

Validation of CREST

by

Abhinav Gupta

Jun Zhao

Pradeep Aradhya

Enhancement Project For
Duke Power company

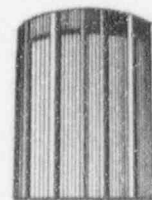
Interim Report

October 1995

Center for Nuclear Power Plant
Structures, Equipment and Piping



North Carolina State University
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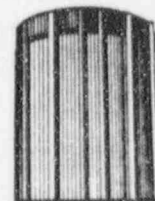
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1 Introduction

The computer program CREST performs response spectrum analysis of coupled primary-secondary systems. For the present application, building is a primary system and piping system the secondary. To perform the analysis of a coupled system, CREST must be interfaced with a piping analysis program, which in the present case is PIPESTRESS. We are validating CREST against ANSYS by comparing the response spectrum results from the former with the time history results from the latter for three real-life-like building-piping coupled systems. Mode shapes and frequencies of the coupled systems calculated using the two programs are also compared. The validation analyses and the comparison of results for the first of the three building-piping systems are presented in this interim report.

2 Pressurizer Spray Line

Pressurizer spray line is the first of three piping systems used for validation of the computer program CREST. The validation is performed by comparison with a direct integration time history analysis of the coupled piping-building model. The pressurizer spray line is shown in Fig.1 and the primary system used for this piping system is shown in Fig.2. The piping system consists primarily of a 2.5 inch diameter, schedule 160 pipe. Two relatively small segments of this piping have different cross sections with diameters of 0.5 inch and 1.5 inch, respectively. The modulus of elasticity for the steel pipe is taken as $28.3E06$ psi and the piping is assumed to be filled with water. The piping is supported on a total of 3 anchors, 19 snubbers and 5 spring type supports. Table 1 gives the stiffnesses of these supports and the global direction in which each support is active. The table also lists the weight of the supports bearing on piping system and the connectivity of each support with the building model in terms of building node numbers. As seen in this table, the stiffnesses of spring supports are very small compared to the stiffnesses of snubbers. The spring supports do not have any significant effect on the member forces and support reactions. These supports have not been shown in Fig.1, however, they are included in the analysis. Fig.2 gives the node numbers, floor elevations and structural properties of various elements in the three dimensional stick model of the primary system. The translational

and rotational anchor stiffnesses used in this analysis are 1.0E08 kips/in and 8.33E08 ft-kips/radian, respectively. The coupled piping-building model is assumed to be classically damped. Therefore, undamped eigenvectors and eigenvalues are evaluated in the solution of eigenvalue problem in CREST.

2.1 Input and Output Files

Various input and output files are ~~stored on the enclosed diskette~~^{attached}. The ANSYS input and output files for modal analysis of the coupled piping and building model are *cpmodal.in* and *cpmodal.out*, respectively. ANSYS was also used to perform time history analysis of the coupled model for two different earthquake records, El Centro 1940 (S00E) and Taft-Lincoln School 1952 (S69E). The ANSYS input file when El Centro is used is *pb2ecx.in*. Results are stored in two files, one each for pre- and the post-processing of the data. The two files are named *pb2ecx.out* and *pb2ecx1* for the El Centro analysis. For the Taft record, input file is named *pb2tfx.in* and the output files are *pb2tfx.out* and *pb2tfx1*, respectively. The output files contain member forces and support loads for several time intervals. Due to large size of the problem, maximum response values are evaluated internally by ANSYS for every 2 seconds interval. Therefore, these files contain solution output for 10 such intervals that lie between 0 to 20 seconds. Since all the maximum responses occur much before 20 seconds, the output files contain responses up to 20 seconds only.

The interface between CREST and PIPESTRESS for performing the response spectrum analysis of the coupled model is explained in reference [3]. The piping system is modeled on PIPESTRESS and the corresponding input file is *ps1^{dat}.in*. The floor response spectra are specified in the PIPESTRESS input file only for the purpose of generating the unit solutions needed by CREST. The spectral values are redundant and not used. CREST needs an additional file that contains information about the dynamic properties of uncoupled primary system, the control data and the connectivity data. This file also contains information about the response spectra at the base of primary system to be used as the input ground motion. The name of this input file corresponding to the El Centro record is *crelcent.in* and that to Taft is *crtaft.in*. The output files generated by CREST for the two earthquake records are *crelcent.out* and *crtaft.out*, respectively. The input response spectra at the base of primary sys-

tem is evaluated at the exact values of coupled frequencies and the modal damping ratios. This procedure eliminates any uncertainties that may be introduced in the interpolation process. The dynamic properties of the primary system used in these input files were generated by performing an uncoupled modal analysis using ANSYS. The input file for this analysis is *primary.in* and the output file is *primary.out*. The dynamic properties of the primary system were used to evaluate the residual mode of the uncoupled primary system according to the procedure given in references [2, 3].

2.2 Damping Calculation

Rayleigh damping is used in the ANSYS time history analysis which is given by

$$[C] = \alpha [M] + \beta [K] \quad (1)$$

in which α and β are proportionality constants. These constants are evaluated using the frequencies of the coupled model. For coupled mode i we can write

$$2\zeta_i \omega_i = \alpha + \beta \omega_i^2 \quad (2)$$

in which ω_i and ζ_i are the circular frequency and the damping ratio in mode i . In the present analysis, it is assumed that the coupled modes with the lowest and the highest frequencies have a damping ratio of 0.05. The lowest coupled mode has a frequency of 1.3145 Hz. and the highest mode has a frequency of 32.917 Hz. These frequencies together with $\zeta_i = 0.05$ when substituted in equation 2 give

$$\alpha = 0.7941209 \quad \beta = 0.000466231 \quad (3)$$

Once the parameters α and β are evaluated, the modal damping ratios for other modes can be evaluated directly using equation 2. Table 2 gives the damping ratios evaluated using this procedure for each mode of the coupled system.

3 Results and Discussion

Frequencies and damping ratios for the coupled system are given in Table 2. The coupled mode shapes for the non-rigid modes obtained from ANSYS are compared with those from CREST. The plots for two sets of mode shapes are shown appendix.

Three different curves are plotted for each coupled mode shape, one corresponding to the modal displacements in each of the three global directions. In each plot, the node numbers corresponding to the piping system are plotted on the x-axis and the modal displacement on the y-axis. As seen from these figures, the mode shapes from the two programs are in excellent agreement with each other. The plots corresponding to the coupled modes 12 and 14 (frequencies = 10.1792 and 12.0367 Hz., respectively) appear to show large differences in the curves. In these modes, the significant displacements occur in the primary system degrees of freedom. Very small (negligible) displacements occur in the piping system degrees of freedom. Plots of negligible displacement values on a large scale magnifies the differences. These mode shapes result in negligible response values in the piping system. Tables 3 and 4 compare the significant member forces and support loads in the piping system from ANSYS time history analysis using El Centro record with the corresponding values obtained from a response spectrum analysis using CREST. Tables 5 and 6 compare the corresponding values from the two programs for Taft earthquake input. As seen from these tables, the agreement between the two sets of analyses is good. Agreement in the two sets of analyses is better for Taft input than for the El Centro input. Reasons for larger differences in some forces for El Centro input were explored. Anchor reaction in global x-direction, F_x , at node number 1 is studied in detail. Table 7 gives the values of modal responses for F_x in all the coupled modes. CREST evaluated response in each coupled mode also includes the effect of missing mass. Combination of these modal responses using 10 % grouping method of mode combination [5] gives $F_x = 99.5$ lb which is only 1% more than the value of 98.5 lb evaluated by CREST and much lower than the value of 148 lb given by the time history analysis. The fact that the two response spectrum values are almost equal and both much less than the time history value demonstrates that the difference in forces evaluated using the time history and the response spectrum method comes from the inherent differences in the two methods of analyses and is unrelated to the specific CREST methodology.

The phenomenon was studied further taking the force F_x in anchor 1 as an example. As seen from table 7, significant contribution to the total force comes from modes numbered 2,3 and 5 that have frequencies of 1.5867 Hz., 2.8009 Hz. and 3.60057 Hz., respectively. The forces in the three modes are 49.171 lb, -52.396 lb and -59.849 lb, respectively. ANSYS time history analysis output shows that the absolute maximum

of the force F_x occurs at 4.56 seconds. Therefore, the time histories of modal responses from these three modes were studied for a period of 3 seconds between 3 to 6 seconds. Fig. 3 shows the plots of the histories of three modal responses and also the history of the combined response from these three modes. As seen from the figure, the modal responses from three modes have same signs at 4.56 seconds. None of these modal forces have their maximum values at the particular instant of time. However, these values are large enough that the combined force in these modes is 110 lb. The corresponding values from the 10% grouping method and CREST are 93.5 lb and 95.5 lb. The three modes do not form any group within the 10 % frequency range. Therefore, the combined response given by the 10 % grouping method [5] is equivalent to the SRSS combined response. For mode combination in CREST [4], the correlation coefficients between the three modes are: $\bar{e}_{23}^d = 0.0$, $\bar{e}_{25}^d = 0.07$ and $\bar{e}_{35}^d = 0.0$. The only non-zero correlation term is \bar{e}_{35}^d which is also negligible. That in effect renders the CREST modal combination into the SRSS combination.

The above example illustrates the inherent differences in a time history and the response spectrum analyses. In general, no one-to-one correspondence exists between the time history method and the response spectrum method. On the "average", response spectrum method gives responses that are close to the responses obtained from a time history analysis. On an individual basis, response spectrum may give responses that are either more or less in magnitude than the time history analysis. A detailed explanation of the differences in the two methods is given in section 3.3 and table 3.2 in reference [1].

References

- [1] Gupta, A.K., "Response Spectrum Method In Seismic Analysis and Design of Structures", Blackwell Scientific Publication, Boston, MA, 1990; CRC Press, Inc., Boca Raton, FL, 1992.
- [2] Gupta, A. and Gupta, A.K, "Coupled Analysis of Piping Systems Including the Effect of High Frequency Modes," *Report*, Center for Nuclear Power Plant Structures, Equipments and Piping, Department of Civil Engineering, North Carolina State University, Raleigh, NC, 1994.
- [3] Gupta, A.K., Jaw, J.W. and Gupta, A., "CREST, A Computer Program for Coupled Response Spectrum Analysis of Secondary Systems, Interfaced with PIPESTRESS," *User's Manual*, , Center for Nuclear Power Plant Structures, Equipments and Piping, Department of Civil Engineering, North Carolina State University, Raleigh, NC, 1995.
- [4] Megahed, H.A. and Gupta, A.K., "Topics in Seismic Response of Nonclassically Damped Systems," *Report*, Research Program on Nuclear Power Plant Structures, Equipments and Piping, Department of Civil Engineering, North Carolina State University, Raleigh, NC, August 1992.
- [5] United States Nuclear Regulatory Commission, "Combining Modal Responses and Special Components in Seismic Response Analysis," *Nuclear Regulatory Guide*, No. 1.92.

Table 1: Support Details and Connectivity, Pressurizer Spray Line

Support Name	Support Type	Stiffness (lb/ in)	Mass (lb)	Global Direction	Connectivity (Building Node)
PSH2	Snubber	77000	25.2	Z	306
PSH3	Snubber	77000	25.2	X	306
PSH4	Snubber	77000	25.2	Y	307
PSH5	Spring	56	4.30	Y	307
PSH8	Snubber	77000	25.2	X	308
PSH12	Snubber	77000	25.2	Z	310
PSH15	Snubber	212000	43.2	Y	312
PSH17	Snubber	212000	40.2	X	312
PSH20	Snubber	77000	25.2	Y	312
PSH21	Snubber	77000	25.2	Z	312
PSH22	Spring	126	4.75	Y	312
PSH23	Spring	35	4.2	Y	312
PSH25	Snubber	77000	24.8	X	312
PSH26	Snubber	77000	24.8	Z	312
PSH27	Snubber	77000	25.2	Y	312
PSH29	Snubber	77000	25.2	Z	312
PSH31	Snubber	77000	25.2	X	312
PSH33	Spring	400	10.0	Y	312
PSH34	Snubber	77000	25.2	Z	312
PSH35	Spring	224	5.50	Y	312
PSH36 A	Snubber	77000	31.5	X	312
PSH36 B	Snubber	77000	31.5	Z	312
PSH37 A	Snubber	77000	31.5	X	312
PSH37 B	Snubber	77000	31.5	Z	312
ANCH1	Anchor	Rigid	0.00	X,Y,Z	304
ANCH2	Anchor	Rigid	0.00	X,Y,Z	309
ANCH3	Anchor	Rigid	0.00	X,Y,Z	312

Table 2: Frequencies and Damping Ratios, Pressurizer Spray Line

Mode No.	Frequency (Hz.)	Damping Ratio	Mode No.	Frequency (Hz.)	Damping Ratio
1	1.3145	0.050000	18	16.0903	0.027495
2	1.5867	0.042150	19	16.5975	0.028118
3	2.8009	0.026665	20	17.9594	0.029824
4	3.4301	0.023447	21	18.2559	0.030201
5	3.6006	0.022825	22	19.6406	0.031985
6	3.8984	0.021920	23	20.8892	0.033622
7	4.2591	0.021076	24	22.1696	0.035322
8	5.6890	0.019441	25	23.0565	0.036512
9	7.4677	0.019400	26	23.4915	0.037098
10	8.0710	0.019651	27	23.6251	0.037279
11	8.3071	0.019775	28	24.1809	0.038031
12	10.1792	0.021110	29	25.3193	0.039581
13	10.6266	0.021512	30	26.2363	0.040837
14	12.0367	0.022875	31	26.7325	0.041519
15	13.1299	0.024044	32	26.8858	0.041730
16	13.4392	0.024387	33	27.5432	0.042637
17	14.7927	0.025939	34	32.9170	0.050000

Table 3: Comparison of Support Responses in Pressurizer Spray Line, El Centro

Support		Response Quantity	ANSYS	CREST	Percent Difference (C-A)*100/Amax
Node	Type		A	C	
1	Anchor	F_x	148	98	-7
	Anchor	F_z	83	94	2
	Anchor	M_x	139	151	3
	Anchor	M_y	458	358	-22
	Anchor	M_z	163	162	-0
87	Anchor	F_x	71	77	1
	Anchor	F_y	49	54	1
	Anchor	M_x	168	177	2
	Anchor	M_y	118	119	0
	Anchor	M_z	44	49	1
130	Anchor	F_x	47	47	0
	Anchor	M_z	64	67	1
9	Snubber	F_x	309	286	-3
10	Snubber	F_z	212	236	3
15	Snubber	F_y	254	262	1
23	Snubber	F_x	359	282	-11
28	Snubber	F_z	150	160	1
37	Snubber	F_y	221	229	1
39	Snubber	F_x	536	423	-16
45	Snubber	F_x	150	127	-3
124	Snubber	F_x	80	80	-0
57	Snubber	F_x	689	687	-0
73	Snubber	F_z	113	83	-4
131	Snubber	F_x	489	421	-10
133	Snubber	F_x	525	484	-6

F = Force (lb)

M = Moment (ft-lb)

Amax = Maximum Force or Moment

Table 4: Comparison of Significant Member Responses in Pressurizer Spray Line, El Centro

Member End Nodes	Response Quantity	ANSYS A	CREST C	Percent Difference (C-A)*100/Amax
1 - 2	F_x	147	98	-10
	M_x	139	151	1
	M_y	458	358	-5
6 - 7	F_x	129	95	-7
	M_z	166	126	-2
9 - 10	F_x	194	178	-3
	F_z	78	87	2
	M_x	694	783	5
	M_z	768	668	-5
15 - 16	F_z	116	119	1
	M_z	797	732	-3
23 - 24	M_x	412	454	2
	M_z	1099	854	-13
35 - 37	F_y	219	229	2
38 - 39	F_x	225	183	-9
	M_y	1857	1508	-19
44 - 45	F_z	99	85	-3
	M_z	234	178	-3
56 - 57	F_x	476	487	2
71 - 72	F_x	412	381	-6
93 - 94	M_x	113	83	-2
101 - 102	F_x	164	162	-0
65 - 131	F_x	249	216	-7

F = Force (lb)

M = Moment (ft-lb)

Amax = Maximum Force or Moment

Table 5: Comparison of Support Responses in Pressurizer Spray Line, Taft

Support		Response Quantity	ANSYS	CREST	Percent Difference (C-A)*100/Amax
Node	Type		A	C	
1	Anchor	F_x	66	59	-3
	Anchor	F_z	41	39	-1
	Anchor	M_x	63	62	-1
	Anchor	M_y	143	158	11
	Anchor	M_z	104	102	-1
87	Anchor	F_x	23	25	1
	Anchor	F_y	18	19	1
	Anchor	M_x	57	63	4
	Anchor	M_y	35	36	1
	Anchor	M_z	16	16	-0
130	Anchor	F_x	14	14	0
	Anchor	M_z	19	20	0
9	Snubber	F_x	156	164	4
10	Snubber	F_z	98	97	-1
15	Snubber	F_y	115	108	-3
23	Snubber	F_x	149	132	-7
28	Snubber	F_z	62	65	1
37	Snubber	F_y	95	94	-0
39	Snubber	F_x	224	199	-10
45	Snubber	F_z	62	55	-3
124	Snubber	F_x	23	24	0
57	Snubber	F_x	240	215	-10
73	Snubber	F_z	41	37	-2
131	Snubber	F_x	141	128	-6
133	Snubber	F_x	156	146	-5

F = Force (lb)

M = Moment (ft-lb)

Amax = Maximum Force or Moment

Table 6: Comparison of Significant Member Responses in Pressurizer Spray Line, Taft

Member End Nodes	Response Quantity	ANSYS A	CREST C	Percent Difference (C-A)*100/Amax
1 - 2	F_x	65	59	-3
	M_x	63	62	-0
	M_y	143	158	2
6 - 7	F_x	62	58	-2
	M_z	80	67	-2
9 - 10	F_x	104	104	0
	F_z	35	35	-0
	M_x	333	321	-1
	M_z	404	414	1
15 - 16	F_x	49	49	-0
	M_z	448	403	-5
23 - 24	M_x	175	185	1
	M_z	472	414	-7
35 - 37	F_y	96	95	-1
38 - 39	F_x	104	90	-13
	M_y	852	723	-15
44 - 45	F_z	34	34	0
	M_z	111	102	-1
56 - 57	F_x	180	159	-12
71 - 72	F_x	128	115	-7
93 - 94	M_x	48	41	-1
101 - 102	F_x	60	52	-5
65 - 131	F_x	75	67	-5

F = Force (lb)

M = Moment (ft-lb)

Amax = Maximum Force or Moment

Table 7: Mode Combination Using 10 % Grouping Method [5] for Reaction F_x (lb) in Anchor at Node 1

Mode No.	Frequency (Hz.)	Modal Response	Mode Group No.	Response in Each Group
1	1.3145	6.121	1	6.121
2	1.5867	49.171	2	49.171
3	2.8009	-52.396	3	52.396
4	3.4301	-0.494	4	60.343
5	3.6006	-59.849	4	
6	3.8984	-0.122	5	2.134
7	4.2591	2.012	5	
8	5.6890	-0.031	6	0.031
9	7.4677	-4.209	7	4.553
10	8.0710	-0.344	7	
11	8.3071	0.061	8	0.061
12	10.1792	0.021	9	2.158
13	10.6266	2.137	9	
14	12.0367	21.166	10	21.849
15	13.1299	0.683	10	
16	13.4392	-0.313	11	0.313
17	14.7927	-0.037	12	0.037
18	16.0903	0.007	13	0.007
19	16.5975	0.031	14	0.997
20	17.9594	-0.478	14	
21	18.2559	-0.488	14	
22	19.6406	-0.037	15	1.978
23	20.8892	1.942	15	
24	22.1696	-0.113	16	18.463
25	23.0565	2.159	16	
26	23.4915	15.701	16	
27	23.6251	0.454	16	
28	24.1809	-0.036	16	
29	25.3193	0.885	17	7.740
30	26.2363	2.130	17	
31	26.7325	-2.563	17	
32	26.8858	0.902	17	
33	27.5432	1.259	17	
34	32.917	12.088	18	12.088
SRSS of Response in Each Group =				99.504

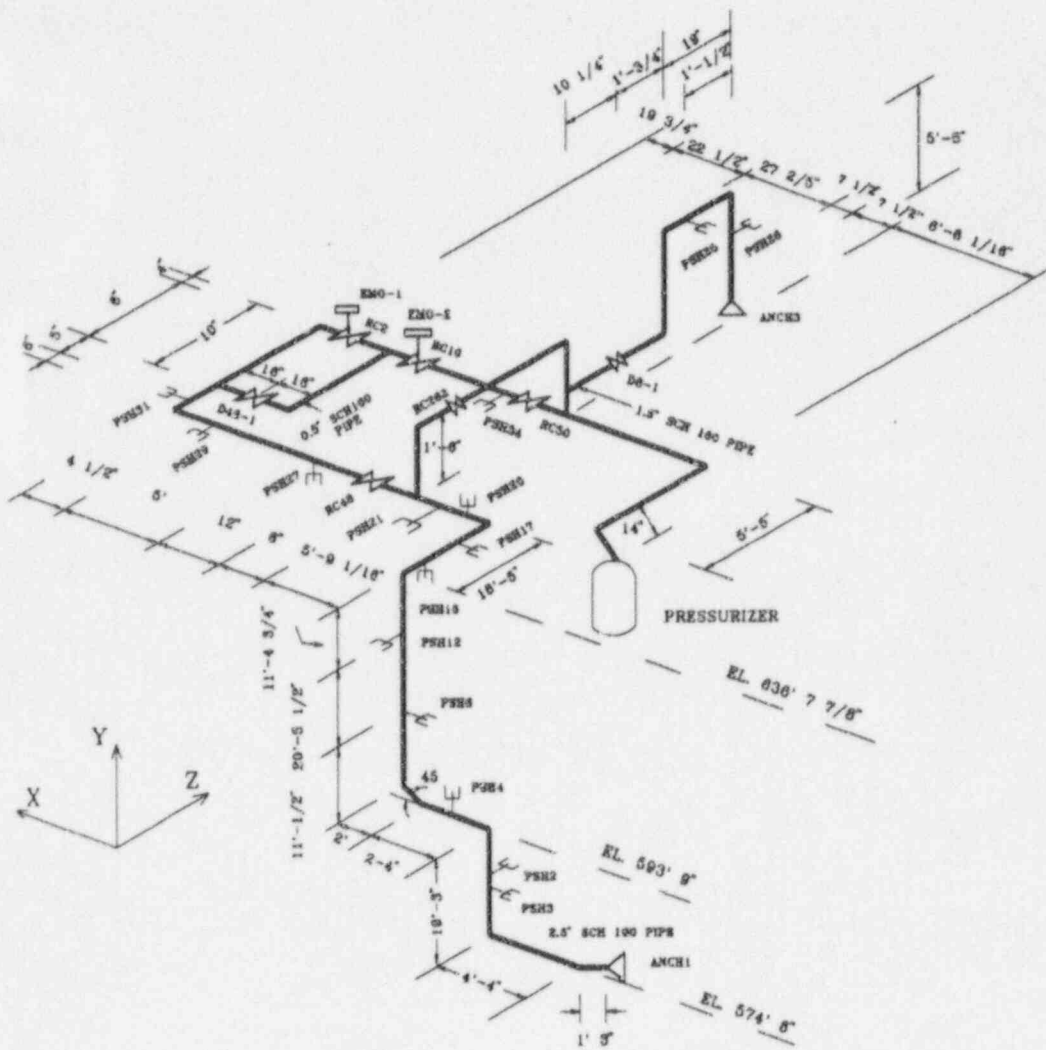


Figure 1: Piping Configuration, Presurizer Spray Line (Not to Scale)

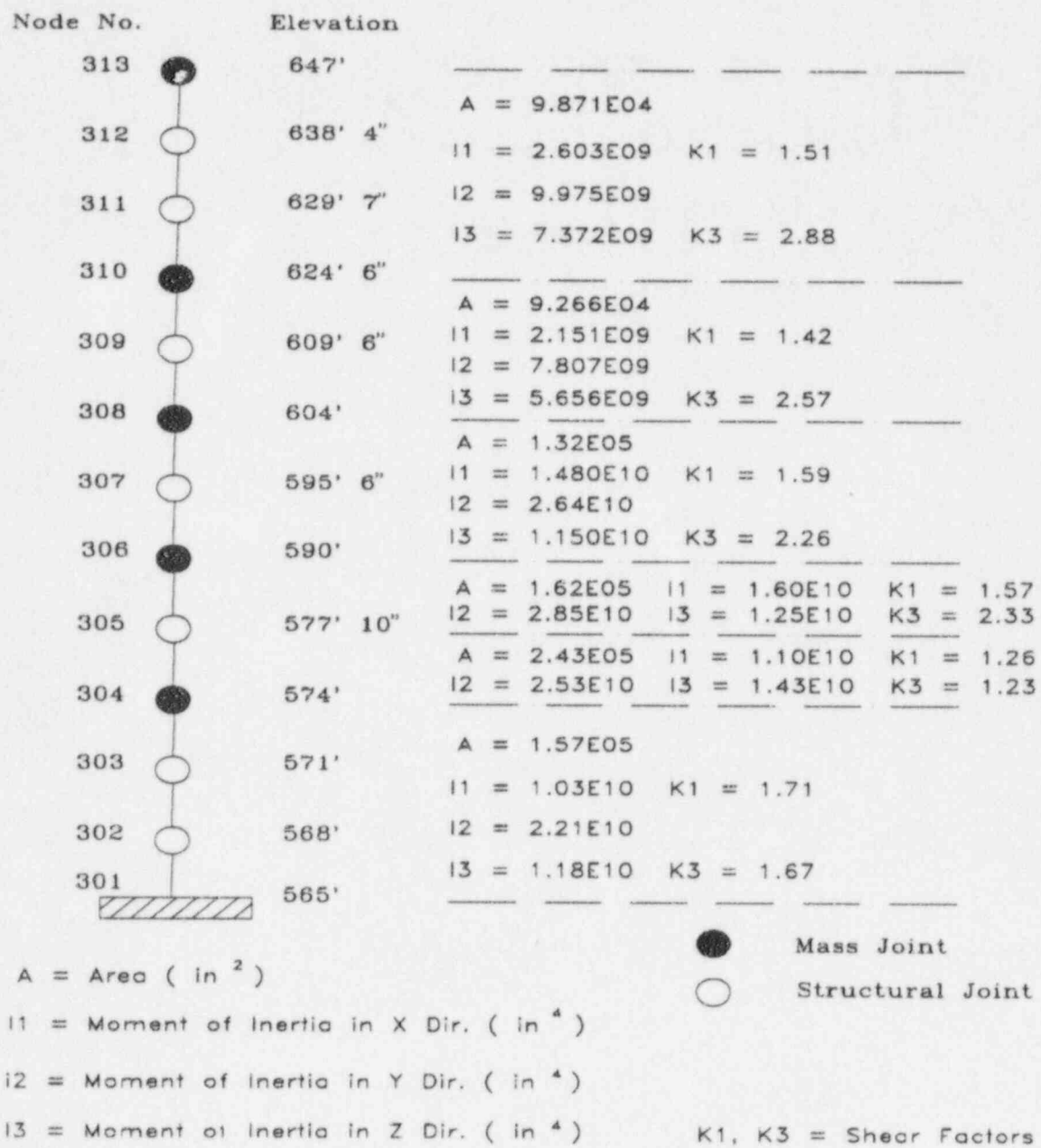
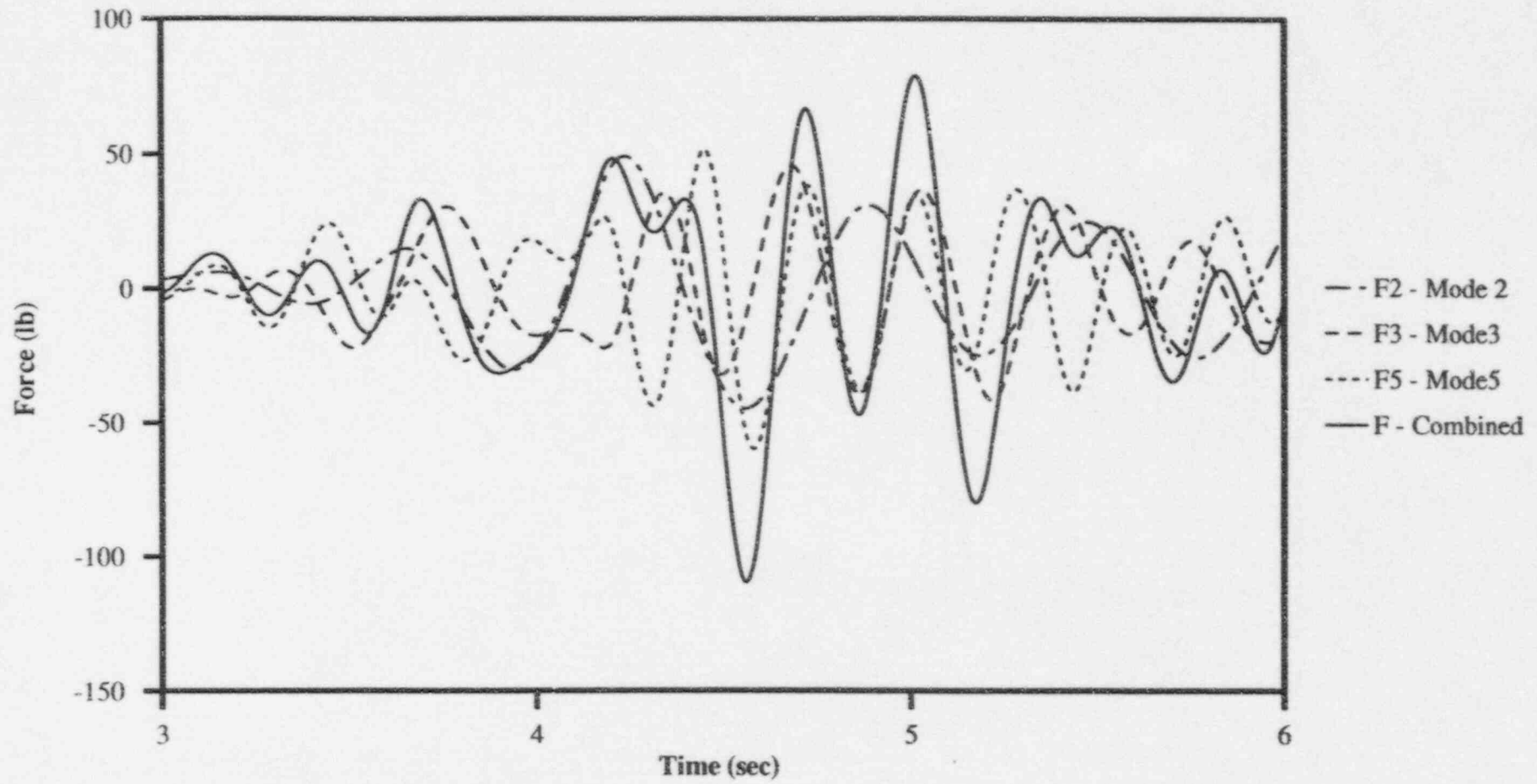


Figure 2: Building Model, Pressurizer Spray Line

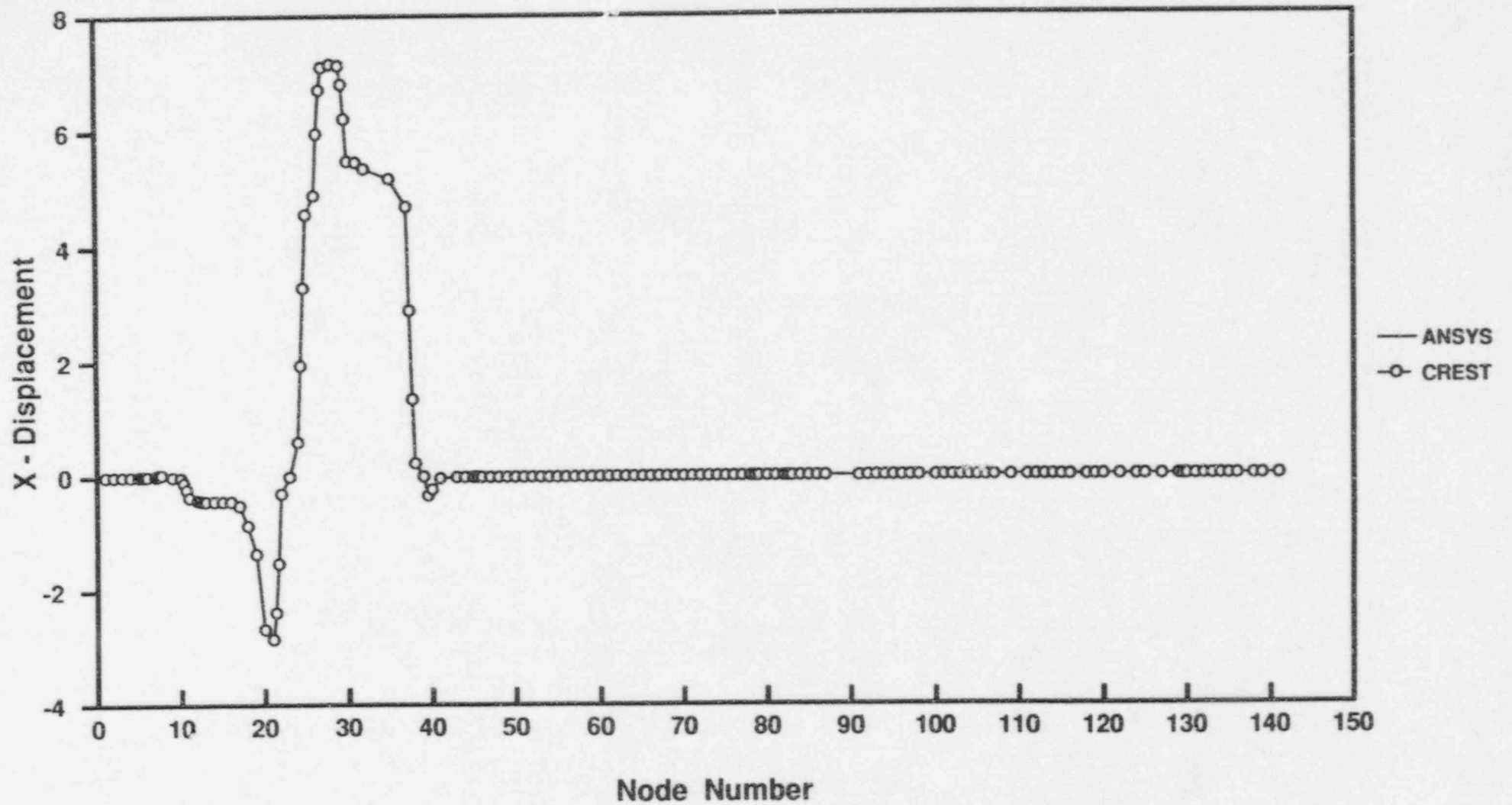
Fig3: Plot of Force Time Histories



Appendix

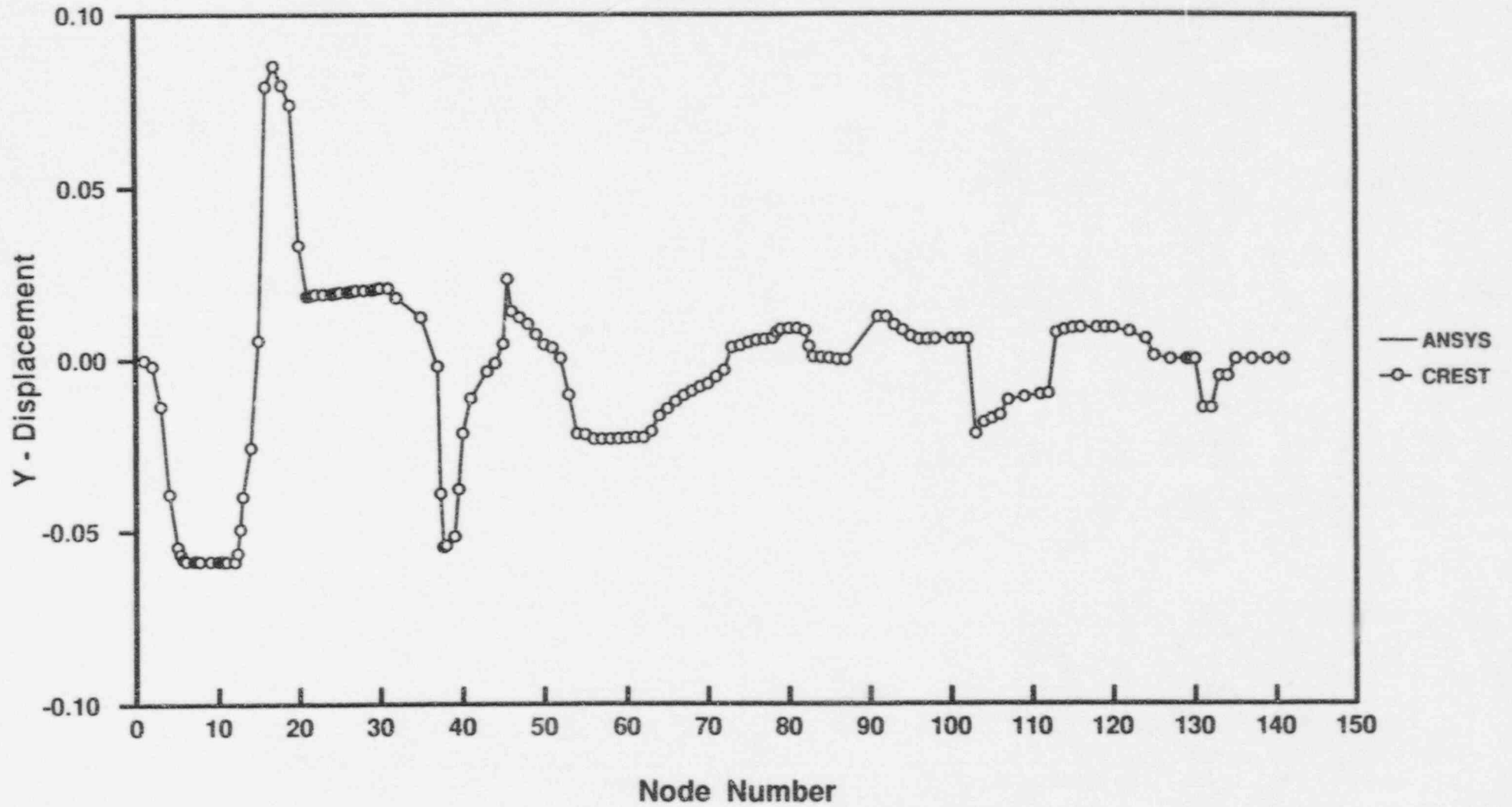
Comparison of Coupled Mode Shapes from ANSYS and CREST

Mode 1



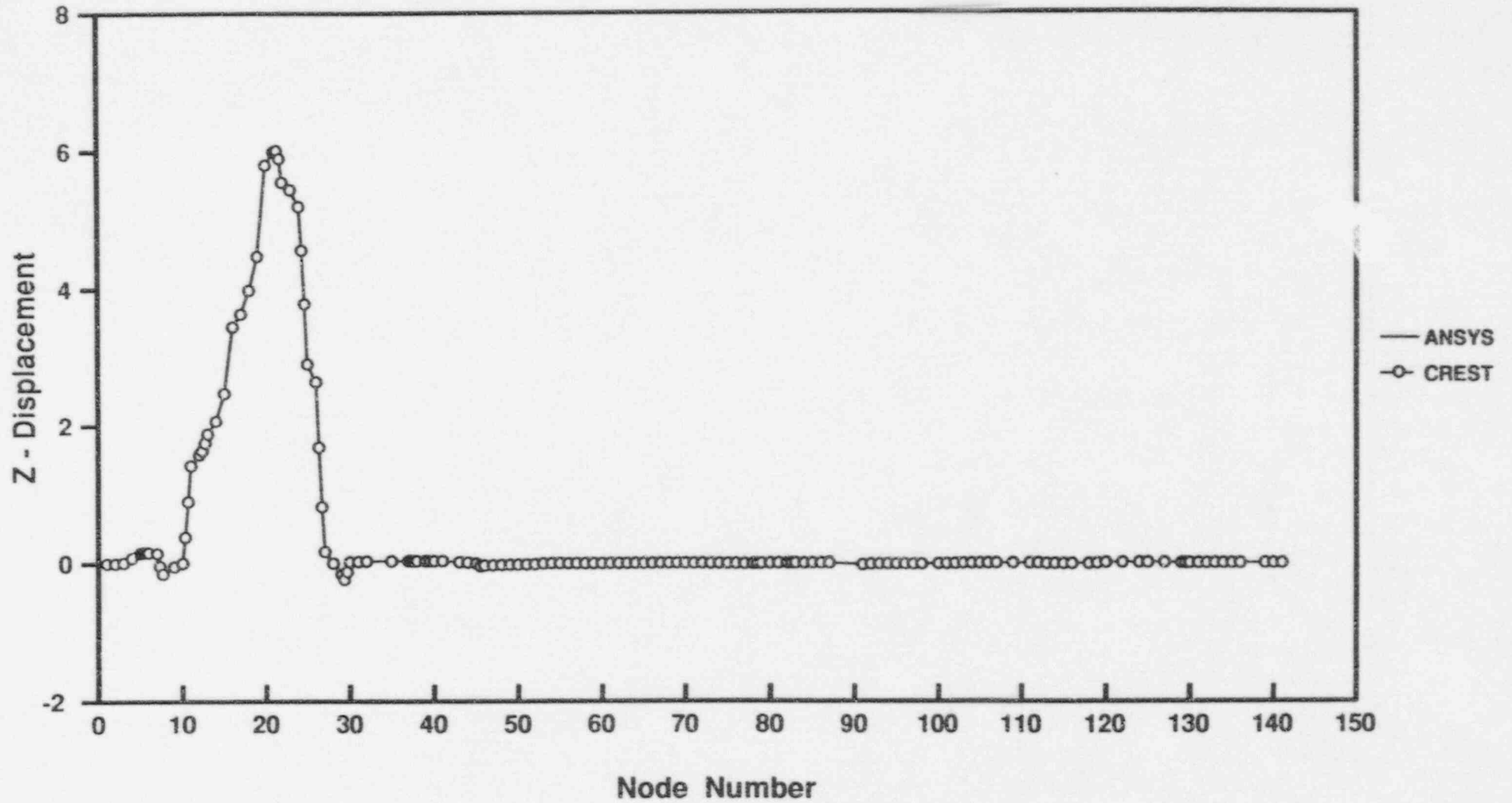
For relative locations of nodes please see the reference material

Mode 1



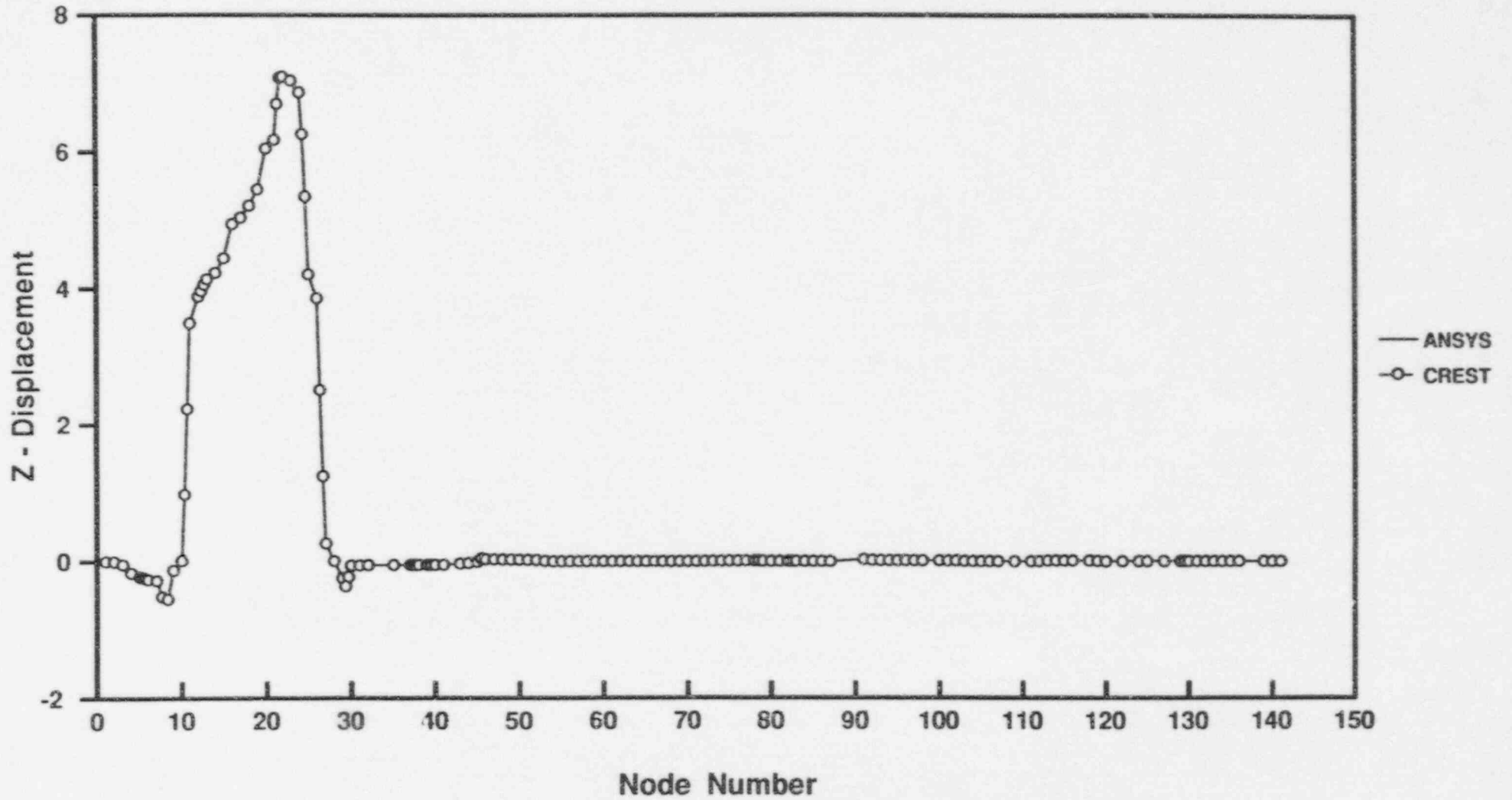
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Mode 1



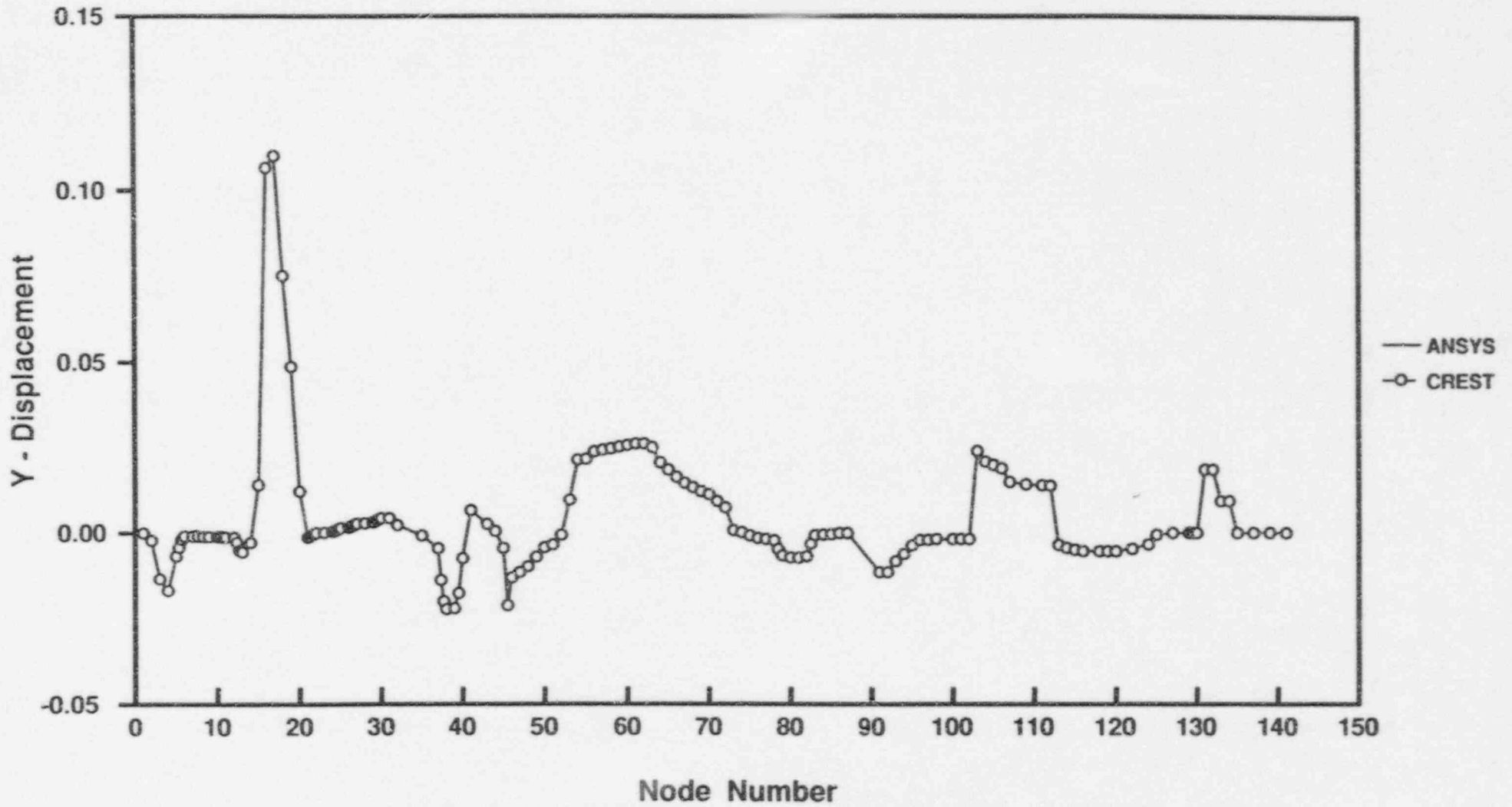
For relative locations of nodes please see the reference material

Mode 2



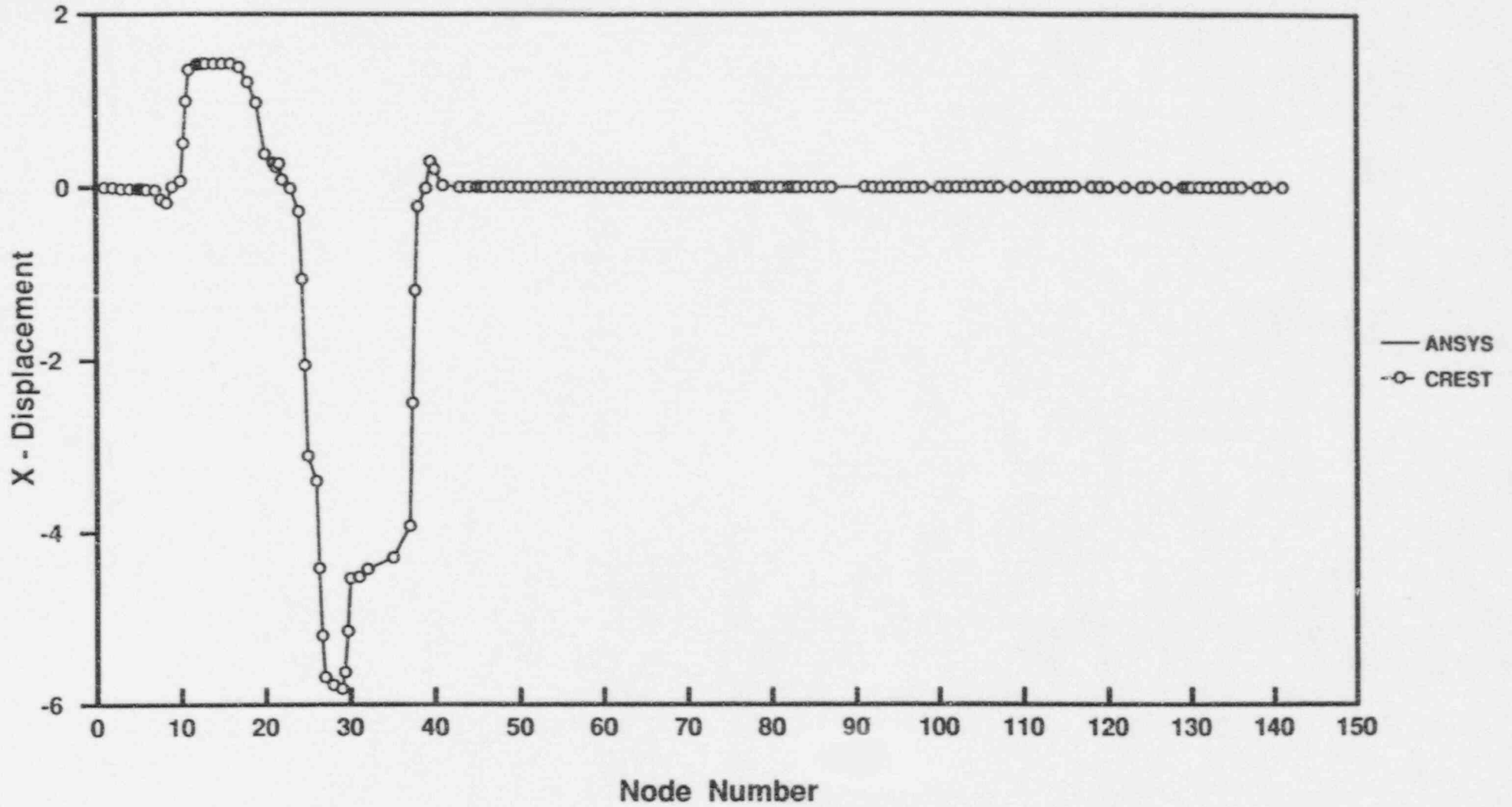
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Mode 2



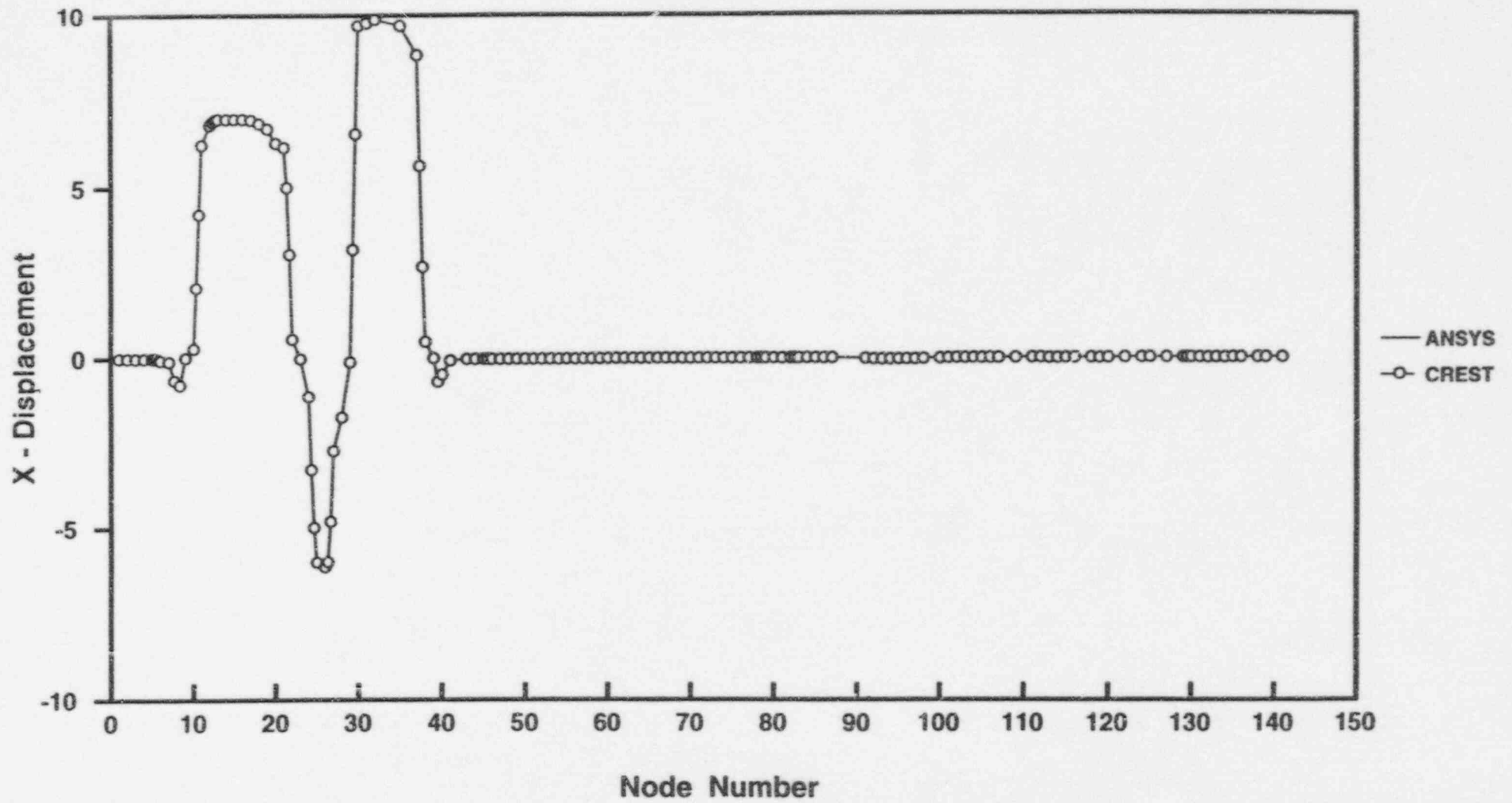
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Mode 2



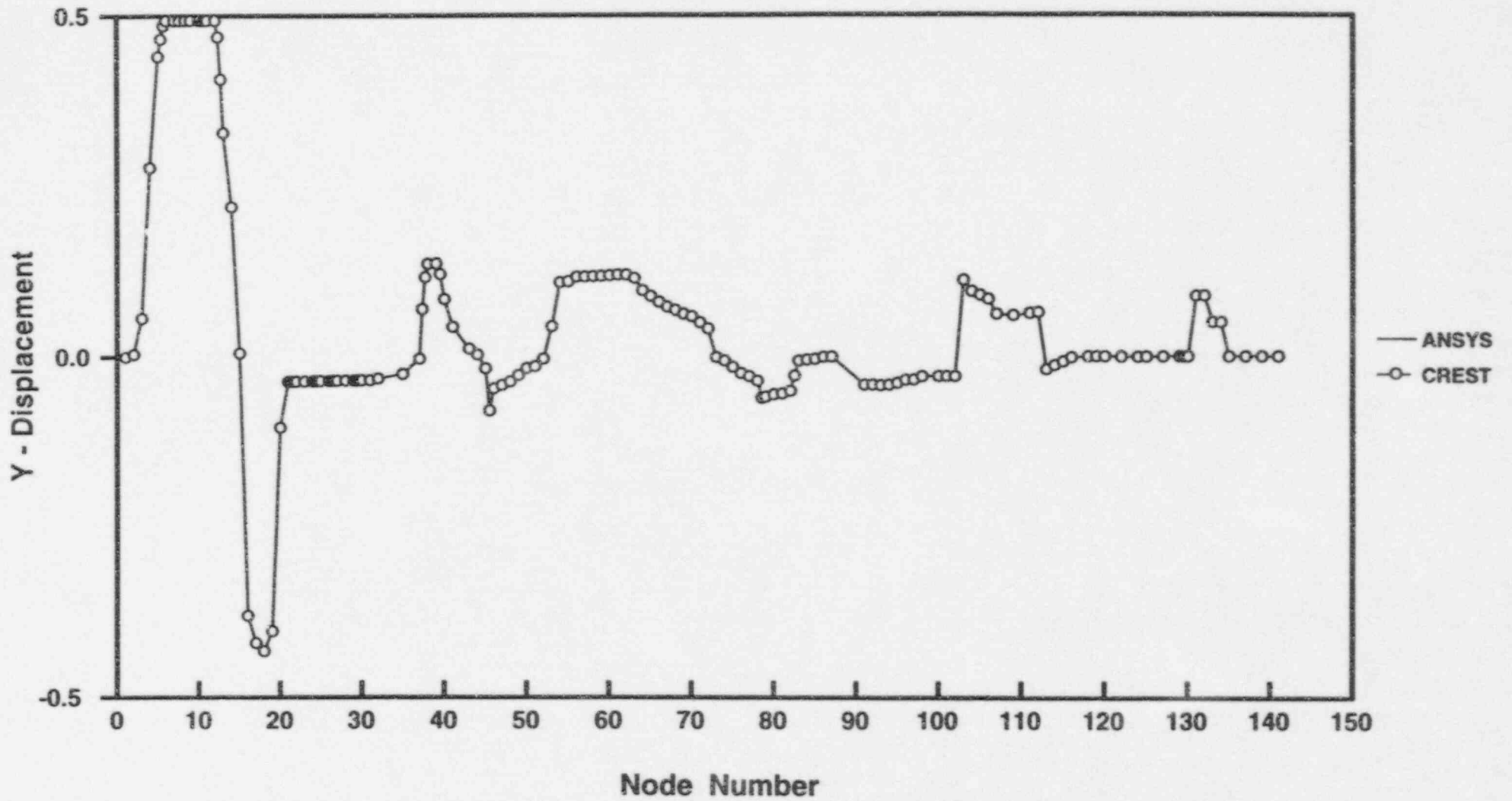
For relative locations of nodes please see the reference material

Mode 3



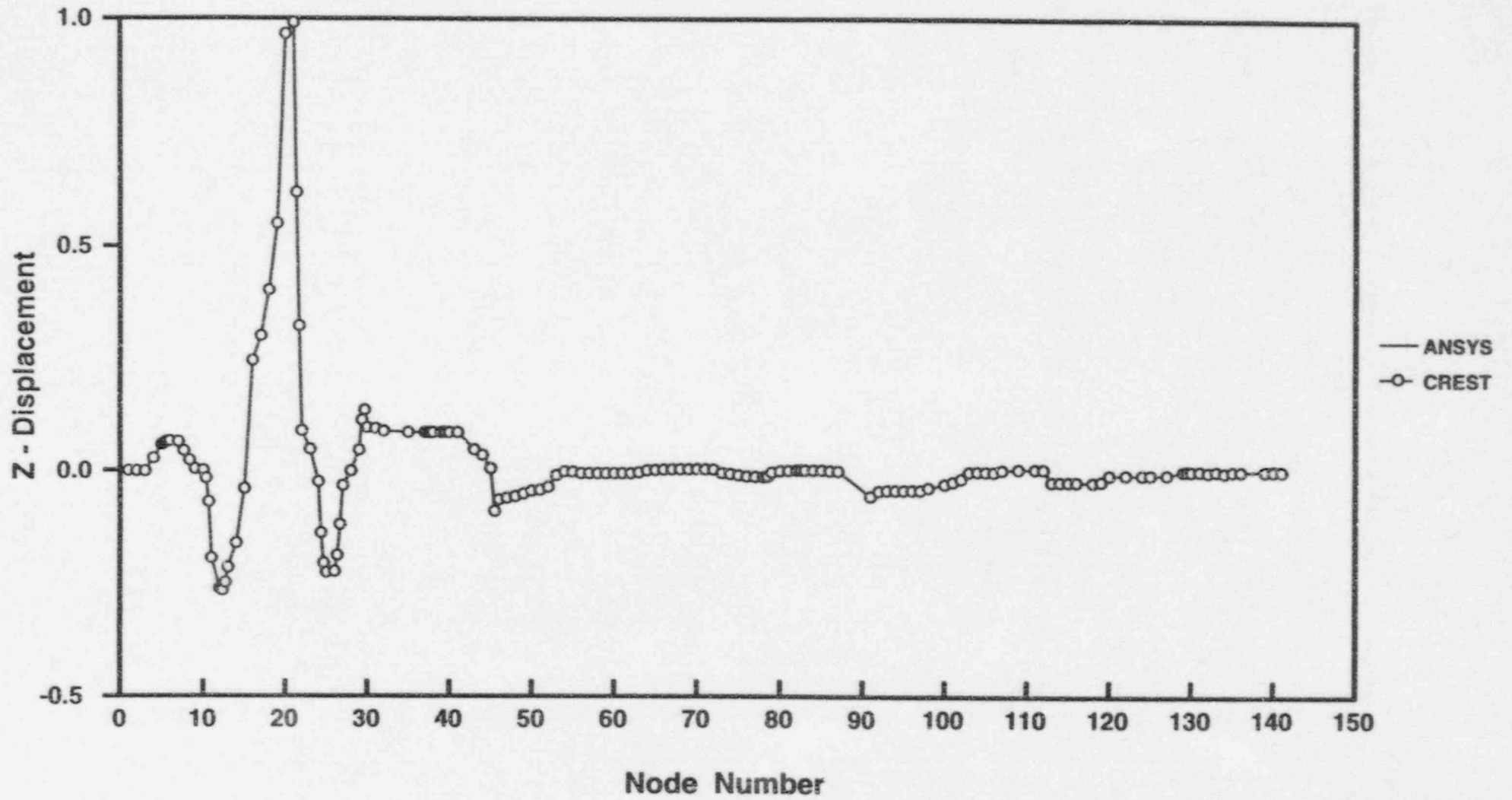
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Mode 3



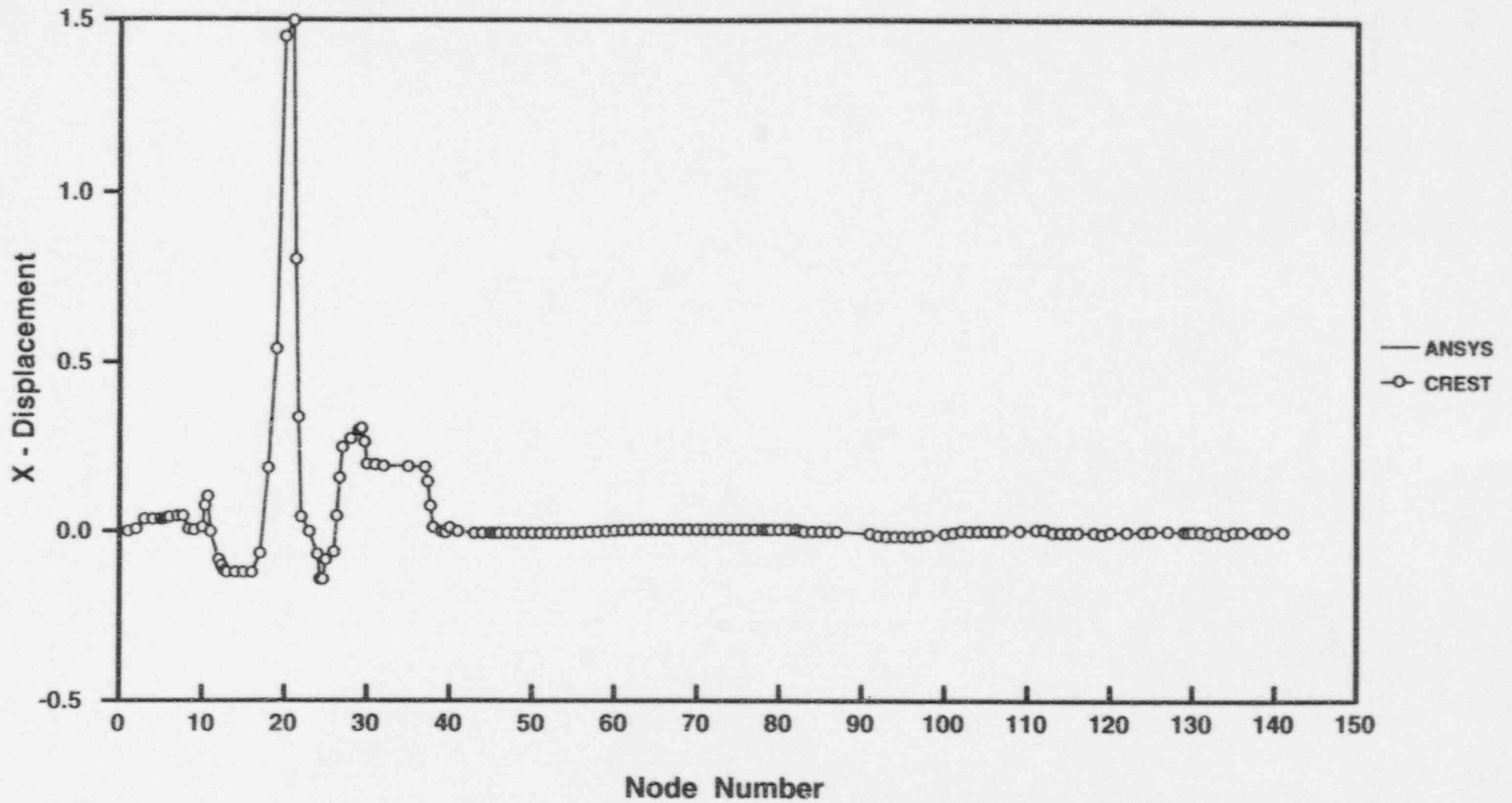
For relative locations of nodes please see the reference material

Mode 3



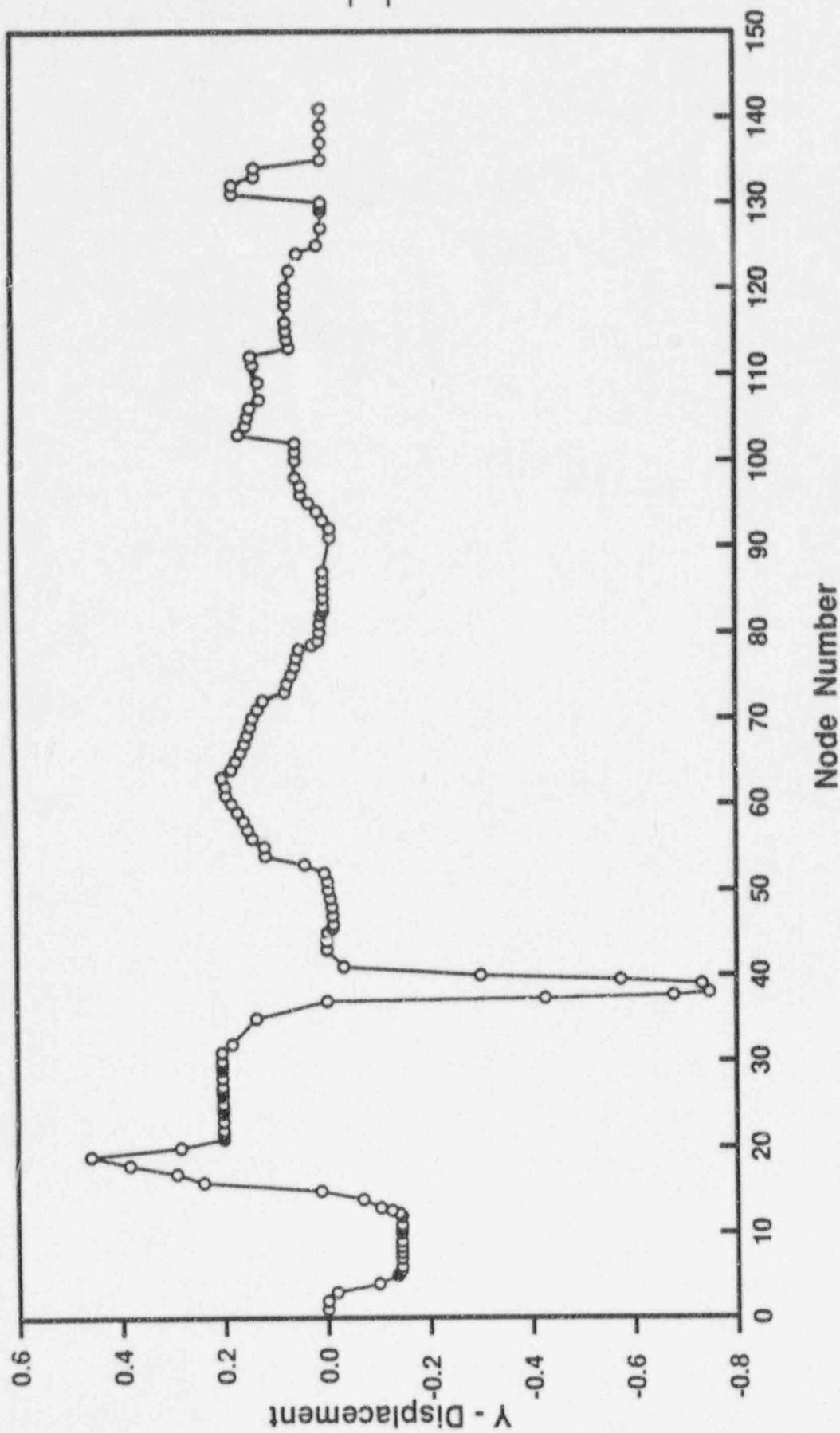
For relative locations of nodes please see the reference material

Mode 4



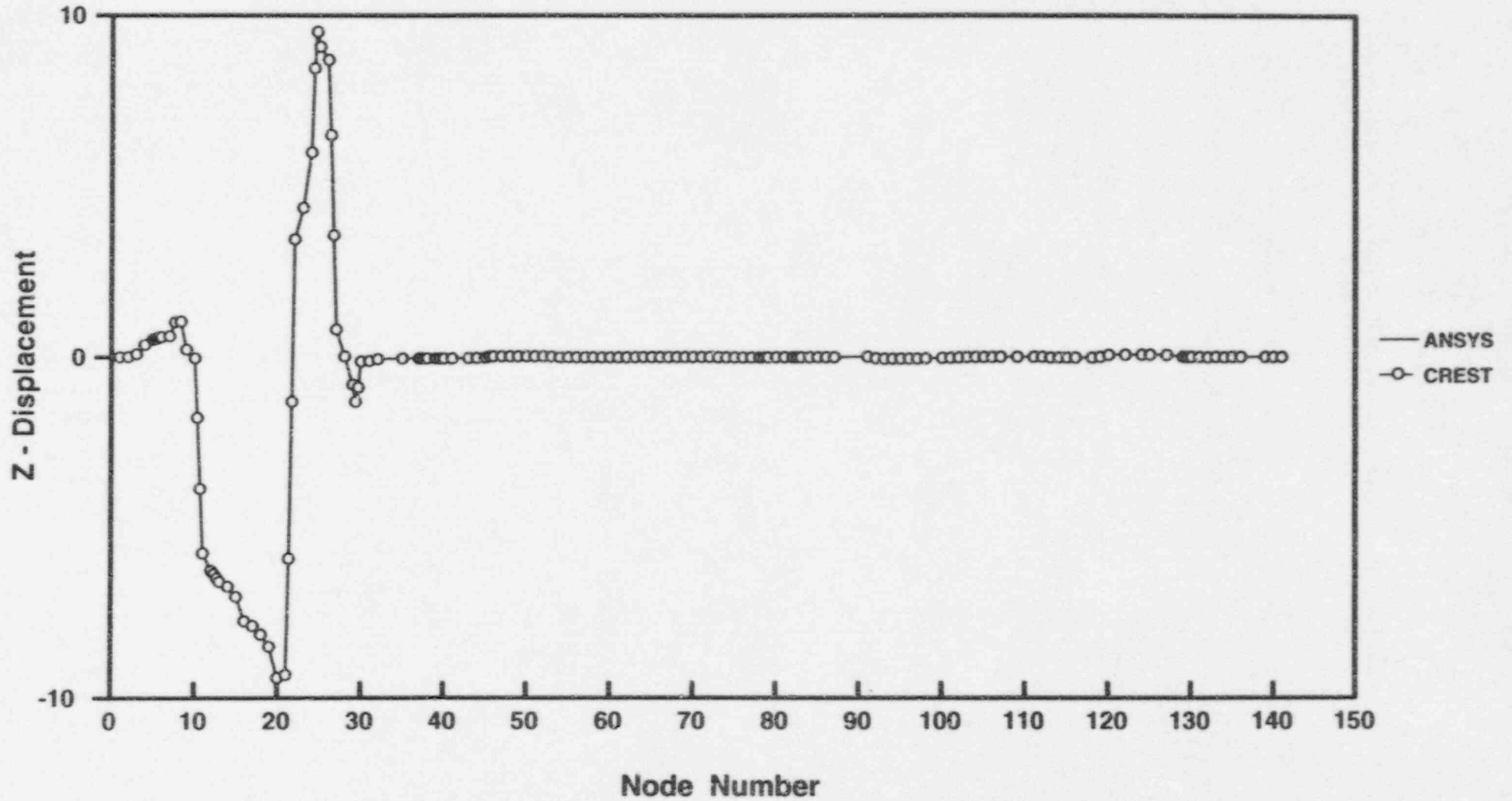
For relative locations of nodes please see the reference material

Mode 4



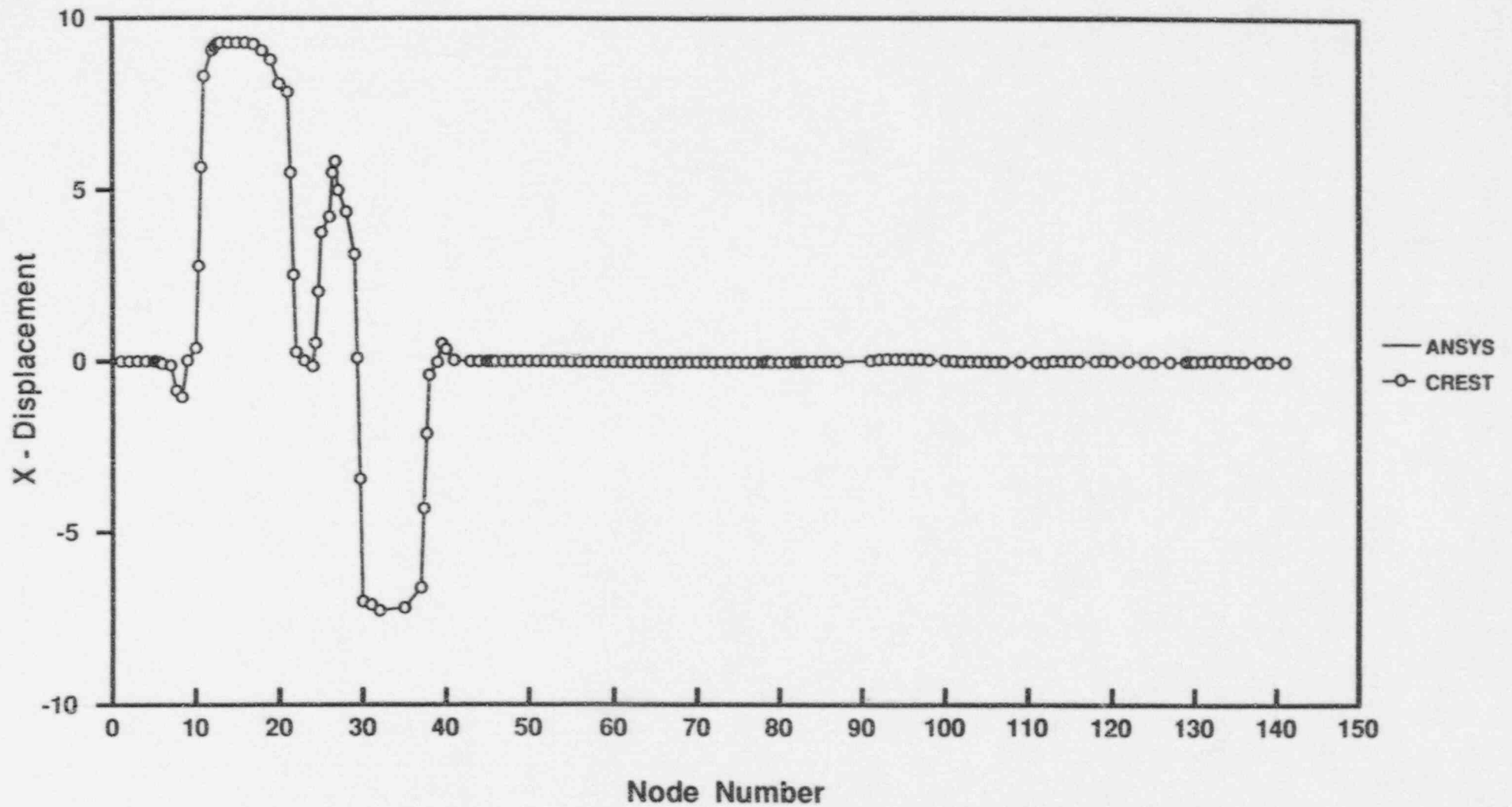
For relative locations of nodes please see the reference material

Mode 4



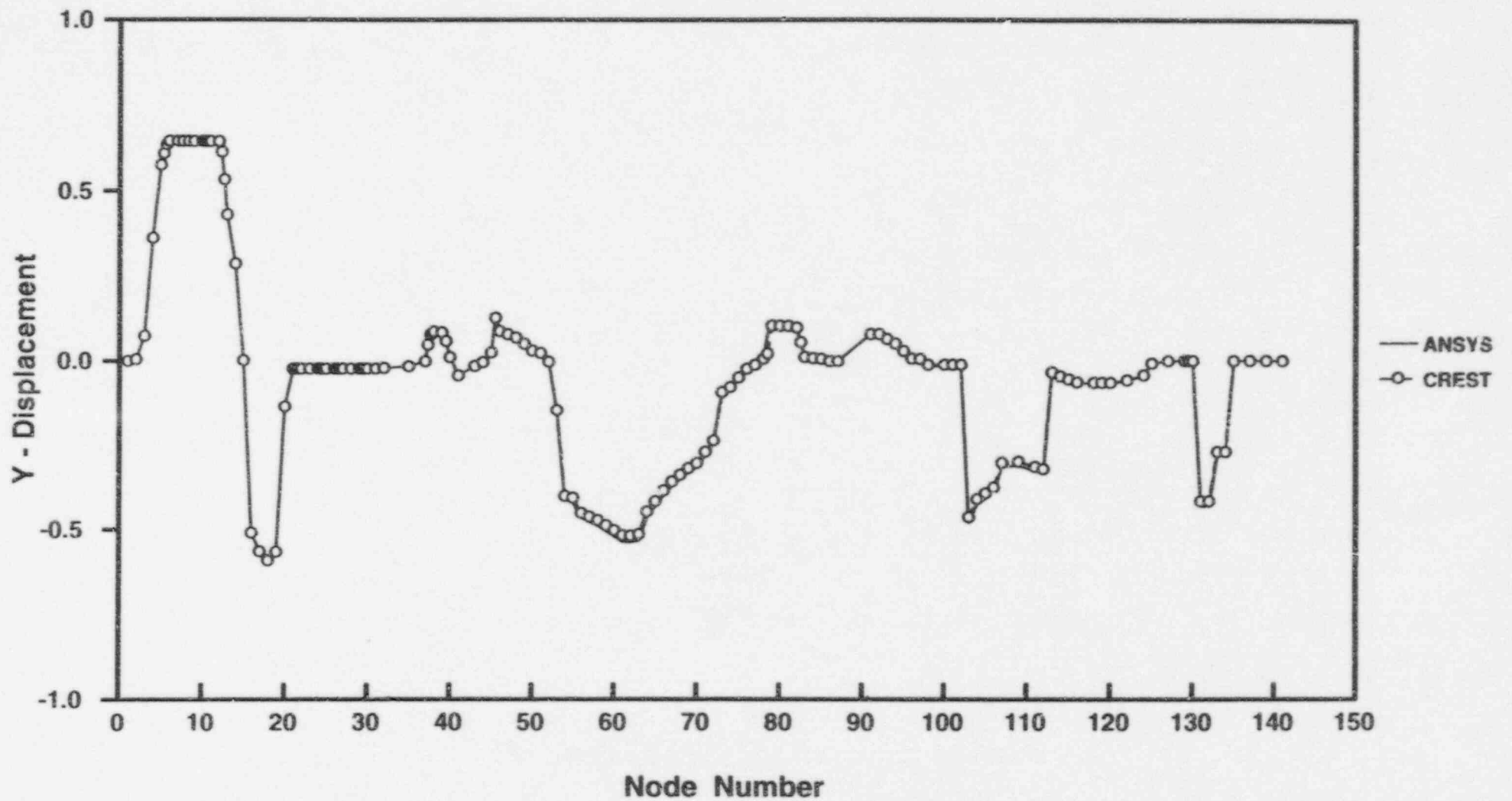
For relative locations of nodes please see the reference material

Mode 5



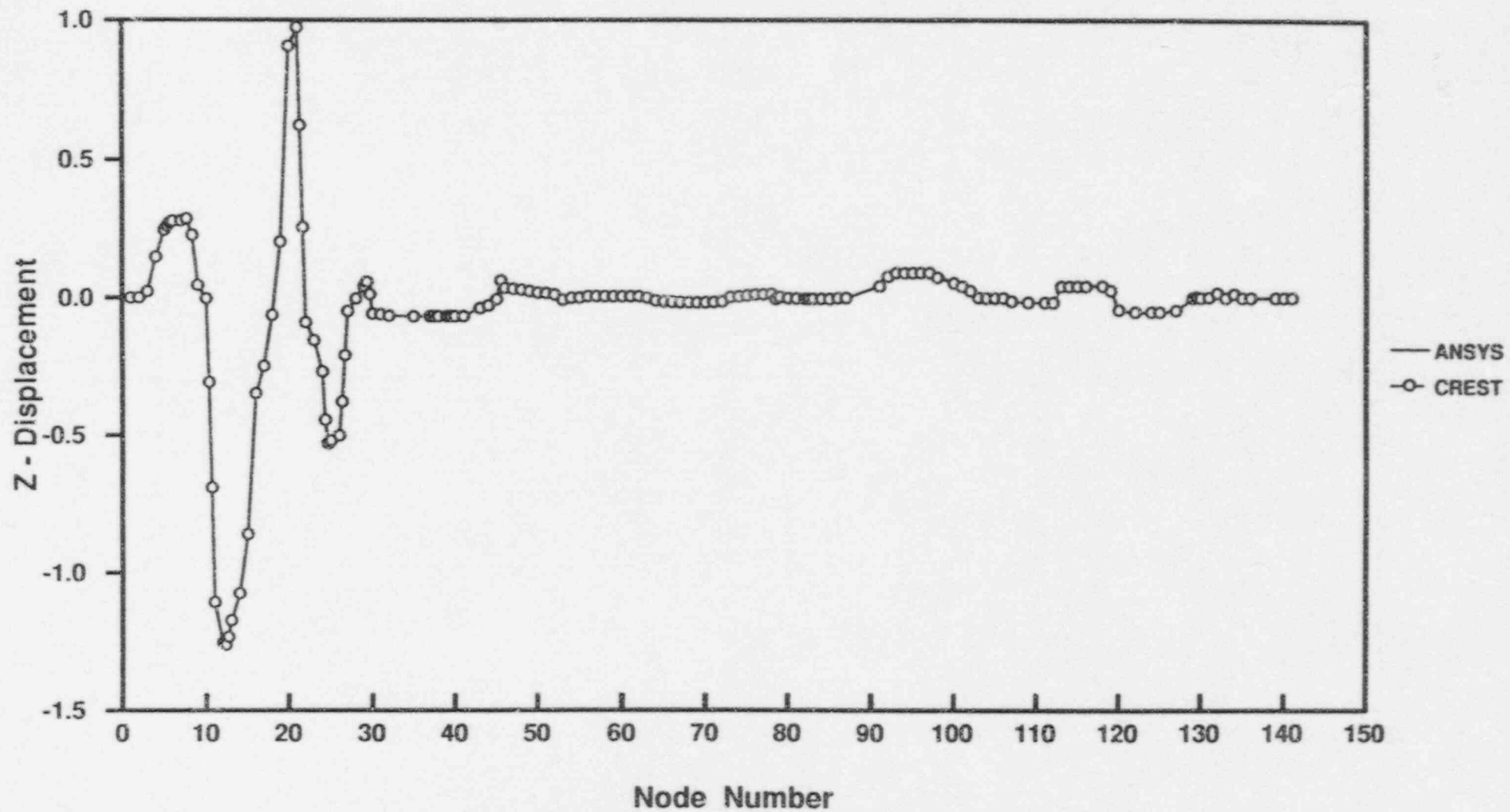
For relative locations of nodes please see the reference material

Mode 5



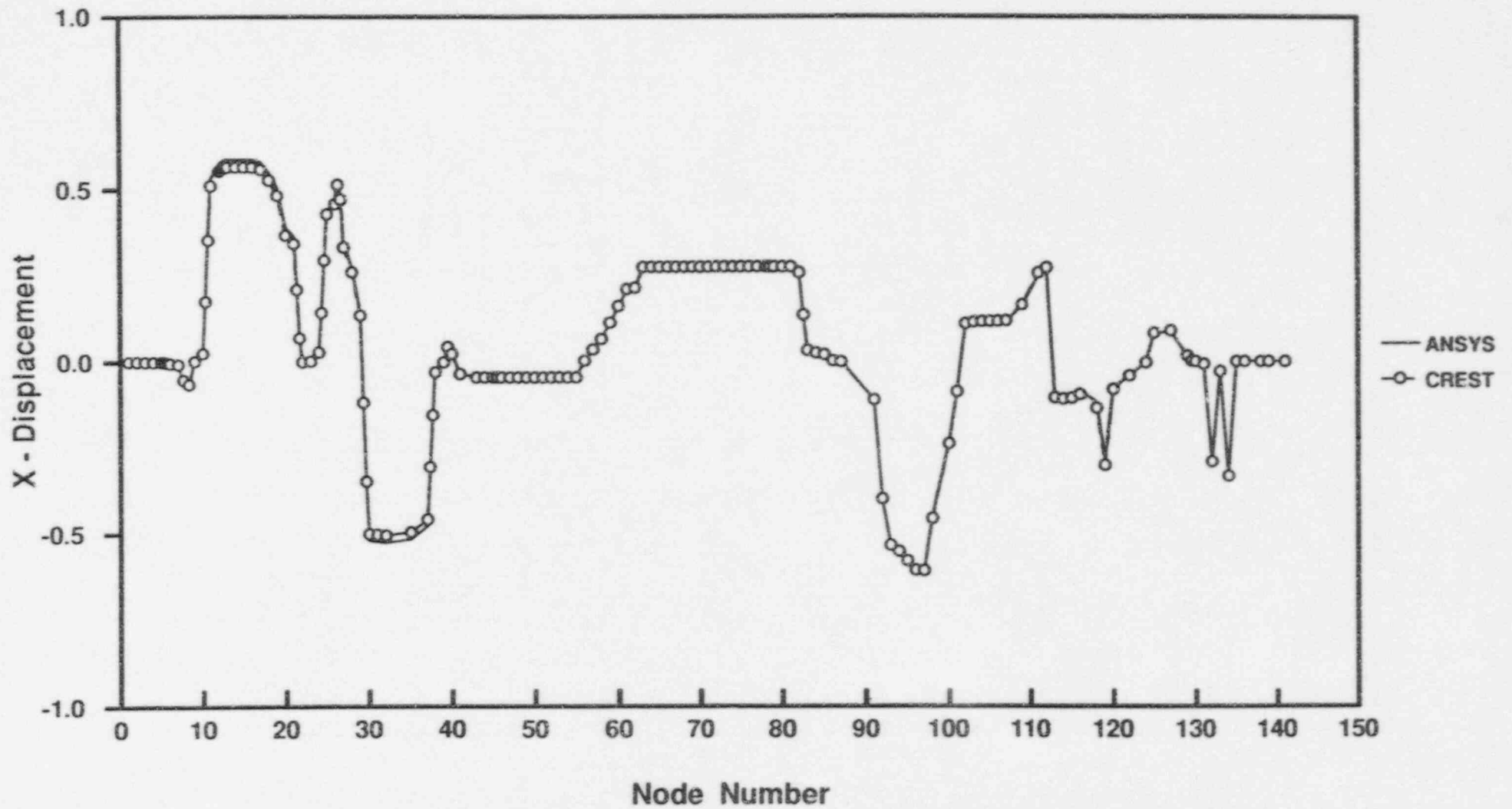
For relative locations of nodes please see the reference material

Mode 5



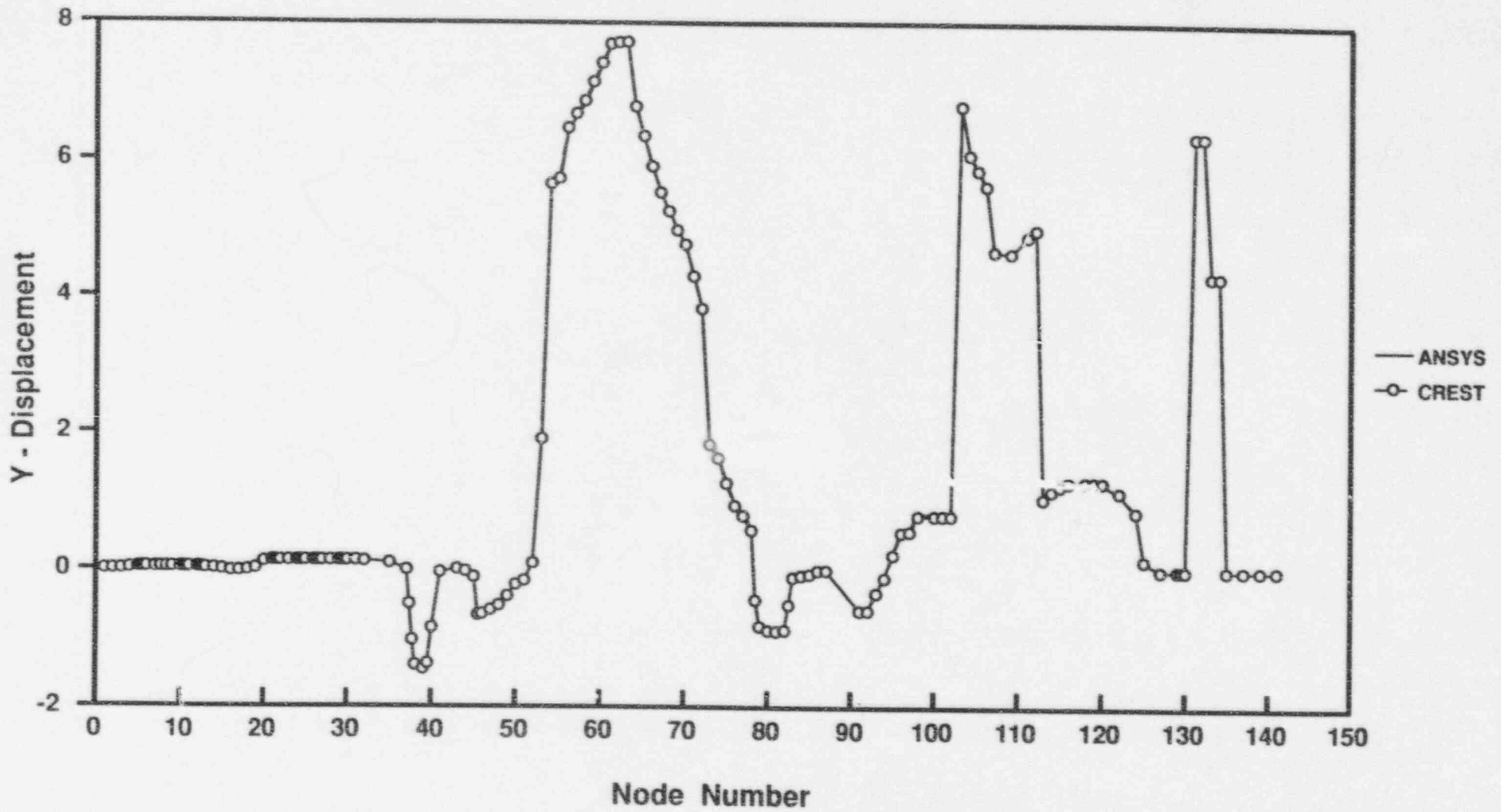
For relative locations of nodes please see the reference material

Mode 6



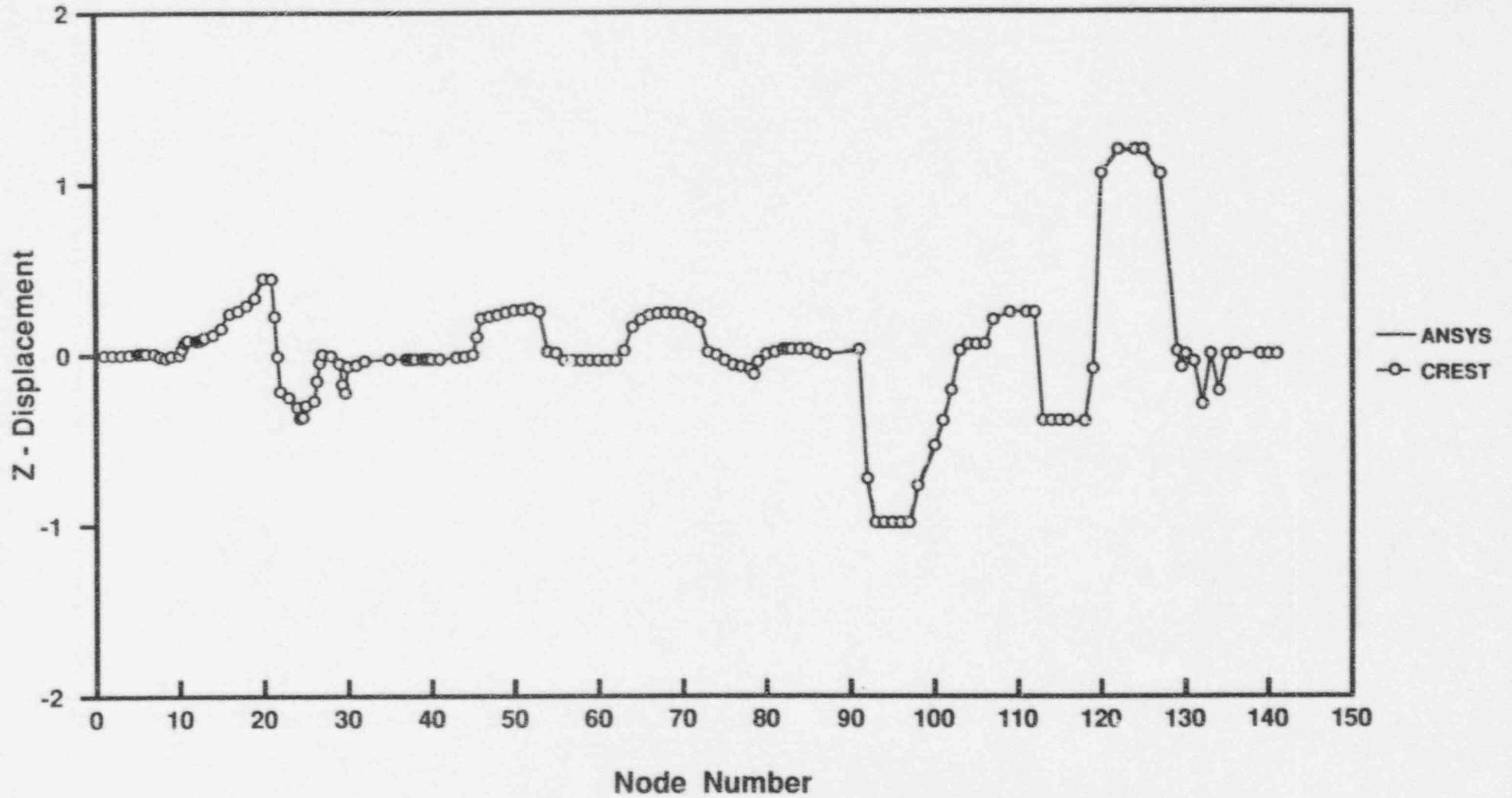
For relative locations of nodes please see the reference material

Mode 6



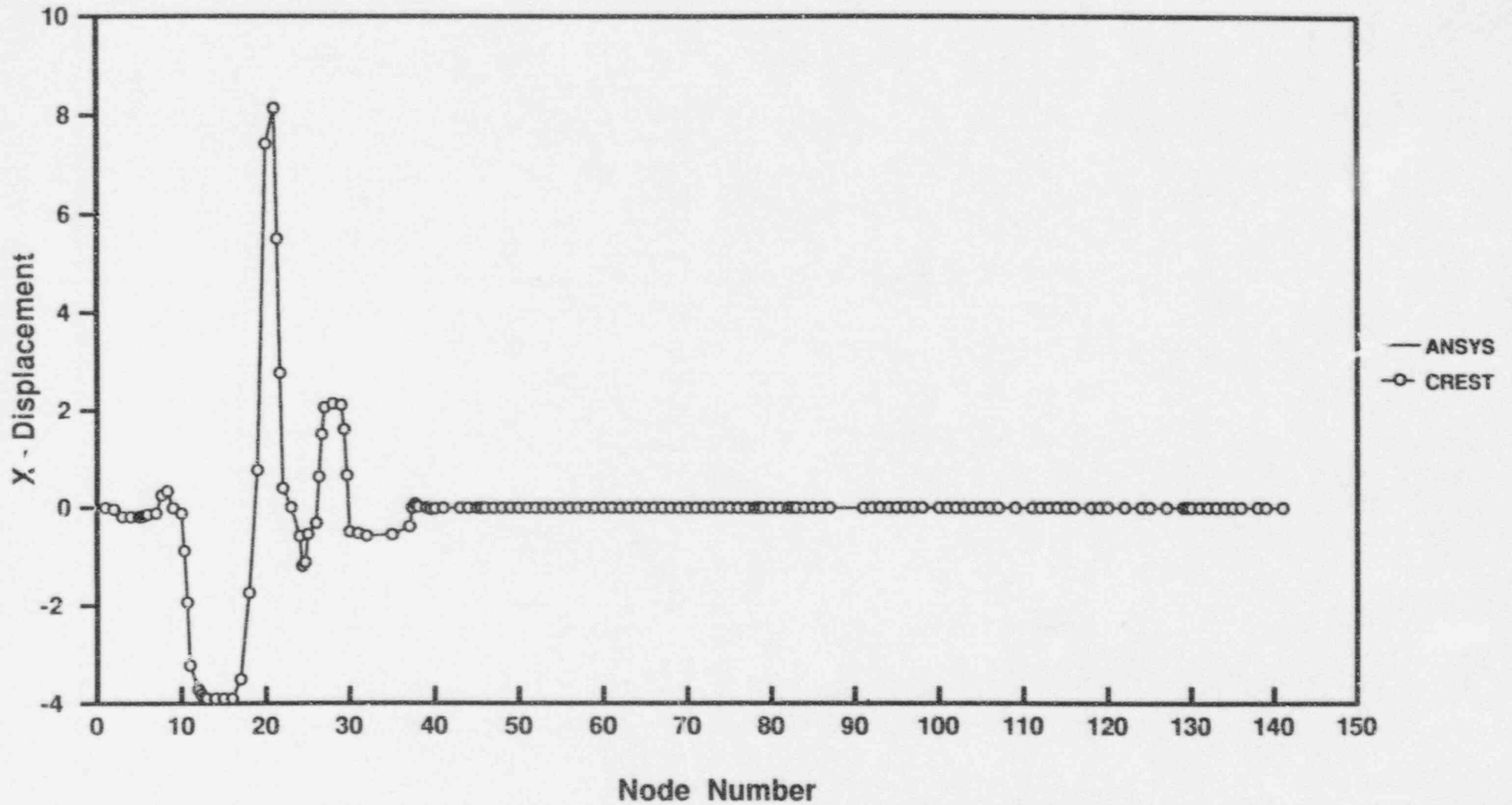
For relative locations of nodes please see the reference material

Mode 6



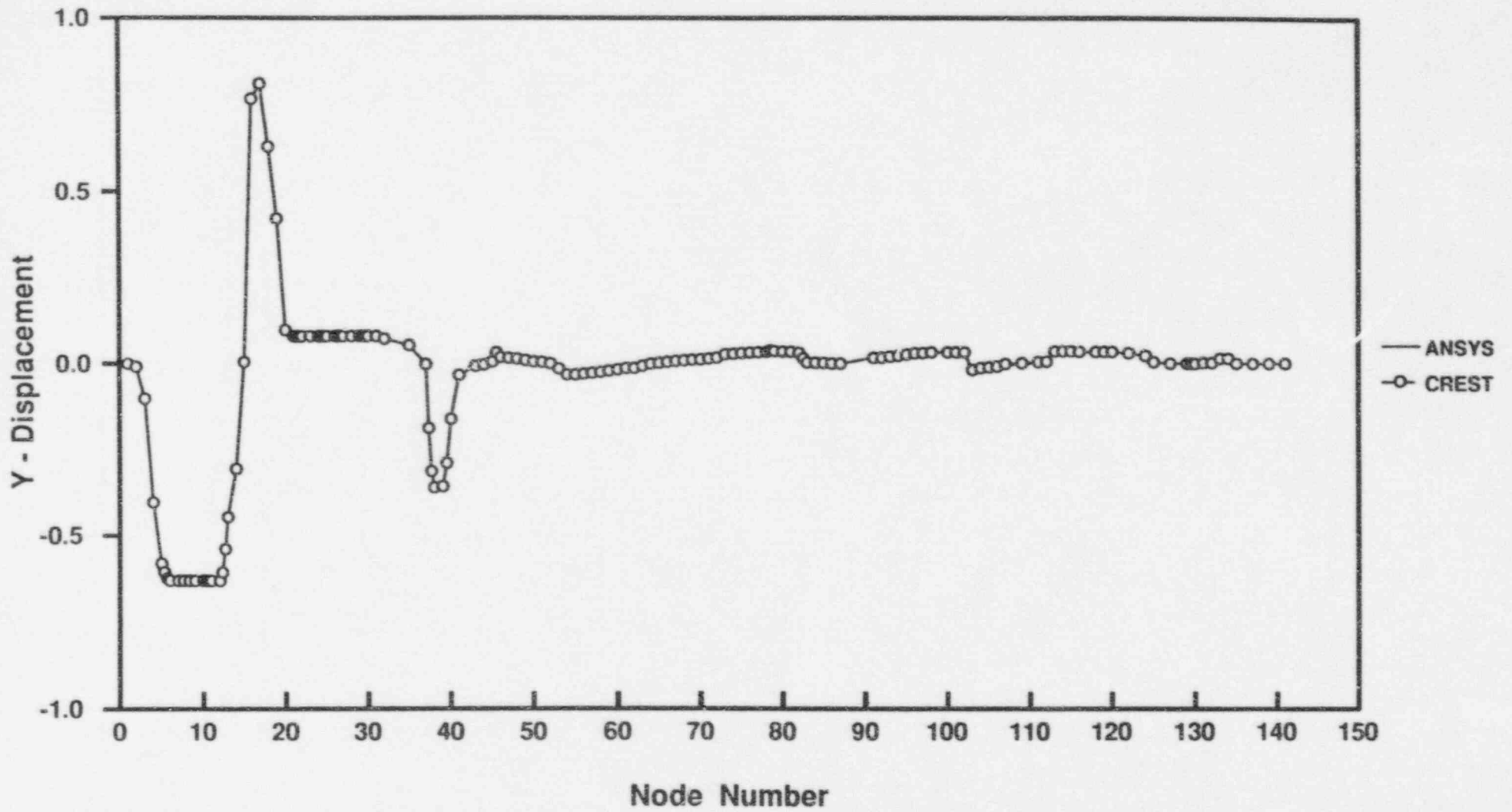
For relative locations of nodes please see the reference material

Mode 7



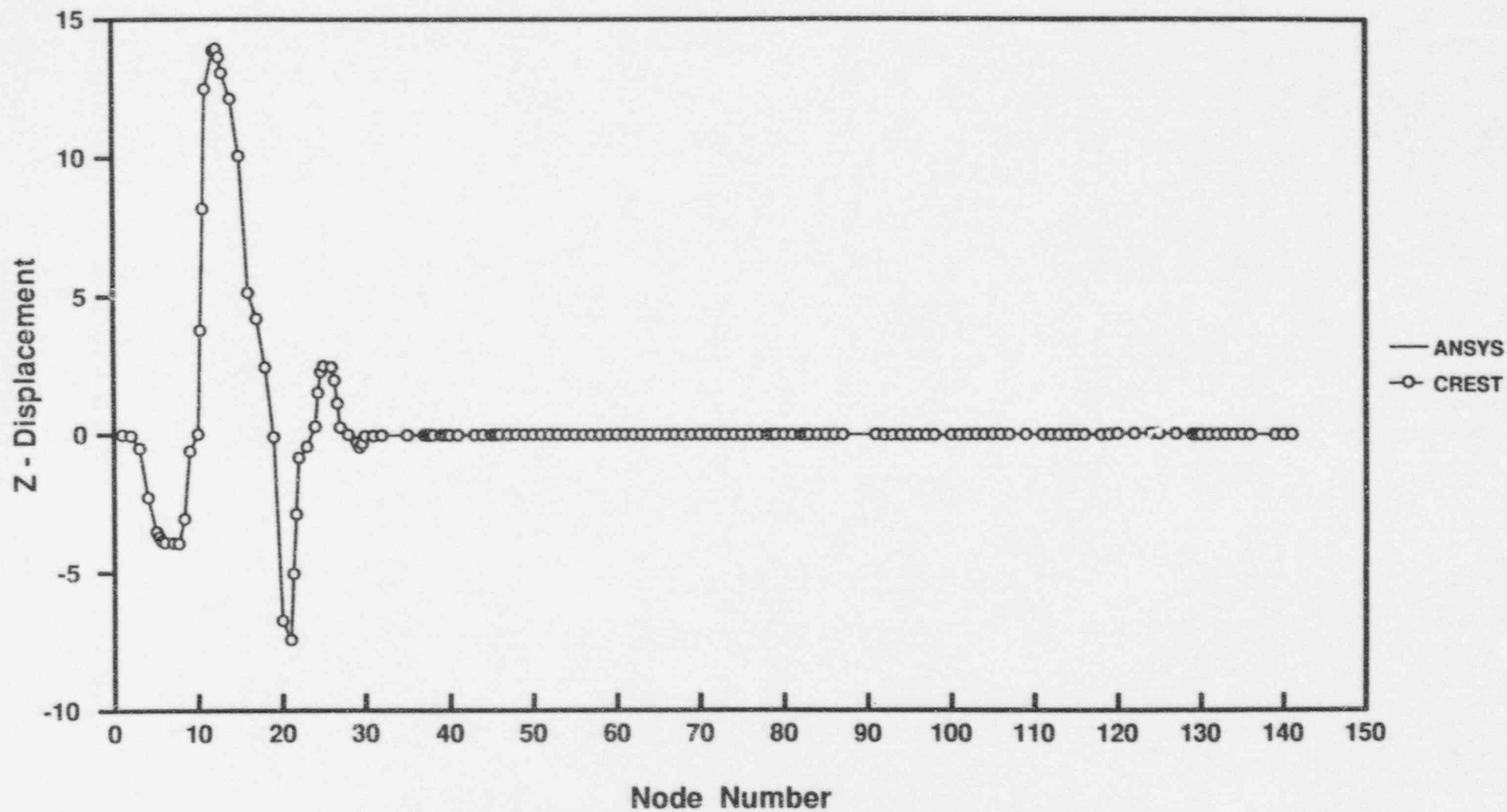
For relative locations of nodes please see the reference material

Mode 7



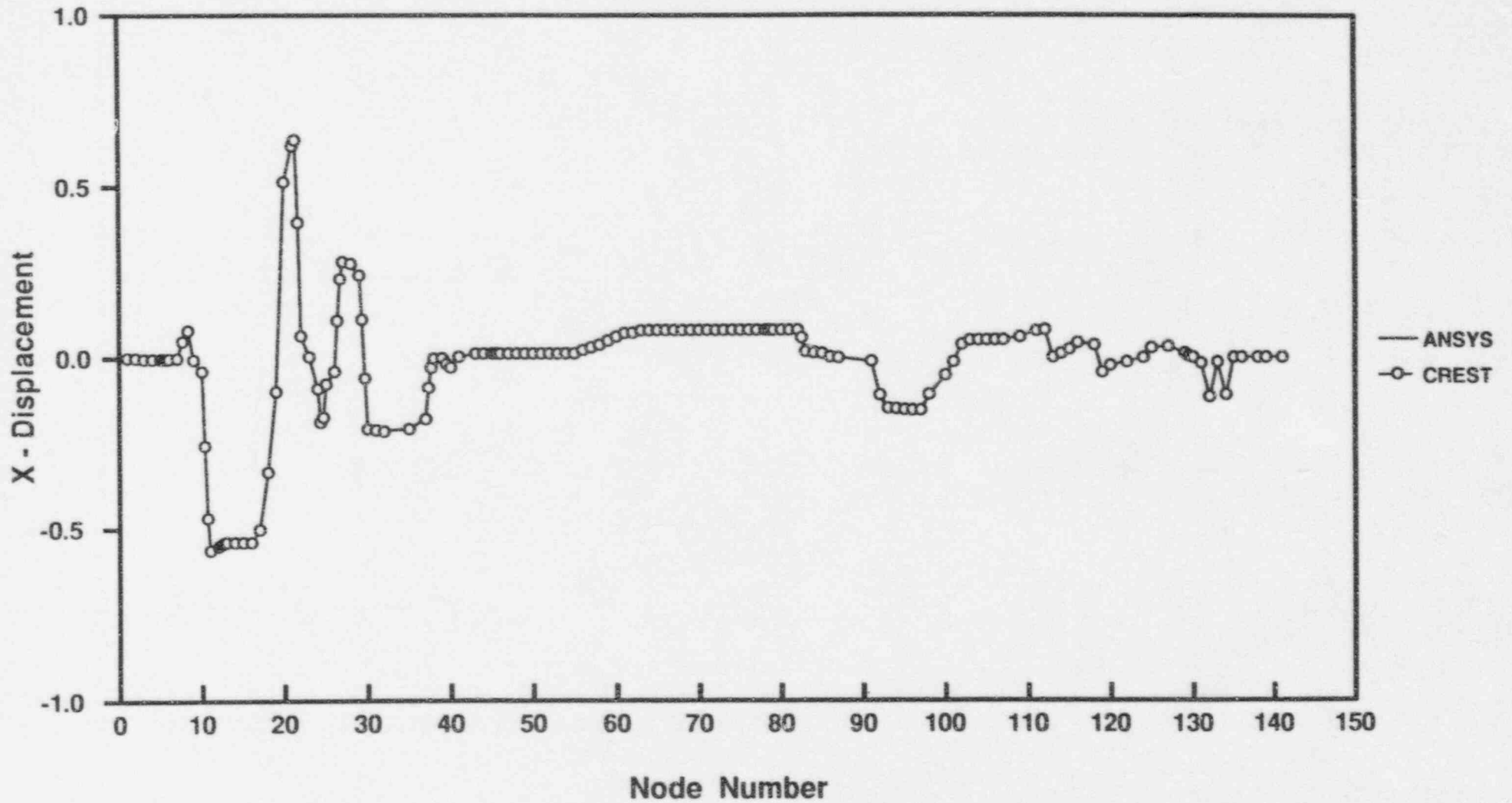
For relative locations of nodes please see the reference material

Mode 7



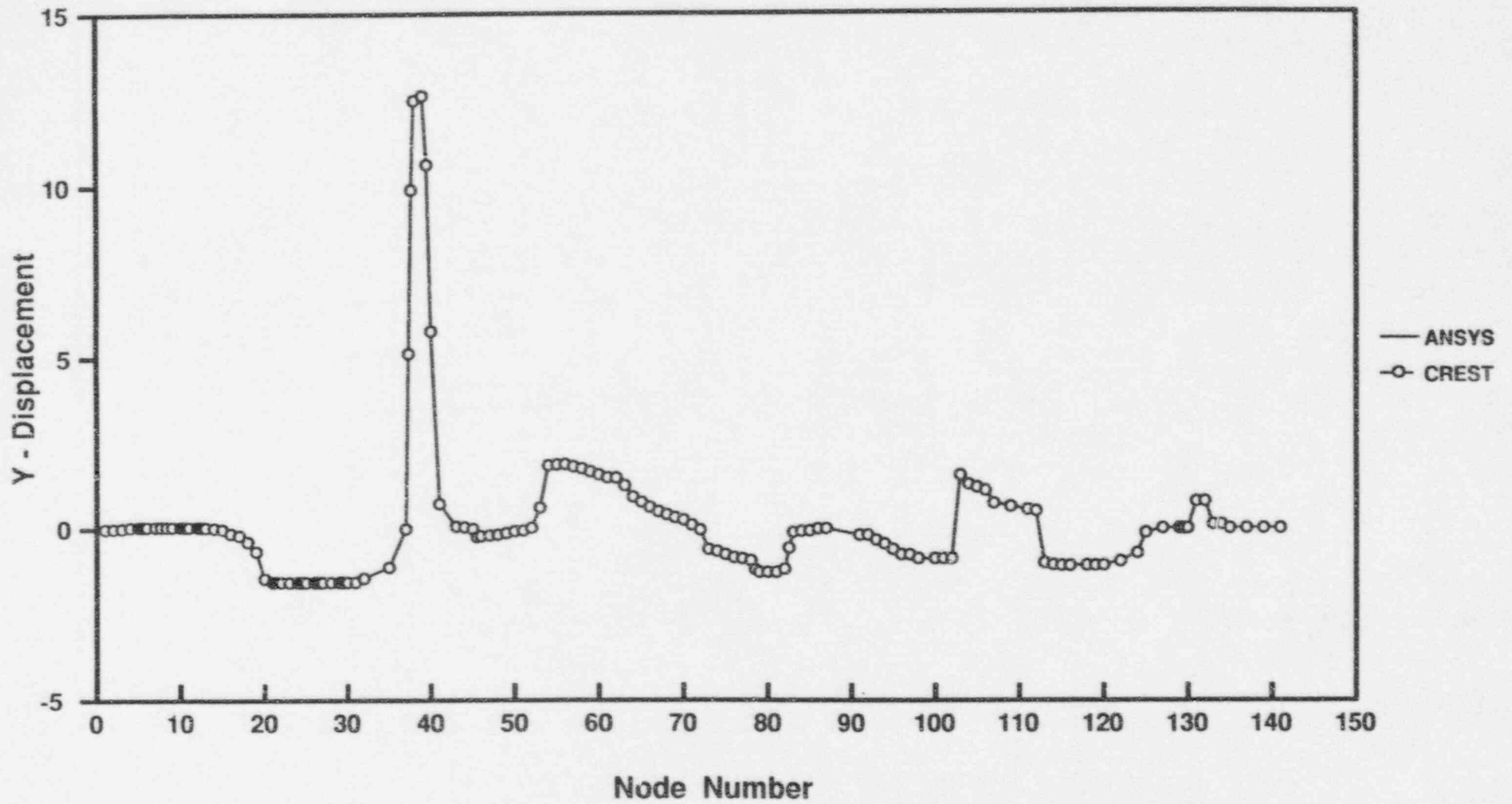
For relative locations of nodes please see the reference material

Mode 8



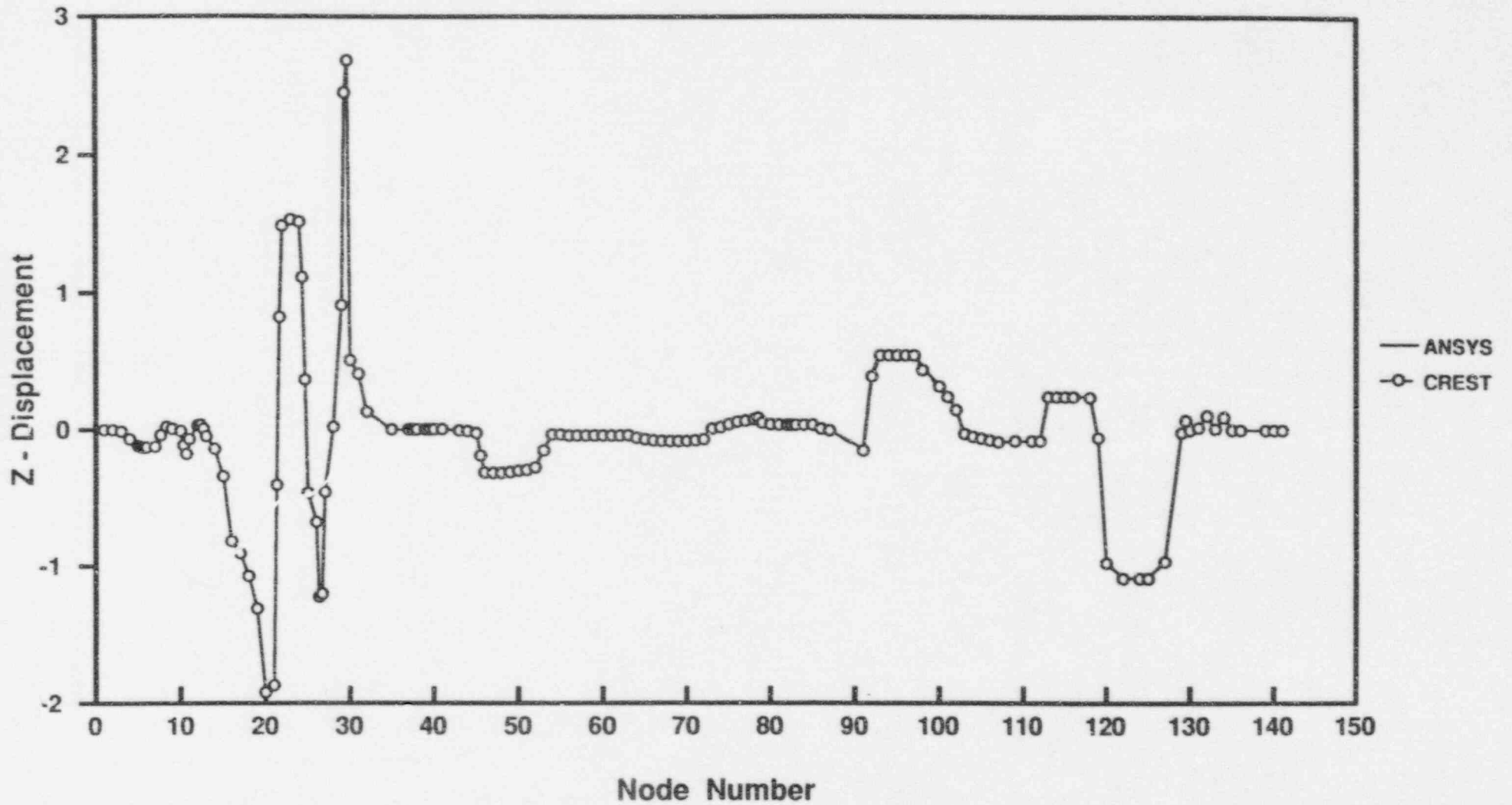
For relative locations of nodes please see the reference material

Mode 8



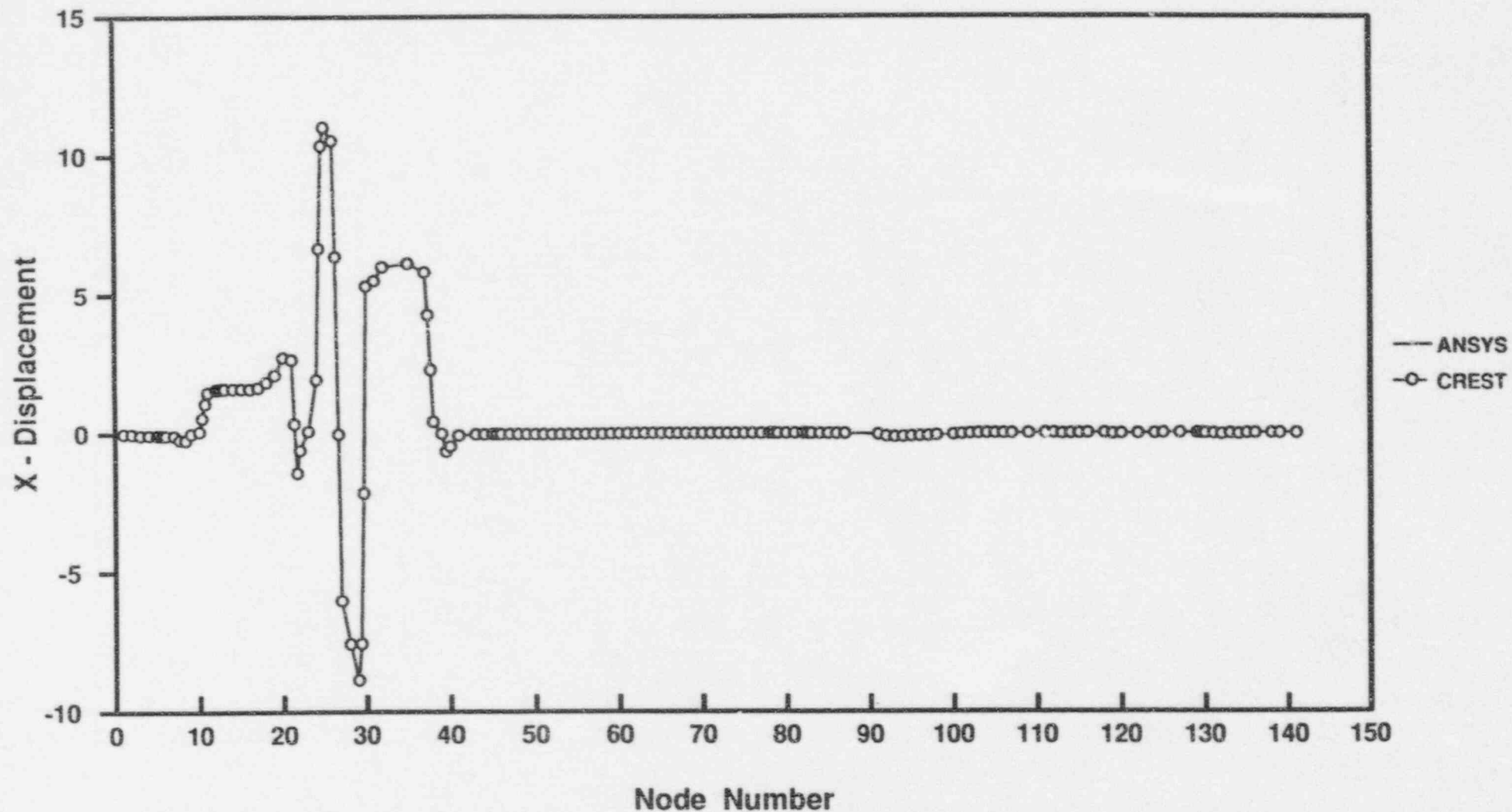
For relative locations of nodes please see the reference material

Mode 8



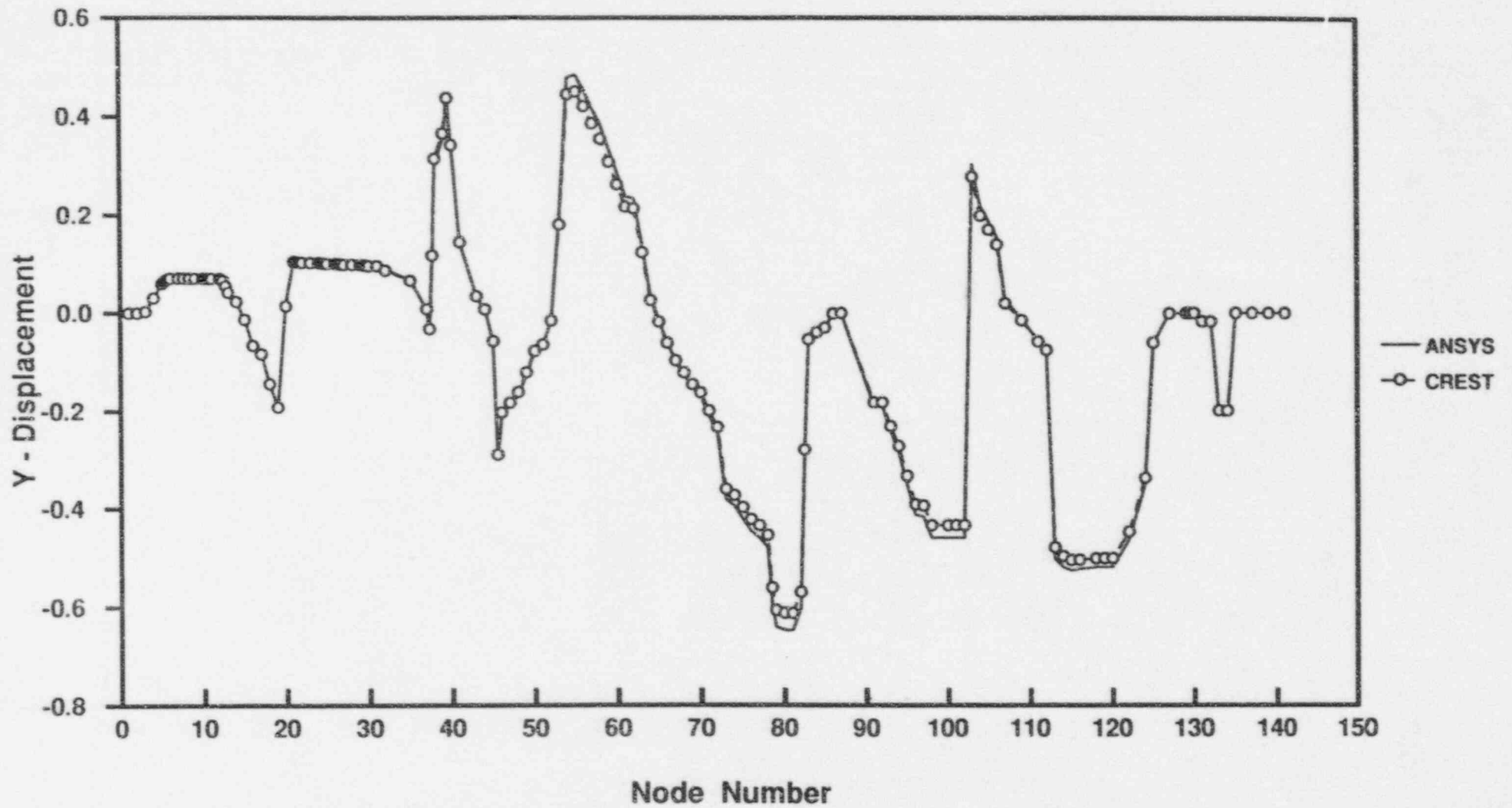
For relative locations of nodes please see the reference material

Mode 9



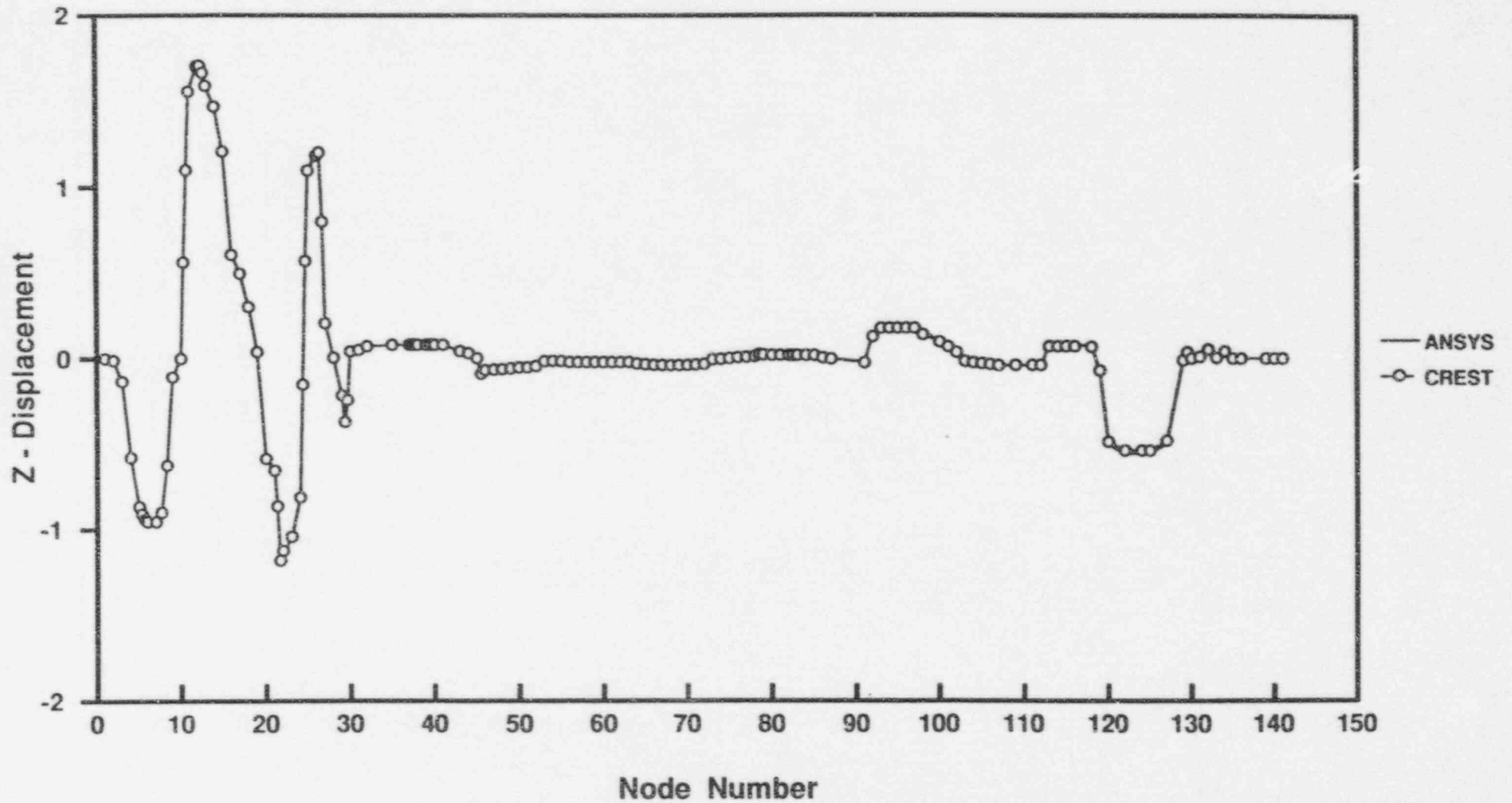
For relative locations of nodes please see the reference material

Mode 9



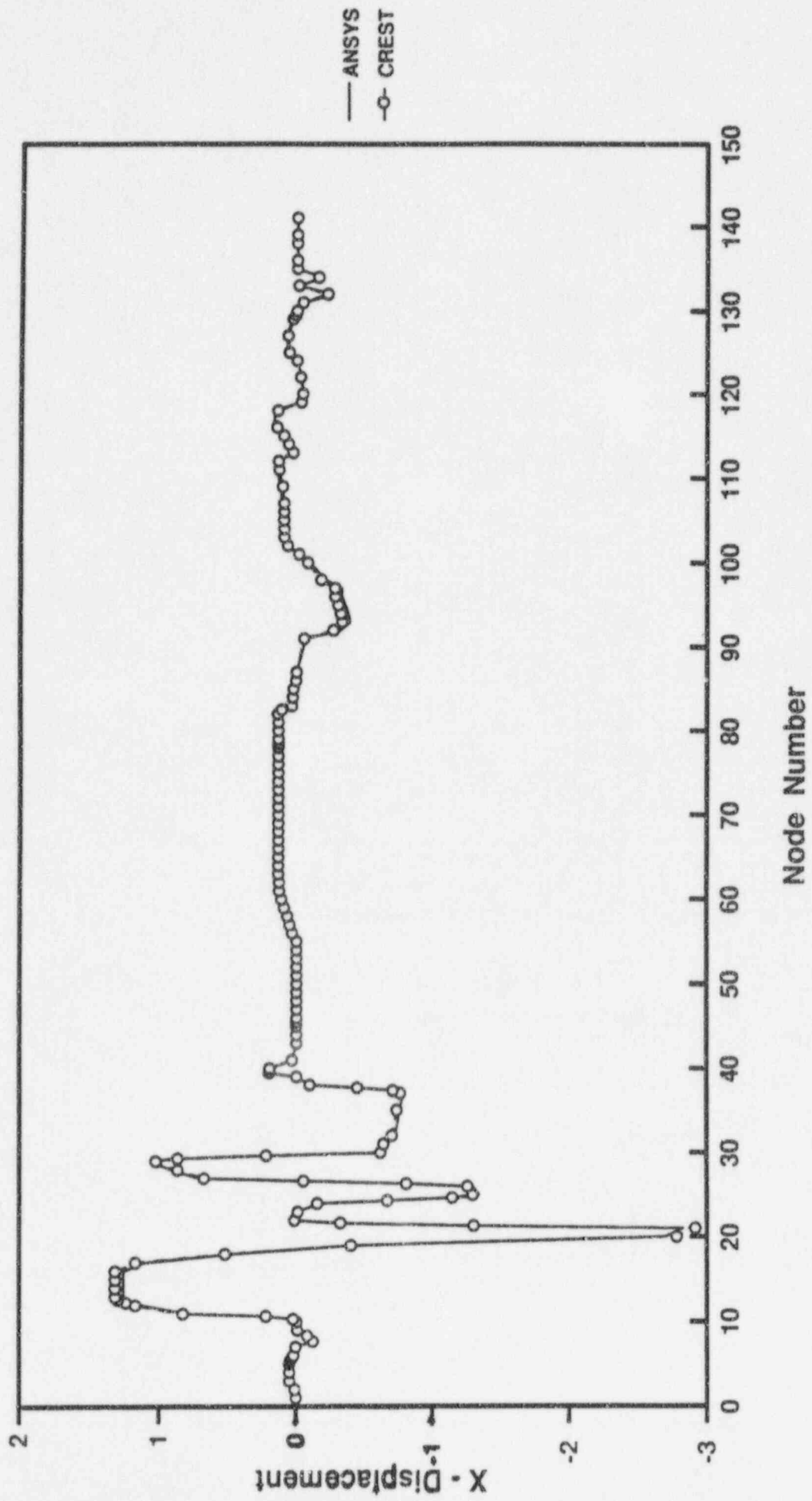
For relative locations of nodes please see the reference material

Mode 9



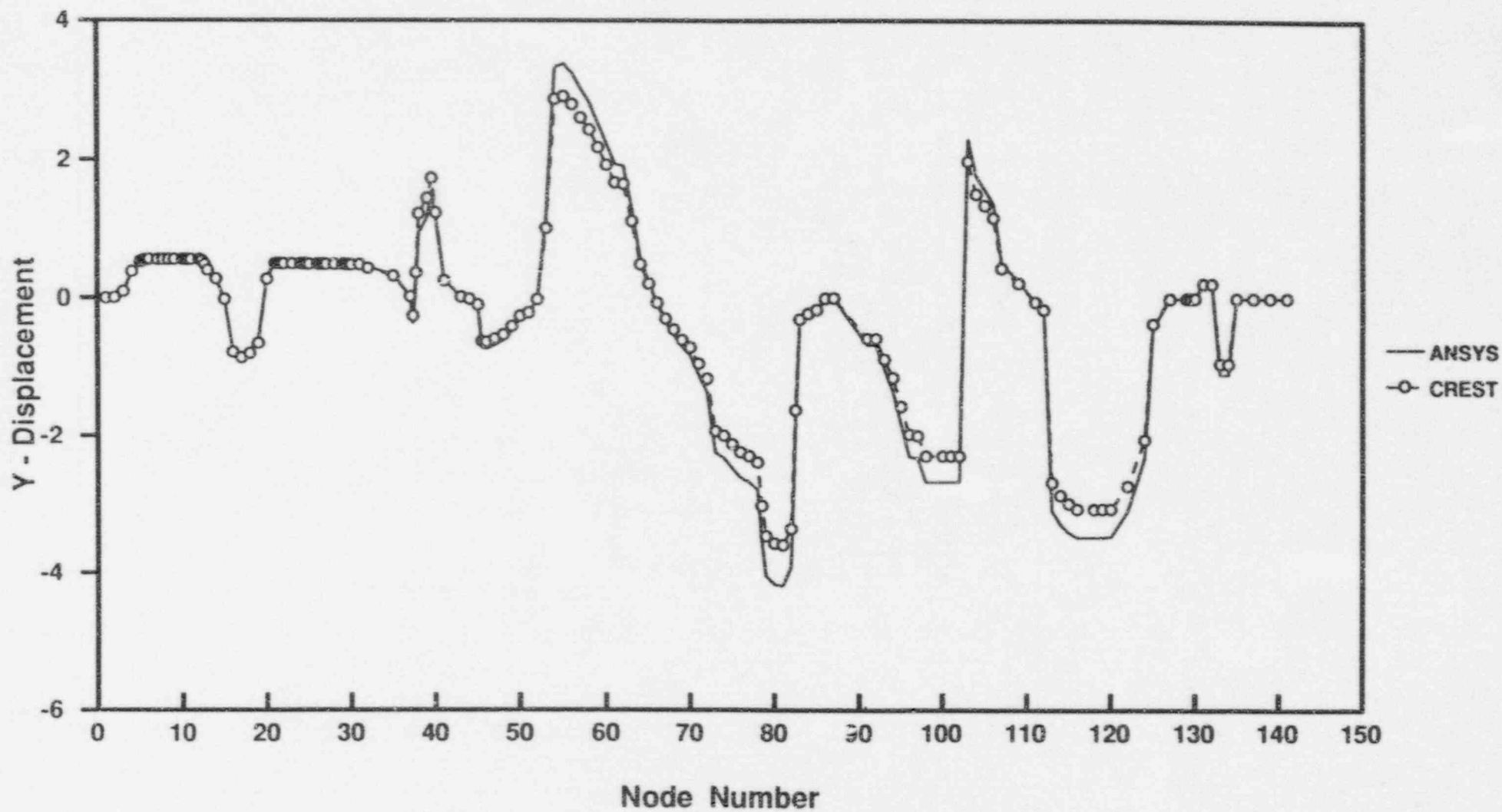
For relative locations of nodes please see the reference material

Mode 10



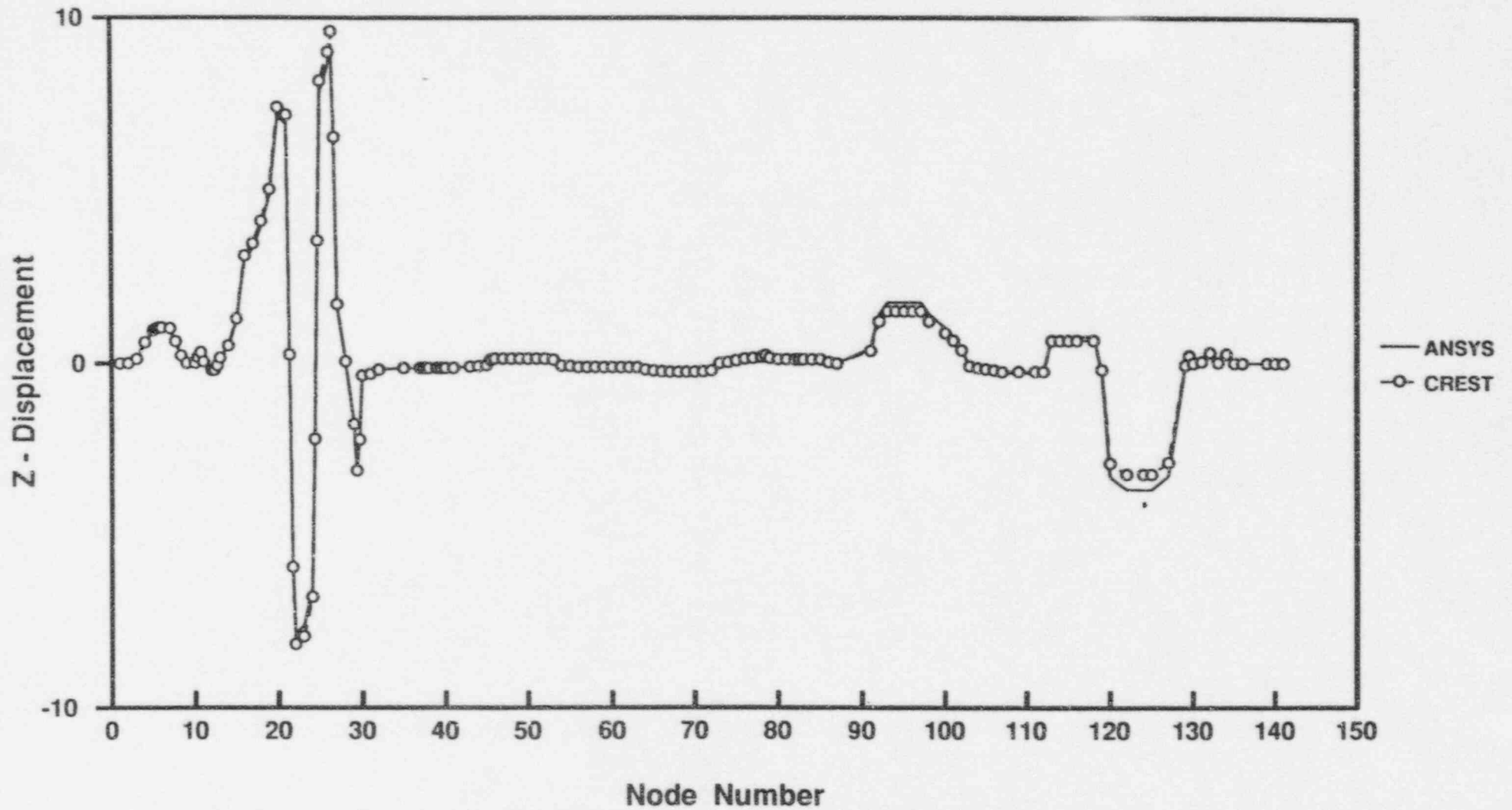
For relative locations of nodes please see the reference material

Mode 10



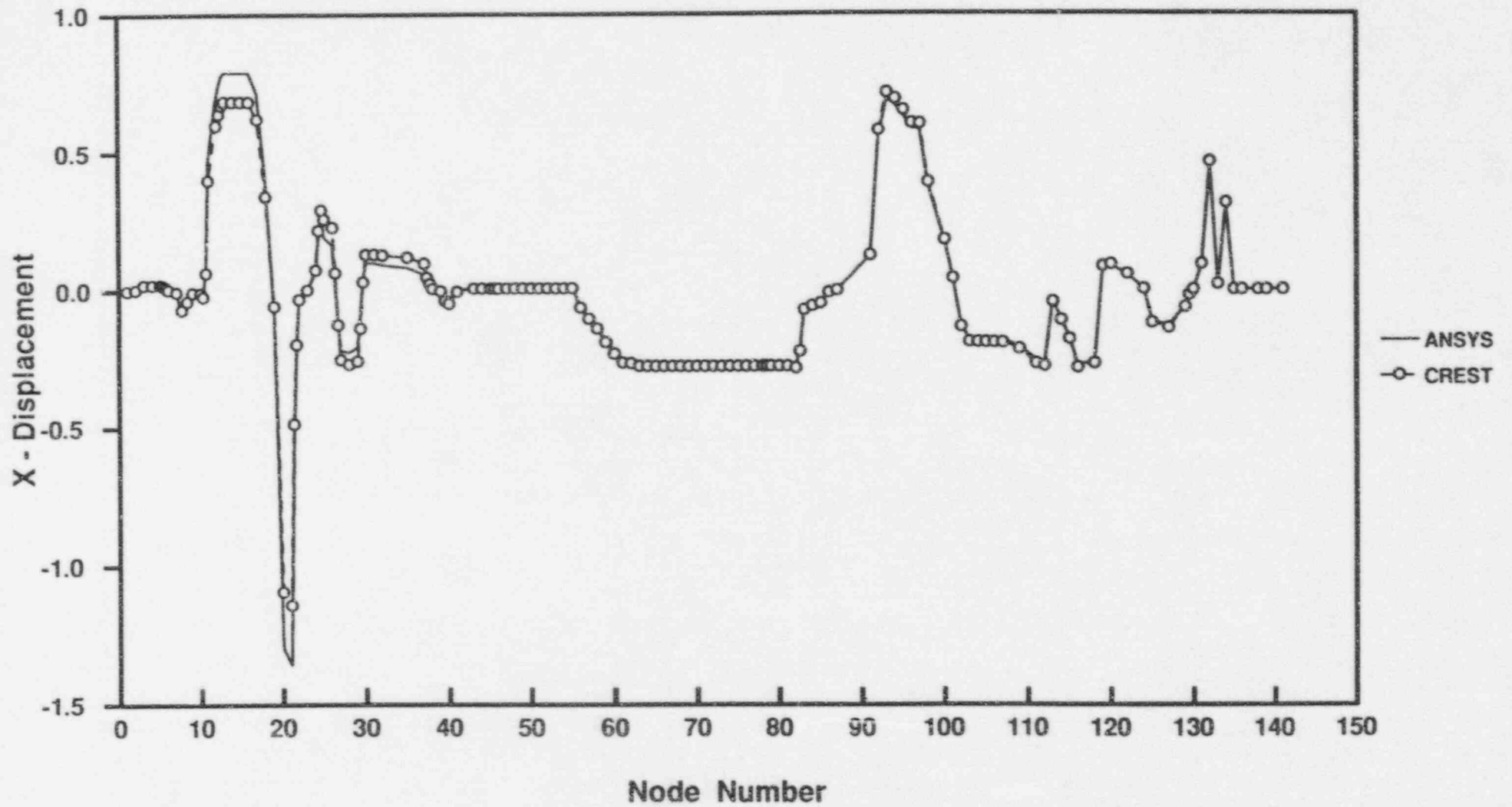
For relative locations of nodes please see the reference material

Mode 10



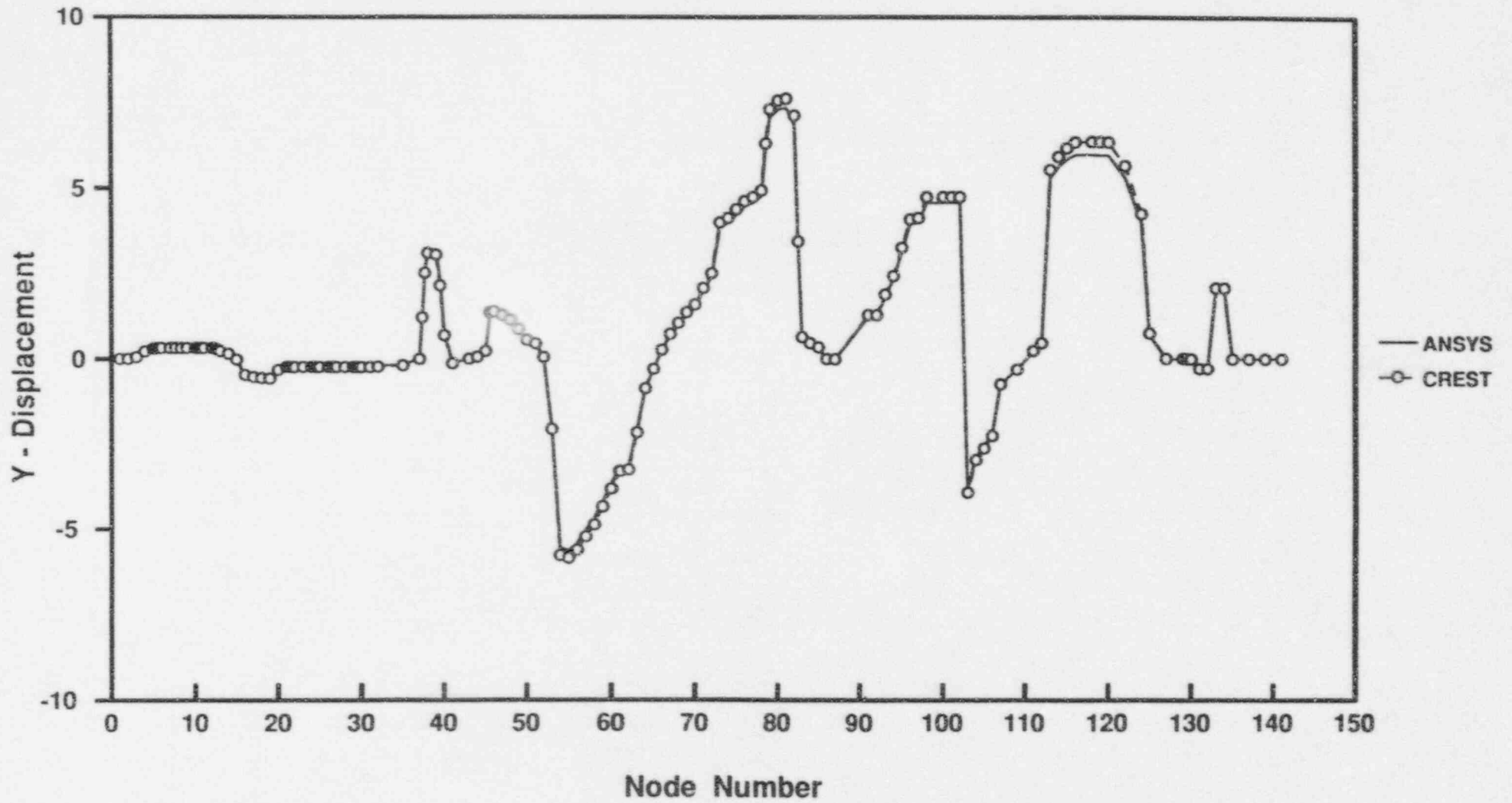
For relative locations of nodes please see the reference material

Mode 11



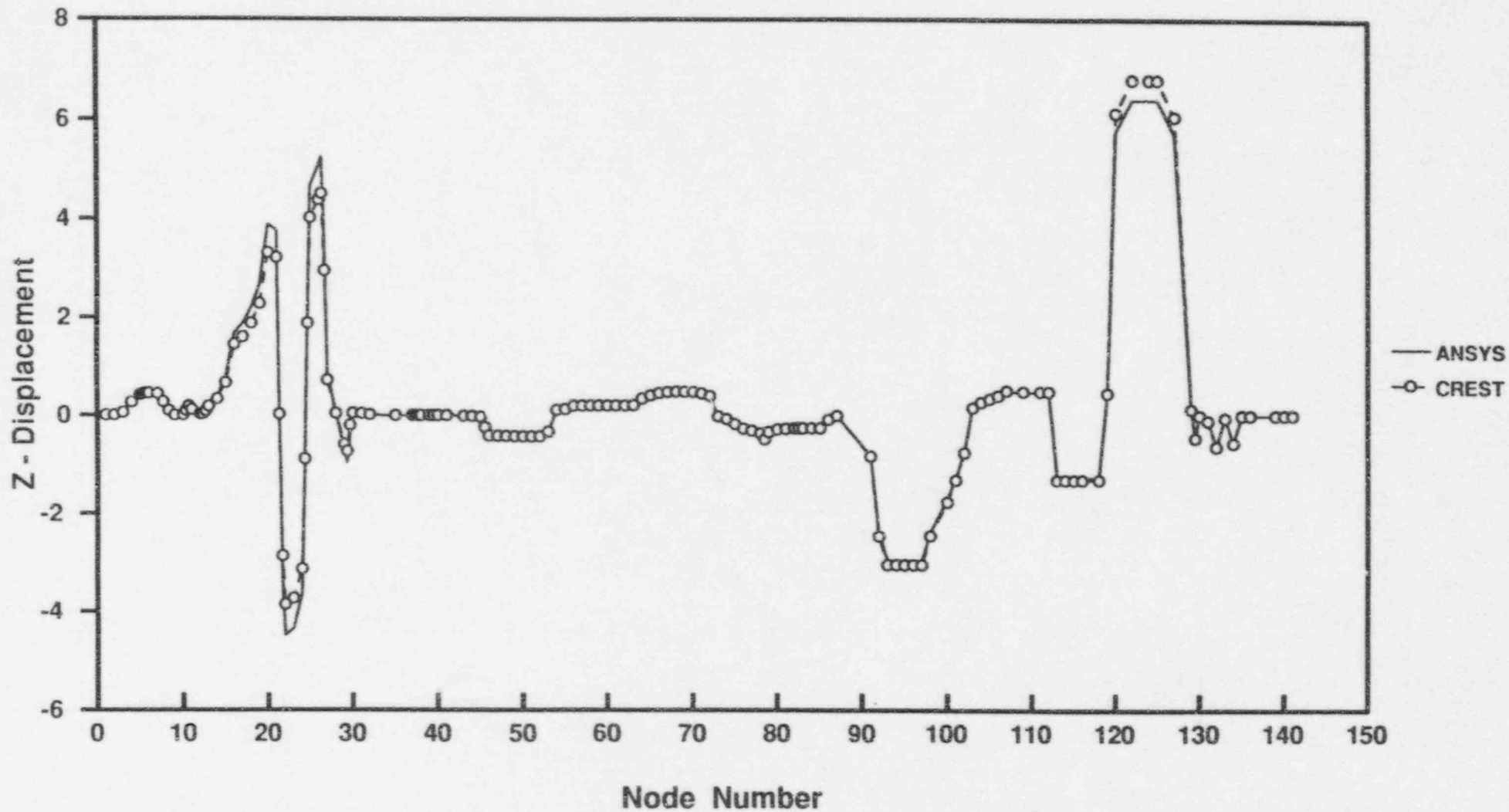
For relative locations of nodes please see the reference material

Mode 11



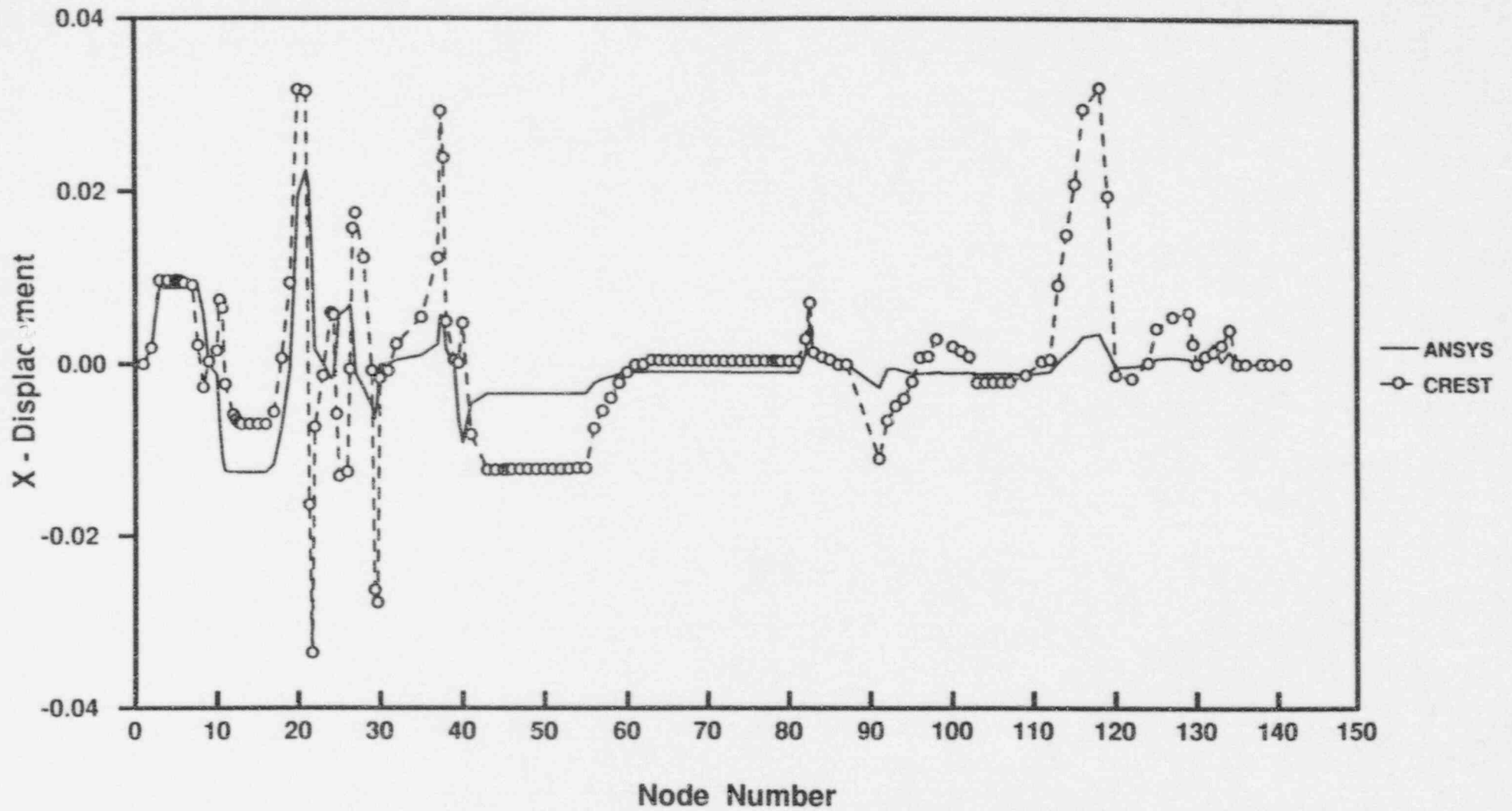
For relative locations of nodes please see the reference material

Mode 11



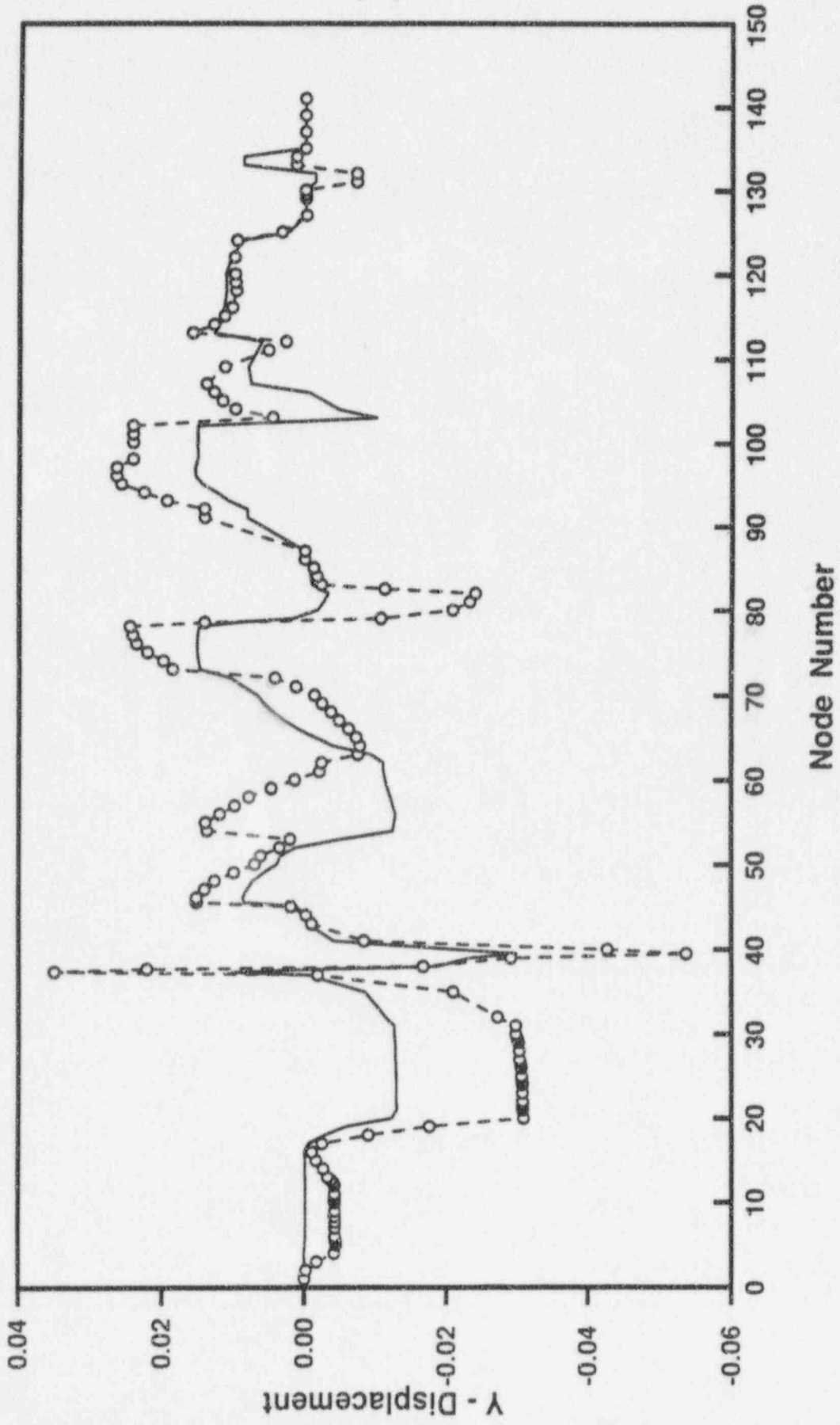
For relative locations of nodes please see the reference material

Mode 12



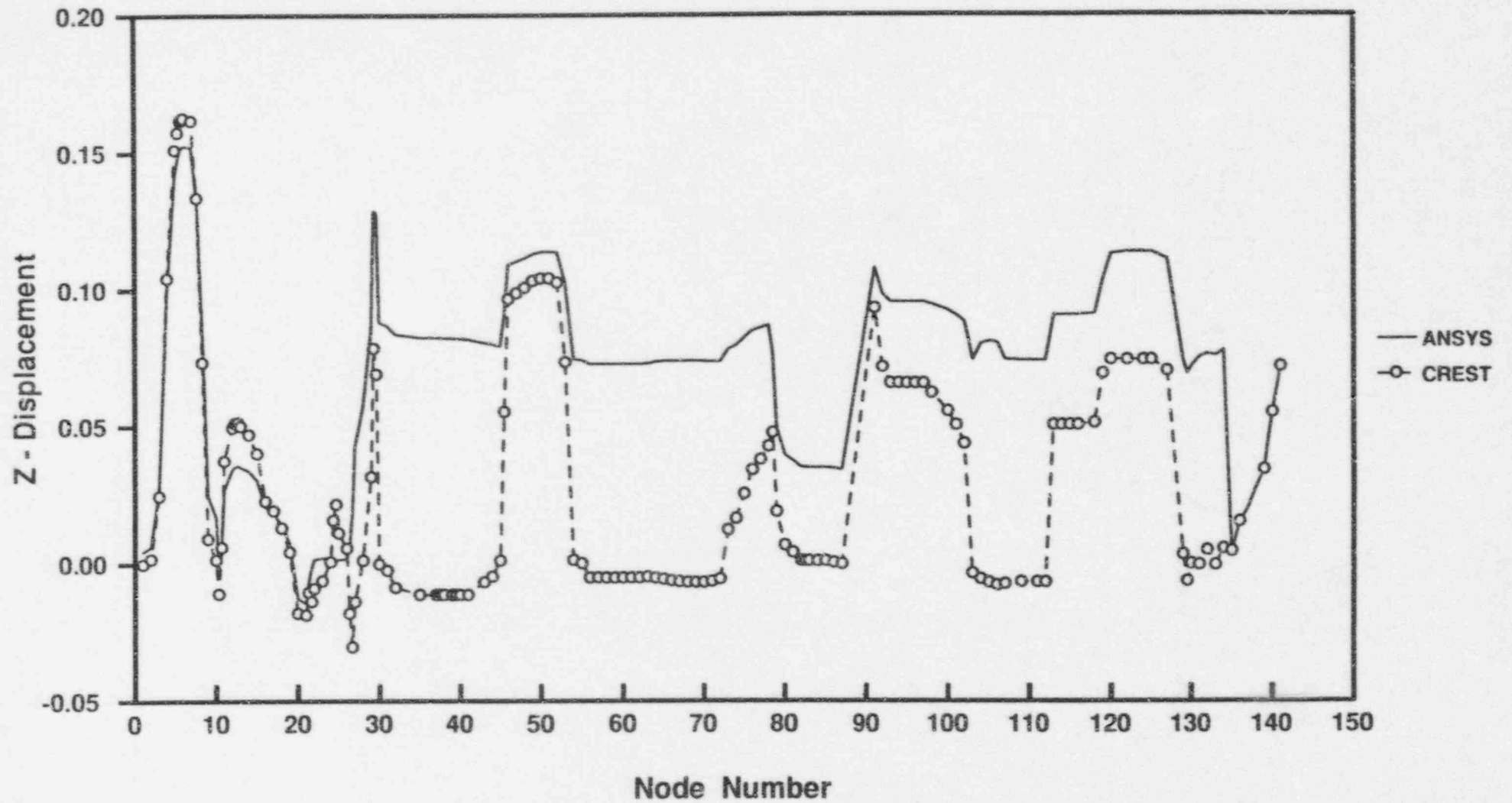
For relative locations of nodes please see the reference material

Mode 12



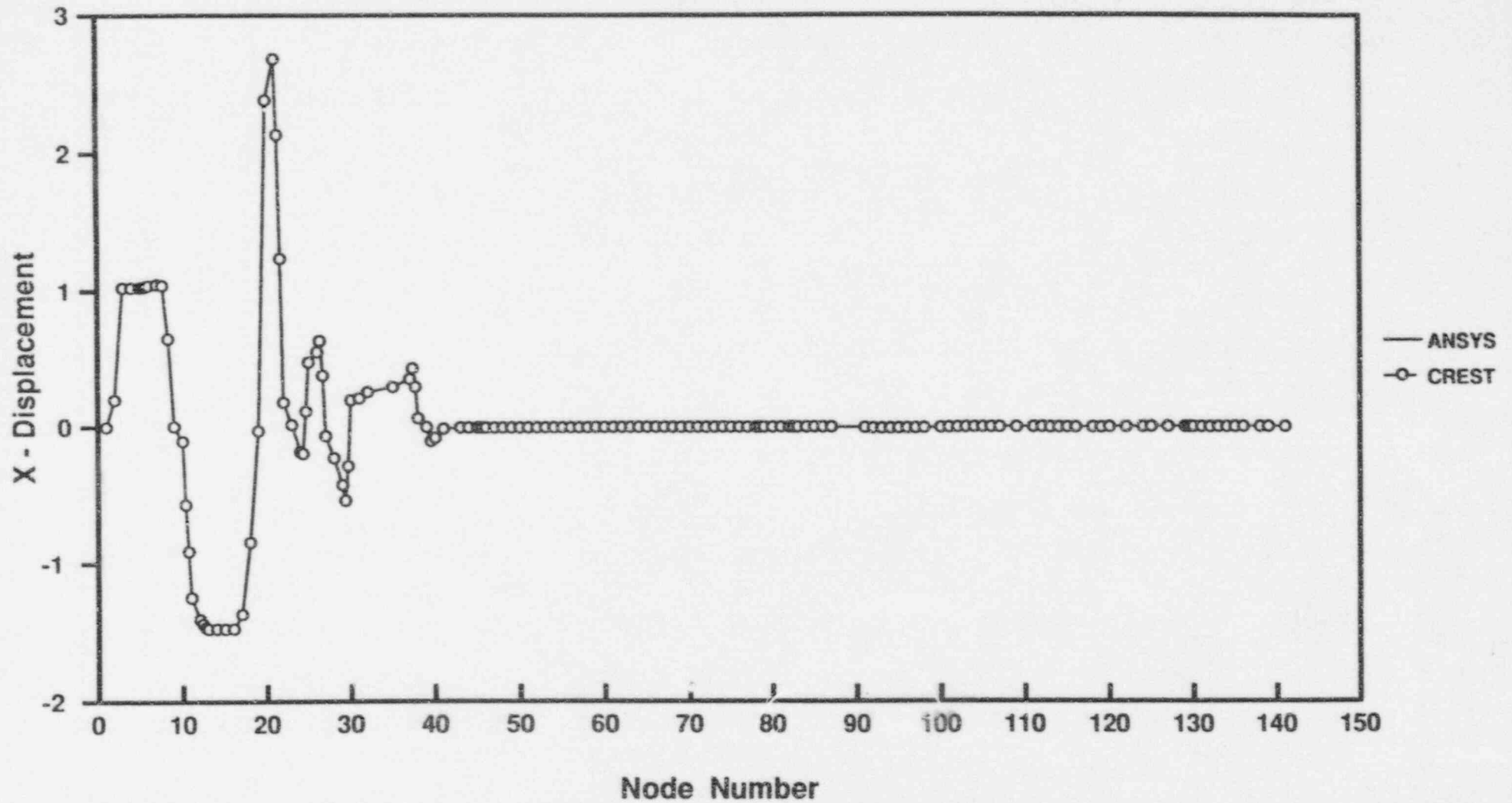
For relative locations of nodes please see the reference material

Mode 12



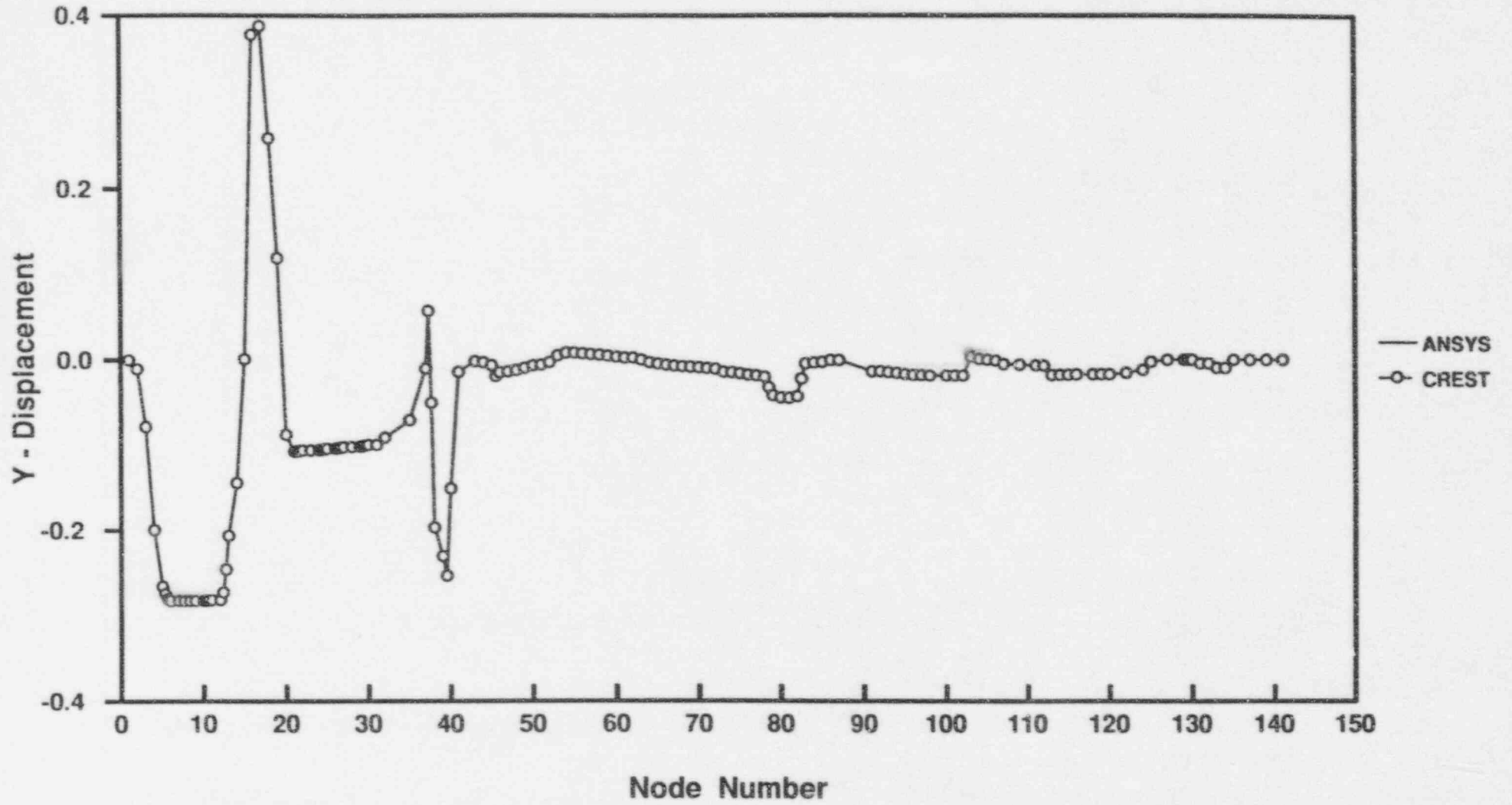
For relative locations of nodes please see the reference material

Mode 13



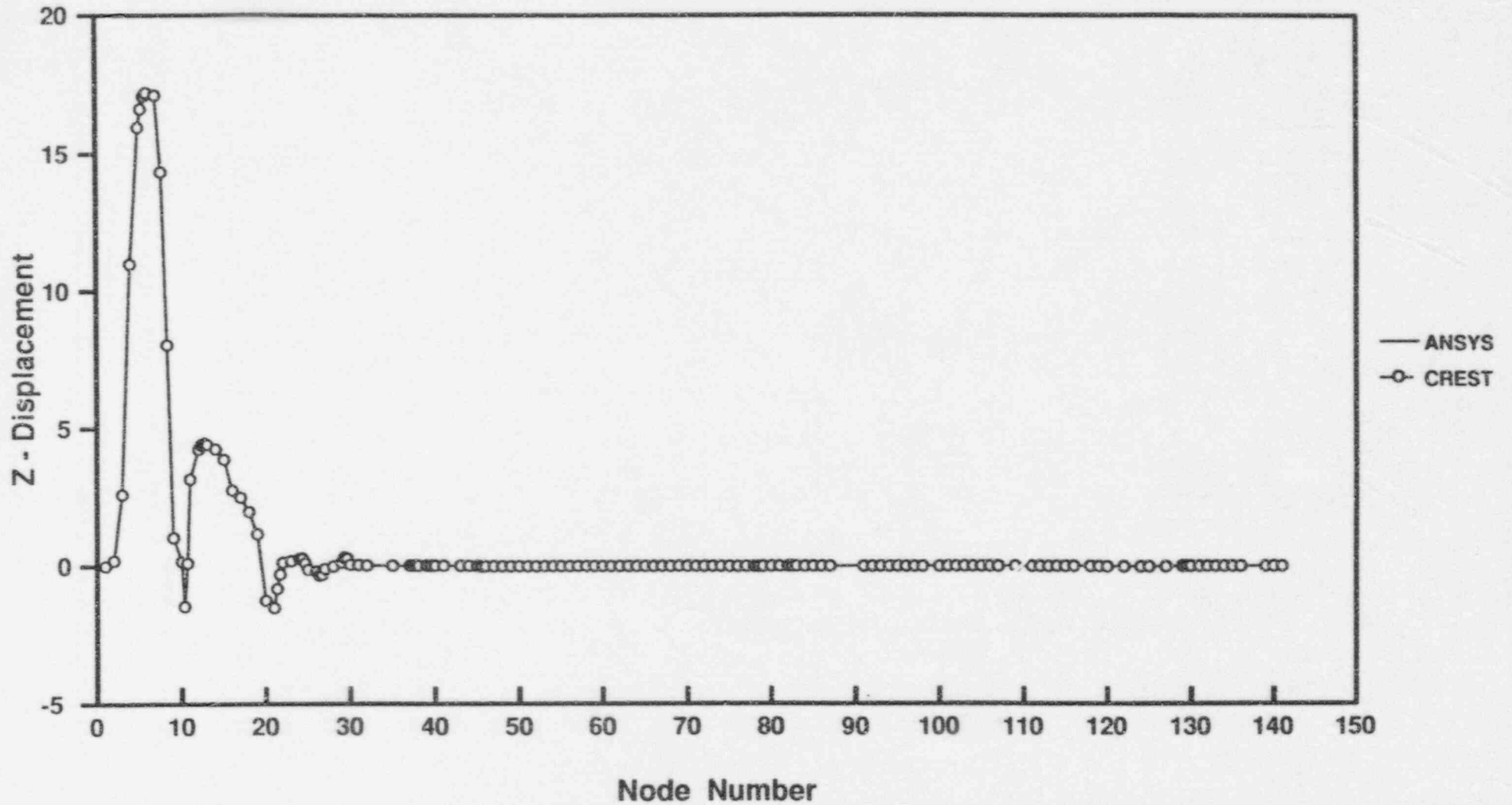
For relative locations of nodes please see the reference material

Mode 13



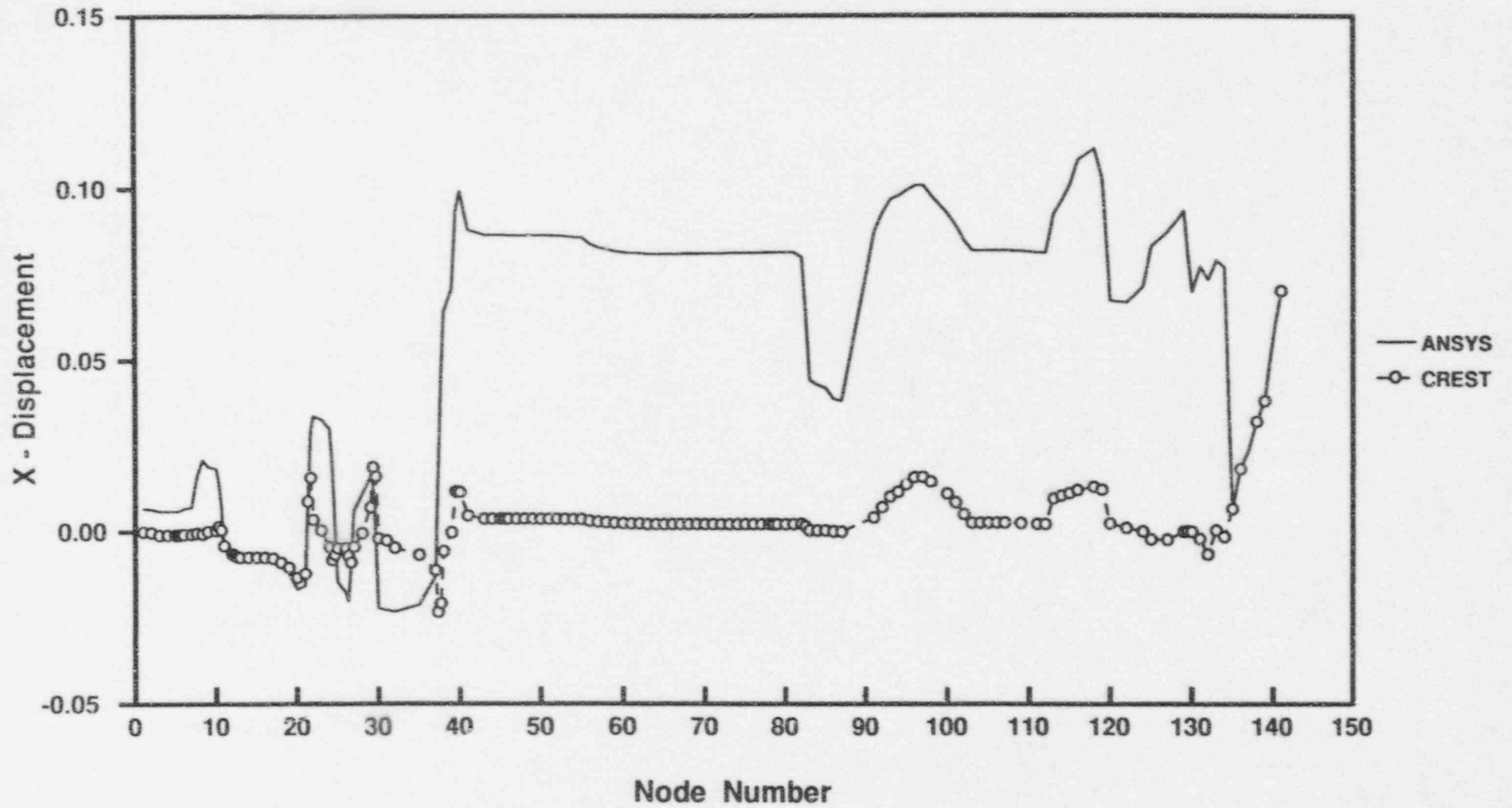
For relative locations of nodes please see the reference material

Mode 13



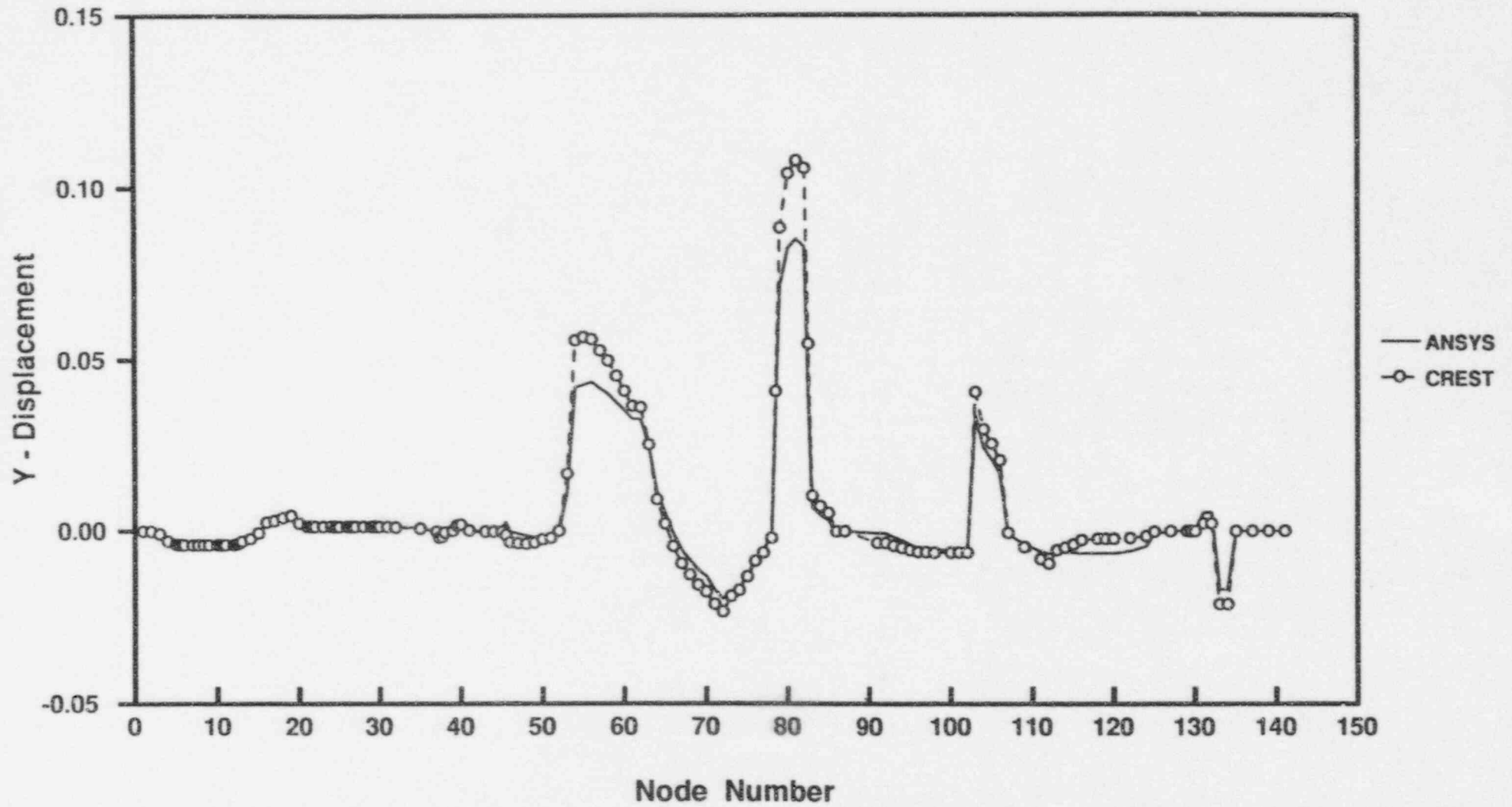
For relative locations of nodes please see the reference material

Mode 14



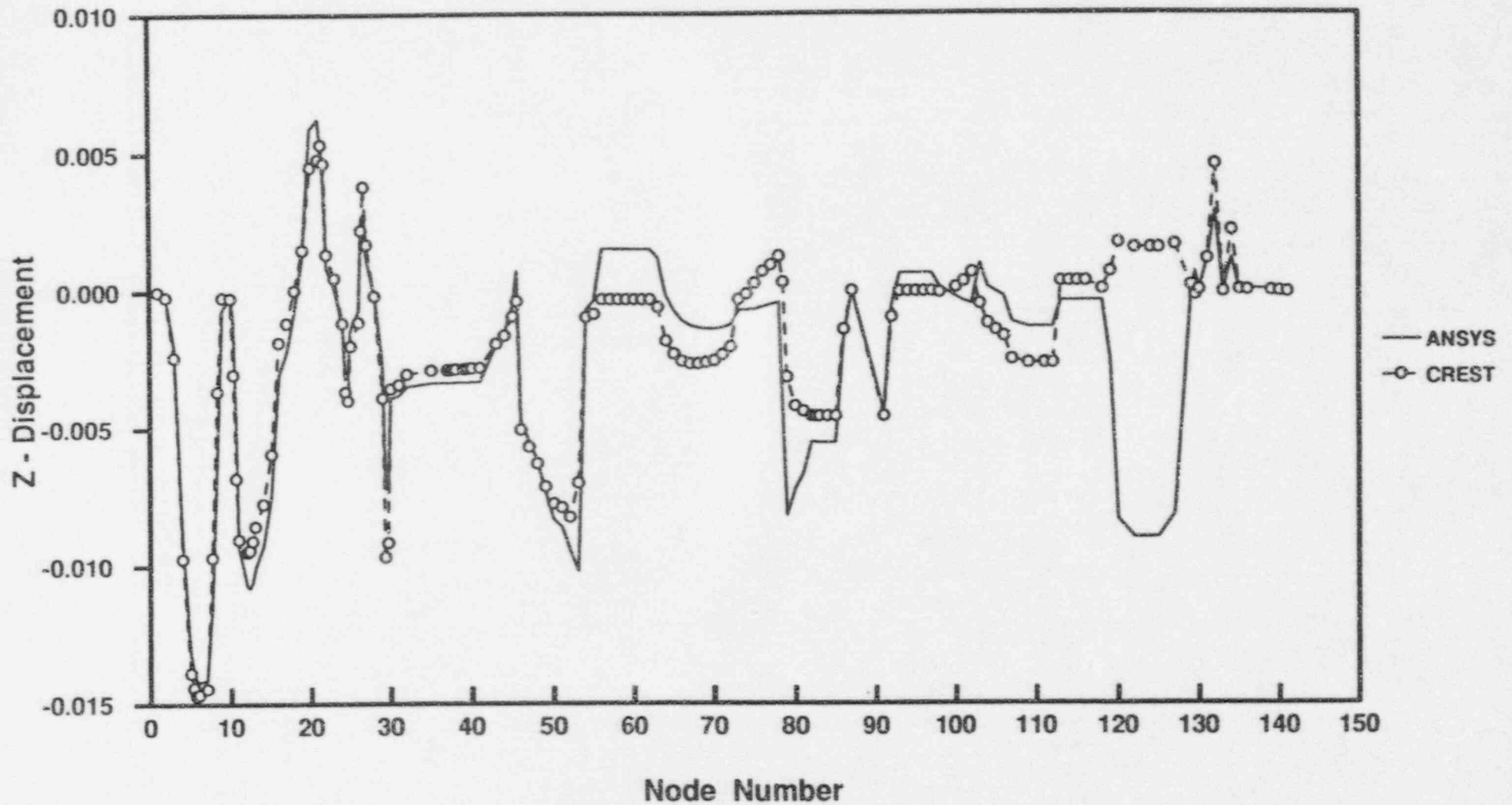
For relative locations of nodes please see the reference material

Mode 14



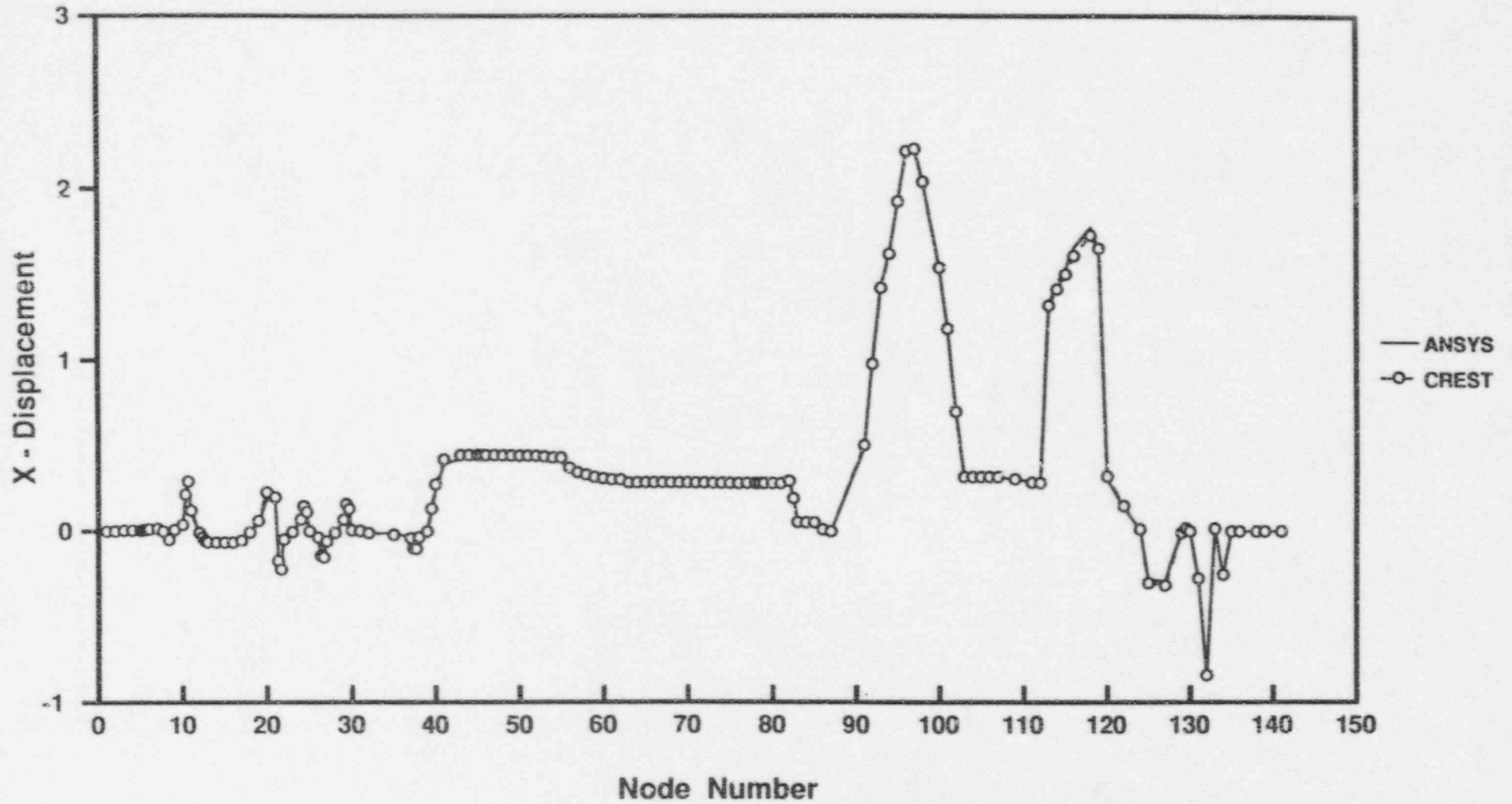
For relative locations of nodes please see the reference material

Mode 14



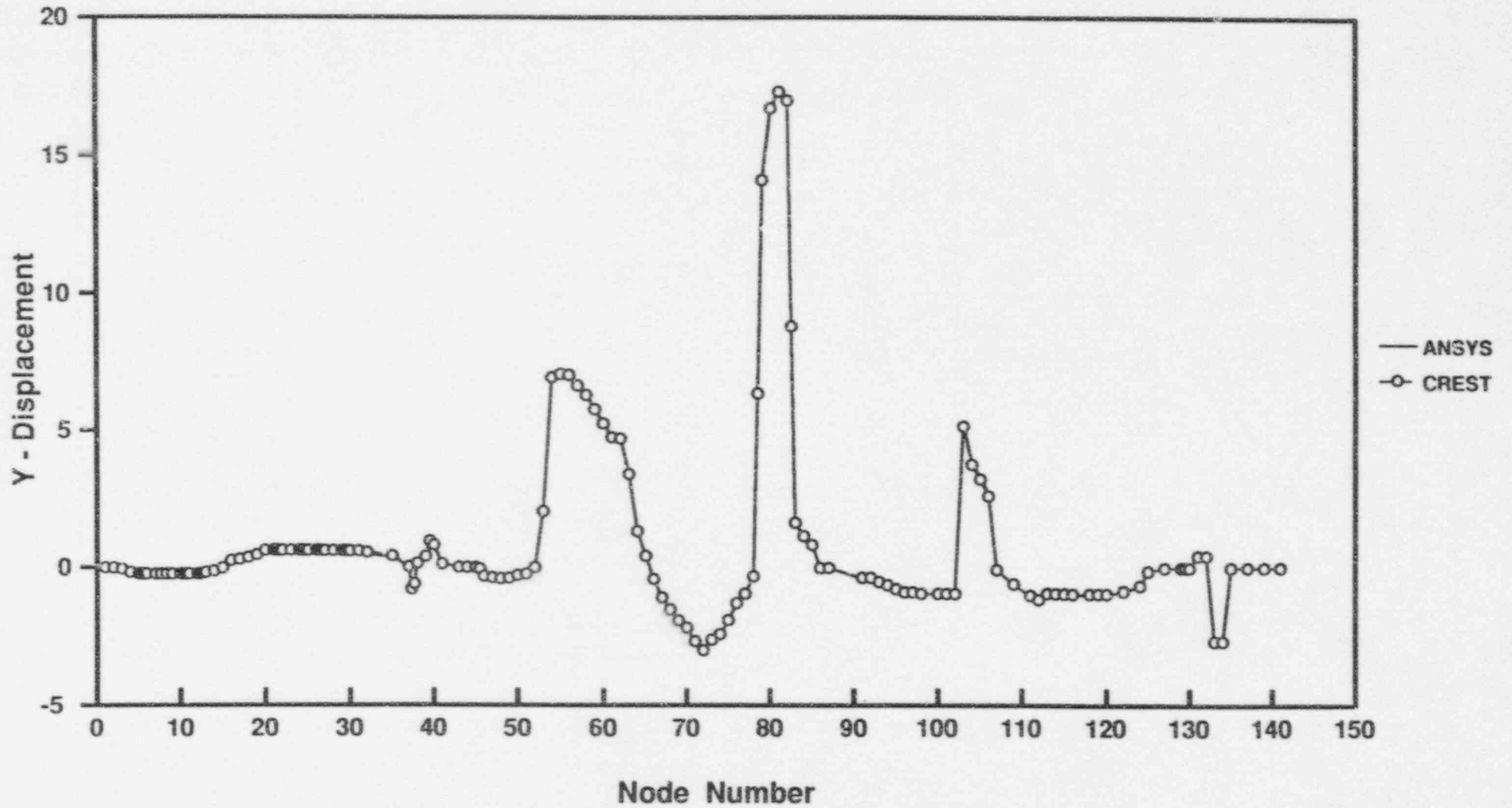
For relative locations of nodes please see the reference material

Mode 15



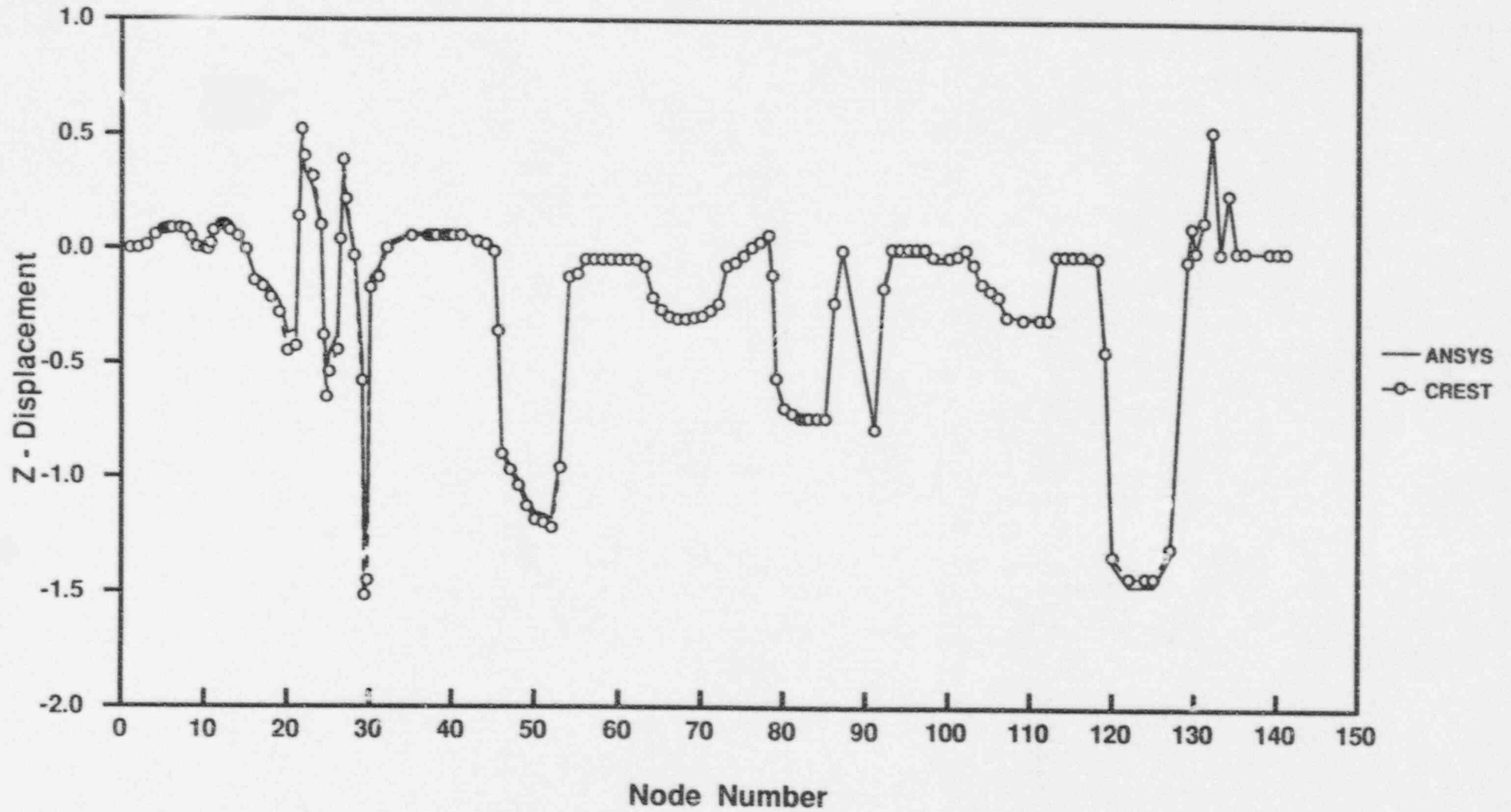
For relative locations of nodes please see the reference material

Mode 15



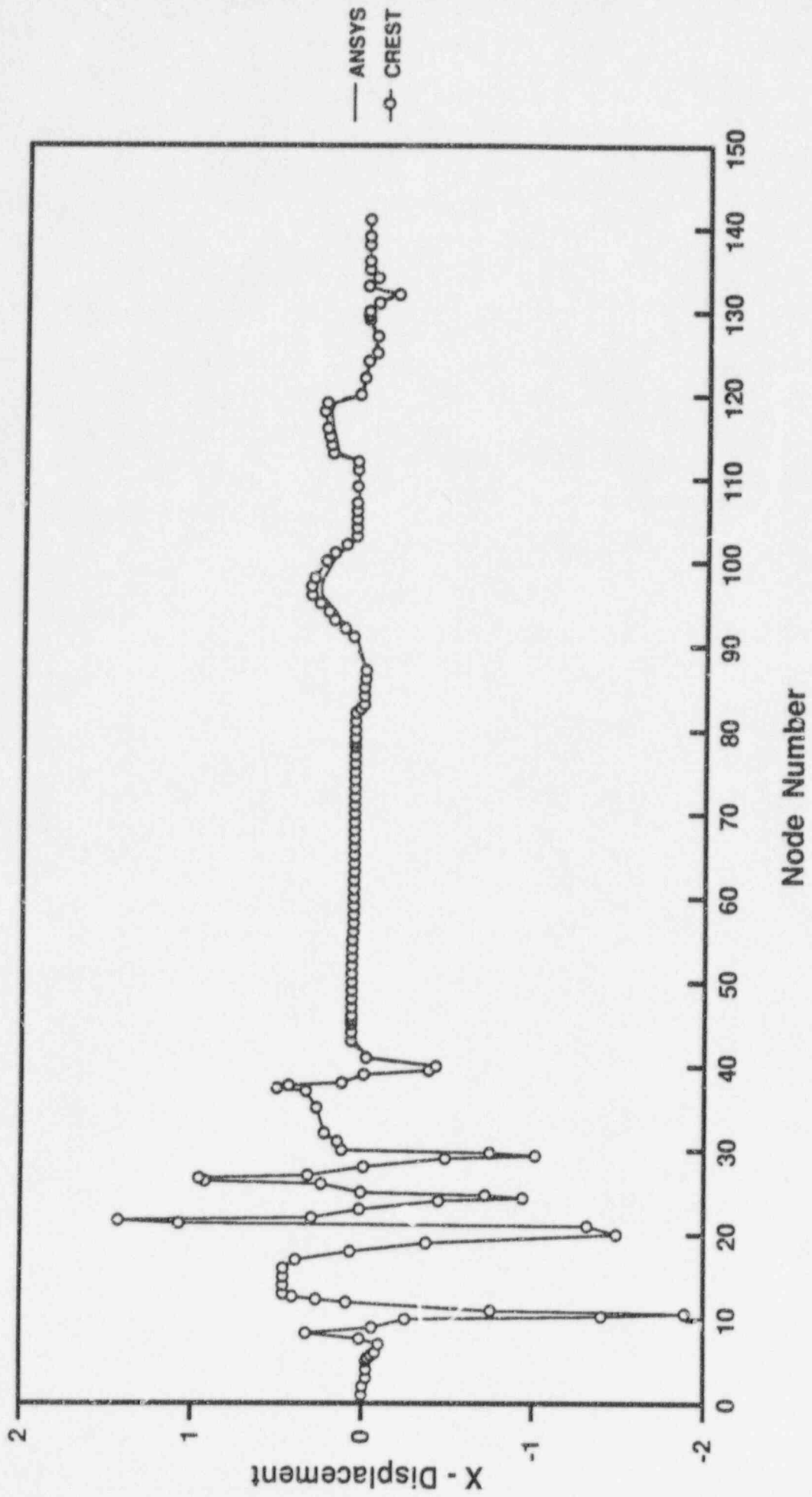
For relative locations of nodes please see the reference material

Mode 15



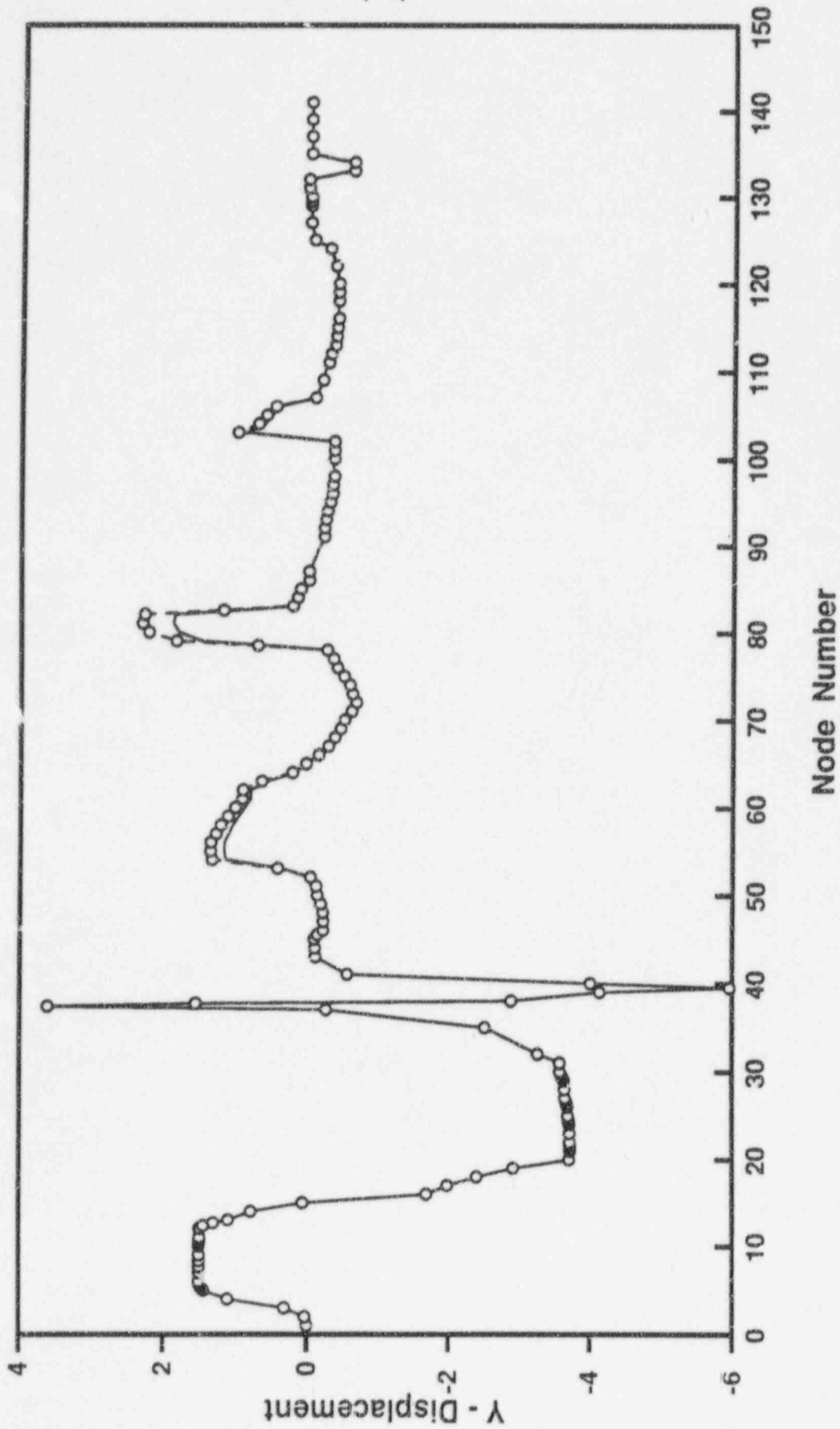
For relative locations of nodes please see the reference material

Mode 16



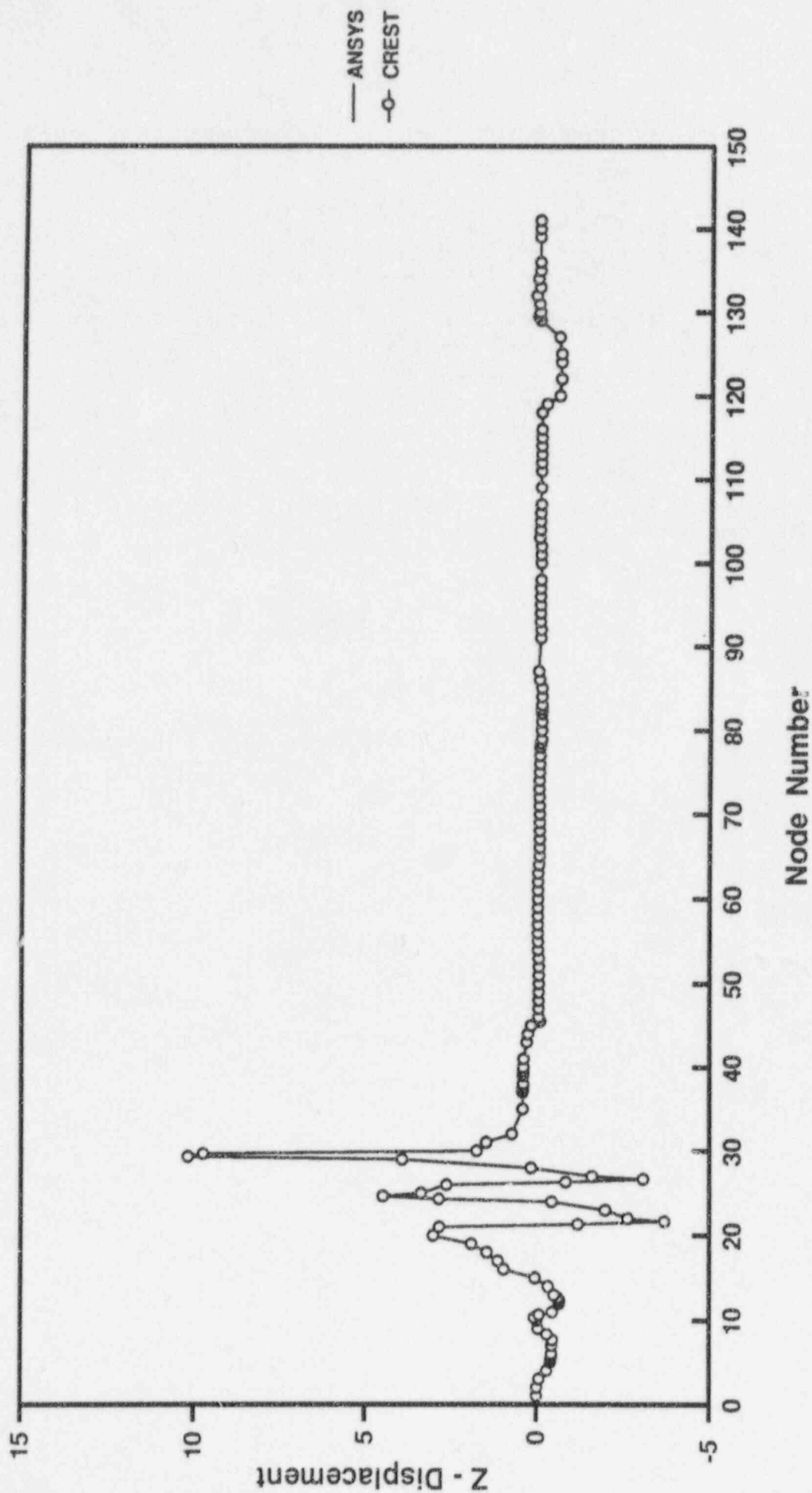
For relative locations of nodes please see the reference material

Mode 16



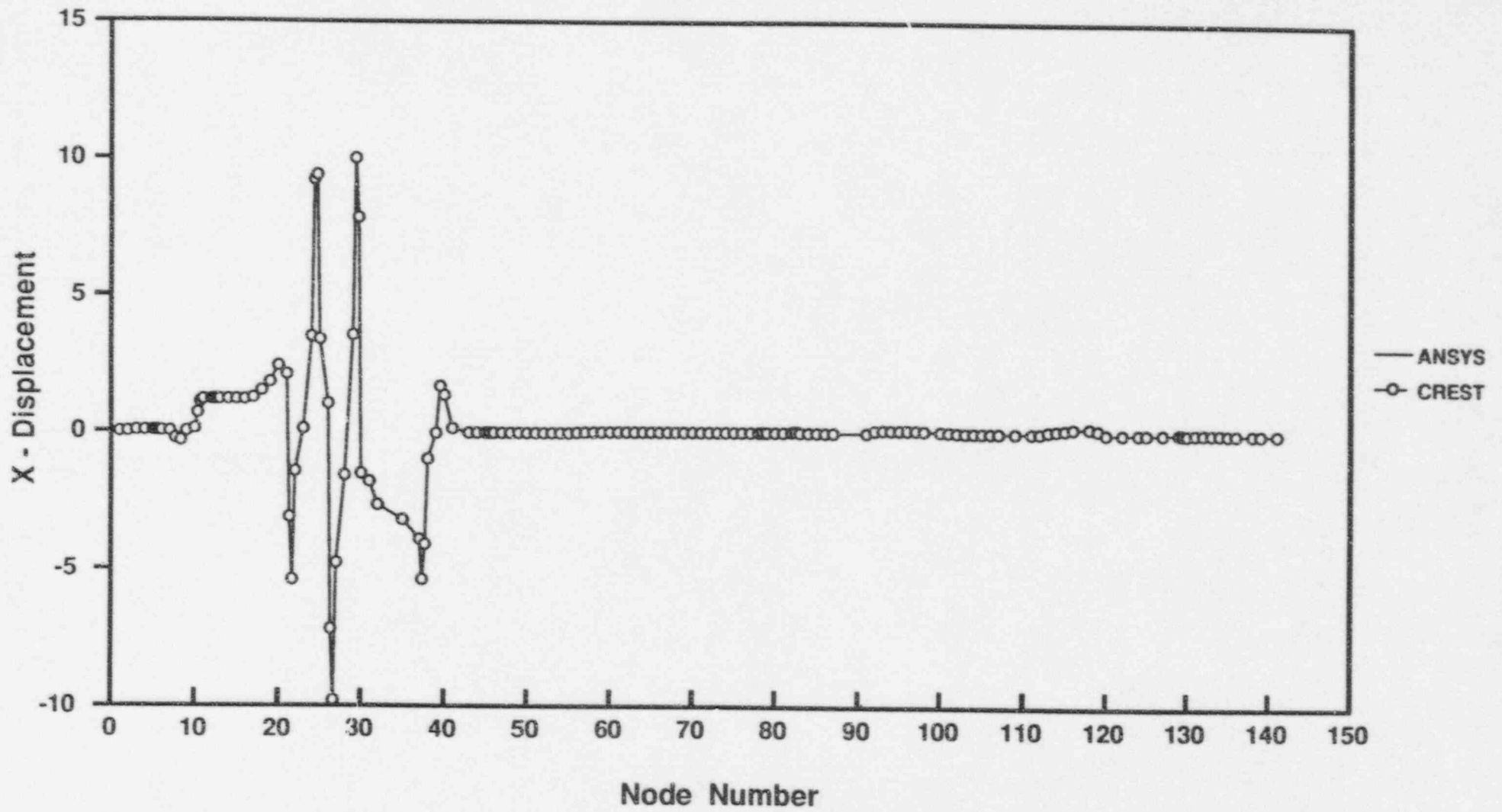
For relative locations of nodes please see the reference material

Mode 15



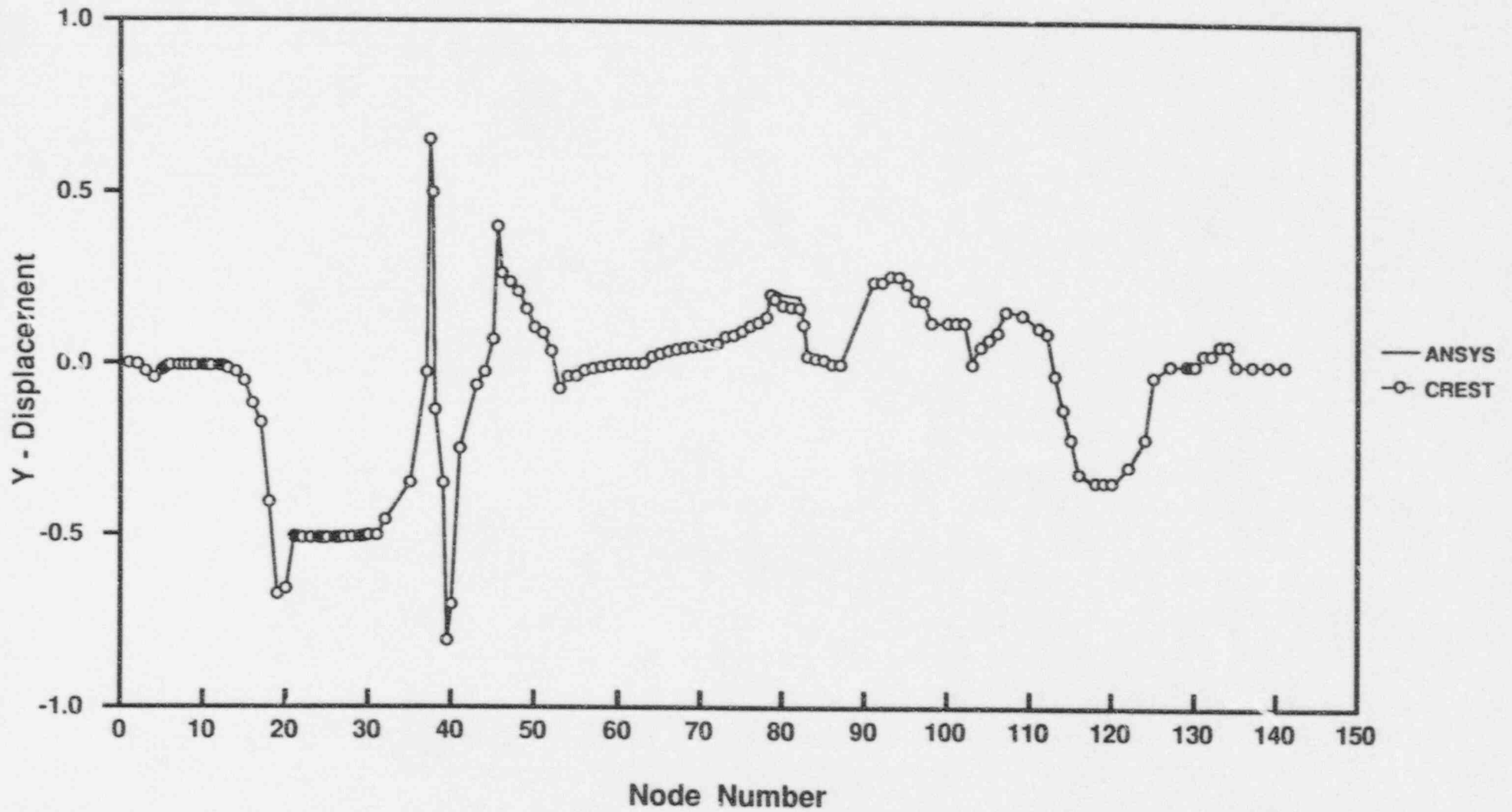
For relative locations of nodes please see the reference material

Mode 17



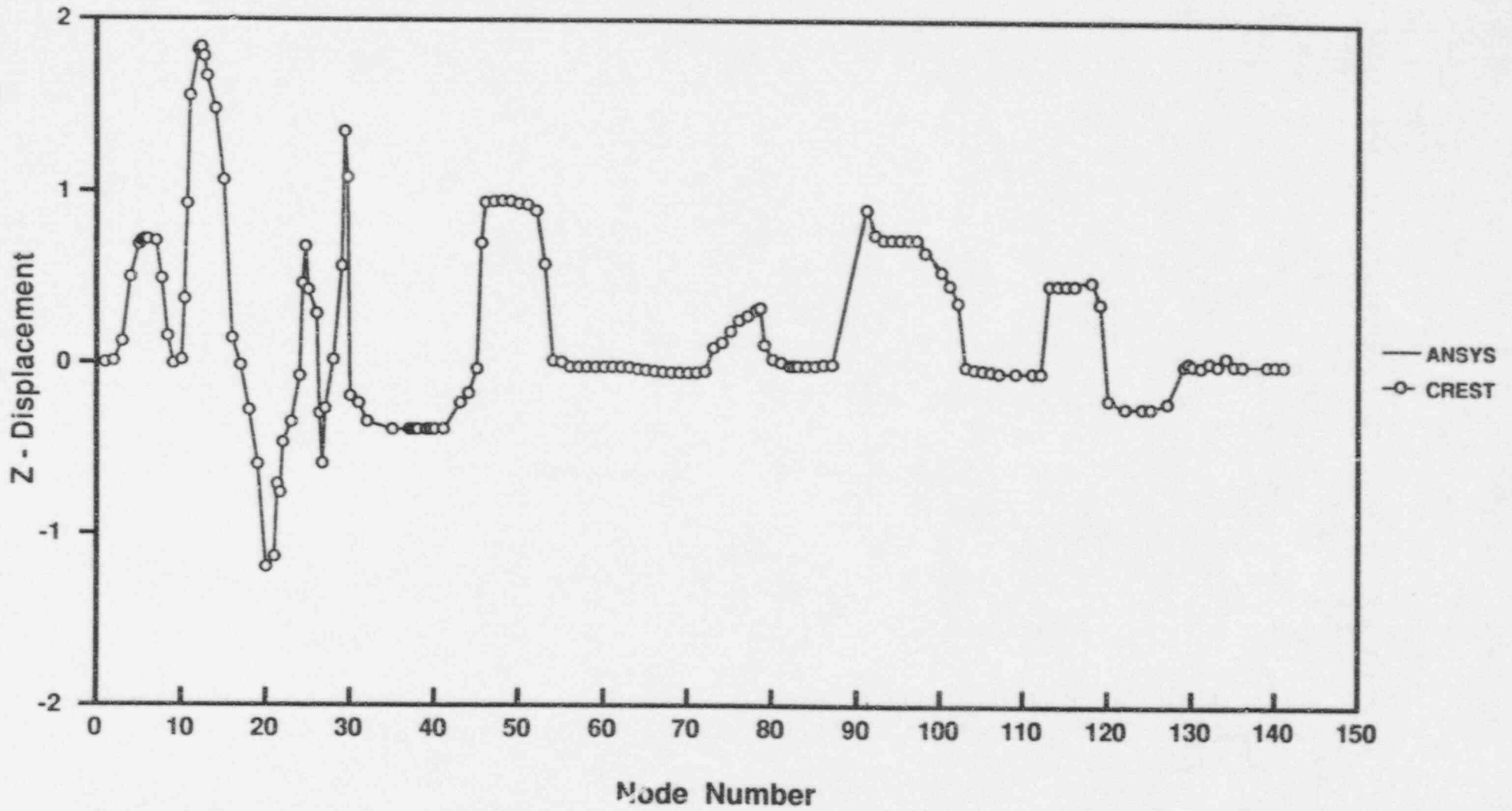
For relative locations of nodes please see the reference material

Mode 17



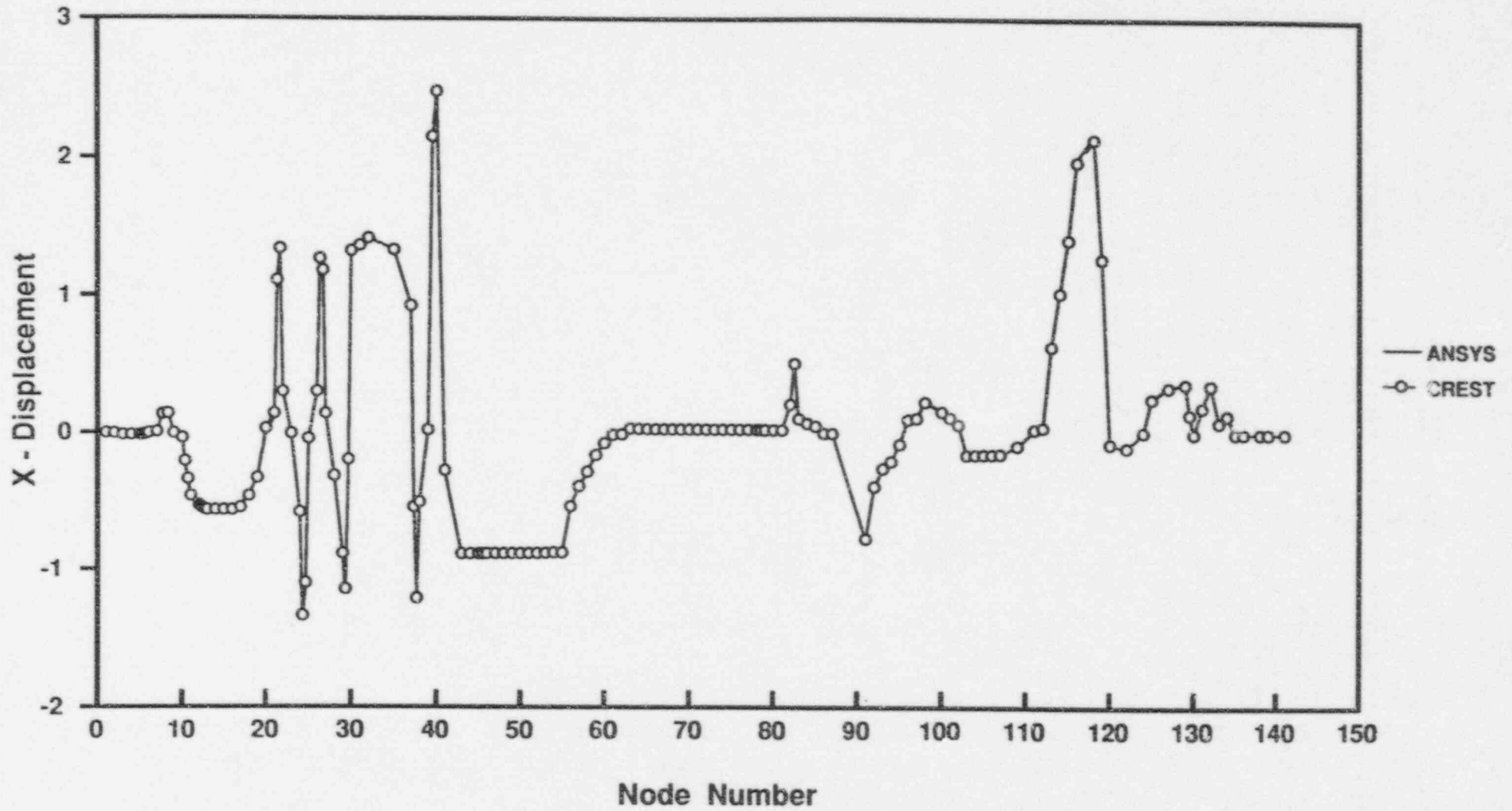
For relative locations of nodes please see the reference material

Mode 17



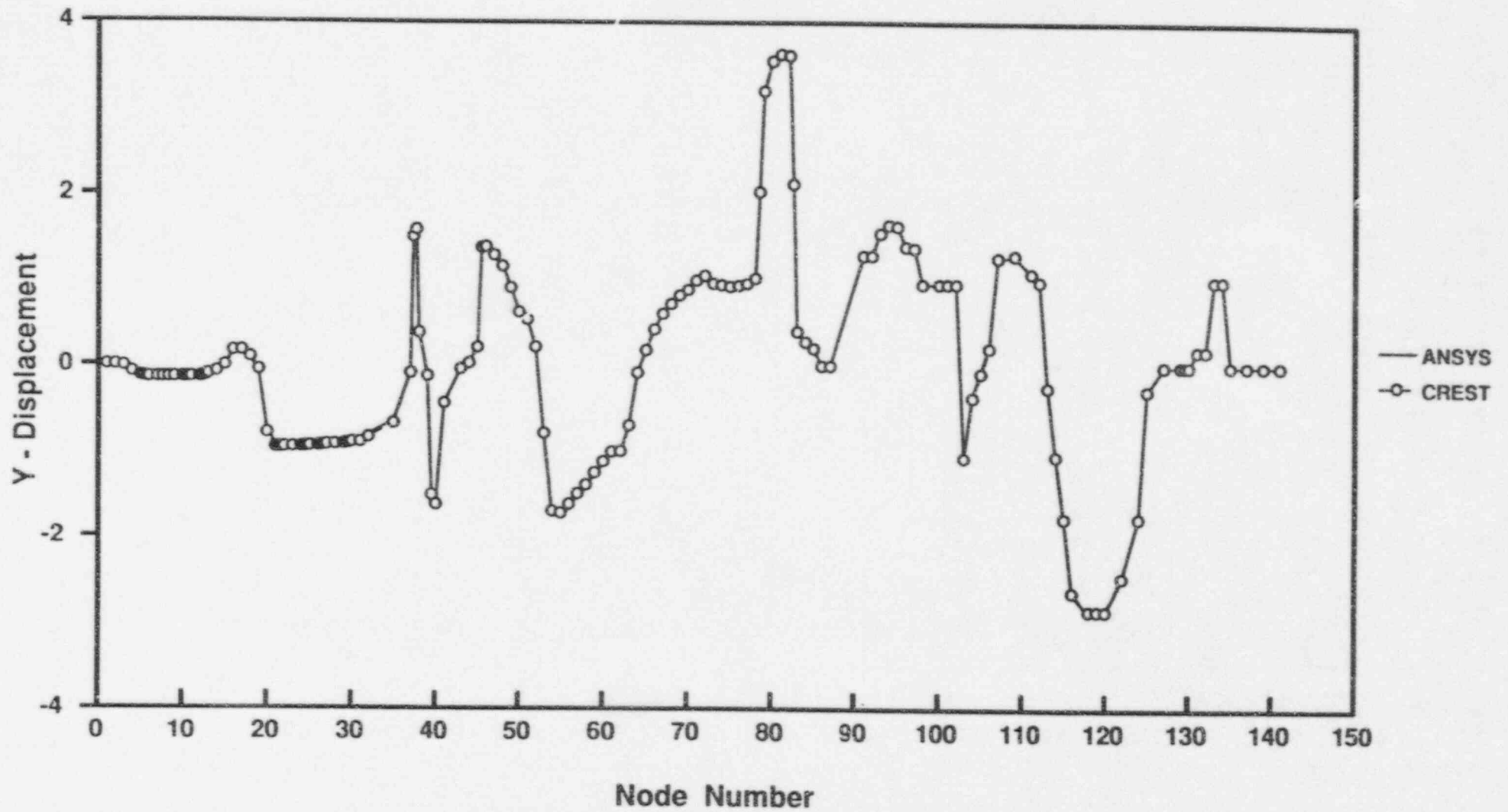
For relative locations of nodes please see the reference material

Mode 18



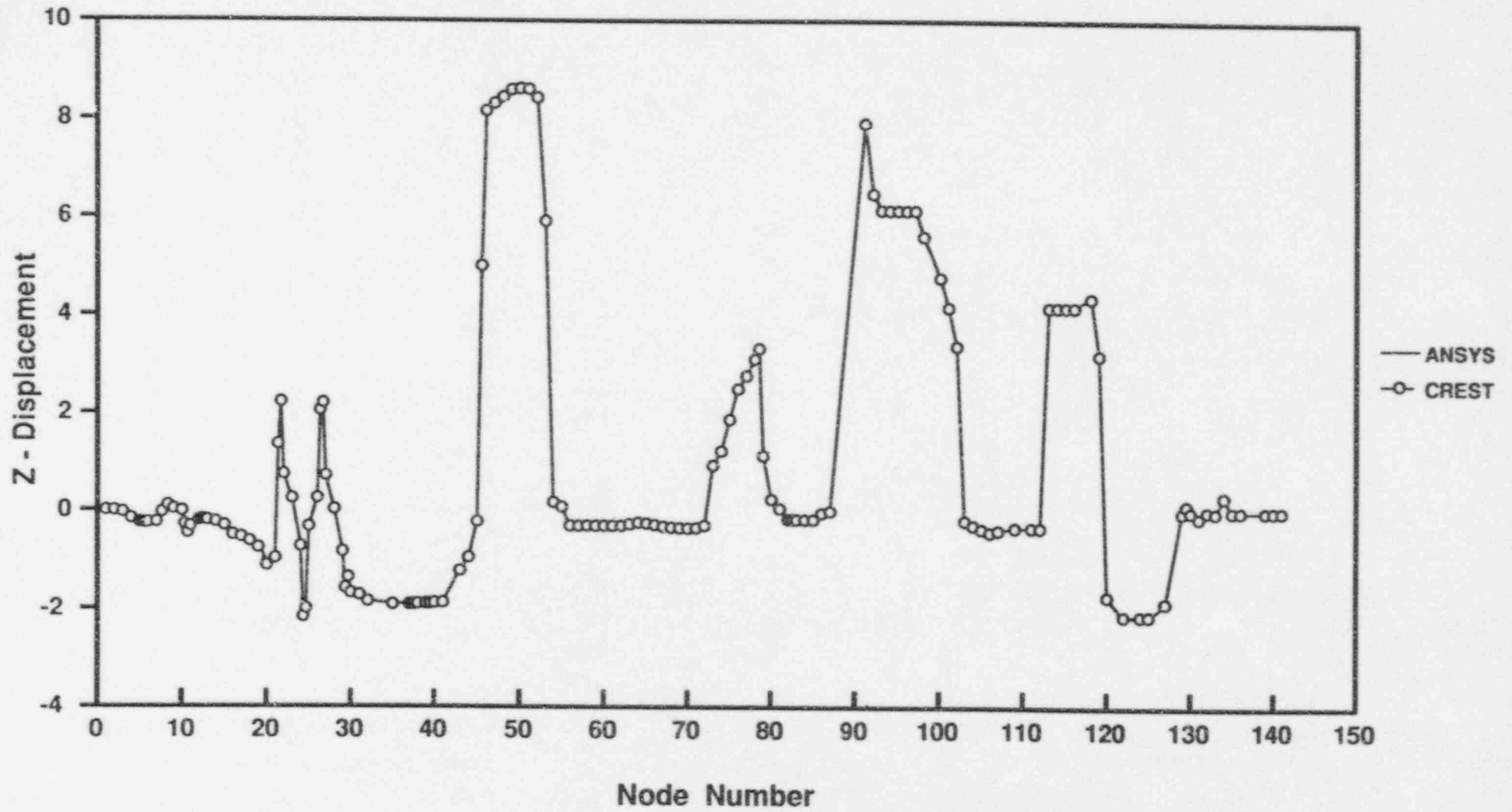
For relative locations of nodes please see the reference material

Mode 18



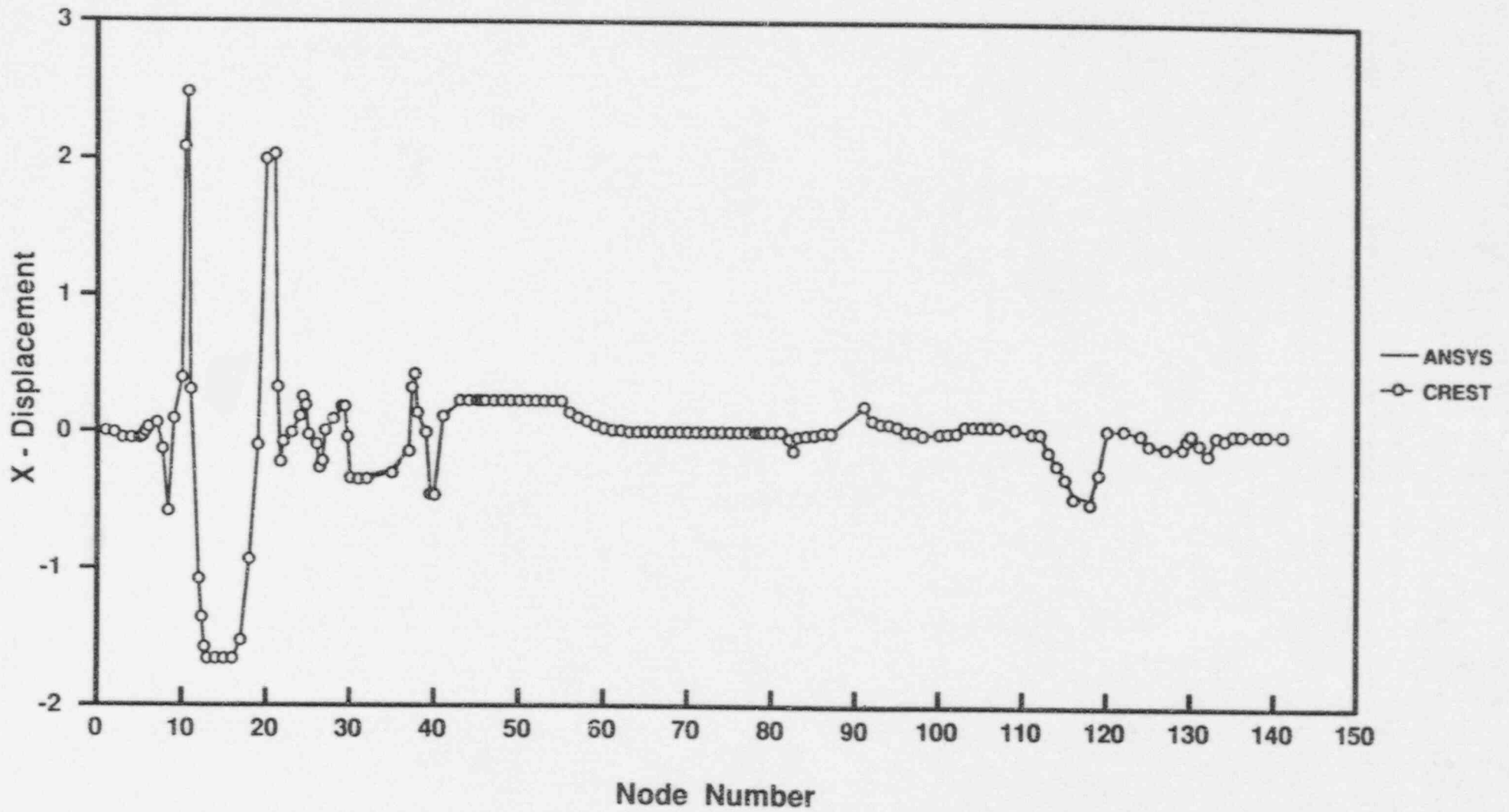
For relative locations of nodes please see the reference material

Mode 18



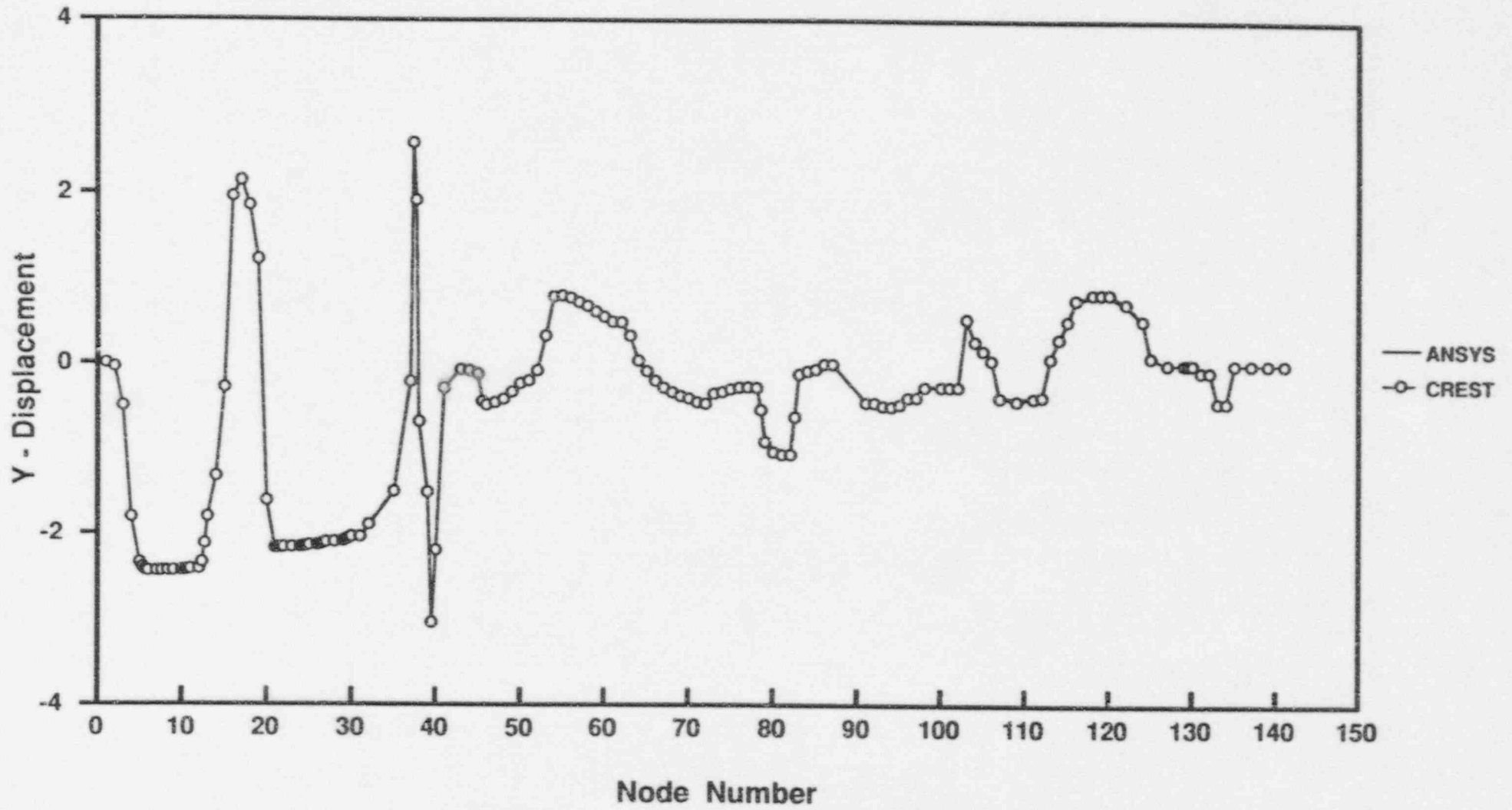
For relative locations of nodes please see the reference material

Mode 19



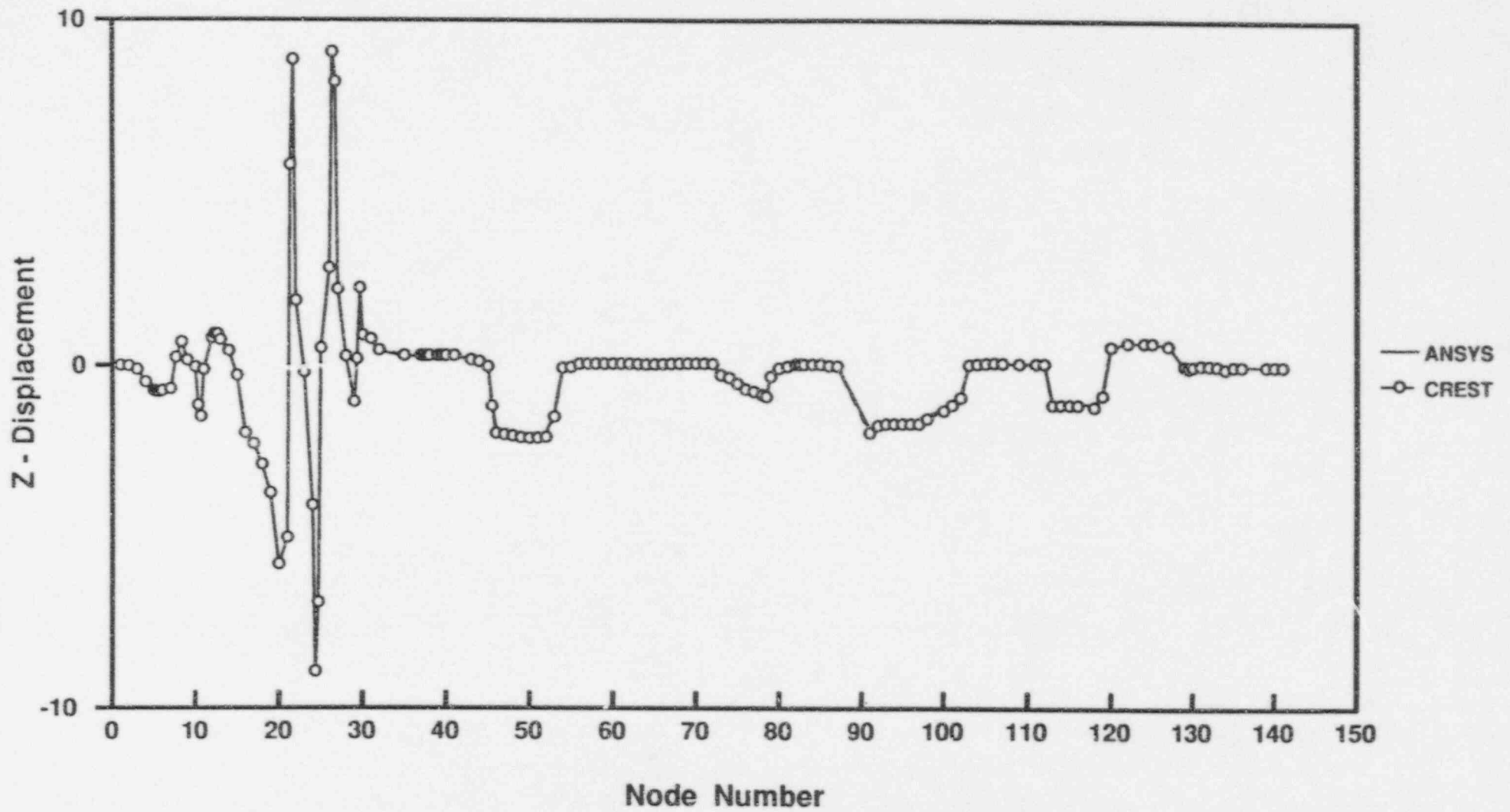
For relative locations of nodes please see the reference material

Mode 19



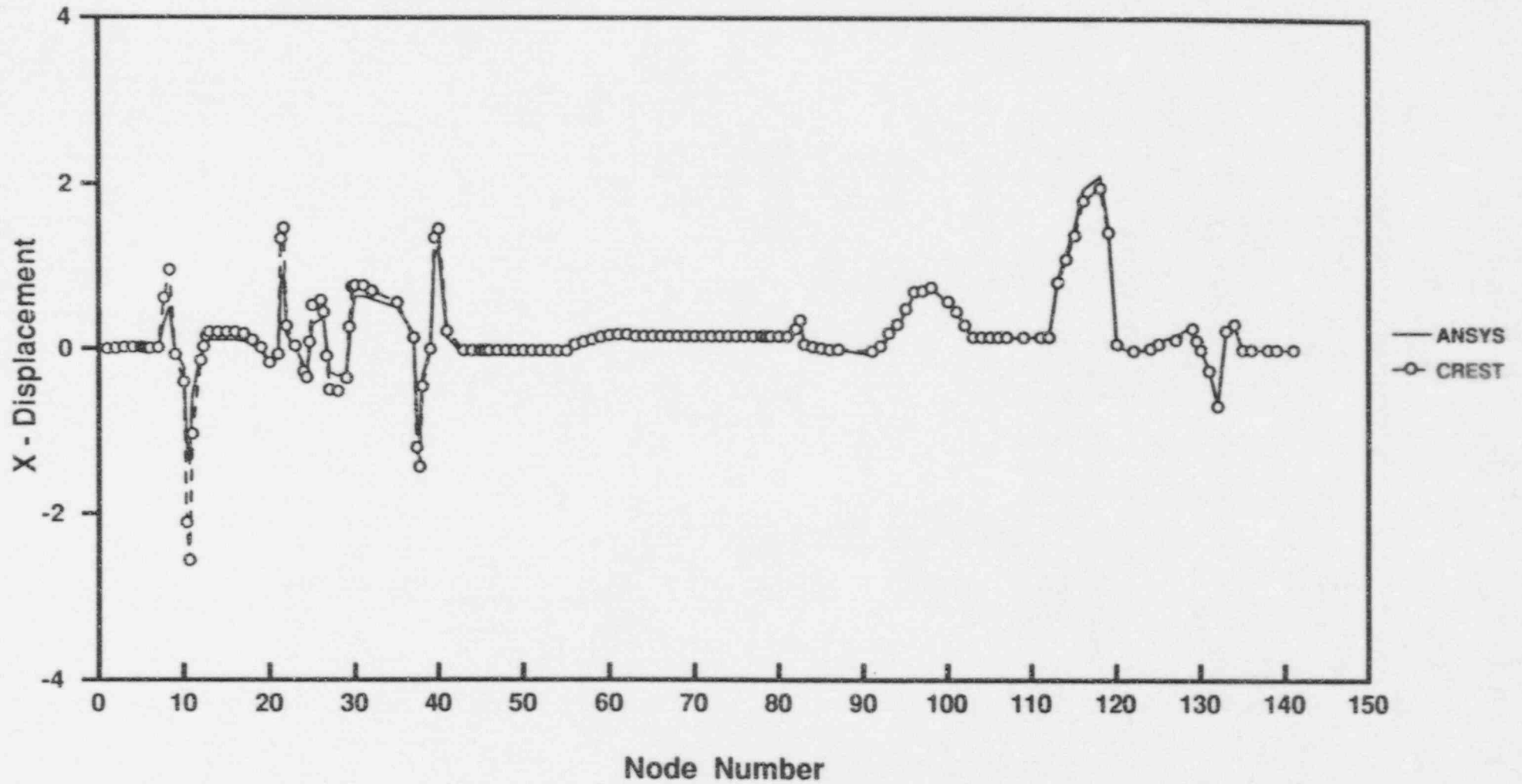
For relative locations of nodes please see the reference material

Mode 19



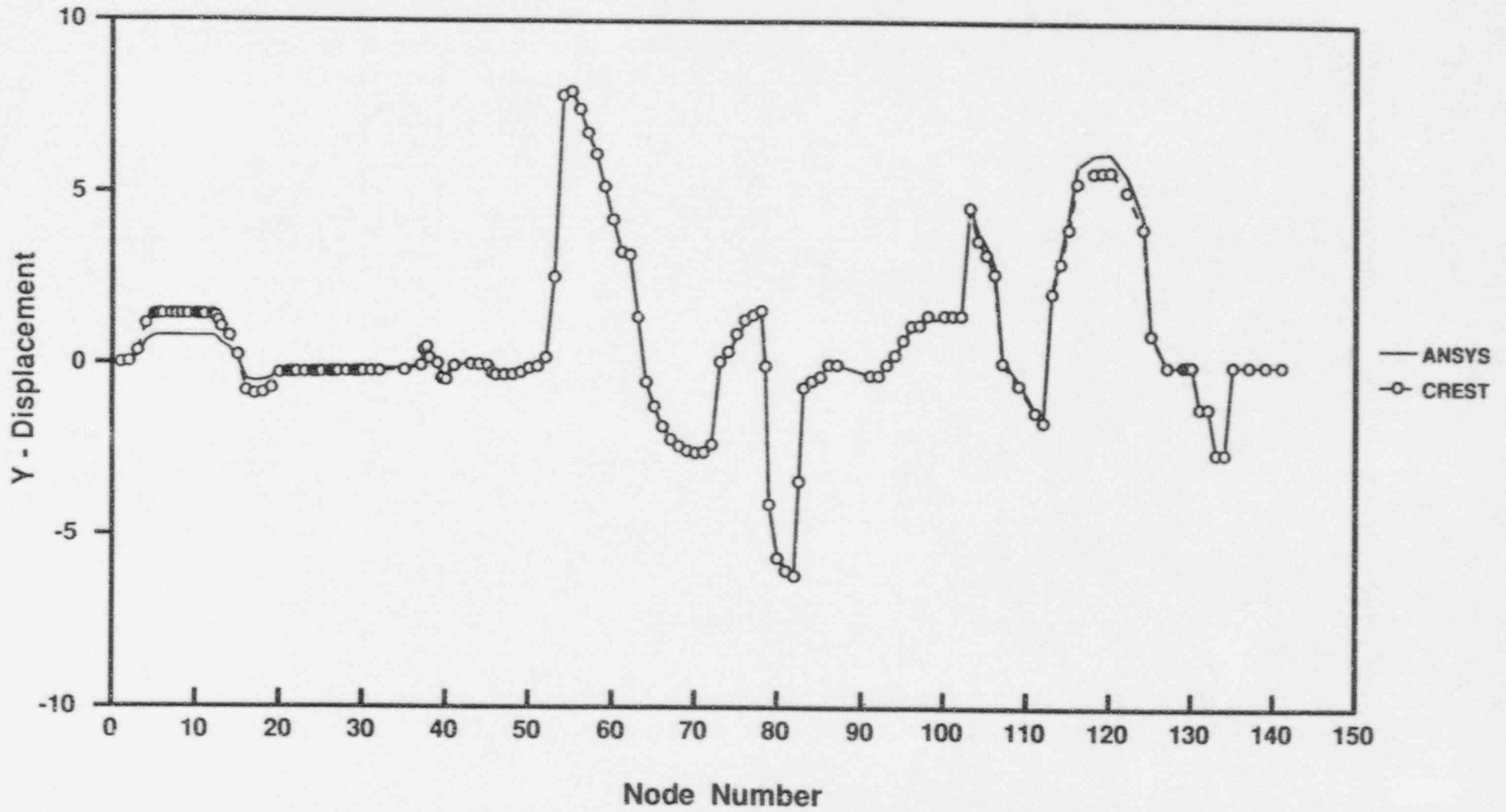
For relative locations of nodes please see the reference material

Mode 20



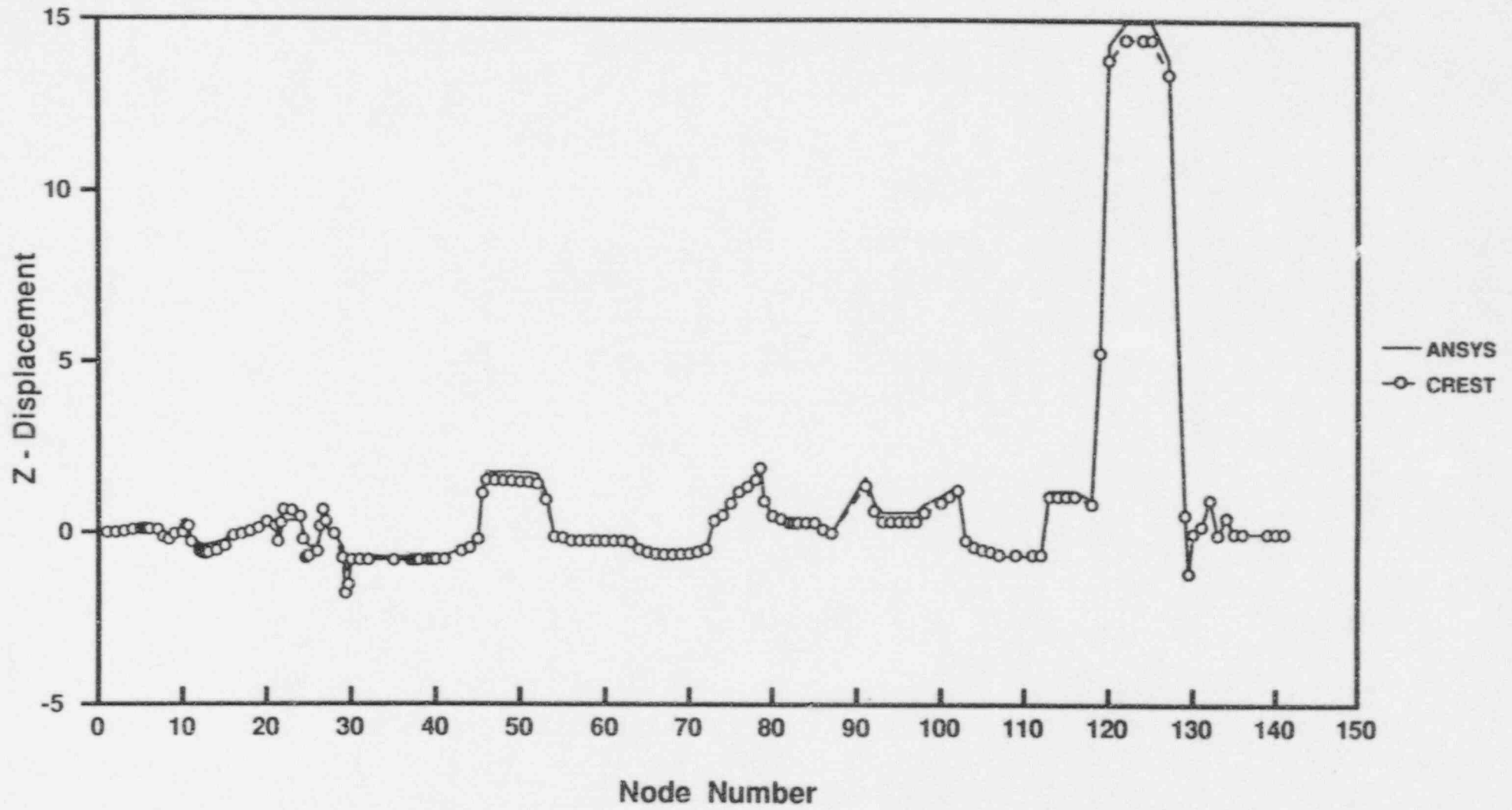
For relative locations of nodes please see the reference material

Mode 20



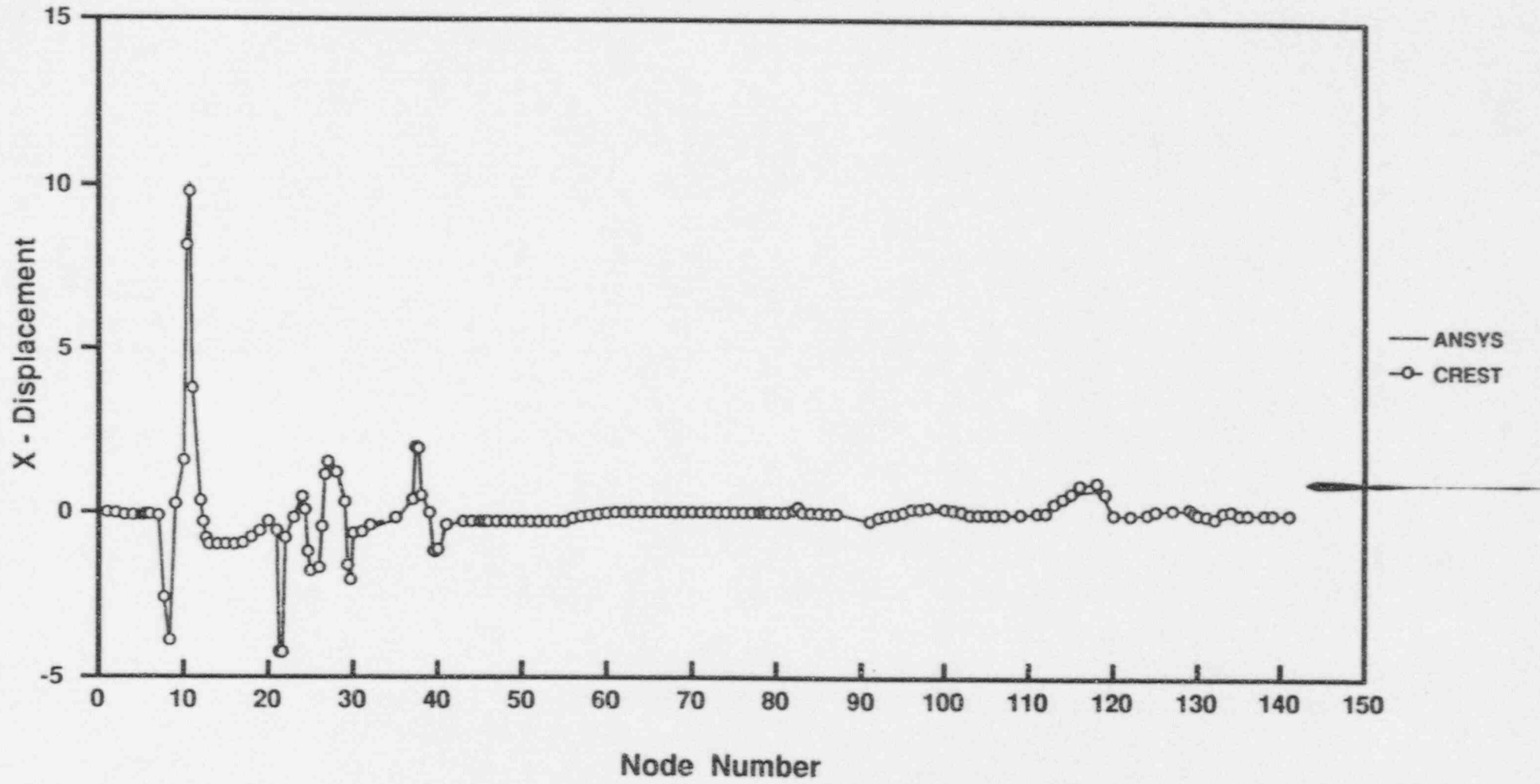
For relative locations of nodes please see the reference material

Mode 20



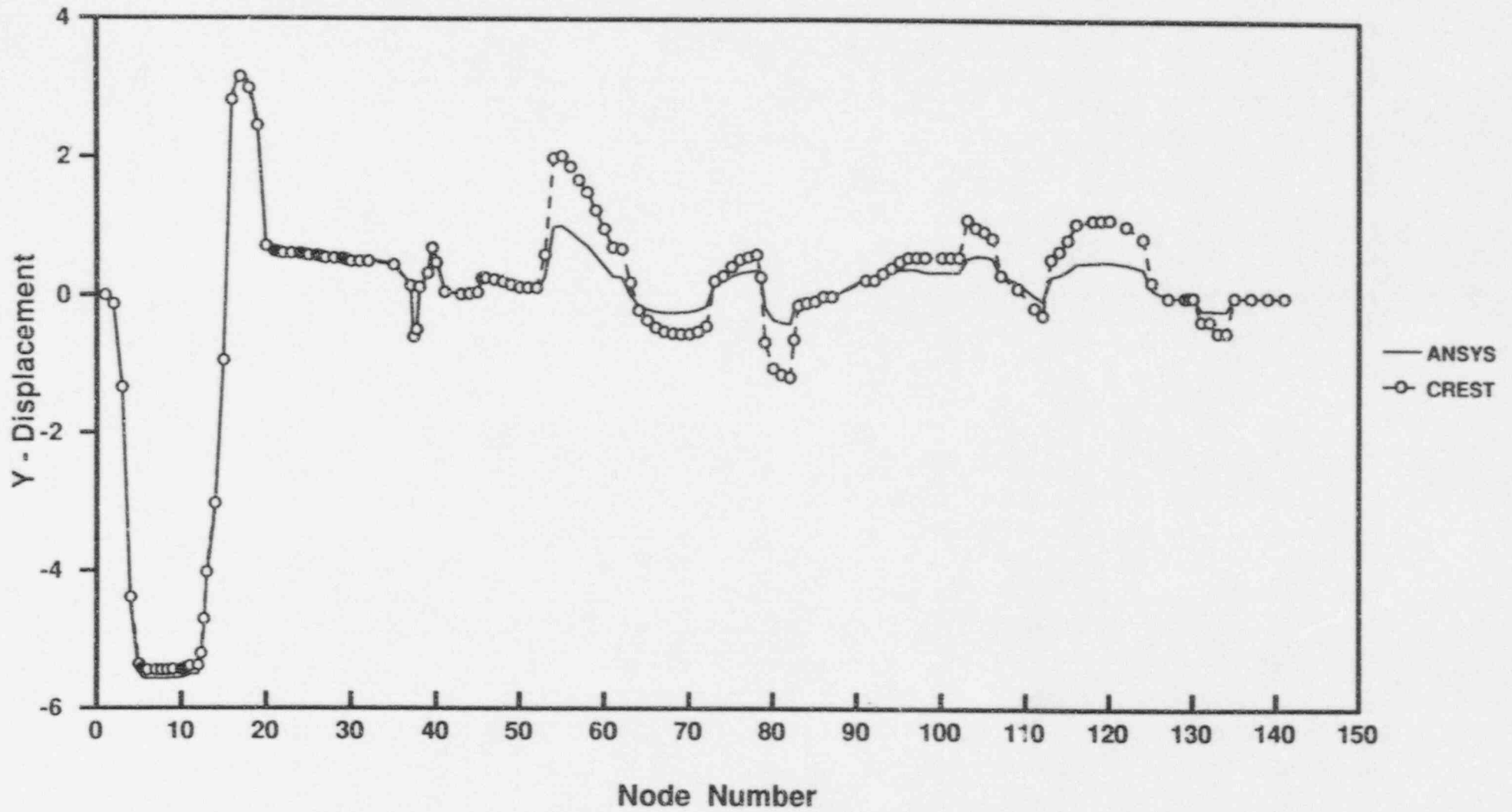
For relative locations of nodes please see the reference material

Mode 21



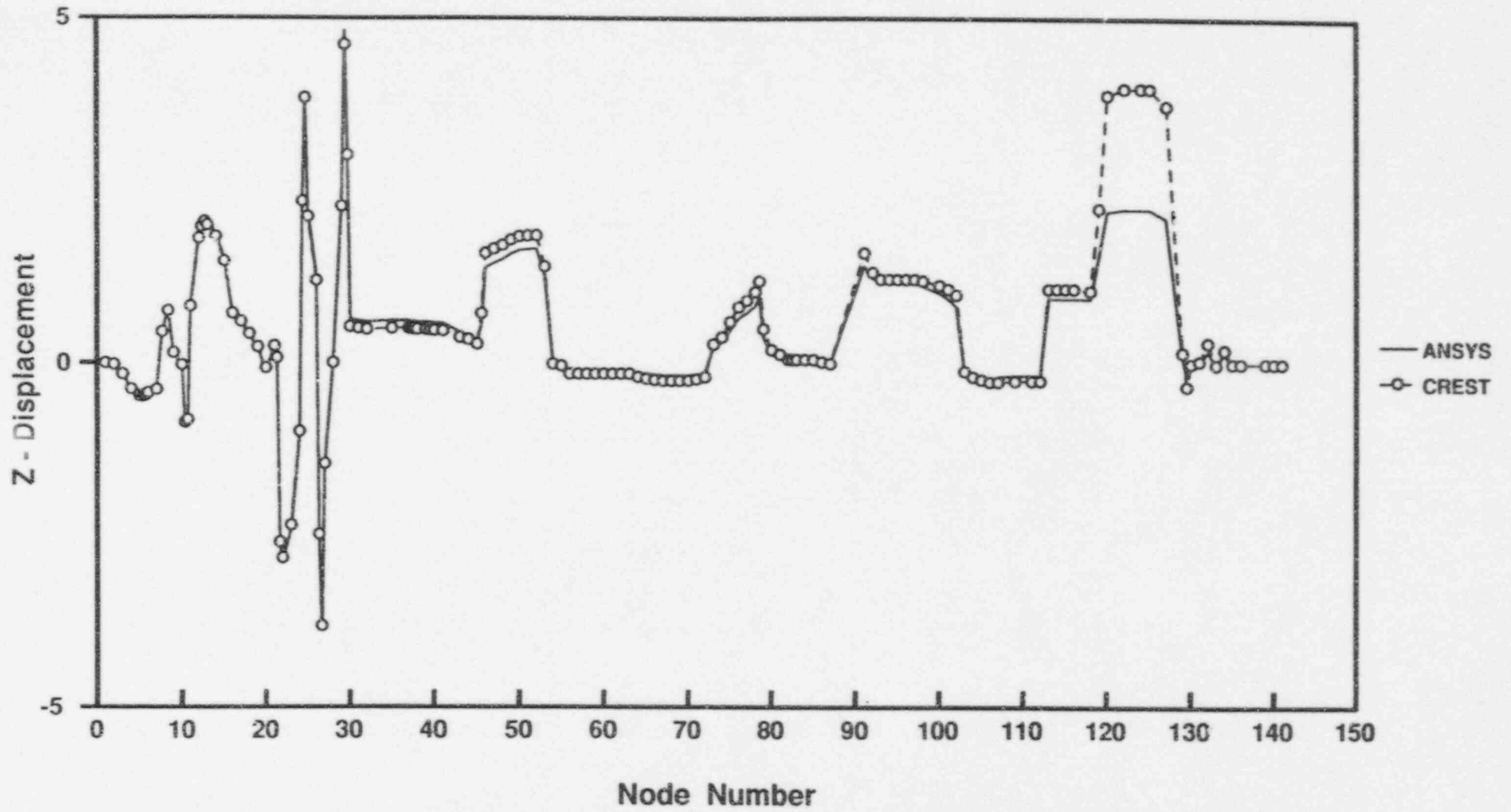
For relative locations of nodes please see the reference material

Mode 21



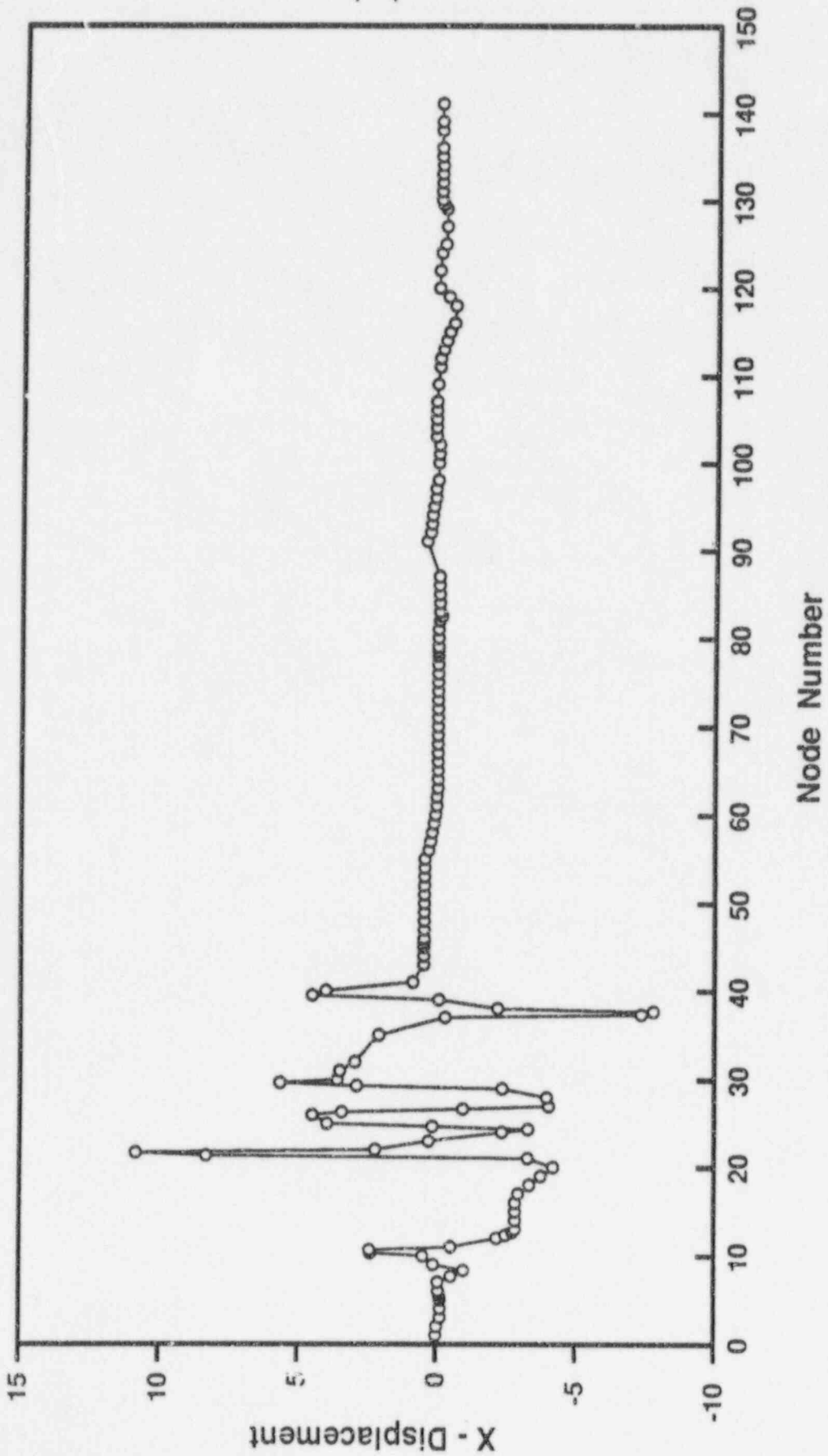
For relative locations of nodes please see the reference material

Mode 21



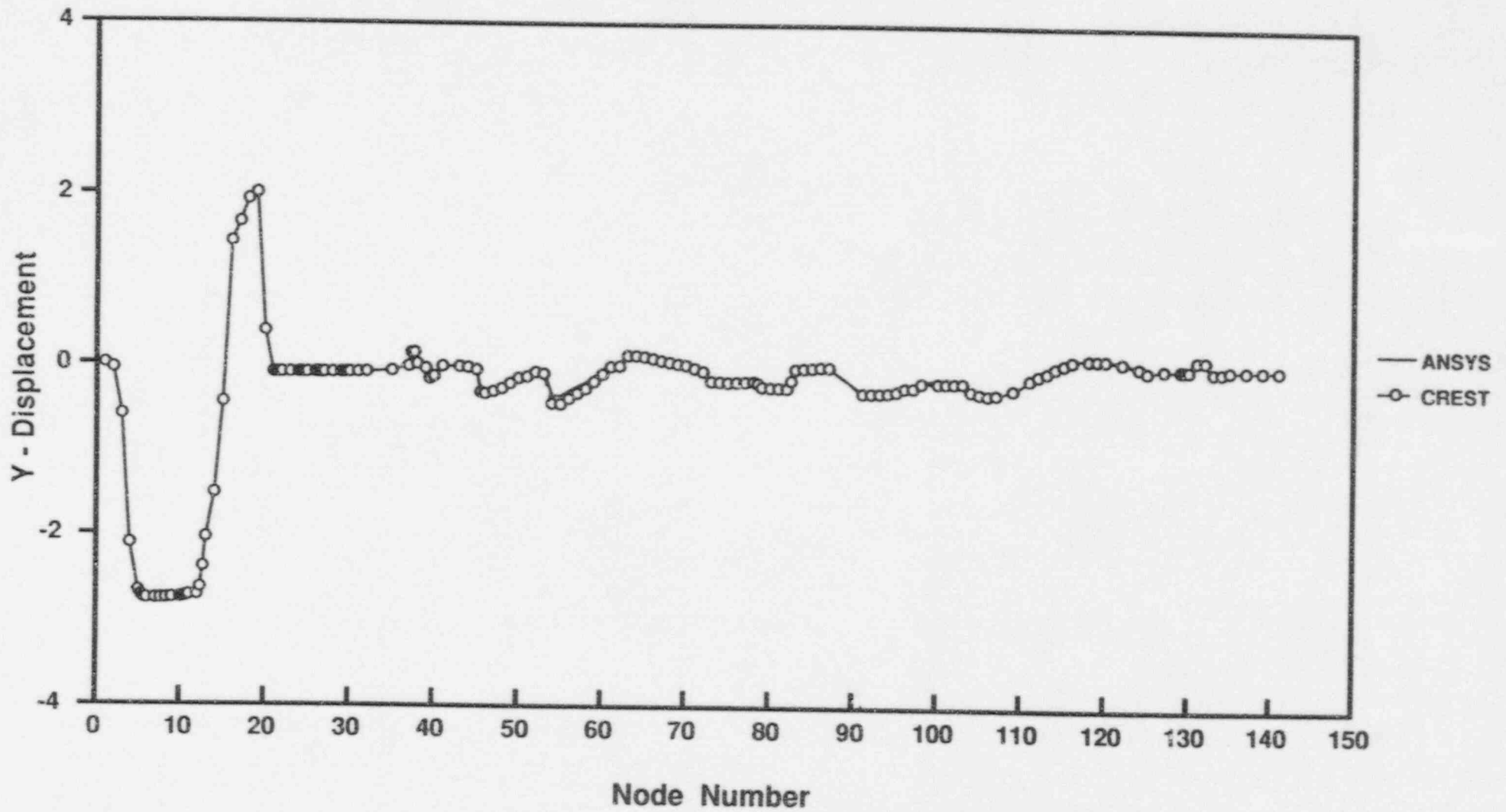
For relative locations of nodes please see the reference material

Mode 22



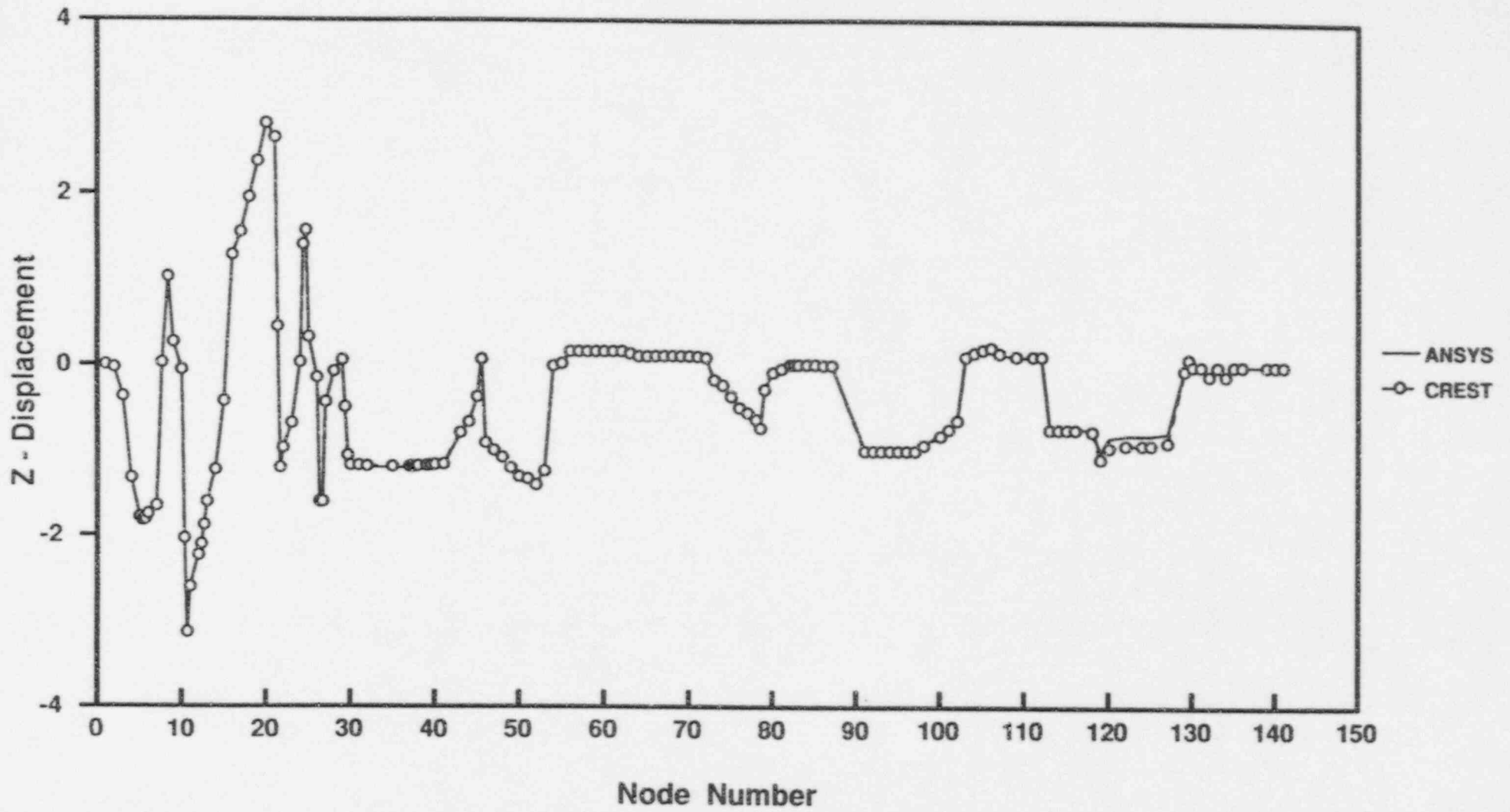
For relative locations of nodes please see the reference material

Mode 22



For relative locations of nodes please see the reference material

Mode 22



For relative locations of nodes please see the reference material

```

/batch.list
/fileName, cpmodal
/units, Bst          : weight: kips, Length: feet
/psop7
g=186.4/12
a=144/1000
b=(12**3)/1000
c=0.036126684*b/g
d=12/1000
r1=2.875/12
r3=0.84/12
r5=1.9/12
r1=0.375/12
r3=0.188/12
r5=0.281/12
rr1=1.667
rr1=0.3125
rr12=0.5
rr13=0.313
rr3=0.3125
rr5=0.187
/Title, Modal analysis of coupled system of pressurizer spray line & building
sp,ex,1,(28.3e6*a)          : for piping
sp,nu,xy,1,0.3
sp,dens,1,(0.40695565*b/g)
sp,ex,2,(28.3e6*a)
sp,nu,xy,2,0.3
sp,dens,2,(0.43887146*b/g)
sp,ex,3,(28.3e6*a)
sp,nu,xy,3,0.3
sp,dens,3,(0.32858561*b/g)
sp,ex,4,(28.3e6*a)
sp,nu,xy,4,0.3
sp,dens,4,(5.8515393*b/g)
sp,ex,5,(28.3e6*a)
sp,nu,xy,5,0.3
sp,dens,5,(9.49939372*b/g)
sp,ex,6,(28.3e6*a)
sp,nu,xy,6,0.3
sp,dens,6,(2.5829705*b/g)
et,1,pipel8,.....1
et,2,pipel8,.....2
et,3,combinl4,1          :ID spring X' Direction
et,4,combinl4,2          :ID spring Y' Direction
et,5,combinl4,3          :ID spring Z' Direction
et,6,combinl4,4          :ID spring ROTX' Direction
et,7,combinl4,5          :ID spring ROTY' Direction
et,8,combinl4,6          :ID spring ROTZ' Direction
et,30,masa21,.....2
F,11,r1,rl,.....c
F,211,r1,rl,rl,rr11
rmore,c
F,21,r1,rl,rr1
rmore,c
F,212,r1,rl,rr12
rmore,c
F,213,r1,rl,rr13
rmore,c
F,13,r3,rl,.....c
F,23,r3,rl,rr3
rmore,c
F,15,r5,rl,.....c
F,25,r5,rl,rr5
rmore,c
F,51,(77000*d)
F,52,(56*d)
F,53,(212000*d)
F,54,(126*d)
F,55,(35*d)
F,56,(400*d)
F,57,(22*d)
F,58,(1.0e11*d)
F,59,8.33e4
F,31,(25.0/g/1000)
F,32,(4.0/g/1000)
F,33,(43.0/g/1000)
F,34,(40.0/g/1000)
F,35,(75.0/g/1000)
F,36,(15.0/g/1000)
F,37,(6.0/g/1000)
F,38,(105.0/g/1000)
F,39,(10.0/g/1000)
F,40,(12.0/g/1000)
F,41,(31.5/g/1000)
F,42,(230.0/g/1000)
E=1/(12**12)
I=1/(12**4)
et,71,beam8              : for building
sp,ex,71,(4.5e6*a)
sp,nu,xy,71,0.3
sp,dens,71,0.0
F,71,(157000*E),(1*1.18e+10),(1*1.03e+10),
rmore,.....1,71,1.67
F,72,(243000*E),(1*1.43e+10),(1*1.1e+10),
rmore,.....1,72,1.23
F,73,(162000*E),(1*1.25e+10),(1*1.6e+10),
rmore,.....1,73,2.33
F,74,(132000*E),(1*1.15e+10),(1*1.48e+10),
rmore,.....1,74,2.26
F,75,(92660*E),(1*5.656e+09),(1*2.151e+09),
rmore,.....1,75,2.57

```

```

1.76 (188710*E),(1*7.372e+08),(1*2.60e+09),
rmore,.....1,51,2.88
et,72,masa21,.....2
F,77,(4474.0e1/g/1000)
F,78,(4428.75e1/g/1000)
F,79,(2650.75e1/g/1000)
F,80,(1207.25e1/g/1000)
F,81,(2847.75e1/g/1000)
N,1,0.574,0
N,2,0.396,574,-0.396
N,3,1.574,574,-0.884
N,4,3.79,574,-0.884
N,5,4.905,574,-0.884
N,9001,5.061,574,042,-0.884
N,9002,5.175,574,156,-0.884
N,6,5.217,574,312,-0.884
N,7,5.217,574,5,-0.884
N,9003,5.217,577,568,-0.884
N,9004,5.217,580,632,-0.884
N,9,5.217,583,698,-0.884
N,10,5.217,584,229,-0.884
N,9005,5.217,586,833,-0.884
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N,12,5.217,592,938,-0.884
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N,17,7.643,593,25,-0.792
N,18,8.051,593,25,-0.394
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N,20,10.158,593,25,1.723
N,21,10.379,593,562,1.944
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N,9010,10.379,600,243,1.944
N,22,10.379,603,583,1.944
N,23,10.379,604,291,1.944
N,24,10.379,605,655,1.944
N,9011,10.379,608,436,1.944
N,9012,10.379,611,218,1.944
N,25,10.379,613,939,1.944
N,26,10.379,614,791,1.944
N,9013,10.379,617,742,1.944
N,9014,10.379,620,693,1.944
N,27,10.379,623,645,1.944
N,28,10.379,624,749,1.944
N,29,10.379,626,415,1.944
N,9015,10.379,629,526,1.944
N,9016,10.379,632,638,1.944
N,30,10.379,635,749,1.944
N,31,10.379,635,832,1.944
N,32,10.379,636,053,0.035
N,35,10.379,636,144,2.256
N,37,10.379,636,144,2.959
N,9017,10.379,636,144,5.657
N,9018,10.379,636,144,8.355
N,38,10.379,636,144,11.053
N,39,10.379,636,144,11.918
N,9019,10.379,636,144,14.756
N,40,10.379,636,144,17.595
N,41,10.379,636,144,20.048
N,43,10.692,636,144,20.36
N,44,10.812,636,144,20.36
N,45,11.129,636,144,20.36
N,9020,11.507,636,144,20.36
F,46,15.885,636,144,20.36
F,47,16.135,636,144,20.36
F,48,16.385,636,144,20.36
F,49,16.801,636,144,20.36
N,50,17.218,636,144,20.36
N,51,17.343,636,144,20.36
N,52,17.801,636,144,20.36
N,53,19.822,636,144,20.36
N,54,22.801,636,144,20.36
N,55,22.864,636,144,20.36
N,56,23.178,636,144,20.673
N,57,23.176,636,144,20.86
N,58,23.176,636,144,21.027
N,59,23.176,636,144,21.277
N,60,23.176,636,144,21.527
N,61,23.176,636,144,21.777
N,62,23.176,636,144,21.798
N,63,22.864,636,144,22.31
N,64,21.947,636,144,22.31
N,65,21.53,636,144,22.31
N,66,21.113,636,144,22.31
N,67,20.759,636,144,22.31
N,68,20.509,636,144,22.31
N,69,20.259,636,144,22.31
N,70,20.071,636,144,22.31
N,71,19.854,636,144,22.31
N,72,19.237,636,144,22.31
N,73,17.983,636,144,22.31
N,74,17.175,636,144,22.31
N,75,16.758,636,144,22.31
N,76,16.341,636,144,22.31
N,77,16.133,636,144,22.31
N,78,15.799,636,144,22.31

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N.9021.13.413.636.144.22.11
N.79.13.028.636.144.22.11
N.80.16.131.636.144.22.11
N.81.9.897.636.144.22.11
N.82.9.585.636.144.21.798
N.9022.9.585.636.144.19.663
N.83.9.585.636.144.17.527
N.84.9.585.636.144.17.333
N.85.9.585.636.144.17.194
N.86.9.231.635.791.16.694
N.87.8.76.635.319.14.694
N.87.16.135.636.144.20.36
N.81.16.135.636.144.20.36
N.92.16.135.637.332.20.36
N.93.16.135.637.644.20.673
N.94.16.135.637.644.20.944
N.95.16.135.637.644.21.361
N.96.16.135.637.644.21.798
N.97.16.135.637.644.21.799
N.98.16.135.637.332.22.111
N.100.16.135.636.957.22.111
N.101.16.135.636.707.22.133
N.102.16.135.636.394.22.111
N.77.16.135.636.144.22.111
N.55.23.176.636.144.21.277
N.103.22.866.636.144.21.277
N.104.22.092.636.144.21.277
N.105.21.842.636.144.21.277
N.106.21.592.636.144.21.277
N.107.20.634.636.144.21.277
N.109.20.509.636.144.21.402
N.111.20.509.636.144.21.683
N.112.20.509.636.144.21.691
N.68.20.509.636.144.22.111
N.101.16.135.636.707.22.111
N.113.16.135.636.707.22.621
N.114.16.135.636.707.22.965
N.115.16.135.636.707.23.119
N.116.16.135.636.707.23.84
N.118.16.135.636.894.24.027
N.9023.16.135.639.274.24.027
N.120.16.135.641.654.24.027
N.122.16.135.641.841.24.214
N.124.16.135.641.841.24.567
N.125.16.135.641.841.25.411
N.127.16.135.641.654.25.598
N.129.16.135.639.508.25.598
N.9024.16.135.637.966.25.598
N.130.16.135.636.47.25.598
N.65.21.53.636.144.22.11
N.131.21.53.636.415.22.11
N.132.21.53.636.666.22.11
N.71.19.654.636.144.22.11
N.133.19.654.636.415.22.11
N.134.19.654.636.686.22.11
ladd ambar and spring supports
N.1001.0.574.0
N.1009.5.217.583.696.-0.884
N.1010.5.217.584.329.-0.884
N.1014.5.759.593.25.-0.884
N.1015.6.259.593.25.-0.884
N.1027.10.379.604.291.1.944
N.1028.10.379.624.749.1.944
N.1029.10.379.626.415.1.944
N.1037.10.379.636.144.2.959
N.1039.10.379.636.144.11.918
N.1044.10.412.636.144.20.36
N.1045.11.129.636.144.20.36
N.1052.17.801.636.144.20.36
N.1053.19.822.636.144.20.36
N.1054.22.801.636.144.20.36
N.1057.23.176.636.144.20.86
N.1061.23.176.636.144.21.777
N.1073.17.383.636.144.22.11
N.1078.15.799.636.144.22.11
N.1079.11.028.636.144.22.11
N.1087.8.76.635.319.16.694
N.1124.16.135.641.841.24.567
N.1129.16.135.639.508.25.598
N.1130.16.135.636.425.25.598
N.1131.21.53.636.415.22.11
N.1133.19.654.636.415.22.11
type.1
real.11
mat.1
e.1.2
type.2
real.21
e.2.3.1
type.1
real.11
e.3.4
e.4.5
type.2
real.21
e.5.9001.4
e.9001.9002.4
e.9002.6.4
type.1
real.11
e.6.7

```

```

e.7.9001
e.9003.9004
e.9004.9
e.9.10
e.10.9005
e.9005.9006
e.9006.11
e.11.12
type.2
real.21
e.12.9007.11
e.9007.9008.11
e.9008.13.11
type.1
real.11
e.13.14
e.14.15
e.15.16
type.2
real.21
e.16.17.15
type.1
real.11
e.17.18
e.18.19
e.19.20
type.2
real.21
e.20.21.19
type.1
real.11
e.21.9009
e.9009.9010
e.9010.22
e.23.23
e.23.24
e.24.9011
e.9011.9012
e.9012.25
e.25.26
e.26.9013
e.9013.9014
e.9014.27
e.27.28
e.28.29
e.29.9015
e.9015.9016
e.9016.30
e.30.31
type.2
real.21
e.31.32.20
e.32.35.30
type.1
real.11
e.35.37
e.37.9017
e.9017.9018
e.9018.38
e.38.39
e.39.9019
e.9019.40
e.40.41
type.2
real.21
e.41.43.40
type.1
real.11
e.43.44
e.44.45
e.45.9020
e.9020.46
e.46.47
e.47.48
type.1
real.11
mat.2
e.48.49
e.49.50
type.1
real.11
mat.1
e.50.51
e.51.51
e.52.51
e.53.54
e.54.55
type.2
real.21
e.55.56.54
type.1
real.11
e.56.57
e.57.58
e.58.59
e.59.60
e.60.61
e.61.62
type.2
real.21
e.62.63.61

```


type.1
 real.11
 e. 53.64
 type.1
 real.11
 mat.2
 e. 85.65
 type.2
 real.11
 mat.1
 e. 66.67
 e. 67.68
 e. 68.70
 type.1
 real.11
 mat.2
 e. 70.71
 e. 71.72
 type.1
 real.11
 mat.2
 e. 72.73
 e. 73.74
 mat.2
 e. 74.75
 e. 75.76
 mat.2
 e. 76.77
 e. 77.78
 e. 78.8021
 e. 8021 - 79
 e. 79 - 80
 e. 80 - 81
 type.1
 real.11
 mat.2
 e. 82.8022
 type.1
 real.11
 mat.2
 e. 82.8022
 e. 83 - 84
 e. 84 - 85
 mat.2
 e. 85.86.64
 type.1
 real.11
 mat.2
 e. 86.87
 e. 87.91
 type.2
 real.11
 mat.2
 e. 92.93.91
 type.1
 real.11
 mat.2
 e. 93.94
 mat.2
 e. 94.95
 e. 95.96
 mat.1
 e. 96.97
 type.2
 real.21
 e. 97.96.96
 type.1
 mat.1
 e. 98.100
 e. 100 - 101
 e. 101 - 102
 type.1
 mat.1
 e. 102.77
 type.1
 mat.1
 e. 103.104
 mat.4
 e. 104.105
 e. 105.106
 mat.3
 type.107
 mat.3
 mat.3
 real.23
 type.1
 mat.3
 e. 109.111
 e. 111.112
 type.1
 mat.5
 real.15
 e. 112.68
 e. 101.113
 e. 113.114
 e. 114.115
 mat.5
 e. 115.116

type.2
 real.25
 e. 116.118.115
 type.1
 real.15
 e. 118.8023
 e. 8023.120
 type.2
 real.25
 e. 120.122.9021
 type.1
 real.15
 e. 122.124
 e. 124.125
 type.2
 real.25
 e. 125.127.124
 type.1
 real.15
 e. 127.129
 e. 129.8024
 e. 8024.130
 mat.1
 type.1
 e. 131
 e. 131.132
 e. 71.133
 e. 133.134
 real.58
 type.1
 e. 1.1001
 type.5
 e. 1.1001
 real.59
 type.6
 e. 1.1001
 type.8
 e. 1.1001
 type.8
 e. 1.1001
 real.51
 type.3
 e. 3.1009
 type.4
 e. 10.1010
 type.4
 e. 15.1015
 real.52
 type.4
 e. 14.1014
 real.11
 e. 23.1023
 type.5
 e. 26.1028
 real.53
 type.4
 e. 37.1037
 type.5
 e. 39.1039
 real.51
 type.4
 e. 44.1044
 type.5
 e. 45.1045
 real.54
 type.5
 e. 53.1053
 real.55
 e. 79.1079
 real.51
 type.3
 e. 124.1124
 type.5
 e. 124.1129
 type.4
 e. 52.1052
 type.5
 e. 54.1054
 type.3
 e. 57.1057
 type.4
 e. 78.1078
 type.5
 real.51
 e. 73.1073
 real.57
 type.5081
 real.51
 type.3
 e. 131.1131
 type.5
 e. 131.1131

```

Type 3
e.133.1133
Type 5
e.133.1133
real.58
Type 3
e.87.1087
Type 5
e.87.1087
Type 6
e.87.1087
real.59
Type 6
e.37.1087
Type 7
e.87.1087
e.87.1087
e.87.1087
real.58
Type 3
e.130.1130
Type 4
e.130.1130
Type 6
e.130.1130
real.59
Type 6
e.130.1130
Type 7
e.130.1130
Type 6
e.130.1130
Type 30
real.31
e.9
e.10
e.15
e.28
e.48
e.45
e.52
e.54
e.57
e.114
e.124
e.129
real.32
e.14
e.79
e.77.33
e.77.33
real.38
e.39
real.35
e.75
e.75
real.36
e.53
real.37
e.62
real.38
e.55
e.71
e.71.39
e.78
real.40
e.105
real.41
e.131
e.131
e.132
e.134
n.301.0.
n.302.0.
n.303.0.
n.304.0.
n.305.0.
n.305.0.
n.307.0.
n.308.0.
n.309.0.
n.310.0.
n.311.0.
n.312.0.
Type 71
mat.71
real.71
e.301.302
e.302.303
e.303.304
e.304.305
real.73
e.305.306
real.74
e.306.307

```

!for building

```

e.307.308
real.75
e.308.309
e.309.310
real.76
e.310.311
e.311.312
Type 72
e.312.313
real.77
e.304
e.306
real.78
real.79
e.318
e.310
e.310
e.313
Type 1
e.1.ux.304.1001
Type 2
e.2.ux.305.1007
Type 3
e.3.ux.312.1017.1039.1044.1045.1051.1079
Type 4
e.4.ux.312.1017.1021.1022.1023.1024.1025.1026
Type 5
e.5.ux.307.1015.1034
Type 6
e.6.ux.308.1023
Type 7
e.7.ux.310.1028
Type 1
e.1.ux.rock.rock.rock
Type 2
e.2.ux.rock.rock.rock
Type 3
e.3.ux.rock.rock.rock
Type 4
e.4.ux.rock.rock.rock
Type 5
e.5.ux.rock.rock.rock
Type 6
e.6.ux.rock.rock.rock
Type 7
e.7.ux.rock.rock.rock
d.301.all
dump.on
finish
finish
/solu
antype.modal
modopt.,33.,.33
m.3001.334.ny.ux
m.3004.ux.310.2.ny.ux
e.313.ux....ny.ux
outgr.nacl.all
save
solve
finish

```

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-----
WELCOME TO THE ANSYS PROGRAM
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***** ANSYS COMMAND LINE ARGUMENTS *****

NONE
 *** WARNING ***
 AUTHORIZATION FILE WILL SOON EXPIRE.
 CONTACT YOUR LOCAL ANSYS DISTRIBUTOR FOR DETAILS.

***** ANSYS DYNAMIC MEMORY ALLOCATION *****

WORK SPACE REQUESTED	=	8388608	32.000 MB	DEFAULT
MINIMUM WORK SPACE REQUIRED	=	2613736	9.971 MB	
MINIMUM WORK SPACE RECOMMENDED	=	4597640	17.539 MB	
WORK SPACE OBTAINED	=	8388606	32.000 MB	
BYTES PER WORD	=	4		

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 RESULTS SHOULD BE IMMEDIATELY BROUGHT TO OUR ATTENTION.

ENTER /SHOW,device TO SET THE GRAPHICS DISPLAY TO device(e.g. X11,4207,ETC.)
 ENTER /MENU,ON TO START THE ANSYS MENU SYSTEM
 ENTER HELP FOR GENERAL ANSYS HELP INFORMATION

40416-2 VERSION=8UN4SPARC REVISION= 5.0
 FOR SUPPORT CALL PHONE FAX
 CURRENT JORNAM=fil 15:51:45 OCT 11, 1995 CP= 0.940

```

BEGIN
1 /filnam,cpmodal
2 /units,bfc           !weight: kips, Length: feet
3 /prep
4 g=386.4/12
5 a=144/1000
6 bc=(12**3)/1000
7 co=0.036126684*b/g
8 d=12/1000
9 r1=2.875/12
10 r3=0.84/12
11 r5=1.9/12
12 ct=0.375/12
13 ct=0.188/12
14 ct=0.281/12
15 rr1=1.667
16 rr2=0.3125
17 rr12=6.5
18 rr13=0.313
19 rr3=0.125
20 rr5=0.187
21 /title,Modal analysis of coupled system of presurizer spray line & building
22 mp,ex,1,(28.3e6*a)           ! for piping
23 mp,mu,xy,1,0.3
24 mp,dens,1,(0.40695565*b/g)
25 mp,ex,2,(28.3e6*a)
26 mp,mu,xy,2,0.3
27 mp,dens,2,(0.43867346*b/g)
28 mp,ex,3,(28.3e6*a)
29 mp,mu,xy,3,0.3
30 mp,dens,3,(0.82658561*b/g)
31 mp,ex,4,(28.3e6*a)
32 mp,mu,xy,4,0.3
33 mp,dens,4,(5.8515393*b/g)
34 mp,ex,5,(28.3e6*a)
35 mp,mu,xy,5,0.3
36 mp,dens,5,(0.49939372*b/g)
37 mp,ex,6,(28.3e6*a)
38 mp,mu,xy,6,0.3
39 mp,dens,6,(2.5829705*b/g)
40 et,1,pipe16,.....1
41 et,2,pipe18,.....2
42 et,3,coeshin14,1           !ID spring X' Direction

```

```

43 et,4,coeshin14,.2           !ID spring Y' Direction
44 et,5,coeshin14,.3           !ID spring Z' Direction
45 et,6,coeshin14,.4           !ID spring ROTX' Direction
46 et,7,coeshin14,.5           !ID spring ROTY' Direction
47 et,8,coeshin14,.6           !ID spring ROTZ' Direction
48 et,30,masse21,.,.2
49 r,11,r1,ct,.,.,.0
50 r,21,r1,ct,rr1
51 rmore,c
52 r,21,r1,ct,rr1
53 rmore,c
54 r,212,r1,ct,rr12
55 rmore,c
56 r,213,r1,ct,rr13
57 rmore,c
58 r,13,r3,ct,.,.,.0
59 r,23,r3,ct,rr3
60 rmore,c
61 r,15,r5,ct5,.,.,.0
62 r,25,r5,ct5,rr5
63 rmore,c
64 r,51,(77000*d)
65 r,52,(95*d)
66 r,53,(212000*d)
67 r,54,(126*d)
68 r,55,(35*d)
69 r,56,(400*d)
70 r,57,(224*d)
71 r,58,(1.0e11*d)
72 r,59,8.33e8
73 r,31,(25.0/g/1000)
74 r,32,(4.0/g/1000)
75 r,33,(43.0/g/1000)
76 r,34,(40.0/g/1000)
77 r,35,(75.0/g/1000)
78 r,36,(5.0/g/1000)
79 r,37,(6.0/g/1000)
80 r,38,(105.0/g/1000)
81 r,39,(10.0/g/1000)
82 r,40,(12.0/g/1000)
83 r,41,(31.5/g/1000)
84 r,42,(230.0/g/1000)
85 f=1/(12**4)
86 i=1/(12**4)
87 et,71,masse
88 mp,ex,71,(4.5e6*a)           ! for building
89 mp,mu,xy,71,0.3
90 mp,dens,71,0.0
91 r,71,(157000*f),(1*1.18e+10),(1*1.03e+10)
92 rmore,.,1.71,1.67
93 r,72,(243000*f),(1*1.43e+10),(1*1.1e+10)
94 rmore,.,1.26,1.23
95 r,73,(162000*f),(1*1.25e+10),(1*1.6e+10)
96 rmore,.,1.57,2.33
97 r,74,(132000*f),(1*1.15e+10),(1*1.48e+10)
98 rmore,.,(1*2.64e10),1.59,2.26
99 r,75,(92660*f),(1*5.656e+09),(1*2.151e+09)
100 rmore,.,1.42,2.57
101 r,76,(98710*f),(1*7.372e+09),(1*2.603e+09)
102 rmore,.,1.51,2.88
103 et,72,masse21,.,.2
104 r,77,(4474.0e3/g/1000)
105 r,78,(4428.75e3/g/1000)
106 r,79,(2650.75e3/g/1000)
107 r,80,(5207.25e3/g/1000)
108 r,81,(2847.75e3/g/1000)
109 M,1,0.574,0
110 M,2,0.396,574,-0.396           ! for piping
111 M,3,1.574,574,-0.884
112 M,4,3.79,574,-0.884
113 M,5,4.905,574,-0.884
114 M,9001,5.061,574.042,-0.884
115 M,9002,5.175,574.156,-0.884
116 M,6,5.217,574.312,-0.884
117 M,7,5.217,574.5,-0.884
118 M,9003,5.217,577.565,-0.884
119 M,9004,5.217,580.612,-0.884
120 M,9,5.217,583.696,-0.884
121 M,10,5.217,584.229,-0.884
122 M,9005,5.217,586.833,-0.884
123 M,9006,5.217,589.428,-0.884
124 M,11,5.217,592.042,-0.884
125 M,12,5.217,592.938,-0.884
126 M,9007,5.259,593.098,-0.884
127 M,9008,5.373,593.208,-0.884
128 M,13,5.53,593.25,-0.884
129 M,14,5.759,593.25,-0.884
130 M,15,6.259,593.25,-0.884
131 M,16,7.427,593.25,-0.884
132 M,17,7.643,593.25,-0.792
133 M,18,8.051,593.25,-0.384
134 M,19,8.629,593.25,0.194
135 M,20,10.158,593.25,1.723
136 M,21,10.379,593.562,1.944
137 M,9009,10.379,594.803,1.944
138 M,9010,10.379,600.243,1.944
139 M,22,10.379,603.583,1.944
140 M,23,10.379,604.291,1.944
141 M,24,10.379,605.655,1.944
142 M,9011,10.379,608.436,1.944
143 M,9012,10.379,611.218,1.944

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144 M.25.10.379.613.999.1.944
 145 M.26.10.379.614.781.1.944
 146 M.9013.10.379.617.747.1.944
 147 M.9014.10.379.620.693.1.944
 148 M.27.10.379.623.645.1.944
 149 M.28.10.379.624.749.1.944
 150 M.29.10.379.628.415.1.944
 151 M.9015.10.379.629.526.1.944
 152 M.9016.10.379.632.638.1.944
 153 M.30.10.379.635.749.1.944
 154 M.31.10.379.635.832.1.944
 155 M.32.10.379.636.081.2.035
 156 M.35.10.379.636.144.2.256
 157 M.37.10.379.636.144.2.959
 158 M.9017.10.379.636.144.5.657
 159 M.9018.10.379.636.144.8.355
 160 M.38.10.379.636.144.11.053
 161 M.39.10.379.636.144.11.918
 162 M.9019.10.379.636.144.14.756
 163 M.40.10.379.636.144.17.585
 164 M.41.10.379.636.144.20.048
 165 M.43.10.692.636.144.20.36
 166 M.44.10.812.636.144.20.35
 167 M.45.11.129.636.144.20.35
 168 M.9020.11.507.636.144.20.36
 169 M.46.15.885.636.144.20.36
 170 M.47.16.135.636.144.20.36
 171 M.48.16.385.636.144.20.36
 172 M.49.16.801.636.144.20.36
 173 M.50.17.218.636.144.20.36
 174 M.51.17.343.636.144.20.36
 175 M.52.17.801.636.144.20.36
 176 M.53.19.822.636.144.20.36
 177 M.54.22.801.636.144.20.36
 178 M.55.22.864.636.144.20.36
 179 M.56.23.176.636.144.20.673
 180 M.57.23.176.636.144.20.66
 181 M.58.23.176.636.144.21.027
 182 M.59.23.176.636.144.21.277
 183 M.60.23.176.636.144.21.527
 184 M.61.23.176.636.144.21.777
 185 M.62.23.176.636.144.21.798
 186 M.63.22.864.636.144.22.11
 187 M.64.21.947.636.144.22.11
 188 M.65.21.53.636.144.22.11
 189 M.66.21.113.636.144.22.11
 190 M.67.20.759.636.144.22.11
 191 M.68.20.509.636.144.22.11
 192 M.69.20.259.636.144.22.11
 193 M.70.20.071.636.144.22.11
 194 M.71.19.654.636.144.22.11
 195 M.72.19.237.636.144.22.11
 196 M.73.17.383.636.144.22.11
 197 M.74.17.175.636.144.22.11
 198 M.75.16.758.636.144.22.11
 199 M.76.16.341.636.144.22.11
 200 M.77.16.133.636.144.22.11
 201 M.78.15.799.636.144.22.11
 202 M.9021.13.413.636.144.22.11
 203 M.79.11.028.636.144.22.11
 204 M.80.10.121.636.144.22.11
 205 M.81.9.897.636.144.22.11
 206 M.82.9.585.636.144.21.798
 207 M.9022.9.585.636.144.19.663
 208 M.83.9.585.636.144.17.527
 209 M.84.9.585.636.144.17.333
 210 M.85.9.585.636.144.17.194
 211 M.86.9.231.636.144.16.694
 212 M.87.8.76.636.144.16.694
 213 M.87.16.135.636.144.20.36
 214 M.91.16.135.636.144.20.36
 215 M.92.16.135.637.332.20.36
 216 M.93.16.135.637.644.20.673
 217 M.94.16.135.637.644.20.944
 218 M.95.16.135.637.644.21.361
 219 M.96.16.135.637.644.21.778
 220 M.97.16.135.637.644.21.799
 221 M.98.16.135.637.332.22.111
 222 M.100.16.135.636.957.22.111
 223 M.101.16.135.636.707.22.111
 224 M.102.16.135.636.394.22.111
 225 M.77.16.135.636.144.22.111
 226 M.59.23.176.636.144.21.277
 227 M.103.22.866.636.144.21.277
 228 M.104.22.092.636.144.21.277
 229 M.105.21.842.636.144.21.277
 230 M.106.21.592.636.144.21.277
 231 M.107.20.634.636.144.21.277
 232 M.109.20.509.636.144.21.402
 233 M.111.20.509.636.144.21.683
 234 M.112.20.509.636.144.21.801
 235 M.68.20.509.636.144.22.111
 236 M.101.16.135.636.707.22.111
 237 M.113.16.135.636.707.22.611
 238 M.114.16.135.636.707.22.965
 239 M.115.16.135.636.707.23.319
 240 M.116.16.135.636.707.23.84
 241 M.118.16.135.636.894.24.027
 242 M.9023.16.135.639.274.24.027
 243 M.120.16.135.641.654.24.027
 244 M.122.16.135.641.841.24.214

245 M.124.16.135.641.841.24.567
 246 M.125.16.135.641.841.25.411
 247 M.127.16.135.641.654.25.598
 248 M.129.16.135.639.508.25.598
 249 M.9024.16.135.637.966.25.598
 250 M.130.16.135.636.425.25.598
 251 M.85.21.53.636.144.22.11
 252 M.121.21.53.636.415.22.11
 253 M.132.21.53.636.686.22.11
 254 M.71.19.654.636.144.22.11
 255 M.133.19.654.636.415.22.11
 256 M.134.19.654.36.686.22.11
 257 *add another and spring supports*
 258 M.1901.0.574.0
 259 M.1009.5.217.585.698.-0.884
 260 M.1010.5.217.584.279.-0.884
 261 M.1014.5.259.593.25.-0.884
 262 M.1015.5.259.593.25.-0.884
 263 M.1023.10.379.604.291.1.944
 264 M.1028.10.379.624.749.1.944
 265 M.1029.10.379.626.415.1.944
 266 M.1037.10.379.636.144.2.959
 267 M.1039.10.379.636.144.11.918
 268 M.1044.10.812.636.144.20.36
 269 M.1045.11.129.636.144.20.36
 270 M.1052.17.801.636.144.20.36
 271 M.1053.18.822.636.144.20.36
 272 M.1054.22.801.636.144.20.36
 273 M.1057.23.176.636.144.20.86
 274 M.1061.23.176.636.144.21.777
 275 M.1073.17.383.636.144.22.11
 276 M.1078.15.799.636.144.22.11
 277 M.1079.11.028.636.144.22.11
 278 M.1087.8.76.636.319.16.694
 279 M.1124.16.135.641.841.24.567
 280 M.1129.16.135.639.508.25.598
 281 M.1130.16.135.636.425.25.598
 282 M.1131.21.53.636.415.22.11
 283 M.1133.19.654.636.415.22.11
 284 type.1
 285 real.11
 286 int.1
 287 e.1.2
 288 type.2
 289 real.211
 290 e.2.3.1
 291 type.1
 292 real.11
 293 e.3.4
 294 e.4.5
 295 type.2
 296 real.21
 297 e.5.9001.4
 298 e.9001.9002.4
 299 e.9002.6.4
 300 type.1
 301 real.11
 302 e.6.7
 303 e.7.9003
 304 e.9003.9004
 305 e.9004.9
 306 e.9.10
 307 e.10.9005
 308 e.9005.9006
 309 e.9006.11
 310 e.11.12
 311 type.2
 312 real.21
 313 e.12.9007.11
 314 e.9007.9008.11
 315 e.9008.13.11
 316 type.1
 317 real.11
 318 e.13.14
 319 e.14.15
 320 e.15.16
 321 type.2
 322 real.21
 323 e.16.17.15
 324 type.1
 325 real.11
 326 e.17.18
 327 e.18.19
 328 e.19.20
 329 type.2
 330 real.21
 331 e.20.21.19
 332 type.1
 333 real.11
 334 e.21.9009
 335 e.9009.9010
 336 e.9010.22
 337 e.22.23
 338 e.23.24
 339 e.24.9011
 340 e.9011.9012
 341 e.9012.25
 342 e.25.26
 343 e.26.9013
 344 e.9013.9014
 345 e.9014.27

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346 e. 27 . 28
347 e. 28 . 29
348 e. 29 . 9015
349 e. 9015 . 9016
350 e. 9016 . 30
351 e. 30 . 31
352 type.2
353 real.21
354 e.31.32.30
355 e.32.33.30
356 type.1
357 real.11
358 e.35.37
359 e. 37 . 9017
360 e. 9017 . 9018
361 e. 9018 . 7.
362 e. 38 . 39
363 e. 39 . 9019
364 e. 9019 . 40
365 e. 40 . 41
366 type.2
367 real.21
368 e.41.43.40
369 type.1
370 real.11
371 e.43.44
372 e. 44 . 45
373 e. 45 . 9020
374 e. 9020 . 46
375 e. 46 . 47
376 e. 47 . 48
377 type.1
378 real.11
379 mat.2
380 e.48.49
381 e.49.50
382 type.1
383 real.11
384 mat.1
385 e.50.51
386 e. 51 . 52
387 e. 52 . 53
388 e. 53 . 54
389 e. 54 . 55
390 type.2
391 real.21
392 e.55.56.54
393 type.1
394 real.11
395 e.56.57
396 e. 57 . 58
397 e. 58 . 59
398 e. 59 . 60
399 e. 60 . 61
400 e. 61 . 62
401 type.2
402 real.21
403 e.62.63.61
404 type.1
405 real.11
406 e.63.64
407 type.1
408 real.11
409 mat.2
410 e.64.65
411 e.65.66
412 type.1
413 real.11
414 mat.1
415 e.66.67
416 e.67.68
417 e.68.69
418 e.69.70
419 type.1
420 real.11
421 mat.2
422 e.70.71
423 e.71.72
424 type.1
425 real.11
426 mat.1
427 e.72.73
428 e.73.74
429 mat.2
430 e.74.75
431 e.75.76
432 mat.1
433 e.76.77
434 e. 77 . 78
435 e. 78 . 9021
436 e. 9021 . 79
437 e. 79 . 80
438 e. 80 . 81
439 type.2
440 real.21
441 e.81.82.80
442 type.1
443 real.11
444 e.82.9022
445 e. 9022 . 83
446 e. 83 . 84

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447 e. 84 . 85
448 type.2
449 real.212
450 e.85.86.84
451 type.1
452 real.11
453 e.86.87
454 e.47.91
455 e.91.92
456 type.2
457 real.213
458 e.92.93.91
459 type.1
460 real.11
461 e.93.94
462 mat.2
463 e.94.95
464 e.95.96
465 mat.1
466 e.96.97
467 type.2
468 real.21
469 e.97.98.96
470 type.1
471 real.11
472 e.98.100
473 e. 100 . 101
474 e. 101 . 102
475 e.102.77
476 type.1
477 mat.3
478 real.13
479 e.59.103
480 e.103.104
481 mat.4
482 e.104.105
483 e.105.106
484 mat.3
485 e.106.107
486 type.2
487 mat.3
488 real.23
489 e.107.109.106
490 type.1
491 mat.3
492 real.13
493 e.109.111
494 e.111.112
495 type.1
496 mat.5
497 real.15
498 e.112.68
499 e.101.113
500 mat.6
501 e.113.114
502 e.114.115
503 mat.5
504 e.115.116
505 type.2
506 real.25
507 e.116.118.115
508 type.1
509 mat.5
510 real.15
511 e.118.9023
512 e.9023.120
513 type.2
514 real.25
515 e.120.122.9023
516 type.1
517 mat.5
518 real.15
519 e.122.124
520 e.124.125
521 type.2
522 real.25
523 e.125.127.124
524 type.1
525 mat.5
526 real.15
527 e.127.129
528 e.129.9024
529 e.9024.130
530 mat.1
531 type.1
532 real.11
533 e.65.132
534 e.132.132
535 e.71.133
536 e.133.134
537 real.58
538 type.3
539 e.1.001
540 type.4
541 e.1.1001
542 type.5
543 e.1.1001
544 real.59
545 type.6
546 e.1.1001
547 type.7

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548 e.1.1001
549 type.2
550 e.1.1001
551 real.51
552 type.3
553 e.9.1009
554 type.5
555 e.10.1010
556 type.4
557 e.15.1015
558 real.52
559 type.4
560 e.14.1014
561 real.51
562 type.3
563 e.23.1033
564 type.5
565 e.28.1028
566 real.53
567 type.4
568 e.37.1037
569 type.3
570 e.38.1039
571 real.51
572 type.4
573 e.44.1044
574 type.5
575 e.45.1045
576 real.54
577 type.4
578 e.53.1053
579 real.55
580 e.79.1079
581 real.51
582 type.3
583 e.124.1124
584 type.5
585 e.129.1129
586 type.4
587 e.52.1052
588 type.5
589 e.54.1054
590 type.3
591 e.57.1057
592 real.56
593 type.4
594 e.78.1078
595 type.5
596 real.51
597 e.73.1073
598 real.57
599 type.4
600 e.91.1061
601 real.51
602 type.3
603 e.131.1131
604 type.5
605 e.131.1131
606 type.3
607 e.133.1133
608 type.5
609 e.133.1133
610 real.58
611 type.3
612 e.87.1087
613 type.4
614 e.87.1087
615 type.5
616 e.87.1087
617 real.59
618 type.6
619 e.87.1087
620 type.7
621 e.87.1087
622 type.8
623 e.87.1087
624 real.58
625 type.3
626 e.130.1130
627 type.4
628 e.130.1130
629 type.5
630 e.130.1130
631 real.59
632 type.6
633 e.130.1130
634 type.7
635 e.130.1130
636 type.8
637 e.130.1130
638 type.10
639 real.31
640 e.9
641 e.10
642 e.15
643 e.21
644 e.28
645 e.44
646 e.45
647 e.52
648 e.54

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649 e.57
650 e.73
651 e.114
652 e.124
653 e.129
654 real.32
655 e.14
656 e.78
657 real.33
658 e.37
659 real.7
660 e.39
661 real.3
662 e.49
663 e.75
664 e.95
665 real.36
666 e.53
667 real.37
668 e.61
669 real.38
670 e.65
671 e.71
672 real.39
673 e.78
674 real.40
675 e.105
676 real.41
677 e.131
678 e.133
679 real.42
680 e.132
681 e.134
682 n.301.0. 585.0. (for building)
683 n.302.0. 568.0.
684 n.303.0. 571.0.
685 n.304.0. 574.0.
686 n.305.0. 577.83333.0.
687 n.306.0. 590.0.
688 n.307.0. 595.5.0.
689 n.308.0. 604.0.
690 n.309.0. 609.5.0.
691 n.310.0. 624.5.0.
692 n.311.0. 629.58333.0.
693 n.312.0. 638.33333.0.
694 n.313.0. 647.0.
695 type.71
696 mat.71
697 real.71
698 e.301.302
699 e.302.303
700 e.303.304
701 real.72
702 e.304.305
703 real.73
704 e.305.306
705 real.74
706 e.306.307
707 e.307.308
708 real.75
709 e.308.309
710 e.309.310
711 real.76
712 e.310.311
713 e.311.312
714 e.312.313
715 type.72
716 real.77
717 e.304
718 real.78
719 e.306
720 real.79
721 e.308
722 real.80
723 e.310
724 real.81
725 e.313
726 cp.1.ux.304.1001
727 cp.2.ux.309.1087
728 cp.3.ux.312.1037.1039.1044.1045.1053.1079
729 cp.3.ux.312.1124.1129.1052.1054.1057.1078
730 cp.3.ux.312.1073.1061.1131.1133.1130
731 cp.4.ux.306.1009.1010
732 cp.5.ux.307.1015.1014
733 cp.6.ux.308.1023
734 cp.7.ux.310.1028
735 cplgen.1.uy.uz.rotx.rotz
736 cplgen.2.uy.uz.rotx.rotz
737 cplgen.3.uy.uz.rotx.rotz
738 cplgen.4.uy.uz.rotx.rotz
739 cplgen.5.uy.uz.rotx.rotz
740 cplgen.6.uy.uz.rotx.rotz
741 cplgen.7.uy.uz.rotx.rotz
742 s.301.all
743 lumpn.on
744 save
745 finish
746
747 /solu
748 antype.modal
749 modopt.,33.,.,33

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750 M. 1. UN. 134. 0Y. US
 751 M. 8001. UN. 8024. 0Y. US
 752 M. 304. UN. 310. 2. 0Y. US
 753 M. 313. UN. 310. 2. 0Y. US
 754 coupr /moel. all
 755 4015
 757 finish

CURRENT JOINTAGE IDENTIFIED AS cpmodel

BRITISH FEET UNITS P. *****
 LENGTH * FEET P.
 TIME * SECONDS .SEC)
 TEMPERATURE * FAHRENHEIT
 CURRENT * AMPS

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
 4015-2 VERSURE SUBPARC 19:31:46 OCT 11, 1995 CP* 1.710
 FOR SUPPORT CALL PHONE

***** ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY**

***** ANSYS ANALYSIS DEFINITION (PREP) *****

PARAMETER C = 32.10000
 PARAMETER A = 0.1440000
 PARAMETER B = 1.728000
 PARAMETER C = 0.1918724E-02
 PARAMETER D = 0.1200000E-01
 PARAMETER R1 = 0.2395833
 PARAMETER R3 = 0.7000000E-01
 PARAMETER R5 = 0.1583333
 PARAMETER T1 = 0.3125000E-01
 PARAMETER T5 = 0.1566667E-01
 PARAMETER RR11 = 1.667000
 PARAMETER RR2 = 0.3125000
 PARAMETER R6.2 = 0.5000000
 PARAMETER RR13 = 0.3110000
 PARAMETER R53 = 0.1250000
 PARAMETER R85 = 0.1870000

TITLE
 Model analysis of precurser system of precurser spray line & building

MATERIAL 1 EX = 4078200.
 MATERIAL 1 MUY = 0.3000000
 MATERIAL 2 DENS = 0.2183911E-01
 MATERIAL 2 EX = 4078200.
 MATERIAL 2 MUY = 0.3000000
 MATERIAL 2 DENS = 0.3000000
 MATERIAL 2 EX = 0.2154123E-01
 MATERIAL 2 MUY = 0.3000000
 MATERIAL 2 DENS = 0.4983217E-01
 MATERIAL 3 EX = 4078200.
 MATERIAL 3 MUY = 0.3000000
 MATERIAL 3 DENS = 0.4983217E-01
 MATERIAL 4 EX = 4078200.
 MATERIAL 4 MUY = 0.3000000
 MATERIAL 4 DENS = 0.140205
 MATERIAL 5 EX = 4078200.
 MATERIAL 5 MUY = 0.3000000
 MATERIAL 5 DENS = 0.2679976E-01
 MATERIAL 6 EX = 4078200.
 MATERIAL 6 MUY = 0.3000000

MATERIAL 6 DENS = 0.1386141
 ELEMENT TYPE 1 IS PIPE16 ELASTIC STRAIGHT PIPE
 KEYOPT(1-12) = 0 0 0 0 1 0 0 0 0 0 0 0
 CURRENT MODAL DOF SET IS UX UY UZ ROTX ROTY ROTZ
 THREE-DIMENSIONAL MODEL

ELEMENT TYPE 2 IS PIPE18 ELASTIC CURVED PIPE (ELBOW)
 KEYOPT(1-12) = 0 0 0 0 0 2 0 0 0 0 0 0
 CURRENT MODAL DOF SET IS UX UY UZ ROTX ROTY ROTZ
 THREE-DIMENSIONAL MODEL

ELEMENT TYPE 3 IS COMBIN14 SPRING-DAMPER
 KEYOPT(1-12) = 0 1 0 0 0 0 0 0 0 0 0 0
 CURRENT MODAL DOF SET IS UX UY UZ ROTX ROTY ROTZ
 THREE-DIMENSIONAL MODEL

ELEMENT TYPE 4 IS COMBIN14 SPRING-DAMPER
 KEYOPT(1-12) = 0 2 0 0 0 0 0 0 0 0 0 0
 CURRENT MODAL DOF SET IS UX UY UZ ROTX ROTY ROTZ
 THREE-DIMENSIONAL MODEL

ELEMENT TYPE 5 IS COMBIN14 SPRING-DAMPER
 KEYOPT(1-12) = 0 3 0 0 0 0 0 0 0 0 0 0
 CURRENT MODAL DOF SET IS UX UY UZ ROTX ROTY ROTZ
 THREE-DIMENSIONAL MODEL

ELEMENT TYPE 6 IS COMBIN14 SPRING-DAMPER
 KEYOPT(1-12) = 0 4 0 0 0 0 0 0 0 0 0 0
 CURRENT MODAL DOF SET IS UX UY UZ ROTX ROTY ROTZ
 THREE-DIMENSIONAL MODEL

ELEMENT TYPE 7 IS COMBIN14 SPRING-DAMPER
 KEYOPT(1-12) = 0 5 0 0 0 0 0 0 0 0 0 0
 CURRENT MODAL DOF SET IS UX UY UZ ROTX ROTY ROTZ
 THREE-DIMENSIONAL MODEL

ELEMENT TYPE 8 IS COMBIN14 SPRING-DAMPER
 KEYOPT(1-12) = 0 6 0 0 0 0 0 0 0 0 0 0
 CURRENT MODAL DOF SET IS UX UY UZ ROTX ROTY ROTZ
 THREE-DIMENSIONAL MODEL

ELEMENT TYPE 30 IS MASS21 STRUCTURAL MASS
 KEYOPT(1-12) = 0 0 0 0 0 0 0 0 0 0 0 0
 CURRENT MODAL DOF SET IS UX UY UZ ROTX ROTY ROTZ
 THREE-DIMENSIONAL MODEL

REAL CONSTANT SET 11 ITEMS 1 TO 6 0.19187E-02
 0.23958 0.31250E-01
 KEAL CONSTANT SET 211 ITEMS 1 TO 6 0.
 0.23958 0.31250E-01 1.6670 0.

REAL CONSTANT SET 211 ITEMS 7 TO 12 0.
 0.19187E-02 0. 0. 0. 0. 0.
 REAL CONSTANT SET 21 ITEMS 1 TO 6 0.
 0.23958 0.31250E-01 0.31250 0.

REAL CONSTANT SET 211 ITEMS 7 TO 12 0.
 0.19187E-02 0. 0. 0. 0. 0.
 REAL CONSTANT SET 212 ITEMS 1 TO 6 0.
 0.23958 0.31250E-01 0.50000 0.

REAL CONSTANT SET 212 ITEMS 7 TO 12 0.
 0.19187E-02 0. 0. 0. 0. 0.
 REAL CONSTANT SET 213 ITEMS 1 TO 6 0.
 0.23958 0.31250E-01 0.31100 0.

REAL CONSTANT SET 213 ITEMS 7 TO 12 0.
 0.19187E-02 0. 0. 0. 0. 0.
 REAL CONSTANT SET 13 ITEMS 1 TO 6 0.
 0.70000E-01 0.156667E-01

REAL CONSTANT SET 23 ITEMS 1 TO 6 0.
 0.70000E-01 0.18667E-01 0.12500 0.
 REAL CONSTANT SET 22 ITEMS 7 TO 12 0.
 0.19187E-02 0. 0. 0. 0. 0.

REAL CONSTANT SET 15 ITEMS 1 TO 6 0.
 0.15833 0.23417E-01
 REAL CONSTANT SET 25 ITEMS 1 TO 6 0.
 0.15833 0.23417E-01 0.18700 0.

REAL CONSTANT SET 25 ITEMS 7 TO 12 0.
 0.19187E-02 0. 0. 0. 0. 0.
 REAL CONSTANT SET 25 ITEMS 1 TO 6 0.
 0.15833 0.23417E-01 0.18700 0.

REAL CONSTANT SET 25 ITEMS 7 TO 12 0.
 0.19187E-02 0. 0. 0. 0. 0.
 REAL CONSTANT SET 25 ITEMS 1 TO 6 0.
 0.15833 0.23417E-01 0.18700 0.

REAL CONSTANT SET 25 ITEMS 7 TO 12 0.
 0.19187E-02 0. 0. 0. 0. 0.
 REAL CONSTANT SET 25 ITEMS 1 TO 6 0.
 0.15833 0.23417E-01 0.18700 0.

REAL CONSTANT SET 25 ITEMS 7 TO 12 0.
 0.19187E-02 0. 0. 0. 0. 0.
 REAL CONSTANT SET 25 ITEMS 1 TO 6 0.
 0.15833 0.23417E-01 0.18700 0.

REAL CONSTANT SET 25 ITEMS 7 TO 12 0.
 0.19187E-02 0. 0. 0. 0. 0.
 REAL CONSTANT SET 25 ITEMS 1 TO 6 0.
 0.15833 0.23417E-01 0.18700 0.

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REAL CONSTANT SET	55	ITEMS	1 TO 6	0.	0.	0.	0.
924.00	0.	0.	0.	0.	0.	0.	0.
REAL CONSTANT SET	52	ITEMS	1 TO 6	0.	0.	0.	0.
0.67200	0.	0.	0.	0.	0.	0.	0.
REAL CONSTANT SET	53	ITEMS	1 TO 6	0.	0.	0.	0.
2544.0	0.	0.	0.	0.	0.	0.	0.
REAL CONSTANT SET	54	ITEMS	1 TO 6	0.	0.	0.	0.
1.5120	0.	0.	0.	0.	0.	0.	0.
REAL CONSTANT SET	55	ITEMS	1 TO 6	0.	0.	0.	0.
0.42000	0.	0.	0.	0.	0.	0.	0.
REAL CONSTANT SET	56	ITEMS	1 TO 6	0.	0.	0.	0.
4.9000	0.	0.	0.	0.	0.	0.	0.
REAL CONSTANT SET	57	ITEMS	1 TO 6	0.	0.	0.	0.
2.4880	0.	0.	0.	0.	0.	0.	0.
REAL CONSTANT SET	58	ITEMS	1 TO 6	0.	0.	0.	0.
0.12000E+10	0.	0.	0.	0.	0.	0.	0.
REAL CONSTANT SET	59	ITEMS	1 TO 6	0.	0.	0.	0.
0.83300E+09	0.	0.	0.	0.	0.	0.	0.
REAL CONSTANT SET	31	ITEMS	1 TO 6	0.	0.	0.	0.
0.77640E-03	0.	0.	0.	0.	0.	0.	0.
REAL CONSTANT SET	32	ITEMS	1 TO 6	0.	0.	0.	0.
0.12422E-03	0.	0.	0.	0.	0.	0.	0.
REAL CONSTANT SET	33	ITEMS	1 TO 6	0.	0.	0.	0.
0.13354E-02	0.	0.	0.	0.	0.	0.	0.
REAL CONSTANT SET	34	ITEMS	1 TO 6	0.	0.	0.	0.
0.12422E-02	0.	0.	0.	0.	0.	0.	0.
REAL CONSTANT SET	35	ITEMS	1 TO 6	0.	0.	0.	0.
0.23292E-02	0.	0.	0.	0.	0.	0.	0.
REAL CONSTANT SET	36	ITEMS	1 TO 6	0.	0.	0.	0.
0.15528E-03	0.	0.	0.	0.	0.	0.	0.
REAL CONSTANT SET	37	ITEMS	1 TO 6	0.	0.	0.	0.
0.18634E-03	0.	0.	0.	0.	0.	0.	0.
REAL CONSTANT SET	38	ITEMS	1 TO 6	0.	0.	0.	0.
0.32609E-02	0.	0.	0.	0.	0.	0.	0.
REAL CONSTANT SET	39	ITEMS	1 TO 6	0.	0.	0.	0.
0.31056E-03	0.	0.	0.	0.	0.	0.	0.
REAL CONSTANT SET	40	ITEMS	1 TO 6	0.	0.	0.	0.
0.37267E-03	0.	0.	0.	0.	0.	0.	0.
REAL CONSTANT SET	41	ITEMS	1 TO 6	0.	0.	0.	0.
0.97826E-03	0.	0.	0.	0.	0.	0.	0.
REAL CONSTANT SET	42	ITEMS	1 TO 6	0.	0.	0.	0.
0.71429E-02	0.	0.	0.	0.	0.	0.	0.
PARAMETER P	= 0.6944444E-02						
PARAMETER I	= 0.4822531E-04						
ELEMENT TYPE	71	IN BEAM4	3-D ELASTIC BEAM				
KEYOPT(1-12)	= 0 0 0 0 0 0 0 0 0 0 0 0						
CURRENT NODAL DOF SET IS	UX	UY	UZ	ROTX	ROTY	ROTZ	
THREE-DIMENSIONAL MODEL							
MATERIAL	71	EX =	648000.0				
MATERIAL	71	NUXY =	0.3000000				
MATERIAL	71	DEMG =	0.				
REAL CONSTANT SET	71	ITEMS	1 TO 6	0.	0.	0.	0.
1090.1	0.56106E+06	0.49672E+06	0.	0.	0.	0.	0.
REAL CONSTANT SET	71	ITEMS	7 TO 12	0.	0.	0.	0.
0.	0.	1.7100	1.6700	0.	0.	0.	0.
REAL CONSTANT SET	72	ITEMS	1 TO 6	0.	0.	0.	0.
1687.5	0.68942E+06	0.53048E+06	0.	0.	0.	0.	0.
REAL CONSTANT SET	72	ITEMS	7 TO 12	0.	0.	0.	0.
0.	0.	1.2600	1.2300	0.	0.	0.	0.
REAL CONSTANT SET	73	ITEMS	1 TO 6	0.	0.	0.	0.
1125.0	0.60282E+06	0.77160E+06	0.	0.	0.	0.	0.
REAL CONSTANT SET	73	ITEMS	7 TO 12	0.	0.	0.	0.
0.	0.	1.5700	2.3300	0.	0.	0.	0.
REAL CONSTANT SET	74	ITEMS	1 TO 6	0.	0.	0.	0.
916.67	0.55459E+06	0.71373E+06	0.	0.	0.	0.	0.
REAL CONSTANT SET	74	ITEMS	7 TO 12	0.	0.	0.	0.

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0.	0.12731E+07	1.5700	1.2600	0.	0.	0.	0.
REAL CONSTANT SET	75	ITEMS	1 TO 6	0.	0.	0.	0.
643.47	0.27276E+06	0.10373E+06	0.	0.	0.	0.	0.
REAL CONSTANT SET	75	ITEMS	7 TO 12	0.	0.	0.	0.
0.	0.	1.4200	2.5700	0.	0.	0.	0.
REAL CONSTANT SET	76	ITEMS	1 TO 6	0.	0.	0.	0.
685.49	0.35552E+06	0.12553E+06	0.	0.	0.	0.	0.
REAL CONSTANT SET	76	ITEMS	7 TO 12	0.	0.	0.	0.
0.	0.	1.5100	2.8800	0.	0.	0.	0.
ELEMENT TYPE	72	IS MASS21	STRUCTURAL MASS				
KEYOPT(1-12)	= 0 0 2 0 0 0 0 0 0 0 0 0						
CURRENT NODAL DOF SET IS	UX	UY	UZ	ROTX	ROTY	ROTZ	
THREE-DIMENSIONAL MODEL							
REAL CONSTANT SET	77	ITEMS	1 TO 6	0.	0.	0.	0.
138.94	0.	0.	0.	0.	0.	0.	0.
REAL CONSTANT SET	78	ITEMS	1 TO 6	0.	0.	0.	0.
137.54	0.	0.	0.	0.	0.	0.	0.
REAL CONSTANT SET	79	ITEMS	1 TO 6	0.	0.	0.	0.
82.321	0.	0.	0.	0.	0.	0.	0.
REAL CONSTANT SET	80	ITEMS	1 TO 6	0.	0.	0.	0.
99.604	0.	0.	0.	0.	0.	0.	0.
REAL CONSTANT SET	81	ITEMS	1 TO 6	0.	0.	0.	0.
88.439	0.	0.	0.	0.	0.	0.	0.
NODE	1	KCS=	0 X,Y,Z=	0.	574.00	0.	0.
NODE	2	KCS=	0 X,Y,Z=	0.39600	574.00	-0.39600	0.
NODE	3	KCS=	0 X,Y,Z=	1.5740	574.00	-0.88400	0.
NODE	4	KCS=	0 X,Y,Z=	3.7900	574.00	-0.88400	0.
NODE	5	KCS=	0 X,Y,Z=	4.9050	574.00	-0.88400	0.
NODE	9001	KCS=	0 X,Y,Z=	5.0610	574.04	-0.88400	0.
NODE	9002	KCS=	0 X,Y,Z=	5.1750	574.16	-0.88400	0.
NODE	6	KCS=	0 X,Y,Z=	5.2170	574.31	-0.88400	0.
NODE	7	KCS=	0 X,Y,Z=	5.2170	574.50	-0.88400	0.
NODE	9003	KCS=	0 X,Y,Z=	5.2170	577.57	-0.88400	0.
NODE	9004	KCS=	0 X,Y,Z=	5.2170	580.63	-0.88400	0.
NODE	9	KCS=	0 X,Y,Z=	5.2170	583.70	-0.88400	0.
NODE	10	KCS=	0 X,Y,Z=	5.2170	584.23	-0.88400	0.
NODE	9005	KCS=	0 X,Y,Z=	5.2170	586.83	-0.88400	0.
NODE	9006	KCS=	0 X,Y,Z=	5.2170	589.44	-0.88400	0.
NODE	11	KCS=	0 X,Y,Z=	5.2170	592.04	-0.88400	0.
NODE	12	KCS=	0 X,Y,Z=	5.2170	592.94	-0.88400	0.
NODE	9007	KCS=	0 X,Y,Z=	5.2590	593.09	-0.88400	0.
NODE	9008	KCS=	0 X,Y,Z=	5.3730	593.27	-0.88400	0.
NODE	13	KCS=	0 X,Y,Z=	5.5300	593.25	-0.88400	0.
NODE	14	KCS=	0 X,Y,Z=	5.7590	593.25	-0.88400	0.
NODE	15	KCS=	0 X,Y,Z=	6.2590	593.25	-0.88400	0.
NODE	16	KCS=	0 X,Y,Z=	7.4220	593.25	-0.88400	0.
NODE	17	KCS=	0 X,Y,Z=	7.6430	593.25	-0.79200	0.
NODE	18	KCS=	0 X,Y,Z=	8.0510	593.25	-0.79200	0.
NODE	19	KCS=	0 X,Y,Z=	8.6290	593.25	-0.79200	0.
NODE	20	KCS=	0 X,Y,Z=	10.158	593.25	1.7230	0.
NODE	21	KCS=	0 X,Y,Z=	10.379	593.56	1.9440	0.
NODE	9009	KCS=	0 X,Y,Z=	10.379	596.90	1.9440	0.
NODE	9010	KCS=	0 X,Y,Z=	10.379	600.24	1.9440	0.
NODE	22	KCS=	0 X,Y,Z=	10.379	603.58	1.9440	0.
NODE	23	KCS=	0 X,Y,Z=	10.379	604.29	1.9440	0.
NODE	24	KCS=	0 X,Y,Z=	10.379	605.65	1.9440	0.

MODE	9011	KCS=	0	X.Y.Z=	10.379	609.64	1.9440
MODE	9012	KCS=	0	X.Y.Z=	10.379	611.22	1.9440
MODE	25	KCS=	0	X.Y.Z=	10.379	614.00	1.9440
MODE	26	KCS=	0	X.Y.Z=	10.379	614.79	1.9440
MODE	9013	KCS=	0	X.Y.Z=	10.379	617.74	1.9440
MODE	9014	KCS=	0	X.Y.Z=	10.379	620.63	1.9440
MODE	27	KCS=	0	X.Y.Z=	10.379	623.64	1.9440
MODE	28	KCS=	0	X.Y.Z=	10.379	624.75	1.9440
MODE	29	KCS=	0	X.Y.Z=	10.379	626.41	1.9440
MODE	9015	KCS=	0	X.Y.Z=	10.379	629.53	1.9440
MODE	9016	KCS=	0	X.Y.Z=	10.379	632.64	1.9440
MODE	30	KCS=	0	X.Y.Z=	10.379	635.75	1.9440
MODE	31	KCS=	0	X.Y.Z=	10.379	635.61	1.9440
MODE	32	KCS=	0	X.Y.Z=	10.379	636.05	2.0350
MODE	35	KCS=	0	X.Y.Z=	10.379	636.14	2.2560
MODE	37	KCS=	0	X.Y.Z=	10.379	636.14	2.9590
MODE	9017	KCS=	0	X.Y.Z=	10.379	636.14	5.6570
MODE	9018	KCS=	0	X.Y.Z=	10.379	636.14	8.3550
MODE	38	KCS=	0	X.Y.Z=	10.379	636.14	11.053
MODE	39	KCS=	0	X.Y.Z=	10.379	636.14	11.918
MODE	9019	KCS=	0	X.Y.Z=	10.379	636.14	14.756
MODE	40	KCS=	0	X.Y.Z=	10.379	636.14	17.595
MODE	41	KCS=	0	X.Y.Z=	10.379	636.14	20.048
MODE	43	KCS=	0	X.Y.Z=	10.692	636.14	20.360
MODE	44	KCS=	0	X.Y.Z=	10.812	636.14	20.360
MODE	45	KCS=	0	X.Y.Z=	11.129	636.14	20.360
MODE	9020	KCS=	0	X.Y.Z=	13.507	636.14	20.360
MODE	46	KCS=	0	X.Y.Z=	15.885	636.14	20.360
MODE	47	KCS=	0	X.Y.Z=	16.135	636.14	20.360
MODE	48	KCS=	0	X.Y.Z=	16.385	636.14	20.360
MODE	49	KCS=	0	X.Y.Z=	16.601	636.14	20.360
MODE	50	KCS=	0	X.Y.Z=	17.218	636.14	20.360
MODE	51	KCS=	0	X.Y.Z=	17.343	636.14	20.360
MODE	52	KCS=	0	X.Y.Z=	17.901	636.14	20.360
MODE	53	KCS=	0	X.Y.Z=	19.822	36.14	20.360
MODE	54	KCS=	0	X.Y.Z=	22.601	636.14	20.360
MODE	55	KCS=	0	X.Y.Z=	22.864	636.14	20.360
MODE	56	KCS=	0	X.Y.Z=	23.176	636.14	20.673
MODE	57	KCS=	0	X.Y.Z=	23.176	636.14	20.860
MODE	58	KCS=	0	X.Y.Z=	23.176	636.14	21.027
MODE	59	KCS=	0	X.Y.Z=	23.176	636.14	21.277
MODE	60	KCS=	0	X.Y.Z=	23.176	636.14	21.527
MODE	61	KCS=	0	X.Y.Z=	23.176	636.14	21.777
MODE	62	KCS=	0	X.Y.Z=	23.176	636.14	21.798
MODE	63	KCS=	0	X.Y.Z=	22.664	636.14	22.110
MODE	64	KCS=	0	X.Y.Z=	21.947	636.14	22.110
MODE	65	KCS=	0	X.Y.Z=	21.530	636.14	22.110
MODE	66	KCS=	0	X.Y.Z=	21.113	636.14	22.110
MODE	67	KCS=	0	X.Y.Z=	20.759	636.14	22.110
MODE	68	KCS=	0	X.Y.Z=	20.509	636.14	22.110
MODE	69	KCS=	0	X.Y.Z=	20.259	636.14	22.110

MODE	70	KCS=	0	X.Y.Z=	20.071	636.14	22.110
MODE	71	KCS=	0	X.Y.Z=	19.654	636.14	22.110
MODE	72	KCS=	0	X.Y.Z=	19.237	636.14	22.110
MODE	73	KCS=	0	X.Y.Z=	17.383	636.14	22.110
MODE	74	KCS=	0	X.Y.Z=	17.175	636.14	22.110
MODE	75	KCS=	0	X.Y.Z=	16.758	636.14	22.110
MODE	76	KCS=	0	X.Y.Z=	16.341	636.14	22.110
MODE	77	KCS=	0	X.Y.Z=	16.113	636.14	22.110
MODE	78	KCS=	0	X.Y.Z=	15.799	636.14	22.110
MODE	9021	KCS=	0	X.Y.Z=	13.413	636.14	22.110
MODE	79	KCS=	0	X.Y.Z=	11.028	636.14	22.110
MODE	80	KCS=	0	X.Y.Z=	10.121	636.14	22.110
MODE	81	KCS=	0	X.Y.Z=	9.8970	636.14	22.110
MODE	82	KCS=	0	X.Y.Z=	9.5850	636.14	21.798
MODE	9022	KCS=	0	X.Y.Z=	9.5850	636.14	19.863
MODE	83	KCS=	0	X.Y.Z=	9.5850	636.14	17.527
MODE	84	KCS=	0	X.Y.Z=	9.5850	636.14	17.333
MODE	85	KCS=	0	X.Y.Z=	9.5850	636.14	17.194
MODE	86	KCS=	0	X.Y.Z=	9.2310	635.79	16.694
MODE	87	KCS=	0	X.Y.Z=	8.7600	635.32	16.694
MODE	47	KCS=	0	X.Y.Z=	16.135	636.14	20.360
MODE	91	KCS=	0	X.Y.Z=	16.135	636.39	20.360
MODE	92	KCS=	0	X.Y.Z=	16.135	637.33	20.360
MODE	93	KCS=	0	X.Y.Z=	16.135	637.64	20.673
MODE	94	KCS=	0	X.Y.Z=	16.135	637.64	20.944
MODE	95	KCS=	0	X.Y.Z=	16.135	637.64	21.361
MODE	96	KCS=	0	X.Y.Z=	16.135	637.64	21.778
MODE	97	KCS=	0	X.Y.Z=	16.135	637.64	21.799
MODE	98	KCS=	0	X.Y.Z=	16.135	637.33	22.111
MODE	100	KCS=	0	X.Y.Z=	16.135	636.96	22.111
MODE	101	KCS=	0	X.Y.Z=	16.135	636.71	22.111
MODE	102	KCS=	0	X.Y.Z=	16.135	636.39	22.111
MODE	77	KCS=	0	X.Y.Z=	16.135	636.14	22.111
MODE	59	KCS=	0	X.Y.Z=	23.176	636.14	21.277
MODE	103	KCS=	0	X.Y.Z=	22.866	636.14	21.277
MODE	104	KCS=	0	X.Y.Z=	22.092	636.14	21.277
MODE	105	KCS=	0	X.Y.Z=	21.842	636.14	21.277
MODE	106	KCS=	0	X.Y.Z=	21.592	636.14	21.277
MODE	107	KCS=	0	X.Y.Z=	20.634	636.14	21.277
MODE	109	KCS=	0	X.Y.Z=	20.509	636.14	21.402
MODE	111	KCS=	0	X.Y.Z=	20.509	636.14	21.663
MODE	112	KCS=	0	X.Y.Z=	20.509	636.14	21.801
MODE	58	KCS=	0	X.Y.Z=	20.509	636.14	22.111
MODE	101	KCS=	0	X.Y.Z=	16.115	636.71	22.111
MODE	113	KCS=	0	X.Y.Z=	16.135	636.71	22.611
MODE	114	KCS=	0	X.Y.Z=	16.135	636.71	22.965
MODE	115	KCS=	0	X.Y.Z=	16.135	636.71	23.319
MODE	116	KCS=	0	X.Y.Z=	16.135	636.71	23.840
MODE	118	KCS=	0	X.Y.Z=	16.135	636.89	24.027
MODE	9023	KCS=	0	X.Y.Z=	16.115	639.27	24.027

NODE	120	KCS*	0	X,Y,Z*	16.135	641.65	24.027
NODE	122	KCS*	0	X,Y,Z*	16.135	641.84	24.214
NODE	124	KCS*	0	X,Y,Z*	16.135	641.84	24.567
NODE	125	KCS*	0	X,Y,Z*	16.135	641.84	25.411
NODE	127	KCS*	0	X,Y,Z*	16.135	641.65	25.558
NODE	129	KCS*	0	X,Y,Z*	16.135	639.51	25.598
NODE	9024	KCS*	0	X,Y,Z*	16.135	637.97	25.598
NODE	130	KCS*	0	X,Y,Z*	16.135	636.42	25.598
NODE	65	KCS*	0	X,Y,Z*	21.530	636.14	22.110
NODE	131	KCS*	0	X,Y,Z*	21.530	636.41	22.110
NODE	132	KCS*	0	X,Y,Z*	21.530	636.69	22.110
NODE	71	KCS*	0	X,Y,Z*	19.654	636.14	22.130
NODE	133	KCS*	0	X,Y,Z*	19.654	636.41	22.110
NODE	134	KCS*	0	X,Y,Z*	19.654	636.69	22.110
NODE	1001	KCS*	0	X,Y,Z*	0.	574.00	0.
NODE	1009	KCS*	0	X,Y,Z*	5.2170	583.70	-0.88400
NODE	1010	KCS*	0	X,Y,Z*	5.2170	584.23	-0.88400
NODE	1014	KCS*	0	X,Y,Z*	5.7599	593.25	-0.88400
NODE	1015	KCS*	0	X,Y,Z*	6.2590	593.25	-0.88400
NODE	1023	KCS*	0	X,Y,Z*	10.379	604.29	1.9440
NODE	1028	KCS*	0	X,Y,Z*	10.379	624.75	1.9440
NODE	1039	KCS*	0	X,Y,Z*	10.379	626.41	1.9440
NODE	1037	KCS*	0	X,Y,Z*	10.379	636.14	2.8590
NODE	1038	KCS*	0	X,Y,Z*	10.379	636.14	11.918
NODE	1044	KCS*	0	X,Y,Z*	10.812	536.14	20.360
NODE	1045	KCS*	0	X,Y,Z*	11.129	636.14	20.360
NODE	1052	KCS*	0	X,Y,Z*	17.801	636.14	20.360
NODE	1053	KCS*	0	X,Y,Z*	19.822	636.14	20.360
NODE	1054	KCS*	0	X,Y,Z*	22.801	636.14	20.360
NODE	1057	KCS*	0	X,Y,Z*	23.176	636.14	27.880
NODE	1061	KCS*	0	X,Y,Z*	23.176	636.14	21.777
NODE	1073	KCS*	0	X,Y,Z*	17.383	636.14	22.110
NODE	1078	KCS*	0	X,Y,Z*	15.799	636.14	22.110
NODE	1079	KCS*	0	X,Y,Z*	11.028	636.14	22.110
NODE	1087	KCS*	0	X,Y,Z*	8.7600	635.32	16.694
NODE	1124	KCS*	0	X,Y,Z*	16.135	641.84	24.567
NODE	1119	KCS*	0	X,Y,Z*	16.135	639.51	25.598
NODE	1130	KCS*	0	X,Y,Z*	16.135	636.42	25.598
NODE	1131	KCS*	0	X,Y,Z*	21.530	636.41	22.110
NODE	1133	KCS*	0	X,Y,Z*	19.654	636.41	22.110
ELMNT TYPE SET TO							
REAL CONSTANT NUMBER*			11				
MATERIAL NUMBER SET TO			1				
ELMNT	1	1	2	0			
ELMNT TYPE SET TO							
REAL CONSTANT NUMBER*			211				
ELMNT	2	3	3	3			
ELMNT TYPE SET TO							
REAL CONSTANT NUMBER*			11				
ELMNT	3	3	4	0			
ELMNT	4	4	5	0			

ELMNT TYPE SET TO			2				
REAL CONSTANT NUMBER*			22				
ELMNT	5	5	6	1	4		
ELMNT	6	9001	9002	4			
ELMNT	7	9002	6	4			
ELMNT TYPE SET TO			1				
REAL CONSTANT NUMBER*			11				
ELMNT	8	6	7	0			
ELMNT	9	7	9003	0			
ELMNT	10	9003	9004	0			
ELMNT	11	9004	9	0			
ELMNT	12	9	10	0			
ELMNT	13	10	9005	0			
ELMNT	14	9005	9006	0			
ELMNT	15	9006	11	0			
ELMNT	16	11	12	0			
ELMNT TYPE SET TO			2				
REAL CONSTANT NUMBER*			21				
ELMNT	17	12	9007	11			
ELMNT	18	9007	9008	11			
ELMNT	19	9008	13	11			
ELMNT TYPE SET TO			1				
REAL CONSTANT NUMBER*			11				
ELMNT	20	13	14	0			
ELMNT	21	14	15	0			
ELMNT	22	15	16	0			
ELMNT TYPE SET TO			2				
REAL CONSTANT NUMBER*			21				
ELMNT	23	16	17	15			
ELMNT TYPE SET TO			1				
REAL CONSTANT NUMBER*			11				
ELMNT	24	17	18	0			
ELMNT	25	18	19	0			
ELMNT	26	19	20	0			
ELMNT TYPE SET TO			2				
REAL CONSTANT NUMBER*			21				
ELMNT	27	20	21	19			
ELMNT TYPE SET TO			1				
REAL CONSTANT NUMBER*			11				
ELMNT	28	21	9009	0			
ELMNT	29	9009	9010	0			
ELMNT	30	9010	22	0			
ELMNT	31	22	23	0			
ELMNT	32	23	24	0			
ELMNT	33	24	9011	0			
ELMNT	34	9011	9012	0			
ELMNT	35	9012	25	0			
ELMNT	36	25	26	0			
ELMNT	37	26	9013	0			
ELMNT	38	9013	9014	0			

ELEMENT	38	9014	27	0
ELEMENT	40	27	28	0
ELEMENT	41	28	29	0
ELEMENT	42	29	9015	0
ELEMENT	43	9015	9016	0
ELEMENT	44	9016	30	0
ELEMENT	45	30	31	0
ELEMENT TYPE SET TO			2	
REAL CONSTANT NUMBER*			21	
ELEMENT	46	31	32	30
ELEMENT	47	32	35	30
ELEMENT TYPE SET TO			1	
REAL CONSTANT NUMBER*			11	
ELEMENT	48	35	37	0
ELEMENT	49	37	9017	0
ELEMENT	50	9017	9018	0
ELEMENT	51	9018	38	0
ELEMENT	52	38	39	0
ELEMENT	53	39	9019	0
ELEMENT	54	9019	40	0
ELEMENT	55	40	41	0
ELEMENT TYPE SET TO			2	
REAL CONSTANT NUMBER*			21	
ELEMENT	56	41	43	40
ELEMENT TYPE SET TO			1	
REAL CONSTANT NUMBER*			11	
ELEMENT	57	43	44	0
ELEMENT	58	44	45	0
ELEMENT	59	45	9020	0
ELEMENT	60	9020	46	0
ELEMENT	61	46	47	0
ELEMENT	62	47	48	0
ELEMENT TYPE SET TO			1	
REAL CONSTANT NUMBER*			11	
ELEMENT	63	48	49	0
ELEMENT	64	49	50	0
ELEMENT TYPE SET TO			1	
REAL CONSTANT NUMBER*			11	
ELEMENT	65	50	51	0
ELEMENT	66	51	52	0
ELEMENT	67	52	53	0
ELEMENT	68	53	54	0
ELEMENT	69	54	55	0
ELEMENT TYPE SET TO			2	
REAL CONSTANT NUMBER*			21	
ELEMENT	70	55	58	54
ELEMENT TYPE SET TO			1	
REAL CONSTANT NUMBER*			11	
ELEMENT	71	56	57	0

ELEMENT	72	57	58	0
ELEMENT	73	58	59	0
ELEMENT	74	59	60	0
ELEMENT	75	60	61	0
ELEMENT	76	61	62	0
ELEMENT TYPE SET TO			2	
REAL CONSTANT NUMBER*			21	
ELEMENT	77	62	63	61
ELEMENT TYPE SET TO			1	
REAL CONSTANT NUMBER*			11	
ELEMENT	78	63	64	0
ELEMENT TYPE SET TO			1	
REAL CONSTANT NUMBER*			11	
ELEMENT	79	64	65	0
ELEMENT	80	65	66	0
ELEMENT TYPE SET TO			1	
REAL CONSTANT NUMBER*			11	
ELEMENT	81	66	67	0
ELEMENT	82	67	68	0
ELEMENT	83	68	69	0
ELEMENT	84	69	70	0
ELEMENT TYPE SET TO			1	
REAL CONSTANT NUMBER*			11	
ELEMENT	85	70	71	0
ELEMENT	86	71	72	0
ELEMENT TYPE SET TO			1	
REAL CONSTANT NUMBER*			11	
ELEMENT	87	72	73	0
ELEMENT	88	73	74	0
ELEMENT	89	74	75	0
ELEMENT	90	75	76	0
ELEMENT TYPE SET TO			1	
REAL CONSTANT NUMBER*			11	
ELEMENT	91	76	77	0
ELEMENT	92	77	78	0
ELEMENT	93	78	9021	0
ELEMENT	94	9021	79	0
ELEMENT	95	79	80	0
ELEMENT	96	80	81	0
ELEMENT TYPE SET TO			2	
REAL CONSTANT NUMBER*			21	
ELEMENT	97	81	82	80
ELEMENT TYPE SET TO			1	
REAL CONSTANT NUMBER*			11	
ELEMENT	98	82	9022	0
ELEMENT	99	9022	83	0

ELEMENT 100 63 84 0
 ELEMENT 101 84 85 0
 ELEMENT TYPE SET TO 2
 REAL CONSTANT NUMBER* 212
 ELEMENT 102 85 86 84
 ELEMENT TYPE SET TO 1
 REAL CONSTANT NUMBER* 11
 ELEMENT 103 86 87 0
 ELEMENT 104 87 91 0
 ELEMENT 105 91 92 0
 ELEMENT TYPE SET TO 2
 REAL CONSTANT NUMBER* 213
 ELEMENT 106 92 93 91
 ELEMENT TYPE SET TO 1
 REAL CONSTANT NUMBER* 11
 ELEMENT 107 93 94 0
 MATERIAL NUMBER SET TO 2
 ELEMENT 108 94 95 0
 ELEMENT 109 95 96 0
 MATERIAL NUMBER SET TO 1
 ELEMENT 110 96 97 0
 ELEMENT TYPE SET TO 2
 REAL CONSTANT NUMBER* 21
 ELEMENT 111 97 98 96
 ELEMENT TYPE SET TO 1
 REAL CONSTANT NUMBER* 11
 ELEMENT 112 98 100 0
 ELEMENT 113 100 101 0
 ELEMENT 114 101 102 0
 ELEMENT 115 102 77 0
 ELEMENT TYPE SET TO 1
 MATERIAL NUMBER SET TO 3
 REAL CONSTANT NUMBER* 13
 ELEMENT 116 59 103 0
 ELEMENT 117 103 104 0
 MATERIAL NUMBER SET TO 4
 ELEMENT 118 104 105 0
 ELEMENT 119 105 106 0
 MATERIAL NUMBER SET TO 3
 ELEMENT 120 106 107 0
 ELEMENT TYPE SET TO 2
 MATERIAL NUMBER SET TO 3
 REAL CONSTANT NUMBER* 23
 ELEMENT 121 107 108 106
 ELEMENT TYPE SET TO 1
 MATERIAL NUMBER SET TO 3
 REAL CONSTANT NUMBER* 13
 ELEMENT 122 109 111 0
 ELEMENT 123 111 112 0
 ELEMENT TYPE SET TO 1
 MATERIAL NUMBER SET TO 5

REAL CONSTANT NUMBER* 15
 ELEMENT 124 112 68 0
 ELEMENT 125 101 113 0
 MATERIAL NUMBER SET TO 6
 ELEMENT 126 113 114 0
 ELEMENT 127 114 115 0
 MATERIAL NUMBER SET TO 5
 ELEMENT 128 115 116 0
 ELEMENT TYPE SET TO 2
 REAL CONSTANT NUMBER* 25
 ELEMENT 129 116 118 115
 ELEMENT TYPE SET TO 1
 MATERIAL NUMBER SET TO 5
 REAL CONSTANT NUMBER* 15
 ELEMENT 130 118 9023 0
 ELEMENT 131 9023 130 0
 ELEMENT TYPE SET TO 2
 REAL CONSTANT NUMBER* 25
 ELEMENT 132 120 122 9023
 ELEMENT TYPE SET TO 1
 MATERIAL NUMBER SET TO 5
 REAL CONSTANT NUMBER* 15
 ELEMENT 133 122 124 0
 ELEMENT 134 124 125 0
 ELEMENT TYPE SET TO 2
 REAL CONSTANT NUMBER* 25
 ELEMENT 135 125 127 124
 ELEMENT TYPE SET TO 1
 MATERIAL NUMBER SET TO 5
 REAL CONSTANT NUMBER* 15
 ELEMENT 136 127 129 0
 ELEMENT 137 129 9024 0
 ELEMENT 138 9024 130 0
 MATERIAL NUMBER SET TO 2
 ELEMENT TYPE SET TO 1
 REAL CONSTANT NUMBER* 11
 ELEMENT 139 85 131 0
 ELEMENT 140 131 132 0
 ELEMENT 141 71 133 0
 ELEMENT 142 133 134 0
 REAL CONSTANT NUMBER* 58
 ELEMENT TYPE SET TO 3
 ELEMENT 143 1 1001
 ELEMENT TYPE SET TO 4
 ELEMENT 144 1 1001
 ELEMENT TYPE SET TO 5
 ELEMENT 145 1 1001
 REAL CONSTANT NUMBER* 59
 ELEMENT TYPE SET TO 6
 ELEMENT 146 1 1001

ELEMENT TYPE SET TO 7
 ELEMENT 147 1 1001
 ELEMENT TYPE SET TO 8
 ELEMENT 148 1 1001
 REAL CONSTANT NUMBER= 51
 ELEMENT TYPE SET TO 3
 ELEMENT 149 8 1009
 ELEMENT TYPE SET TO 5
 ELEMENT 150 10 1010
 ELEMENT TYPE SET TO 4
 ELEMENT 151 15 1015
 REAL CONSTANT NUMBER= 52
 ELEMENT TYPE SET TO 4
 ELEMENT 152 14 1014
 REAL CONSTANT NUMBER= 51
 ELEMENT TYPE SET TO 3
 ELEMENT 153 23 1023
 ELEMENT TYPE SET TO 5
 ELEMENT 154 28 1028
 REAL CONSTANT NUMBER= 53
 ELEMENT TYPE SET TO 4
 ELEMENT 155 37 1037
 ELEMENT TYPE SET TO 3
 ELEMENT 156 39 1039
 REAL CONSTANT NUMBER= 51
 ELEMENT TYPE SET TO 4
 ELEMENT 157 44 1044
 ELEMENT TYPE SET TO 5
 ELEMENT 158 45 1045
 REAL CONSTANT NUMBER= 54
 ELEMENT TYPE SET TO 4
 ELEMENT 159 53 1053
 REAL CONSTANT NUMBER= 55
 ELEMENT 160 79 1079
 REAL CONSTANT NUMBER= 51
 ELEMENT TYPE SET TO 3
 ELEMENT 161 124 1124
 ELEMENT TYPE SET TO 5
 ELEMENT 162 129 1129
 ELEMENT TYPE SET TO 4
 ELEMENT 163 52 1052
 ELEMENT TYPE SET TO 5
 ELEMENT 164 54 1054
 ELEMENT TYPE SET TO 3
 ELEMENT 165 57 1057
 REAL CONSTANT NUMBER= 56
 ELEMENT TYPE SET TO 4
 ELEMENT 166 78 1078
 ELEMENT TYPE SET TO 5
 REAL CONSTANT NUMBER= 51
 ELEMENT 167 73 1073

REAL CONSTANT NUMBER= 57
 ELEMENT TYPE SET TO 4
 ELEMENT 168 61 1061
 REAL CONSTANT NUMBER= 51
 ELEMENT TYPE SET TO 3
 ELEMENT 169 131 1131
 ELEMENT TYPE SET TO 5
 ELEMENT 170 131 1131
 ELEMENT TYPE SET TO 3
 ELEMENT 171 133 1133
 ELEMENT TYPE SET TO 5
 ELEMENT 172 133 1133
 REAL CONSTANT NUMBER= 58
 ELEMENT TYPE SET TO 3
 ELEMENT 173 87 1087
 ELEMENT TYPE SET TO 4
 ELEMENT 174 87 1087
 ELEMENT TYPE SET TO 5
 ELEMENT 175 87 1087
 REAL CONSTANT NUMBER= 59
 ELEMENT TYPE SET TO 6
 ELEMENT 176 87 1087
 ELEMENT TYPE SET TO 7
 ELEMENT 177 87 1087
 ELEMENT TYPE SET TO 8
 ELEMENT 178 87 1087
 REAL CONSTANT NUMBER= 58
 ELEMENT TYPE SET TO 3
 ELEMENT 179 130 1130
 ELEMENT TYPE SET TO 4
 ELEMENT 180 130 1130
 ELEMENT TYPE SET TO 5
 ELEMENT 181 130 1130
 REAL CONSTANT NUMBER= 59
 ELEMENT TYPE SET TO 6
 ELEMENT 182 130 1130
 ELEMENT TYPE SET TO 7
 ELEMENT 183 130 1130
 ELEMENT TYPE SET TO 8
 ELEMENT 184 130 1130
 ELEMENT TYPE SET TO 30
 REAL CONSTANT NUMBER= 32
 ELEMENT 185 9
 ELEMENT 186 10
 ELEMENT 187 15
 ELEMENT 188 23
 ELEMENT 189 28
 ELEMENT 190 50
 ELEMENT 191 45
 ELEMENT 192 52

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ELEMENT 193 54
ELEMENT 194 57
ELEMENT 195 73
ELEMENT 196 114
ELEMENT 197 124
ELEMENT 198 129
REAL CONSTANT NUMBER= 33
ELEMENT 199 14
ELEMENT 200 78
REAL CONSTANT NUMBER= 33
ELEMENT 201 37
REAL CONSTANT NUMBER= 34
ELEMENT 202 39
REAL CONSTANT NUMBER= 35
ELEMENT 203 48
ELEMENT 204 75
ELEMENT 205 95
REAL CONSTANT NUMBER= 36
ELEMENT 206 53
REAL CONSTANT NUMBER= 37
ELEMENT 207 61
REAL COPY VANT NUMBER= 38
ELEMENT 208 65
ELEMENT 209 71
REAL COPY VANT NUMBER= 39
ELEMENT 210 78
REAL CONSTANT NUMBER= 40
ELEMENT 211 105
REAL CONSTANT NUMBER= 41
ELEMENT 212 111
ELEMENT 213 133
REAL CONSTANT NUMBER= 42
ELEMENT 214 132
ELEMENT 215 134
NODE 301 KCS= 0 X,Y,Z= 0. 565.00 0.
NODE 302 KCS= 0 X,Y,Z= 0. 568.00 0.
NODE 303 KCS= 0 X,Y,Z= 0. 571.00 0.
NODE 304 KCS= 0 X,Y,Z= 0. 574.00 0.
NODE 305 KCS= 0 X,Y,Z= 0. 577.83 0.
NODE 306 KCS= 0 X,Y,Z= 0. 580.00 0.
NODE 307 KCS= 0 X,Y,Z= 0. 585.50 0.
NODE 308 KCS= 0 X,Y,Z= 0. 604.00 0.
NODE 309 KCS= 0 X,Y,Z= 0. 605.50 0.
NODE 310 KCS= 0 X,Y,Z= 0. 624.50 0.
NODE 311 KCS= 0 X,Y,Z= 0. 629.58 0.
NODE 312 KCS= 0 X,Y,Z= 0. 638.33 0.
NODE 313 KCS= 0 X,Y,Z= 0. 647.00 0.
ELEMENT TYPE SET TO 71
REAL CONSTANT NUMBER= 71
ELEMENT 216 301 302 0

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ELEMENT 217 302 303 0
ELEMENT 218 301 304 0
REAL CONSTANT NUMBER= 72
ELEMENT 219 304 305 0
REAL CONSTANT NUMBER= 73
ELEMENT 220 305 306 0
REAL CONSTANT NUMBER= 74
ELEMENT 221 306 307 0
ELEMENT 222 307 308 0
REAL CONSTANT NUMBER= 75
ELEMENT 223 308 309 0
ELEMENT 224 309 310 0
REAL CONSTANT NUMBER= 76
ELEMENT 225 310 311 0
ELEMENT 226 311 312 0
ELEMENT 227 312 313 0
ELEMENT TYPE SET TO 72
REAL CONSTANT NUMBER= 77
ELEMENT 228 304
REAL CONSTANT NUMBER= 78
ELEMENT 229 306
REAL CONSTANT NUMBER= 79
ELEMENT 230 308
REAL CONSTANT NUMBER= 80
ELEMENT 231 310
REAL CONSTANT NUMBER= 81
ELEMENT 232 313
COUPLED SET= 1 DIRECTIONS= UX TOTAL NODES= 2
NODES ADDED = 304 1001 1
MAXIMUM COUPLED SET NUMBER= 1
COUPLED SET= 2 DIRECTIONS= UX TOTAL NODES= 2
NODES ADDED = 309 1087 2
MAXIMUM COUPLED SET NUMBER= 2
COUPLED SET= 3 DIRECTIONS= UX TOTAL NODES= 7
NODES ADDED = 312 1037 1039 1044 1045 1053 1079
MAXIMUM COUPLED SET NUMBER= 3
*** WARNING *** CP= 4.030 TIME= 15:51:49
Coupled set 3 already contains node 312.
Node 312 will not be added to the set.
COUPLED SET= 3 DIRECTIONS= UX TOTAL NODES= 13
NODES ADDED = 1124 1129 1052 1054 1057 1078
MAXIMUM COUPLED SET NUMBER= 3
*** WARNING *** CP= 4.050 TIME= 15:51:49
Coupled set 3 already contains node 312.
Node 312 will not be added to the set.
COUPLED SET= 3 DIRECTIONS= UX TOTAL NODES= 18
NODES ADDED = 1073 1061 1131 1133 1130
MAXIMUM COUPLED SET NUMBER= 3
COUPLED SET= 4 DIRECTIONS= UX TOTAL NODES= 3
NODES ADDED = 306 1009 1010
MAXIMUM COUPLED SET NUMBER= 4
COUPLED SET= 5 DIRECTIONS= UX TOTAL NODES= 3
NODES ADDED = 107 1015 1014
MAXIMUM COUPLED SET NUMBER= 5
COUPLED SET= 6 DIRECTIONS= UX TOTAL NODES= 2
NODES ADDED = 308 1021 6
MAXIMUM COUPLED SET NUMBER= 6
COUPLED SET= 7 DIRECTIONS= UX TOTAL NODES= 2
NODES ADDED = 310 1028 7
MAXIMUM COUPLED SET NUMBER= 7
GENERATE FROM SET 1 COUPLED SETS IN DIRECTIONS UX UZ KCSX ROTY ROTZ

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COUPLED SET# 6 DIRECTIONS-UY TOTAL NODES- 2
 COUPLED SET# 9 DIRECTIONS-UZ TOTAL NODES- 2
 COUPLED SET# 10 DIRECTIONS-ROTX TOTAL NODES- 2
 COUPLED SET# 11 DIRECTIONS-ROTY TOTAL NODES- 2
 COUPLED SET# 12 DIRECTIONS-ROTE TOTAL NODES- 2
 MAXIMUM COUPLED SET NUMBER= 12
 GENERATE FROM SET 2 COUPLED SETS IN DIRECTIONS UY UZ ROTX ROTY ROTZ
 COUPLED SET# 13 DIRECTIONS-UY TOTAL NODES- 2
 COUPLED SET# 14 DIRECTIONS-UZ TOTAL NODES- 2
 COUPLED SET# 15 DIRECTIONS-ROTX TOTAL NODES- 2
 COUPLED SET# 16 DIRECTIONS-ROTY TOTAL NODES- 2
 COUPLED SET# 17 DIRECTIONS-ROTE TOTAL NODES- 2
 MAXIMUM COUPLED SET NUMBER= 17
 GENERATE FROM SET 3 COUPLED SETS IN DIRECTIONS UY UZ ROTX ROTY ROTZ
 COUPLED SET# 18 DIRECTIONS-UY TOTAL NODES- 18
 COUPLED SET# 19 DIRECTIONS-UZ TOTAL NODES- 18
 COUPLED SET# 20 DIRECTIONS-ROTX TOTAL NODES- 18
 COUPLED SET# 21 DIRECTIONS-ROTY TOTAL NODES- 18
 COUPLED SET# 22 DIRECTIONS-ROTE TOTAL NODES- 18
 MAXIMUM COUPLED SET NUMBER= 22
 GENERATE FROM SET 4 COUPLED SETS IN DIRECTIONS UY UZ ROTX ROTY ROTZ
 COUPLED SET# 23 DIRECTIONS-UY TOTAL NODES- 3
 COUPLED SET# 24 DIRECTIONS-UZ TOTAL NODES- 3
 COUPLED SET# 25 DIRECTIONS-ROTX TOTAL NODES- 3
 COUPLED SET# 26 DIRECTIONS-ROTY TOTAL NODES- 3
 COUPLED SET# 27 DIRECTIONS-ROTE TOTAL NODES- 3
 MAXIMUM COUPLED SET NUMBER= 27
 GENERATE FROM SET 5 COUPLED SETS IN DIRECTIONS UY UZ ROTX ROTY ROTZ
 COUPLED SET# 28 DIRECTIONS-UY TOTAL NODES- 3
 COUPLED SET# 29 DIRECTIONS-UZ TOTAL NODES- 3
 COUPLED SET# 30 DIRECTIONS-ROTX TOTAL NODES- 3
 COUPLED SET# 31 DIRECTIONS-ROTY TOTAL NODES- 3
 COUPLED SET# 32 DIRECTIONS-ROTE TOTAL NODES- 3
 MAXIMUM COUPLED SET NUMBER= 32
 GENERATE FROM SET 6 COUPLED SETS IN DIRECTIONS UY UZ ROTX ROTY ROTZ
 COUPLED SET# 33 DIRECTIONS-UY TOTAL NODES- 2
 COUPLED SET# 34 DIRECTIONS-UZ TOTAL NODES- 2
 COUPLED SET# 35 DIRECTIONS-ROTX TOTAL NODES- 2
 COUPLED SET# 36 DIRECTIONS-ROTY TOTAL NODES- 2
 COUPLED SET# 37 DIRECTIONS-ROTE TOTAL NODES- 2
 MAXIMUM COUPLED SET NUMBER= 37
 GENERATE FROM SET 7 COUPLED SETS IN DIRECTIONS UY UZ ROTX ROTY ROTZ
 COUPLED SET# 38 DIRECTIONS-UY TOTAL NODES- 2
 COUPLED SET# 39 DIRECTIONS-UZ TOTAL NODES- 2
 COUPLED SET# 40 DIRECTIONS-ROTX TOTAL NODES- 2
 COUPLED SET# 41 DIRECTIONS-ROTY TOTAL NODES- 2
 COUPLED SET# 42 DIRECTIONS-ROTE TOTAL NODES- 2
 MAXIMUM COUPLED SET NUMBER= 42
 SPECIFIED CONSTRAINT UX FOR SELECTED NODES 303 TO 303 BY 1
 REAL= 0.0
 ADDITIONAL DOFS UY UZ ROTX ROTY ROTZ
 USE LUMPED MASS MATRIX APPROXIMATION

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= cpmodal.db
 FOR POSSIBLE RESUME FROM THIS POINT
 ***** ROUTINE COMPLETED ***** CP = 4.750
 ***** ANSYS SOLUTION ROUTINE *****
 PERFORM A MODAL ANALYSIS
 THIS WILL BE A NEW ANALYSIS
 USE HOUSER'S METHOD
 EXTRACT 33 MODES
 PRINT 33 REDUCED MODES
 NORMALIZE THE MODE SHAPES TO THE MASS MATRIX
 MASTER DOF UX FOR SELECTED NODES IN RANGE 1 TO 134 IN STEPS OF 1
 ADDITIONAL DOFS UY UZ
 NUMBER OF MASTER DOFS 351
 *** WARNING *** CP= 4.780 TIME= 15:51:52
 Master DOF from the previous M command was applied only to defined and
 selected nodes.
 MASTER DOF UX FOR SELECTED NODES IN RANGE 9001 TO 9024 IN STEPS OF 1
 ADDITIONAL DOFS UY UZ
 NUMBER OF MASTER DOFS 423
 MASTER DOF UX FOR SELECTED NODES IN RANGE 304 TO 310 IN STEPS OF 2
 ADDITIONAL DOFS UY UZ
 NUMBER OF MASTER DOFS 415
 MASTER DOF UX FOR SELECTED NODES IN RANGE 313 TO 313 IN STEPS OF 1
 ADDITIONAL DOFS UY UZ
 NUMBER OF MASTER DOFS 438
 PRINT MODAL ITEMS WITH A FREQUENCY OF ALL
 FOR ALL APPLICABLE ENTITIES
 ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= cpmodal.db
 FOR POSSIBLE RESUME FROM THIS POINT
 ***** ANSYS SOLVE COMMAND *****
 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
 40416-2 VERSION=SPARC 15:51:55 OCT 11, 1985 CP= 5.530
 FOR SUPPORT CALL PHONE
 Modal analysis of coupled system of pressurizer spray line & building
 ***** ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY *****
 SOLUTION OPTIONS
 PROBLEM DIMENSIONALITY 3-D
 DEGREES OF FREEDOM UX UY UZ ROTX ROTY ROTZ
 ANALYSIS TYPE MODAL
 EXTRACTION METHOD REDUCED
 LUMPED MASS MATRIX YES
 NUMBER OF MODES TO EXTRACT 33
 NUMBER OF REDUCED MODES TO PRINT 33
 NUMBER OF MASTER DOFS 438
 *** WARNING *** CP= 9.240 TIME= 15:52:00
 Zero thickness element 216 may result in wrong thermal or bending
 stress. Check real constant table 71.
 *** WARNING *** CP= 9.260 TIME= 15:52:00
 Zero thickness element 215 may result in wrong thermal or bending
 stress. Check real constant table 72.
 *** WARNING *** CP= 9.270 TIME= 15:52:00
 Zero thickness element 220 may result in wrong thermal or bending
 stress. Check real constant table 73.
 *** WARNING *** CP= 9.280 TIME= 15:52:00
 Zero thickness element 221 may result in wrong thermal or bending
 stress. Check real constant table 74.
 *** WARNING *** CP= 9.280 TIME= 15:52:00
 Zero thickness element 223 may result in wrong thermal or bending
 stress. Check real constant table 75.
 *** WARNING *** CP= 9.290 TIME= 15:52:00
 Zero thickness element 225 may result in wrong thermal or bending
 stress. Check real constant table 76.
 *** NOTE *** CP= 9.470 TIME= 15:52:00
 The output data was checked and warning messages were found.
 Please review output of errors file (filever) for these warning
 messages.
 LOAD STEP NUMBER= 1

**** CENTROID, MASS, AND MASS MOMENTS OF INERTIA ****
 CALCULATIONS ASSUME ELEMENT MASS AT ELEMENT CENTROID
 TOTAL MASS = 546.36

CENTROID	MOM. OF INERTIA ABOUT ORIGIN	MOM. OF INERTIA ABOUT CENTROID
IC = 0.26898E-01	IXX = 0.18466E+09	IXX = 0.15748E+06
IC = 0.27920E-02	IYY = 57.01	IYY = 57.01
	IXZ = 0.13992E+09	IXZ = 0.15748E+06
	IYZ = -986.3	IYZ = -42.33
	IYZ = -972.0	IYZ = -50.29
	IYZ = -26.33	IYZ = -26.33

*** MASS SUMMARY BY ELEMENT TYPE ***
 TYPE MASS
 1 0.66831E-01
 2 0.34566E-02
 30 0.44472E-01
 72 546.848

*** WARNING ***
 Coefficient ratio exceeds 1.0e8 - Check results.
 *** ELEMENT MATRIX FORMULATION TIMES ***
 TYPE NUMBER BONDAGE TOTAL CPU AVE CPU
 1 120 FIF216 0.970 0.008
 2 22 FIF216 0.100 0.014
 3 10 COM214 0.040 0.004
 4 12 COM214 0.050 0.004
 5 11 COM214 0.030 0.007
 6 3 COM214 0.030 0.010
 7 3 COM214 0.030 0.010
 8 3 COM214 0.000 0.000
 9 31 MASS21 0.150 0.005
 10 12 BEAM4 0.120 0.010
 11 5 MASS21 0.010 0.002
 12 5 MASS21 0.010 0.002

Time at end of element matrix formulation: CP: 11.8000003
 Estimated number of active DOFs: 918
 Maximum svwv: 436
 Number of Master DOFs: 438

Time at end of matrix triangularization: CP: 26.9199994
 Equation solver maximum pivot: 2.46071616E+11 at node 302 ROTZ
 Equation solver minimum pivot: 9.190031E-11 at node 104 ROTZ

**** EIGENVALUE (NATURAL FREQUENCY) SOLUTION ****
 MODE FREQUENCY (CYCLES/TIME)

1	1.14484E6
2	1.54870E4
3	2.00721E4
4	3.42895E5
5	3.60034E4
6	3.68282E3
7	4.25989E3
8	4.69378E1
9	6.62502E3
10	8.27427E6
11	10.17677E6
12	10.62661E2
13	10.62661E2
14	12.03427E6
15	13.08194E3
16	14.79217E6
17	14.79217E6
18	16.06426E6
19	16.59426E0
20	17.75034E5
21	18.24373E3
22	18.63628E5
23	20.89270E4
24	21.05523E3
25	23.46664E2
26	23.52465E4
27	23.52465E4
28	24.30937E6
29	25.31246E0
30	26.05849E6
31	26.44209E6
32	26.44209E6
33	26.46155E7

40415-2 VERSION-SUNSPARC 15.55.12 OCT 11. 1995 CP: 111.040
 FOR SUPPORT CALL PHONE

Modal analysis of coupled system of pressurizer spray line & building
 ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

**** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION ****
 LOAD STEP= 1 MODE = 1 CUR. ITER. = 1 FREQUENCY = 1.1145

NOTE - ALL VECTOR DOFS ARE IN GLOBAL COORDINATE SYSTEMS.

NOTE

ROTY

ROTX

UY

UX

UZ

NOTE

ROTY

ROTX

UY

UX

UZ

NOTE

ROTY

ROTX

**** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 ****
 FOR SUPPORT CALL VERSION-SUNSPARC 15.55.12 OCT 11. 1995 CP: 111.080
 PHONE

Modal analysis of coupled system of pressurizer spray line & building
 ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

**** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION ****
 LOAD STEP= 1 MODE = 1 CUR. ITER. = 1 FREQUENCY = 1.1145

NOTE - ALL VECTOR DOFS ARE IN GLOBAL COORDINATE SYSTEMS.

NOTE

ROTY

ROTX

UY

UX

UZ

NOTE

ROTY

ROTX

UY

UX

UZ

NOTE

ROTY

ROTX

Table with 4 columns: Node ID, UX, UY, UZ. Rows 60-85 showing nodal displacement values.

**** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 ****
40416-2 VERSION=SUN4SPARC 15:55:12 OCT 11, 1995 CP= 111.280
FOR SUPPORT CALL PHONE FAX

Modal analysis of coupled system of pressurizer spray line & building

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

**** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION **** FREQUENCY = 1.5867
LOAD STEP= 1 MODE = 2 CUM. ITER.= 2

NOTE - ALL VECTOR DOPS ARE IN NODAL COORDINATE SYSTEMS.

Table with 6 columns: Node ID, UX, UY, UZ, ROTX, ROTY, ROTZ. Rows 86-308 showing nodal displacement and rotation values.

**** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 ****
40416-2 VERSION=SUN4SPARC 15:55:12 OCT 11, 1995 CP= 111.320
FOR SUPPORT CALL PHONE FAX

Modal analysis of coupled system of pressurizer spray line & building

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

**** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION **** FREQUENCY = 1.5867
LOAD STEP= 1 MODE = 2 CUM. ITER.= 2

NOTE - ALL VECTOR DOPS ARE IN NODAL COORDINATE SYSTEMS.

Table with 6 columns: Node ID, UX, UY, UZ, ROTX, ROTY, ROTZ. Row 310 showing nodal displacement and rotation values.

Table with 4 columns: Node ID, UX, UY, UZ. Rows 313-504 showing nodal displacement values.

Table with 6 columns: Node ID, UX, UY, UZ, ROTX, ROTY, ROTZ. Rows 505-507 showing nodal displacement and rotation values.

**** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 ****
40416-2 VERSION=SUN4SPARC 15:55:12 OCT 11, 1995 CP= 111.350
FOR SUPPORT CALL PHONE FAX

Modal analysis of coupled system of pressurizer spray line & building

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

**** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION **** FREQUENCY = 2.8007
LOAD STEP= 1 MODE = 3 CUM. ITER.= 3

NOTE - ALL VECTOR DOPS ARE IN NODAL COORDINATE SYSTEMS.

Table with 6 columns: Node ID, UX, UY, UZ, ROTX, ROTY, ROTZ. Rows 508-904 showing nodal displacement and rotation values.

**** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 ****
40416-2 VERSION=SUN4SPARC 15:55:13 OCT 11, 1995 CP= 111.400
FOR SUPPORT CALL PHONE FAX

Modal analysis of coupled system of pressurizer spray line & building

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

**** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION **** FREQUENCY = 2.8007
LOAD STEP= 1 MODE = 3 CUM. ITER.= 3

NOTE - ALL VECTOR DOPS ARE IN NODAL COORDINATE SYSTEMS.

129 0.359521E-01 -0.410587E-02 -0.686361E-01
130 -0.234860E-04 -0.773342E-05 0.109924E-03
131 -0.506211E-01 0.238297 0.600643E-01
132 -0.259089 0.238311 0.358047
133 -0.127391E-01 -1.10910 0.286708E-01
134 -0.183047 -1.10917 0.316529
304 -0.252932E-05 -0.920329E-06 0.881489E-05
306 -0.709847E-05 -0.254849E-05 0.288808E-04
308 -0.118621E-04 -0.422964E-05 0.502384E-04

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUN4SARC 15:55:14 OCT 11, 1995 CP= 112.590
FOR SUPPORT CALL PHONE FAX

Modal analysis of coupled system of pressurizer spray line & building

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

***** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION ***** FREQUENCY = 8.0609
LOAD STEP= 1 MODE = 10 CUM. ITER.= 10

NOTE - ALL VECTOR DOFS ARE IN NODAL COORDINATE SYSTEMS.

Table with columns: NODE, UX, UY, UZ, ROTX, ROTY, ROTZ. Rows include nodes 310 to 9024 with corresponding displacement values.

MAXIMUM NODE 21 VALUE -2.82909 81 -4.19528 8013 9.23586 0 0 0

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUN4SARC 15:55:14 OCT 11, 1995 CP= 112.630
FOR SUPPORT CALL PHONE FAX

Modal analysis of coupled system of pressurizer spray line & building

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

***** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION ***** FREQUENCY = 8.2743
LOAD STEP= 1 MODE = 11 CUM. ITER.= 11

NOTE - ALL VECTOR DOFS ARE IN NODAL COORDINATE SYSTEMS.

Table with columns: NODE, UX, UY, UZ, ROTX, ROTY, ROTZ. Rows include nodes 1 to 29 with corresponding displacement values.

30 0.102309 -0.195432 0.287271E-01
31 0.101950 -0.195435 0.256891E-01
32 0.959231E-01 -0.187567 0.938822E-02
35 0.854060E-01 -0.155147 -0.270301E-02
37 0.606484E-01 0.109551E-01 -0.255113E-02
38 0.167705E-02 3.23349 -0.811842E-03
39 -0.665661E-01 0.210776 -0.425880E-03
40 -0.326941E-01 0.818795 0.584792E-03
41 0.225825E-02 -0.100138 0.112214E-02
43 0.115971E-01 0.133505E-01 -0.926283E-05
44 0.115960E-01 0.728867E-01 -0.141716E-01
45 0.115929E-01 0.234018 -0.292832E-01

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUN4SARC 15:55:14 OCT 11, 1995 CP= 112.670
FOR SUPPORT CALL PHONE FAX

Modal analysis of coupled system of pressurizer spray line & building

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

***** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION ***** FREQUENCY = 8.2743
LOAD STEP= 1 MODE = 11 CUM. ITER.= 11

NOTE - ALL VECTOR DOFS ARE IN NODAL COORDINATE SYSTEMS.

Table with columns: NODE, UX, UY, UZ, ROTX, ROTY, ROTZ. Rows include nodes 46 to 85 with corresponding displacement values.

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUN4SARC 15:55:14 OCT 11, 1995 CP= 112.710
FOR SUPPORT CALL PHONE FAX

Modal analysis of coupled system of pressurizer spray line & building

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

***** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION ***** FREQUENCY = 8.2743
LOAD STEP= 1 MODE = 11 CUM. ITER.= 11

NOTE - ALL VECTOR DOFS ARE IN NODAL COORDINATE SYSTEMS.

Table with columns: NODE, UX, UY, UZ, ROTX, ROTY, ROTZ. Rows include nodes 86 to 104 with corresponding displacement values.

MODE	UX	UY	UZ	NOTE
105	-0.181305	-2.55413	0.357040	
106	-0.181516	-2.20181	0.414744	
107	-0.182762	-0.734914	0.491536	
109	-0.204361	-0.107561	0.473107	
110	-0.254921	0.231175	0.473144	
111	-0.265732	0.430911	0.473159	
112	-0.261888	0.530217	-1.27052	
113	-0.265732	0.430911	-1.27052	
114	-0.178848	5.44443	-1.27086	
115	-0.274474	5.97492	-1.27099	
116	-0.281100	5.97574	-1.26113	
120	-0.876458	5.96760	5.77130	
122	-0.546888	5.30220	6.39616	
124	-0.218693	4.10053	6.39891	
126	-0.131846	3.06382	6.39832	
127	-0.118048	1.18041E+01	6.39827	
129	-0.611505E-01	0.493702E+02	6.39841E-04	
130	-0.122031E-04	0.403924E+04	6.392513	
131	-0.885883E-01	-0.284560	6.392513	
132	-0.442936	-0.284574	-0.650694	
133	-0.154137E+01	1.79543	-0.435694E-01	
134	-0.115633E+06	0.410328E+06	-0.310247E-06	
135	-0.201028E-05	0.104628E-04	-0.179481E-05	
136	-0.430817E-05	0.174674E-04	-0.482672E-05	

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
 40416-2 VERSION=USASPPAC 15.55:14 OCT 11, 1995 CP# 112 750
 FOR SUPPORT CALL PHONE
 Modal analysis of coupled system of pressurizer spray line & building
 ****ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY**
 ***** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION ***** FREQUENCY = 8.2743
 LOAD STEP= 1 MUDE = 11 CUM. ITER.= 11
 NOTE - ALL VECTOR DOFS ARE IN MODAL COORDINATE SYSTEMS.
 MAXIMUMS
 MODE UX UY UZ
 1 -0.513366E-07 -0.54102E-08 0.454027E-02
 2 0.173313E-02 0.188914E-04 0.628185E-02
 3 0.878576E-02 -0.144876E-04 0.268355E-02
 4 0.878022E-02 0.278328E-04 0.987424E-01
 5 0.879012E-02 -0.503357E-04 0.141308
 6 0.884016E-02 -0.939208E-04 0.123519
 7 0.921345E-04 -0.827658E-04 0.246702E-02
 8 -0.123669E-02 -0.827133E-04 0.169183E-01
 10 -0.124078E-02 -0.815534E-04 0.270254E-01
 11 -0.125212E-02 -0.814121E-04 0.331370E-01
 13 -0.125421E-01 -0.732845E-04 0.351370E-01

MODE	UX	UY	UZ	NOTE
14	-0.125421E-01	-0.590148E-04	0.317722E-01	
15	-0.125421E-01	-0.332681E-04	0.304439E-01	
16	-0.125395E-01	0.686534E-05	0.206066E-01	
17	-0.116217E-01	-0.526522E-05	0.186140E-01	
18	-0.742433E-02	-0.240915E-02	0.142545E-01	
19	-0.428813E-03	-0.578512E-02	0.745193E-02	
20	-0.322400E-01	-0.128192E-01	-0.144848E-01	
21	-0.183403E-02	-0.128985E-01	0.173186E-02	
22	-0.183403E-02	-0.128985E-01	0.173186E-02	
23	-0.216048E-03	-0.128985E-01	0.212631E-02	
24	-0.165173E-02	-0.128985E-01	0.255823E-02	
25	-0.574629E-02	-0.128363E-01	0.197522E-02	
26	-0.645079E-02	-0.128378E-01	0.198919E-02	
27	-0.570741E-02	-0.127714E-01	0.529333E-01	
28	-0.490172E-02	-0.127714E-01	0.850102E-01	
29	-0.490172E-02	-0.127714E-01	0.850102E-01	
30	-0.506556E-04	-0.125865E-01	0.861748E-01	
31	-0.523520E-04	-0.125777E-01	0.869742E-01	
32	-0.507325E-03	-0.113372E-01	0.839027E-01	
33	-0.104228E-02	-0.846622E-02	0.826988E-01	
34	-0.193368E-02	-0.605459E-02	0.826977E-01	
35	-0.193368E-02	-0.605459E-02	0.826977E-01	
36	-0.193368E-02	-0.605459E-02	0.826977E-01	
37	-0.193368E-02	-0.605459E-02	0.826977E-01	
38	-0.193368E-02	-0.605459E-02	0.826977E-01	
39	-0.193368E-02	-0.605459E-02	0.826977E-01	
40	-0.457368E-02	-0.211493E-01	0.821331E-01	
41	-0.457368E-02	-0.211493E-01	0.821331E-01	
42	-0.457368E-02	-0.211493E-01	0.821331E-01	
43	-0.338370E-02	-0.441105E-02	0.807167E-01	
44	-0.338370E-02	-0.785268E-08	0.802797E-01	
45	-0.338377E-02	0.118153E-02	0.794133E-01	

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
 40416-2 VERSION=USASPPAC 15.55:14 OCT 11, 1995 CP# 112.840
 FOR SUPPORT CALL PHONE
 Modal analysis of coupled system of pressurizer spray line & building
 ****ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY**
 ***** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION ***** FREQUENCY = 10.177
 LOAD STEP= 1 MUDE = 12 CUM. ITER.= 12
 NOTE - ALL VECTOR DOFS ARE IN MODAL COORDINATE SYSTEMS.
 MAXIMUMS
 MODE UX UY UZ
 46 -0.338321E-02 0.877705E-02 0.109018
 47 -0.338321E-02 0.877705E-02 0.110129
 48 -0.338321E-02 0.877705E-02 0.113475
 49 -0.338321E-02 0.877705E-02 0.113295
 50 -0.338321E-02 0.877705E-02 0.113769
 51 -0.338321E-02 0.877705E-02 0.113769
 52 -0.338321E-02 0.877705E-02 0.113769
 53 -0.338321E-02 0.877705E-02 0.113769
 54 -0.338321E-02 0.877705E-02 0.113769
 55 -0.338321E-02 0.877705E-02 0.113769
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 67 -0.338321E-02 0.877705E-02 0.113769
 68 -0.338321E-02 0.877705E-02 0.113769
 69 -0.338321E-02 0.877705E-02 0.113769
 70 -0.338321E-02 0.877705E-02 0.113769
 71 -0.338321E-02 0.877705E-02 0.113769
 72 -0.338321E-02 0.877705E-02 0.113769
 73 -0.338321E-02 0.877705E-02 0.113769
 74 -0.338321E-02 0.877705E-02 0.113769
 75 -0.338321E-02 0.877705E-02 0.113769
 76 -0.338321E-02 0.877705E-02 0.113769
 77 -0.338321E-02 0.877705E-02 0.113769
 78 -0.338321E-02 0.877705E-02 0.113769
 79 -0.338321E-02 0.877705E-02 0.113769
 80 -0.338321E-02 0.877705E-02 0.113769
 81 -0.338321E-02 0.877705E-02 0.113769
 82 -0.338321E-02 0.877705E-02 0.113769
 83 -0.338321E-02 0.877705E-02 0.113769
 84 -0.338321E-02 0.877705E-02 0.113769
 85 -0.338321E-02 0.877705E-02 0.113769

Header: cpmodal.out 57/105. Table with columns: Node, UX, UY, UZ, ROTX, ROTY, ROTZ. Includes metadata: ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0, 40416-2, VERSION=SUN4SPARC, 15:55:14 OCT 11, 1995 CP= 113.200. Text: Nodal analysis of coupled system of pressurizer spray line & building. **ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY**. **** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION **** FREQUENCY = 12.034. LOAD STEP= 1 MODE = 14 CUM. ITER.= 14. NOTE - ALL VECTOR DOFS ARE IN NODAL COORDINATE SYSTEMS. Table with 7 columns: NODE, UX, UY, UZ, ROTX, ROTY, ROTZ. Rows 70-85. Includes footer: ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0, 40416-2, VERSION=SUN4S*ARC, 15:55:14 OCT 11, 1995 CP= 113.240. Text: Nodal analysis of coupled system of pressurizer spray line & building. **ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY**. **** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION **** FREQUENCY = 12.034. LOAD STEP= 1 MODE = 14 CUM. ITER.= 14. NOTE - ALL VECTOR DOFS ARE IN NODAL COORDINATE SYSTEMS. Table with 7 columns: NODE, UX, UY, UZ, ROTX, ROTY, ROTZ. Rows 310-9009.

Header: cpmodal.out 58/105. Table with columns: Node, UX, UY, UZ, ROTX, ROTY, ROTZ. Includes metadata: ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0, 40416-2, VERSION=SUN4SPARC, 15:55:14 OCT 11, 1995 CP= 113.270. Text: Nodal analysis of coupled system of pressurizer spray line & building. **ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY**. **** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION **** FREQUENCY = 13.062. LOAD STEP= 1 MODE = 15 CUM. ITER.= 15. NOTE - ALL VECTOR DOFS ARE IN NODAL COORDINATE SYSTEMS. Table with 7 columns: NODE, UX, UY, UZ, ROTX, ROTY, ROTZ. Rows 9010-9024. Includes footer: ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0, 40416-2, VERSION=SUN4S*ARC, 15:55:14 OCT 11, 1995 CP= 113.310. Text: Nodal analysis of coupled system of pressurizer spray line & building. **ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY**. **** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION **** FREQUENCY = 13.062. LOAD STEP= 1 MODE = 15 CUM. ITER.= 15. NOTE - ALL VECTOR DOFS ARE IN NODAL COORDINATE SYSTEMS. Table with 7 columns: NODE, UX, UY, UZ, ROTX, ROTY, ROTZ. Rows 46-53.

LOAD STEP= 1			MODE = 15	CUM. ITER. = 15
**** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 ****				
4016.2	VELOCITY=484848	18.55.15	OCT 11, 1995	CP# 113.360
FOR SUPPORT CALL				
Modal analysis of coupled system of pressurizer spray line & building				
****ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY****				
***** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION *****	1	MODE = 15	CUM. ITER. = 15	FREQUENCY = 11.842
NOTE - ALL VECTOR DOFS ARE IN NODAL COORDINATE SYSTEMS.				

NODE	UX	UY	UZ	ROTX	ROTY	ROTZ
86	0.961545E-02	-0.418592E-02	-0.228442			
87	0.262705E-03	0.134400E-04	-0.703782E-04			
91	0.847202	-0.138050	-0.190107			
93	4.43301	-0.544136	-0.186762E-01			
94	1.62724	-0.651204	-0.185463E-01			
95	2.28242	-0.789222	-0.184268E-01			
96	2.21451	-0.891215	-0.182978E-01			
97	2.28818	-0.878728	-0.182133E-01			
98	2.28818	-0.878728	-0.182133E-01			
100	1.51822	-0.841856	-0.458704E-01			
101	1.18337	-0.841788	-0.388532E-01			
102	0.705316	-0.841674	-0.105368E-01			
103	0.313559	5.21055	-0.674107E-01			
104	0.313541	3.86544	-0.135149			
105	0.313527	3.32328	-0.150069			
106	0.313486	2.78100	-0.164180			
107	0.313444	2.23872	-0.178292			
109	0.305184	-0.159202E-01	-0.159202E-01			
111	0.291945	-1.01068	-0.293073			
112	0.290752	-1.16148	-0.293055			
113	0.313368	-0.835526	-0.388763E-01			
114	4.43875	-0.847767	-0.388240E-01			
115	3.53467	-0.852468	-0.389043E-01			
116	2.75198	-0.872993	-0.422758E-01			
117	2.00468	-0.871671	-0.482375E-01			
120	0.304448	-0.871671	-0.336735			
122	0.116987	-0.871758	-1.46443			
124	0.114252E-01	-0.870656	-1.46439			
125	-0.263333	-0.872022	-1.33245			
127	-0.269188	-0.86823E-03	0.465070E-01			
129	0.270548E-02	-0.266523E-03	0.465070E-01			
131	0.270668E-03	0.448735	0.331936			
132	-0.819935	0.448609	0.522194			
133	0.168847E-01	-2.70635	-0.406133E-02			
134	-0.255097	-2.70678	0.248654			
304	-0.471935E-04	0.472311E-05	0.139488E-04			
306	-0.126693E-03	0.123349E-04	0.452072E-04			
308	-0.222514E-03	0.209731E-04	0.780448E-04			

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 ****
 4016.2 VELOCITY=484848 18.55.15 OCT 11, 1995 CP# 113.400
 FOR SUPPORT CALL
 Modal analysis of coupled system of pressurizer spray line & building
 ****ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY****
 ***** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION *****
 1 1 1 1 1 1 1
 NOTE - ALL VECTOR DOFS ARE IN NODAL COORDINATE SYSTEMS.

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 ****
 4016.2 VELOCITY=484848 18.55.15 OCT 11, 1995 CP# 113.400
 FOR SUPPORT CALL
 Modal analysis of coupled system of pressurizer spray line & building
 ****ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY****
 ***** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION *****
 1 1 1 1 1 1 1
 NOTE - ALL VECTOR DOFS ARE IN NODAL COORDINATE SYSTEMS.

LOAD STEP= 1			MODE = 15	CUM. ITER. = 15
**** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 ****				
4016.2	VELOCITY=484848	18.55.15	OCT 11, 1995	CP# 113.430
FOR SUPPORT CALL				
Modal analysis of coupled system of pressurizer spray line & building				
****ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY****				
***** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION *****	1	MODE = 15	CUM. ITER. = 15	FREQUENCY = 13.438
NOTE - ALL VECTOR DOFS ARE IN NODAL COORDINATE SYSTEMS.				

NODE	UX	UY	UZ	ROTX	ROTY	ROTZ
110	-0.154072E-01	0.147248E-04	0.137898E-03			
111	-0.548267E-02	-0.184552	0.725515E-01			
9001	0.8142748E-02	-0.191072	0.743240E-01			
9002	-0.184213E-03	-0.191951	0.706221E-01			
9003	-0.408641E-01	-0.191951	-0.418322E-01			
9004	-0.179536	-0.191614	-0.106702E-01			
9005	0.244038	-0.191758	-0.197982E-01			
9006	0.479214E-01	-0.191758	-0.197982E-01			
9007	-0.144114	0.116053	0.778151E-01			
9008	-0.183811	0.551502	0.435308			
9009	0.110396	0.549365	-0.304272			
9010	-0.115678E-01	0.548255	-0.328845			
9011	-0.112810	0.544966	-0.358278E-01			
9012	0.121888	0.534568	-1.36207			
9013	0.987133E-01	0.533782	-1.20927			
9014	-0.808659E-01	-0.681059	0.688182E-01			
9015	-0.808659E-01	-0.681059	0.688182E-01			
9016	-0.808659E-01	-0.681059	0.688182E-01			
9017	-0.808659E-01	-0.681059	0.688182E-01			
9018	-0.808659E-01	-0.681059	0.688182E-01			
9019	-0.808659E-01	-0.681059	0.688182E-01			
9020	-0.808659E-01	-0.681059	0.688182E-01			
9021	-0.808659E-01	-0.681059	0.688182E-01			
9022	-0.808659E-01	-0.681059	0.688182E-01			
9023	-0.808659E-01	-0.681059	0.688182E-01			
9024	-0.808659E-01	-0.681059	0.688182E-01			

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 ****
 4016.2 VELOCITY=484848 18.55.15 OCT 11, 1995 CP# 113.430
 FOR SUPPORT CALL
 Modal analysis of coupled system of pressurizer spray line & building
 ****ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY****
 ***** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION *****
 1 1 1 1 1 1 1
 NOTE - ALL VECTOR DOFS ARE IN NODAL COORDINATE SYSTEMS.

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 ****
 4016.2 VELOCITY=484848 18.55.15 OCT 11, 1995 CP# 113.430
 FOR SUPPORT CALL
 Modal analysis of coupled system of pressurizer spray line & building
 ****ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY****
 ***** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION *****
 1 1 1 1 1 1 1
 NOTE - ALL VECTOR DOFS ARE IN NODAL COORDINATE SYSTEMS.

cpmodal.out

MODE	UX	UY	UZ	NOTE	NOTY	NOTZ
19	-0.128608	-0.648345E-01	-0.700163			
20	0.127519E-02	-1.03105	-1.63966			
21	0.115487	-0.825222	1.63951			
22	0.103787	-0.319966	1.78237			
23	0.113326	0.715823	1.37877			
24	-0.662858E-02	-0.118049	6.17224			
25	-0.800022E-01	-0.407803	5.64485			
26	0.295046	-0.405628	4.78559			
27	0.157843	-0.891148	4.35483			
28	-0.304552	-0.889220	3.39497			
29	-0.984372	-0.885294	-0.231176			
30	1.32321	-0.882247	-0.342413			
31	1.31311	-0.879212	-0.420255			
32	1.41835	-0.876177	-0.498100			
33	1.31602	-0.873142	-0.575952			
34	0.935305	-0.849318E-01	-0.653803			
35	-0.495132	-0.846286	-0.732654			
36	0.259434E-01	-0.843251	-0.811511			
37	2.45278	-0.840220	-0.890368			
38	-0.286252	-0.837189	-0.969225			
39	-0.886509	-0.834158	-1.048082			
40	-0.884435	-0.831127	-1.126938			
41	-0.882351	-0.828096	-1.205794			
42	-0.880302	-0.825064	-1.284650			
43	-0.878253	-0.822032	-1.363506			
44	-0.876204	-0.819001	-1.442362			
45	-0.874155	-0.815970	-1.521218			

**** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
 40416.2 VEKOR-SUBSPARC 15.55.15 OCT 11. 1995 CP= 113.840
 FOR SUPPORT CALL VEKOR-SUBSPARC 15.55.15 OCT 11. 1995 CP= 113.840
 FREQUENCY = 16.045
 Modal analysis of coupled system of pressurizer spray line & building
 ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

cpmodal.out

MODE	UX	UY	UZ	NOTE	NOTY	NOTZ
31	-0.664373E-05	0.662217E-05	-0.487896E-03			
32	-0.177646E-04	0.677751E-05	-0.718052E-01			
33	-0.117705E-01	-0.110865	-0.24425			
34	-0.699718E-02	-0.113612	-0.240908E-01			
35	0.144616	-0.117243	0.944531E-01			
36	-0.224657	-0.116702	-0.272486			
37	-0.358651	-0.116303	-0.436725			
38	-0.523343	-0.115375	-0.608812			
39	-0.710460	-0.114102	-0.812660			
40	-0.921078	-0.112604	-1.049288			
41	-1.15433	-0.110942	-1.328042			
42	-1.410214	-0.109134	-1.649253			
43	-1.687713	-0.107192	-2.014012			
44	-1.986448	-0.105120	-2.423888			
45	-2.306054	-0.102923	-2.879442			

**** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
 40416.2 VEKOR-SUBSPARC 15.55.15 OCT 11. 1995 CP= 113.840
 FOR SUPPORT CALL VEKOR-SUBSPARC 15.55.15 OCT 11. 1995 CP= 113.840
 FREQUENCY = 16.045
 Modal analysis of coupled system of pressurizer spray line & building
 ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

cpmodal.out

MODE	UX	UY	UZ	NOTE	NOTY	NOTZ
31	-0.664373E-05	0.662217E-05	-0.487896E-03			
32	-0.177646E-04	0.677751E-05	-0.718052E-01			
33	-0.117705E-01	-0.110865	-0.24425			
34	-0.699718E-02	-0.113612	-0.240908E-01			
35	0.144616	-0.117243	0.944531E-01			
36	-0.224657	-0.116702	-0.272486			
37	-0.358651	-0.116303	-0.436725			
38	-0.523343	-0.115375	-0.608812			
39	-0.710460	-0.114102	-0.812660			
40	-0.921078	-0.112604	-1.049288			
41	-1.15433	-0.110942	-1.328042			
42	-1.410214	-0.109134	-1.649253			
43	-1.687713	-0.107192	-2.014012			
44	-1.986448	-0.105120	-2.423888			
45	-2.306054	-0.102923	-2.879442			

**** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
 40416.2 VEKOR-SUBSPARC 15.55.15 OCT 11. 1995 CP= 113.840
 FOR SUPPORT CALL VEKOR-SUBSPARC 15.55.15 OCT 11. 1995 CP= 113.840
 FREQUENCY = 16.045
 Modal analysis of coupled system of pressurizer spray line & building
 ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

cpmodal.out

MODE	UX	UY	UZ	NOTE	NOTY	NOTZ
31	-0.664373E-05	0.662217E-05	-0.487896E-03			
32	-0.177646E-04	0.677751E-05	-0.718052E-01			
33	-0.117705E-01	-0.110865	-0.24425			
34	-0.699718E-02	-0.113612	-0.240908E-01			
35	0.144616	-0.117243	0.944531E-01			
36	-0.224657	-0.116702	-0.272486			
37	-0.358651	-0.116303	-0.436725			
38	-0.523343	-0.115375	-0.608812			
39	-0.710460	-0.114102	-0.812660			
40	-0.921078	-0.112604	-1.049288			
41	-1.15433	-0.110942	-1.328042			
42	-1.410214	-0.109134	-1.649253			
43	-1.687713	-0.107192	-2.014012			
44	-1.986448	-0.105120	-2.423888			
45	-2.306054	-0.102923	-2.879442			

**** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
 40416.2 VEKOR-SUBSPARC 15.55.15 OCT 11. 1995 CP= 113.840
 FOR SUPPORT CALL VEKOR-SUBSPARC 15.55.15 OCT 11. 1995 CP= 113.840
 FREQUENCY = 16.045
 Modal analysis of coupled system of pressurizer spray line & building
 ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUM4SPARC 15:55:15 OCT 11, 1995 CP= 114.090
FOR SUPPORT CALL PHONE FAX

Modal analysis of coupled system of pressurizer spray line & building

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

***** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION ***** FREQUENCY = 17.750
LOAD STEP= 1 MODE = 20 CUM. ITER.= 20

NOTE - ALL VECTOR DOFS ARE IN MODAL COORDINATE SYSTEMS.

Table with columns: NODE, UX, UY, UZ, ROTX, ROTY, ROTZ. Rows 1-45 showing displacement and rotation values for various nodes.

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUM4SPARC 15:55:15 OCT 11, 1995 CP= 114.130
FOR SUPPORT CALL PHONE FAX

Modal analysis of coupled system of pressurizer spray line & building

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

***** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION ***** FREQUENCY = 17.750
LOAD STEP= 1 MODE = 20 CUM. ITER.= 20

NOTE - ALL VECTOR DOFS ARE IN MODAL COORDINATE SYSTEMS.

Table with columns: NODE, UX, UY, UZ, ROTX, ROTY, ROTZ. Rows 46-74 showing displacement and rotation values for various nodes.

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUM4SPARC 15:55:15 OCT 11, 1995 CP= 114.160
FOR SUPPORT CALL PHONE FAX

Modal analysis of coupled system of pressurizer spray line & building

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

***** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION ***** FREQUENCY = 17.750
LOAD STEP= 1 MODE = 20 CUM. ITER.= 20

NOTE - ALL VECTOR DOFS ARE IN MODAL COORDINATE SYSTEMS.

Table with columns: NODE, UX, UY, UZ, ROTX, ROTY, ROTZ. Rows 86-306 showing displacement and rotation values for various nodes.

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUM4SPARC 15:55:15 OCT 11, 1995 CP= 114.200
FOR SUPPORT CALL PHONE FAX

Modal analysis of coupled system of pressurizer spray line & building

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

***** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION ***** FREQUENCY = 17.750
LOAD STEP= 1 MODE = 20 CUM. ITER.= 20

NOTE - ALL VECTOR DOFS ARE IN MODAL COORDINATE SYSTEMS.

Table with columns: NODE, UX, UY, UZ, ROTX, ROTY, ROTZ. Rows 310-9014 showing displacement and rotation values for various nodes.

Table with 4 columns: Node, UX, UY, UZ. Rows 310-324 showing nodal displacement components.

MAXIMEMS table with 4 columns: NODE, VALUE, UX, UY, UZ. Shows maximum values for nodes 9006, 9003, 9015.

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUM4SPARC 15:55:16 OCT 11, 1995 CP= 114.390
FOR SUPPORT CALL PHONE FAX

Modal analysis of coupled system of pressurizer spray line & building

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

***** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION ***** FREQUENCY = 19.637
LOAD STEP= 1 NODE = 22 CUM. ITER = 22

NOTE - ALL VECTOR DOFS ARE IN NODAL COORDINATE SYSTEMS.

Table with 7 columns: NODE, UX, UY, UZ, ROTX, ROTY, ROTZ. Rows 1-45 showing nodal displacement and rotation components.

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUM4SPARC 15:55:16 OCT 11, 1995 CP= 114.440
FOR SUPPORT CALL PHONE FAX

Modal analysis of coupled system of pressurizer spray line & building

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

***** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION ***** FREQUENCY = 19.637
LOAD STEP= 1 NODE = 22 CUM. ITER = 22

NOTE - ALL VECTOR DOFS ARE IN NODAL COORDINATE SYSTEMS.

Table with 7 columns: NODE, UX, UY, UZ, ROTX, ROTY, ROTZ. Rows 46-85 showing nodal displacement and rotation components.

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUM4SPARC 15:55:16 OCT 11, 1995 CP= 114.480
FOR SUPPORT CALL PHONE FAX

Modal analysis of coupled system of pressurizer spray line & building

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

***** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION ***** FREQUENCY = 19.637
LOAD STEP= 1 NODE = 22 CUM. ITER = 22

NOTE - ALL VECTOR DOFS ARE IN NODAL COORDINATE SYSTEMS.

Table with 7 columns: NODE, UX, UY, UZ, ROTX, ROTY, ROTZ. Rows 86-308 showing nodal displacement and rotation components.

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUM4SPARC 15:55:16 OCT 11, 1995 CP= 114.520
FOR SUPPORT CALL PHONE FAX

Modal analysis of coupled system of pressurizer spray line & building

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

***** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION ***** FREQUENCY = 19.637
LOAD STEP= 1 MODE = 22 CUM. ITER.= 22

NOTE - ALL VECTOR DOFS ARE IN NODAL COORDINATE SYSTEMS.

Table with columns: NODE, UX, UY, UZ, ROTX, ROTY, ROTZ. Contains data for nodes 310 through 9024.

MAXIMUMS NODE 9010 7 9006 0 0 0
VALUE 10.8146 -2.77410 -3.12260 0 0 0

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUM4SPARC 15:55:16 OCT 11, 1995 CP= 114.550
FOR SUPPORT CALL PHONE FAX

Modal analysis of coupled system of pressurizer spray line & building

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

***** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION ***** FREQUENCY = 20.883
LOAD STEP= 1 MODE = 23 CUM. ITER.= 23

NOTE - ALL VECTOR DOFS ARE IN NODAL COORDINATE SYSTEMS.

Table with columns: NODE, UX, UY, UZ, ROTX, ROTY, ROTZ. Contains data for nodes 1 through 43.

44 -0.745071 0.129423 1.76138
45 -0.744370 0.271297 1.06627

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUM4SPARC 15:55:16 OCT 11, 1995 CP= 114.590
FOR SUPPORT CALL PHONE FAX

Modal analysis of coupled system of pressurizer spray line & building

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

***** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION ***** FREQUENCY = 20.883
LOAD STEP= 1 MODE = 23 CUM. ITER.= 23

NOTE - ALL VECTOR DOFS ARE IN NODAL COORDINATE SYSTEMS.

Table with columns: NODE, UX, UY, UZ, ROTX, ROTY, ROTZ. Contains data for nodes 46 through 85.

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUM4SPARC 15:55:16 OCT 11, 1995 CP= 114.640
FOR SUPPORT CALL PHONE FAX

Modal analysis of coupled system of pressurizer spray line & building

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

***** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION ***** FREQUENCY = 20.883
LOAD STEP= 1 MODE = 23 CUM. ITER.= 23

NOTE - ALL VECTOR DOFS ARE IN NODAL COORDINATE SYSTEMS.

Table with columns: NODE, UX, UY, UZ, ROTX, ROTY, ROTZ. Contains data for nodes 86 through 118.

***** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION ***** FREQUENCY = 23.055

LOAD STEP= 1 MODE = 25 CUM. ITER.= 25

NOTE - ALL VECTOR DOFS ARE IN NODAL COORDINATE SYSTEMS.

Table with columns: NODE, UX, UY, UZ, ROTX, ROTY, ROTZ. Rows 86-308.

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUM4SPARC 15.55.16 OCT 11, 1995 CP= 115.010
FOR SUPPORT CALL PHONE FAX

Modal analysis of coupled system of pressurizer spray line & building

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

***** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION ***** FREQUENCY = 23.055

LOAD STEP= 1 MODE = 25 CUM. ITER.= 25

NOTE - ALL VECTOR DOFS ARE IN NODAL COORDINATE SYSTEMS.

Table with columns: NODE, UX, UY, UZ, ROTX, ROTY, ROTZ. Rows 110-9024. Includes MAXIMUMS table at the bottom.

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUM4SPARC 15.55.16 OCT 11, 1995 CP= 115.050
FOR SUPPORT CALL PHONE FAX

Modal analysis of coupled system of pressurizer spray line & building

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY
***** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION ***** FREQUENCY = 23.467

LOAD STEP= 1 MODE = 26 CUM. ITER.= 26

NOTE - ALL VECTOR DOFS ARE IN NODAL COORDINATE SYSTEMS.

Table with columns: NODE, UX, UY, UZ, ROTX, ROTY, ROTZ. Rows 1-45.

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUM4SPARC 15.55.16 OCT 11, 1995 CP= 115.020
FOR SUPPORT CALL PHONE FAX

Modal analysis of coupled system of pressurizer spray line & building

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

***** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION ***** FREQUENCY = 23.467

LOAD STEP= 1 MODE = 26 CUM. ITER.= 26

NOTE - ALL VECTOR DOFS ARE IN NODAL COORDINATE SYSTEMS.

Table with columns: NODE, UX, UY, UZ, ROTX, ROTY, ROTZ. Rows 46-78.

MODE	UX	UY	UZ	ROTX	ROTY	NOTE
104	0.900130	-4.22158	0.954821			
105	0.901877	-5.42631	1.05295			
106	0.902280	-6.57707	1.06086			
107	0.902893	-5.51150	0.923371			
109	0.981602	-6.81256	0.925847			
110	0.982100	-7.96322	0.982100			
112	1.15447	-2.27987	0.982030			
113	3.75593	1.79861	-0.29405			
114	5.20455	2.76544	-0.295836			
115	6.84374	2.78173	-0.296780			
116	9.33741	3.61418	-0.298135			
118	10.4998	3.97613	-0.605258			
119	1.06781	3.44220	-4.07484			
120	0.902113	2.38417	4.03925			
124	-2.25914	0.339536	-4.03570			
125	-2.40745	0.417072	-4.14145			
128	-0.268430	0.248318	-0.543878			
130	-0.263155	0.457232	-0.687978			
132	-0.268314	2.14420	-0.450399			
133	-0.409632	2.4555	-1.07021			
134	0.409920	-2.66647	-1.44202			
304	-0.163972	0.553328	0.4			
306	-0.356892	0.149132	0.164803			
308	-0.445947	0.236481	0.201304			

**** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 ****
 40416-2 VERSION-SUNSHARPac PNAME 15:55:17 OCT 11, 1995 CP# 115.820
 FOR SUPPORT CALL

Model analysis of coupled system of pressurizer spray line & building

**** ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY ****

**** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION **** FREQUENCY = 26.056
 LOAD STEP= 1 MODE = 30 CUM. ITER = 30

NOTE - ALL VECTOR DOFS ARE IN GLOBAL COORDINATE SYSTEMS.

MODE	UX	UY	UZ	ROTX	ROTY	NOTE
310	-0.435627	0.435627	0.971818			
311	0.435627	0.435627	0.971818			
9001	-0.424580	0.553319	-0.171438			
9002	-0.424580	0.553319	-0.602078			
9003	-1.42248	0.607514	-0.519457			
9004	-1.16300	0.605258	0.164258			
9005	-0.516244	0.597073	0.106206			
9006	-0.904470	0.572121	0.385070			
9007	-0.314261	0.514959	-0.742103			
9008	0.732299	1.83333	1.78622			
9010	0.822592	1.82810	2.01342			
9011	0.696787	1.80313	-0.948102			
9012	0.696787	1.78929	1.06557			
9013	-0.727414	1.74524	-0.374305			
9014	-0.401384	1.64236	2.54336			
9016	-0.735932	1.60742	0.685994			
9017	0.707349	2.46099	0.131512			
9018	0.464833	5.35077	0.179937			
9019	0.704576	-6.73023	0.118731			
9020	0.886280	0.905041	0.93227			
9021	0.462264	-2.47088	0.359277			
9023	10.9143	3.96814	-5.97177			
9024	0.370150	0.126430	0.456619			

**** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 ****
 40416-2 VERSION-SUNSHARPac PNAME 15:55:17 OCT 11, 1995 CP# 115.850
 FOR SUPPORT CALL

Model analysis of coupled system of pressurizer spray line & building

**** ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY ****

**** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION **** FREQUENCY = 26.291
 LOAD STEP= 1 MODE = 31 CUM. ITER = 31

NOTE - ALL VECTOR DOFS ARE IN GLOBAL COORDINATE SYSTEMS.

MODE	UX	UY	UZ	ROTX	ROTY	NOTE
1	0.412638	-0.353435	0.185839			
2	-0.684079	0.148328	0.176420			
3	-0.594047	-0.720682	0.157888			
4	-0.575019	-0.781708	-0.600442			
5	0.714566	-0.456458	-0.599442			
6	0.165468	-0.456398	-0.905218			
7	0.177598	-0.450442	0.682782			
8	0.603255	-0.449482	0.657588			
9	0.859178	-0.437958	-0.339478			
10	0.681496	-0.410208	-0.235978			

**** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 ****
 40416-2 VERSION-SUNSHARPac PNAME 15:55:17 OCT 11, 1995 CP# 115.770
 FOR SUPPORT CALL

Model analysis of coupled system of pressurizer spray line & building

**** ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY ****

**** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION **** FREQUENCY = 26.056
 LOAD STEP= 1 MODE = 30 CUM. ITER = 30

NOTE - ALL VECTOR DOFS ARE IN GLOBAL COORDINATE SYSTEMS.

MODE	UX	UY	UZ	ROTX	ROTY	NOTE
29	0.427182	1.67808	1.47088			
30	-0.158708	1.57005	-0.179400			
31	-0.139239	1.56902	-0.131782			
32	-0.608848	1.48669	0.453618			
33	0.270358	1.24519	0.135761			
34	0.244108	1.14413	0.114213			
35	0.282386	1.59428	0.132269			
38	1.16813	-5.76689	0.114318			
40	0.931602	-1.23624	0.110168			
43	0.889614	-0.275177	0.150451			
44	0.889543	-0.192753	0.166934			
45	0.889274	0.114228	0.216861			

**** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 ****
 40416-2 VERSION-SUNSHARPac PNAME 15:55:17 OCT 11, 1995 CP# 115.770
 FOR SUPPORT CALL

Model analysis of coupled system of pressurizer spray line & building

**** ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY ****

**** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION **** FREQUENCY = 26.056
 LOAD STEP= 1 MODE = 30 CUM. ITER = 30

NOTE - ALL VECTOR DOFS ARE IN GLOBAL COORDINATE SYSTEMS.

MODE	UX	UY	UZ	ROTX	ROTY	NOTE
46	-0.624038	-0.552946	0.812268			
47	0.624038	0.552946	0.812268			
91	-0.435627	0.435627	0.971818			
92	0.435627	0.435627	0.971818			
93	0.90179	0.735972	-1.13345			
94	3.17614	0.602963	-1.33387			
95	3.61892	0.80411	-1.33489			
96	4.06518	0.993571	-1.33422			
97	4.51356	1.18690	-1.33422			
98	4.96194	1.38128	-1.33422			
100	2.94019	1.58726	-0.920667			
101	2.43496	1.36407	-0.293317			
102	1.74078	1.16443	0.101074			
103	0.894533	0.542599	0.363335			

cpmodal.out

MAXIMUMS 9023 9018 9014 0 0 0
 NODES 9.54094 -7.46658 3.93420 0 0 0
 VALLE 1 1 1
 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
 40416.2 VESIM-GRIPAPAC 15:55.11 OCT 11, 1995 CP* 116.170
 FOR SUPPORT CALL PHONE
 Modal analysis of coupled system of pressurizer spray line & building
 ***** ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY *****
 ***** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION ***** FREQUENCY = 26.862
 LOAD STEP= 1 MODE= 33 CUR. ITER.= 33

NOTE - ALL VECTOR DOFS ARE IN GLOBAL COORDINATE SYSTEMS.

MODE	UX	UY	UZ	ROTX	ROTY	NOTE
46	0.131725	-0.132577E-02	0.348909			
47	0.351266	0.65262E-02	0.457316			
48	0.238566	-0.14562E-01	0.505245			
49	0.350017	0.181540E-01	0.555245			
50	0.345194	0.220910E-01	0.665221			
51	0.346829	0.232955E-01	0.682413			
52	0.347611	0.239542E-01	0.718778			
53	0.342984	0.102618	0.525766			
54	0.331383	0.154908	0.652128E-01			
55	0.275348	0.269672E-01	0.739475E-01			
57	0.232780	0.276062E-01	0.112052			
58	0.196345	-0.140348E-01	0.112070			
59	0.143612	-0.781332E-01	0.112095			
60	0.935701E-21	-0.144276	0.112107			
61	0.461368E-01	-0.11970	0.112119			
62	0.427302E-01	-0.276639	0.112131			
63	0.847939E-01	-0.176613	0.627384E-01			
64	0.861801E-02	-0.177235	-0.282157E-01			
65	0.868363E-02	-0.122513	-0.552540E-01			
66	0.868354E-02	-0.027970E-01	-0.729352E-01			
67	0.868326E-02	-0.728518E-02	-0.818402E-01			
68	0.868326E-02	-0.827153E-01	-0.852787E-01			

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
 40416.2 VESIM-GRIPAPAC 15:55.11 OCT 11, 1995 CP* 116.210
 FOR SUPPORT CALL PHONE
 Modal analysis of coupled system of pressurizer spray line & building
 ***** ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY *****
 ***** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION ***** FREQUENCY = 26.862
 LOAD STEP= 1 MODE= 33 CUR. ITER.= 33

NOTE - ALL VECTOR DOFS ARE IN GLOBAL COORDINATE SYSTEMS.

cpmodal.out

MAXIMUMS 9023 9018 9014 0 0 0
 NODES 9.54094 -7.46658 3.93420 0 0 0
 VALLE 1 1 1
 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
 40416.2 VESIM-GRIPAPAC 15:55.11 OCT 11, 1995 CP* 116.250
 FOR SUPPORT CALL PHONE
 Modal analysis of coupled system of pressurizer spray line & building
 ***** ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY *****
 ***** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION ***** FREQUENCY = 26.862
 LOAD STEP= 1 MODE= 33 CUR. ITER.= 33

NOTE - ALL VECTOR DOFS ARE IN GLOBAL COORDINATE SYSTEMS.

MODE	UX	UY	UZ	ROTX	ROTY	NOTE
69	-0.873418E-02	0.528189E-01	-0.481078E-01			
70	-0.576468E-02	0.850451E-01	-0.647589E-01			
71	-0.883218E-02	0.128398	-0.766403E-01			
72	-0.904825E-02	0.154159	-0.829743E-01			
73	-0.904825E-02	0.154159	-0.829743E-01			
74	-0.904825E-02	0.154159	-0.829743E-01			
75	-0.904825E-02	0.154159	-0.829743E-01			
76	-0.904825E-02	0.154159	-0.829743E-01			
77	-0.904825E-02	0.154159	-0.829743E-01			
78	-0.904825E-02	0.154159	-0.829743E-01			
79	-0.904825E-02	0.154159	-0.829743E-01			
80	-0.904825E-02	0.154159	-0.829743E-01			
81	-0.904825E-02	0.154159	-0.829743E-01			
82	-0.904825E-02	0.154159	-0.829743E-01			
83	-0.904825E-02	0.154159	-0.829743E-01			
84	-0.904825E-02	0.154159	-0.829743E-01			
85	-0.904825E-02	0.154159	-0.829743E-01			

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
 40416.2 VESIM-GRIPAPAC 15:55.11 OCT 11, 1995 CP* 116.290
 FOR SUPPORT CALL PHONE
 Modal analysis of coupled system of pressurizer spray line & building
 ***** ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY *****
 ***** REDUCED EIGENVECTOR (MODE SHAPE) SOLUTION ***** FREQUENCY = 26.862
 LOAD STEP= 1 MODE= 33 CUR. ITER.= 33

NOTE - ALL VECTOR DOFS ARE IN GLOBAL COORDINATE SYSTEMS.

*** ANSYS BINARY FILE STATISTICS
 BUFFER SIZE USED= 4096
 0.148 MB WRITTEN ON ELEMENT MATRIX FILE: cpmoda1.mat
 0.148 MB WRITTEN ON ELEMENT MATRIX FILE: cpmoda1.mat
 0.806 MB WRITTEN ON TRIANGULARIZED MATRIX FILE: cpmoda1.tri
 3.082 MB WRITTEN ON MODAL MATRIX FILE: cpmoda1.moda

FINISH SOLUTION PROCESSING

***** ROUTINE COMPLETED ***** CP * 117.690

***** END OF INPUT ENCOUNTERED *****

REMOVE ALL SOLUTION AND POST DATA
 SAVE ALL MODEL DATA

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= cpmoda1.db
 FOR POSSIBLE RESUME FROM THIS POINT

NUMBER OF WARNING MESSAGES ENCOUNTERED= 10
 NUMBER OF ERROR MESSAGES ENCOUNTERED= 0

ANSYS RUN COMPLETED

REV: 5.0 SUNASPARC
 CP TIME (sec) = 116.550 TIME = 15:55:25
 ELAPSED TIME (sec) = 222.000 DATE = 10/11/88

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/batch.list
/filnam,pb2ecx
/units,bft
/weight:kips,Length:feet
/prop7
g=386.4/12
a=144/1000
ba=(12**3)/1000
c=0.036126684*b/g
d=12/1000
r1=2.875/12
r3=0.84/12
r5=1.9/12
t1=0.375/12
t3=0.188/12
t5=0.281/12
rr11=1.667
rr1=0.3125
rr12=0.5
rr13=0.313
rr3=0.125
rr5=0.187
/ctitle,Time-history analysis of coupled system (presurizer spray line)
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mp,dens,1,(0.40695565*b/g)
mp,ex,2,(28.3e6*a)
mp,nuxy,2,0.3
mp,dens,2,(0.43867346*b/g)
mp,ex,3,(28.3e6*a)
mp,nuxy,3,0.3
mp,dens,3,(0.92858561*b/g)
mp,ex,4,(28.3e6*a)
mp,nuxy,4,0.3
mp,dens,4,(5.8515393*b/g)
mp,ex,5,(28.3e6*a)
mp,nuxy,5,0.3
mp,dens,5,(0.49939372*b/g)
mp,ex,6,(28.3e6*a)
mp,nuxy,6,0.3
mp,dens,6,(2.5829705*b/g)
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et,2,pipe18,,,,,2
et,3,combin14,,1
et,4,combin14,,2
et,5,combin14,,3
et,6,combin14,,4
et,7,combin14,,5
et,8,combin14,,6
et,9,pipe16,,,,,1
et,10,pipe18,,,,,2
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r,21,r1,t1,rr11
rmore,c
r,21,r1,t1,rr1
rmore,c
r,212,r1,t1,rr12
rmore,c
r,213,r1,t1,rr13
rmore,c
r,13,r3,t3,,,,c
r,23,r3,t3,rr3
rmore,c
r,15,r5,t5,,,,c
r,25,r5,t5,rr5
rmore,c
r,51,(77000*d)
r,52,(56*d)
r,53,(212000*d)
r,54,(126*d)
r,55,(35*d)
r,56,(400*d)
r,57,(224*d)
r,58,(1.0e11*d)
r,59,8.33e8
r,31,(25.0/g/1000)
r,32,(4.0/g/1000)
r,33,(43.0/g/1000)
r,34,(40.0/g/1000)
r,35,(75.0/g/1000)
r,36,(5.0/g/1000)
r,37,(6.0/g/1000)
r,38,(105.0/g/1000)
r,39,(10.0/g/1000)
r,40,(12.0/g/1000)
r,41,(31.5/g/1000)
r,42,(230.0/g/1000)
r=1/(12**2)
r=1/(12**4)
et,71,beam4
mp,ex,71,(4.5e6*a)
mp,nuxy,71,0.3
mp,dens,71,0.0

```

! for building

```

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rmore,,,1.71,1.67
r,72,(243000*r),(1*1.43e+10),(1*1.1e+10),
rmore,,,1.26,1.23
r,73,(162000*r),(1*1.25e+10),(1*1.6e+10),
rmore,,,1.57,2.33
r,74,(132000*r),(1*1.15e+10),(1*1.48e+10),
rmore,(1*2.64e10),1.59,2.26
r,75,(92660*r),(1*5.656e+09),(1*2.151e+09),
rmore,,,1.42,2.57
r,76,(98710*r),(1*7.372e+09),(1*2.603e+09),
rmore,,,1.51,2.88
et,72,beam21,,,,2
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r,78,(4428.75e3/g/1000)
r,79,(2650.75e3/g/1000)
r,80,(3207.25e3/g/1000)
r,81,(2847.75e3/g/1000)
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 type,2
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 type,1
 real,11
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 e,4,5
 type,2
 real,21
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 e,9002,6,4
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 e,11,12
 type,2
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 e,14,15
 e,15,16
 type,2
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 type,1
 real,11
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 e,32,35,30
 type,1
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 e,37,9017
 e,9017,9018
 e,9018,38
 e,38,39
 e,39,9019
 e,9019,40

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type,2
real,21
e.41,43,40
type,1
real,11
e.43,44
e. 44 . 45
e. 45 . 9020
e. 9020 . 46
e. 46 . 47
e. 47 . 48
type,1
real,11
mat,2
e.48,49
e.49,50
type,1
real,11
mat,1
e.50,51
e. 51 . 52
e. 52 . 53
e. 53 . 54
e. 54 . 55
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real,21
e.55,56,54
type,1
real,11
e.56,57
e. 57 . 58
e. 58 . 59
e. 59 . 60
e. 60 . 61
e. 61 . 62
type,2
real,21
e.62,63,61
type,1
real,11
e.63,64
type,1
real,11
mat,2
e.64,65
e.65,66
type,1
real,11
mat,1
e.66,67
e.67,68
e.68,69
e.69,70
type,1
real,11
mat,2
e.70,71
e.71,72
type,1
real,11
mat,1
e.72,73
e.73,74
mat,2
e.74,75
e.75,76
mat,1
e.76,77
e. 77 . 78
e. 78 . 9021
e. 9021 . 79
e. 79 . 80
e. 80 . 81
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real,21
e.81,82,80
type,1
real,11
e.82,9022
e. 9022 . 83
e. 83 . 84
e. 84 . 85
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real,212
e.85,86,84
type,1
real,11
e.86,87
e.47,91
e.91,92

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e. 101 . 102
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e.103,104
mat,4
e.104,105
e.105,106
mat,3
e.106,107
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mat,3
real,23
e.107,109,106
type,1
mat,3
real,13
e.109,111
e.111,112
type,1
mat,5
real,15
e.112,68
e.101,113
mat,6
e.113,114
e.114,115
mat,5
e.115,116
type,2
real,25
e.116,118,115
type,1
mat,5
real,15
e.118,9023
e.9023,120
type,2
real,25
e.120,122,9023
type,1
mat,5
real,15
e.122,124
e.124,125
type,2
real,25
e.125,127,124
type,1
mat,5
real,15
e.127,129
e.129,9024
e.9024,130
mat,1
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e.131,132
e.71,133
e.133,134
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type,4
e.1,1001
type,5
e.1,1001
real,59
type,6
e.1,1001

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type, 4
e, 14, 1014
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type, 5
e, 28, 1028
real, 53
type, 4
e, 37, 1037
type, 3
e, 39, 1039
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type, 4
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e, 45, 1045
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type, 4
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real, 57
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e, 133, 1133
type, 5
e, 133, 1133
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type, 4
e, 87, 1087
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e, 87, 1087
type, 8
e, 87, 1087
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type, 4
e, 130, 1130
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type, 7
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type, 8
e, 130, 1130

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e, 15
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e, 303, 304
real, 72
e, 304, 305
real, 73
e, 305, 306
real, 74
e, 306, 307
e, 307, 308
real, 75
e, 308, 309
e, 309, 310
real, 76
e, 310, 311
e, 311, 312
e, 312, 313
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real, 72
e, 304
real, 78
e, 306
real, 79
e, 308
real, 80
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real, 81
e, 313
cp, 1, ux, 304, 1001
cp, 2, ux, 309, 1087
cp, 3, ux, 312, 1037, 1039, 1044, 1045, 1053, 1079

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for building

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cp.5,ux,307,1015,1014
cp.6,ux,308,1023
cp.7,ux,310,1028
cp1gen,1,uy,uz,rotx,roty,rotz
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cp1gen,6,uy,uz,rotx,roty,rotz
cp1gen,7,uy,uz,rotx,roty,rotz
d,301,all
lumpm,on
save
finish

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```

C*** Time History analysis for earthquake record (El Centro)

```

```

/output.pb2ecx0
/solu
entype,trans
t,rnopt, reduced
m,1,ux,134,,uy,uz
m,9001,ux,9024,,uy,uz
m,304,ux,310,2,,uy,uz
m,313,ux,,uy,uz
ALPHAD,0.7941209
BETAD,0.00046621099
DELTIM,0.001
T = 0.0
*MACRO TO GET ACCELERATION INPUT
*CREATE,GRNDXITN
TIMINT,ON
T = T + 0.02
TIME,T
ACEL,(ARG1/12)
OUTRES,NSOL, LAST
SOLVE

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esol,13,22,15,m,z
esol,14,32,23,m,x
esol,15,32,23,m,z
esol,16,48,35,f,y
esol,17,52,39,f,x
esol,18,52,39,m,y
esol,19,58,45,f,z
esol,20,58,45,m,z
esol,21,71,56,f,x
esol,22,86,72,f,x
esol,23,107,93,m,x
esol,24,114,102,f,x
esol,25,114,102,f,z
esol,26,117,103,f,x
esol,27,123,112,m,y
esol,28,125,101,f,x
esol,29,125,101,m,y
esol,30,139,65,f,x
extrem,2,30
save
finish

/solu
express,on
numexp,100,0.1,0.2

```

```

outpr,,none
solve
save
finish

/post26
numvar,30
esol , 2 , 1 , 1 , f , x
esol , 3 , 1 , 1 , f , y
esol , 4 , 1 , 1 , m , x
esol , 5 , 1 , 1 , m , y
esol , 6 , 8 , 6 , f , x
esol , 7 , 8 , 6 , m , z
esol , 8 , 12 , 10 , f , x
esol , 9 , 12 , 10 , f , z
esol , 10 , 12 , 10 , m , x
esol , 11 , 12 , 10 , m , z
esol , 12 , 22 , 15 , f , z
esol , 13 , 22 , 15 , m , z
esol , 14 , 32 , 23 , m , x
esol , 15 , 32 , 23 , m , z
esol , 16 , 48 , 35 , f , y
esol , 17 , 52 , 39 , f , x
esol , 18 , 52 , 39 , m , y
esol , 19 , 58 , 45 , f , z
esol , 20 , 58 , 45 , m , z
esol , 21 , 71 , 56 , f , x
esol , 22 , 86 , 72 , f , x
esol , 23 , 107 , 93 , m , x
esol , 24 , 114 , 102 , f , x
esol , 25 , 114 , 102 , f , z
esol , 26 , 117 , 103 , f , x
esol , 27 , 123 , 112 , m , y
esol , 28 , 125 , 101 , f , x
esol , 29 , 125 , 101 , m , y
esol , 30 , 139 , 65 , f , x
extrem,2,30
save
finish

/solu
expass,on
numexp,100,0.2,0.3
outpr,,none
solve
save
finish

/post26
numvar,30
esol , 2 , 1 , 1 , f , x
esol , 3 , 1 , 1 , f , y
esol , 4 , 1 , 1 , m , x
esol , 5 , 1 , 1 , m , y
esol , 6 , 8 , 6 , f , x
esol , 7 , 8 , 6 , m , z
esol , 8 , 12 , 10 , f , x
esol , 9 , 12 , 10 , f , z
esol , 10 , 12 , 10 , m , x
esol , 11 , 12 , 10 , m , z
esol , 12 , 22 , 15 , f , z
esol , 13 , 22 , 15 , m , z
esol , 14 , 32 , 23 , m , x
esol , 15 , 32 , 23 , m , z
esol , 16 , 48 , 35 , f , y
esol , 17 , 52 , 39 , f , x
esol , 18 , 52 , 39 , m , y
esol , 19 , 58 , 45 , f , z
esol , 20 , 58 , 45 , m , z
esol , 21 , 71 , 56 , f , x
esol , 22 , 86 , 72 , f , x
esol , 23 , 107 , 93 , m , x
esol , 24 , 114 , 102 , f , x
esol , 25 , 114 , 102 , f , z
esol , 26 , 117 , 103 , f , x
esol , 27 , 123 , 112 , m , y
esol , 28 , 125 , 101 , f , x
esol , 29 , 125 , 101 , m , y
esol , 30 , 139 , 65 , f , x
extrem,2,30
save
finish

/solu
expass,on
numexp,100,0.3,0.4
outpr,,none
solve
save
finish

```

```

/post26
numvar,30
esol , 2 , 1 , 1 , f , x
esol , 3 , 1 , 1 , f , y
esol , 4 , 1 , 1 , m , x
esol , 5 , 1 , 1 , m , y
esol , 6 , 8 , 6 , f , x
esol , 7 , 8 , 6 , m , z
esol , 8 , 12 , 10 , f , x
esol , 9 , 12 , 10 , f , z
esol , 10 , 12 , 10 , m , x
esol , 11 , 12 , 10 , m , z
esol , 12 , 22 , 15 , f , z
esol , 13 , 22 , 15 , m , z
esol , 14 , 32 , 23 , m , x
esol , 15 , 32 , 23 , m , z
esol , 16 , 48 , 35 , f , y
esol , 17 , 52 , 39 , f , x
esol , 18 , 52 , 39 , m , y
esol , 19 , 58 , 45 , f , z
esol , 20 , 58 , 45 , m , z
esol , 21 , 71 , 56 , f , x
esol , 22 , 86 , 72 , f , x
esol , 23 , 107 , 93 , m , x
esol , 24 , 114 , 102 , f , x
esol , 25 , 114 , 102 , f , z
esol , 26 , 117 , 103 , f , x
esol , 27 , 123 , 112 , m , y
esol , 28 , 125 , 101 , f , x
esol , 29 , 125 , 101 , m , y
esol , 30 , 139 , 65 , f , x
extrem,1,30
save
finish

/solu
expass,on
numexp,100,0.4,0.5
outpr,,none
solve
save
finish

/post26
numvar,30
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esol , 3 , 1 , 1 , f , y
esol , 4 , 1 , 1 , m , x
esol , 5 , 1 , 1 , m , y
esol , 6 , 8 , 6 , f , x
esol , 7 , 8 , 6 , m , z
esol , 8 , 12 , 10 , f , x
esol , 9 , 12 , 10 , f , z
esol , 10 , 12 , 10 , m , x
esol , 11 , 12 , 10 , m , z
esol , 12 , 22 , 15 , f , z
esol , 13 , 22 , 15 , m , z
esol , 14 , 32 , 23 , m , x
esol , 15 , 32 , 23 , m , z
esol , 16 , 48 , 35 , f , y
esol , 17 , 52 , 39 , f , x
esol , 18 , 52 , 39 , m , y
esol , 19 , 58 , 45 , f , z
esol , 20 , 58 , 45 , m , z
esol , 21 , 71 , 56 , f , x
esol , 22 , 86 , 72 , f , x
esol , 23 , 107 , 93 , m , x
esol , 24 , 114 , 102 , f , x
esol , 25 , 114 , 102 , f , z
esol , 26 , 117 , 103 , f , x
esol , 27 , 123 , 112 , m , y
esol , 28 , 125 , 101 , f , x
esol , 29 , 125 , 101 , m , y
esol , 30 , 139 , 65 , f , x
extrem,2,30
save
finish

/solu
expass,on
numexp,100,0.5,0.6
outpr,,none
solve
save
finish

/post26
numvar,30
esol , 2 , 1 , 1 , f , x
esol , 3 , 1 , 1 , f , y
esol , 4 , 1 , 1 , m , x

```



```
esol . 15 . 12 . 31 . m . x  
esol . 16 . 46 . 36 . t . x  
esol . 17 . 52 . 39 . t . x  
esol . 18 . 54 . 45 . t . y  
esol . 19 . 54 . 45 . t . y  
esol . 20 . 58 . 45 . m . t  
esol . 21 . 71 . 56 . t . x  
esol . 22 . 34 . 72 . t . x  
esol . 23 . 107 . 93 . m . x  
esol . 24 . 114 . 103 . t . x  
esol . 25 . 114 . 103 . t . x  
esol . 26 . 117 . 103 . t . x  
esol . 27 . 123 . 112 . m . y  
esol . 28 . 125 . 101 . t . x  
esol . 29 . 125 . 101 . m . y  
esol . 30 . 139 . 65 . t  
extty.2.10  
save  
finish
```

```

-----
WELCOME TO THE ANSYS PROGRAM
-----

```

***** ANSYS COMMAND LINE ARGUMENTS *****

MEMORY REQUESTED (MB) = 48.0

*** WARNING ***

AUTHORIZATION FILE WILL SOON EXPIRE.

CONTACT YOUR LOCAL ANSYS DISTRIBUTOR FOR DETAILS.

***** ANSYS DYNAMIC MEMORY ALLOCATION *****

WORK SPACE REQUESTED	=	12582912	48.000 MB	COMMAND LINE
MINIMUM WORK SPACE REQUIRED	=	2613736	9.971 MB	
MINIMUM WORK SPACE RECOMMENDED	=	4597640	17.539 MB	
WORK SPACE OBTAINED	=	12582910	48.000 MB	
BYTES PER WORD	=	4		

***** NOTICE ***** THIS IS THE ANSYS GENERAL PURPOSE FINITE ELEMENT COMPUTER PROGRAM. NEITHER SWANSON ANALYSIS SYSTEMS, INC. NOR THE DISTRIBUTOR SUPPLYING THIS PROGRAM ASSUME ANY RESPONSIBILITY FOR THE VALIDITY, ACCURACY, OR APPLICABILITY OF ANY RESULTS OBTAINED FROM THE ANSYS SYSTEM. USERS MUST VERIFY THEIR OWN RESULTS.

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ENTER /SHOW,device TO SET THE GRAPHICS DISPLAY TO device(e.g. X11,4207,ETC.)

ENTER /MENU,ON TO START THE ANSYS MENU SYSTEM

ENTER HELP FOR GENERAL ANSYS HELP INFORMATION

40416-2 VERSION=SP4SPARC REVISION= 5.0
 FOR SUPPORT CALL PHONE FAX
 CURRENT JOBNAME=fil1e 21:50:22 OCT 09, 1995 CP= 1.640

BEGIN:

```

1 /filna, pb2ecx
2 /units, bft ;weight: kips, Length: feet
3 /prep7
4 q=386.4/12
5 a=144/1000
6 ba=(12**3)/1000
7 c=0.036126684*b/g
8 d=12/1000
9 r1=2.875/12
10 r3=0.84/12
11 r5=1.9/12
12 t1=0.375/12
13 t3=0.188/12
14 t5=0.281/12
15 rr1=1.667
16 rr1=0.3125
17 rr12=0.5
18 rr13=0.313
19 rr3=0.125
20 rr5=0.187
21 /title, Time-history analysis of coupled system (presurizer spray line)
22 mp, ex, 1, (28.3e6*a) ; for piping
23 mp, nuxy, 1, 0.3
24 mp, dens, 1, (0.40695565*b/g)
25 mp, ex, 2, (28.3e6*a)
26 mp, nuxy, 2, 0.3
27 mp, dens, 2, (0.43867346*b/g)
28 mp, ex, 3, (28.3e6*a)
29 mp, nuxy, 3, 0.3
30 mp, dens, 3, (0.52856561*b/g)
31 mp, ex, 4, (28.3e6*a)
32 mp, nuxy, 4, 0.3

```

```

33 mp, dens, 4, (5.8515393*b/g)
34 mp, ex, 5, (28.3e6*a)
35 mp, nuxy, 5, 0.3
36 mp, dens, 5, (0.49939372*b/g)
37 mp, ex, 6, (28.3e6*a)
38 mp, nuxy, 6, 0.3
39 mp, dens, 6, (2.5829705*b/g)
40 et, 1, pipe16, , , , , 1
41 et, 2, pipe18, , , , , 2
42 et, 3, combin14, , 1 ;ID spring X' Direction
43 et, 4, combin14, , 2 ;ID spring Y' Direction
44 et, 5, combin14, , 3 ;ID spring Z' Direction
45 et, 6, combin14, , 4 ;ID spring ROTX' Direction
46 et, 7, combin14, , 5 ;ID spring ROTY' Direction
47 et, 8, combin14, , 6 ;ID spring ROTZ' Direction
48 et, 30, mass21, , , 2
49 r, 11, r1, t1, , , , c
50 r, 211, r1, t1, rr11
51 rmore, c
52 r, 21, r1, t1, rr1
53 rmore, c
54 r, 212, r1, t1, rr12
55 rmore, c
56 r, 213, r1, t1, rr13
57 rmore, c
58 r, 13, r3, t3, , , , c
59 r, 23, r3, t3, rr3
60 rmore, c
61 r, 15, r5, t5, , , , c
62 r, 25, r5, t5, rr5
63 rmore, c
64 r, 51, (77000*d)
65 r, 52, (56*d)
66 r, 53, (212000*d)
67 r, 54, (126*d)
68 r, 55, (35*d)
69 r, 56, (400*d)
70 r, 57, (224*d)
71 r, 58, (1.0e11*d)
72 r, 59, 8.33e8
73 r, 31, (25.0/g/1000)
74 r, 32, (4.0/g/1000)
75 r, 33, (43.0/g/1000)
76 r, 34, (40.0/g/1000)
77 r, 35, (78.0/g/1000)
78 r, 36, (5.0/g/1000)
79 r, 37, (6.0/g/1000)
80 r, 38, (105.0/g/1000)
81 r, 39, (10.0/g/1000)
82 r, 40, (12.0/g/1000)
83 r, 41, (31.5/g/1000)
84 r, 42, (230.0/g/1000)
85 f=1/(12**12)
86 l=1/(12**4)
87 et, 71, beam4 ; for building
88 mp, ex, 71, (4.5e6*a)
89 mp, nuxy, 71, 0.3
90 mp, dens, 71, 0.0
91 r, 71, (157000*f), (1*1.18e+10), (1*1.03e+10),
92 rmore, , 1, 71, 1.67
93 r, 72, (243000*f), (1*1.43e+10), (1*1.1e+10),
94 rmore, , 1, 26, 1.23
95 r, 73, (162000*f), (1*1.25e+10), (1*1.6e+10),
96 rmore, , 1, 57, 2.33
97 r, 74, (132000*f), (1*1.15e+10), (1*1.48e+10),
98 rmore, , (1*2.64e10), 1, 59, 2.26
99 r, 75, (52660*f), (1*5.656e+09), (1*2.151e+09),
100 rmore, , 1, 42, 2.57
101 r, 76, (98710*f), (1*7.372e+09), (1*2.603e+09),
102 rmore, , 1, 51, 2.88
103 et, 72, mass21, , , 2
104 r, 77, (4474.0e3/g/1000)
105 r, 78, (4428.75e3/g/1000)
106 r, 79, (2650.75e3/g/1000)
107 r, 80, (3207.25e3/g/1000)
108 r, 81, (2847.75e3/g/1000)
109 N, 1, 0.574, 0
110 N, 2, 0.396, 574, -0.396
111 N, 3, 1.574, 574, -0.884
112 N, 4, 3.79, 574, -0.884
113 N, 5, 4.905, 574, -0.884
114 N, 9001, 5.061, 574, 042, -0.884
115 N, 9002, 5.175, 574, 156, -0.884
116 N, 6, 5.217, 574, 312, -0.884
117 N, 7, 5.217, 574, 5, -0.884
118 N, 9003, 5.217, 577, 566, -0.884
119 N, 9004, 5.217, 580, 632, -0.884
120 N, 9, 5.217, 583, 698, -0.884
121 N, 10, 5.217, 584, 229, -0.884
122 N, 9005, 5.217, 586, 833, -0.884
123 N, 9006, 5.217, 589, 438, -0.884

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124 N,11.5.217,592.042,-0.884
 125 N,12.5.217,592.936,-0.884
 126 N,9007.5.259,593.094,-0.884
 127 N,9008.5.373,593.208,-0.884
 128 N,13.5.53,593.25,-0.884
 129 N,14.5.759,593.25,-0.884
 130 N,15.6.259,593.25,-0.884
 131 N,16.7.422,593.25,-0.884
 132 N,17.7.643,593.25,-0.792
 133 N,18.8.051,593.25,-0.194
 134 N,19.8.629,593.25,0.194
 135 N,20.10.158,593.25,1.773
 136 N,21.10.379,593.562,1.944
 137 N,9009,10.379,596.903,1.944
 138 N,9010,10.379,600.243,1.944
 139 N,22.10.379,603.583,1.944
 140 N,23.10.379,604.291,1.944
 141 N,24.10.379,605.655,1.944
 142 N,9011,10.379,608.436,1.944
 143 N,9012,10.379,611.218,1.944
 144 N,25.10.379,613.999,1.944
 145 N,26.10.379,614.791,1.944
 146 N,9013,10.379,617.742,1.944
 147 N,9014,10.379,620.693,1.944
 148 N,27.10.379,623.645,1.944
 149 N,28.10.379,624.749,1.944
 150 N,29.10.379,626.415,1.944
 151 N,9015,10.379,629.526,1.944
 152 N,9016,10.379,632.638,1.944
 153 N,30.10.379,635.749,1.944
 154 N,31.10.379,638.832,1.944
 155 N,32.10.379,638.053,2.035
 156 N,35.10.379,636.144,2.256
 157 N,17.10.379,636.144,2.959
 158 N,9017,10.379,636.144,5.657
 159 N,9018,10.379,636.144,8.355
 160 N,36.10.379,636.144,11.053
 161 N,39.10.379,636.144,11.918
 162 N,9019,10.379,636.144,14.756
 163 N,40.10.379,636.144,17.595
 164 N,41.10.379,636.144,20.048
 165 N,43.10.692,636.144,20.36
 166 N,44.10.812,636.144,20.36
 167 N,45.11.129,636.144,20.36
 168 N,9020,13.507,636.144,20.36
 169 N,46.15.885,636.144,20.36
 170 N,47.16.135,636.144,20.36
 171 N,48.16.385,636.144,20.36
 172 N,49.16.801,636.144,20.36
 173 N,50.17.218,636.144,20.36
 174 N,51.17.343,636.144,20.36
 175 N,52.17.801,636.144,20.36
 176 N,53.19.822,636.144,20.36
 177 N,54.22.801,636.144,20.36
 178 N,55.22.864,636.144,20.36
 179 N,56.23.176,636.144,20.673
 180 N,57.23.176,636.144,20.86
 181 N,58.23.176,636.144,21.027
 182 N,59.23.176,636.144,21.277
 183 N,60.23.176,636.144,21.527
 184 N,61.23.176,636.144,21.777
 185 N,62.23.176,636.144,21.798
 186 N,63.22.864,636.144,22.11
 187 N,64.21.947,636.144,22.11
 188 N,65.21.53,636.144,22.11
 189 N,66.21.113,636.144,22.11
 190 N,67.20.759,636.144,22.11
 191 N,68.20.509,636.144,22.11
 192 N,69.20.259,636.144,22.11
 193 N,70.20.071,636.144,22.11
 194 N,71.19.654,636.144,22.11
 195 N,72.19.237,636.144,22.11
 196 N,73.17.383,636.144,22.11
 197 N,74.17.175,636.144,22.11
 198 N,75.16.758,636.144,22.11
 199 N,76.16.341,636.144,22.11
 200 N,77.16.133,636.144,22.11
 201 N,78.15.799,636.144,22.11
 202 N,9021,13.413,636.144,22.11
 203 N,79.11.028,636.144,22.11
 204 N,80.10.121,636.144,22.11
 205 N,81.9.897,636.144,22.11
 206 N,82.9.585,636.144,21.798
 207 N,9022,9.585,636.144,19.667
 208 N,83.9.585,636.144,17.527
 209 N,84.9.585,636.144,17.333
 210 N,85.9.585,636.144,17.194
 211 N,86.9.231,635.791,16.694
 212 N,87.8.76,635.319,16.694
 213 N,47.16.135,636.144,20.36
 214 N,91.16.135,636.394,20.36

215 N,92.16.135,637.332,20.36
 216 N,93.16.135,637.644,20.673
 217 N,94.16.135,637.644,20.944
 218 N,95.16.135,637.644,21.361
 219 N,96.16.135,637.644,21.778
 220 N,97.16.135,637.644,21.799
 221 N,98.16.135,637.332,22.111
 222 N,100.16.135,636.957,22.111
 223 N,101.16.135,636.707,22.111
 224 N,102.16.135,636.394,22.111
 225 N,77.16.135,636.144,22.111
 226 N,59.23.176,636.144,21.277
 227 N,103.22.866,636.144,21.277
 228 N,104.22.092,636.144,21.277
 229 N,105.21.842,636.144,21.277
 230 N,106.21.592,636.144,21.277
 231 N,107.20.634,636.144,21.277
 232 N,109.20.509,636.144,21.402
 233 N,111.20.509,636.144,21.683
 234 N,112.20.509,636.144,21.801
 235 N,68.20.509,636.144,22.111
 236 N,101.16.135,636.707,22.111
 237 N,113.16.135,636.707,22.611
 238 N,114.16.135,636.707,22.965
 239 N,115.16.135,636.707,23.319
 240 N,116.16.135,636.707,23.84
 241 N,118.16.135,636.894,24.027
 242 N,9023,16.135,639.274,22.027
 243 N,120.16.135,641.654,24.027
 244 N,122.16.135,641.841,24.214
 245 N,124.16.135,641.841,24.567
 246 N,125.16.135,641.841,25.411
 247 N,127.16.135,641.654,25.598
 248 N,129.16.135,639.508,25.598
 249 N,9024,16.135,637.964,25.598
 250 N,130.16.135,636.425,25.598
 251 N,65.21.53,636.144,22.11
 252 N,131.21.53,636.415,22.11
 253 N,132.21.53,636.686,22.11
 254 N,71.19.654,336.144,22.11
 255 N,133.19.654,636.415,22.11
 256 N,134.19.654,636.686,22.11
 257 N,1001,0.574,0
 258 N,1009,5.217,583.698,-0.884
 259 N,1010,5.217,584.229,-0.884
 260 N,1014,5.759,593.25,-0.884
 261 N,1015,6.259,593.25,-0.884
 262 N,1023,10.379,604.291,1.944
 263 N,1028,10.379,624.749,1.944
 264 N,1029,10.379,626.415,1.944
 265 N,1037,10.379,636.144,2.959
 266 N,1039,10.379,636.144,11.918
 267 N,1044,10.812,636.144,20.36
 268 N,1045,11.129,636.144,20.36
 269 N,1052,17.801,636.144,20.36
 270 N,1053,19.822,636.144,20.36
 271 N,1054,22.801,636.144,20.36
 272 N,1057,23.176,636.144,20.86
 273 N,1061,23.176,636.144,21.777
 274 N,1073,17.383,636.144,22.11
 275 N,1078,15.799,636.144,22.11
 276 N,1079,11.028,636.144,22.11
 277 N,1087,8.76,635.319,16.694
 278 N,1124,16.135,641.841,24.567
 279 N,1129,16.135,639.508,25.598
 280 N,1130,16.135,636.425,25.598
 281 N,1131,21.53,636.415,22.11
 282 N,1133,19.654,636.415,22.11
 283 type,1
 284 real,11
 285 mat,1
 286 e,1,2
 287 type,2
 288 real,211
 289 e,2,3,1
 290 type,1
 291 real,11
 292 e,3,4
 293 e,4,5
 294 type,2
 295 real,21
 296 e,5,90C1,4
 297 e,9001,9002,4
 298 e,9002,6,4
 299 type,1
 300 real,11
 301 e,6,7
 302 e,7,9003
 303 e,9003,9004
 304 e,9004,9
 305 e,9,10

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306 e. 10, 9005
307 e. 9005, 9006
308 e. 9006, 11
309 e. 11, 12
310 type, 2
311 real, 21
312 e. 12, 9007, 11
313 e. 9007, 9008, 11
314 e. 9008, 13, 11
315 type, 1
316 real, 11
317 e. 13, 14
318 e. 14, 15
319 e. 15, 16
320 type, 2
321 real, 21
322 e. 16, 17, 15
323 type, 1
324 real, 11
325 e. 17, 18
326 e. 18, 19
327 e. 19, 20
328 type, 2
329 real, 21
330 e. 20, 21, 19
331 type, 1
332 real, 11
333 e. 21, 9009
334 e. 9009, 9010
335 e. 9010, 22
336 e. 22, 23
337 e. 23, 24
338 e. 24, 9011
339 e. 9011, 9012
340 e. 9012, 25
341 e. 25, 26
342 e. 26, 9013
343 e. 9013, 9014
344 e. 9014, 27
345 e. 27, 28
346 e. 28, 29
347 e. 29, 9015
348 e. 9015, 9016
349 e. 9016, 30
350 e. 30, 31
351 type, 2
352 real, 21
353 e. 31, 32, 30
354 e. 32, 35, 30
355 type, 1
356 real, 11
357 e. 35, 37
358 e. 37, 9017
359 e. 9017, 9018
360 e. 9018, 38
361 e. 38, 39
362 e. 39, 9019
363 e. 9019, 40
364 e. 40, 41
365 type, 2
366 real, 21
367 e. 41, 43, 40
368 type, 1
369 real, 11
370 e. 43, 44
371 e. 44, 45
372 e. 45, 9020
373 e. 9020, 46
374 e. 46, 47
375 e. 47, 48
376 type, 1
377 real, 11
378 mat, 2
379 e. 48, 49
380 e. 49, 50
381 type, 1
382 real, 11
383 mat, 1
384 e. 50, 51
385 e. 51, 52
386 e. 52, 53
387 e. 53, 54
388 e. 54, 55
389 type, 2
390 real, 21
391 e. 55, 56, 54
392 type, 1
393 real, 11
394 e. 56, 57
395 e. 57, 58
396 e. 58, 59

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398 e. 60, 61
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402 e. 62, 63, 61
403 type, 1
404 real, 11
405 e. 63, 64
406 type, 1
407 real, 11
408 mat, 2
409 e. 64, 65
410 e. 65, 66
411 type, 1
412 real, 11
413 mat, 1
414 e. 66, 67
415 e. 67, 68
416 e. 68, 69
417 e. 69, 70
418 type, 1
419 real, 11
420 mat, 2
421 e. 70, 71
422 e. 71, 72
423 type, 1
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425 mat, 1
426 e. 72, 73
427 e. 73, 74
428 mat, 2
429 e. 74, 75
430 e. 75, 76
431 mat, 1
432 e. 76, 77
433 e. 77, 78
434 e. 78, 9021
435 e. 9021, 79
436 e. 79, 80
437 e. 80, 81
438 type, 2
439 real, 21
440 e. 81, 82, 80
441 type, 1
442 real, 11
443 e. 82, 9022
444 e. 9022, 83
445 e. 83, 84
446 e. 84, 85
447 type, 2
448 real, 212
449 e. 85, 86, 84
450 type, 1
451 real, 11
452 e. 86, 87
453 e. 47, 91
454 e. 91, 92
455 type, 2
456 real, 213
457 e. 92, 93, 91
458 type, 1
459 real, 11
460 e. 93, 94
461 mat, 2
462 e. 94, 95
463 e. 95, 96
464 mat, 1
465 e. 96, 97
466 type, 2
467 real, 21
468 e. 97, 98, 96
469 type, 1
470 real, 11
471 e. 98, 100
472 e. 100, 101
473 e. 101, 102
474 e. 102, 77
475 type, 1
476 mat, 3
477 real, 13
478 e. 59, 103
479 e. 103, 104
480 mat, 4
481 e. 104, 105
482 e. 105, 106
483 mat, 3
484 e. 106, 107
485 type, 2
486 mat, 3
487 real, 23

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491 real,13
492 e,109,111
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495 mat,5
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499 mat,6
500 e,113,114
501 e,114,115
502 mat,5
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505 real,25
506 e,116,118,115
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510 e,118,9023
511 e,9023,120
512 type,2
513 real,25
514 e,120,122,9023
515 type,1
516 mat,5
517 real,15
518 e,122,124
519 e,124,125
520 type,2
521 real,25
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523 type,1
524 mat,5
525 real,15
526 e,127,129
527 e,129,9024
528 e,9024,130
529 mat,1
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532 e,65,131
533 e,131,132
534 e,71,133
535 e,133,134
536 real,58
537 type,3
538 e,1,1001
539 type,4
540 e,1,1001
541 type,5
542 e,1,1001
543 real,59
544 type,6
545 e,1,1001
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550 real,51
551 type,3
552 e,9,1009
553 type,5
554 e,10,1010
555 type,4
556 e,15,1015
557 real,52
558 type,4
559 e,14,1014
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561 type,3
562 e,23,1023
563 type,5
564 e,28,1028
565 real,53
566 type,4
567 e,37,1037
568 type,3
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570 real,51
571 type,4
572 e,44,1044
573 type,5
574 e,45,1045
575 real,54
576 type,4
577 e,53,1053
578 real,55

579 e,79,1079
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616 real,59
617 type,6
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619 type,7
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621 type,8
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637 type,30
638 real,31
639 e,9
640 e,10
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656 real,33
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660 real,35
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665 e,53
666 real,37
667 e,61
668 real,38
669 e,65

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672 e,78
673 real,40
674 e,105
675 real,41
676 e,131
677 e,133
678 real,42
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696 real,71
697 e,301,302
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699 e,303,304
700 real,72
701 e,304,305
702 real,73
703 e,305,306
704 real,74
705 e,306,307
706 e,307,308
707 real,75
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710 real,76
711 e,310,311
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713 e,312,313
714 type,72
715 real,77
716 e,304
717 real,78
718 e,306
719 real,79
720 e,308
721 real,80
722 e,310
723 real,81
724 e,313
725 cp,1,ux,304,1001
726 cp,2,ux,309,1087
727 cp,3,ux,312,1037,1039,1044,1045,1053,1079
728 cp,3,ux,312,1124,1129,1052,1054,1057,1078
729 cp,3,ux,312,1073,1061,1131,1133,1130
730 cp,4,rx,306,1009,1010
731 cp,5,ux,307,1015,1014
732 cp,6,ux,308,1023
733 cp,7,ux,310,1028
734 cplgen,1,uy,uz,rotx,roty,rotz
735 cplgen,2,uy,uz,rotx,roty,rotz
736 cplgen,3,uy,uz,rotx,roty,rotz
737 cplgen,4,uy,uz,rotx,roty,rotz
738 cplgen,5,uy,uz,rotx,roty,rotz
739 cplgen,6,uy,uz,rotx,roty,rotz
740 cplgen,7,uy,uz,rotx,roty,rotz
741 d,301,all
742 lumpm,on
743 save
744 finish
745
746 C*** Time History analysis for earthquake record (El Centro)
747 /output,pb2ecx0
748 /solu
749 antype,trans
750 timogt, reduced
751 m,1,ux,134,uy,uz
752 m,9001,ux,9024,uy,uz
753 m,304,ux,310,2,uy,uz
754 m,313,ux,,uy,uz
755 ALPHAD,0.7941209
756 BETAD,0.00046623099
757 DELTIM,0.001
758 T = 0.0
759 /MACRO TO GET ACCELERATION INPUT
760 *CREATE,GRNDXITN

```

(for building

```

761 TIMINT, ON
762 T = T + 0.02
763 TIME, T
764 ACCEL, (ARG1/12)
765 OUTRES, NSOL, LAST
766 SOLVE
767 *END
768 *USE, GRNDXITN, -6.3207709
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3565 nsol, 5, 17, u, x
3566 nsol, 6, 17, u, y
3567 nsol, 7, 17, u, z
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3574 nsol, 14, 35, u, x
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3580 /solu
3581 expans, on

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3640 solve
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3642 finish
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3644 /post26
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4003 esol.23.153.23.f,x
4004 esol.24.154.28.f,z
4005 esol.25.155.37.f,y
4006 esol.26.156.39.f,x
4007 esol.27.157.44.f,y
4008 esol.28.158.45.f,z
4009 esol.29.161.124.f,x
4010 esol.30.162.129.f,z
4011 esol.31.163.52.f,y
4012 esol.32.164.54.f,z
4013 esol.33.165.57.f,x
4014 esol.34.167.73.f,z
4015 esol.35.169.131.f,x
4016 esol.36.170.131.f,z
4017 esol.37.171.133.f,x
4018 esol.38.172.133.f,z
4019 esol.39.152.14.f,y
4020 esol.40.159.53.f,y
4021 esol.41.168.61.f,y
4022 esol.42.166.78.f,y
4023 esol.43.160.79.f,y
4024 extrem.2.43
4025 save
4026 finish
4027
4028 /solu
4029 expans.on
4030 numexp.100.0.8.0.9
4031 outpr.,none
4032 solve
4033 save
4034 finish
4035
4036 /post26

```

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4037 numvar.43
4038 esol.2.143.1.f,x
4039 esol.3.144.1.f,y
4040 esol.4.145.1.f,z
4041 esol.5.146.1.m,x
4042 esol.6.147.1.m,y
4043 esol.7.148.1.m,z
4044 esol.8.173.87.f,x
4045 esol.9.174.87.f,y
4046 esol.10.175.87.f,z
4047 esol.11.176.87.m,x
4048 esol.12.177.87.m,y
4049 esol.13.178.87.m,z
4050 esol.14.179.130.f,x
4051 esol.15.180.130.f,y
4052 esol.16.181.130.f,z
4053 esol.17.182.130.m,x
4054 esol.18.183.130.m,y
4055 esol.19.184.130.m,z
4056 esol.20.149.9.f,x
4057 esol.21.150.10.f,z
4058 esol.22.151.15.f,y
4059 esol.23.153.23.f,x
4060 esol.24.154.28.f,z
4061 esol.25.155.37.f,y
4062 esol.26.156.39.f,x
4063 esol.27.157.44.f,y
4064 esol.28.158.45.f,z
4065 esol.29.161.124.f,x
4066 esol.30.162.129.f,z
4067 esol.31.163.52.f,y
4068 esol.32.164.54.f,z
4069 esol.33.165.57.f,x
4070 esol.34.167.73.f,z
4071 esol.35.169.131.f,x
4072 esol.36.170.131.f,z
4073 esol.37.171.133.f,x
4074 esol.38.172.133.f,z
4075 esol.39.152.14.f,y
4076 esol.40.159.53.f,y
4077 esol.41.168.61.f,y
4078 esol.42.166.78.f,y
4079 esol.43.160.79.f,y
4080 extrem.2.43
4081 save
4082 finish
4083
4084 /solu
4085 expans.on
4086 numexp.100.0.9.1.0
4087 outpr.,none
4088 solve
4089 save
4090 finish
4091
4092 /post26
4093 numvar.43
4094 esol.2.143.1.f,x
4095 esol.3.144.1.f,y
4096 esol.4.145.1.f,z
4097 esol.5.146.1.m,x
4098 esol.6.147.1.m,y
4099 esol.7.148.1.m,z
4100 esol.8.173.87.f,x
4101 esol.9.174.87.f,y
4102 esol.10.175.87.f,z
4103 esol.11.176.87.m,x
4104 esol.12.177.87.m,y
4105 esol.13.178.87.m,z
4106 esol.14.179.130.f,x
4107 esol.15.180.130.f,y
4108 esol.16.181.130.f,z
4109 esol.17.182.130.m,x
4110 esol.18.183.130.m,y
4111 esol.19.184.130.m,z
4112 esol.20.149.9.f,x
4113 esol.21.150.10.f,z
4114 esol.22.151.15.f,y
4115 esol.23.153.23.f,x
4116 esol.24.154.28.f,z
4117 esol.25.155.37.f,y
4118 esol.26.156.39.f,x
4119 esol.27.157.44.f,y
4120 esol.28.158.45.f,z
4121 esol.29.161.124.f,x
4122 esol.30.162.129.f,z
4123 esol.31.163.52.f,y
4124 esol.32.164.54.f,z
4125 esol.33.165.57.f,x
4126 esol.34.167.73.f,z
4127 esol.35.169.131.f,x

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4128 esol,36,170,131,f,z
4129 esol,37,171,133,f,x
4130 esol,38,172,133,f,z
4131 esol,39,152,14,f,y
4132 esol,40,159,53,f,y
4133 esol,41,158,61,f,y
4134 esol,42,166,78,f,y
4135 esol,43,160,79,f,y
4136 extrem,2,43
4137 save
4138 finish
4139
4140 /solu
4141 expass,on
4142 numexp,100,0.0,0.1
4143 outpr,,none
4144 solve
4145 save
4146 finish
4147
4148 /post26
4149 numvar,30
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4151 esol, 3, 1, 1, f, y
4152 esol, 4, 1, 1, m, x
4153 esol, 5, 1, 1, m, y
4154 esol, 6, 8, 6, f, x
4155 esol, 7, 8, 6, m, z
4156 esol, 8, 12, 10, f, x
4157 esol, 9, 12, 10, f, z
4158 esol, 10, 12, 10, m, x
4159 esol, 11, 12, 10, m, z
4160 esol, 12, 22, 15, f, z
4161 esol, 13, 22, 15, m, z
4162 esol, 14, 32, 23, m, x
4163 esol, 15, 32, 23, m, z
4164 esol, 16, 48, 35, f, y
4165 esol, 17, 52, 39, f, x
4166 esol, 18, 52, 39, m, y
4167 esol, 19, 58, 45, f, z
4168 esol, 20, 58, 45, m, z
4169 esol, 21, 71, 56, f, x
4170 esol, 22, 86, 72, f, x
4171 esol, 23, 107, 93, m, x
4172 esol, 24, 114, 102, f, x
4173 esol, 25, 114, 102, f, z
4174 esol, 26, 117, 103, f, x
4175 esol, 27, 123, 112, m, y
4176 esol, 28, 125, 101, f, x
4177 esol, 29, 125, 101, m, y
4178 esol, 30, 139, 65, f, x
4179 extrem,2,30
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4181 finish
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4183 /solu
4184 expass,on
4185 numexp,100,0.1,0.2
4186 outpr,,none
4187 solve
4188 save
4189 finish
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4191 /post26
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4197 esol, 6, 8, 6, f, x
4198 esol, 7, 8, 6, m, z
4199 esol, 8, 12, 10, f, x
4200 esol, 9, 12, 10, f, z
4201 esol, 10, 12, 10, m, x
4202 esol, 11, 12, 10, m, z
4203 esol, 12, 22, 15, f, z
4204 esol, 13, 22, 15, m, z
4205 esol, 14, 32, 23, m, x
4206 esol, 15, 32, 23, m, z
4207 esol, 16, 48, 35, f, y
4208 esol, 17, 52, 39, f, x
4209 esol, 18, 52, 39, m, y
4210 esol, 19, 58, 45, f, z
4211 esol, 20, 58, 45, m, z
4212 esol, 21, 71, 56, f, x
4213 esol, 22, 86, 72, f, x
4214 esol, 23, 107, 93, m, x
4215 esol, 24, 114, 102, f, x
4216 esol, 25, 114, 102, f, z
4217 esol, 26, 117, 103, f, x
4218 esol, 27, 123, 112, m, y

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4219 esol, 28, 125, 101, f, x
4220 esol, 29, 125, 101, m, y
4221 esol, 30, 139, 65, f, x
4222 extrem,2,30
4223 save
4224 finish
4225
4226 /solu
4227 expass,on
4228 numexp,100,0.2,0.3
4229 outpr,,none
4230 solve
4231 save
4232 finish
4233
4234 /post26
4235 numvar,30
4236 esol, 2, 1, 1, f, x
4237 esol, 3, 1, 1, f, y
4238 esol, 4, 1, 1, m, x
4239 esol, 5, 1, 1, m, y
4240 esol, 6, 8, 6, f, x
4241 esol, 7, 8, 6, m, z
4242 esol, 8, 12, 10, f, x
4243 esol, 9, 12, 10, f, z
4244 esol, 10, 12, 10, m, x
4245 esol, 11, 12, 10, m, z
4246 esol, 12, 22, 15, f, z
4247 esol, 13, 22, 15, m, z
4248 esol, 14, 32, 23, m, x
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4251 esol, 17, 52, 39, f, x
4252 esol, 18, 52, 39, m, y
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4254 esol, 20, 58, 45, m, z
4255 esol, 21, 71, 56, f, x
4256 esol, 22, 86, 72, f, x
4257 esol, 23, 107, 93, m, x
4258 esol, 24, 114, 102, f, x
4259 esol, 25, 114, 102, f, z
4260 esol, 26, 117, 103, f, x
4261 esol, 27, 123, 112, m, y
4262 esol, 28, 125, 101, f, x
4263 esol, 29, 125, 101, m, y
4264 esol, 30, 139, 65, f, x
4265 extrem,2,30
4266 save
4267 finish
4268
4269 /solu
4270 expass,on
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4273 solve
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4275 finish
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4277 /post26
4278 numvar,30
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4283 esol, 6, 8, 6, f, x
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4286 esol, 9, 12, 10, f, z
4287 esol, 10, 12, 10, m, x
4288 esol, 11, 12, 10, m, z
4289 esol, 12, 22, 15, f, z
4290 esol, 13, 22, 15, m, z
4291 esol, 14, 32, 23, m, x
4292 esol, 15, 32, 23, m, z
4293 esol, 16, 48, 35, f, y
4294 esol, 17, 52, 39, f, x
4295 esol, 18, 52, 39, m, y
4296 esol, 19, 58, 45, f, z
4297 esol, 20, 58, 45, m, z
4298 esol, 21, 71, 56, f, x
4299 esol, 22, 86, 72, f, x
4300 esol, 23, 107, 93, m, x
4301 esol, 24, 114, 102, f, x
4302 esol, 25, 114, 102, f, z
4303 esol, 26, 117, 103, f, x
4304 esol, 27, 123, 112, m, y
4305 esol, 28, 125, 101, f, x
4306 esol, 29, 125, 101, m, y
4307 esol, 30, 139, 65, f, x
4308 extrem,2,30
4309 save

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4310 finish
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4312 /solu
4313 expass,on
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4315 outpr,,none
4316 solve
4317 save
4318 finish
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4320 /post26
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4323 esol , 3 , 1 , 1 , f , y
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4327 esol , 7 , 8 , 6 , m , z
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4336 esol , 16 , 48 , 35 , f , y
4337 esol , 17 , 52 , 39 , f , x
4338 esol , 18 , 52 , 39 , m , y
4339 esol , 19 , 58 , 45 , f , z
4340 esol , 20 , 58 , 45 , m , z
4341 esol , 21 , 71 , 56 , f , x
4342 esol , 22 , 86 , 72 , f , x
4343 esol , 23 , 107 , 93 , m , x
4344 esol , 24 , 114 , 102 , f , x
4345 esol , 25 , 114 , 102 , f , z
4346 esol , 26 , 117 , 103 , f , x
4347 esol , 27 , 123 , 112 , m , y
4348 esol , 28 , 125 , 101 , f , x
4349 esol , 29 , 125 , 101 , m , y
4350 esol , 30 , 139 , 65 , f , x
4351 extrem,2,30
4352 save
4353 finish
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4355 /solu
4356 expass,on
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4359 solve
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4363 /post26
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4366 esol , 3 , 1 , 1 , f , y
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4368 esol , 5 , 1 , 1 , m , y
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4370 esol , 7 , 8 , 6 , m , z
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4372 esol , 9 , 12 , 10 , f , z
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4383 esol , 20 , 58 , 45 , m , z
4384 esol , 21 , 71 , 56 , f , x
4385 esol , 22 , 86 , 72 , f , x
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4388 esol , 25 , 114 , 102 , f , z
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4393 esol , 30 , 139 , 65 , f , x
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4399 expass,on
4400 numexp,100,0.6,0.7

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4404 finish
4405
4406 /post26
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4472 esol , 23 , 107 , 93 , m , x
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4476 esol , 27 , 123 , 112 , m , y
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4478 esol , 29 , 125 , 101 , m , y
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4488 solve
4489 save
4490 finish
4491

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4524 save
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4531 solve
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4533 finish
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4535 /post26
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4563 esol , 28 , 125 , 101 , f , x
4564 esol , 29 , 125 , 101 , m , y
4565 esol , 30 , 139 , 65 , f , x
4566 extrem,2,30
4567 save
4568 finish

```

CURRENT JOBNAME REDEFINED AS pb2ecx

BRITISH FEET UNITS SPECIFIED
LENGTH = FEET (FT)
MASS = SLUGS
TIME = SECONDS (SEC)
TEMPERATURE = FAHRENHEIT
CURRENT = AMPS

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUN4SPARC 21:50:30 OCT 09, 1995 CP= 5.760
FOR SUPPORT CALL PHONE FAX

***ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY**

***** ANSYS ANALYSIS DEFINITION (PREP7) *****

```

PARAMETER G = 32.20000
PARAMETER A = 0.1440000
PARAMETER B = 1.728000
PARAMETER C = 0.1938724E-02
PARAMETER D = 0.1200000E-01
PARAMETER R1 = 0.2395833
PARAMETER R3 = 0.7000000E-01
PARAMETER R5 = 0.1583333
PARAMETER T1 = 0.3125000E-01
PARAMETER T3 = 0.1566667E-01
PARAMETER T5 = 0.2341667E-01
PARAMETER RR11 = 1.667000
PARAMETER RR1 = 0.3125000
PARAMETER RR12 = 0.5000000
PARAMETER RR13 = 0.3130000
PARAMETER RR3 = 0.1250000
PARAMETER RR5 = 0.1870000

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TITLE=
Time-history analysis of coupled system (presurizer spray line)

```

MATERIAL 1 EX = 4075200.
MATERIAL 1 NUXY = 0.3000000
MATERIAL 1 DENS = 0.2183911E-01
MATERIAL 2 EX = 4075200.
MATERIAL 2 NUXY = 0.3000000
MATERIAL 2 DENS = 0.2354123E-01
MATERIAL 3 EX = 4075200.
MATERIAL 3 NUXY = 0.3000000
MATERIAL 3 DENS = 0.4983217E-01
MATERIAL 4 EX = 4075200.
MATERIAL 4 NUXY = 0.3000000
MATERIAL 4 DENS = 0.3140205
MATERIAL 5 EX = 4075200.
MATERIAL 5 NUXY = 0.3000000
MATERIAL 5 DENS = 0.2679976E-01
MATERIAL 6 EX = 4075200.
MATERIAL 6 NUXY = 0.3000000
MATERIAL 6 DENS = 0.1386141

```

ELEMENT TYPE 1 IS PIPE16 ELASTIC STRAIGHT PIPE
KEYOPT(1-12)= 0 0 0 0 0 1 0 0 0 0 0 0

CURRENT NODAL DOF SET IS UX UY UZ ROTX ROTY ROTZ
THREE-DIMENSIONAL MODEL

ELEMENT TYPE 2 IS PIPE18 ELASTIC CURVED PIPE (ELBOW)
KEYOPT(1-12)= 0 0 0 0 0 2 0 0 0 0 0 0

CURRENT NODAL DOF SET IS UX UY UZ ROTX ROTY ROTZ

THREE-DIMENSIONAL MODEL

ELEMENT TYPE 3 IS COMBIN14 SPRING-DAMPER
KEYOPT(1-12)= 0 1 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS UX UY UZ ROTX ROTY ROTZ
THREE-DIMENSIONAL MODEL

ELEMENT TYPE 4 IS COMBIN14 SPRING-DAMPER
KEYOPT(1-12)= 0 2 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS UX UY UZ ROTX ROTY ROTZ
THREE-DIMENSIONAL MODEL

ELEMENT TYPE 5 IS COMBIN14 SPRING-DAMPER
KEYOPT(1-12)= 0 3 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS UX UY UZ ROTX ROTY ROTZ
THREE-DIMENSIONAL MODEL

ELEMENT TYPE 6 IS COMBIN14 SPRING-DAMPER
KEYOPT(1-12)= 0 4 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS UX UY UZ ROTX ROTY ROTZ
THREE-DIMENSIONAL MODEL

ELEMENT TYPE 7 IS COMBIN14 SPRING-DAMPER
KEYOPT(1-12)= 0 5 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS UX UY UZ ROTX ROTY ROTZ
THREE-DIMENSIONAL MODEL

ELEMENT TYPE 8 IS COMBIN14 SPRING-DAMPER
KEYOPT(1-12)= 0 6 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS UX UY UZ ROTX ROTY ROTZ
THREE-DIMENSIONAL MODEL

ELEMENT TYPE 10 IS MASS21 STRUCTURAL MASS
KEYOPT(1-12)= 0 0 2 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS UX UY UZ ROTX ROTY ROTZ
THREE-DIMENSIONAL MODEL

REAL CONSTANT SET 11 ITEMS 1 TO 6
0.23958 0.31250E-01 0. 0. 0. 0.19387E-02

REAL CONSTANT SET 211 ITEMS 1 TO 6
0.23958 0.31250E-01 1.6670 0. 0. 0.

REAL CONSTANT SET 211 ITEMS 7 TO 12
0.19387E-02 0. 0. 0. 0. 0.

REAL CONSTANT SET 21 ITEMS 1 TO 6
0.23958 0.31250E-01 0.31250 0. 0. 0.

REAL CONSTANT SET 21 ITEMS 7 TO 12
0.19387E-02 0. 0. 0. 0. 0.

REAL CONSTANT SET 212 ITEMS 1 TO 6
0.23958 0.31250E-01 0.50000 0. 0. 0.

REAL CONSTANT SET 212 ITEMS 7 TO 12
0.19387E-02 0. 0. 0. 0. 0.

REAL CONSTANT SET 213 ITEMS 1 TO 6
0.23958 0.31250E-01 0.31300 0. 0. 0.

REAL CONSTANT SET 213 ITEMS 7 TO 12
0.19387E-02 0. 0. 0. 0. 0.

REAL CONSTANT SET 13 ITEMS 1 TO 6
0.70000E-01 0.15667E-01 0. 0. 0. 0.19387E-02

REAL CONSTANT SET 23 ITEMS 1 TO 6
0.70000E-01 0.15667E-01 0.12500 0. 0. 0.

REAL CONSTANT SET 23 ITEMS 7 TO 12
0.19387E-02 0. 0. 0. 0. 0.

REAL CONSTANT SET 15 ITEMS 1 TO 6
0.15833 0.23417E-01 0. 0. 0. 0.19387E-02

REAL CONSTANT SET 25 ITEMS 1 TO 6
0.15833 0.23417E-01 0.18700 0. 0. 0.

REAL CONSTANT SET 25 ITEMS 7 TO 12
0.19387E-02 0. 0. 0. 0. 0.

REAL CONSTANT SET 51 ITEMS 1 TO 6
924.00 0. 0. 0. 0. 0.

REAL CONSTANT SET 52 ITEMS 1 TO 6
0.67200 0. 0. 0. 0. 0.

REAL CONSTANT SET 53 ITEMS 1 TO 6
2544.0 0. 0. 0. 0. 0.

REAL CONSTANT SET 54 ITEMS 1 TO 6
1.5120 0. 0. 0. 0. 0.

REAL CONSTANT SET 55 ITEMS 1 TO 6
0.42000 0. 0. 0. 0. 0.

REAL CONSTANT SET 56 ITEMS 1 TO 6
4.8000 0. 0. 0. 0. 0.

REAL CONSTANT SET 57 ITEMS 1 TO 6
2.6880 0. 0. 0. 0. 0.

REAL CONSTANT SET 58 ITEMS 1 TO 6
0.12000E+10 0. 0. 0. 0. 0.

REAL CONSTANT SET 59 ITEMS 1 TO 6
0.83300E+09 0. 0. 0. 0. 0.

REAL CONSTANT SET 31 ITEMS 1 TO 6
0.77640E-03 0. 0. 0. 0. 0.

REAL CONSTANT SET 32 ITEMS 1 TO 6
0.12422E-03 0. 0. 0. 0. 0.

REAL CONSTANT SET 33 ITEMS 1 TO 6
0.13354E-02 0. 0. 0. 0. 0.

REAL CONSTANT SET 34 ITEMS 1 TO 6
0.12422E-02 0. 0. 0. 0. 0.

REAL CONSTANT SET 35 ITEMS 1 TO 6
0.23292E-02 0. 0. 0. 0. 0.

REAL CONSTANT SET 36 ITEMS 1 TO 6
0.15528E-03 0. 0. 0. 0. 0.

REAL CONSTANT SET 37 ITEMS 1 TO 6
0.18634E-03 0. 0. 0. 0. 0.

REAL CONSTANT SET 38 ITEMS 1 TO 6
0.32609E-02 0. 0. 0. 0. 0.

REAL CONSTANT SET 39 ITEMS 1 TO 6
0.31056E-03 0. 0. 0. 0. 0.

REAL CONSTANT SET 40 ITEMS 1 TO 6
0.37267E-03 0. 0. 0. 0. 0.

REAL CONSTANT SET 41 ITEMS 1 TO 6
0.97826E-03 0. 0. 0. 0. 0.

REAL CONSTANT SET 42 ITEMS 1 TO 6
0.71429E-02 0. 0. 0. 0. 0.

PARAMETER F = 0.6944444E-02

PARAMETER I = 0.4822531E-04

ELEMENT TYPE 71 IS BEAM4 3-D ELASTIC BEAM
KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS UX UY UZ ROTX ROTY ROTZ
THREE-DIMENSIONAL MODEL

MATERIAL 71 EX = 648000.0

MATERIAL 71 NUXY = 0.3000000

MATERIAL 71 DENS = 0.

REAL CONSTANT SET 71 ITEMS 1 TO 6
1090.3 0.56906E+06 0.49672E+06 0. 0. 0.

REAL CONSTANT SET 71 ITEMS 7 TO 12
0. 0. 1.7100 1.6700 0. 0.

REAL CONSTANT SET 72 ITEMS 1 TO 6
1687.5 0.68962E+06 0.53048E+06 0. 0. 0.

REAL CONSTANT SET 72 ITEMS 7 TO 12
0. 0. 1.2600 1.2300 0. 0.

REAL CONSTANT SET 73 ITEMS 1 TO 6
1125.0 0.60282E+06 0.77160E+06 0. 0. 0.

```

REAL CONSTANT SET      73 ITEMS 7 TO 12
0. 0. 1.5700 2.3300 0. 0.

REAL CONSTANT SET      74 ITEMS 1 TO 6
916.67 0.55459E+06 0.71373E+06 0. 0. 0.

REAL CONSTANT SET      74 ITEMS 7 TO 12
0. 0.12731E+07 1.5900 2.2600 0. 0.

REAL CONSTANT SET      75 ITEMS 1 TO 6
643.47 0.27276E+06 0.10373E+06 0. 0. 0.

REAL CONSTANT SET      75 ITEMS 7 TO 12
0. 0. 1.4200 2.5700 0. 0.

REAL CONSTANT SET      76 ITEMS 1 TO 6
685.49 0.35552E+06 0.12553E+06 0. 0. 0.

REAL CONSTANT SET      76 ITEMS 7 TO 12
0. 0. 1.5100 2.8800 0. 0.

ELEMENT TYPE 72 IS MASS21 STRUCTURAL MASS
KEYOPT(1-12)= 0 0 2 0 0 0 0 0 0 0 0 0

CURRENT NODAL DOF SET IS UX UY UZ ROTX ROTY ROTZ
THREE-DIMENSIONAL MODEL

REAL CONSTANT SET      77 ITEMS 1 TO 6
138.94 0. 0. 0. 0. 0.

REAL CONSTANT SET      78 ITEMS 1 TO 6
137.54 0. 0. 0. 0. 0.

REAL CONSTANT SET      79 ITEMS 1 TO 6
82.321 0. 0. 0. 0. 0.

REAL CONSTANT SET      80 ITEMS 1 TO 6
99.604 0. 0. 0. 0. 0.

REAL CONSTANT SET      81 ITEMS 1 TO 6
80.439 0. 0. 0. 0. 0.

NODE      1 KCS= 0 X,Y,Z= 0. 574.00 0.
NODE      2 KCS= 0 X,Y,Z= 6.39600 574.00 -0.39600
NODE      3 KCS= 0 X,Y,Z= 1.5740 574.00 -0.88400
NODE      4 KCS= 0 X,Y,Z= 3.7900 574.00 -0.88400
NODE      5 KCS= 0 X,Y,Z= 4.9050 574.00 -0.88400
NODE     9001 KCS= 0 X,Y,Z= 5.0610 574.04 -0.88400
NODE     9002 KCS= 0 X,Y,Z= 5.1750 574.16 -0.88400
NODE      6 KCS= 0 X,Y,Z= 5.2170 574.31 -0.88400
NODE      7 KCS= 0 X,Y,Z= 5.2170 574.50 -0.88400
NODE     9003 KCS= 0 X,Y,Z= 5.2170 577.57 -0.88400
NODE     9004 KCS= 0 X,Y,Z= 5.2170 580.63 -0.88400
NODE      9 KCS= 0 X,Y,Z= 5.2170 583.70 -0.88400
NODE     10 KCS= 0 X,Y,Z= 5.2170 584.23 -0.88400
NODE     9005 KCS= 0 X,Y,Z= 5.2170 586.83 -0.88400
NODE     9006 KCS= 0 X,Y,Z= 5.2170 589.44 -0.88400
NODE     11 KCS= 0 X,Y,Z= 5.2170 592.04 -0.88400
NODE     12 KCS= 0 X,Y,Z= 5.2170 592.94 -0.88400
NODE     9007 KCS= 0 X,Y,Z= 5.2590 593.09 -0.88400
NODE     9008 KCS= 0 X,Y,Z= 5.3730 593.21 -0.88400
NODE     13 KCS= 0 X,Y,Z= 5.5300 593.25 -0.88400
NODE     14 KCS= 0 X,Y,Z= 5.7590 593.25 -0.88400
NODE     15 KCS= 0 X,Y,Z= 6.2590 593.25 -0.88400
NODE     16 KCS= 0 X,Y,Z= 7.4220 593.25 -0.88400
NODE     17 KCS= 0 X,Y,Z= 7.6430 593.25 -0.79200

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NODE      18 KCS= 0 X,Y,Z= 8.0510 593.25 -0.38400
NODE      19 KCS= 0 X,Y,Z= 8.6290 593.25 0.19400
NODE      20 KCS= 0 X,Y,Z= 10.158 593.25 1.7230
NODE      21 KCS= 0 X,Y,Z= 10.379 593.56 1.9440
NODE     9009 KCS= 0 X,Y,Z= 10.379 596.90 1.9440
NODE     9010 KCS= 0 X,Y,Z= 10.379 600.24 1.9440
NODE      22 KCS= 0 X,Y,Z= 10.379 603.58 1.9440
NODE      23 KCS= 0 X,Y,Z= 10.379 604.29 1.9440
NODE      24 KCS= 0 X,Y,Z= 10.379 605.65 1.9440
NODE     9011 KCS= 0 X,Y,Z= 10.379 608.44 1.9440
NODE     9012 KCS= 0 X,Y,Z= 10.379 611.22 1.9440
NODE      25 KCS= 0 X,Y,Z= 10.379 614.00 1.9440
NODE      26 KCS= 0 X,Y,Z= 10.379 614.79 1.9440
NODE     9013 KCS= 0 X,Y,Z= 10.379 617.74 1.9440
NODE     9014 KCS= 0 X,Y,Z= 10.379 620.69 1.9440
NODE      27 KCS= 0 X,Y,Z= 10.379 623.64 1.9440
NODE      28 KCS= 0 X,Y,Z= 10.379 624.75 1.9440
NODE      29 KCS= 0 X,Y,Z= 10.379 626.41 1.9440
NODE     9015 KCS= 0 X,Y,Z= 10.379 629.53 1.9440
NODE     9016 KCS= 0 X,Y,Z= 10.379 632.64 1.9440
NODE      30 KCS= 0 X,Y,Z= 10.379 635.75 1.9440
NODE      31 KCS= 0 X,Y,Z= 10.379 635.83 1.9440
NODE      32 KCS= 0 X,Y,Z= 10.379 636.05 2.0350
NODE      35 KCS= 0 X,Y,Z= 10.379 636.14 2.2560
NODE      37 KCS= 0 X,Y,Z= 10.379 636.14 2.9590
NODE     9017 KCS= 0 X,Y,Z= 10.379 636.14 5.6570
NODE     9018 KCS= 0 X,Y,Z= 10.379 636.14 8.3550
NODE      38 KCS= 0 X,Y,Z= 10.379 636.14 11.053
NODE      39 KCS= 0 X,Y,Z= 10.379 636.14 11.918
NODE     9019 KCS= 0 X,Y,Z= 10.379 636.14 14.756
NODE      40 KCS= 0 X,Y,Z= 10.379 636.14 17.595
NODE      41 KCS= 0 X,Y,Z= 10.379 636.14 20.048
NODE      43 KCS= 0 X,Y,Z= 10.692 636.14 20.360
NODE      44 KCS= 0 X,Y,Z= 10.812 636.14 20.360
NODE      45 KCS= 0 X,Y,Z= 11.129 636.14 20.360
NODE     9020 KCS= 0 X,Y,Z= 13.507 636.14 20.360
NODE      46 KCS= 0 X,Y,Z= 15.885 636.14 20.360
NODE      47 KCS= 0 X,Y,Z= 16.135 636.14 20.360
NODE      48 KCS= 0 X,Y,Z= 16.385 636.14 20.360
NODE      49 KCS= 0 X,Y,Z= 16.801 636.14 20.360
NODE      50 KCS= 0 X,Y,Z= 17.218 636.14 20.360
NODE      51 KCS= 0 X,Y,Z= 17.343 636.14 20.360
NODE      52 KCS= 0 X,Y,Z= 17.801 636.14 20.360
NODE      53 KCS= 0 X,Y,Z= 19.622 636.14 20.360
NODE      54 KCS= 0 X,Y,Z= 22.801 636.14 20.360
NODE      55 KCS= 0 X,Y,Z= 22.864 636.14 20.360

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pb2ecx.out							57/70
NODE	56	KCS=	0	X,Y,Z=	23.176	636.14	20.673
NODE	57	KCS=	0	X,Y,Z=	23.176	636.14	20.860
NODE	58	KCS=	0	X,Y,Z=	23.176	636.14	21.027
NODE	59	KCS=	0	X,Y,Z=	23.176	636.14	21.277
NODE	60	KCS=	0	X,Y,Z=	23.176	636.14	21.527
NODE	61	KCS=	0	X,Y,Z=	23.176	636.14	21.777
NODE	62	KCS=	0	X,Y,Z=	23.176	636.14	21.798
NODE	63	KCS=	0	X,Y,Z=	22.864	636.14	22.110
NODE	64	KCS=	0	X,Y,Z=	21.947	636.14	22.110
NODE	65	KCS=	0	X,Y,Z=	21.530	636.14	22.110
NODE	66	KCS=	0	X,Y,Z=	21.113	636.14	22.110
NODE	67	KCS=	0	X,Y,Z=	20.759	636.14	22.110
NODE	68	KCS=	0	X,Y,Z=	20.509	636.14	22.110
NODE	69	KCS=	0	X,Y,Z=	20.259	636.14	22.110
NODE	70	KCS=	0	X,Y,Z=	20.071	636.14	22.110
NODE	71	KCS=	0	X,Y,Z=	19.654	636.14	22.110
NODE	72	KCS=	0	X,Y,Z=	19.237	636.14	22.110
NODE	73	KCS=	0	X,Y,Z=	17.383	636.14	22.110
NODE	74	KCS=	0	X,Y,Z=	17.175	636.14	22.110
NODE	75	KCS=	0	X,Y,Z=	16.758	636.14	22.110
NODE	76	KCS=	0	X,Y,Z=	16.341	636.14	22.110
NODE	77	KCS=	0	X,Y,Z=	16.133	636.14	22.110
NODE	78	KCS=	0	X,Y,Z=	15.799	636.14	22.110
NODE	9021	KCS=	0	X,Y,Z=	13.413	636.14	22.110
NODE	79	KCS=	0	X,Y,Z=	11.028	636.14	22.110
NODE	80	KCS=	0	X,Y,Z=	10.121	636.14	22.110
NODE	81	KCS=	0	X,Y,Z=	9.8970	636.14	22.110
NODE	82	KCS=	0	X,Y,Z=	9.5850	636.14	21.798
NODE	9022	KCS=	0	X,Y,Z=	9.5850	636.14	19.663
NODE	83	KCS=	0	X,Y,Z=	9.5850	636.14	17.527
NODE	84	KCS=	0	X,Y,Z=	9.5850	636.14	17.333
NODE	85	KCS=	0	X,Y,Z=	9.5850	636.14	17.194
NODE	86	KCS=	0	X,Y,Z=	9.2310	635.79	16.694
NODE	87	KCS=	0	X,Y,Z=	8.7600	635.32	16.694
NODE	47	KCS=	0	X,Y,Z=	16.135	636.14	20.360
NODE	91	KCS=	0	X,Y,Z=	16.135	636.39	20.360
NODE	92	KCS=	0	X,Y,Z=	16.135	637.33	20.360
NODE	93	KCS=	0	X,Y,Z=	16.135	637.64	20.673
NODE	94	KCS=	0	X,Y,Z=	16.135	637.64	20.944
NODE	95	KCS=	0	X,Y,Z=	16.135	637.64	21.361
NODE	96	KCS=	0	X,Y,Z=	16.135	637.64	21.778
NODE	97	KCS=	0	X,Y,Z=	16.135	637.64	21.799
NODE	98	KCS=	0	X,Y,Z=	16.135	637.33	22.111
NODE	100	KCS=	0	X,Y,Z=	16.135	636.96	22.111
NODE	101	KCS=	0	X,Y,Z=	16.135	636.71	22.111

pb2ecx.out							58/70
NODE	102	KCS=	0	X,Y,Z=	16.135	636.39	22.111
NODE	77	KCS=	0	X,Y,Z=	16.135	636.14	22.111
NODE	59	KCS=	0	X,Y,Z=	23.176	636.14	21.277
NODE	103	KCS=	0	X,Y,Z=	22.866	636.14	21.277
NODE	104	KCS=	0	X,Y,Z=	22.092	636.14	21.277
NODE	105	KCS=	0	X,Y,Z=	21.842	636.14	21.277
NODE	106	KCS=	0	X,Y,Z=	21.592	636.14	21.277
NODE	107	KCS=	0	X,Y,Z=	20.634	636.14	21.277
NODE	109	KCS=	0	X,Y,Z=	20.509	636.14	21.402
NODE	111	KCS=	0	X,Y,Z=	20.509	636.14	21.683
NODE	112	KCS=	0	X,Y,Z=	20.509	636.14	21.301
NODE	68	KCS=	0	X,Y,Z=	20.509	636.14	22.111
NODE	101	KCS=	0	X,Y,Z=	16.135	636.71	22.111
NODE	113	KCS=	0	X,Y,Z=	16.135	636.71	22.611
NODE	114	KCS=	0	X,Y,Z=	16.135	636.71	22.965
NODE	115	KCS=	0	X,Y,Z=	16.135	636.71	23.319
NODE	116	KCS=	0	X,Y,Z=	16.135	636.71	23.840
NODE	118	KCS=	0	X,Y,Z=	16.135	636.89	24.027
NODE	9023	KCS=	0	X,Y,Z=	16.135	639.27	24.027
NODE	120	KCS=	0	X,Y,Z=	16.135	641.65	24.027
NODE	122	KCS=	0	X,Y,Z=	16.135	641.84	24.214
NODE	124	KCS=	0	X,Y,Z=	16.135	641.84	24.567
NODE	125	KCS=	0	X,Y,Z=	16.135	641.84	25.411
NODE	127	KCS=	0	X,Y,Z=	16.135	641.65	25.598
NODE	129	KCS=	0	X,Y,Z=	16.135	639.51	25.598
NODE	9024	KCS=	0	X,Y,Z=	16.135	637.97	25.598
NODE	130	KCS=	0	X,Y,Z=	16.135	636.42	25.598
NODE	65	KCS=	0	X,Y,Z=	21.530	636.14	22.110
NODE	131	KCS=	0	X,Y,Z=	21.530	636.41	22.110
NODE	132	KCS=	0	X,Y,Z=	21.530	636.69	22.110
NODE	71	KCS=	0	X,Y,Z=	19.654	636.14	22.110
NODE	133	KCS=	0	X,Y,Z=	19.654	636.41	22.110
NODE	134	KCS=	0	X,Y,Z=	19.654	636.69	22.110
NODE	1001	KCS=	0	X,Y,Z=	0.	574.00	0.
NODE	1009	KCS=	0	X,Y,Z=	5.2170	583.70	-0.88400
NODE	1010	KCS=	0	X,Y,Z=	5.2170	584.23	-0.88400
NODE	1014	KCS=	0	X,Y,Z=	5.7590	593.25	-0.88400
NODE	1015	KCS=	0	X,Y,Z=	6.2590	593.25	-0.88400
NODE	1023	KCS=	0	X,Y,Z=	10.379	604.29	1.9440
NODE	1028	KCS=	0	X,Y,Z=	10.379	624.75	1.9440
NODE	1029	KCS=	0	X,Y,Z=	10.379	626.41	1.9440
NODE	1037	KCS=	0	X,Y,Z=	10.379	636.14	2.9590
NODE	1039	KCS=	0	X,Y,Z=	10.379	636.14	11.918
NODE	1044	KCS=	0	X,Y,Z=	10.812	636.14	20.360
NODE	1045	KCS=	0	X,Y,Z=	11.129	636.14	20.360
NODE	1052	KCS=	0	X,Y,Z=	17.801	636.14	20.360

NODE 1053 KCS= 0 X,Y,Z= 19.824 636.14 20.380
 NODE 1054 KCS= 0 X,Y,Z= 22.801 636.14 20.380
 NODE 1057 KCS= 0 X,Y,Z= 23.176 636.14 20.860
 NODE 1061 KCS= 0 X,Y,Z= 23.176 636.14 21.777
 NODE 1073 KCS= 0 X,Y,Z= 17.383 636.14 22.110
 NODE 1078 KCS= 0 X,Y,Z= 15.799 636.14 22.110
 NODE 1079 KCS= 0 X,Y,Z= 11.028 636.14 22.110
 NODE 1087 KCS= 0 X,Y,Z= 8.7600 635.32 16.694
 NODE 1124 KCS= 0 X,Y,Z= 16.135 641.84 24.567
 NODE 1129 KCS= 0 X,Y,Z= 16.135 639.51 25.598
 NODE 1130 KCS= 0 X,Y,Z= 16.135 636.42 25.598
 NODE 1131 KCS= 0 X,Y,Z= 21.530 636.41 22.110
 NODE 1133 KCS= 0 X,Y,Z= 19.654 636.41 22.110
 ELEMENT TYPE SET TO 1
 REAL CONSTANT NUMBER= 11
 MATERIAL NUMBER SET TO 1
 ELEMENT 1 1 2 0
 ELEMENT TYPE SP= 10 2
 REAL CONSTANT NUMBER= 211
 ELEMENT 2 2 3 1
 ELEMENT TYPE SET TO 1
 REAL CONSTANT NUMBER= 11
 ELEMENT 3 3 4 0
 ELEMENT 4 4 5 0
 ELEMENT TYPE SET TO 2
 REAL CONSTANT NUMBER= 21
 ELEMENT 5 5 9001 4
 ELEMENT 6 9001 9002 4
 ELEMENT 7 9002 6 4
 ELEMENT TYPE SET TO 1
 REAL CONSTANT NUMBER= 11
 ELEMENT 8 6 7 0
 ELEMENT 9 7 9003 0
 ELEMENT 10 9003 9004 0
 ELEMENT 11 9004 9 0
 ELEMENT 12 9 10 0
 ELEMENT 13 10 9005 0
 ELEMENT 14 9005 9006 0
 ELEMENT 15 9006 11 0
 ELEMENT 16 11 12 0
 ELEMENT TYPE SET TO 2
 REAL CONSTANT NUMBER= 21
 ELEMENT 17 12 9007 11
 ELEMENT 18 9007 9008 11
 ELEMENT 19 9008 13 11

ELEMENT TYPE SET TO 1
 REAL CONSTANT NUMBER= 11
 ELEMENT 20 13 14 0
 ELEMENT 21 14 15 0
 ELEMENT 22 15 16 0
 ELEMENT TYPE SET TO 2
 REAL CONSTANT NUMBER= 21
 ELEMENT 23 16 17 15
 ELEMENT TYPE SET TO 1
 REAL CONSTANT NUMBER= 11
 ELEMENT 24 17 18 0
 ELEMENT 25 18 19 0
 ELEMENT 26 19 20 0
 ELEMENT TYPE SET TO 2
 REAL CONSTANT NUMBER= 21
 ELEMENT 27 20 21 19
 ELEMENT TYPE SET TO 1
 REAL CONSTANT NUMBER= 11
 ELEMENT 28 21 9009 0
 ELEMENT 29 9009 9010 0
 ELEMENT 30 9010 22 0
 ELEMENT 31 22 23 0
 ELEMENT 32 23 24 0
 ELEMENT 33 24 9011 0
 ELEMENT 34 9011 9012 0
 ELEMENT 35 9012 25 0
 ELEMENT 36 25 26 0
 ELEMENT 37 26 9013 0
 ELEMENT 38 9013 9014 0
 ELEMENT 39 9014 27 0
 ELEMENT 40 27 28 0
 ELEMENT 41 28 29 0
 ELEMENT 42 29 9015 0
 ELEMENT 43 9015 9016 0
 ELEMENT 44 9016 30 0
 ELEMENT 45 30 31 0
 ELEMENT TYPE SET TO 2
 REAL CONSTANT NUMBER= 21
 ELEMENT 46 31 32 30
 ELEMENT 47 32 35 30
 ELEMENT TYPE SET TO 1
 REAL CONSTANT NUMBER= 11
 ELEMENT 48 35 37 0
 ELEMENT 49 37 9017 0
 ELEMENT 50 9017 9018 0
 ELEMENT 51 9018 38 0

ELEMENT	52	38	39	0
ELEMENT	53	39	9019	0
ELEMENT	54	9019	40	0
ELEMENT	55	40	41	0
ELEMENT TYPE SET TO			2	
REAL CONSTANT NUMBER=			21	
ELEMENT	56	41	43	40
ELEMENT TYPE SET TO			1	
REAL CONSTANT NUMBER=			11	
ELEMENT	57	43	44	0
ELEMENT	58	44	45	0
ELEMENT	59	45	9020	0
ELEMENT	60	9020	46	0
ELEMENT	61	46	47	0
ELEMENT	62	47	48	0
ELEMENT TYPE SET TO			1	
REAL CONSTANT NUMBER=			11	
MATERIAL NUMBER SET TO			2	
ELEMENT	63	48	49	0
ELEMENT	64	49	50	0
ELEMENT TYPE SET TO			1	
REAL CONSTANT NUMBER=			11	
MATERIAL NUMBER SET TO			1	
ELEMENT	65	50	51	0
ELEMENT	66	51	52	0
ELEMENT	67	52	53	0
ELEMENT	68	53	54	0
ELEMENT	69	54	55	0
ELEMENT TYPE SET TO			2	
REAL CONSTANT NUMBER=			21	
ELEMENT	70	55	56	54
ELEMENT TYPE SET TO			1	
REAL CONSTANT NUMBER=			11	
ELEMENT	71	56	57	0
ELEMENT	72	57	58	0
ELEMENT	73	58	59	0
ELEMENT	74	59	60	0
ELEMENT	75	60	61	0
ELEMENT	76	61	62	0
ELEMENT TYPE SET TO			2	
REAL CONSTANT NUMBER=			21	
ELEMENT	77	62	63	61
ELEMENT TYPE SET TO			1	
REAL CONSTANT NUMBER=			11	
ELEMENT	78	63	64	0

ELEMENT TYPE SET TO			1	
REAL CONSTANT NUMBER=			11	
MATERIAL NUMBER SET TO			2	
ELEMENT	79	64	65	0
ELEMENT	80	65	66	0
ELEMENT TYPE SET TO			1	
REAL CONSTANT NUMBER=			11	
MATERIAL NUMBER SET TO			1	
ELEMENT	81	66	67	0
ELEMENT	82	67	68	0
ELEMENT	83	68	69	0
ELEMENT	84	69	70	0
ELEMENT TYPE SET TO			1	
REAL CONSTANT NUMBER=			11	
MATERIAL NUMBER SET TO			2	
ELEMENT	85	70	71	0
ELEMENT	86	71	72	0
ELEMENT TYPE SET TO			1	
REAL CONSTANT NUMBER=			11	
MATERIAL NUMBER SET TO			1	
ELEMENT	87	72	73	0
ELEMENT	88	73	74	0
MATERIAL NUMBER SET TO			2	
ELEMENT	89	74	75	0
ELEMENT	90	75	76	0
MATERIAL NUMBER SET TO			1	
ELEMENT	91	76	77	0
ELEMENT	92	77	78	0
ELEMENT	93	78	9021	0
ELEMENT	94	9021	79	0
ELEMENT	95	79	80	0
ELEMENT	96	80	81	0
ELEMENT TYPE SET TO			2	
REAL CONSTANT NUMBER=			21	
ELEMENT	97	81	82	80
ELEMENT TYPE SET TO			1	
REAL CONSTANT NUMBER=			11	
ELEMENT	98	82	9022	0
ELEMENT	99	9022	83	0
ELEMENT	100	83	84	0
ELEMENT	101	84	85	0
ELEMENT TYPE SET TO			2	
REAL CONSTANT NUMBER=			212	
ELEMENT	102	85	86	84
ELEMENT TYPE SET TO			1	
REAL CONSTANT NUMBER=			11	

ELEMENT	103	86	87	0
ELEMENT	104	47	91	0
ELEMENT	105	91	92	0
ELEMENT TYPE SET TO	2			
REAL CONSTANT NUMBER=	213			
ELEMENT	106	92	93	91
ELEMENT TYPE SET TO	1			
REAL CONSTANT NUMBER=	11			
ELEMENT	107	93	94	0
MATERIAL NUMBER SET TO	2			
ELEMENT	108	94	95	0
ELEMENT	109	95	96	0
MATERIAL NUMBER SET TO	1			
ELEMENT	110	96	97	0
ELEMENT TYPE SET TO	2			
REAL CONSTANT NUMBER=	21			
ELEMENT	111	97	98	96
ELEMENT TYPE SET TO	1			
REAL CONSTANT NUMBER=	11			
ELEMENT	112	98	100	0
ELEMENT	113	100	101	0
ELEMENT	114	101	102	0
ELEMENT	115	102	77	0
ELEMENT TYPE SET TO	1			
MATERIAL NUMBER SET TO	3			
REAL CONSTANT NUMBER=	13			
ELEMENT	116	59	103	0
ELEMENT	117	103	104	0
MATERIAL NUMBER SET TO	4			
ELEMENT	118	104	105	0
ELEMENT	119	105	106	0
MATERIAL NUMBER SET TO	3			
ELEMENT	120	106	107	0
ELEMENT TYPE SET TO	2			
MATERIAL NUMBER SET TO	3			
REAL CONSTANT NUMBER=	23			
ELEMENT	121	107	109	106
ELEMENT TYPE SET TO	1			
MATERIAL NUMBER SET TO	3			
REAL CONSTANT NUMBER=	13			
ELEMENT	122	109	111	0
ELEMENT	123	111	112	0
ELEMENT TYPE SET TO	1			
MATERIAL NUMBER SET TO	5			
REAL CONSTANT NUMBER=	15			

ELEMENT	124	112	68	0
ELEMENT	125	101	113	0
MATERIAL NUMBER SET TO	6			
ELEMENT	126	113	114	0
ELEMENT	127	114	115	0
MATERIAL NUMBER SET TO	5			
ELEMENT	128	115	116	0
ELEMENT TYPE SET TO	2			
REAL CONSTANT NUMBER=	25			
ELEMENT	129	116	118	115
ELEMENT TYPE SET TO	1			
MATERIAL NUMBER SET TO	5			
REAL CONSTANT NUMBER=	15			
ELEMENT	130	118	9023	0
ELEMENT	131	9023	120	0
ELEMENT TYPE SET TO	2			
REAL CONSTANT NUMBER=	25			
ELEMENT	132	120	122	9023
ELEMENT TYPE SET TO	1			
MATERIAL NUMBER SET TO	5			
REAL CONSTANT NUMBER=	15			
ELEMENT	133	122	124	0
ELEMENT	134	124	125	0
ELEMENT TYPE SET TO	2			
REAL CONSTANT NUMBER=	25			
ELEMENT	135	125	127	124
ELEMENT TYPE SET TO	1			
MATERIAL NUMBER SET TO	5			
REAL CONSTANT NUMBER=	15			
ELEMENT	136	127	129	0
ELEMENT	137	129	9024	0
ELEMENT	138	9024	130	0
MATERIAL NUMBER SET TO	1			
ELEMENT TYPE SET TO	1			
REAL CONSTANT NUMBER=	11			
ELEMENT	139	65	131	0
ELEMENT	140	131	132	0
ELEMENT	141	71	133	0
ELEMENT	142	133	134	0
REAL CONSTANT NUMBER=	58			
ELEMENT TYPE SET TO	3			
ELEMENT	143	1	1001	
ELEMENT TYPE SET TO	4			
ELEMENT	144	1	1001	
ELEMENT TYPE SET TO	5			
ELEMENT	145	1	1001	

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REAL CONSTANT NUMBER= 59
ELEMENT TYPE SET TO 6
ELEMENT 146 1 1001
ELEMENT TYPE SET TO 7
ELEMENT 147 1 1001
ELEMENT TYPE SET TO 8
ELEMENT 148 1 1001
REAL CONSTANT NUMBER= 51
ELEMENT TYPE SET TO 3
ELEMENT 149 9 1009
ELEMENT TYPE SET TO 5
ELEMENT 150 10 1010
ELEMENT TYPE SET TO 4
ELEMENT 151 15 1015
REAL CONSTANT NUMBER= 52
ELEMENT TYPE SET TO 4
ELEMENT 152 14 1014
REAL CONSTANT NUMBER= 51
ELEMENT TYPE SET TO 3
ELEMENT 153 23 1023
ELEMENT TYPE SET TO 5
ELEMENT 154 28 1028
REAL CONSTANT NUMBER= 53
ELEMENT TYPE SET TO 4
ELEMENT 155 37 1037
ELEMENT TYPE SET TO 3
ELEMENT 156 39 1039
REAL CONSTANT NUMBER= 51
ELEMENT TYPE SET TO 4
ELEMENT 157 44 1044
ELEMENT TYPE SET TO 5
ELEMENT 158 45 1045
REAL CONSTANT NUMBER= 54
ELEMENT TYPE SET TO 4
ELEMENT 159 53 1053
REAL CONSTANT NUMBER= 55
ELEMENT 160 79 1079
REAL CONSTANT NUMBER= 51
ELEMENT TYPE SET TO 3
ELEMENT 161 124 1124
ELEMENT TYPE SET TO 5
ELEMENT 162 129 1129
ELEMENT TYPE SET TO 4
ELEMENT 163 52 1052
ELEMENT TYPE SET TO 5

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ELEMENT 164 54 1054
ELEMENT TYPE SET TO 3
ELEMENT 165 57 1057
REAL CONSTANT NUMBER= 56
ELEMENT TYPE SET TO 4
ELEMENT 166 78 1078
ELEMENT TYPE SET TO 5
REAL CONSTANT NUMBER= 51
ELEMENT 167 73 1073
REAL CONSTANT NUMBER= 57
ELEMENT TYPE SET TO 4
ELEMENT 168 61 1061
REAL CONSTANT NUMBER= 51
ELEMENT TYPE SET TO 3
ELEMENT 169 131 1131
ELEMENT TYPE SET TO 5
ELEMENT 170 131 1131
ELEMENT TYPE SET TO 3
ELEMENT 171 133 1133
ELEMENT TYPE SET TO 5
ELEMENT 172 133 1133
REAL CONSTANT NUMBER= 58
ELEMENT TYPE SET TO 3
ELEMENT 173 87 1087
ELEMENT TYPE SET TO 4
ELEMENT 174 87 1087
ELEMENT TYPE SET TO 5
ELEMENT 175 87 1087
REAL CONSTANT NUMBER= 59
ELEMENT TYPE SET TO 6
ELEMENT 176 87 1087
ELEMENT TYPE SET TO 7
ELEMENT 177 87 1087
ELEMENT TYPE SET TO 8
ELEMENT 178 87 1087
REAL CONSTANT NUMBER= 58
ELEMENT TYPE SET TO 3
ELEMENT 179 130 1130
ELEMENT TYPE SET TO 4
ELEMENT 180 130 1130
ELEMENT TYPE SET TO 5
ELEMENT 181 130 1130
REAL CONSTANT NUMBER= 59
ELEMENT TYPE SET TO 6
ELEMENT 182 130 1130
ELEMENT TYPE SET TO 7

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ELEMENT 183 130 1130
 ELEMENT TYPE SET TO 8
 ELEMENT 184 130 1130
 ELEMENT TYPE SET TO 10
 REAL CONSTANT NUMBER= 31
 ELEMENT 185 9
 ELEMENT 186 10
 ELEMENT 187 15
 ELEMENT 188 23
 ELEMENT 189 28
 ELEMENT 190 44
 ELEMENT 191 45
 ELEMENT 192 52
 ELEMENT 193 54
 ELEMENT 194 57
 ELEMENT 195 73
 ELEMENT 196 114
 ELEMENT 197 124
 ELEMENT 198 129
 REAL CONSTANT NUMBER= 32
 ELEMENT 199 14
 ELEMENT 200 79
 REAL CONSTANT NUMBER= 33
 ELEMENT 201 37
 REAL CONSTANT NUMBER= 34
 ELEMENT 202 39
 REAL CONSTANT NUMBER= 35
 ELEMENT 203 49
 ELEMENT 204 75
 ELEMENT 205 95
 REAL CONSTANT NUMBER= 36
 ELEMENT 206 53
 REAL CONSTANT NUMBER= 37
 ELEMENT 207 61
 REAL CONSTANT NUMBER= 36
 ELEMENT 208 65
 ELEMENT 209 71
 REAL CONSTANT NUMBER= 39
 ELEMENT 210 78
 REAL CONSTANT NUMBER= 40
 ELEMENT 211 105
 REAL CONSTANT NUMBER= 41
 ELEMENT 212 131
 ELEMENT 213 133
 REAL CONSTANT NUMBER= 42

ELEMENT 214 132
 ELEMENT 215 134
 NODE 301 KCS= 0 X,Y,Z= 0. 565.00 0.
 NODE 302 KCS= 0 X,Y,Z= 0. 568.00 0.
 NODE 303 KCS= 0 X,Y,Z= 0. 571.00 0.
 NODE 304 KCS= 0 X,Y,Z= 0. 574.00 0.
 NODE 305 KCS= 0 X,Y,Z= 0. 577.83 0.
 NODE 306 KCS= 0 X,Y,Z= 0. 590.00 0.
 NODE 307 KCS= 0 X,Y,Z= 0. 595.50 0.
 NODE 308 KCS= 0 X,Y,Z= 0. 604.00 0.
 NODE 309 KCS= 0 X,Y,Z= 0. 609.50 0.
 NODE 310 KCS= 0 X,Y,Z= 0. 624.50 0.
 NODE 311 KCS= 0 X,Y,Z= 0. 629.58 0.
 NODE 312 KCS= 0 X,Y,Z= 0. 638.33 0.
 NODE 313 KCS= 0 X,Y,Z= 0. 647.00 0.
 ELEMENT TYPE SET TO 71
 MATERIAL NUMBER SET TO 71
 REAL CONSTANT NUMBER= 71
 ELEMENT 216 301 302 0
 ELEMENT 217 302 303 0
 ELEMENT 218 303 304 0
 REAL CONSTANT NUMBER= 72
 ELEMENT 219 304 305 0
 REAL CONSTANT NUMBER= 73
 ELEMENT 220 305 306 0
 REAL CONSTANT NUMBER= 74
 ELEMENT 221 306 307 0
 ELEMENT 222 307 308 0
 REAL CONSTANT NUMBER= 75
 ELEMENT 223 308 309 0
 ELEMENT 224 309 310 0
 REAL CONSTANT NUMBER= 76
 ELEMENT 225 310 311 0
 ELEMENT 226 311 312 0
 ELEMENT 227 312 313 0
 ELEMENT TYPE SET TO 72
 REAL CONSTANT NUMBER= 77
 ELEMENT 228 304
 REAL CONSTANT NUMBER= 78
 ELEMENT 229 306
 REAL CONSTANT NUMBER= 79
 ELEMENT 230 308
 REAL CONSTANT NUMBER= 80
 ELEMENT 231 310
 REAL CONSTANT NUMBER= 81
 ELEMENT 232 313

COUPLED SET= 1 DIRECTION= UX TOTAL NODES= 2
 NODES ADDED = 304 1001
 MAXIMUM COUPLED SET NUMBER= 1

COUPLED SET= 2 DIRECTION= UX TOTAL NODES= 2
 NODES ADDED = 309 1087 2
 MAXIMUM COUPLED SET NUMBER= 2

COUPLED SET= 3 DIRECTION= UX TOTAL NODES= 7
 NODES ADDED = 312 1017 1039 1044 1045 1053 1079
 MAXIMUM COUPLED SET NUMBER= 3 CP= 8.170 TIME= 21:50:35

*** WARNING ***
 Coupled set 3 already contains node 312.
 Node 312 will not be added to the set.

COUPLED SET= 3 DIRECTION= UX TOTAL NODES= 13
 NODES ADDED = 1124 1129 1052 1054 1057 1078
 MAXIMUM COUPLED SET NUMBER= 3

*** WARNING ***
 Coupled set 3 already contains node 312.
 Node 312 will not be added to the set.

COUPLED SET= 3 DIRECTION= UX TOTAL NODES= 16
 NODES ADDED = 1073 1061 1131 1133 1130
 MAXIMUM COUPLED SET NUMBER= 3

COUPLED SET= 4 DIRECTION= UX TOTAL NODES= 3
 NODES ADDED = 304 1009 1010
 MAXIMUM COUPLED SET NUMBER= 4

COUPLED SET= 5 DIRECTION= UX TOTAL NODES= 3
 NODES ADDED = 307 1015 1014
 MAXIMUM COUPLED SET NUMBER= 5

COUPLED SET= 6 DIRECTION= UX TOTAL NODES= 2
 NODES ADDED = 308 1023
 MAXIMUM COUPLED SET NUMBER= 6

COUPLED SET= 7 DIRECTION= UX TOTAL NODES= 2
 NODES ADDED = 310 1028
 MAXIMUM COUPLED SET NUMBER= 7

GENERATE FROM SET 1 COUPLED SETS IN DIRECTIONS UY UZ ROTX ROTY ROTZ

COUPLED SET= 8 DIRECTION= UY TOTAL NODES= 2
 COUPLED SET= 9 DIRECTION= UZ TOTAL NODES= 2
 COUPLED SET= 10 DIRECTION= ROTX TOTAL NODES= 2
 COUPLED SET= 11 DIRECTION= ROTY TOTAL NODES= 2
 COUPLED SET= 12 DIRECTION= ROTZ TOTAL NODES= 2
 MAXIMUM COUPLED SET NUMBER= 12

GENERATE FROM SET 2 COUPLED SETS IN DIRECTIONS UY UZ ROTX ROTY ROTZ

COUPLED SET= 13 DIRECTION= UY TOTAL NODES= 2
 COUPLED SET= 14 DIRECTION= UZ TOTAL NODES= 2
 COUPLED SET= 15 DIRECTION= ROTX TOTAL NODES= 2
 COUPLED SET= 16 DIRECTION= ROTY TOTAL NODES= 2
 COUPLED SET= 17 DIRECTION= ROTZ TOTAL NODES= 2
 MAXIMUM COUPLED SET NUMBER= 17

GENERATE FROM SET 3 COUPLED SETS IN DIRECTIONS UY UZ ROTX ROTY ROTZ

COUPLED SET= 18 DIRECTION= UY TOTAL NODES= 16
 COUPLED SET= 19 DIRECTION= UZ TOTAL NODES= 16
 COUPLED SET= 20 DIRECTION= ROTX TOTAL NODES= 16
 COUPLED SET= 21 DIRECTION= ROTY TOTAL NODES= 16
 COUPLED SET= 22 DIRECTION= ROTZ TOTAL NODES= 16
 MAXIMUM COUPLED SET NUMBER= 22

GENERATE FROM SET 4 COUPLED SETS IN DIRECTIONS UY UZ ROTX ROTY ROTZ

COUPLED SET= 23 DIRECTION= UY TOTAL NODES= 3

COUPLED SET= 24 DIRECTION= UZ TOTAL NODES= 3
 COUPLED SET= 25 DIRECTION= ROTX TOTAL NODES= 3
 COUPLED SET= 26 DIRECTION= ROTY TOTAL NODES= 3
 COUPLED SET= 27 DIRECTION= ROTZ TOTAL NODES= 3
 MAXIMUM COUPLED SET NUMBER= 27

GENERATE FROM SET 5 COUPLED SETS IN DIRECTIONS UY UZ ROTX ROTY ROTZ

COUPLED SET= 28 DIRECTION= UY TOTAL NODES= 3
 COUPLED SET= 29 DIRECTION= UZ TOTAL NODES= 3
 COUPLED SET= 30 DIRECTION= ROTX TOTAL NODES= 3
 COUPLED SET= 31 DIRECTION= ROTY TOTAL NODES= 3
 COUPLED SET= 32 DIRECTION= ROTZ TOTAL NODES= 3
 MAXIMUM COUPLED SET NUMBER= 32

GENERATE FROM SET 6 COUPLED SETS IN DIRECTIONS UY UZ ROTX ROTY ROTZ

COUPLED SET= 33 DIRECTION= UY TOTAL NODES= 2
 COUPLED SET= 34 DIRECTION= UZ TOTAL NODES= 2
 COUPLED SET= 35 DIRECTION= ROTX TOTAL NODES= 2
 COUPLED SET= 36 DIRECTION= ROTY TOTAL NODES= 2
 COUPLED SET= 37 DIRECTION= ROTZ TOTAL NODES= 2
 MAXIMUM COUPLED SET NUMBER= 37

GENERATE FROM SET 7 COUPLED SETS IN DIRECTIONS UY UZ ROTX ROTY ROTZ

COUPLED SET= 38 DIRECTION= UY TOTAL NODES= 2
 COUPLED SET= 39 DIRECTION= UZ TOTAL NODES= 2
 COUPLED SET= 40 DIRECTION= ROTX TOTAL NODES= 2
 COUPLED SET= 41 DIRECTION= ROTY TOTAL NODES= 2
 COUPLED SET= 42 DIRECTION= ROTZ TOTAL NODES= 2
 MAXIMUM COUPLED SET NUMBER= 42

SPECIFIED CONSTRAINT UX FOR SELECTED NODES 301 TO 301 BY 1
 REAL= 0 IMAG= 0
 ADDITIONAL DOFS= UY UZ ROTX ROTY ROTZ

USE LUMPED MASS MATRIX APPROXIMATION

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2eck.db
 FOR POSSIBLE RESUME FROM THIS POINT

***** ROUTINE COMPLETED ***** CP = 9.480

*** Time History analysis for earthquake record (E) Centro

/OUTPUT FILE= pb2eck0

ANSYS RUN COMPLETED

REV. 5.0 SUNASPARC

CP TIME (sec) = 19372.561 TIME = 05:11:57
 ELAPSED TIME (sec) = 26500.000 DATE = 10/10/95

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
 40416-2 VERSION=SUN4SPARC 02:11:56 OCT 10, 1995 CP= 14847.030
 FOR SUPPORT CALL PHONE FAX

Time-history analysis of coupled system (presurizer spray line)

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

***** TIME-HISTORY POSTPROCESSOR (POST26) *****

ALL POST26 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS

*** NOTE *** CP= 14847.110 TIME= 02:11:56
 Unable to open default results file pb2ecx.rst
 Use FILE command to open a results file.

DATA FILE CHANGED TO FILE= pb2ecx.rdsp

MAXIMUM NUMBER OF VARIABLES= 15

VARIABLE	IS AT NODE	ITEM	COMP	NAME
VARIABLE 2	IS AT NODE 12	ITEM= U	COMP= X	NAME= UX
VARIABLE 3	IS AT NODE 12	ITEM= U	COMP= Y	NAME= UY
VARIABLE 4	IS AT NODE 12	ITEM= U	COMP= Z	NAME= UZ
VARIABLE 5	IS AT NODE 17	ITEM= U	COMP= X	NAME= UX
VARIABLE 6	IS AT NODE 17	ITEM= U	COMP= Y	NAME= UY
VARIABLE 7	IS AT NODE 17	ITEM= U	COMP= Z	NAME= UZ
VARIABLE 8	IS AT NODE 21	ITEM= U	COMP= X	NAME= UX
VARIABLE 9	IS AT NODE 21	ITEM= U	COMP= Z	NAME= UZ
VARIABLE 10	IS AT NODE 9010	ITEM= U	COMP= Z	NAME= UZ
VARIABLE 11	IS AT NODE 24	ITEM= U	COMP= Z	NAME= UZ
VARIABLE 12	IS AT NODE 9013	ITEM= U	COMP= Z	NAME= UZ
VARIABLE 13	IS AT NODE 28	ITEM= U	COMP= X	NAME= UX
VARIABLE 14	IS AT NODE 35	ITEM= U	COMP= X	NAME= UX
VARIABLE 15	IS AT NODE 9017	ITEM= U	COMP= X	NAME= UX

STORAGE COMPLETE FOR 2787 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES

VARI TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	NSOL 12 UX	UX	-0.8100E-01	4.320	0.6937E-01	4.460
3	NSOL 12 UY	UY	-0.5166E-02	4.320	0.4031E-02	4.460
4	NSOL 12 UZ	UZ	-0.6096E-01	4.780	0.6723E-01	5.120
5	NSOL 17 UX	UX	-0.8386E-01	4.320	0.6975E-01	4.460
6	NSOL 17 UY	UY	-0.3759E-02	7.480	0.4405E-02	6.520
7	NSOL 17 UZ	UZ	-0.1042	4.780	0.1110	5.140
8	NSOL 21 UX	UX	-0.1138	4.300	0.6624E-01	4.000
9	NSOL 21 UZ	UZ	-0.1546	4.800	0.1634	5.160
10	NSOL 9010 UZ	UZ	-0.1583	4.800	0.1685	5.160
11	NSOL 24 UZ	UZ	-0.1435	4.800	0.1526	5.140
12	NSOL 9013 UZ	UZ	-0.4966E-01	4.800	0.5264E-01	5.120
13	NSOL 28 UX	UX	-0.2249	4.600	0.2492	4.240
14	NSOL 35 UX	UX	-0.2169	4.680	0.1876	4.260
15	NSOL 9017 UX	UX	-0.1232	4.680	0.1068	4.260

POST26 SUMMARY OF VARIABLE EXTREME VALUES

VARI TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	NSOL 12 UX	UX	-0.8100E-01	4.320	0.6937E-01	4.460
3	NSOL 12 UY	UY	-0.5166E-02	4.320	0.4031E-02	4.460
4	NSOL 12 UZ	UZ	-0.6096E-01	4.780	0.6723E-01	5.120
5	NSOL 17 UX	UX	-0.8386E-01	4.320	0.6975E-01	4.460
6	NSOL 17 UY	UY	-0.3759E-02	7.480	0.4405E-02	6.520
7	NSOL 17 UZ	UZ	-0.1042	4.780	0.1110	5.140
8	NSOL 21 UX	UX	-0.1138	4.300	0.6624E-01	4.000
9	NSOL 21 UZ	UZ	-0.1546	4.800	0.1634	5.160
10	NSOL 9010 UZ	UZ	-0.1583	4.800	0.1685	5.160
11	NSOL 24 UZ	UZ	-0.1435	4.800	0.1526	5.140
12	NSOL 9013 UZ	UZ	-0.4966E-01	4.800	0.5264E-01	5.120
13	NSOL 28 UX	UX	-0.2249	4.600	0.2492	4.240
14	NSOL 35 UX	UX	-0.2169	4.680	0.1876	4.260
15	NSOL 9017 UX	UX	-0.1232	4.680	0.1068	4.260

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2ecx.db
 FOR POSSIBLE RESUME FROM THIS POINT

***** ROUTINE COMPLETED ***** CP = 14854.020

***** ANSYS SOLUTION ROUTINE *****

PERFORM AN EXPANSION PASS

EXPAND 100 SOLUTIONS
 IN THE RANGE FROM 0. TO 0.10000
 CALCULATE ELEMENT RESULTS AS WELL AS THE NODAL DOF SOLUTION

PRINT BARI ITEMS WITH A FREQUENCY OF NONE
 FOR ALL APPLICABLE ENTITIES

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
 40416-2 VERSION=SUN4SPARC 02:12:16 OCT 10, 1995 CP= 14854.080
 FOR SUPPORT CALL PHONE FAX

Time-history analysis of coupled system (presurizer spray line)

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

SOLUTION OPTIONS

PROBLEM DIMENSIONALITY 3-D
 DEGREES OF FREEDOM UX UY UZ ROTX ROTY ROTZ
 ANALYSIS TYPE TRANSIENT
 SOLUTION METHOD REDUCED
 EXPANSION PASS ON

LOAD STEP OPTIONS

LOAD STEP NUMBER 1
 NUMBER OF SOLUTIONS TO BE EXPANDED 100
 RANGE 0. TO 0.10000
 ELEMENT RESULTS CALCULATION ON
 PRINT OUTPUT CONTROLS
 ITEM FREQUENCY COMPONENT
 BARI NONE
 DATABASE OUTPUT CONTROLS
 ITEM FREQUENCY COMPONENT
 NSOL LAST

*** ELEMENT RESULT CALCULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	120	PIPE16	0.703	0.006
2	22	PIPE18	0.258	0.012
3	10	COMBIN14	0.031	0.003
4	12	COMBIN14	0.021	0.002
5	11	COMBIN14	0.011	0.001
6	3	COMBIN14	0.000	0.000
7	3	COMBIN14	0.010	0.003
8	3	COMBIN14	0.000	0.000
30	31	MASS21	0.060	0.002
71	12	BEAM4	0.430	0.036
72	5	MASS21	0.011	0.002

*** NODAL LOAD CALCULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	120	PIPE16	0.079	0.001
2	22	PIPE18	0.000	0.000
3	10	COMBIN14	0.010	0.001
4	12	COMBIN14	0.000	0.000
5	11	COMBIN14	0.000	0.000
6	3	COMBIN14	0.000	0.000
7	3	COMBIN14	0.010	0.003
8	3	COMBIN14	0.010	0.003
30	31	MASS21	0.020	0.001
71	12	BEAM4	0.020	0.002
72	5	MASS21	0.000	0.000

*** ANSYS BINARY FILE STATISTIC

BUFFER SIZE USED= 4096
 33.078 MB WRITTEN ON RESULTS FILE: pb2ecx.rst

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2ecx.db
 FOR POSSIBLE RESUME FROM THIS POINT

FINISH SOLUTION PROCESSING

14	ESOL	179	F	X	FX	-0.1314E-01	3.960	0.2219E-01	3.660
15	ESOL	180	F	Y	FY	-0.3349E-02	3.640	0.4605E-02	3.960
16	ESOL	181	F	Z	FZ	-0.3813E-02	3.960	0.2179E-02	3.760
17	ESOL	182	M	X	MX	-0.3761E-02	3.960	0.2130E-02	3.760
18	ESOL	183	M	Y	MY	-0.2890E-02	3.960	0.5657E-02	3.660
19	ESOL	184	M	Z	MZ	-0.3047E-01	3.660	0.1832E-01	3.960
20	ESOL	149	F	X	FX	-0.1993	3.980	0.1671	3.740
21	ESOL	150	F	Y	FY	-0.7395E-01	3.900	0.3668E-01	3.680
22	ESOL	151	F	Z	FZ	-0.9689E-01	3.920	0.5240E-01	3.620
23	ESOL	153	F	X	FX	-0.9390E-01	3.440	0.1671	3.840
24	ESOL	154	F	Z	FZ	-0.3349E-01	3.860	0.1814E-01	3.640
25	ESOL	155	F	Y	FY	-0.4217E-01	3.660	0.8658E-01	3.940
26	ESOL	156	F	X	FX	-0.1582	3.600	0.2649	3.920
27	ESOL	157	F	Y	FY	-0.2183E-01	3.980	0.2127E-01	3.680
28	ESOL	158	F	Z	FZ	-0.3796E-01	3.660	0.7430E-01	3.960
29	ESOL	161	F	X	FX	-0.2247E-01	3.960	0.3800E-01	3.660
30	ESOL	162	F	Z	FZ	-0.4145E-02	3.760	0.5707E-02	3.960
31	ESOL	163	F	Y	FY	-0.1739E-01	3.660	0.2179E-01	4.000
32	ESOL	164	F	Z	FZ	-0.2059E-01	4.000	0.8059E-02	3.600
33	ESOL	165	F	X	FX	-0.3303	3.960	0.3501	3.660
34	ESOL	167	F	Z	FZ	-0.5617E-01	3.920	0.2819E-01	3.600
35	ESOL	169	F	X	FX	-0.1218	3.420	0.2383	3.660
36	ESOL	170	F	Z	FZ	-0.1621E-01	3.960	0.1869E-01	3.840
37	ESOL	171	F	X	FX	-0.1498	3.960	0.2466	3.660
38	ESOL	172	F	Z	FZ	-0.6956E-02	3.680	0.9632E-02	3.660
39	ESOL	152	F	Y	FY	-0.8107E-03	3.980	0.7880E-03	3.800
40	ESOL	159	F	Y	FY	-0.7193E-03	3.880	0.4167E-03	3.680
41	ESOL	168	F	Y	FY	-0.3585E-02	3.880	0.2285E-02	3.680
42	ESOL	166	F	Y	FY	-0.6108E-03	3.660	0.6833E-03	3.940
43	ESOL	160	F	Y	FY	-0.5080E-03	3.960	0.6768E-03	3.920

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2ecx.db
FOR POSSIBLE RESUME FROM THIS POINT

***** ROUTINE COMPLETED ***** CP = 15327.100

***** ANSYS SOLUTION ROUTINE *****

PERFORM AN EXPANSION PASS

EXPAND 100 SOLUTIONS
IN THE RANGE FROM 0.20000 TO 0.30000
CALCULATE ELEMENT RESULTS AS WELL AS THE NODAL DOF SOLUTION

PRINT BASI ITEMS WITH A FREQUENCY OF NONE
FOR ALL APPLICABLE ENTITIES

***** ANSYS SOLVE COMMAND *****

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUN4SPARC 02:34:24 OCT 10, 1995 CP= 15327.130
FOR SUPPORT CALL PHONE FAX

Time-history analysis of cov.ed system (presurizer spray line)

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

SOLUTION OPTIONS

PROBLEM DIMENSIONALITY 3-D
DEGREES OF FREEDOM UX UY UZ ROTX ROTY ROTZ
ANALYSIS TYPE TRANSIENT
SOLUTION METHOD REDUCED
EXPANSION PASS ON

LOAD STEP OPTIONS

LOAD STEP NUMBER 1
NUMBER OF SOLUTIONS TO BE EXPANDED 100
RANGE 0.20000 TO 0.30000
ELEMENT RESULTS CALCULATION ON
PRINT OUTPUT CONTROLS
ITEM FREQUENCY COMPONENT
BASI NONE
DATABASE OUTPUT CONTROLS
ITEM FREQUENCY COMPONENT
NSOL LAST

*** ELEMENT RESULT CALCULATION TIMES
TYPE NUMBER ENAME TOTAL CP AVE CP
1 120 PIPE16 0.600 0.005
2 22 PIPE18 0.159 0.007
3 10 COMBIN14 0.040 0.004

4	12	COMBIN14	0.011	0.001
5	11	COMBIN14	0.010	0.001
6	3	COMBIN14	0.000	0.000
7	3	COMBIN14	0.000	0.000
8	3	COMBIN14	0.000	0.000
30	31	MASS21	0.051	0.002
71	12	BEAM4	0.051	0.004
72	5	MASS21	0.000	0.000

*** NODAL LOAD CALCULATION TIMES
TYPE NUMBER ENAME TOTAL CP AVE CP

1	120	PIPE16	0.081	0.001
2	22	PIPE18	0.000	0.000
3	10	COMBIN14	0.000	0.000
4	12	COMBIN14	0.000	0.000
5	11	COMBIN14	0.000	0.000
6	3	COMBIN14	0.000	0.000
7	3	COMBIN14	0.000	0.000
8	3	COMBIN14	0.000	0.000
30	31	MASS21	0.000	0.000
71	12	BEAM4	0.000	0.000
72	5	MASS21	0.000	0.000

*** ANSYS BINARY FILE STATISTICS

BUFFER SIZE USED= 4096
33.078 MB WRITTEN ON RESULTS FILE: pb2ecx.rst

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2ecx.db
FOR POSSIBLE RESUME FROM THIS POINT

FINISH SOLUTION PROCESSING

***** ROUTINE COMPLETED ***** CP = 15540.020

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUN4SPARC 02:43:45 OCT 10, 1995 CP= 15540.040
FOR SUPPORT CALL PHONE FAX

Time-history analysis of coupled system (presurizer spray line)

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

***** TIME-HISTORY POSTPROCESSOR (POST26) *****

ALL POST26 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS

MAXIMUM NUMBER OF VARIABLES= 43

VARIABLE 2	IS AT ELEMENT	143	NODE=	1
ITEM= F	COMP= X	NAME= FX		
VARIABLE 3	IS AT ELEMENT	144	NODE=	1
ITEM= F	COMP= Y	NAME= FY		
VARIABLE 4	IS AT ELEMENT	145	NODE=	1
ITEM= F	COMP= Z	NAME= FZ		
VARIABLE 5	IS AT ELEMENT	146	NODE=	1
ITEM= M	COMP= X	NAME= MX		
VARIABLE 6	IS AT ELEMENT	147	NODE=	1
ITEM= M	COMP= Y	NAME= MY		
VARIABLE 7	IS AT ELEMENT	148	NODE=	1
ITEM= M	COMP= Z	NAME= MZ		
VARIABLE 8	IS AT ELEMENT	173	NODE=	87
ITEM= F	COMP= X	NAME= FX		
VARIABLE 9	IS AT ELEMENT	174	NODE=	87
ITEM= F	COMP= Y	NAME= FY		
VARIABLE 10	IS AT ELEMENT	175	NODE=	87
ITEM= F	COMP= Z	NAME= FZ		
VARIABLE 11	IS AT ELEMENT	176	NODE=	87
ITEM= M	COMP= X	NAME= MX		
VARIABLE 12	IS AT ELEMENT	177	NODE=	87
ITEM= M	COMP= Y	NAME= MY		
VARIABLE 13	IS AT ELEMENT	178	NODE=	87
ITEM= M	COMP= Z	NAME= MZ		

VARIABLE 14	IS AT ELEMENT	179	NODE-	130
ITEM= F	COMP= X	NAME= FX		
VARIABLE 15	IS AT ELEMENT	180	NODE-	130
ITEM= F	COMP= Y	NAME= FY		
VARIABLE 16	IS AT ELEMENT	181	NODE-	130
ITEM= F	COMP= Z	NAME= FZ		
VARIABLE 17	IS AT ELEMENT	182	NODE-	130
ITEM= M	COMP= X	NAME= MX		
VARIABLE 18	IS AT ELEMENT	183	NODE-	130
ITEM= M	COMP= Y	NAME= MY		
VARIABLE 19	IS AT ELEMENT	184	NODE-	130
ITEM= M	COMP= Z	NAME= MZ		
VARIABLE 20	IS AT ELEMENT	149	NODE-	9
ITEM= F	COMP= X	NAME= FX		
VARIABLE 21	IS AT ELEMENT	150	NODE-	10
ITEM= F	COMP= Z	NAME= FZ		
VARIABLE 22	IS AT ELEMENT	151	NODE-	15
ITEM= F	COMP= Y	NAME= FY		
VARIABLE 23	IS AT ELEMENT	153	NODE-	23
ITEM= F	COMP= X	NAME= FX		
VARIABLE 24	IS AT ELEMENT	154	NODE-	28
ITEM= F	COMP= Z	NAME= FZ		
VARIABLE 25	IS AT ELEMENT	155	NODE-	37
ITEM= F	COMP= Y	NAME= FY		
VARIABLE 26	IS AT ELEMENT	156	NODE-	39
ITEM= F	COMP= X	NAME= FX		
VARIABLE 27	IS AT ELEMENT	157	NODE-	44
ITEM= F	COMP= Y	NAME= FY		
VARIABLE 28	IS AT ELEMENT	158	NODE-	45
ITEM= F	COMP= Z	NAME= FZ		
VARIABLE 29	IS AT ELEMENT	161	NODE-	124
ITEM= F	COMP= X	NAME= FX		
VARIABLE 30	IS AT ELEMENT	162	NODE-	129
ITEM= F	COMP= Z	NAME= FZ		
VARIABLE 31	IS AT ELEMENT	163	NODE-	52
ITEM= F	COMP= Y	NAME= FY		
VARIABLE 32	IS AT ELEMENT	164	NODE-	54
ITEM= F	COMP= Z	NAME= FZ		
VARIABLE 33	IS AT ELEMENT	165	NODE-	57
ITEM= F	COMP= X	NAME= FX		
VARIABLE 34	IS AT ELEMENT	167	NODE-	73
ITEM= F	COMP= Z	NAME= FZ		
VARIABLE 35	IS AT ELEMENT	169	NODE-	131
ITEM= F	COMP= X	NAME= FX		
VARIABLE 36	IS AT ELEMENT	170	NODE-	131
ITEM= F	COMP= Z	NAME= FZ		
VARIABLE 37	IS AT ELEMENT	171	NODE-	133
ITEM= F	COMP= X	NAME= FX		
VARIABLE 38	IS AT ELEMENT	172	NODE-	133
ITEM= F	COMP= Z	NAME= FZ		
VARIABLE 39	IS AT ELEMENT	152	NODE-	14
ITEM= F	COMP= Y	NAME= FY		
VARIABLE 40	IS AT ELEMENT	159	NODE-	53
ITEM= F	COMP= Y	NAME= FY		
VARIABLE 41	IS AT ELEMENT	168	NODE-	61
ITEM= F	COMP= Y	NAME= FY		
VARIABLE 42	IS AT ELEMENT	166	NODE-	78
ITEM= F	COMP= Y	NAME= FY		
VARIABLE 43	IS AT ELEMENT	160	NODE-	79
ITEM= F	COMP= Y	NAME= FY		

STORAGE COMPLETE FOR 99 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES							
VARI TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME	
2	ESOL	143 F X	FX	-0.1118	4.320	0.1478	4.460
3	ESOL	144 F Y	FY	-0.2437E-01	4.760	0.2923E-01	4.580
4	ESOL	145 F Z	FZ	-0.7992E-01	4.780	0.8267E-01	5.140
5	ESOL	146 M X	MX	-0.1295	4.780	0.1393	5.120
6	ESOL	147 M Y	MY	-0.4409	4.580	0.4584	4.260
7	ESOL	146 M Z	MZ	-0.1080	5.580	0.1565	4.340
8	ESOL	173 P X	FX	-0.4508E-01	4.120	0.7072E-01	4.460
9	ESOL	174 P Y	FY	-0.4891E-01	4.680	0.4895E-01	4.560
10	ESOL	175 P Z	FZ	-0.1323E-01	4.500	0.1910E-01	4.220
11	ESOL	176 M X	MX	-0.1684	4.560	0.1534	4.680
12	ESOL	177 M Y	MY	-0.6696E-01	4.120	0.1182	4.460
13	ESOL	178 M Z	MZ	-0.4422E-01	4.460	0.2755E-01	4.120
14	ESOL	179 F X	FX	-0.2989E-01	4.500	0.4666E-01	4.460
15	ESOL	180 F Y	FY	-0.1530E-01	5.160	0.1556E-01	4.740
16	ESOL	181 F Z	FZ	-0.1274E-01	4.840	0.1173E-01	5.040
17	ESOL	182 M X	MX	-0.1248E-01	4.840	0.1151E-01	5.040
18	ESOL	183 M Y	MY	-0.8627E-02	4.500	0.1106E-01	4.460
19	ESOL	184 M Z	MZ	-0.6421E-01	4.460	0.4458E-01	4.500
20	ESOL	149 F X	FX	-0.2365	5.260	0.3086	4.280
21	ESOL	150 F Z	FZ	-0.2118	5.120	0.1919	4.760
22	ESOL	151 F Y	FY	-0.2541	4.500	0.2789	5.500
23	ESOL	153 F X	FX	-0.2413	4.160	0.3592	4.620
24	ESOL	154 F Z	FZ	-0.1498	5.120	0.1359	4.780
25	ESOL	155 F Y	FY	-0.1899	4.840	0.2207	5.180
26	ESOL	156 F X	FX	-0.4481	4.260	0.5364	4.700
27	ESOL	157 P Y	FY	-0.4787E-01	4.550	0.3830E-01	5.040
28	ESOL	158 P Z	FZ	-0.1498	4.280	0.1335	4.500
29	ESOL	161 F X	FX	-0.5046E-01	5.420	0.8029E-01	4.460
30	ESOL	162 P Z	FZ	-0.2015E-01	5.040	0.2286E-01	4.840
31	ESOL	163 P Y	FY	-0.4354E-01	4.360	0.5149E-01	4.580
32	ESOL	164 F Z	FZ	-0.5921E-01	4.640	0.4205E-01	4.840
33	ESOL	165 P X	FX	-0.4689	5.420	0.6894	4.460
34	ESOL	167 P Z	FZ	-0.1127	4.620	0.9100E-01	4.280
35	ESOL	169 P X	FX	-0.2868	5.420	0.4886	4.460
36	ESOL	170 P Z	FZ	-0.4830E-01	5.600	0.6129E-01	4.640
37	ESOL	171 P X	FX	-0.3068	5.420	0.5249	4.460
38	ESOL	172 P Z	FZ	-0.1930E-01	4.220	0.1851E-01	4.640
39	ESOL	152 P Y	FY	-0.1209E-02	4.460	0.1519E-02	4.320
40	ESOL	159 P Y	FY	-0.2015E-02	4.600	0.2018E-02	5.040
41	ESOL	168 P Y	FY	-0.1031E-01	4.600	0.9837E-02	5.040
42	ESOL	166 P Y	FY	-0.4517E-02	5.040	0.4509E-02	4.840
43	ESOL	160 P Y	FY	-0.1556E-02	4.760	0.1665E-02	4.720

POST26 SUMMARY OF VARIABLE EXTREME VALUES							
VARI TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME	
2	ESOL	143 F X	FX	-0.1118	4.320	0.1478	4.460
3	ESOL	144 F Y	FY	-0.2437E-01	4.760	0.2923E-01	4.580
4	ESOL	145 F Z	FZ	-0.7992E-01	4.780	0.8267E-01	5.140
5	ESOL	146 M X	MX	-0.1295	4.780	0.1393	5.120
6	ESOL	147 M Y	MY	-0.4409	4.580	0.4584	4.260
7	ESOL	146 M Z	MZ	-0.1080	5.580	0.1565	4.340
8	ESOL	173 P X	FX	-0.4508E-01	4.120	0.7072E-01	4.460
9	ESOL	174 P Y	FY	-0.4891E-01	4.680	0.4895E-01	4.560
10	ESOL	175 P Z	FZ	-0.1323E-01	4.500	0.1910E-01	4.220
11	ESOL	176 M X	MX	-0.1684	4.560	0.1534	4.680
12	ESOL	177 M Y	MY	-0.6696E-01	4.120	0.1182	4.460
13	ESOL	178 M Z	MZ	-0.4422E-01	4.460	0.2755E-01	4.120
14	ESOL	179 F X	FX	-0.2989E-01	4.500	0.4666E-01	4.460
15	ESOL	180 F Y	FY	-0.1530E-01	5.160	0.1556E-01	4.740
16	ESOL	181 F Z	FZ	-0.1274E-01	4.840	0.1173E-01	5.040
17	ESOL	182 M X	MX	-0.1248E-01	4.840	0.1151E-01	5.040
18	ESOL	183 M Y	MY	-0.8627E-02	4.500	0.1106E-01	4.460
19	ESOL	184 M Z	MZ	-0.6421E-01	4.460	0.4458E-01	4.500
20	ESOL	149 F X	FX	-0.2365	5.260	0.3086	4.280
21	ESOL	150 F Z	FZ	-0.2118	5.120	0.1919	4.760
22	ESOL	151 F Y	FY	-0.2541	4.500	0.2789	5.500
23	ESOL	153 F X	FX	-0.2413	4.160	0.3592	4.620
24	ESOL	154 F Z	FZ	-0.1498	5.120	0.1359	4.780
25	ESOL	155 F Y	FY	-0.1899	4.840	0.2207	5.180
26	ESOL	156 F X	FX	-0.4481	4.260	0.5364	4.700
27	ESOL	157 P Y	FY	-0.4787E-01	4.560	0.3830E-01	5.040
28	ESOL	158 P Z	FZ	-0.1498	4.280	0.1335	4.500
29	ESOL	161 F X	FX	-0.5046E-01	5.420	0.8029E-01	4.460
30	ESOL	162 P Z	FZ	-0.2015E-01	5.040	0.2286E-01	4.840
31	ESOL	163 P Y	FY	-0.4354E-01	4.360	0.5149E-01	4.580
32	ESOL	164 F Z	FZ	-0.5921E-01	4.640	0.4205E-01	4.840
33	ESOL	165 P X	FX	-0.4689	5.420	0.6894	4.460
34	ESOL	167 P Z	FZ	-0.1127	4.620	0.9100E-01	4.280
35	ESOL	169 P X	FX	-0.2868	5.420	0.4886	4.460
36	ESOL	170 P Z	FZ	-0.4830E-01	5.600	0.6129E-01	4.640
37	ESOL	171 P X	FX	-0.3068	5.420	0.5249	4.460
38	ESOL	172 P Z	FZ	-0.1930E-01	4.220	0.1851E-01	4.640
39	ESOL	152 P Y	FY	-0.1209E-02	4.460	0.1519E-02	4.320
40	ESOL	159 P Y	FY	-0.2015E-02	4.600	0.2018E-02	5.040
41	ESOL	168 P Y	FY	-0.1031E-01	4.600	0.9837E-02	5.040
42	ESOL	166 P Y	FY	-0.4517E-02	5.040	0.4509E-02	4.840

43 ESOL 160 F Y FY -0.1556E-02 4.760 0.1665E-02 4.720

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2ecx.db
FOR POSSIBLE RESUME FROM THIS POINT

***** ROUTINE COMPLETED ***** CP = 15553.670

***** ANSYS SOLUTION ROUTINE *****

PERFORM AN EXPANSION PASS

EXPAND 100 SOLUTIONS
IN THE RANGE FROM 0.30000 TO 0.40000
CALCULATE ELEMENT RESULTS AS WELL AS THE NODAL DOF SOLUTION

PRINT BASIC ITEMS WITH A FREQUENCY OF NONE
FOR ALL APPLICABLE ENTITIES

***** ANSYS SOLVE COMMAND *****

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUN4SPARC 02:44:21 OCT 10, 1995 CP= 15553.700
FOR SUPPORT CALL PHONE FAX

Time-history analysis of coupled system (presurizer spray line)

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

SOLUTION OPTIONS

PROBLEM DIMENSIONALITY 3-D
DEGREES OF FREEDOM UX UY UZ ROTX ROTY ROTZ
ANALYSIS TYPE TRANSIENT
SOLUTION METHOD REDUCED
EXPANSION PASS ON

LOAD STEP OPTIONS

LOAD STEP NUMBER 1
NUMBER OF SOLUTIONS TO BE EXPANDED 100
RANGE 0.30000 TO 0.40000
ELEMENT RESULTS CALCULATION ON
PRINT OUTPUT CONTROLS
ITEM FREQUENCY COMPONENT
BASIC NONE
DATABASE OUTPUT CONTROLS
ITEM FREQUENCY COMPONENT
NSOL LAST

*** ELEMENT RESULT CALCULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	120	PIPE16	0.542	0.005
2	22	PIPE18	0.208	0.009
3	10	COMBIN14	0.020	0.002
4	12	COMBIN14	0.000	0.000
5	11	COMBIN14	0.010	0.001
6	3	COMBIN14	0.010	0.003
7	3	COMBIN14	0.000	0.000
8	3	COMBIN14	0.000	0.000
30	31	MASS21	0.020	0.001
71	12	BEAM4	0.040	0.003
72	5	MASS21	0.010	0.002

*** NODAL LOAD CALCULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	120	PIPE16	0.089	0.001
2	22	PIPE18	0.000	0.000
3	10	COMBIN14	0.000	0.000
4	12	COMBIN14	0.021	0.002
5	11	COMBIN14	0.000	0.000
6	3	COMBIN14	0.000	0.000
7	3	COMBIN14	0.000	0.000
8	3	COMBIN14	0.000	0.000
30	31	MASS21	0.010	0.000
71	12	BEAM4	0.000	0.000
72	5	MASS21	0.010	0.002

*** ANSYS BINARY FILE STATISTICS

BUFFER SIZE USED= 4096
33.076 MB WRITTEN ON RESULTS FILE: pb2ecx.rst

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2ecx.db
FOR POSSIBLE RESUME FROM THIS POINT

FINISH SOLUTION PROCESSING

***** ROUTINE COMPLETED ***** CP = 15765.840

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUN4SPARC 02:53:53 OCT 10, 1995 CP= 15765.860
FOR SUPPORT CALL PHONE FAX

Time-history analysis of coupled system (presurizer spray line)

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

***** TIME-HISTORY POSTPROCESSOR (POST26) *****

ALL POST26 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS

MAXIMUM NUMBER OF VARIABLES= 43

VARIABLE 2	IS AT ELEMENT	143	NODE=	1
ITEM= F	COMP= X		NAME= FX	
VARIABLE 3	IS AT ELEMENT	144	NODE=	1
ITEM= F	COMP= Y		NAME= FY	
VARIABLE 4	IS AT ELEMENT	145	NODE=	1
ITEM= F	COMP= Z		NAME= FZ	
VARIABLE 5	IS AT ELEMENT	146	NODE=	1
ITEM= M	COMP= X		NAME= MX	
VARIABLE 6	IS AT ELEMENT	147	NODE=	1
ITEM= M	COMP= Y		NAME= MY	
VARIABLE 7	IS AT ELEMENT	148	NODE=	1
ITEM= M	COMP= Z		NAME= MZ	
VARIABLE 8	IS AT ELEMENT	173	NODE=	87
ITEM= F	COMP= X		NAME= FX	
VARIABLE 9	IS AT ELEMENT	174	NODE=	87
ITEM= F	COMP= Y		NAME= FY	
VARIABLE 10	IS AT ELEMENT	175	NODE=	87
ITEM= F	COMP= Z		NAME= FZ	
VARIABLE 11	IS AT ELEMENT	176	NODE=	87
ITEM= M	COMP= X		NAME= MX	
VARIABLE 12	IS AT ELEMENT	177	NODE=	87
ITEM= M	COMP= Y		NAME= MY	
VARIABLE 13	IS AT ELEMENT	178	NODE=	87
ITEM= M	COMP= Z		NAME= MZ	
VARIABLE 14	IS AT ELEMENT	179	NODE=	130
ITEM= F	COMP= X		NAME= FX	
VARIABLE 15	IS AT ELEMENT	180	NODE=	130
ITEM= F	COMP= Y		NAME= FY	
VARIABLE 16	IS AT ELEMENT	181	NODE=	130
ITEM= F	COMP= Z		NAME= FZ	
VARIABLE 17	IS AT ELEMENT	182	NODE=	130
ITEM= M	COMP= X		NAME= MX	
VARIABLE 18	IS AT ELEMENT	183	NODE=	130
ITEM= M	COMP= Y		NAME= MY	
VARIABLE 19	IS AT ELEMENT	184	NODE=	130
ITEM= M	COMP= Z		NAME= MZ	
VARIABLE 20	IS AT ELEMENT	149	NODE=	9
ITEM= F	COMP= X		NAME= FX	
VARIABLE 21	IS AT ELEMENT	150	NODE=	10
ITEM= F	COMP= Y		NAME= FY	
VARIABLE 22	IS AT ELEMENT	151	NODE=	15
ITEM= F	COMP= Z		NAME= FZ	
VARIABLE 23	IS AT ELEMENT	153	NODE=	23
ITEM= F	COMP= X		NAME= FX	

VARIABLE 24	IS AT ELEMENT	154	NODE=	28
ITEM= F	COMP= Z	NAME= FZ		
VARIABLE 25	IS AT ELEMENT	155	NODE=	37
ITEM= F	COMP= Y	NAME= FY		
VARIABLE 26	IS AT ELEMENT	156	NODE=	39
ITEM= F	COMP= X	NAME= FX		
VARIABLE 27	IS AT ELEMENT	157	NODE=	44
ITEM= F	COMP= Y	NAME= FY		
VARIABLE 28	IS AT ELEMENT	158	NODE=	45
ITEM= F	COMP= Z	NAME= FZ		
VARIABLE 29	IS AT ELEMENT	161	NODE=	124
ITEM= F	COMP= X	NAME= FX		
VARIABLE 30	IS AT ELEMENT	162	NODE=	129
ITEM= F	COMP= Z	NAME= FZ		
VARIABLE 31	IS AT ELEMENT	163	NODE=	52
ITEM= F	COMP= Y	NAME= FY		
VARIABLE 32	IS AT ELEMENT	164	NODE=	54
ITEM= F	COMP= Z	NAME= FZ		
VARIABLE 33	IS AT ELEMENT	165	NODE=	57
ITEM= F	COMP= X	NAME= FX		
VARIABLE 34	IS AT ELEMENT	167	NODE=	73
ITEM= F	COMP= Z	NAME= FZ		
VARIABLE 35	IS AT ELEMENT	169	NODE=	131
ITEM= F	COMP= X	NAME= FX		
VARIABLE 36	IS AT ELEMENT	170	NODE=	131
ITEM= F	COMP= Z	NAME= FZ		
VARIABLE 37	IS AT ELEMENT	171	NODE=	133
ITEM= F	COMP= X	NAME= FX		
VARIABLE 38	IS AT ELEMENT	172	NODE=	133
ITEM= F	COMP= Z	NAME= FZ		
VARIABLE 39	IS AT ELEMENT	152	NODE=	14
ITEM= F	COMP= Y	NAME= FY		
VARIABLE 40	IS AT ELEMENT	159	NODE=	53
ITEM= F	COMP= Y	NAME= FY		
VARIABLE 41	IS AT ELEMENT	168	NODE=	61
ITEM= F	COMP= Y	NAME= FY		
VARIABLE 42	IS AT ELEMENT	166	NODE=	78
ITEM= F	COMP= Y	NAME= FY		
VARIABLE 43	IS AT ELEMENT	160	NODE=	79
ITEM= F	COMP= Y	NAME= FY		

STORAGE COMPLETE FOR 99 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES

VARI TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	ESOL 143 F X	FX	-0.8621E-01	7.620	0.8652E-01	6.360
3	ESOL 144 F Y	FY	-0.1956E-01	7.520	0.2041E-01	6.500
4	ESOL 145 F Z	FZ	-0.5096E-01	7.480	0.4457E-01	7.100
5	ESOL 146 M X	MX	-0.7044E-01	7.460	0.7420E-01	7.820
6	ESOL 147 M Y	MY	-0.2770	7.180	0.2571	6.100
7	ESOL 148 M Z	MZ	-0.1261	7.480	0.1632	6.520
8	ESOL 173 F X	FX	-0.5198E-01	6.840	0.6348E-01	6.880
9	ESOL 174 F Y	FY	-0.4399E-01	6.940	0.4281E-01	6.980
10	ESOL 175 F Z	FZ	-0.1166E-01	7.260	0.1377E-01	6.960
11	ESOL 176 M X	MX	-0.1398	6.980	0.1502	6.940
12	ESOL 177 M Y	MY	-0.8727E-01	6.840	0.1075	6.880
13	ESOL 178 M Z	MZ	-0.4244E-01	6.880	0.3197E-01	6.840
14	ESOL 179 F X	FX	-0.3118E-01	6.840	0.4364E-01	6.880
15	ESOL 180 F Y	FY	-0.1121E-01	7.060	0.1131E-01	7.240
16	ESOL 181 F Z	FZ	-0.9559E-02	7.260	0.1021E-01	7.060
17	ESOL 182 M X	MX	-0.9411E-02	7.260	0.1004E-01	7.060
18	ESOL 183 M Y	MY	-0.7110E-02	6.920	0.1122E-01	6.880
19	ESOL 184 M Z	MZ	-0.6098E-01	6.880	0.4330E-01	6.920
20	ESOL 149 F X	FX	-0.2209	6.340	0.2367	6.500
21	ESOL 150 F Z	FZ	-0.1105	7.860	0.1130	6.120
22	ESOL 151 F Y	FY	-0.1299	7.160	0.1338	6.140
23	ESOL 153 F X	FX	-0.1671	7.520	0.2341	7.320
24	ESOL 154 F Z	FZ	-0.7791E-01	7.800	0.7306E-01	7.440
25	ESOL 155 F Y	FY	-0.1151	6.120	0.1056	7.820
26	ESOL 156 F X	FX	-0.2725	7.620	0.3551	7.220
27	ESOL 157 F Y	FY	-0.2429E-01	7.080	0.3898E-01	6.900
28	ESOL 158 F Z	FZ	-0.7773E-01	6.080	0.9728E-01	7.180
29	ESOL 161 F X	FX	-0.5618E-01	6.840	0.7277E-01	6.880
30	ESOL 162 F Z	FZ	-0.1680E-01	7.060	0.1638E-01	7.020
31	ESOL 163 F Y	FY	-0.3277E-01	6.480	0.2191E-01	7.120
32	ESOL 164 F Z	FZ	-0.3781E-01	7.060	0.4331E-01	7.020
33	ESOL 165 F X	FX	-0.4605	6.840	0.5917	6.880
34	ESOL 167 F Z	FZ	-0.7784E-01	7.220	0.5556E-01	7.620
35	ESOL 169 F X	FX	-0.3228	6.840	0.4125	6.880
36	ESOL 170 F Z	FZ	-0.4402E-01	6.940	0.4570E-01	7.060
37	ESOL 171 F X	FX	-0.3737	6.840	0.4572	6.880
38	ESOL 172 F Z	FZ	-0.1216E-01	6.900	0.1281E-01	7.180
39	ESOL 152 F Y	FY	-0.1194E-02	6.700	0.1428E-02	6.520
40	ESOL 159 F Y	FY	-0.1385E-02	7.100	0.1405E-02	6.900
41	ESOL 168 F Y	FY	-0.6786E-02	7.100	0.7618E-02	6.900
42	ESOL 166 F Y	FY	-0.2019E-02	6.200	0.2654E-02	7.120
43	ESOL 160 F Y	FY	-0.1559E-02	6.940	0.1361E-02	6.980

27	ESOL 157 F Y	FY	-0.2429E-01	7.080	0.3898E-01	6.900
28	ESOL 158 F Z	FZ	-0.7773E-01	6.080	0.9728E-01	7.180
29	ESOL 161 F X	FX	-0.5618E-01	6.840	0.7277E-01	6.880
30	ESOL 162 F Z	FZ	-0.1680E-01	7.060	0.1638E-01	7.020
31	ESOL 163 F Y	FY	-0.3277E-01	6.480	0.2191E-01	7.120
32	ESOL 164 F Z	FZ	-0.3781E-01	7.060	0.4331E-01	7.020
33	ESOL 165 F X	FX	-0.4605	6.840	0.5917	6.880
34	ESOL 167 F Z	FZ	-0.7784E-01	7.220	0.5556E-01	7.620
35	ESOL 169 F X	FX	-0.3228	6.840	0.4125	6.880
36	ESOL 170 F Z	FZ	-0.4402E-01	6.940	0.4570E-01	7.060
37	ESOL 171 F X	FX	-0.3737	6.840	0.4572	6.880
38	ESOL 172 F Z	FZ	-0.1216E-01	6.900	0.1281E-01	7.180
39	ESOL 152 F Y	FY	-0.1194E-02	6.700	0.1428E-02	6.520
40	ESOL 159 F Y	FY	-0.1385E-02	7.100	0.1405E-02	6.900
41	ESOL 168 F Y	FY	-0.6786E-02	7.100	0.7618E-02	6.900
42	ESOL 166 F Y	FY	-0.2019E-02	6.200	0.2654E-02	7.120
43	ESOL 160 F Y	FY	-0.1559E-02	6.940	0.1361E-02	6.980

POST26 SUMMARY OF VARIABLE EXTREME VALUES

VARI TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	ESOL 143 F X	FX	-0.8621E-01	7.620	0.8652E-01	6.360
3	ESOL 144 F Y	FY	-0.1956E-01	7.520	0.2041E-01	6.500
4	ESOL 145 F Z	FZ	-0.5096E-01	7.480	0.4457E-01	7.100
5	ESOL 146 M X	MX	-0.7044E-01	7.460	0.7420E-01	7.820
6	ESOL 147 M Y	MY	-0.2770	7.180	0.2571	6.100
7	ESOL 148 M Z	MZ	-0.1261	7.480	0.1632	6.520
8	ESOL 173 F X	FX	-0.5198E-01	6.840	0.6348E-01	6.880
9	ESOL 174 F Y	FY	-0.4399E-01	6.940	0.4281E-01	6.980
10	ESOL 175 F Z	FZ	-0.1166E-01	7.260	0.1377E-01	6.960
11	ESOL 176 M X	MX	-0.1398	6.980	0.1502	6.940
12	ESOL 177 M Y	MY	-0.8727E-01	6.840	0.1075	6.880
13	ESOL 178 M Z	MZ	-0.4244E-01	6.880	0.3197E-01	6.840
14	ESOL 179 F X	FX	-0.3118E-01	6.840	0.4364E-01	6.880
15	ESOL 180 F Y	FY	-0.1121E-01	7.060	0.1131E-01	7.240
16	ESOL 181 F Z	FZ	-0.9559E-02	7.260	0.1021E-01	7.060
17	ESOL 182 M X	MX	-0.9411E-02	7.260	0.1004E-01	7.060
18	ESOL 183 M Y	MY	-0.7110E-02	6.920	0.1122E-01	6.880
19	ESOL 184 M Z	MZ	-0.6098E-01	6.880	0.4330E-01	6.920
20	ESOL 149 F X	FX	-0.2209	6.340	0.2367	6.500
21	ESOL 150 F Z	FZ	-0.1105	7.860	0.1130	6.120
22	ESOL 151 F Y	FY	-0.1299	7.160	0.1338	6.140
23	ESOL 153 F X	FX	-0.1671	7.520	0.2341	7.320
24	ESOL 154 F Z	FZ	-0.7791E-01	7.800	0.7306E-01	7.440
25	ESOL 155 F Y	FY	-0.1151	6.120	0.1056	7.820
26	ESOL 156 F X	FX	-0.2725	7.620	0.3551	7.220
27	ESOL 157 F Y	FY	-0.2429E-01	7.080	0.3898E-01	6.900
28	ESOL 158 F Z	FZ	-0.7773E-01	6.080	0.9728E-01	7.180
29	ESOL 161 F X	FX	-0.5618E-01	6.840	0.7277E-01	6.880
30	ESOL 162 F Z	FZ	-0.1680E-01	7.060	0.1638E-01	7.020
31	ESOL 163 F Y	FY	-0.3277E-01	6.480	0.2191E-01	7.120
32	ESOL 164 F Z	FZ	-0.3781E-01	7.060	0.4331E-01	7.020
33	ESOL 165 F X	FX	-0.4605	6.840	0.5917	6.880
34	ESOL 167 F Z	FZ	-0.7784E-01	7.220	0.5556E-01	7.620
35	ESOL 169 F X	FX	-0.3228	6.840	0.4125	6.880
36	ESOL 170 F Z	FZ	-0.4402E-01	6.940	0.4570E-01	7.060
37	ESOL 171 F X	FX	-0.3737	6.840	0.4572	6.880
38	ESOL 172 F Z	FZ	-0.1216E-01	6.900	0.1281E-01	7.180
39	ESOL 152 F Y	FY	-0.1194E-02	6.700	0.1428E-02	6.520
40	ESOL 159 F Y	FY	-0.1385E-02	7.100	0.1405E-02	6.900
41	ESOL 168 F Y	FY	-0.6786E-02	7.100	0.7618E-02	6.900
42	ESOL 166 F Y	FY	-0.2019E-02	6.200	0.2654E-02	7.120
43	ESOL 160 F Y	FY	-0.1559E-02	6.940	0.1361E-02	6.980

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2ecr.db
FOR POSSIBLE RESUME FROM THIS POINT

***** ROUTINE COMPLETED ***** CP = 15778.870

***** ANSYS SOLUTION ROUTINE *****

PERFORM AN EXPANSION PASS

EXPAND 100 SOLUTIONS

IN THE RANGE FROM 0.40000 TO 0.50000

CALCULATE ELEMENT RESULTS AS WELL AS THE NODAL DOF SOLUTION

PRINT BASH ITEMS WITH A FREQUENCY OF NONE
FOR ALL APPLICABLE ENTITIES

***** ANSYS SOLVE COMMAND *****

1
***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
45416-2 VERSION=JUN48PARC 02:54:23 OCT 10, 1995 CP= 15778.900
FOR SUPPORT CALL PHONE FAX

VARIABLE 3	IS AT ELEMENT	144	NOISE=	1
ITEM= F	COMP= Y	NAME= FY		
VARIABLE 4	IS AT ELEMENT	145	NOISE=	1
ITEM= F	COMP= Z	NAME= FZ		
VARIABLE 5	IS AT ELEMENT	146	NOISE=	1
ITEM= M	COMP= X	NAME= MX		
VARIABLE 6	IS AT ELEMENT	147	NOISE=	1
ITEM= M	COMP= Y	NAME= MY		
VARIABLE 7	IS AT ELEMENT	148	NOISE=	1
ITEM= M	COMP= Z	NAME= MZ		
VARIABLE 8	IS AT ELEMENT	173	NOISE=	87
ITEM= F	COMP= X	NAME= FX		
VARIABLE 9	IS AT ELEMENT	174	NOISE=	87
ITEM= F	COMP= Y	NAME= FY		
VARIABLE 10	IS AT ELEMENT	175	NOISE=	87
ITEM= F	COMP= Z	NAME= FZ		
VARIABLE 11	IS AT ELEMENT	176	NOISE=	87
ITEM= M	COMP= X	NAME= MX		
VARIABLE 12	IS AT ELEMENT	177	NOISE=	87
ITEM= M	COMP= Y	NAME= MY		
VARIABLE 13	IS AT ELEMENT	178	NOISE=	87
ITEM= M	COMP= Z	NAME= MZ		
VARIABLE 14	IS AT ELEMENT	179	NOISE=	130
ITEM= F	COMP= X	NAME= FX		
VARIABLE 15	IS AT ELEMENT	180	NOISE=	130
ITEM= F	COMP= Y	NAME= FY		
VARIABLE 16	IS AT ELEMENT	181	NOISE=	130
ITEM= F	COMP= Z	NAME= FZ		
VARIABLE 17	IS AT ELEMENT	182	NOISE=	130
ITEM= M	COMP= X	NAME= MX		
VARIABLE 18	IS AT ELEMENT	183	NOISE=	130
ITEM= M	COMP= Y	NAME= MY		
VARIABLE 19	IS AT ELEMENT	184	NOISE=	130
ITEM= M	COMP= Z	NAME= MZ		
VARIABLE 20	IS AT ELEMENT	149	NOISE=	9
ITEM= F	COMP= X	NAME= FX		
VARIABLE 21	IS AT ELEMENT	150	NOISE=	10
ITEM= F	COMP= Z	NAME= FZ		
VARIABLE 22	IS AT ELEMENT	151	NOISE=	15
ITEM= F	COMP= Y	NAME= FY		
VARIABLE 23	IS AT ELEMENT	153	NOISE=	23
ITEM= F	COMP= X	NAME= FX		
VARIABLE 24	IS AT ELEMENT	154	NOISE=	28
ITEM= F	COMP= Z	NAME= FZ		
VARIABLE 25	IS AT ELEMENT	155	NOISE=	37
ITEM= F	COMP= Y	NAME= FY		
VARIABLE 26	IS AT ELEMENT	156	NOISE=	39
ITEM= F	COMP= X	NAME= FX		
VARIABLE 27	IS AT ELEMENT	157	NOISE=	44
ITEM= F	COMP= Y	NAME= FY		
VARIABLE 28	IS AT ELEMENT	158	NOISE=	45
ITEM= F	COMP= Z	NAME= FZ		
VARIABLE 29	IS AT ELEMENT	161	NOISE=	124
ITEM= F	COMP= X	NAME= FX		
VARIABLE 30	IS AT ELEMENT	162	NOISE=	129
ITEM= F	COMP= Z	NAME= FZ		
VARIABLE 31	IS AT ELEMENT	163	NOISE=	52
ITEM= F	COMP= Y	NAME= FY		
VARIABLE 32	IS AT ELEMENT	164	NOISE=	54
ITEM= F	COMP= Z	NAME= FZ		
VARIABLE 33	IS AT ELEMENT	165	NOISE=	57
ITEM= F	COMP= X	NAME= FX		

Time-history analysis of coupled system (presurizer spray line)

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

SOLUTION OPTIONS

PROBLEM DIMENSIONALITY 3-D
 DEGREES OF FREEDOM UX UY UZ ROTX ROTY ROTZ
 ANALYSIS TYPE TRANSIENT
 SOLUTION METHOD REDUCED
 EXPANSION PASS ON

LOAD STEP OPTIONS

LOAD STEP NUMBER 1
 NUMBER OF SOLUTIONS TO BE EXPANDED 100
 RANGE 0.40000 TO 0.50000
 ELEMENT RESULTS CALCULATION ON
 PRINT OUTPUT CONTROLS ON

ITEM FREQUENCY COMPONENT
 BASE NAME
 DATABASE OUTPUT CONTROLS
 ITEM FREQUENCY COMPONENT
 NSOL LAST

*** ELEMENT RESULT CALCULATION TIMES

TYPE NUMBER	ENAME	TOTAL CP	AVE CP
1	PIPE16	0.550	0.005
2	PIPE18	0.159	0.007
3	COMBIN14	0.010	0.001
4	COMBIN14	0.021	0.002
5	COMBIN14	0.011	0.001
6	COMBIN14	0.000	0.000
7	COMBIN14	0.000	0.000
8	COMBIN14	0.000	0.000
30	MASS21	0.020	0.001
71	BEAM4	0.070	0.006
72	MASS21	0.010	0.002

*** TOTAL LOAD CALCULATION TIMES

TYPE NUMBER	ENAME	TOTAL CP	AVE CP
1	PIPE16	0.090	0.001
2	PIPE18	0.011	0.000
3	COMBIN14	0.000	0.000
4	COMBIN14	0.011	0.001
5	COMBIN14	0.010	0.001
6	COMBIN14	0.000	0.000
7	COMBIN14	0.000	0.000
8	COMBIN14	0.000	0.000
30	MASS21	0.020	0.001
71	BEAM4	0.010	0.001
72	MASS21	0.000	0.000

*** ANSYS BINARY FILE STATISTICS
 BUFFER SIZE USED= 4096
 33.078 MB WRITTEN ON RESULTS FILE: pb2eck.rst

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME: pb2eck.db
 FOR POSSIBLE RESUME FROM THIS POINT

FINISH SOLUTION PROCESSING

***** ROUTINE COMPLETED ***** CP = 15991.960

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
 40416-2 VESLION-SUN4SAPAC 01:03:49 OCT 10, 1995 CP= 15991.980
 FOR SUPPORT CALL VESLION-SUN4SAPAC FAX

Time-history analysis of coupled system (presurizer spray line)

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

***** TIME-HISTORY POSTPROCESSOR (POST26) *****

ALL POST26 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS

MAXIMUM NUMBER OF VARIABLES= 43

VARIABLE 2 IS AT ELEMENT 143 NOISE= 1
 ITEM= F COMP= X NAME= FX

ITEM= F COMP= X NAME= FX
 VARIABLE 34 IS AT ELEMENT 167 NODE= 73
 ITEM= F COMP= Z NAME= FZ
 VARIABLE 35 IS AT ELEMENT 169 NODE= 131
 ITEM= F COMP= X NAME= FX
 VARIABLE 36 IS AT ELEMENT 170 NODE= 131
 ITEM= F COMP= Z NAME= FZ
 VARIABLE 37 IS AT ELEMENT 171 NODE= 133
 ITEM= F COMP= X NAME= FX
 VARIABLE 38 IS AT ELEMENT 172 NODE= 133
 ITEM= F COMP= Z NAME= FZ
 VARIABLE 39 IS AT ELEMENT 152 NODE= 14
 ITEM= F COMP= Y NAME= FY
 VARIABLE 40 IS AT ELEMENT 159 NODE= 53
 ITEM= F COMP= Y NAME= FY
 VARIABLE 41 IS AT ELEMENT 168 NODE= 61
 ITEM= F COMP= Y NAME= FY
 VARIABLE 42 IS AT ELEMENT 166 NODE= 78
 ITEM= F COMP= Y NAME= FY
 VARIABLE 43 IS AT ELEMENT 160 NODE= 79
 ITEM= F COMP= Y NAME= FY

STORAGE COMPLETE FOR 99 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES

VARI	TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	ESOL	143 F X	FX	-0.3470E-01	8.180	0.4599E-01	8.040
3	ESOL	144 F Y	FY	-0.1730E-01	8.860	0.1351E-01	8.500
4	ESOL	145 F Z	FZ	-0.4300E-01	8.220	0.4341E-01	8.500
5	ESOL	146 M X	MX	-0.7725E-01	8.860	0.7877E-01	8.500
6	ESOL	147 M Y	MY	-0.5760E-01	8.580	0.9392E-01	8.240
7	ESOL	148 M Z	MZ	-0.9912E-01	8.860	0.7616E-01	8.440
8	ESOL	173 F X	FX	-0.1981E-01	8.100	0.1741E-01	8.140
9	ESOL	174 F Y	FY	-0.1127E-01	8.600	0.1347E-01	8.480
10	ESOL	175 F Z	FZ	-0.5963E-02	8.100	0.4268E-02	8.480
11	ESOL	176 M X	MX	-0.4155E-01	8.140	0.3802E-01	8.360
12	ESOL	177 M Y	MY	-0.3087E-01	8.100	0.3161E-01	8.060
13	ESOL	178 M Z	MZ	-0.1178E-01	8.060	0.1591E-01	8.180
14	ESOL	179 F X	FX	-0.1314E-01	8.100	0.1205E-01	8.060
15	ESOL	180 F Y	FY	-0.4771E-02	8.480	0.5547E-02	8.080
16	ESOL	181 F Z	FZ	-0.3106E-02	9.420	0.3451E-02	9.240
17	ESOL	182 M X	MX	-0.3072E-02	9.420	0.3451E-02	9.240
18	ESOL	183 M Y	MY	-0.3971E-02	8.180	0.2788E-02	8.060
19	ESOL	184 M Z	MZ	-0.1678E-01	8.060	0.1881E-01	8.100
20	ESOL	149 F X	FX	-0.8961E-01	8.040	0.9728E-01	9.020
21	ESOL	150 F Z	FZ	-0.1139	8.500	0.1067	8.180
22	ESOL	151 F Y	FY	-0.1221	8.540	0.1241	8.200
23	ESOL	153 F X	FX	-0.1184	8.300	0.1001	8.140
24	ESOL	154 F Z	FZ	-0.7655E-01	8.500	0.8142E-01	8.180
25	ESOL	155 F Y	FY	-0.1005	8.180	0.1040	8.500
26	ESOL	156 F X	FX	-0.1909	8.440	0.1968	8.060
27	ESOL	157 F Y	FY	-0.2137E-01	8.160	0.1421E-01	8.320
28	ESOL	158 F Z	FZ	-0.4665E-01	8.140	0.3774E-01	8.600
29	ESOL	161 F X	FX	-0.2119E-01	8.100	0.2179E-01	8.140
30	ESOL	162 F Z	FZ	-0.5201E-02	9.240	0.5372E-02	8.100
31	ESOL	163 F Y	FY	-0.8370E-02	8.460	0.1465E-01	8.060
32	ESOL	164 F Z	FZ	-0.1133E-01	8.060	0.1209E-01	8.440
33	ESOL	165 F X	FX	-0.2390	8.100	0.1811	8.480
34	ESOL	167 F Z	FZ	-0.3672E-01	8.060	0.3322E-01	8.440
35	ESOL	169 F X	FX	-0.1043	8.100	0.1216	8.140
36	ESOL	170 F Z	FZ	-0.1366E-01	8.100	0.1715E-01	8.140
37	ESOL	171 F X	FX	-0.1293	8.100	0.1448	8.140
38	ESOL	172 F Z	FZ	-0.5819E-02	8.460	0.5023E-02	8.100
39	ESOL	152 F Y	FY	-0.7178E-03	8.860	0.5969E-03	8.440
40	ESOL	159 F Y	FY	-0.9872E-03	8.180	0.8078E-03	8.320
41	ESOL	168 F Y	FY	-0.5443E-02	8.180	0.4911E-02	8.300
42	ESOL	166 F Y	FY	-0.1023E-02	9.480	0.1151E-02	9.560
43	ESOL	160 F Y	FY	-0.4025E-03	8.360	0.4451E-03	8.140

POST26 SUMMARY OF VARIABLE EXTREME VALUES

VARI	TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	ESOL	143 F X	FX	-0.3470E-01	8.180	0.4599E-01	8.040
3	ESOL	144 F Y	FY	-0.1730E-01	8.860	0.1351E-01	8.500
4	ESOL	145 F Z	FZ	-0.4300E-01	8.220	0.4341E-01	8.500
5	ESOL	146 M X	MX	-0.7725E-01	8.860	0.7877E-01	8.500
6	ESOL	147 M Y	MY	-0.5760E-01	8.580	0.9392E-01	8.240
7	ESOL	148 M Z	MZ	-0.9912E-01	8.860	0.7616E-01	8.440
8	ESOL	173 F X	FX	-0.1981E-01	8.100	0.1741E-01	8.140
9	ESOL	174 F Y	FY	-0.1127E-01	8.600	0.1347E-01	8.480

10	ESOL	175 F Z	FZ	-0.5963E-02	8.100	0.4268E-02	8.480
11	ESOL	176 M X	MX	-0.4155E-01	8.140	0.3802E-01	8.360
12	ESOL	177 M Y	MY	-0.3087E-01	8.100	0.3161E-01	8.060
13	ESOL	178 M Z	MZ	-0.1178E-01	8.060	0.1591E-01	8.180
14	ESOL	179 F X	FX	-0.1314E-01	8.100	0.1205E-01	8.060
15	ESOL	180 F Y	FY	-0.4771E-02	8.480	0.5547E-02	8.080
16	ESOL	181 F Z	FZ	-0.3106E-02	9.420	0.3451E-02	9.240
17	ESOL	182 M X	MX	-0.3072E-02	9.420	0.3451E-02	9.240
18	ESOL	183 M Y	MY	-0.3971E-02	8.180	0.2788E-02	8.060
19	ESOL	184 M Z	MZ	-0.1678E-01	8.060	0.1881E-01	8.100
20	ESOL	149 F X	FX	-0.8961E-01	8.040	0.9728E-01	9.020
21	ESOL	150 F Z	FZ	-0.1139	8.500	0.1067	8.180
22	ESOL	151 F Y	FY	-0.1221	8.540	0.1241	8.200
23	ESOL	153 F X	FX	-0.1184	8.300	0.1001	8.140
24	ESOL	154 F Z	FZ	-0.7655E-01	8.500	0.8142E-01	8.180
25	ESOL	155 F Y	FY	-0.1005	8.180	0.1040	8.500
26	ESOL	156 F X	FX	-0.1909	8.440	0.1968	8.060
27	ESOL	157 F Y	FY	-0.2137E-01	8.160	0.1421E-01	8.320
28	ESOL	158 F Z	FZ	-0.4665E-01	8.140	0.3774E-01	8.600
29	ESOL	161 F X	FX	-0.2119E-01	8.100	0.2179E-01	8.140
30	ESOL	162 F Z	FZ	-0.5201E-02	9.240	0.5372E-02	8.100
31	ESOL	163 F Y	FY	-0.8370E-02	8.460	0.1465E-01	8.060
32	ESOL	164 F Z	FZ	-0.1133E-01	8.060	0.1209E-01	8.440
33	ESOL	165 F X	FX	-0.2390	8.100	0.1811	8.480
34	ESOL	167 F Z	FZ	-0.3672E-01	8.060	0.3322E-01	8.440
35	ESOL	169 F X	FX	-0.1043	8.100	0.1216	8.140
36	ESOL	170 F Z	FZ	-0.1366E-01	8.100	0.1715E-01	8.140
37	ESOL	171 F X	FX	-0.1293	8.100	0.1448	8.140
38	ESOL	172 F Z	FZ	-0.5819E-02	8.460	0.5023E-02	8.100
39	ESOL	152 F Y	FY	-0.7178E-03	8.860	0.5969E-03	8.440
40	ESOL	159 F Y	FY	-0.9872E-03	8.180	0.8078E-03	8.320
41	ESOL	168 F Y	FY	-0.5443E-02	8.180	0.4911E-02	8.300
42	ESOL	166 F Y	FY	-0.1023E-02	9.480	0.1151E-02	9.560
43	ESOL	160 F Y	FY	-0.4025E-03	8.360	0.4451E-03	8.140

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2ecx.db
FOR POSSIBLE RESUME FROM THIS POINT

***** ROUTINE COMPLETED ***** CP = 16004.750

***** ANSYS SOLUTION ROUTINE *****

PERFORM AN EXPANSION PASS

EXPAND 100 SOLUTIONS
IN THE RANGE FROM 0.50000 TO 0.60000
CALCULATE ELEMENT RESULTS AS WELL AS THE NODAL DOP SOLUTIONPRINT BASH ITEMS WITH A FREQUENCY OF NONE
FOR ALL APPLICABLE ENTITIES

***** ANSYS SOLVE COMMAND *****

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUN4SPARC 03:04:22 OCT 10, 1995 CP= 16004.780
FOR SUPPORT CALL PHONE FAX

Time-history analysis of coupled system (presurizer spray line)

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

SOLUTION OPTION

PROBLEM DIMENSIONALITY 3-D
 DEGREE OF FREEDOM UX UY UZ ROTX ROTY ROTZ
 ANALYSIS TYPE TRANSIENT
 SOLUTION METHOD REDUCED
 EXPANSION PASS ON

LOAD STEP OPTIONS

LOAD STEP NUMBER 1
 NUMBER OF SOLUTIONS TO BE EXPANDED 100
 RANGE 0.50000 TO 0.60000

ELEMENT RESULTS CALCULATION ON

PRINT OUTPUT CONTROLS
ITEM FREQUENCY COMPONENTBASH NONE
DATABASE OUTPUT CONTROLS
ITEM FREQUENCY COMPONENT

NSOL LAST

*** ELEMENT RESULT CALCULATION TIMES
TYPE NUMBER ENAME TOTAL CP AVE CP

1 120 PIPE16 0.549 0.005
 2 22 PIPE18 0.233 0.010
 3 10 COMBIN14 0.020 0.002
 4 12 COMBIN14 0.020 0.002
 5 11 COMBIN14 0.021 0.002
 6 3 COMBIN14 0.000 0.000
 7 3 COMBIN14 0.010 0.003
 8 3 COMBIN14 0.000 0.000
 30 31 MASS21 0.050 0.002
 71 12 BEAM4 0.060 0.005
 72 5 MASS21 0.011 0.002

*** NORMAL LOAD CALCULATION TIMES
 TYPE NUMBER ENAME TOTAL CP AVE CP
 1 120 PIPE16 0.068 0.001
 2 22 PIPE18 0.020 0.001
 3 10 COMBIN14 0.020 0.002
 4 12 COMBIN14 0.000 0.000
 5 11 COMBIN14 0.000 0.000
 6 3 COMBIN14 0.000 0.000
 7 3 COMBIN14 0.010 0.003
 8 3 COMBIN14 0.000 0.000
 30 31 MASS21 0.000 0.000
 71 12 BEAM4 0.000 0.000
 72 5 MASS21 0.010 0.002

*** ANSYS BINARY FILE STATISTICS
 SUFFIX SIZE USED 409F
 31.400 MB WRITTEN ON RESULTS FILE, pb2eck.rst
 ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME, pb2eck.db
 FOR POSSIBLE RESUME FROM THIS POINT

FINISH SOLUTION PROCESSING

***** ROUTINE COMPLETED ***** CP = 16220.170

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
 40416-2 VERSION=SUN4SPARC 03.14.10 OCT 10, 1995 CP= 16220.190
 FOR SUPPORT CALL PHONE FAX

Time-history analysis of coupled system (presurizer spray line)

***ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY**

***** TIME-HISTORY POSTPROCESSOR (POST26) *****

ALL POST26 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS

MAXIMUM NUMBER OF VARIABLES= 43

VARIABLE 2 IS AT ELEMENT 143 NODE= 1
 ITEM= F COMP= X NAME= FX
 VARIABLE 3 IS AT ELEMENT 144 NODE= 1
 ITEM= F COMP= Y NAME= FY
 VARIABLE 4 IS AT ELEMENT 145 NODE= 1
 ITEM= F COMP= Z NAME= FZ
 VARIABLE 5 IS AT ELEMENT 146 NODE= 1
 ITEM= M COMP= X NAME= MX
 VARIABLE 6 IS AT ELEMENT 147 NODE= 1
 ITEM= M COMP= Y NAME= MY
 VARIABLE 7 IS AT ELEMENT 148 NODE= 1
 ITEM= M COMP= Z NAME= MZ
 VARIABLE 8 IS AT ELEMENT 173 NODE= 87
 ITEM= F COMP= X NAME= FX
 VARIABLE 9 IS AT ELEMENT 174 NODE= 87
 ITEM= F COMP= Y NAME= FY
 VARIABLE 10 IS AT ELEMENT 175 NODE= 87
 ITEM= F COMP= Z NAME= FZ
 VARIABLE 11 IS AT ELEMENT 176 NODE= 87
 ITEM= M COMP= X NAME= MX
 VARIABLE 12 IS AT ELEMENT 177 NODE= 87
 ITEM= M COMP= Y NAME= MY

VARIABLE 13 IS AT ELEMENT 178 NODE= 87
 ITEM= M COMP= Z NAME= MZ
 VARIABLE 14 IS AT ELEMENT 179 NODE= 130
 ITEM= F COMP= X NAME= FX
 VARIABLE 15 IS AT ELEMENT 180 NODE= 130
 ITEM= F COMP= Y NAME= FY
 VARIABLE 16 IS AT ELEMENT 181 NODE= 130
 ITEM= F COMP= Z NAME= FZ
 VARIABLE 17 IS AT ELEMENT 182 NODE= 130
 ITEM= M COMP= X NAME= MX
 VARIABLE 18 IS AT ELEMENT 183 NODE= 130
 ITEM= M COMP= Y NAME= MY
 VARIABLE 19 IS AT ELEMENT 184 NODE= 130
 ITEM= M COMP= Z NAME= MZ
 VARIABLE 20 IS AT ELEMENT 149 NODE= 9
 ITEM= F COMP= X NAME= FX
 VARIABLE 21 IS AT ELEMENT 150 NODE= 10
 ITEM= F COMP= Z NAME= FZ
 VARIABLE 22 IS AT ELEMENT 151 NODE= 15
 ITEM= F COMP= Y NAME= FY
 VARIABLE 23 IS AT ELEMENT 153 NODE= 23
 ITEM= F COMP= X NAME= FX
 VARIABLE 24 IS AT ELEMENT 154 NODE= 28
 ITEM= F COMP= Z NAME= FZ
 VARIABLE 25 IS AT ELEMENT 155 NODE= 37
 ITEM= F COMP= Y NAME= FY
 VARIABLE 26 IS AT ELEMENT 156 NODE= 39
 ITEM= F COMP= X NAME= FX
 VARIABLE 27 IS AT ELEMENT 157 NODE= 44
 ITEM= F COMP= Y NAME= FY
 VARIABLE 28 IS AT ELEMENT 158 NODE= 45
 ITEM= F COMP= Z NAME= FZ
 VARIABLE 29 IS AT ELEMENT 161 NODE= 124
 ITEM= F COMP= X NAME= FX
 VARIABLE 30 IS AT ELEMENT 162 NODE= 129
 ITEM= F COMP= Z NAME= FZ
 VARIABLE 31 IS AT ELEMENT 163 NODE= 52
 ITEM= F COMP= Y NAME= FY
 VARIABLE 32 IS AT ELEMENT 164 NODE= 54
 ITEM= F COMP= Z NAME= FZ
 VARIABLE 33 IS AT ELEMENT 165 NODE= 57
 ITEM= F COMP= X NAME= FX
 VARIABLE 34 IS AT ELEMENT 167 NODE= 73
 ITEM= F COMP= Z NAME= FZ
 VARIABLE 35 IS AT ELEMENT 169 NODE= 131
 ITEM= F COMP= X NAME= FX
 VARIABLE 36 IS AT ELEMENT 170 NODE= 131
 ITEM= F COMP= Z NAME= FZ
 VARIABLE 37 IS AT ELEMENT 171 NODE= 133
 ITEM= F COMP= X NAME= FX
 VARIABLE 38 IS AT ELEMENT 172 NODE= 133
 ITEM= F COMP= Z NAME= FZ
 VARIABLE 39 IS AT ELEMENT 152 NODE= 14
 ITEM= F COMP= Y NAME= FY
 VARIABLE 40 IS AT ELEMENT 159 NODE= 53
 ITEM= F COMP= X NAME= FX
 VARIABLE 41 IS AT ELEMENT 166 NODE= 61
 ITEM= F COMP= Y NAME= FY
 VARIABLE 42 IS AT ELEMENT 166 NODE= 78
 ITEM= F COMP= Y NAME= FY

VARIABLE 43 IS AT ELEMENT 160 NODE= 79
ITEM= F COMP= Y NAME= FY

STORAGE COMPLETE FOR 100 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES

Table with columns: VARI TYPE, IDENTIFIERS, NAME, MINIMUM, AT TIME, MAXIMUM, AT TIME. Contains 43 rows of data for various elements and components.

POST26 SUMMARY OF VARIABLE EXTREME VALUES

Table with columns: VARI TYPE, IDENTIFIERS, NAME, MINIMUM, AT TIME, MAXIMUM, AT TIME. Contains 43 rows of data for various elements and components.

Table with 4 columns: ID, Component, Type, Value. Contains 5 rows of data for elements 39-43.

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2ecx.db
FOR POSSIBLE RESUME FROM THIS POINT

***** ROUTINE COMPLETED ***** CP = 16232.370

***** ANSYS SOLUTION ROUTINE *****

PERFORM AN EXPANSION PASS

EXPAND 100 SOLUTIONS
IN THE RANGE FROM 0.60000 TO 0.70000
CALCULATE ELEMENT RESULTS AS WELL AS THE NODAL DDF SOLUTION

PRINT BASH ITEMS WITH A FREQUENCY OF NONE
FOR ALL APPLICABLE ENTITIES

***** ANSYS SOLVE COMMAND *****

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUN4SPARC 03:14:42 OCT 10, 1995 CP= 16232.400
FOR SUPPORT CALL PHONE FAX

Time-history analysis of coupled system (presurizer spray line)

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

SOLUTION OPTIONS

PROBLEM DIMENSIONALITY 3-D
DEGREES OF FREEDOM UX UY UZ ROTX ROTY ROTZ
ANALYSIS TYPE TRANSIENT
SOLUTION METHOD REDUCED
EXPANSION PASS ON

LOAD STEP OPTIONS

LOAD STEP NUMBER 1
NUMBER OF SOLUTIONS TO BE EXPANDED 100
RANGE 0.60000 TO 0.70000
ELEMENT RESULTS CALCULATION ON

PRINT OUTPUT CONTROLS
ITEM FREQUENCY COMPONENT
BASH NONE
DATABASE OUTPUT CONTROLS
ITEM FREQUENCY COMPONENT
NODL LAST

*** ELEMENT RESULT CALCULATION TIMES

Table with columns: TYPE, NUMBER, ENAME, TOTAL CP, AVE CP. Contains 8 rows of data for element calculations.

*** NODAL LOAD CALCULATION TIMES

Table with columns: TYPE, NUMBER, ENAME, TOTAL CP, AVE CP. Contains 8 rows of data for nodal load calculations.

35	ESOL	169	F	X	FX	-0.1019	16.20	0.7815E-01	16.64
36	ESOL	170	F	Z	FZ	-0.1407E-01	16.38	0.1280E-01	17.32
37	ESOL	171	F	X	FX	-0.9381E-01	16.20	0.8445E-01	16.64
38	ESOL	172	F	Z	FZ	-0.5746E-02	16.98	0.5964E-02	17.42
39	ESOL	152	F	Y	FY	-0.5966E-03	16.62	0.5333E-03	16.46
40	ESOL	159	F	Y	FY	-0.6129E-03	16.76	0.6724E-03	16.34
41	ESOL	168	F	Y	FY	-0.3499E-02	16.76	0.3918E-02	16.14
42	ESOL	166	F	Y	FY	-0.1595E-02	16.06	0.1290E-02	16.62
43	ESOL	160	F	Y	FY	-0.4407E-03	16.30	0.4842E-03	16.74

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2ecx.db
FOR POSSIBLE RESUME FROM THIS POINT

***** ROUTINE COMPLETED ***** CP = 16908.210

***** ANSYS SOLUTION ROUTINE *****

PERFORM AN EXPANSION PASS

EXPAND 100 SOLUTIONS
IN THE RANGE FROM 0.90000 TO 1.0000
CALCULATE ELEMENT RESULTS AS WELL AS THE NODAL DOF SOLUTION

PRINT BASIC ITEMS WITH A FREQUENCY OF NONE
FOR ALL APPLICABLE ENTITIES

***** ANSYS SOLVE COMMAND *****

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUN4SPARC 03:43:08 OCT 10, 1995 CP= 16908.240
FOR SUPPORT CALL PHONE FAX

Time-history analysis of coupled system (presurizer spray line)

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

SOLUTION OPTIONS

PROBLEM DIMENSIONALITY3-D
DEGREES OF FREEDOM*X UY UZ ROTX ROTY ROTZ
ANALYSIS TYPETRANSIENT
SOLUTION METHODREDUCED
EXPANSION PASSON

LOAD STEP OPTIONS

LOAD STEP NUMBER1
NUMBER OF SOLUTIONS TO BE EXPANDED100
RANGE0.90000 TO 1.0000
ELEMENT RESULTS CALCULATIONON
PRINT OUTPUT CONTROLS
ITEM FREQUENCY COMPONENT
BASIC NONE
DATABASE OUTPUT CONTROLS
ITEM FREQUENCY COMPONENT
NSOL LAST

*** ELEMENT RESULT CALCULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	120	PIPE16	0.538	0.004
2	22	PIPE18	0.199	0.009
3	10	COMBIN14	0.010	0.001
4	12	COMBIN14	0.021	0.002
5	11	COMBIN14	0.021	0.002
6	3	COMBIN14	0.010	0.003
7	3	COMBIN14	0.011	0.004
8	3	COMBIN14	0.000	0.000
30	31	MASS21	0.052	0.002
71	12	BEAM4	0.080	0.007
72	5	MASS21	0.000	0.000

*** NODAL LOAD CALCULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	120	PIPE16	0.068	0.001
2	22	PIPE18	0.021	0.001
3	10	COMBIN14	0.000	0.000
4	12	COMBIN14	0.000	0.000
5	11	COMBIN14	0.000	0.000
6	3	COMBIN14	0.000	0.000
7	3	COMBIN14	0.000	0.000
8	3	COMBIN14	0.000	0.000
30	31	MASS21	0.010	0.000

71	12	BEAM4	0.000	0.000
72	5	MASS21	0.000	0.000

*** ANSYS BINARY FILE STATISTICS

BUFFER SIZE USED= 4096
33.406 MB WRITTEN ON RESULTS FILE: pb2ecx.rst

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2ecx.db
FOR POSSIBLE RESUME FROM THIS POINT

FINISH SOLUTION PROCESSING

***** ROUTINE COMPLETED ***** CP = 17124.150

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUN4SPARC 03:51:14 OCT 10, 1995 CP= 17124.180
FOR SUPPORT CALL PHONE FAX

Time-history analysis of coupled system (presurizer spray line)

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

***** TIME-HISTORY POSTPROCESSOR (POST26) *****

ALL POST26 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS

MAXIMUM NUMBER OF VARIABLES= 43

VARIABLE 2	IS AT ELEMENT	143	NODE=	1
ITEM= F	COMP= X		NAME= FX	
VARIABLE 3	IS AT ELEMENT	144	NODE=	1
ITEM= F	COMP= Y		NAME= FY	
VARIABLE 4	IS AT ELEMENT	145	NODE=	1
ITEM= F	COMP= Z		NAME= FZ	
VARIABLE 5	IS AT ELEMENT	146	NODE=	1
ITEM= M	COMP= X		NAME= MX	
VARIABLE 6	IS AT ELEMENT	147	NODE=	1
ITEM= M	COMP= Y		NAME= MY	
VARIABLE 7	IS AT ELEMENT	148	NODE=	1
ITEM= M	COMP= Z		NAME= MZ	
VARIABLE 8	IS AT ELEMENT	173	NODE=	87
ITEM= F	COMP= X		NAME= FX	
VARIABLE 9	IS AT ELEMENT	174	NODE=	87
ITEM= F	COMP= Y		NAME= FY	
VARIABLE 10	IS AT ELEMENT	175	NODE=	87
ITEM= F	COMP= Z		NAME= FZ	
VARIABLE 11	IS AT ELEMENT	176	NODE=	87
ITEM= M	COMP= X		NAME= MX	
VARIABLE 12	IS AT ELEMENT	177	NODE=	87
ITEM= M	COMP= Y		NAME= MY	
VARIABLE 13	IS AT ELEMENT	178	NODE=	87
ITEM= M	COMP= Z		NAME= MZ	
VARIABLE 14	IS AT ELEMENT	179	NODE=	130
ITEM= F	COMP= X		NAME= FX	
VARIABLE 15	IS AT ELEMENT	180	NODE=	130
ITEM= F	COMP= Y		NAME= FY	
VARIABLE 16	IS AT ELEMENT	181	NODE=	130
ITEM= F	COMP= Z		NAME= FZ	
VARIABLE 17	IS AT ELEMENT	182	NODE=	130
ITEM= M	COMP= X		NAME= MX	
VARIABLE 18	IS AT ELEMENT	183	NODE=	130
ITEM= M	COMP= Y		NAME= MY	
VARIABLE 19	IS AT ELEMENT	184	NODE=	130
ITEM= M	COMP= Z		NAME= MZ	
VARIABLE 20	IS AT ELEMENT	149	NODE=	9
ITEM= F	COMP= X		NAME= FX	

FOR ALL APPLICABLE ENTITIES

***** ANSYS SOLVE COMMAND *****

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
 40416-2 VERSION=SUN4SPARC 03:51:43 OCT 10, 1995 CP= 17136.920
 FOR SUPPORT CALL PHONE FAX

Time-history analysis of coupled system (presurizer spray line)

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

SOLUTION OPTIONS

PROBLEM DIMENSIONALITY 3-D
 DEGREES OF FREEDOM UK UY UZ ROTX ROTY ROTZ
 ANALYSIS TYPE TRANSIENT
 SOLUTION METHOD REDUCED
 EXPANSION PASS ON

LOAD STEP OPTIONS

LOAD STEP NUMBER 1
 NUMBER OF SOLUTIONS TO BE EXPANDED 100 TO 0.10000
 ELEMENT RESULTS CALCULATION ON
 PRINT OUTPUT CONTROLS ON
 PLOT FREQUENCY COMPONENT
 MASS NAME
 ITEM FREQUENCY COMPONENT
 NSOL LAST

DATABASE OUTPUT CONTROLS

ITEM FREQUENCY COMPONENT
 NSOL LAST

*** ELEMENT RESULT CALCULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	120	PIPE16	0.601	0.005
2	22	PIPE18	0.169	0.008
3	10	COMBIN14	0.010	0.001
4	12	COMBIN14	0.010	0.001
5	11	COMBIN14	0.011	0.001
6	3	COMBIN14	0.000	0.000
7	3	COMBIN14	0.000	0.000
8	3	COMBIN14	0.010	0.001
30	31	MASS21	0.011	0.000
71	12	BEAM4	0.061	0.005
72	5	MASS21	0.000	0.000

*** NODAL LOAD CALCULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	120	PIPE16	0.069	0.001
2	22	PIPE18	0.010	0.000
3	10	COMBIN14	0.000	0.000
4	12	COMBIN14	0.000	0.000
5	11	COMBIN14	0.010	0.001
6	3	COMBIN14	0.000	0.000
7	3	COMBIN14	0.000	0.000
8	3	COMBIN14	0.010	0.001
30	31	MASS21	0.020	0.001
71	12	BEAM4	0.010	0.001
72	5	MASS21	0.000	0.000

*** ANSYS BINARY FILE STATISTICS

BUFFER SIZE USED= 4096
 33.074 MB WRITTEN ON RESULTS FILE: pb2ecx.rst

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME: pb2ecx.db.
 FOR POSSIBLE RESUME FROM THIS POINT

FINISH SOLUTION PROCESSING

***** ROUTINE COMPLETED ***** CP = 17350.410

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
 40416-2 VERSION=SUN4SPARC 03:59:16 OCT 10, 1995 CP= 17350.420
 FOR SUPPORT CALL PHONE FAX

Time-history analysis of coupled system (presurizer spray line)

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

***** TIME-HISTORY POSTPROCESSOR (POST26) *****

ALL POST26 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS

MAXIMUM NUMBER OF VARIABLES= 30

VARIABLE	ITEM	IS AT ELEMENT	NAME	NOISE
VARIABLE 2	1	IS AT ELEMENT	NAME= FX	1
VARIABLE 3	1	IS AT ELEMENT	NAME= FY	1
VARIABLE 4	1	IS AT ELEMENT	NAME= MX	1
VARIABLE 5	1	IS AT ELEMENT	NAME= MY	1
VARIABLE 6	8	IS AT ELEMENT	NAME= FX	6
VARIABLE 7	8	IS AT ELEMENT	NAME= MY	6
VARIABLE 8	12	IS AT ELEMENT	NAME= FX	10
VARIABLE 9	12	IS AT ELEMENT	NAME= MY	10
VARIABLE 10	12	IS AT ELEMENT	NAME= MX	10
VARIABLE 11	12	IS AT ELEMENT	NAME= MY	10
VARIABLE 12	22	IS AT ELEMENT	NAME= FX	15
VARIABLE 13	22	IS AT ELEMENT	NAME= MY	15
VARIABLE 14	32	IS AT ELEMENT	NAME= MX	23
VARIABLE 15	32	IS AT ELEMENT	NAME= MY	23
VARIABLE 16	48	IS AT ELEMENT	NAME= FX	35
VARIABLE 17	52	IS AT ELEMENT	NAME= MY	39
VARIABLE 18	52	IS AT ELEMENT	NAME= MX	39
VARIABLE 19	58	IS AT ELEMENT	NAME= FX	45
VARIABLE 20	58	IS AT ELEMENT	NAME= MY	45
VARIABLE 21	71	IS AT ELEMENT	NAME= MX	56
VARIABLE 22	86	IS AT ELEMENT	NAME= MY	72
VARIABLE 23	107	IS AT ELEMENT	NAME= FX	93
VARIABLE 24	114	IS AT ELEMENT	NAME= MY	102
VARIABLE 25	114	IS AT ELEMENT	NAME= MX	102
VARIABLE 26	117	IS AT ELEMENT	NAME= FX	103
VARIABLE 27	123	IS AT ELEMENT	NAME= MY	112
VARIABLE 28	125	IS AT ELEMENT	NAME= MX	101
VARIABLE 29	125	IS AT ELEMENT	NAME= MY	101
VARIABLE 30	139	IS AT ELEMENT	NAME= FX	65

MAXIMUM NUMBER OF VARIABLES= 10

1	VARIABLE 2	IS AT ELEMENT	1	NODE=
1	ITEM= F	COMP= X	NAME= FX	
1	VARIABLE 3	IS AT ELEMENT	1	NODE=
1	ITEM= F	COMP= Y	NAME= FY	
1	VARIABLE 4	IS AT ELEMENT	1	NODE=
1	ITEM= M	COMP= X	NAME= MX	
1	VARIABLE 5	IS AT ELEMENT	1	NODE=
1	ITEM= M	COMP= Y	NAME= MY	
6	VARIABLE 6	IS AT ELEMENT	6	NODE=
6	ITEM= F	COMP= X	NAME= FX	
6	VARIABLE 7	IS AT ELEMENT	6	NODE=
6	ITEM= M	COMP= Z	NAME= MZ	
10	VARIABLE 8	IS AT ELEMENT	12	NODE=
10	ITEM= F	COMP= X	NAME= FX	
10	VARIABLE 9	IS AT ELEMENT	12	NODE=
10	ITEM= F	COMP= Z	NAME= FZ	
10	VARIABLE 10	IS AT ELEMENT	12	NODE=
10	ITEM= M	COMP= X	NAME= MX	
10	VARIABLE 11	IS AT ELEMENT	12	NODE=
10	ITEM= M	COMP= Z	NAME= MZ	
15	VARIABLE 12	IS AT ELEMENT	22	NODE=
15	ITEM= F	COMP= Z	NAME= FZ	
15	VARIABLE 13	IS AT ELEMENT	22	NODE=
15	ITEM= M	COMP= Z	NAME= MZ	
23	VARIABLE 14	IS AT ELEMENT	32	NODE=
23	ITEM= M	COMP= X	NAME= MX	
23	VARIABLE 15	IS AT ELEMENT	32	NODE=
23	ITEM= M	COMP= Z	NAME= MZ	
35	VARIABLE 16	IS AT ELEMENT	48	NODE=
35	ITEM= F	COMP= Y	NAME= FY	
39	VARIABLE 17	IS AT ELEMENT	52	NODE=
39	ITEM= F	COMP= X	NAME= FX	
39	VARIABLE 18	IS AT ELEMENT	52	NODE=
39	ITEM= M	COMP= Y	NAME= MY	
45	VARIABLE 19	IS AT ELEMENT	58	NODE=
45	ITEM= F	COMP= Z	NAME= FZ	
45	VARIABLE 20	IS AT ELEMENT	58	NODE=
45	ITEM= M	COMP= Z	NAME= MZ	
56	VARIABLE 21	IS AT ELEMENT	71	NODE=
56	ITEM= F	COMP= X	NAME= FX	
72	VARIABLE 22	IS AT ELEMENT	86	NODE=
72	ITEM= F	COMP= X	NAME= FX	
93	VARIABLE 23	IS AT ELEMENT	107	NODE=
93	ITEM= M	COMP= X	NAME= MX	
102	VARIABLE 24	IS AT ELEMENT	114	NODE=
102	ITEM= F	COMP= X	NAME= FX	
102	VARIABLE 25	IS AT ELEMENT	114	NODE=
102	ITEM= F	COMP= Z	NAME= FZ	
103	VARIABLE 26	IS AT ELEMENT	117	NODE=
103	ITEM= F	COMP= X	NAME= FX	
112	VARIABLE 27	IS AT ELEMENT	123	NODE=
112	ITEM= M	COMP= Y	NAME= MY	
101	VARIABLE 28	IS AT ELEMENT	125	NODE=
101	ITEM= F	COMP= X	NAME= FX	
101	VARIABLE 29	IS AT ELEMENT	125	NODE=
101	ITEM= M	COMP= Y	NAME= MY	
65	VARIABLE 30	IS AT ELEMENT	139	NODE=
65	ITEM= F	COMP= X	NAME= FX	

STORAGE COMPLETE FOR 99 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES

VARI TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	ESOL	1 F	X	FX	-0.5318E-01	3.940
2	ESOL	1 M	Y	FY	-0.1574E-01	3.840
2	ESOL	1 M	X	MX	-0.1185E-01	3.600
5	ESOL	1 M	Y	FY	-0.1185E-01	3.750
5	ESOL	1 M	X	MX	-0.1492E-01	3.880
6	ESOL	8 M	X	FX	-0.5802E-01	3.980
6	ESOL	8 M	Y	FY	-0.3922E-01	3.780
6	ESOL	8 M	Z	FZ	-0.1141E-01	3.980
6	ESOL	12 M	X	FX	-0.1403E-01	3.680
6	ESOL	12 M	Y	FY	-0.2445E-01	3.950
6	ESOL	12 M	Z	FZ	-0.3644E-01	3.780
6	ESOL	22 M	X	FX	-0.1884E-01	3.640
6	ESOL	22 M	Y	FY	-0.3150E-01	3.760
6	ESOL	22 M	Z	FZ	-0.1078E-01	3.880
6	ESOL	32 M	X	FX	-0.2133E-01	3.460
6	ESOL	32 M	Y	FY	-0.4191E-01	3.660
6	ESOL	48 M	X	FX	-0.1115E-01	3.950
6	ESOL	52 M	Y	FY	-0.4907E-01	3.600
6	ESOL	52 M	Z	FZ	-0.2355E-01	3.860
10	ESOL	58 M	X	FX	-0.1000E-01	4.000
10	ESOL	58 M	Y	FY	-0.2597E-01	3.960
10	ESOL	71 M	X	FX	-0.1263E-01	3.960
10	ESOL	71 M	Y	FY	-0.2867E-01	3.580
10	ESOL	107 M	X	MX	-0.8440E-01	3.660
10	ESOL	114 M	X	FX	-0.2414E-01	3.600
10	ESOL	114 M	Y	FY	-0.1128E-01	3.840
10	ESOL	117 M	X	FX	-0.3141E-02	3.960
10	ESOL	123 M	X	FX	-0.3547E-01	3.660
10	ESOL	125 M	Y	FY	-0.4055E-01	3.660
10	ESOL	125 M	Z	FZ	-0.6350E-01	3.420
10	ESOL	139 M	X	FX	-0.6350E-01	3.420

POST76 SUMMARY OF VARIABLE EXTREME VALUES

VARI TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	ESOL	1 F	X	FX	-0.5218E-01	3.940
2	ESOL	1 F	Y	FY	-0.1574E-01	3.840
2	ESOL	1 M	X	MX	-0.3345E-01	3.840
5	ESOL	1 M	Y	FY	-0.1492E-01	3.720
5	ESOL	1 M	X	MX	-0.5802E-01	3.980
6	ESOL	8 M	X	FX	-0.3922E-01	3.780
6	ESOL	8 M	Z	FZ	-0.1241E-01	3.780
6	ESOL	12 M	X	FX	-0.1403E-01	3.680
6	ESOL	12 M	Y	FY	-0.2445E-01	3.900
6	ESOL	12 M	Z	FZ	-0.3644E-01	3.780
6	ESOL	22 M	X	FX	-0.1884E-01	3.640
6	ESOL	22 M	Y	FY	-0.3150E-01	3.760
6	ESOL	22 M	Z	FZ	-0.1078E-01	3.880
6	ESOL	32 M	X	FX	-0.2133E-01	3.460
6	ESOL	32 M	Y	FY	-0.4191E-01	3.660
6	ESOL	48 M	X	FX	-0.1115E-01	3.950
6	ESOL	52 M	Y	FY	-0.4907E-01	3.600
6	ESOL	52 M	Z	FZ	-0.2355E-01	3.860
10	ESOL	58 M	X	FX	-0.1000E-01	4.000
10	ESOL	58 M	Y	FY	-0.2597E-01	3.960
10	ESOL	71 M	X	FX	-0.1263E-01	3.960
10	ESOL	71 M	Y	FY	-0.2867E-01	3.580
10	ESOL	107 M	X	MX	-0.8440E-01	3.660
10	ESOL	114 M	X	FX	-0.2414E-01	3.600
10	ESOL	114 M	Y	FY	-0.1128E-01	3.840
10	ESOL	117 M	X	FX	-0.3141E-02	3.960
10	ESOL	123 M	X	FX	-0.3547E-01	3.660
10	ESOL	125 M	Y	FY	-0.4055E-01	3.660
10	ESOL	125 M	Z	FZ	-0.6350E-01	3.420
10	ESOL	139 M	X	FX	-0.6350E-01	3.420

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2eck.db FOR POSSIBLE RESUME FROM THIS POINT

***** ROUTINE COMPLETED ***** CP = 17582.091

***** ANSYS SOLUTION ROUTINE *****

PERFORM AN EXPANSION PASS

EXPAND 100 SOLUTIONS IN THE RANGE FROM 0.20000 TO 0.30000 CALCULATE ELEMENT RESULTS AS WELL AS THE GLOBAL IDOF SOLUTION PRINT BASIC ITEMS WITH A FREQUENCY OF NONE FOR ALL APPLICABLE ENTITIES

***** ANSYS SOLVE COMMAND *****

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****

40416-2 VERSION=UN4SPARC 04.07.41 OCT 10, 1995 CP= 17582.320 PHONE FAX

Time-history analysis of coupled system (presurizer spray line)

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

SOLUTION OPTIONS

PROBLEM DIMENSIONALITY... 3-D DEGREES OF FREEDOM... UK UY UZ ROTX ROTY ROTZ ANALYSIS TYPE... TRANSIENT SOLUTION METHOD... REDUCED EXPANSION PASS... ON

LOAD STEP OPTIONS

LOAD STEP NUMBER... 1 NUMBER OF SOLUTIONS TO BE EXPANDED... 100 PRINT OUTPUT CONTROLS... ON TO 0.10000

DATABASE: OUTPUT CONTROLS

ITEM NONE PASI FREQUENCY COMPONENT ITEM FREQNCY COMPONENT REOL LAST

*** ELEMENT RESULT CALCULATION TIMES

Table with columns: TYPE NUMBER, ENAME, TOTAL CP, AVE CP. Rows include PIPE16, COMBINI4, COMPINI4, MASS21, MASS21.

*** GLOBAL LOAD CALCULATION TIMES

Table with columns: TYPE NUMBER, ENAME, TOTAL CP, AVE CP. Rows include PIPE16, COMBINI4, COMPINI4, MASS21, BEAM4.

*** ANSYS BINARY FILE STATISTICS

BUFFER SIZE USED= 4096 33,076 MB WRITTEN ON RESULTS FILE: pb2eck.rst

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2eck.db FOR POSSIBLE RESUME FROM THIS POINT

FINISH SOLUTION PROCESSING

***** ROUTINE COMPLETED ***** CP = 17794.940

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 ***** 40416-2 VERSION=UN4SPARC 04.15.14 OCT 10, 1995 CP= 17794.959 FOR SUPPORT CALL PHONE

Time-history analysis of coupled system (presurizer spray line)

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

***** TIME-HISTORY POSTPROCESSOR (POST16) *****

ALL POST6 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS

MAXIMUM NUMBER OF VARIABLES= 30

VARIABLE 2 IS AT ELEMENT 1. NOISE= 1

ITEM= F COMP= X NAME= FX 1 NOISE= 1

ITEM= F COMP= Y NAME= FY 1 NOISE= 1

ITEM= M COMP= X NAME= MX 1 NOISE= 1

VARIABLE 5 IS AT ELEMENT 1 NOISE= 1

ITEM= M COMP= Y NAME= MY 1 NOISE= 1

VARIABLE 6 IS AT ELEMENT 8 NOISE= 6

ITEM= F COMP= X NAME= FX 6 NOISE= 6

VARIABLE 7 IS AT ELEMENT 6 NOISE= 6

ITEM= M COMP= 1 NAME= MZ 6 NOISE= 6

VARIABLE 8 IS AT ELEMENT 12 NOISE= 12

ITEM= F COMP= X NAME= FX 12 NOISE= 12

VARIABLE 9 IS AT ELEMENT 12 NOISE= 12

ITEM= F COMP= 2 NAME= FZ 12 NOISE= 12

VARIABLE 10 IS AT ELEMENT 12 NOISE= 12

ITEM= M COMP= X NAME= MX 12 NOISE= 12

VARIABLE 11 IS AT ELEMENT 12 NOISE= 12

ITEM= M COMP= 2 NAME= MZ 12 NOISE= 12

VARIABLE 12 IS AT ELEMENT 22 NOISE= 22

ITEM= F COMP= 1 NAME= FZ 22 NOISE= 22

VARIABLE 13 IS AT ELEMENT 22 NOISE= 22

ITEM= M COMP= 2 NAME= MZ 22 NOISE= 22

VARIABLE 14 IS AT ELEMENT 32 NOISE= 32

ITEM= M COMP= X NAME= MX 32 NOISE= 32

VARIABLE 15 IS AT ELEMENT 32 NOISE= 32

ITEM= M COMP= 1 NAME= MZ 32 NOISE= 32

VARIABLE 16 IS AT ELEMENT 48 NOISE= 48

ITEM= F COMP= Y NAME= FY 48 NOISE= 48

VARIABLE 17 IS AT ELEMENT 52 NOISE= 52

ITEM= F COMP= X NAME= FX 52 NOISE= 52

VARIABLE 18 IS AT ELEMENT 52 NOISE= 52

ITEM= M COMP= Y NAME= MY 52 NOISE= 52

VARIABLE 19 IS AT ELEMENT 58 NOISE= 58

ITEM= F COMP= 1 NAME= FZ 58 NOISE= 58

VARIABLE 20 IS AT ELEMENT 58 NOISE= 58

ITEM= M COMP= 2 NAME= MZ 58 NOISE= 58

VARIABLE 21 IS AT ELEMENT 71 NOISE= 71

ITEM= F COMP= X NAME= FX 71 NOISE= 71

VARIABLE 22 IS AT ELEMENT 86 NOISE= 86

ITEM= F COMP= X NAME= FX 86 NOISE= 86

VARIABLE 23 IS AT ELEMENT 107 NOISE= 107

ITEM= M COMP= X NAME= MX 107 NOISE= 107

VARIABLE 24 IS AT ELEMENT 114 NOISE= 114

ITEM= F COMP= X NAME= FX 114 NOISE= 114

VARIABLE 25 IS AT ELEMENT 114 NOISE= 114

ITEM= F COMP= 1 NAME= FZ 114 NOISE= 114

VARIABLE 26 IS AT ELEMENT 117 NOISE= 117

ITEM= F COMP= X NAME= FX 117 NOISE= 117

VARIABLE 27 IS AT ELEMENT 123 NOISE= 123

ITEM= M COMP= Y NAME= MY 123 NOISE= 123

VARIABLE 28 IS AT ELEMENT 125 NOISE= 125

ITEM= F COMP= X NAME= FX 125 NOISE= 125

VARIABLE 29 IS AT ELEMENT 125 NOISE= 125

ITEM= M COMP= Y NAME= MY 125 NOISE= 125

VARIABLE 30 IS AT ELEMENT 139 NOISE= 139

ITEM= F COMP= X NAME= FX 139 NOISE= 139

STORAGE COMPLETS FOR 99 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES

VARIABLE TYPE IDENTIFIERS NAME MINIMUM AT TIME MAXIMUM AT TIME

2	ESOL	1	F	X	FX	-0.1469	4.460	0.1118	4.320
3	ESOL	1	F	Y	FY	-0.2923E-01	4.580	0.2437E-01	4.760
4	ESOL	1	M	X	MX	-0.1393	5.120	0.1295	4.780
5	ESOL	1	M	Y	MY	-0.4584	4.260	0.4409	4.580
6	ESOL	8	F	X	FX	-0.1294	4.460	0.1103	4.320
7	ESOL	8	M	Z	ME	-0.1389	5.420	0.1657	4.460
8	ESOL	12	F	X	FX	-0.1527	4.460	0.1945	4.280
9	ESOL	12	F	Z	FZ	-0.6893E-01	5.500	0.7803E-01	5.120
10	ESOL	12	M	X	MX	-0.6935	5.120	0.6272	4.780
11	ESOL	12	M	Z	ME	-0.7683	4.320	0.6679	4.460
12	ESOL	22	F	Z	FZ	-0.1071	4.840	0.1156	5.180
13	ESOL	22	M	Z	ME	-0.7969	4.300	0.7937	4.460
14	ESOL	32	M	X	MX	-0.4125	5.160	0.3998	5.500
15	ESOL	32	M	Z	ME	-0.8191	4.180	1.099	4.600
16	ESOL	48	F	Y	FY	-0.1876	4.840	0.2190	5.180
17	ESOL	52	F	X	FX	-0.2252	4.640	0.1919	4.260
18	ESOL	52	M	Y	MY	-1.627	4.260	1.857	4.680
19	ESOL	58	F	Z	FZ	-0.9391E-01	4.500	0.9873E-01	5.440
20	ESOL	58	M	Z	ME	-0.2345	4.560	0.2028	5.020
21	ESOL	71	F	X	FX	-0.3760	4.660	0.4761	4.460
22	ESOL	86	F	X	FX	-0.2801	5.420	0.4118	4.460
23	ESOL	107	M	X	MX	-0.9565E-01	4.260	0.1132	4.640
24	ESOL	114	F	X	FX	-0.1640	4.460	0.1423	5.420
25	ESOL	114	F	Z	FZ	-0.8484E-01	4.260	0.9180E-01	4.720
26	ESOL	117	F	X	FX	-0.3025E-01	4.460	0.1743E-01	5.160
27	ESOL	123	M	Y	MY	-0.5740E-02	4.740	0.6305E-02	4.300
28	ESOL	125	F	X	FX	-0.7879E-01	4.460	0.6196E-01	5.420
29	ESOL	125	M	Y	MY	-0.8910E-01	4.460	0.7229E-01	5.420
30	ESOL	139	F	X	FX	-0.1582	5.420	0.2490	4.460

**T26 SUMMARY OF VARIABLE EXTREME VALUES

VARI TYPE	IDENTIFIERS	NAME	MINIMUM	MAXIMUM	AT TIME
2	ESOL	1 F X	FX	-0.1469	4.460
3	ESOL	1 F Y	FY	-0.2923E-01	4.580
4	ESOL	1 M X	MX	-0.1393	5.120
5	ESOL	1 M Y	MY	-0.4584	4.260
6	ESOL	8 F X	FX	-0.1294	4.460
7	ESOL	8 M Z	ME	-0.1389	5.420
8	ESOL	12 F X	FX	-0.1527	4.460
9	ESOL	12 F Z	FZ	-0.6893E-01	5.500
10	ESOL	12 M X	MX	-0.6935	5.120
11	ESOL	12 M Z	ME	-0.7683	4.320
12	ESOL	22 F Z	FZ	-0.1071	4.840
13	ESOL	22 M Z	ME	-0.7969	4.300
14	ESOL	32 M X	MX	-0.4125	5.160
15	ESOL	32 M Z	ME	-0.8191	4.180
16	ESOL	48 F Y	FY	-0.1876	4.840
17	ESOL	52 F X	FX	-0.2252	4.640
18	ESOL	52 M Y	MY	-1.627	4.260
19	ESOL	58 F Z	FZ	-0.9391E-01	4.500
20	ESOL	58 M Z	ME	-0.2345	4.560
21	ESOL	71 F X	FX	-0.3760	4.660
22	ESOL	86 F X	FX	-0.2801	5.420
23	ESOL	107 M X	MX	-0.9565E-01	4.260
24	ESOL	114 F X	FX	-0.1640	4.460
25	ESOL	114 F Z	FZ	-0.8484E-01	4.260
26	ESOL	117 F X	FX	-0.3025E-01	4.460
27	ESOL	123 M Y	MY	-0.5740E-02	4.740
28	ESOL	125 F X	FX	-0.7879E-01	4.460
29	ESOL	125 M Y	MY	-0.8910E-01	4.460
30	ESOL	139 F X	FX	-0.1582	5.420

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2ecx.db
FOR POSSIBLE RESUME FROM THIS POINT

***** ROUTINE COMPLETED ***** CP = 17805.071

***** ANSYS SOLUTION ROUTINE *****

PERFORM AN EXPANSION PASS

EXPAND 100 SOLUTIONS
IN THE RANGE FROM 0.30/00 TO 0.40000
CALCULATE ELEMENT RESULTS AS WELL AS THE NODAL DOF SOLUTION

PRINT BASH ITEMS WITH A FREQUENCY OF NONE
FOR ALL APPLICABLE ENTITIES

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUN4SPARC 04:15:41 OCT 10, 1995 CP= 17805.100
FOR SUPPORT CALL PHONE FAX

Time-history analysis of coupled system (presurizer spray line)

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

SOLUTION OPTIONS

PROBLEM DIMENSIONALITY 3-D
DEGREES OF FREEDOM UX UY UZ ROTX ROTY ROTZ
ANALYSIS TYPE TRANSIENT
SOLUTION METHOD REDUCED
EXPANSION PASS ON

LOAD STEP OPTIONS

LOAD STEP NUMBER 1
NUMBER OF SOLUTIONS TO BE EXPANDED 100
RANGE 0.30000 TO 0.40000
ELEMENT RESULTS CALCULATION ON
PRINT OUTPUT CONTROLS
ITEM FREQUENCY COMPONENT
BASI NONE COMPONENT
DATABASE OUTPUT CONTROLS
ITEM FREQUENCY COMPONENT
NSOL LAST

*** ELEMENT RESULT CALCULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	120	PIPE16	0.510	0.004
2	22	PIPE18	0.188	0.009
3	10	COMBIN14	0.000	0.000
4	12	COMBIN14	0.012	0.001
5	11	COMBIN14	0.029	0.003
6	3	COMBIN14	0.000	0.000
7	3	COMBIN14	0.000	0.000
8	3	COMBIN14	0.000	0.000
30	31	MASS21	0.031	0.001
71	12	BEAM4	0.069	0.006
72	5	MASS21	0.000	0.000

*** NODAL LOAD CALCULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	120	PIPE16	0.080	0.001
2	22	PIPE18	0.010	0.000
3	10	COMBIN14	0.000	0.000
4	12	COMBIN14	0.000	0.000
5	11	COMBIN14	0.000	0.000
6	3	COMBIN14	0.010	0.003
7	3	COMBIN14	0.000	0.000
8	3	COMBIN14	0.000	0.000
30	31	MASS21	0.021	0.001
71	12	BEAM4	0.000	0.000
72	5	MASS21	0.000	0.000

*** ANSYS BINARY FILE STATISTICS

BUFFER SIZE USED= 4096
33.078 MB WRITTEN ON RESULTS FILE: pb2ecx.rst

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2ecx.db
FOR POSSIBLE RESUME FROM THIS POINT

FINISH SOLUTION PROCESSING

***** ROUTINE COMPLETED ***** CP = 18018.170

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUN4SPARC 04:23:18 OCT 10, 1995 CP= 18018.190
FOR SUPPORT CALL PHONE FAX

Time-history analysis of coupled system (presurizer spray line)

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

***** TIME-HISTORY POSTPROCESSOR (POST26) *****

ALL POST26 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS

MAXIMUM NUMBER OF VARIABLES= 10

VARIABLE 2 IS AT ELEMENT 1 NODE= 1
ITEM= F COMP= X NAME= FX

VARIABLE 3 IS AT ELEMENT 1 NODE= 1

SOLUTION OPTIONS
 PROBLEM DIMENSIONALITY 3-D
 DEGREE OF FREEDOM UX UY UZ ROTX ROTY ROTZ
 ANALYSIS TYPE TRANSIENT
 SOLUTION METHOD REDUCED
 EXPANSION PASS OR

LOAD STEP OPTIONS
 LOAD STEP NUMBER 1
 NUMBER OF SOLUTIONS TO BE EXPANDED 100
 RANGE OF SOLUTIONS TO BE EXPANDED 0.40000 TO 0.50000
 ELEMENT RESULTS CALCULATION ON
 PRINT OUTPUT CONTROLS
 ITEM FREQUENCY COMPONENT
 ITEM NAME
 DATE/TIME OUTPUT CONTROLS
 ITEM FREQUENCY COMPONENT
 ITEM LAST

*** ELEMENT RESULT CALCULATION TIMES

TYPE NUMBER	ENAME	TOTAL CP	AVE CP
1	120 PIPE16	0.549	0.005
2	22 PIPE18	0.141	0.006
3	10 COMBIN14	0.010	0.001
4	12 COMBIN14	0.012	0.001
5	11 COMBIN14	0.041	0.004
6	3 COMBIN14	0.000	0.000
7	3 COMBIN14	0.000	0.000
8	3 COMBIN14	0.010	0.003
30	31 MASS21	0.041	0.001
71	12 BEAM4	0.050	0.008
72	5 MASS21	0.000	0.000

*** GLOBAL LOAD CALCULATION TIMES

TYPE NUMBER	ENAME	TOTAL CP	AVE CP
1	120 PIPE16	0.100	0.001
2	22 PIPE18	0.029	0.001
3	10 COMBIN14	0.000	0.000
4	12 COMBIN14	0.010	0.001
5	11 COMBIN14	0.000	0.000
6	3 COMBIN14	0.000	0.000
7	3 COMBIN14	0.000	0.000
8	3 COMBIN14	0.000	0.000
30	31 MASS21	0.000	0.000
71	12 BEAM4	0.000	0.000
72	5 MASS21	0.000	0.000

*** ANSYS BINARY FILE STATISTICS
 BUFFER SIZE USED- 4096
 33,078 MB WRITTEN ON RESULTS FILE: pb2ecx.rst

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2ecx.db
 FOR POSSIBLE RESUME FROM THIS POINT

FINISH SOLUTION PROCESSING

***** ROUTINE COMPLETED ***** CP = 18240.939

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
 40415.2 VERSION=SUB45PARC 04.31.18 OCT 10, 1985 CP= 18240.959
 FOR SUPPORT CALL PHONE FAX

Time-history analysis of coupled system (pressurizer spray line)
 ANSYS VEB:ON FOR EDUCATIONAL PURPOSES ONLY

**** TIME-HISTORY POSTPROCESSOR (POST26) ****
 ALL POST26 SPELIFICATIONS ARE RESET TO INITIAL DEFAULTS
 MAXIMUM NUMBER OF VARIABLES= 30

VARIABLE	IS AT ELEMENT	NAME	FX	FY	FZ
VARIABLE 2	IS AT ELEMENT	1	NODE=		
ITEM= F	COMP= X	NAME= FX			
VARIABLE 3	IS AT ELEMENT	1	NODE=		
ITEM= F	COMP= Y	NAME= FY			
VARIABLE 4	IS AT ELEMENT	1	NODE=		
ITEM= F	COMP= Z	NAME= FZ			

ITEM=	M	COMP=	X	NAME=	MX	1	NODE=
VARIABLE 5	IS AT ELEMENT	1	NODE=				
ITEM= M	COMP= Y	NAME= MY					
VARIABLE 6	IS AT ELEMENT	8	NODE=				
ITEM= F	COMP= X	NAME= FX					
VARIABLE 7	IS AT ELEMENT	8	NODE=				
ITEM= M	COMP= Z	NAME= MZ					
VARIABLE 8	IS AT ELEMENT	12	NODE=				
ITEM= F	COMP= X	NAME= FX					
VARIABLE 9	IS AT ELEMENT	12	NODE=				
ITEM= F	COMP= Z	NAME= FZ					
VARIABLE 10	IS AT ELEMENT	12	NODE=				
ITEM= M	COMP= X	NAME= MX					
VARIABLE 11	IS AT ELEMENT	12	NODE=				
ITEM= M	COMP= Z	NAME= MZ					
VARIABLE 12	IS AT ELEMENT	22	NODE=				
ITEM= F	COMP= Z	NAME= FZ					
VARIABLE 13	IS AT ELEMENT	22	NODE=				
ITEM= M	COMP= Z	NAME= MZ					
VARIABLE 14	IS AT ELEMENT	32	NODE=				
ITEM= M	COMP= X	NAME= MX					
VARIABLE 15	IS AT ELEMENT	32	NODE=				
ITEM= M	COMP= Z	NAME= MZ					
VARIABLE 16	IS AT ELEMENT	48	NODE=				
ITEM= F	COMP= Y	NAME= FY					
VARIABLE 17	IS AT ELEMENT	52	NODE=				
ITEM= F	COMP= X	NAME= FX					
VARIABLE 18	IS AT ELEMENT	52	NODE=				
ITEM= M	COMP= Y	NAME= MY					
VARIABLE 19	IS AT ELEMENT	58	NODE=				
ITEM= F	COMP= Z	NAME= FZ					
VARIABLE 20	IS AT ELEMENT	58	NODE=				
ITEM= M	COMP= Z	NAME= MZ					
VARIABLE 21	IS AT ELEMENT	71	NODE=				
ITEM= F	COMP= X	NAME= FX					
VARIABLE 22	IS AT ELEMENT	86	NODE=				
ITEM= F	COMP= X	NAME= FX					
VARIABLE 23	IS AT ELEMENT	107	NODE=				
ITEM= M	COMP= X	NAME= MX					
VARIABLE 24	IS AT ELEMENT	114	NODE=				
ITEM= F	COMP= X	NAME= FX					
VARIABLE 25	IS AT ELEMENT	114	NODE=				
ITEM= F	COMP= Z	NAME= FZ					
VARIABLE 26	IS AT ELEMENT	117	NODE=				
ITEM= F	COMP= X	NAME= FX					
VARIABLE 27	IS AT ELEMENT	123	NODE=				
ITEM= M	COMP= Y	NAME= MY					
VARIABLE 28	IS AT ELEMENT	125	NODE=				
ITEM= F	COMP= X	NAME= FX					
VARIABLE 29	IS AT ELEMENT	125	NODE=				
ITEM= M	COMP= Y	NAME= MY					
VARIABLE 30	IS AT ELEMENT	139	NODE=				
ITEM= F	COMP= X	NAME= FX					

STORAGE COMPLETE FOR 9% DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES

VARI TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME	
2	ESOL	1 F X	FX	-0.4578E-01	8.040	0.3453E-01	8.180
3	ESOL	1 F Y	FY	-0.1351E-01	8.500	0.1730E-01	8.860
4	ESOL	1 M X	MX	-0.7872E-01	8.500	0.7725E-01	8.860
5	ESOL	1 M Y	MY	-0.9392E-01	8.240	0.9762E-01	8.580
6	ESOL	8 F X	FX	-0.4198E-01	8.040	0.3155E-01	8.180
7	ESOL	8 M Z	MZ	-0.5466E-01	8.180	0.5800E-01	8.560

SOLUTION METHOD REDUCED
EXPANSION PASS ON

LOAD STEP OPTIONS

LOAD STEP NUMBER 1
NUMBER OF SOLUTIONS TO BE EXPANDED 100
RANGE 0.60000 TO 0.70000
ELEMENT RESULTS CALCULATION ON
PRINT OUTPUT CONTROLS
ITEM FREQUENCY COMPONENT
BASI NONE
DATABASE OUTPUT CONTROLS
ITEM FREQUENCY COMPONENT
NSOL LAST

*** ELEMENT RESULT CALCULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	120	PIPE16	0.556	0.005
2	22	PIPE18	0.184	0.008
3	10	COMBIN14	0.010	0.001
4	12	COMBIN14	0.012	0.001
5	11	COMBIN14	0.010	0.001
6	3	COMBIN14	0.000	0.000
7	3	COMBIN14	0.000	0.000
8	3	COMBIN14	0.000	0.000
30	31	MASS21	0.029	0.001
71	12	BEAM4	0.041	0.003
72	5	MASS21	0.010	0.002

*** NODAL LOAD CALCULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	120	PIPE16	0.049	0.000
2	22	PIPE18	0.000	0.000
3	10	COMBIN14	0.000	0.000
4	12	COMBIN14	0.010	0.001
5	11	COMBIN14	0.010	0.001
6	3	COMBIN14	0.000	0.000
7	3	COMBIN14	0.000	0.000
8	3	COMBIN14	0.010	0.003
30	31	MASS21	0.061	0.002
71	12	BEAM4	0.000	0.000
72	5	MASS21	0.010	0.002

*** ANSYS BINARY FILE STATISTICS
BUFFER SIZE USED= 4096
33.078 MB WRITTEN ON RESULTS FILE: pb2ecx.rst

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2ecx.db
FOR POSSIBLE RESUME FROM THIS POINT

FINISH SOLUTION PROCESSING

***** ROUTINE COMPLETED ***** CP = 18690.499

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSIC 4-SUNASTARC 04:47:21 OCT 10, 1995 CP= 18690.519
FOR SUPPORT CALL PHONE FAX

Time-history analysis of coupled system (presurizer spray line)

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

***** TIME-HISTORY POSTPROCESSOR (POST26) *****

ALL POST26 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS

MAXIMUM NUMBER OF VARIABLES= 30

VARIABLE 2	IS AT ELEMENT	1	NODE=	1
ITEM= F	COMP= X	NAME= FX		
VARIABLE 3	IS AT ELEMENT	1	NODE=	1
ITEM= F	COMP= Y	NAME= FY		
VARIABLE 4	IS AT ELEMENT	1	NODE=	1
ITEM= M	COMP= X	NAME= MX		
VARIABLE 5	IS AT ELEMENT	1	NODE=	1
ITEM= M	COMP= Y	NAME= MY		
VARIABLE 6	IS AT ELEMENT	8	NODE=	6

ITEM=	F	COMP=	X	NAME=	FX			
VARIABLE 7	IS AT ELEMENT	8	NODE=	6				
ITEM= M	COMP= Z	NAME= MZ						
VARIABLE 8	IS AT ELEMENT	12	NODE=	10				
ITEM= F	COMP= X	NAME= FX						
VARIABLE 9	IS AT ELEMENT	12	NODE=	10				
ITEM= F	COMP= Z	NAME= FZ						
VARIABLE 10	IS AT ELEMENT	12	NODE=	10				
ITEM= M	COMP= X	NAME= MX						
VARIABLE 11	IS AT ELEMENT	12	NODE=	10				
ITEM= M	COMP= Z	NAME= MZ						
VARIABLE 12	IS AT ELEMENT	22	NODE=	15				
ITEM= F	COMP= Z	NAME= FZ						
VARIABLE 13	IS AT ELEMENT	22	NODE=	15				
ITEM= M	COMP= Z	NAME= MZ						
VARIABLE 14	IS AT ELEMENT	32	NODE=	23				
ITEM= M	COMP= X	NAME= MX						
VARIABLE 15	IS AT ELEMENT	32	NODE=	23				
ITEM= M	COMP= Z	NAME= MZ						
VARIABLE 16	IS AT ELEMENT	48	NODE=	35				
ITEM= F	COMP= Y	NAME= FY						
VARIABLE 17	IS AT ELEMENT	52	NODE=	39				
ITEM= F	COMP= X	NAME= FX						
VARIABLE 18	IS AT ELEMENT	52	NODE=	39				
ITEM= M	COMP= Y	NAME= MY						
VARIABLE 19	IS AT ELEMENT	58	NODE=	45				
ITEM= F	COMP= Z	NAME= FZ						
VARIABLE 20	IS AT ELEMENT	58	NODE=	45				
ITEM= M	COMP= Z	NAME= MZ						
VARIABLE 21	IS AT ELEMENT	71	NODE=	56				
ITEM= F	COMP= X	NAME= FX						
VARIABLE 22	IS AT ELEMENT	86	NODE=	72				
ITEM= F	COMP= X	NAME= FX						
VARIABLE 23	IS AT ELEMENT	107	NODE=	93				
ITEM= M	COMP= X	NAME= MX						
VARIABLE 24	IS AT ELEMENT	114	NODE=	102				
ITEM= F	COMP= X	NAME= FX						
VARIABLE 25	IS AT ELEMENT	114	NODE=	102				
ITEM= F	COMP= Z	NAME= FZ						
VARIABLE 26	IS AT ELEMENT	117	NODE=	103				
ITEM= F	COMP= X	NAME= FX						
VARIABLE 27	IS AT ELEMENT	123	NODE=	112				
ITEM= M	COMP= Y	NAME= MY						
VARIABLE 28	IS AT ELEMENT	125	NODE=	101				
ITEM= F	COMP= X	NAME= FX						
VARIABLE 29	IS AT ELEMENT	125	NODE=	101				
ITEM= M	COMP= Y	NAME= MY						
VARIABLE 30	IS AT ELEMENT	139	NODE=	65				
ITEM= F	COMP= X	NAME= FX						

STORAGE COMPLETE FOR 99 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES

VARI	TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	ESOL	1 F X	FX	-0.7447E-01	12.70	0.7640E-01	12.54
3	ESOL	1 F Y	FY	-0.9595E-02	12.84	0.1472E-01	13.80
4	ESOL	1 M X	MX	-0.7739E-01	14.00	0.3577E-01	12.40
5	ESOL	1 M Y	MY	-0.1463	11.94	0.9717E-01	12.84
6	ESOL	8 F X	FX	-0.6964E-01	12.70	0.7215E-01	12.54
7	ESOL	8 M Z	MZ	-0.7209E-01	12.54	0.7603E-01	12.70
8	ESOL	12 F X	FX	-0.1061	12.68	0.1119	12.54
9	ESOL	12 F Z	FZ	-0.1985E-01	12.40	0.2169E-01	12.06
10	ESOL	12 M X	MX	-0.1902	12.04	0.1721	12.40
11	ESOL	12 M Z	MZ	-0.4797	12.54	0.4464	12.70
12	ESOL	22 F Z	FZ	-0.2200E-01	12.34	0.2931E-01	12.04
13	ESOL	22 M Z	MZ	-0.4230	12.54	0.4280	12.70

14	ESOL	32	M	X	MX	-0.6425E-01	14.00	0.1087	12.36
15	ESOL	32	M	Z	ME	-0.4752	13.80	0.3840	12.80
16	ESOL	48	F	Y	FY	-0.4334E-01	12.48	0.5645E-01	12.68
17	ESOL	52	F	X	FX	-0.7055E-01	13.56	0.9726E-01	13.86
18	ESOL	52	M	Y	MY	-0.7482	13.88	0.5617	13.56
19	ESOL	58	F	Z	FZ	-0.2539E-01	12.08	0.2071E-01	12.36
20	ESOL	58	M	Z	ME	-0.9185E-01	13.40	0.1064	12.14
21	ESOL	71	F	X	FX	-0.9265E-01	12.98	0.1522	13.90
22	ESOL	86	F	X	FX	-0.9516E-01	13.86	0.8125E-01	14.00
23	ESOL	107	M	X	MX	-0.3902E-01	13.84	0.3469E-01	13.58
24	ESOL	114	F	X	FX	-0.4101E-01	13.90	0.3465E-01	12.50
25	ESOL	114	F	Z	FZ	-0.3915E-01	13.88	0.2852E-01	13.56
26	ESOL	117	F	X	FX	-0.1195E-01	12.16	0.1211E-01	12.04
27	ESOL	123	M	Y	MY	-0.2931E-02	12.16	0.2897E-02	13.10
28	ESOL	125	F	X	FX	-0.1713E-01	12.46	0.2080E-01	13.86
29	ESOL	125	M	Y	MY	-0.2087E-01	12.46	0.2416E-01	12.30
30	ESOL	139	F	X	FX	-0.6573E-01	13.86	0.5136E-01	12.46

POST26 SUMMARY OF VARIABLE EXTREME VALUES

VARI	TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	ESOL	1	F	X	FX	-0.7447E-01	12.70
3	ESOL	1	F	Y	FY	-0.9595E-02	12.84
4	ESOL	1	M	X	MX	-0.3939E-01	14.00
5	ESOL	1	M	Y	MY	-0.1463	13.94
6	ESOL	8	F	X	FX	-0.6964E-01	12.70
7	ESOL	8	M	Z	ME	-0.7209E-01	12.54
8	ESOL	12	F	X	FX	-0.1061	12.68
9	ESOL	12	F	Z	FZ	-0.1985E-01	12.40
10	ESOL	12	M	X	MX	-0.1902	12.04
11	ESOL	12	M	Z	ME	-0.4797	12.54
12	ESOL	22	F	Z	FZ	-0.2200E-01	12.34
13	ESOL	22	M	Z	ME	-0.4230	12.54
14	ESOL	32	M	X	MX	-0.8425E-01	14.00
15	ESOL	32	M	Z	ME	-0.4752	13.80
16	ESOL	48	F	Y	FY	-0.4334E-01	12.48
17	ESOL	52	F	X	FX	-0.7055E-01	13.56
18	ESOL	52	M	Y	MY	-0.7482	13.88
19	ESOL	58	F	Z	FZ	-0.2539E-01	12.08
20	ESOL	58	M	Z	ME	-0.9185E-01	13.40
21	ESOL	71	F	X	FX	-0.9265E-01	12.98
22	ESOL	86	F	X	FX	-0.9516E-01	13.86
23	ESOL	107	M	X	MX	-0.3902E-01	13.84
24	ESOL	114	F	X	FX	-0.4101E-01	13.90
25	ESOL	114	F	Z	FZ	-0.3915E-01	13.88
26	ESOL	117	F	X	FX	-0.1195E-01	12.16
27	ESOL	123	M	Y	MY	-0.2931E-02	12.16
28	ESOL	125	F	X	FX	-0.1713E-01	12.46
29	ESOL	125	M	Y	MY	-0.2087E-01	12.46
30	ESOL	139	F	X	FX	-0.6573E-01	13.86

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2ecx.db
FOR POSSIBLE RESUME FROM THIS POINT

***** ROUTINE COMPLETED ***** CP = 18700.471

***** ANSYS SOLUTION ROUTINE *****

PERFORM AN EXPANSION PASS

EXPAND 100 SOLUTIONS
IN THE RANGE FROM 0.70000 TO 0.80000
CALCULATE ELEMENT RESULTS AS WELL AS THE NODAL DOF SOLUTION

PRINT BASH ITEMS WITH A FREQUENCY OF NONE
FOR ALL APPLICABLE ENTITIES

***** ANSYS SOLVE COMMAND *****

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUN4SPARC 04:47:48 OCT 10, 1995 CP= 18700.491
FOR SUPPORT CALL PHONE FAX

Time-history analysis of coupled system (presurizer spray line)

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

SOLUTION OPTIONS

PROBLEM DIMENSIONALITY3-D
DEGREES OF FREEDOMUX UY UZ ROTX ROTY ROTZ
ANALYSIS TYPETRANSIENT
SOLUTION METHODREDUCED
EXPANSION PASSON

LOAD STEP OPTIONS

LOAD STEP NUMBER1
NUMBER OF SOLUTIONS TO BE EXPANDED100
RANGE0.70000 TO 0.80000
ELEMENT RESULTS CALCULATIONON
PRINT OUTPUT CONTROLS
ITEM FREQUENCY COMPONENT
BASH NONE
DATABASE OUTPUT CONTROLS
ITEM FREQUENCY COMPONENT
NSOL LAST

*** ELEMENT RESULT CALCULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	120	PIPE16	0.498	0.004
2	22	PIPE18	0.180	0.008
3	10	COMBIN14	0.000	0.000
4	12	COMBIN14	0.020	0.002
5	11	COMBIN14	0.010	0.001
6	3	COMBIN14	0.000	0.000
7	5	COMBIN14	0.000	0.000
8	3	COMBIN14	0.000	0.000
30	31	MASS21	0.351	0.002
71	12	BEAM4	0.049	0.004
72	5	MASS21	0.010	0.002

*** NODAL LOAD CALCULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	120	PIPE16	0.123	0.001
2	22	PIPE18	0.029	0.001
3	10	COMBIN14	0.000	0.000
4	12	COMBIN14	0.000	0.000
5	11	COMBIN14	0.000	0.000
6	3	COMBIN14	0.000	0.000
7	3	COMBIN14	0.000	0.000
8	3	COMBIN14	0.000	0.000
30	31	MASS21	0.020	0.001
71	12	BEAM4	0.010	0.001
72	5	MASS21	0.000	0.000

*** ANSYS BINARY FILE STATISTICS

BUFFER SIZE USED= 4096
33.078 MB WRITTEN ON RESULTS FILE: pb2ecx.rst

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2ecx.db
FOR POSSIBLE RESUME FROM THIS POINT

FINISH SOLUTION PROCESSING

***** ROUTINE COMPLETED ***** CP = 18913.291

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUN4SPARC 04:55:19 OCT 10, 1995 CP= 18913.311
FOR SUPPORT CALL PHONE FAX

Time-history analysis of coupled system (presurizer spray line)

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

***** TIME-HISTORY POSTPROCESSOR (POST26) *****

ALL POST26 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS

MAXIMUM NUMBER OF VARIABLES= 30

VARIABLE 2	IS AT ELEMENT	1	NODE=	1
ITEM= F	COMP= X		NAME=	FX
VARIABLE 3	IS AT ELEMENT	1	NODE=	1
ITEM= F	COMP= Y		NAME=	FY
VARIABLE 4	IS AT ELEMENT	1	NODE=	1
ITEM= M	COMP= X		NAME=	MX
VARIABLE 5	IS AT ELEMENT	1	NODE=	1
ITEM= M	COMP= Y		NAME=	MY
VARIABLE 6	IS AT ELEMENT	8	NODE=	6
ITEM= F	COMP= X		NAME=	FX
VARIABLE 7	IS AT ELEMENT	8	NODE=	6

VARIABLE	IS AT ELEMENT	12	NODE=	10
VARIABLE 8	IS AT ELEMENT	12	NODE=	10
ITEM= F	COMP= X	NAME= FX		
VARIABLE 9	IS AT ELEMENT	12	NODE=	10
ITEM= F	COMP= Z	NAME= FZ		
VARIABLE 10	IS AT ELEMENT	12	NODE=	10
ITEM= M	COMP= X	NAME= MX		
VARIABLE 11	IS AT ELEMENT	12	NODE=	10
ITEM= M	COMP= Z	NAME= MZ		
VARIABLE 12	IS AT ELEMENT	22	NODE=	15
ITEM= F	COMP= Z	NAME= FZ		
VARIABLE 13	IS AT ELEMENT	22	NODE=	15
ITEM= M	COMP= Z	NAME= MZ		
VARIABLE 14	IS AT ELEMENT	32	NODE=	23
ITEM= M	COMP= X	NAME= MX		
VARIABLE 15	IS AT ELEMENT	32	NODE=	23
ITEM= M	COMP= Z	NAME= MZ		
VARIABLE 16	IS AT ELEMENT	48	NODE=	35
ITEM= F	COMP= Y	NAME= FY		
VARIABLE 17	IS AT ELEMENT	52	NODE=	39
ITEM= F	COMP= X	NAME= FX		
VARIABLE 18	IS AT ELEMENT	52	NODE=	39
ITEM= M	COMP= Y	NAME= MY		
VARIABLE 19	IS AT ELEMENT	58	NODE=	45
ITEM= F	COMP= Z	NAME= FZ		
VARIABLE 20	IS AT ELEMENT	58	NODE=	45
ITEM= M	COMP= Z	NAME= MZ		
VARIABLE 21	IS AT ELEMENT	71	NODE=	56
ITEM= F	COMP= X	NAME= FX		
VARIABLE 22	IS AT ELEMENT	86	NODE=	72
ITEM= F	COMP= X	NAME= FX		
VARIABLE 23	IS AT ELEMENT	107	NODE=	93
ITEM= M	COMP= X	NAME= MX		
VARIABLE 24	IS AT ELEMENT	114	NODE=	102
ITEM= F	COMP= X	NAME= FX		
VARIABLE 25	IS AT ELEMENT	114	NODE=	102
ITEM= F	COMP= Z	NAME= FZ		
VARIABLE 26	IS AT ELEMENT	117	NODE=	103
ITEM= F	COMP= X	NAME= FX		
VARIABLE 27	IS AT ELEMENT	123	NODE=	112
ITEM= M	COMP= Y	NAME= MY		
VARIABLE 28	IS AT ELEMENT	125	NODE=	101
ITEM= F	COMP= X	NAME= FX		
VARIABLE 29	IS AT ELEMENT	125	NODE=	101
ITEM= M	COMP= Y	NAME= MY		
VARIABLE 30	IS AT ELEMENT	139	NODE=	65
ITEM= F	COMP= X	NAME= FX		

STORAGE COMPLETE FOR 99 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES

VARI TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	ESOL 1 F X	FX	-0.5673E-01	15.48	0.4829E-01	15.10
3	ESOL 1 F Y	FY	-0.2225E-01	15.48	0.2228E-01	15.18
4	ESOL 1 M X	MX	-0.1021	15.44	0.1034	15.12
5	ESOL 1 M Y	MY	-0.1910	14.52	0.1929	14.20
6	ESOL 8 F X	FX	-0.4864E-01	15.48	0.4076E-01	15.10
7	ESOL 8 M Z	MZ	-0.6896E-01	15.10	0.7986E-01	15.48
8	ESOL 12 F X	FX	-0.8703E-01	14.92	0.5554E-01	15.08
9	ESOL 12 F Z	FZ	-0.5810E-01	15.14	0.5814E-01	15.44
10	ESOL 12 M X	MX	-0.5088	15.46	0.5134	15.14
11	ESOL 12 M Z	MZ	-0.2077	15.08	0.3252	14.92
12	ESOL 22 F Z	FZ	-0.8393E-01	15.12	0.8166E-01	15.48
13	ESOL 22 M Z	MZ	-0.3328	15.10	0.3874	15.48
14	ESOL 32 M X	MX	-0.3088	15.46	0.3104	15.14
15	ESOL 32 M Z	MZ	-0.4163	14.64	0.5467	14.24
16	ESOL 48 F Y	FY	-0.1514	15.12	0.1496	15.50

17	ESOL 52 F X	FX	-0.1244	14.32	0.1145	14.54
18	ESOL 52 M Y	MY	-0.9356	14.56	1.096	14.32
19	ESOL 58 F Z	FZ	-0.6407E-01	15.46	0.6036E-01	15.14
20	ESOL 58 M Z	MZ	-0.1094	14.24	0.1199	14.66
21	ESOL 71 F X	FX	-0.1887	14.28	0.1623	14.64
22	ESOL 86 F X	FX	-0.8288E-01	15.42	0.1023	15.48
23	ESOL 107 M X	MX	-0.5492E-01	14.54	0.5533E-01	14.32
24	ESOL 114 F X	FX	-0.4245E-01	14.56	0.4834E-01	14.36
25	ESOL 114 F Z	FZ	-0.4778E-01	14.56	0.5295E-01	14.30
26	ESOL 117 F X	FX	-0.1018E-01	14.32	0.1043E-01	14.52
27	ESOL 123 M Y	MY	-0.3342E-02	14.30	0.2531E-02	14.58
28	ESOL 125 F X	FX	-0.2089E-01	15.48	0.1717E-01	15.42
29	ESOL 125 M Y	MY	-0.2361E-01	15.48	0.2012E-01	15.42
30	ESOL 139 F X	FX	-0.5146E-01	15.42	0.5775E-01	15.48

POST26 SUMMARY OF VARIABLE EXTREME VALUES

VARI TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	ESOL 1 F X	FX	-0.5673E-01	15.48	0.4829E-01	15.10
3	ESOL 1 F Y	FY	-0.2225E-01	15.48	0.2228E-01	15.18
4	ESOL 1 M X	MX	-0.1021	15.44	0.1034	15.12
5	ESOL 1 M Y	MY	-0.1910	14.52	0.1929	14.20
6	ESOL 8 F X	FX	-0.4864E-01	15.48	0.4076E-01	15.10
7	ESOL 8 M Z	MZ	-0.6896E-01	15.10	0.7986E-01	15.48
8	ESOL 12 F X	FX	-0.8703E-01	14.92	0.5554E-01	15.08
9	ESOL 12 F Z	FZ	-0.5810E-01	15.14	0.5814E-01	15.44
10	ESOL 12 M X	MX	-0.5088	15.46	0.5134	15.14
11	ESOL 12 M Z	MZ	-0.2077	15.08	0.3252	14.92
12	ESOL 22 F Z	FZ	-0.8393E-01	15.12	0.8166E-01	15.48
13	ESOL 22 M Z	MZ	-0.3328	15.10	0.3874	15.48
14	ESOL 32 M X	MX	-0.3088	15.46	0.3104	15.14
15	ESOL 32 M Z	MZ	-0.4163	14.64	0.5467	14.24
16	ESOL 48 F Y	FY	-0.1514	15.12	0.1496	15.50
17	ESOL 52 F X	FX	-0.1244	14.32	0.1145	14.54
18	ESOL 52 M Y	MY	-0.9356	14.56	1.096	14.32
19	ESOL 58 F Z	FZ	-0.6407E-01	15.46	0.6036E-01	15.14
20	ESOL 58 M Z	MZ	-0.1094	14.24	0.1199	14.66
21	ESOL 71 F X	FX	-0.1887	14.28	0.1623	14.64
22	ESOL 86 F X	FX	-0.8288E-01	15.42	0.1023	15.48
23	ESOL 107 M X	MX	-0.5492E-01	14.54	0.5533E-01	14.32
24	ESOL 114 F X	FX	-0.4245E-01	14.56	0.4834E-01	14.36
25	ESOL 114 F Z	FZ	-0.4778E-01	14.56	0.5295E-01	14.30
26	ESOL 117 F X	FX	-0.1018E-01	14.32	0.1043E-01	14.52
27	ESOL 123 M Y	MY	-0.3342E-02	14.30	0.2531E-02	14.58
28	ESOL 125 F X	FX	-0.2089E-01	15.48	0.1717E-01	15.42
29	ESOL 125 M Y	MY	-0.2361E-01	15.48	0.2012E-01	15.42
30	ESOL 139 F X	FX	-0.5146E-01	15.42	0.5775E-01	15.48

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2ecx.db
FOR POSSIBLE RESUME FROM THIS POINT

***** ROUTINE COMPLETED ***** CP = 18923.111

***** ANSYS SOLUTION ROUTINE *****

PERFORM AN EXPANSION PASS

EXPAND 100 SOLUTIONS
IN THE RANGE FROM 0.80000 TO 0.90000
CALCULATE ELEMENT RESULTS AS WELL AS THE NODAL DOP SOLUTIONPRINT SASI ITEMS WITH A FREQUENCY OF NONE
FOR ALL APPLICABLE ENTITIES

***** ANSYS SOLVE COMMAND *****

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUN4SPARC 04:55:44 OCT 10, 1995 CP= 18923.141
FOR SUPPORT CALL PHONE FAX

Time-history analysis of coupled system (presurizer spray line)

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

SOLUTION OPTIONS

PROBLEM DIMENSIONALITY 3-D
DEGREES OF FREEDOM UX UY UZ ROTX ROTY ROTZ
ANALYSIS TYPE TRANSIENT
SOLUTION METHOD REDUCED
EXPANSION PASS ON

LOAD STEP OPTIONS

LOAD STEP NUMBER 1

NUMBER OF SOLUTIONS TO BE EXPANDED 100 TO 0.90000

RANGE 0.80000 ON
ELEMENT RESULTS CALCULATION
PRINT OUTPUT CONTROLS
ITEM FREQUENCY COMPONENT
BASE FREQUENCY COMPONENT
DATABASE OUTPUT CONTROLS
ITEM FREQUENCY COMPONENT
NSOL

*** ELEMENT RESULT CALCULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	120	PIPE16	0.558	0.005
2	22	PIPE18	0.269	0.010
3	10	COMBIN14	0.010	0.001
4	12	COMBIN14	0.010	0.001
5	11	COMBIN14	0.020	0.002
6	3	COMBIN14	0.000	0.000
7	3	COMBIN14	0.010	0.003
8	3	COMBIN14	0.000	0.000
30	31	MASS21	0.041	0.001
71	12	BEAM4	0.040	0.003
72	5	MASS21	0.020	0.004

*** NODAL LOAD CALCULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	120	PIPE16	0.072	0.001
2	22	PIPE18	0.000	0.000
3	10	COMBIN14	0.000	0.000
4	12	COMBIN14	0.010	0.001
5	11	COMBIN14	0.000	0.000
6	3	COMBIN14	0.000	0.000
7	3	COMBIN14	0.000	0.000
8	3	COMBIN14	0.010	0.003
30	31	MASS21	0.000	0.000
71	12	BEAM4	0.000	0.000
72	5	MASS21	0.000	0.000

*** ANSYS BINARY FILE STATISTICS
BUFFER SIZE USED= 4096
33,078 KB WRITTEN ON RESU*.*) FILE: pb2ecx.rst

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2ecx.db
FOR POSSIBLE RESUME FROM THIS POINT

FINISH SOLUTION PROCESSING

***** ROUTINE COMPLETED ***** CP = 19136.300

1
***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-3 VERSION=SUN48PARC 05.03.10 OUT 10.1995 CP= 19136.330
FOR SUPPORT CALL PRIME

Time-history analysis of coupled system (Dressurizer spray line)

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

***** TIME HISTORY POSTPROCESSOR (POST26) *****

ALL POST26 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS

MAXIMUM NUMBER OF VARIABLES= 30

VARIABLE	IS AT ELEMENT	NAME	TYPE	NOISE
VARIABLE 2	IS AT ELEMENT	NAME= FX	1	NOISE=
ITEM= F	COMP= X			
VARIABLE 3	IS AT ELEMENT	NAME= FY	1	NOISE=
ITEM= F	COMP= Y			
VARIABLE 4	IS AT ELEMENT	NAME= MX	1	NOISE=
ITEM= M	COMP= X			
VARIABLE 5	IS AT ELEMENT	NAME= MY	1	NOISE=
ITEM= M	COMP= Y			
VARIABLE 6	IS AT ELEMENT	NAME= FX	6	NOISE=
ITEM= F	COMP= X			
VARIABLE 7	IS AT ELEMENT	NAME= FY	6	NOISE=
ITEM= F	COMP= Y			
VARIABLE 8	IS AT ELEMENT	NAME= MX	12	NOISE=
ITEM= M	COMP= X			

ITEM= F	COMP= X	NAME= FX	10	NOISE=
VARIABLE 9	IS AT ELEMENT	NAME= FZ	10	NOISE=
ITEM= F	COMP= Z			
VARIABLE 10	IS AT ELEMENT	NAME= MX	10	NOISE=
ITEM= M	COMP= X			
VARIABLE 11	IS AT ELEMENT	NAME= MY	10	NOISE=
ITEM= M	COMP= Y			
VARIABLE 12	IS AT ELEMENT	NAME= FZ	15	NOISE=
ITEM= F	COMP= Z			
VARIABLE 13	IS AT ELEMENT	NAME= MZ	15	NOISE=
ITEM= M	COMP= Z			
VARIABLE 14	IS AT ELEMENT	NAME= MX	23	NOISE=
ITEM= M	COMP= X			
VARIABLE 15	IS AT ELEMENT	NAME= MY	23	NOISE=
ITEM= M	COMP= Y			
VARIABLE 16	IS AT ELEMENT	NAME= FZ	35	NOISE=
ITEM= F	COMP= Z			
VARIABLE 17	IS AT ELEMENT	NAME= FX	39	NOISE=
ITEM= F	COMP= X			
VARIABLE 18	IS AT ELEMENT	NAME= FY	39	NOISE=
ITEM= M	COMP= Y			
VARIABLE 19	IS AT ELEMENT	NAME= FZ	45	NOISE=
ITEM= F	COMP= Z			
VARIABLE 20	IS AT ELEMENT	NAME= MX	45	NOISE=
ITEM= M	COMP= X			
VARIABLE 21	IS AT ELEMENT	NAME= MY	56	NOISE=
ITEM= M	COMP= Y			
VARIABLE 22	IS AT ELEMENT	NAME= FZ	72	NOISE=
ITEM= F	COMP= Z			
VARIABLE 23	IS AT ELEMENT	NAME= MX	93	NOISE=
ITEM= M	COMP= X			
VARIABLE 24	IS AT ELEMENT	NAME= MY	102	NOISE=
ITEM= M	COMP= Y			
VARIABLE 25	IS AT ELEMENT	NAME= FZ	102	NOISE=
ITEM= F	COMP= Z			
VARIABLE 26	IS AT ELEMENT	NAME= FX	103	NOISE=
ITEM= F	COMP= X			
VARIABLE 27	IS AT ELEMENT	NAME= FY	112	NOISE=
ITEM= M	COMP= Y			
VARIABLE 28	IS AT ELEMENT	NAME= FZ	101	NOISE=
ITEM= F	COMP= Z			
VARIABLE 29	IS AT ELEMENT	NAME= MX	101	NOISE=
ITEM= M	COMP= X			
VARIABLE 30	IS AT ELEMENT	NAME= MY	65	NOISE=
ITEM= M	COMP= Y			

STORAGE COMPLETS FOR 55 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES

VARI TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	ESOL	1 F X	-0.4538E-01	16.62	0.8018E-01	16.44
3	ESOL	1 F Y	-0.2090E-01	16.08	0.1804E-01	16.42
4	ESOL	1 M X	-0.8431E-01	16.14	0.8654E-01	16.44
5	ESOL	1 M Y	-0.2464	16.40	0.2135	16.76
6	ESOL	8 F X	-0.4055E-01	17.98	0.8047E-01	16.46
7	ESOL	8 M X	-0.8787E-01	16.44	0.5962E-01	17.98
8	ESOL	12 F X	-0.6953E-01	17.42	0.1095	16.46
9	ESOL	12 P X	-0.4324E-01	16.44	0.4917E-01	16.12
10	ESOL	12 M X	-0.4360	16.12	0.4003	16.44
11	ESOL	12 M Z	-0.2601	16.46	0.2601	17.40
12	ESOL	22 F Z	-0.5788E-01	16.48	0.6995E-01	16.14
13	ESOL	22 M Z	-0.4954	16.46	0.3325	17.98
14	ESOL	32 M X	-0.2468	16.16	0.2017	16.48
15	ESOL	32 M Z	-0.4211	17.10	0.4869	16.72
16	ESOL	48 F Y	-0.1217	16.46	0.1249	16.16
17	ESOL	52 F X	-0.7631E-01	17.42	0.7517E-01	17.04
18	ESOL	52 M Y	-0.5638	17.02	0.5763	17.42
19	ESOL	58 F Z	-0.5377E-01	16.12	0.4100E-01	16.46

ESOL	ITEM	FREQ	COMP	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME	
20	ESOL	58	M	Z	ME	-0.7189E-01	16.72	0.8046E-01	17.14
21	ESOL	71	F	X	FX	-0.1232	16.78	0.1204	17.00
22	ESOL	86	F	X	FX	-0.6977E-01	16.20	0.6391E-01	16.64
23	ESOL	107	M	X	MX	-0.3398E-01	17.06	0.3351E-01	17.42
24	ESOL	114	F	X	FX	-0.3595E-01	17.00	0.2936E-01	16.78
25	ESOL	114	F	Z	FZ	-0.3104E-01	17.04	0.3070E-01	17.40
26	ESOL	117	F	X	FX	-0.8026E-02	16.84	0.8608E-02	17.04
27	ESOL	123	M	Y	MY	-0.2455E-02	17.44	0.2660E-02	17.00
28	ESOL	125	F	X	FX	-0.1484E-01	16.64	0.1460E-01	16.28
29	ESOL	125	M	Y	MY	-0.1714E-01	16.64	0.1726E-01	16.28
30	ESOL	139	F	X	FX	-0.5344E-01	16.20	0.4337E-01	17.00

POST26 SUMMARY OF VARIABLE EXTREME VALUES

VARI	TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	ESOL	1 F	X FX	-0.4538E-01	16.62	0.6018E-01	16.44
3	ESOL	1 F	Y FY	-0.2090E-01	16.08	0.1804E-01	16.42
4	ESOL	1 M	X MX	-0.8431E-01	16.14	0.6654E-01	16.44
5	ESOL	1 M	Y MY	-0.2464	16.40	0.2335	16.78
6	ESOL	8 F	X FX	-0.4055E-01	17.98	0.6047E-01	16.48
7	ESOL	8 M	Z ME	-0.8787E-01	16.44	0.5963E-01	17.98
8	ESOL	12 F	X FX	-0.6953E-01	17.42	0.1095	16.46
9	ESOL	12 F	Z FZ	-0.4324E-01	16.44	0.4917E-01	16.12
10	ESOL	12 M	X MX	-0.4360	16.12	0.4003	16.44
11	ESOL	12 M	Z ME	-0.4086	16.46	0.2601	17.40
12	ESOL	22 F	Z FZ	-0.5788E-01	16.48	0.6995E-01	16.14
13	ESOL	22 M	Z ME	-0.4254	16.46	0.3325	17.98
14	ESOL	32 M	X MX	-0.2468	16.16	0.2017	16.48
15	ESOL	32 M	Z ME	-0.4211	17.10	0.4669	16.72
16	ESOL	48 F	Y FY	-0.1217	16.46	0.1249	16.16
17	ESOL	52 F	X FX	-0.7631E-01	17.42	0.7517E-01	17.04
18	ESOL	52 M	Y MY	-0.5638	17.02	0.5763	17.42
19	ESOL	58 F	Z FZ	-0.5377E-01	16.12	0.4100E-01	16.46
20	ESOL	58 M	Z ME	-0.7389E-01	16.72	0.8046E-01	17.14
21	ESOL	71 F	X FX	-0.1232	16.78	0.1204	17.00
22	ESOL	86 F	X FX	-0.6977E-01	16.20	0.6391E-01	16.64
23	ESOL	107 M	X MX	-0.3398E-01	17.06	0.3351E-01	17.42
24	ESOL	114 F	X FX	-0.3595E-01	17.00	0.2936E-01	16.78
25	ESOL	114 F	Z FZ	-0.3104E-01	17.04	0.3070E-01	17.40
26	ESOL	117 F	X FX	-0.8026E-02	16.84	0.8608E-02	17.04
27	ESOL	123 M	Y MY	-0.2455E-02	17.44	0.2660E-02	17.00
28	ESOL	125 F	X FX	-0.1484E-01	16.64	0.1460E-01	16.28
29	ESOL	125 M	Y MY	-0.1714E-01	16.64	0.1726E-01	16.28
30	ESOL	139 F	X FX	-0.5344E-01	16.20	0.4337E-01	17.00

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME: pb2ecx.db
FOR POSSIBLE RESUME FROM THIS POINT

***** ROUTINE COMPLETED ***** CP = 19146.740

***** ANSYS SOLUTION ROUTINE *****

PERFORM AN EXPANSION PASS

EXPAND 100 SOLUTIONS
IN THE RANGE FROM 0.90000 TO 1.0000
CALCULATE ELEMENT RESULTS AS WELL AS THE NODAL DOF SOLUTION

PRINT BASH ITEMS WITH A FREQUENCY OF NONE
FOR ALL APPLICABLE ENTITIES

***** ANSYS SOLVE COMMAND *****

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUN4SPARC 05:03:47 OCT 10, 1995 CP= 19146.759
FOR SUPPORT CALL PHONE FAX

Time-history analysis of coupled system (presurizer spray line)

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

SOLUTION OPTIONS

PROBLEM DIMENSIONALITY 3-D
DEGREES OF FREEDOM UN UV UZ ROTX ROTY ROTZ
ANALYSIS TYPE TRANSIENT
SOLUTION METHOD REDUCED
EXPANSION PASS ON

LOAD STEP OPTIONS

LOAD STEP NUMBER 1
NUMBER OF SOLUTIONS TO BE EXPANDED 100
RANGE 0.90000 TO 1.0000
ELEMENT RESULTS CALCULATION ON

PRINT OUTPUT CONTROLS
ITEM FREQUENCY COMPONENT
BASH NONE
DATABASE OUTPUT CONTROLS
ITEM FREQUENCY COMPONENT
NSOL LAST

*** ELEMENT RESULT CALCULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	120	PIPE16	0.581	0.005
2	22	PIPE18	0.160	0.007
3	10	COMBIN14	0.020	0.002
4	12	COMBIN14	0.023	0.002
5	11	COMBIN14	0.010	0.001
6	3	COMBIN14	0.000	0.000
7	3	COMBIN14	0.010	0.003
8	3	COMBIN14	0.000	0.000
30	31	MASS21	0.029	0.001
71	12	BEAM4	0.040	0.003
72	5	MASS21	0.010	0.002

*** NODAL LOAD CALCULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	120	PIPE16	0.061	0.001
2	22	PIPE18	0.020	0.001
3	10	COMBIN14	0.010	0.001
4	12	COMBIN14	0.010	0.001
5	11	COMBIN14	0.000	0.000
6	3	COMBIN14	0.000	0.000
7	3	COMBIN14	0.000	0.000
8	3	COMBIN14	0.000	0.000
30	31	MASS21	0.020	0.001
71	12	BEAM4	0.010	0.001
72	5	MASS21	0.000	0.000

*** ANSYS BINARY FILE STATISTICS

BUFFER SIZE USED= 4096
33.406 MB WRITTEN ON RESULTS FILE: pb2ecx.rst

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME: pb2ecx.db
FOR POSSIBLE RESUME FROM THIS POINT

FINISH SOLUTION PROCESSING

***** ROUTINE COMPLETED ***** CP = 19361.111

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUN4SPARC 05:11:24 OCT 10, 1995 CP= 19361.130
FOR SUPPORT CALL PHONE FAX

Time-history analysis of coupled system (presurizer spray line)

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

***** TIME-HISTORY POSTPROCESSOR (POST26) *****

ALL POST26 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS

MAXIMUM NUMBER OF VARIABLES= 30

VARIABLE 2	IS AT ELEMENT	1	NODE=	1
ITEM= F	COMP= X		NAME= FX	
VARIABLE 3	IS AT ELEMENT	1	NODE=	1
ITEM= F	COMP= Y		NAME= FY	
VARIABLE 4	IS AT ELEMENT	1	NODE=	1
ITEM= M	COMP= X		NAME= MX	
VARIABLE 5	IS AT ELEMENT	1	NODE=	1
ITEM= M	COMP= Y		NAME= MY	
VARIABLE 6	IS AT ELEMENT	8	NODE=	6
ITEM= F	COMP= X		NAME= FX	
VARIABLE 7	IS AT ELEMENT	8	NODE=	6
ITEM= M	COMP= Z		NAME= MZ	
VARIABLE 8	IS AT ELEMENT	12	NODE=	10
ITEM= F	COMP= X		NAME= FX	
VARIABLE 9	IS AT ELEMENT	12	NODE=	10

ITEM= F	COMP= Z	NAME= FE		
VARIABLE 10	IS AT ELEMENT	12	NODE=	10
ITEM= M	COMP= X	NAME= MX		
VARIABLE 11	IS AT ELEMENT	12	NODE=	10
ITEM= M	COMP= Z	NAME= ME		
VARIABLE 12	IS AT ELEMENT	22	NODE=	15
ITEM= F	COMP= Z	NAME= FE		
VARIABLE 13	IS AT ELEMENT	22	NODE=	15
ITEM= M	COMP= Z	NAME= ME		
VARIABLE 14	IS AT ELEMENT	32	NODE=	23
ITEM= M	COMP= X	NAME= MX		
VARIABLE 15	IS AT ELEMENT	32	NODE=	23
ITEM= M	COMP= Z	NAME= ME		
VARIABLE 16	IS AT ELEMENT	48	NODE=	35
ITEM= F	COMP= Y	NAME= FY		
VARIABLE 17	IS AT ELEMENT	52	NODE=	39
ITEM= F	COMP= X	NAME= FX		
VARIABLE 18	IS AT ELEMENT	52	NODE=	39
ITEM= M	COMP= Y	NAME= MY		
VARIABLE 19	IS AT ELEMENT	58	NODE=	45
ITEM= F	COMP= Z	NAME= FZ		
VARIABLE 20	IS AT ELEMENT	58	NODE=	45
ITEM= M	COMP= Z	NAME= ME		
VARIABLE 21	IS AT ELEMENT	71	NODE=	56
ITEM= F	COMP= X	NAME= FX		
VARIABLE 22	IS AT ELEMENT	86	NODE=	72
ITEM= F	COMP= X	NAME= FX		
VARIABLE 23	IS AT ELEMENT	107	NODE=	93
ITEM= M	COMP= X	NAME= MX		
VARIABLE 24	IS AT ELEMENT	114	NODE=	102
ITEM= F	COMP= X	NAME= FX		
VARIABLE 25	IS AT ELEMENT	114	NODE=	102
ITEM= F	COMP= Z	NAME= FE		
VARIABLE 26	IS AT ELEMENT	117	NODE=	103
ITEM= F	COMP= X	NAME= FX		
VARIABLE 27	IS AT ELEMENT	123	NODE=	112
ITEM= M	COMP= Y	NAME= MY		
VARIABLE 28	IS AT ELEMENT	125	NODE=	101
ITEM= F	COMP= X	NAME= FX		
VARIABLE 29	IS AT ELEMENT	125	NODE=	101
ITEM= M	COMP= Y	NAME= MY		
VARIABLE 30	IS AT ELEMENT	139	NODE=	65
ITEM= F	COMP= X	NAME= FX		

STORAGE COMPLETE FOR 100 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES

VARI TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	ESOL 1 F X	FX	-0.2675E-01	19.26	0.3293E-01	18.34
3	ESOL 1 F Y	FY	-0.1509E-01	18.64	0.1476E-01	18.98
4	ESOL 1 M X	MX	-0.5732E-01	19.96	0.5503E-01	18.96
5	ESOL 1 M Y	MY	-0.1451	18.26	0.1411	18.64
6	ESOL 8 F X	FX	-0.2538E-01	18.74	0.3017E-01	18.34
7	ESOL 8 M Z	MZ	-0.4946E-01	18.30	0.4049E-01	19.28
8	ESOL 12 F X	FX	-0.4330E-01	18.72	0.4963E-01	18.34
9	ESOL 12 F Z	FZ	-0.3242E-01	18.30	0.3274E-01	18.62
10	ESOL 12 M X	MX	-0.3104	18.62	0.3014	18.98
11	ESOL 12 M Z	MZ	-0.1871	19.14	0.1631	18.74
12	ESOL 22 F Z	FZ	-0.4577E-01	19.62	0.4605E-01	19.30
13	ESOL 22 M Z	MZ	-0.2647	18.32	0.2043	19.28
14	ESOL 32 M X	MX	-0.1694	19.30	0.1644	18.96
15	ESOL 32 M Z	MZ	-0.3153	19.00	0.3189	18.08
16	ESOL 48 F Y	FY	-0.8744E-01	18.30	0.8484E-01	19.30
17	ESOL 52 F X	FX	-0.3992E-01	18.76	0.5453E-01	18.32
18	ESOL 52 M Y	MY	-0.3717	18.34	0.3604	18.10
19	ESOL 58 F Z	FZ	-0.3113E-01	19.30	0.3193E-01	18.28
20	ESOL 58 M Z	MZ	-0.6470E-01	18.06	0.3651E-01	19.98
21	ESOL 71 F X	FX	-0.1012	18.12	0.6797E-01	18.52
22	ESOL 86 F X	FX	-0.5826E-01	19.68	0.5583E-01	18.20

23	ESOL 107 M X	MX	-0.2273E-01	18.34	0.2127E-01	18.08
24	ESOL 114 F X	FX	-0.2122E-01	19.80	0.2950E-01	18.12
25	ESOL 114 F Z	FZ	-0.2083E-01	18.34	0.1973E-01	18.08
26	ESOL 117 F X	FX	-0.6147E-02	18.20	0.5450E-02	18.32
27	ESOL 123 M Y	MY	-0.1510E-02	19.54	0.1626E-02	18.36
28	ESOL 125 F X	FX	-0.1065E-01	18.20	0.1162E-01	19.68
29	ESOL 125 M Y	MY	-0.1244E-01	18.20	0.1396E-01	19.68
30	ESOL 139 F X	FX	-0.3588E-01	19.68	0.3915E-01	18.20

POST26 SUMMARY OF VARIABLE EXTREME VALUES

VARI TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	ESOL 1 F X	FX	-0.2675E-01	19.26	0.3293E-01	18.34
3	ESOL 1 F Y	FY	-0.1509E-01	18.64	0.1476E-01	18.98
4	ESOL 1 M X	MX	-0.5732E-01	19.96	0.5503E-01	18.96
5	ESOL 1 M Y	MY	-0.1451	18.26	0.1411	18.64
6	ESOL 8 F X	FX	-0.2538E-01	18.74	0.3017E-01	18.34
7	ESOL 8 M Z	MZ	-0.4946E-01	18.30	0.4049E-01	19.28
8	ESOL 12 F X	FX	-0.4330E-01	18.72	0.4963E-01	18.34
9	ESOL 12 F Z	FZ	-0.3242E-01	18.30	0.3274E-01	18.62
10	ESOL 12 M X	MX	-0.3104	18.62	0.3014	18.98
11	ESOL 12 M Z	MZ	-0.1871	19.14	0.1631	18.74
12	ESOL 22 F Z	FZ	-0.4577E-01	19.62	0.4605E-01	19.30
13	ESOL 22 M Z	MZ	-0.2647	18.32	0.2043	19.28
14	ESOL 32 M X	MX	-0.1694	19.30	0.1644	18.96
15	ESOL 32 M Z	MZ	-0.3153	19.00	0.3189	18.08
16	ESOL 48 F Y	FY	-0.8744E-01	18.30	0.8484E-01	19.30
17	ESOL 52 F X	FX	-0.3992E-01	18.76	0.5453E-01	18.32
18	ESOL 52 M Y	MY	-0.3717	18.34	0.3604	18.10
19	ESOL 58 F Z	FZ	-0.3113E-01	19.30	0.3193E-01	18.28
20	ESOL 58 M Z	MZ	-0.6470E-01	18.06	0.3651E-01	19.98
21	ESOL 71 F X	FX	-0.1012	18.12	0.6797E-01	18.52
22	ESOL 86 F X	FX	-0.5826E-01	19.68	0.5583E-01	18.20
23	ESOL 107 M X	MX	-0.2273E-01	18.34	0.2127E-01	18.08
24	ESOL 114 F X	FX	-0.2122E-01	19.80	0.2950E-01	18.12
25	ESOL 114 F Z	FZ	-0.2083E-01	18.34	0.1973E-01	18.08
26	ESOL 117 F X	FX	-0.6147E-02	18.20	0.5450E-02	18.32
27	ESOL 123 M Y	MY	-0.1510E-02	19.54	0.1626E-02	18.36
28	ESOL 125 F X	FX	-0.1065E-01	18.20	0.1162E-01	19.68
29	ESOL 125 M Y	MY	-0.1244E-01	18.20	0.1396E-01	19.68
30	ESOL 139 F X	FX	-0.3588E-01	19.68	0.3915E-01	18.20

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2ecx.db
FOR POSSIBLE RESUME FROM THIS POINT

***** ROUTINE COMPLETED ***** CP = 19371.380

***** END OF INPUT ENCOUNTERED *****

PURGE ALL SOLUTION AND POST DATA
SAVE ALL MODEL DATAALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2ecx.db
FOR POSSIBLE RESUME FROM THIS POINTNUMBER OF WARNING MESSAGES ENCOUNTERED= 11
NUMBER OF ERROR MESSAGES ENCOUNTERED= 0

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/hatch.list
/filnam,pb2tfx
/units,bft          weight: kips, length: feet
/prmp7
q=306.4/12
a=144/1000
b=(12**3)/1000
c=0.036126884*h/g
d=12/1000
r1=2.875/12
r3=0.84/12
r5=1.9/12
t1=0.375/12
t3=0.188/12
t5=0.241/12
rr1=1.667
rr1=0.3125
rr12=0.5
rr13=0.313
rr3=0.125
rr5=0.187
/ctitle, Time-history analysis of coupled system (presurizer spray line)
mp,ex,1,(28.3e6*a)          ! for piping
mp,txxy,1,0.0
mp,dens,1,(0.40695565*b/g)
mp,ex,2,(28.3e6*a)
mp,txxy,2,0.0
mp,dens,2,(0.43867346*h/g)
mp,ex,3,(28.3e6*a)
mp,txxy,3,0.0
mp,dens,3,(0.52858561*b/g)
mp,ex,4,(28.3e6*a)
mp,txxy,4,0.0
mp,dens,4,(5.8515193*h/g)
mp,ex,5,(28.3e6*a)
mp,txxy,5,0.0
mp,dens,5,(0.49919372*h/g)
mp,ex,6,(28.3e6*a)
mp,txxy,6,0.0
mp,dens,6,(2.5829705*b/g)
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et,2,pipel8,.....2
et,3,combin14,1          !ID spring X' Direction
et,4,combin14,2          !ID spring Y' Direction
et,5,combin14,3          !ID spring Z' Direction
et,6,combin14,4          !ID spring ROTX' Direction
et,7,combin14,5          !ID spring ROTY' Direction
et,8,combin14,6          !ID spring ROTZ' Direction
et,10,mas21,.....2
r,11,r1,t1,.....c
r,21,r1,t1,rr11
rmore,c
r,21,r1,t1,rr1
rmore,c
r,212,r1,t1,rr12
rmore,c
r,213,r1,t1,rr13
rmore,c
r,13,r3,t3,.....c
r,23,r3,t3,rr3
rmore,c
r,15,r5,t5,.....c
r,25,r5,t5,rr5
rmore,c
r,51,(77000*d)
r,52,(56*d)
r,53,(212000*d)
r,54,(126*d)
r,55,(35*d)
r,56,(400*d)
r,57,(224*d)
r,58,(1.0e11*d)
r,59,8.33e8
r,31,(25.0/g/1000)
r,32,(4.0/g/1000)
r,33,(43.0/g/1000)
r,34,(40.0/g/1000)
r,35,(75.0/g/1000)
r,36,(5.0/g/1000)
r,37,(8.0/g/1000)
r,38,(105.0/g/1000)
r,39,(10.0/g/1000)
r,40,(12.0/g/1000)
r,41,(31.5/g/1000)
r,42,(230.0/g/1000)
E=1/(12**12)
I=1/(12**4)
et,71,beam4          ! for building
mp,ex,71,(4.5e6*a)
mp,txxy,71,0.0
mp,dens,71,0.0
r,71,(157000*F),(1*1.18e+10),(1*1.03e+10),
rmore,.,1,71,1.67
r,72,(243000*F),(1*1.43e+10),(1*1.1e+10),
rmore,.,1,26,1.23
r,73,(162000*F),(1*1.25e+10),(1*1.6e+10),
rmore,.,1,57,2.33
r,74,(132000*F),(1*1.15e+10),(1*1.48e+10),
rmore,.,1*2,64e10,1.59,2.26
r,75,(92660*F),(1*5.656e+09),(1*2.151e+09),
rmore,.,1,42,2.57

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r,76,(98710*F),(1*7.372e+09),(1*2.603e+09),
rmore,.,1,51,2.88
et,72,mas21,.....2
r,77,(4474.0e3/g/1000)
r,78,(4428.75e3/g/1000)
r,79,(2650.75e3/g/1000)
r,80,(3207.25e3/g/1000)
r,81,(2847.75e3/g/1000)
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 N.129.16.135.639.508.25.598
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 mat.1
 e.1.2
 type.2
 real.211
 e.2.3.1
 type.1
 real.11
 e.3.4
 e.4.5
 type.2
 real.21
 e.5.9001.4
 e.9001.9002.4
 e.9002.6.4
 type.1
 real.11
 e.6.7
 e.7.9003

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 e.9004.9
 e.9.10
 e.10.9005
 e.9005.9006
 e.9006.11
 e.11.12
 type.2
 real.21
 e.12.9007.11
 e.9007.9008.11
 e.9008.13.11
 type.1
 real.11
 e.13.14
 e.14.15
 e.15.16
 type.2
 real.21
 e.16.17.15
 type.1
 real.11
 e.17.18
 e.18.19
 e.19.20
 type.2
 real.21
 e.20.21.19
 type.1
 real.11
 e.21.9009
 e.9009.9010
 e.9010.22
 e.22.23
 e.23.24
 e.24.9011
 e.9011.9012
 e.9012.25
 e.25.26
 e.26.9013
 e.9013.9014
 e.9014.27
 e.27.28
 e.28.29
 e.29.9015
 e.9015.9016
 e.9016.30
 e.30.31
 type.2
 real.21
 e.31.32.30
 e.32.33.30
 type.1
 real.11
 e.33.37
 e.37.9017
 e.9017.9018
 e.9018.38
 e.38.39
 e.39.9019
 e.9019.40
 e.40.41
 type.2
 real.21
 e.41.43.40
 type.1
 real.11
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 e.44.45
 e.45.9020
 e.9020.46
 e.46.47
 e.47.48
 type.1
 real.11
 mat.2
 e.48.49
 e.49.50
 type.1
 real.11
 mat.1
 e.50.51
 e.51.52
 e.52.53
 e.53.54
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 type.2
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 e.55.56.54
 type.1
 real.11
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 e.59.60
 e.60.61
 e.61.62
 type.2
 real.21
 e.62.63.61
 type.1


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type.1
real.11
mat.2
e.64.65
e.65.66
type.1
real.11
mat.1
e.66.67
e.67.68
e.68.69
e.69.70
type.1
real.11
mat.2
e.70.71
e.71.72
type.1
real.11
mat.1
e.72.73
e.73.74
mat.2
e.74.75
e.75.76
mat.1
e.76.77
e.77.78
e.78.9021
e.9021.79
e.79.80
e.80.81
type.2
real.21
e.81.82.80
type.1
real.11
e.82.9022
e.9022.83
e.83.84
e.84.85
type.2
real.212
e.85.86.84
type.1
real.11
e.86.87
e.87.91
e.91.92
type.2
real.213
e.92.93.91
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d,301,all
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save
finish

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/solu
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*temp, reduced
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T = 0.0
(MACRO TO GET ACCELERATION INPUT
*CREATE,GRNEXITN
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TIME,T
ACEL,(ARGL/12)
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OUTRES,NEOL,LAST
SOLVE
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FINISH

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/post23
file.pb2tfx.rdap
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nsol,4,12,u,z
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nsol,6,17,u,y
nsol,7,17,u,z
nsol,8,21,u,x
nsol,9,21,u,y
nsol,10,9010,u,x
nsol,11,24,u,z
nsol,12,9013,u,x
nsol,13,28,u,x
nsol,14,35,u,x
nsol,15,9017,u,x
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save
finish

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solve
save
finish

/post26
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esol,6,147,1,m,y
esol,7,148,1,m,z
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esol,9,174,87,f,y
esol,10,175,87,f,z
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esol,12,177,87,m,y
esol,13,178,87,m,z
esol,14,179,130,f,x

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esol.17.182.130.m.x
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esol.19.184.130.m.z
esol.20.149.9.f.x
esol.21.150.10.f.z
esol.22.151.15.f.y
esol.23.153.23.f.x
esol.24.154.28.f.z
esol.25.155.37.f.y
esol.26.156.39.f.x
esol.27.157.44.f.y
esol.28.158.45.f.z
esol.29.161.124.f.x
esol.30.162.129.f.z
esol.31.163.52.f.y
esol.32.164.54.f.z
esol.33.165.57.f.x
esol.34.167.73.f.z
esol.35.169.131.f.x
esol.36.170.131.f.z
esol.37.171.133.f.x
esol.38.172.133.f.z
esol.39.152.14.f.y
esol.40.159.53.f.y
esol.41.168.61.f.y
esol.42.166.78.f.y
esol.43.160.79.f.y
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save
finish

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solve
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esol.7.148.1.m.z
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esol.12.177.87.m.y
esol.13.178.87.m.z
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esol.15.180.130.f.y
esol.16.181.130.f.z
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esol.18.183.130.m.y
esol.19.184.130.m.z
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esol.21.150.10.f.z
esol.22.151.15.f.y
esol.23.153.23.f.x
esol.24.154.28.f.z
esol.25.155.37.f.y
esol.26.156.39.f.x
esol.27.157.44.f.y
esol.28.158.45.f.z
esol.29.161.124.f.x
esol.30.162.129.f.z
esol.31.163.52.f.y
esol.32.164.54.f.z
esol.33.165.57.f.x
esol.34.167.73.f.z
esol.35.169.131.f.x
esol.36.170.131.f.z
esol.37.171.133.f.x
esol.38.172.133.f.z
esol.39.152.14.f.y
esol.40.159.53.f.y
esol.41.168.61.f.y
esol.42.166.78.f.y
esol.43.160.79.f.y
extrem.2.43
save
finish

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numexp.100.0.2.0.3
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solve
save
finish

/post26
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esol.3.144.1.f.y

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esol.7.148.1.m.z
esol.8.173.87.f.x
esol.9.174.87.f.y
esol.10.175.87.f.z
esol.11.176.87.m.x
esol.12.177.87.m.y
esol.13.178.87.m.z
esol.14.179.130.f.x
esol.15.180.130.f.y
esol.16.181.130.f.z
esol.17.182.130.m.x
esol.18.183.130.m.y
esol.19.184.130.m.z
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esol.21.150.10.f.z
esol.22.151.15.f.y
esol.23.153.23.f.x
esol.24.154.28.f.z
esol.25.155.37.f.y
esol.26.156.39.f.x
esol.27.157.44.f.y
esol.28.158.45.f.z
esol.29.161.124.f.x
esol.30.162.129.f.z
esol.31.163.52.f.y
esol.32.164.54.f.z
esol.33.165.57.f.x
esol.34.167.73.f.z
esol.35.169.131.f.x
esol.36.170.131.f.z
esol.37.171.133.f.x
esol.38.172.133.f.z
esol.39.152.14.f.y
esol.40.159.53.f.y
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esol.43.160.79.f.y
extrem.2.43
save
finish

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outpr.,none
solve
save
finish

/post26
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esol.3.144.1.f.y
esol.4.145.1.f.z
esol.5.146.1.m.x
esol.6.147.1.m.y
esol.7.148.1.m.z
esol.8.173.87.f.x
esol.9.174.87.f.y
esol.10.175.87.f.z
esol.11.176.87.m.x
esol.12.177.87.m.y
esol.13.178.87.m.z
esol.14.179.130.f.x
esol.15.180.130.f.y
esol.16.181.130.f.z
esol.17.182.130.m.x
esol.18.183.130.m.y
esol.19.184.130.m.z
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esol.21.150.10.f.z
esol.22.151.15.f.y
esol.23.153.23.f.x
esol.24.154.28.f.z
esol.25.155.37.f.y
esol.26.156.39.f.x
esol.27.157.44.f.y
esol.28.158.45.f.z
esol.29.161.124.f.x
esol.30.162.129.f.z
esol.31.163.52.f.y
esol.32.164.54.f.z
esol.33.165.57.f.x
esol.34.167.73.f.z
esol.35.169.131.f.x
esol.36.170.131.f.z
esol.37.171.133.f.x
esol.38.172.133.f.z
esol.39.152.14.f.y
esol.40.159.53.f.y
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esol.42.166.78.f.y
esol.43.160.79.f.y
extrem.2.43
save
finish

/solu

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outpr,,none
solve
save
finish

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/post26

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eol,40,159,53,f,y
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eol,43,160,79,f,y
extrem,2,43
save
finish

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save
finish

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/post26

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eol,37,171,133,f,x

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save
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esol.7,148,1.m,z
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esol.18,183,130.m,y
esol.19,184,130.m,z
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extrem.2,43
save
finish

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save
finish

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esol.4,145,1.f,z
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esol.6,147,1.m,y
esol.7,148,1.m,z
esol.8,173,87.f,x
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esol.11,176,87.m,x
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esol.15,180,130.f,y

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esol.40,159,53.f,y
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esol.42,166,78.f,y
esol.43,160,79.f,y
extrem.2,43
save
finish

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outpr,,none
solve
save
finish

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esol.11,12,12,10.m,z
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esol.20,58,45,m,z
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esol.24,114,102,f,x
esol.25,114,101,f,z
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esol.29,125,101,m,y
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extrem.2,30
save
finish

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outpr,,none
solve
save
finish

/post26
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esol.7,8,8,6.m,x
esol.8,12,12,10.f,x
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esol.16,48,48,35.f,y
esol.17,52,39,f,x

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esol . 7 . 8 . 6 . m . z
esol . 8 . 12 . 10 . f . x
esol . 9 . 12 . 10 . f . z
esol . 10 . 12 . 10 . m . x
esol . 11 . 12 . 10 . m . z
esol . 12 . 22 . 15 . f . z
esol . 13 . 22 . 15 . m . z
esol . 14 . 32 . 23 . m . x
esol . 15 . 32 . 23 . m . z
esol . 16 . 48 . 35 . f . y
esol . 17 . 52 . 39 . f . x
esol . 18 . 52 . 39 . m . y
esol . 19 . 58 . 45 . f . z
esol . 20 . 58 . 45 . m . z
esol . 21 . 71 . 56 . f . x
esol . 22 . 86 . 72 . f . x
esol . 23 . 107 . 93 . m . x
esol . 24 . 114 . 102 . f . x
esol . 25 . 114 . 102 . f . z
esol . 26 . 117 . 103 . f . x
esol . 27 . 123 . 112 . m . y
esol . 28 . 125 . 101 . f . x
esol . 29 . 125 . 101 . m . y
esol . 30 . 139 . 65 . f . x
extrem.2.30
save
finish

/solu
expass.on
numexp.100.0.7.0.8
outpr.,none
solve
save
finish

/post26
numvar.30
esol . 2 . 1 . 1 . f . x
esol . 3 . 1 . 1 . f . y
esol . 4 . 1 . 1 . m . x
esol . 5 . 1 . 1 . m . y
esol . 6 . 8 . 6 . f . x
esol . 7 . 8 . 6 . m . z
esol . 8 . 12 . 10 . f . x
esol . 9 . 12 . 10 . f . z
esol . 10 . 12 . 10 . m . x
esol . 11 . 12 . 10 . m . z
esol . 12 . 22 . 15 . f . z
esol . 13 . 22 . 15 . m . z
esol . 14 . 32 . 23 . m . x
esol . 15 . 32 . 23 . m . z
esol . 16 . 48 . 35 . f . y
esol . 17 . 52 . 39 . f . x
esol . 18 . 52 . 39 . m . y
esol . 19 . 58 . 45 . f . z
esol . 20 . 58 . 45 . m . z
esol . 21 . 71 . 56 . f . x
esol . 22 . 86 . 72 . f . x
esol . 23 . 107 . 93 . m . x
esol . 24 . 114 . 102 . f . x
esol . 25 . 114 . 102 . f . z
esol . 26 . 117 . 103 . f . x
esol . 27 . 123 . 112 . m . y
esol . 28 . 125 . 101 . f . x
esol . 29 . 125 . 101 . m . y
esol . 30 . 139 . 65 . f . x
extrem.2.30
save
finish

/solu
expass.on
numexp.100.0.8.0.9
outpr.,none
solve
save
finish

/post26
numvar.30
esol . 2 . 1 . 1 . f . x
esol . 3 . 1 . 1 . f . y
esol . 4 . 1 . 1 . m . x
esol . 5 . 1 . 1 . m . y
esol . 6 . 8 . 6 . f . x
esol . 7 . 8 . 6 . m . z
esol . 8 . 12 . 10 . f . x
esol . 9 . 12 . 10 . f . z
esol . 10 . 12 . 10 . m . x
esol . 11 . 12 . 10 . m . z
esol . 12 . 22 . 15 . f . z
esol . 13 . 22 . 15 . m . z
esol . 14 . 32 . 23 . m . x
esol . 15 . 32 . 23 . m . z
esol . 16 . 48 . 35 . f . y
esol . 17 . 52 . 39 . f . x
esol . 18 . 52 . 39 . m . y
esol . 19 . 58 . 45 . f . z

```

```

esol . 20 . 58 . 45 . m . z
esol . 21 . 71 . 56 . f . x
esol . 22 . 86 . 72 . f . x
esol . 23 . 107 . 93 . m . x
esol . 24 . 114 . 102 . f . x
esol . 25 . 114 . 102 . f . z
esol . 26 . 117 . 103 . f . x
esol . 27 . 123 . 112 . m . y
esol . 28 . 125 . 101 . f . x
esol . 29 . 125 . 101 . m . y
esol . 30 . 139 . 65 . f . z
extrem.2.30
save
finish

/solu
expass.on
numexp.100.0.9.1.0
outpr.,none
solve
save
finish

/post26
numvar.30
esol . 2 . 1 . 1 . f . x
esol . 3 . 1 . 1 . f . y
esol . 4 . 1 . 1 . m . x
esol . 5 . 1 . 1 . m . y
esol . 6 . 8 . 6 . f . x
esol . 7 . 8 . 6 . m . z
esol . 8 . 12 . 10 . f . x
esol . 9 . 12 . 10 . f . z
esol . 10 . 12 . 10 . m . x
esol . 11 . 12 . 10 . m . z
esol . 12 . 22 . 15 . f . z
esol . 13 . 22 . 15 . m . z
esol . 14 . 32 . 23 . m . x
esol . 15 . 32 . 23 . m . z
esol . 16 . 48 . 35 . f . y
esol . 17 . 52 . 39 . f . x
esol . 18 . 52 . 39 . m . y
esol . 19 . 58 . 45 . f . z
esol . 20 . 58 . 45 . m . z
esol . 21 . 71 . 56 . f . x
esol . 22 . 86 . 72 . f . x
esol . 23 . 107 . 93 . m . x
esol . 24 . 114 . 102 . f . x
esol . 25 . 114 . 102 . f . z
esol . 26 . 117 . 103 . f . x
esol . 27 . 123 . 112 . m . y
esol . 28 . 125 . 101 . f . x
esol . 29 . 125 . 101 . m . y
esol . 30 . 139 . 65 . f . x
extrem.2.30
save
finish

```

```

11D spring Y' Direction
11D spring Z' Direction
11D spring ROTY' Direction
11D spring ROTZ' Direction

```

- 43 sc.4.combin14..2
- 44 sc.5.combin14..3
- 45 sc.6.combin14..4
- 46 sc.7.combin14..5
- 47 sc.8.combin14..6
- 48 sc.10.nasas21...2
- 49 r.11.r1.r1...c
- 50 r.11.r1.r1.r1...c
- 51 r.11.r1.r1.r1...c
- 52 r.21.r1.r1.r1...c
- 53 r.21.r1.r1.r1...c
- 54 r.212.r1.r1.r1.r12
- 55 r.213.r1.r1.r1.r13
- 56 r.213.r1.r1.r1.r13
- 57 r.213.r1.r1.r1.r13
- 58 r.13.r1.r1.r1...c
- 59 r.13.r1.r1.r1...c
- 60 r.13.r1.r1.r1...c
- 61 r.15.r1.r1.r1...c
- 62 r.15.r1.r1.r1...c
- 63 r.15.r1.r1.r1...c
- 64 r.15.r1.r1.r1...c
- 65 r.22.1566d
- 66 r.23.121000*d
- 67 r.24.1566d
- 68 r.24.1566d
- 69 r.24.1566d
- 70 r.25.1566d
- 71 r.25.1566d
- 72 r.25.1566d
- 73 r.21.125.0/g/1000
- 74 r.22.125.0/g/1000
- 75 r.23.125.0/g/1000
- 76 r.24.125.0/g/1000
- 77 r.25.125.0/g/1000
- 78 r.26.125.0/g/1000
- 79 r.27.125.0/g/1000
- 80 r.28.125.0/g/1000
- 81 r.29.125.0/g/1000
- 82 r.30.125.0/g/1000
- 83 r.31.125.0/g/1000
- 84 r.32.125.0/g/1000
- 85 r.33.125.0/g/1000
- 86 r.34.125.0/g/1000
- 87 r.35.125.0/g/1000
- 88 r.36.125.0/g/1000
- 89 r.37.125.0/g/1000
- 90 r.38.125.0/g/1000
- 91 r.39.125.0/g/1000
- 92 r.40.125.0/g/1000
- 93 r.41.125.0/g/1000
- 94 r.42.125.0/g/1000
- 95 r.43.125.0/g/1000
- 96 r.44.125.0/g/1000
- 97 r.45.125.0/g/1000
- 98 r.46.125.0/g/1000
- 99 r.47.125.0/g/1000
- 100 r.48.125.0/g/1000
- 101 r.49.125.0/g/1000
- 102 r.50.125.0/g/1000
- 103 r.51.125.0/g/1000
- 104 r.52.125.0/g/1000
- 105 r.53.125.0/g/1000
- 106 r.54.125.0/g/1000
- 107 r.55.125.0/g/1000
- 108 r.56.125.0/g/1000
- 109 r.57.125.0/g/1000
- 110 r.58.125.0/g/1000
- 111 r.59.125.0/g/1000
- 112 r.60.125.0/g/1000
- 113 r.61.125.0/g/1000
- 114 r.62.125.0/g/1000
- 115 r.63.125.0/g/1000
- 116 r.64.125.0/g/1000
- 117 r.65.125.0/g/1000
- 118 r.66.125.0/g/1000
- 119 r.67.125.0/g/1000
- 120 r.68.125.0/g/1000
- 121 r.69.125.0/g/1000
- 122 r.70.125.0/g/1000
- 123 r.71.125.0/g/1000
- 124 r.72.125.0/g/1000
- 125 r.73.125.0/g/1000
- 126 r.74.125.0/g/1000
- 127 r.75.125.0/g/1000
- 128 r.76.125.0/g/1000
- 129 r.77.125.0/g/1000
- 130 r.78.125.0/g/1000
- 131 r.79.125.0/g/1000
- 132 r.80.125.0/g/1000
- 133 r.81.125.0/g/1000
- 134 r.82.125.0/g/1000
- 135 r.83.125.0/g/1000
- 136 r.84.125.0/g/1000
- 137 r.85.125.0/g/1000
- 138 r.86.125.0/g/1000
- 139 r.87.125.0/g/1000
- 140 r.88.125.0/g/1000
- 141 r.89.125.0/g/1000
- 142 r.90.125.0/g/1000
- 143 r.91.125.0/g/1000

! for balling

WELCOME TO THE ANSYS PROGRAM

***** ANSYS COMMAND LINE ARGUMENTS *****

J:NEWY REQUESTED (MS) = 48.0

***** ANSYS DYNAMIC MEMORY ALLOCATION *****

```

WORK SPACE REQUIRED * 48.000 MB
MINIMUM WORK SPACE REQUIRED * 9.971 MB
MINIMUM WORK SPACE RECOMMENDED * 17.539 MB
WORK SPACE OBTAINED * 12583510 48.000 MB
BYTES PER WORD * 4

```

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ENTER /SHOW,device TO SET THE GRAPHICS DISPLAY TO device(s.g. XL1,4207,MPC.)

ENTER /MENU,ON TO START THE ANSYS SYSTEM.

ENTER HELP FOR GENERAL ANSYS HELP INFORMATION

40416-2 VERSION=8045FARC REVISION= 5.0 FAX
 CURRENT JOBNAME=fil1 00:18:44 OCT 11, 1995 CP= 1.770

MEGIN: /filenam,pb3tfx
 2 /units,bft
 3 /pswg
 4 9=366.4/12
 5 8=144/1000
 6 b=(12**3)/1000
 7 c=0.0126684*b/g
 8 1=12.875/12
 9 l3=0.84/12
 10 l5=1.9/12
 11 l1=0.375/12
 12 l3=0.188/12
 13 l3=0.188/12
 14 l3=0.188/12
 15 r1=0.3125
 16 r12=0.5
 17 r12=0.5
 18 r13=0.313
 19 r13=0.125
 20 r13=0.187
 21 r13=0.187
 22 r13=0.187
 23 r13=0.187
 24 r13=0.187
 25 r13=0.187
 26 r13=0.187
 27 r13=0.187
 28 r13=0.187
 29 r13=0.187
 30 r13=0.187
 31 r13=0.187
 32 r13=0.187
 33 r13=0.187
 34 r13=0.187
 35 r13=0.187
 36 r13=0.187
 37 r13=0.187
 38 r13=0.187
 39 r13=0.187
 40 r13=0.187
 41 r13=0.187
 42 r13=0.187

!weights: kips, Length, feet

! for piping

!1D spring X' Direction

144 N,25,10,379,613,999,1,944
 145 N,26,10,379,614,791,1,944
 146 N,9013,10,379,617,742,1,944
 147 N,9014,10,379,620,693,1,944
 148 N,27,10,379,623,645,1,944
 149 N,28,10,379,624,749,1,944
 150 N,29,10,379,626,415,1,944
 151 N,9015,10,379,629,526,1,944
 152 N,9016,10,379,632,638,1,944
 153 N,30,10,379,635,749,1,944
 154 N,31,10,379,638,852,1,944
 155 N,32,10,379,636,053,2,035
 156 N,35,10,379,636,144,2,256
 157 N,37,10,379,636,144,2,959
 158 N,9017,10,379,636,144,5,657
 159 N,9018,10,379,636,144,8,355
 160 N,36,10,379,636,144,11,053
 161 N,39,10,379,636,144,11,918
 162 N,9019,10,379,636,144,14,756
 163 N,40,10,379,636,144,17,595
 164 N,41,10,379,636,144,20,048
 165 N,43,10,692,636,144,20,36
 166 N,44,10,812,636,144,20,36
 167 N,45,11,129,636,144,20,36
 168 N,9020,13,507,636,144,20,36
 169 N,46,15,885,636,144,20,36
 170 N,47,16,115,636,144,20,36
 171 N,48,16,385,636,144,20,36
 172 N,49,16,801,636,144,20,36
 173 N,50,17,218,636,144,20,36
 174 N,51,17,343,636,144,20,36
 175 N,52,17,801,636,144,20,36
 176 N,53,19,822,636,144,20,36
 177 N,54,22,801,636,144,20,36
 178 N,55,22,864,636,144,20,36
 179 N,56,23,176,636,144,20,673
 180 N,57,23,176,636,144,20,86
 181 N,58,23,176,636,144,21,027
 182 N,59,23,176,636,144,21,277
 183 N,60,23,176,636,144,21,527
 184 N,61,23,176,636,144,21,777
 185 N,62,23,176,636,144,21,798
 186 N,63,22,864,636,144,22,11
 187 N,64,21,947,636,144,22,11
 188 N,65,21,53,636,144,22,11
 189 N,66,21,113,636,144,22,11
 190 N,67,20,759,636,144,22,11
 191 N,68,20,509,636,144,22,11
 192 N,69,20,259,636,144,22,11
 193 N,70,20,071,636,144,22,11
 194 N,71,19,654,636,144,22,11
 195 N,72,19,237,636,144,22,11
 196 N,75,17,383,636,144,22,11
 197 N,74,17,175,636,144,22,11
 198 N,75,16,758,636,144,22,11
 199 N,76,16,341,636,144,22,11
 200 N,77,16,133,636,144,22,11
 201 N,78,15,799,636,144,22,11
 202 N,9021,13,413,636,144,22,11
 203 N,79,11,028,636,144,22,11
 204 N,80,10,121,636,144,22,11
 205 N,81,9,897,636,144,22,11
 206 N,82,9,585,636,144,21,798
 207 N,9022,9,585,636,144,19,663
 208 N,83,9,585,636,144,17,527
 209 N,84,9,585,636,144,17,333
 210 N,85,9,585,636,144,17,174
 211 N,86,9,331,635,791,16,694
 212 N,87,8,76,635,319,16,694
 213 N,47,16,135,636,144,20,36
 214 N,91,16,135,636,394,20,36
 215 N,92,16,135,637,332,20,36
 216 N,93,16,135,637,644,20,673
 217 N,94,16,135,637,644,20,944
 218 N,95,16,135,637,644,21,961
 219 N,96,16,135,637,644,21,778
 220 N,97,16,135,637,644,21,799
 221 N,98,16,135,637,332,22,111
 222 N,100,16,135,636,957,22,111
 223 N,101,16,135,636,707,22,111
 224 N,102,16,135,636,394,22,111
 225 N,77,16,135,636,144,22,111
 226 N,59,23,176,636,144,21,277
 227 N,103,22,866,636,144,21,277
 228 N,104,22,092,636,144,21,277
 229 N,105,21,842,636,144,21,277
 230 N,106,21,592,636,144,21,277
 231 N,107,20,634,636,144,21,277
 232 N,109,20,509,636,144,21,402
 233 N,111,20,509,636,144,21,689
 234 N,112,20,509,636,144,21,801
 235 N,68,20,509,636,144,22,111
 236 N,101,16,135,636,707,22,111
 237 N,113,16,135,636,707,22,611
 238 N,114,16,135,636,707,22,965
 239 N,115,16,135,636,707,23,319
 240 N,116,16,135,636,707,23,64
 241 N,118,16,135,636,894,24,027
 242 N,9023,16,135,639,274,24,027
 243 N,120,16,135,641,654,24,027
 244 N,122,16,135,642,841,24,214

245 N,124,16,135,641,841,24,547
 246 N,125,16,135,641,841,25,411
 247 N,127,16,135,641,654,25,598
 248 N,129,16,135,639,508,25,598
 249 N,9024,16,135,637,966,25,598
 250 N,130,16,135,636,425,25,598
 251 N,65,21,53,636,144,22,11
 252 N,131,21,53,636,415,22,11
 253 N,132,21,53,636,686,22,11
 254 N,71,19,654,636,144,22,11
 255 N,133,19,654,636,415,22,11
 256 N,134,19,654,636,686,22,11
 257 N,1001,0,574,0
 258 N,1009,5,217,583,698,-0,884
 259 N,1010,5,217,584,229,-0,884
 260 N,1014,5,759,593,25,-0,884
 261 N,1015,6,259,593,25,-0,884
 262 N,1023,10,379,604,291,1,944
 263 N,1028,10,379,624,749,1,944
 264 N,1029,10,379,626,415,1,944
 265 N,1037,10,379,636,144,2,959
 266 N,1039,10,379,636,144,11,918
 267 N,1044,10,812,636,144,20,36
 268 N,1045,11,129,636,144,20,36
 269 N,1052,17,801,636,144,20,36
 270 N,1053,18,822,636,144,20,36
 271 N,1054,22,801,636,144,20,36
 272 N,1057,23,176,636,144,20,86
 273 N,1061,23,176,636,144,21,777
 274 N,1073,17,383,636,144,22,11
 275 N,1078,15,799,636,144,22,11
 276 N,1079,11,028,636,144,22,11
 277 N,1087,8,76,635,319,16,694
 278 N,1124,16,135,641,841,24,567
 279 N,1129,16,135,639,508,25,598
 280 N,1130,16,135,636,425,25,598
 281 N,1131,21,53,636,415,22,11
 282 N,1133,19,654,636,415,22,11
 283 type,1
 284 real,11
 285 mat,1
 286 e,1,2
 287 type,2
 288 real,211
 289 e,2,3,1
 290 type,1
 291 real,11
 292 e,3,4
 293 e,4,5
 294 type,2
 295 real,21
 296 e,5,9001,4
 297 e,9001,9002,4
 298 e,9002,6,4
 299 type,1
 300 real,11
 301 e,6,7
 302 e,7,9003
 303 e,9003,9004
 304 e,9004,9
 305 e,9,10
 306 e,10,9005
 307 e,9005,9006
 308 e,9006,11
 309 e,11,12
 310 type,2
 311 real,21
 312 e,12,9007,11
 313 e,9007,9008,11
 314 e,9008,13,11
 315 type,1
 316 real,11
 317 e,13,14
 318 e,14,15
 319 e,15,16
 320 type,2
 321 real,21
 322 e,16,17,15
 323 type,1
 324 real,11
 325 e,17,18
 326 e,18,19
 327 e,19,20
 328 type,2
 329 real,21
 330 e,20,21,19
 331 type,1
 332 real,11
 333 e,21,9009
 334 e,9009,9010
 335 e,9010,22
 336 e,22,23
 337 e,23,24
 338 e,24,9011
 339 e,9011,9012
 340 e,9012,25
 341 e,25,26
 342 e,26,9013
 343 e,9013,9014
 344 e,9014,27
 345 e,27,28

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346 e. 28 . 29
347 e. 29 . 9015
348 e. 9015 . 9016
349 e. 9016 . 30
350 e. 30 . 31
351 type.2
352 real.21
353 e.31.32.30
354 e.32.35.30
355 type.1
356 real.11
357 e.35.37
358 e. 37 . 9017
359 e. 9017 . 9018
360 e. 9018 . 38
361 e. 38 . 39
362 e. 39 . 9019
363 e. 9019 . 40
364 e. 40 . 41
365 type.2
366 real.21
367 e.41.43.40
368 type.1
369 real.11
370 e.43.44
371 e. 44 . 45
372 e. 45 . 9020
373 e. 9020 . 46
374 e. 46 . 47
375 e. 47 . 48
376 type.1
377 real.11
378 mat.2
379 e.48.49
380 e.49.50
381 type.1
382 real.11
383 mat.1
384 e.50.51
385 e. 51 . 52
386 e. 52 . 53
387 e. 53 . 54
388 e. 54 . 55
389 type.2
390 real.21
391 e.55.56.54
392 type.1
393 real.11
394 e.56.57
395 e. 57 . 58
396 e. 58 . 59
397 e. 59 . 60
398 e. 60 . 61
399 e. 61 . 62
400 type.2
401 real.21
402 e.62.63.61
403 type.1
404 real.11
405 e.63.64
406 type.1
407 real.11
408 mat.2
409 e.64.65
410 e.65.66
411 type.1
412 real.11
413 mat.1
414 e.66.67
415 e.67.68
416 e.68.69
417 e.69.70
418 type.1
419 real.11
420 mat.2
421 e.70.71
422 e.71.72
423 type.1
424 real.11
425 mat.1
426 e.72.73
427 e.73.74
428 mat.2
429 e.74.75
430 e.75.76
431 mat.1
432 e.76.77
433 e. 77 . 78
434 e. 78 . 9021
435 e. 9021 . 79
436 e. 79 . 80
437 e. 80 . 81
438 type.2
439 real.21
440 e.81.82.80
441 type.1
442 real.11
443 e.82.9022
444 e. 9022 . 83
445 e. 83 . 84
446 e. 84 . 85

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447 type.2
448 real.212
449 e.85.86.84
450 type.1
451 real.11
452 e.86.87
453 e.47.51
454 e.91.92
455 type.2
456 real.213
457 e.92.93.91
458 type.1
459 real.11
460 e.93.94
461 mat.2
462 e.94.95
463 e.95.96
464 mat.1
465 e.96.97
466 type.2
467 real.21
468 e.97.98.96
469 type.1
470 real.11
471 e.98.100
472 e. 100 . 101
473 e. 101 . 102
474 e.102.77
475 type.1
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477 real.13
478 e.99.103
479 e.103.104
480 mat.4
481 e.104.105
482 e.105.106
483 mat.3
484 e.106.107
485 type.2
486 mat.3
487 real.23
488 e.107.109.106
489 type.1
490 mat.3
491 real.13
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493 e.111.112
494 type.1
495 mat.5
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497 e.112.68
498 e.101.113
499 mat.6
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501 e.114.115
502 mat.5
503 e.115.116
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508 mat.5
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511 e.9023.120
512 type.2
513 real.25
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516 mat.5
517 real.15
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519 e.124.125
520 type.2
521 real.25
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523 type.1
524 mat.5
525 real.15
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527 e.129.9024
528 e.9024.130
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533 e.131.132
534 e.71.133
535 e.133.134
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538 e.1.1001
539 type.4
540 e.1.1001
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543 real.59
544 type.6
545 e.1.1001
546 type.7
547 e.1.1001

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739 cpigen,6,uy,uz,rotx,roty,rotz
740 cpigen,7,uy,uz,rotx,roty,rotz
741 d,301,all
742 lumpm,on
743 save
744 finish
745
746 C*** Time History analysis for earthquake record (Taft)
747 /output.pb2tfx0
748 /solu
749 antype,trans

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752 m,9001,uk,9024,,uy,uz
753 m,104,uk,110,2,uy,uz
754 m,313,uk,,uy,uz
755 ALPHAD,0.7941209
756 BETAD,0.00046623099
757 DELTIM,0.001
758 T = 0.0
759 !MACRO TO GET ACCELERATION INPUT
760 *CREATE,GRNDXITN
761 TIME,T,ON
762 T = T + 0.02
763 TIME,T
764 ACCL,(ARG1/12)
765 ! *USE,SAVESTEP,T
766 CUTRES,NSOL, LAST
767 SOLVE
768 *END
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3735 esol,2,143,1,f,x
3736 esol,3,144,1,f,y
3737 esol,4,145,1,f,z
3738 esol,5,146,1,m,x
3739 esol,6,147,1,m,y
3740 esol,7,148,1,m,z
3741 esol,8,173,87,f,x
3742 esol,9,174,87,f,y
3743 esol,10,175,87,f,z
3744 esol,11,176,87,m,x
3745 esol,12,177,87,m,y
3746 esol,13,178,87,m,z
3747 esol,14,179,130,f,x
3748 esol,15,180,130,f,y
3749 esol,16,181,130,f,z
3750 esol,17,182,130,m,x
3751 esol,18,183,130,m,y
3752 esol,19,184,130,m,z
3753 esol,20,149,9,f,x
3754 esol,21,150,10,f,z
3755 esol,22,151,15,f,y
3756 esol,23,153,23,f,x
3757 esol,24,154,28,f,z
3758 esol,25,155,37,f,y
3759 esol,26,156,39,f,x
3760 esol,27,157,44,f,y
3761 esol,28,158,45,f,z
3762 esol,29,161,124,f,x
3763 esol,30,162,129,f,x
3764 esol,31,163,23,f,x
3765 esol,32,164,54,f,z
3766 esol,33,165,57,f,x
3767 esol,34,167,73,f,z
3768 esol,35,169,131,f,x
3769 esol,36,170,131,f,z
3770 esol,37,171,133,f,x
3771 esol,38,172,133,f,x
3772 esol,39,152,14,f,y
3773 esol,40,159,53,f,y
3774 esol,41,168,61,f,y
3775 esol,42,166,78,f,y
3776 esol,43,160,79,f,y
3777 extram,2,43
3778 save
3779 finish

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3780
3781 /solu
3782 expass,on
3783 numexp,100,0.3,0.4
3784 outpr,,none
3785 solve
3786 save
3787 finish
3788
3789 /post26
3790 numvar,43
3791 esol,2.143,1.f,x
3792 esol,3.144,1.f,y
3793 esol,4.145,1.f,z
3794 esol,5.146,1.m,x
3795 esol,6.147,1.m,y
3796 esol,7.148,1.m,z
3797 esol,8.173,87.f,x
3798 esol,9.174,87.f,y
3799 esol,10.175,87.f,z
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3801 esol,12.177,87.m,y
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3803 esol,14.179,130.f,x
3804 esol,15.180,130.f,y
3805 esol,16.181,130.f,z
3806 esol,17.182,130.m,x
3807 esol,18.183,130.m,y
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3810 esol,21.150,10.f,z
3811 esol,22.151,15.f,y
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3813 esol,24.154,28.f,z
3814 esol,25.155,37.f,y
3815 esol,26.156,39.f,x
3816 esol,27.157,44.f,y
3817 esol,28.158,45.f,z
3818 esol,29.161,124.f,x
3819 esol,30.162,129.f,z
3820 esol,31.163,52.f,y
3821 esol,32.164,54.f,z
3822 esol,33.165,57.f,x
3823 esol,34.167,73.f,z
3824 esol,35.169,131.f,x
3825 esol,36.170,131.f,x
3826 esol,37.171,133.f,x
3827 esol,38.172,133.f,z
3828 esol,39.152,14.f,y
3829 esol,40.159,53.f,y
3830 esol,41.168,61.f,y
3831 esol,42.166,78.f,y
3832 esol,43.160,79.f,y
3833 extrem,2.43
3834 save
3835 finish
3836
3837 /solu
3838 expass,on
3839 numexp,100,0.4,0.5
3840 outpr,,none
3841 solve
3842 save
3843 finish
3844
3845 /post26
3846 numvar,43
3847 esol,2.143,1.f,x
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3849 esol,4.145,1.f,z
3850 esol,5.146,1.m,x
3851 esol,6.147,1.m,y
3852 esol,7.148,1.m,z
3853 esol,8.173,87.f,x
3854 esol,9.174,87.f,y
3855 esol,10.175,87.f,z
3856 esol,11.176,87.m,x
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3870 esol,25.155,37.f,y
3871 esol,26.156,39.f,x
3872 esol,27.157,44.f,y
3873 esol,28.158,45.f,z
3874 esol,29.161,124.f,x
3875 esol,30.162,129.f,z
3876 esol,31.163,52.f,y
3877 esol,32.164,54.f,z
3878 esol,33.165,57.f,x
3879 esol,34.167,73.f,z
3880 esol,35.169,131.f,x

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3883 esol,38.172,133.f,z
3884 esol,39.152,14.f,y
3885 esol,40.159,53.f,y
3886 esol,41.168,61.f,y
3887 esol,42.166,78.f,y
3888 esol,43.160,79.f,y
3889 extrem,2.43
3890 save
3891 finish
3892
3893 /solu
3894 expass,on
3895 numexp,100,0.5,0.6
3896 outpr,,none
3897 solve
3898 save
3899 finish
3900
3901 /post26
3902 numvar,43
3903 esol,2.143,1.f,x
3904 esol,3.144,1.f,y
3905 esol,4.145,1.f,z
3906 esol,5.146,1.m,x
3907 esol,6.147,1.m,y
3908 esol,7.148,1.m,z
3909 esol,8.173,87.f,x
3910 esol,9.174,87.f,y
3911 esol,10.175,87.f,z
3912 esol,11.176,87.m,x
3913 esol,12.177,87.m,y
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3927 esol,26.156,39.f,x
3928 esol,27.157,44.f,y
3929 esol,28.158,45.f,z
3930 esol,29.161,124.f,x
3931 esol,30.162,129.f,z
3932 esol,31.163,52.f,y
3933 esol,32.164,54.f,z
3934 esol,33.165,57.f,x
3935 esol,34.167,73.f,z
3936 esol,35.169,131.f,x
3937 esol,36.170,131.f,x
3938 esol,37.171,133.f,x
3939 esol,38.172,133.f,z
3940 esol,39.152,14.f,y
3941 esol,40.159,53.f,y
3942 esol,41.168,61.f,y
3943 esol,42.166,78.f,y
3944 esol,43.160,79.f,y
3945 extrem,2.43
3946 save
3947 finish
3948
3949 /solu
3950 expass,on
3951 numexp,100,0.6,0.7
3952 outpr,,none
3953 solve
3954 save
3955 finish
3956
3957 /post26
3958 numvar,43
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3960 esol,3.144,1.f,y
3961 esol,4.145,1.f,z
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3963 esol,6.147,1.m,y
3964 esol,7.148,1.m,z
3965 esol,8.173,87.f,x
3966 esol,9.174,87.f,y
3967 esol,10.175,87.f,z
3968 esol,11.176,87.m,x
3969 esol,12.177,87.m,y
3970 esol,13.178,87.m,z
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3972 esol,15.180,130.f,y
3973 esol,16.181,130.f,z
3974 esol,17.182,130.m,x
3975 esol,18.183,130.m,y
3976 esol,19.184,130.m,z
3977 esol,20.149,9.f,x
3978 esol,21.150,10.f,z
3979 esol,22.151,15.f,y
3980 esol,23.153,23.f,x
3981 esol,24.154,28.f,z

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3984 esol.27.157.44.f.y
3985 esol.28.158.45.f.z
3986 esol.29.161.124.f.x
3987 esol.30.162.129.f.x
3988 esol.31.163.52.f.y
3989 esol.32.164.54.f.z
3990 esol.33.165.57.f.x
3991 esol.34.167.73.f.z
3992 esol.35.169.131.f.x
3993 esol.36.170.131.f.z
3994 esol.37.171.133.f.x
3995 esol.38.172.133.f.z
3996 esol.39.152.14.f.y
3997 esol.40.159.53.f.y
3998 esol.41.168.61.f.y
3999 esol.42.166.78.f.y
4000 esol.43.160.79.f.y
4001 extran.2.43
4002 save
4003 finish
4004
4005 /solu
4006 expass,on
4007 numexp,100,0.7,0.8
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4009 solve
4010 save
4011 finish
4012
4013 /post26
4014 numvar,43
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4016 esol.3.144.1.f.y
4017 esol.4.145.1.f.z
4018 esol.5.146.1.m.x
4019 esol.6.147.1.m.y
4020 esol.7.148.1.m.z
4021 esol.8.173.87.f.x
4022 esol.9.174.87.f.y
4023 esol.10.175.87.f.z
4024 esol.11.176.87.m.x
4025 esol.12.177.87.m.y
4026 esol.13.178.87.m.z
4027 esol.14.179.130.f.x
4028 esol.15.180.130.f.y
4029 esol.16.181.130.f.z
4030 esol.17.182.130.m.x
4031 esol.18.183.130.m.y
4032 esol.19.184.130.m.z
4033 esol.20.149.9.f.x
4034 esol.21.150.10.f.z
4035 esol.22.151.15.f.y
4036 esol.23.153.23.f.x
4037 esol.24.154.28.f.z
4038 esol.25.155.37.f.y
4039 esol.26.156.39.f.x
4040 esol.27.157.44.f.y
4041 esol.28.158.45.f.z
4042 esol.29.161.124.f.x
4043 esol.30.162.129.f.x
4044 esol.31.163.52.f.y
4045 esol.32.164.54.f.z
4046 esol.33.165.57.f.x
4047 esol.34.167.73.f.z
4048 esol.35.168.131.f.x
4049 esol.36.170.131.f.z
4050 esol.37.171.133.f.x
4051 esol.38.172.133.f.z
4052 esol.39.152.14.f.y
4053 esol.40.159.53.f.y
4054 esol.41.168.61.f.y
4055 esol.42.166.78.f.y
4056 esol.43.160.79.f.y
4057 extran.2.43
4058 save
4059 finish
4060
4061 /solu
4062 expass,on
4063 numexp,100,0.8,0.9
4064 outpr,,none
4065 solve
4066 save
4067 finish
4068
4069 /post26
4070 numvar,43
4071 esol.2.143.1.f.x
4072 esol.3.144.1.f.y
4073 esol.4.145.1.f.z
4074 esol.5.146.1.m.x
4075 esol.6.147.1.m.y
4076 esol.7.148.1.m.z
4077 esol.8.173.87.f.x
4078 esol.9.174.87.f.y
4079 esol.10.175.87.f.z
4080 esol.11.176.87.m.x
4081 esol.12.177.87.m.y
4082 esol.13.178.87.m.z

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4083 esol.14.179.130.f.x
4084 esol.15.180.130.f.y
4085 esol.16.181.130.f.z
4086 esol.17.182.130.m.x
4087 esol.18.183.130.m.y
4088 esol.19.184.130.m.z
4089 esol.20.149.9.f.x
4090 esol.21.150.10.f.z
4091 esol.22.151.15.f.y
4092 esol.23.153.23.f.x
4093 esol.24.154.28.f.z
4094 esol.25.155.37.f.y
4095 esol.26.156.39.f.x
4096 esol.27.157.44.f.y
4097 esol.28.158.45.f.z
4098 esol.29.161.124.f.x
4099 esol.30.162.129.f.x
4100 esol.31.163.52.f.y
4101 esol.32.164.54.f.z
4102 esol.33.165.57.f.x
4103 esol.34.167.73.f.z
4104 esol.35.169.131.f.x
4105 esol.36.170.131.f.z
4106 esol.37.171.133.f.x
4107 esol.38.172.133.f.z
4108 esol.39.152.14.f.y
4109 esol.40.159.53.f.y
4110 esol.41.168.61.f.y
4111 esol.42.166.78.f.y
4112 esol.43.160.79.f.y
4113 extran.2.43
4114 save
4115 finish
4116
4117 /solu
4118 expass,on
4119 numexp,100,0.9,1.0
4120 outpr,,none
4121 solve
4122 save
4123 finish
4124
4125 /post26
4126 numvar,43
4127 esol.2.143.1.f.x
4128 esol.3.144.1.f.y
4129 esol.4.145.1.f.z
4130 esol.5.146.1.m.x
4131 esol.6.147.1.m.y
4132 esol.7.148.1.m.z
4133 esol.8.173.87.f.x
4134 esol.9.174.87.f.y
4135 esol.10.175.87.f.z
4136 esol.11.176.87.m.x
4137 esol.12.177.87.m.y
4138 esol.13.178.87.m.z
4139 esol.14.179.130.f.x
4140 esol.15.180.130.f.y
4141 esol.16.181.130.f.z
4142 esol.17.182.130.m.x
4143 esol.18.183.130.m.y
4144 esol.19.184.130.m.z
4145 esol.20.149.9.f.x
4146 esol.21.150.10.f.z
4147 esol.22.151.15.f.y
4148 esol.23.153.23.f.x
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4150 esol.25.155.37.f.y
4151 esol.26.156.39.f.x
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4153 esol.28.158.45.f.z
4154 esol.29.161.124.f.x
4155 esol.30.162.129.f.z
4156 esol.31.163.52.f.y
4157 esol.32.164.54.f.z
4158 esol.33.165.57.f.x
4159 esol.34.167.73.f.z
4160 esol.35.169.131.f.x
4161 esol.36.170.131.f.z
4162 esol.37.171.133.f.x
4163 esol.38.172.133.f.z
4164 esol.39.152.14.f.y
4165 esol.40.159.53.f.y
4166 esol.41.168.61.f.y
4167 esol.42.166.78.f.y
4168 esol.43.160.79.f.y
4169 extran.2.43
4170 save
4171 finish
4172
4173 /solu
4174 expass,on
4175 numexp,100,0.0,0.1
4176 outpr,,none
4177 solve
4178 save
4179 finish
4180
4181 /post26
4182 numvar,30
4183 esol.2.1.1.f.x

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4185 esol . 4 . 1 . 1 . m . x
4186 esol . 5 . 1 . 1 . m . y
4187 esol . 6 . 8 . 8 . f . x
4188 esol . 7 . 8 . 6 . m . x
4189 esol . 8 . 12 . 10 . f . x
4190 esol . 9 . 12 . 10 . f . x
4191 esol . 10 . 12 . 10 . m . x
4192 esol . 11 . 12 . 10 . m . x
4193 esol . 12 . 22 . 15 . f . z
4194 esol . 13 . 22 . 15 . m . z
4195 esol . 14 . 32 . 23 . m . x
4196 esol . 15 . 32 . 23 . m . z
4197 esol . 16 . 48 . 35 . f . y
4198 esol . 17 . 52 . 39 . m . y
4199 esol . 18 . 52 . 39 . m . y
4200 esol . 19 . 58 . 45 . f . z
4201 esol . 20 . 58 . 45 . m . z
4202 esol . 21 . 71 . 56 . f . x
4203 esol . 22 . 86 . 72 . f . x
4204 esol . 23 . 107 . 93 . m . x
4205 esol . 24 . 114 . 102 . f . x
4206 esol . 25 . 114 . 102 . f . x
4207 esol . 26 . 117 . 103 . f . x
4208 esol . 27 . 123 . 112 . m . y
4209 esol . 28 . 125 . 101 . f . x
4210 esol . 29 . 125 . 101 . m . y
4211 esol . 30 . 139 . 65 . f . x
4212 extrem,2,30
4213 save
4214 finish
4215
4216 /solu
4217 express,on
4218 numexp,100,0.1,0.1
4219 outpr,.none
4220 solve
4221 save
4222 finish
4223
4224 /post26
4225 numvar,30
4226 esol . 2 . 1 . 1 . f . x
4227 esol . 3 . 1 . 1 . f . y
4228 esol . 4 . 1 . 1 . m . x
4229 esol . 5 . 1 . 1 . m . y
4230 esol . 6 . 8 . 8 . f . x
4231 esol . 7 . 8 . 6 . m . x
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4239 esol . 15 . 32 . 23 . m . z
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4241 esol . 17 . 52 . 39 . m . y
4242 esol . 18 . 52 . 39 . m . y
4243 esol . 19 . 58 . 45 . f . z
4244 esol . 20 . 58 . 45 . m . z
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4251 esol . 27 . 123 . 112 . m . y
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4255 extrem,2,30
4256 save
4257 finish
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4259 /solu
4260 express,on
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4262 outpr,.none
4263 solve
4264 save
4265 finish
4266
4267 /post26
4268 numvar,30
4269 esol . 2 . 1 . 1 . f . x
4270 esol . 3 . 1 . 1 . f . y
4271 esol . 4 . 1 . 1 . m . x
4272 esol . 5 . 1 . 1 . m . y
4273 esol . 6 . 8 . 8 . f . x
4274 esol . 7 . 8 . 6 . m . x
4275 esol . 8 . 12 . 10 . f . x
4276 esol . 9 . 12 . 10 . f . x
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4279 esol . 12 . 22 . 15 . f . z
4280 esol . 13 . 22 . 15 . m . z
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4282 esol . 15 . 32 . 23 . m . z
4283 esol . 16 . 48 . 35 . f . y
4284 esol . 17 . 52 . 39 . f . x

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4289 esol . 22 . 86 . 72 . f . x
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4293 esol . 26 . 117 . 103 . f . x
4294 esol . 27 . 123 . 112 . m . y
4295 esol . 28 . 125 . 101 . f . x
4296 esol . 29 . 125 . 101 . m . y
4297 esol . 30 . 139 . 65 . f . x
4298 extrem,2,30
4299 save
4300 finish
4301
4302 /solu
4303 express,on
4304 numexp,100,0.3,0.4
4305 outpr,.none
4306 solve
4307 save
4308 finish
4309
4310 /post26
4311 numvar,30
4312 esol . 2 . 1 . 1 . f . x
4313 esol . 3 . 1 . 1 . f . y
4314 esol . 4 . 1 . 1 . m . x
4315 esol . 5 . 1 . 1 . m . y
4316 esol . 6 . 8 . 8 . f . x
4317 esol . 7 . 8 . 6 . m . x
4318 esol . 8 . 12 . 10 . f . x
4319 esol . 9 . 12 . 10 . f . x
4320 esol . 10 . 12 . 10 . m . x
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4322 esol . 12 . 22 . 15 . f . z
4323 esol . 13 . 22 . 15 . m . z
4324 esol . 14 . 32 . 23 . m . x
4325 esol . 15 . 32 . 23 . m . z
4326 esol . 16 . 48 . 35 . f . y
4327 esol . 17 . 52 . 39 . f . x
4328 esol . 18 . 52 . 39 . m . y
4329 esol . 19 . 58 . 45 . f . x
4330 esol . 20 . 58 . 45 . m . x
4331 esol . 21 . 71 . 56 . f . x
4332 esol . 22 . 86 . 72 . f . x
4333 esol . 23 . 107 . 93 . m . x
4334 esol . 24 . 114 . 102 . f . x
4335 esol . 25 . 114 . 102 . f . x
4336 esol . 26 . 117 . 103 . f . x
4337 esol . 27 . 123 . 112 . m . y
4338 esol . 28 . 125 . 101 . f . x
4339 esol . 29 . 125 . 101 . m . y
4340 esol . 30 . 139 . 65 . f . x
4341 extrem,2,30
4342 save
4343 finish
4344
4345 /solu
4346 express,on
4347 numexp,100,0.4,0.5
4348 outpr,.none
4349 solve
4350 save
4351 finish
4352
4353 /post26
4354 numvar,30
4355 esol . 2 . 1 . 1 . f . x
4356 esol . 3 . 1 . 1 . f . y
4357 esol . 4 . 1 . 1 . m . x
4358 esol . 5 . 1 . 1 . m . y
4359 esol . 6 . 8 . 8 . f . x
4360 esol . 7 . 8 . 6 . m . x
4361 esol . 8 . 12 . 10 . f . x
4362 esol . 9 . 12 . 10 . f . x
4363 esol . 10 . 12 . 10 . m . x
4364 esol . 11 . 12 . 10 . m . z
4365 esol . 12 . 22 . 15 . f . z
4366 esol . 13 . 22 . 15 . m . z
4367 esol . 14 . 32 . 23 . m . x
4368 esol . 15 . 32 . 23 . m . z
4369 esol . 16 . 48 . 35 . f . y
4370 esol . 17 . 52 . 39 . f . x
4371 esol . 18 . 52 . 39 . m . y
4372 esol . 19 . 58 . 45 . f . x
4373 esol . 20 . 58 . 45 . m . x
4374 esol . 21 . 71 . 56 . f . x
4375 esol . 22 . 86 . 72 . f . x
4376 esol . 23 . 107 . 93 . m . x
4377 esol . 24 . 114 . 102 . f . x
4378 esol . 25 . 114 . 102 . f . x
4379 esol . 26 . 117 . 103 . f . x
4380 esol . 27 . 123 . 112 . m . y
4381 esol . 28 . 125 . 101 . f . x
4382 esol . 29 . 125 . 101 . m . y
4383 esol . 30 . 139 . 65 . f . x
4384 extrem,2,30
4385 save

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4386 finish
4387
4388 /solu
4389 expass,on
4390 numexp,100,0.5,0.6
4391 outpr,,none
4392 solve
4393 save
4394 finish
4395
4396 /post26
4397 numvar,30
4398 esol , 2 , 1 , 1 , f , x
4399 esol , 3 , 1 , 1 , f , y
4400 esol , 4 , 1 , 1 , m , x
4401 esol , 5 , 1 , 1 , m , y
4402 esol , 6 , 8 , 6 , f , x
4403 esol , 7 , 8 , 6 , m , z
4404 esol , 8 , 12 , 10 , f , x
4405 esol , 9 , 12 , 10 , f , z
4406 esol , 10 , 12 , 10 , m , x
4407 esol , 11 , 12 , 10 , m , z
4408 esol , 12 , 22 , 15 , f , z
4409 esol , 13 , 22 , 15 , m , z
4410 esol , 14 , 32 , 23 , m , x
4411 esol , 15 , 32 , 23 , m , z
4412 esol , 16 , 48 , 35 , f , y
4413 esol , 17 , 52 , 39 , f , x
4414 esol , 18 , 52 , 39 , m , y
4415 esol , 19 , 58 , 45 , f , z
4416 esol , 20 , 58 , 45 , m , z
4417 esol , 21 , 71 , 56 , f , x
4418 esol , 22 , 86 , 72 , f , x
4419 esol , 23 , 107 , 93 , m , x
4420 esol , 24 , 114 , 102 , f , x
4421 esol , 25 , 114 , 102 , f , z
4422 esol , 26 , 117 , 103 , f , x
4423 esol , 27 , 123 , 112 , m , y
4424 esol , 28 , 125 , 101 , f , x
4425 esol , 29 , 125 , 101 , m , y
4426 esol , 30 , 139 , 65 , f , x
4427 extrem,2,30
4428 save
4429 finish
4430
4431 /solu
4432 expass,on
4433 numexp,100,0.6,0.7
4434 outpr,,none
4435 solve
4436 save
4437 finish
4438
4439 /post26
4440 numvar,30
4441 esol , 2 , 1 , 1 , f , x
4442 esol , 3 , 1 , 1 , f , y
4443 esol , 4 , 1 , 1 , m , x
4444 esol , 5 , 1 , 1 , m , y
4445 esol , 6 , 8 , 6 , f , x
4446 esol , 7 , 8 , 6 , m , z
4447 esol , 8 , 12 , 10 , f , x
4448 esol , 9 , 12 , 10 , f , z
4449 esol , 10 , 12 , 10 , m , x
4450 esol , 11 , 12 , 10 , m , z
4451 esol , 12 , 22 , 15 , f , z
4452 esol , 13 , 22 , 15 , m , z
4453 esol , 14 , 32 , 23 , m , x
4454 esol , 15 , 32 , 23 , m , z
4455 esol , 16 , 48 , 35 , f , y
4456 esol , 17 , 52 , 39 , f , x
4457 esol , 18 , 52 , 39 , m , y
4458 esol , 19 , 58 , 45 , f , z
4459 esol , 20 , 58 , 45 , m , z
4460 esol , 21 , 71 , 56 , f , x
4461 esol , 22 , 86 , 72 , f , x
4462 esol , 23 , 107 , 93 , m , x
4463 esol , 24 , 114 , 102 , f , x
4464 esol , 25 , 114 , 102 , f , z
4465 esol , 26 , 117 , 103 , f , x
4466 esol , 27 , 123 , 112 , m , y
4467 esol , 28 , 125 , 101 , f , x
4468 esol , 29 , 125 , 101 , m , y
4469 esol , 30 , 139 , 65 , f , x
4470 extrem,2,30
4471 save
4472 finish
4473
4474 /solu
4475 expass,on
4476 numexp,100,0.7,0.8
4477 outpr,,none
4478 solve
4479 save
4480 finish
4481
4482 /post26
4483 numvar,30
4484 esol , 2 , 1 , 1 , f , x
4485 esol , 3 , 1 , 1 , f , y
4486 esol , 4 , 1 , 1 , m , x

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4487 esol , 5 , 1 , 1 , m , y
4488 esol , 6 , 8 , 6 , f , x
4489 esol , 7 , 8 , 6 , m , z
4490 esol , 8 , 12 , 10 , f , x
4491 esol , 9 , 12 , 10 , f , z
4492 esol , 10 , 12 , 10 , m , x
4493 esol , 11 , 12 , 10 , m , z
4494 esol , 12 , 22 , 15 , f , z
4495 esol , 13 , 22 , 15 , m , z
4496 esol , 14 , 32 , 23 , m , x
4497 esol , 15 , 32 , 23 , m , z
4498 esol , 16 , 48 , 35 , f , y
4499 esol , 17 , 52 , 39 , f , x
4500 esol , 18 , 52 , 39 , m , y
4501 esol , 19 , 58 , 45 , f , z
4502 esol , 20 , 58 , 45 , m , z
4503 esol , 21 , 71 , 56 , f , x
4504 esol , 22 , 86 , 72 , f , x
4505 esol , 23 , 107 , 93 , m , x
4506 esol , 24 , 114 , 102 , f , x
4507 esol , 25 , 114 , 102 , f , z
4508 esol , 26 , 117 , 103 , f , x
4509 esol , 27 , 123 , 112 , m , y
4510 esol , 28 , 125 , 101 , f , x
4511 esol , 29 , 125 , 101 , m , y
4512 esol , 30 , 139 , 65 , f , x
4513 extrem,2,30
4514 save
4515 finish
4516
4517 /solu
4518 expass,on
4519 numexp,100,0.8,0.9
4520 outpr,,none
4521 solve
4522 save
4523 finish
4524
4525 /post26
4526 numvar,30
4527 esol , 2 , 1 , 1 , f , x
4528 esol , 3 , 1 , 1 , f , y
4529 esol , 4 , 1 , 1 , m , x
4530 esol , 5 , 1 , 1 , m , y
4531 esol , 6 , 8 , 6 , f , x
4532 esol , 7 , 8 , 6 , m , z
4533 esol , 8 , 12 , 10 , f , x
4534 esol , 9 , 12 , 10 , f , z
4535 esol , 10 , 12 , 10 , m , x
4536 esol , 11 , 12 , 10 , m , z
4537 esol , 12 , 22 , 15 , f , z
4538 esol , 13 , 22 , 15 , m , z
4539 esol , 14 , 32 , 23 , m , x
4540 esol , 15 , 32 , 23 , m , z
4541 esol , 16 , 48 , 35 , f , y
4542 esol , 17 , 52 , 39 , f , x
4543 esol , 18 , 52 , 39 , m , y
4544 esol , 19 , 58 , 45 , f , z
4545 esol , 20 , 58 , 45 , m , z
4546 esol , 21 , 71 , 56 , f , x
4547 esol , 22 , 86 , 72 , f , x
4548 esol , 23 , 107 , 93 , m , x
4549 esol , 24 , 114 , 102 , f , x
4550 esol , 25 , 114 , 102 , f , z
4551 esol , 26 , 117 , 103 , f , x
4552 esol , 27 , 123 , 112 , m , y
4553 esol , 28 , 125 , 101 , f , x
4554 esol , 29 , 125 , 101 , m , y
4555 esol , 30 , 139 , 65 , f , x
4556 extrem,2,30
4557 save
4558 finish
4559
4560 /solu
4561 expass,on
4562 numexp,100,0.9,1.0
4563 outpr,,none
4564 solve
4565 save
4566 finish
4567
4568 /post26
4569 numvar,30
4570 esol , 2 , 1 , 1 , f , x
4571 esol , 3 , 1 , 1 , f , y
4572 esol , 4 , 1 , 1 , m , x
4573 esol , 5 , 1 , 1 , m , y
4574 esol , 6 , 8 , 6 , f , x
4575 esol , 7 , 8 , 6 , m , z
4576 esol , 8 , 12 , 10 , f , x
4577 esol , 9 , 12 , 10 , f , z
4578 esol , 10 , 12 , 10 , m , x
4579 esol , 11 , 12 , 10 , m , z
4580 esol , 12 , 22 , 15 , f , z
4581 esol , 13 , 22 , 15 , m , z
4582 esol , 14 , 32 , 23 , m , x
4583 esol , 15 , 32 , 23 , m , z
4584 esol , 16 , 48 , 35 , f , y
4585 esol , 17 , 52 , 39 , f , x
4586 esol , 18 , 52 , 39 , m , y
4587 esol , 19 , 58 , 45 , f , z

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4588 elem 30 58 45 8 X
 4589 elem 31 71 56 8 X
 4590 elem 32 86 72 8 X
 4591 elem 33 107 93 8 X
 4592 elem 34 114 102 8 X
 4593 elem 35 114 102 8 X
 4594 elem 36 117 103 8 X
 4595 elem 37 117 103 8 X
 4596 elem 38 125 101 8 X
 4597 elem 39 125 101 8 X
 4598 elem 40 139 85 8 X
 4599 elem 41 139 85 8 X
 4600 save
 4601 finish

CURRENT JOINTS REDEFINED AS pb2tfx

UNIT SYSTEM UNITS SPECIFIED
 LENGTH = FEET (FT)
 MASS = SLUGS
 TIME = SECONDS (SEC)
 TEMPERATURE = FAHRENHEIT
 CURRENT = AMPS

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
 40416.2 VERSION=JUN41PARC 00:18:52 OCT 11, 1995 CP= 6.090
 FOR SUPPORT CALL PHONE FAX

***** ANSYS VERSION 5.0 RUCATIONAL PURPOSES ONLY *****

***** ANSYS ANALYSIS DEFINITION (PREP) *****

PARAMETER G = 32.200000
 PARAMETER A = 0.14400000
 PARAMETER B = 1.728000
 PARAMETER C = 0.1928724E-02
 PARAMETER D = 0.1200000E-01
 PARAMETER R1 = 0.2395833
 PARAMETER R3 = 0.7000000E-01
 PARAMETER R5 = 0.1581333
 PARAMETER T1 = 0.3125000E-01
 PARAMETER T3 = 0.15466877E-02
 PARAMETER T5 = 0.2341667E-01
 PARAMETER R11 = 1.667000
 PARAMETER R81 = 0.3125000
 PARAMETER R82 = 0.5000000
 PARAMETER R83 = 0.3130000
 PARAMETER R84 = 0.1250000
 PARAMETER R85 = 0.1870000

TITLE= Time-history analysis of coupled system (prewarmer spray line)

MATERIAL 1 EX = 4075200.
 MATERIAL 1 MUZY = 0.3000000
 MATERIAL 1 DENS = 0.2181911E-01
 MATERIAL 2 EX = 4075200.
 MATERIAL 2 MUZY = 0.3000000
 MATERIAL 2 DENS = 0.2354123E-01
 MATERIAL 3 EX = 4075200.
 MATERIAL 3 MUZY = 0.3000000
 MATERIAL 3 DENS = 0.4983217E-01
 MATERIAL 4 EX = 4075200.
 MATERIAL 4 MUZY = 0.3000000
 MATERIAL 4 DENS = 0.3140205
 MATERIAL 5 EX = 4075200.
 MATERIAL 5 MUZY = 0.3000000

MATERIAL 5 DENS = 0.2679876E-01
 MATERIAL 6 EX = 4075200.
 MATERIAL 6 MUZY = 0.3000000
 MATERIAL 6 DENS = 0.1386141
 ELEMENT TYPE 1 IS PIPE16 ELASTIC STRAIGHT PIPE
 KEYOPT(1-12)= 0 0 0 0 0 1 0 0 0 0 0 0
 CURRENT MODAL DOF SET IS UX UY UZ ROTX ROTY ROTZ
 THREE-DIMENSIONAL MODEL
 ELEMENT TYPE 2 IS PIPE16 ELASTIC CURVED PIPE (ELBOW)
 KEYOPT(1-12)= 0 0 0 0 0 2 0 0 0 0 0 0
 CURRENT MODAL DOF SET IS UX UY UZ ROTX ROTY ROTZ
 THREE-DIMENSIONAL MODEL
 ELEMENT TYPE 3 IS COMBIN14 SPRING-DAMPER
 KEYOPT(1-12)= 0 1 0 0 0 0 0 0 0 0 0 0
 CURRENT MODAL DOF SET IS UX UY UZ ROTX ROTY ROTZ
 THREE-DIMENSIONAL MODEL
 ELEMENT TYPE 4 IS COMBIN14 SPRING-DAMPER
 KEYOPT(1-12)= 0 2 0 0 0 0 0 0 0 0 0 0
 CURRENT MODAL DOF SET IS UX UY UZ ROTX ROTY ROTZ
 THREE-DIMENSIONAL MODEL
 ELEMENT TYPE 5 IS COMBIN14 SPRING-DAMPER
 KEYOPT(1-12)= 0 3 0 0 0 0 0 0 0 0 0 0
 CURRENT MODAL DOF SET IS UX UY UZ ROTX ROTY ROTZ
 THREE-DIMENSIONAL MODEL
 ELEMENT TYPE 6 IS COMBIN14 SPRING-DAMPER
 KEYOPT(1-12)= 0 4 0 0 0 0 0 0 0 0 0 0
 CURRENT MODAL DOF SET IS UX UY UZ ROTX ROTY ROTZ
 THREE-DIMENSIONAL MODEL
 ELEMENT TYPE 7 IS COMBIN14 SPRING-DAMPER
 KEYOPT(1-12)= 0 5 0 0 0 0 0 0 0 0 0 0
 CURRENT MODAL DOF SET IS UX UY UZ ROTX ROTY ROTZ
 THREE-DIMENSIONAL MODEL
 ELEMENT TYPE 8 IS COMBIN14 SPRING-DAMPER
 KEYOPT(1-12)= 0 6 0 0 0 0 0 0 0 0 0 0
 CURRENT MODAL DOF SET IS UX UY UZ ROTX ROTY ROTZ
 THREE-DIMENSIONAL MODEL
 ELEMENT TYPE 30 IS MASS21 STRUCTURAL MASS
 KEYOPT(1-12)= 0 0 2 0 0 0 0 0 0 0 0 0
 CURRENT MODAL DOF SET IS UX UY UZ ROTX ROTY ROTZ
 THREE-DIMENSIONAL MODEL
 REAL CONSTANT SET 11 ITEMS 1 TO 6 0.
 0.23958 0.31250E-01 1.6670 1 TO 6 0.
 REAL CONSTANT SET 211 ITEMS 1 TO 6 0.
 0.23958 0.31250E-01 1.6670 1 TO 6 0.
 REAL CONSTANT SET 211 ITEMS 7 TO 12 0.
 0.19387E-02 0. 0. 0. 0. 0. 0.
 REAL CONSTANT SET 21 ITEMS 1 TO 6 0.
 0.23958 0.31250E-01 0.31250 1 TO 6 0.
 REAL CONSTANT SET 21 ITEMS 7 TO 12 0.
 0.19387E-02 0. 0. 0. 0. 0. 0.
 REAL CONSTANT SET 212 ITEMS 1 TO 6 0.
 0.23958 0.31250E-01 0.50000 1 TO 6 0.
 REAL CONSTANT SET 212 ITEMS 7 TO 12 0.
 0.19387E-02 0. 0. 0. 0. 0. 0.
 REAL CONSTANT SET 213 ITEMS 1 TO 6 0.
 0.23958 0.31250E-01 0.31300 1 TO 6 0.
 REAL CONSTANT SET 213 ITEMS 7 TO 12 0.
 0.19387E-02 0. 0. 0. 0. 0. 0.
 REAL CONSTANT SET 11 ITEMS 1 TO 6 0.
 6.70000E-01 0.15667E-01 0. 0. 0. 0. 0.19387E-02
 REAL CONSTANT SET 23 ITEMS 1 TO 6 0.
 6.70000E-01 0.15667E-01 0.12500 1 TO 6 0.
 REAL CONSTANT SET 23 ITEMS 7 TO 12 0.
 0.19387E-02 0. 0. 0. 0. 0. 0.
 REAL CONSTANT SET 15 ITEMS 1 TO 6 0.
 0.15813 0.23417E-01 0. 0. 0. 0. 0.19387E-02

REAL CONSTANT SET 25 ITEMS 1 TO 6 0.0
 0.15833 0.23417E-01 0.18700 0.0
 REAL CONSTANT SET 25 ITEMS 7 TO 12 0.0
 0.15387E-02 0.0
 REAL CONSTANT SET 51 ITEMS 1 TO 6 0.0
 914.00 0.0
 REAL CONSTANT SET 53 ITEMS 1 TO 6 0.0
 0.67200 0.0
 REAL CONSTANT SET 53 ITEMS 1 TO 6 0.0
 2544.0 0.0
 REAL CONSTANT SET 54 ITEMS 1 TO 6 0.0
 1.5120 0.0
 REAL CONSTANT SET 55 ITEMS 1 TO 6 0.0
 0.42000 0.0
 REAL CONSTANT SET 56 ITEMS 1 TO 6 0.0
 4.8000 0.0
 REAL CONSTANT SET 57 ITEMS 1 TO 6 0.0
 2.6880 0.0
 REAL CONSTANT SET 58 ITEMS 1 TO 6 0.0
 0.12000E-10 0.0
 REAL CONSTANT SET 59 ITEMS 1 TO 6 0.0
 0.83300E-09 0.0
 REAL CONSTANT SET 31 ITEMS 1 TO 6 0.0
 0.77640E-03 0.0
 REAL CONSTANT SET 32 ITEMS 1 TO 6 0.0
 0.12422E-01 0.0
 REAL CONSTANT SET 33 ITEMS 1 TO 6 0.0
 0.13354E-02 0.0
 REAL CONSTANT SET 34 ITEMS 1 TO 6 0.0
 0.12422E-01 0.0
 REAL CONSTANT SET 35 ITEMS 1 TO 6 0.0
 0.23282E-02 0.0
 REAL CONSTANT SET 36 ITEMS 1 TO 6 0.0
 0.15528E-03 0.0
 REAL CONSTANT SET 37 ITEMS 1 TO 6 0.0
 0.18634E-03 0.0
 REAL CONSTANT SET 38 ITEMS 1 TO 6 0.0
 0.32659E-02 0.0
 REAL CONSTANT SET 39 ITEMS 1 TO 6 0.0
 0.31056E-03 0.0
 REAL CONSTANT SET 40 ITEMS 1 TO 6 0.0
 0.37267E-03 0.0
 REAL CONSTANT SET 41 ITEMS 1 TO 6 0.0
 0.97826E-03 0.0
 REAL CONSTANT SET 42 ITEMS 1 TO 6 0.0
 0.71429E-02 0.0
 PARAMETER P = 0.6944444E-02
 PARAMETER I = 0.482251E-04
 ELEMENT TYPE 71 IS BEM6
 KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0
 CURRENT REAL DOP SET IS UX UY UZ ROTX ROTY ROTZ
 THREE-DIMENSIONAL MODEL
 MATERIAL 71 EX = 648000 G
 MATERIAL 71 NUTY = 0.3000000
 MATERIAL 71 DENM = 0.0
 REAL CONSTANT SET 71 ITEMS 1 TO 6 0.0
 1090.3 0.56506E+06 0.49672E+06 0.0
 REAL CONSTANT SET 71 ITEMS 7 TO 12 1.6700
 0.0
 REAL CONSTANT SET 72 ITEMS 1 TO 6 0.0
 1.687.5 0.68962E+06 0.53048E+06 0.0
 0.0
 REAL CONSTANT SET 72 ITEMS 7 TO 12 1.2100
 1.2600 0.0
 REAL CONSTANT SET 73 ITEMS 1 TO 6 0.0
 1125.0 0.60242E+06 0.77160E+06 0.0
 REAL CONSTANT SET 73 ITEMS 7 TO 12

REAL CONSTANT SET 74 ITEMS 1 TO 6 0.0
 916.67 0.55659E+06 0.71373E+06 0.0
 REAL CONSTANT SET 74 ITEMS 7 TO 12 2.2600
 0.0
 REAL CONSTANT SET 75 ITEMS 1 TO 6 0.0
 643.47 0.21270E+06 0.10373E+06 0.0
 REAL CONSTANT SET 75 ITEMS 7 TO 12 2.5700
 0.0
 REAL CONSTANT SET 76 ITEMS 1 TO 6 0.0
 685.49 0.33552E+06 0.11551E+06 0.0
 REAL CONSTANT SET 76 ITEMS 7 TO 12 2.8800
 0.0
 ELEMENT TYPE 72 IS MASS21
 KEYOPT(1-12)= 0 0 2 0 0 0 0 0 0 0 0 0
 CURRENT REAL DOP SET IS UX UY UZ ROTX ROTY ROTZ
 THREE-DIMENSIONAL MODEL
 REAL CONSTANT SET 77 ITEMS 1 TO 6 0.0
 138.94
 REAL CONSTANT SET 78 ITEMS 1 TO 6 0.0
 137.54
 REAL CONSTANT SET 79 ITEMS 1 TO 6 0.0
 62.3111
 REAL CONSTANT SET 80 ITEMS 1 TO 6 0.0
 99.604
 REAL CONSTANT SET 81 ITEMS 1 TO 6 0.0
 88.439
 NODE 1 KCS= 0 X,Y,Z= 0. 574.00 0. 0.
 NODE 2 KCS= 0 X,Y,Z= 0.38600 574.00 -0.38600
 NODE 3 KCS= 0 X,Y,Z= 1.5740 574.00 -0.88400
 NODE 4 KCS= 0 X,Y,Z= 3.7900 574.00 -0.88400
 NODE 5 KCS= 0 X,Y,Z= 4.9050 574.00 -0.88400
 NODE 6 KCS= 0 X,Y,Z= 5.0610 574.04 -0.88400
 NODE 7 KCS= 0 X,Y,Z= 5.1750 574.16 -0.88400
 NODE 8 KCS= 0 X,Y,Z= 5.2170 574.31 -0.88400
 NODE 9 KCS= 0 X,Y,Z= 5.2170 574.50 -0.88400
 NODE 10 KCS= 0 X,Y,Z= 5.2170 577.57 -0.88400
 NODE 11 KCS= 0 X,Y,Z= 5.2170 580.63 -0.88400
 NODE 12 KCS= 0 X,Y,Z= 5.2170 583.70 -0.88400
 NODE 13 KCS= 0 X,Y,Z= 5.2170 588.23 -0.88400
 NODE 14 KCS= 0 X,Y,Z= 5.2170 586.83 -0.88400
 NODE 15 KCS= 0 X,Y,Z= 5.2170 589.44 -0.88400
 NODE 16 KCS= 0 X,Y,Z= 5.2170 592.04 -0.88400
 NODE 17 KCS= 0 X,Y,Z= 5.2170 592.84 -0.88400
 NODE 18 KCS= 0 X,Y,Z= 5.2590 593.09 -0.88400
 NODE 19 KCS= 0 X,Y,Z= 5.3730 593.21 -0.88400
 NODE 20 KCS= 0 X,Y,Z= 5.5300 593.25 -0.88400
 NODE 21 KCS= 0 X,Y,Z= 5.7590 593.25 -0.88400
 NODE 22 KCS= 0 X,Y,Z= 6.2590 593.25 -0.88400
 NODE 23 KCS= 0 X,Y,Z= 7.4220 593.25 -0.88400
 NODE 24 KCS= 0 X,Y,Z= 7.6430 593.25 -0.38400
 NODE 25 KCS= 0 X,Y,Z= 8.0510 593.25 -0.38400
 NODE 26 KCS= 0 X,Y,Z= 8.6290 593.25 0.19400
 NODE 27 KCS= 0 X,Y,Z= 10.156 593.25 1.7130
 NODE 28 KCS= 0 X,Y,Z= 10.379 593.56 1.9440
 NODE 29 KCS= 0 X,Y,Z= 10.379 596.90 1.9440
 NODE 30 KCS= 0 X,Y,Z= 10.379 600.24 1.9440

NODE	22	ECS*	0	X.Y.Z*	10.379	603.58	1.9440
NODE	23	ECS*	0	X.Y.Z*	10.379	604.29	1.9440
NODE	24	ECS*	0	X.Y.Z*	10.379	605.65	1.9440
NODE	9011	ECS*	0	X.Y.Z*	10.379	608.44	1.9440
NODE	9012	ECS*	0	X.Y.Z*	10.379	611.22	1.9440
NODE	25	ECS*	0	X.Y.Z*	10.379	614.00	1.9440
NODE	26	ECS*	0	X.Y.Z*	10.379	614.79	1.9440
NODE	9013	ECS*	0	X.Y.Z*	10.379	617.74	1.9440
NODE	9014	ECS*	0	X.Y.Z*	10.379	620.69	1.9440
NODE	27	ECS*	0	X.Y.Z*	10.379	623.64	1.9440
NODE	28	ECS*	0	X.Y.Z*	10.379	624.75	1.9440
NODE	29	ECS*	0	X.Y.Z*	10.379	626.41	1.9440
NODE	9015	ECS*	0	X.Y.Z*	10.379	629.53	1.9440
NODE	9016	ECS*	0	X.Y.Z*	10.379	632.64	1.9440
NODE	30	ECS*	0	X.Y.Z*	10.379	635.75	1.9440
NODE	31	ECS*	0	X.Y.Z*	10.379	635.83	1.9440
NODE	32	ECS*	0	X.Y.Z*	10.379	636.05	2.0350
NODE	35	ECS*	0	X.Y.Z*	10.379	636.14	2.2560
NODE	37	ECS*	0	X.Y.Z*	10.379	636.14	2.9590
NODE	9017	ECS*	0	X.Y.Z*	10.379	636.14	5.6570
NODE	9018	ECS*	0	X.Y.Z*	10.379	636.14	8.3550
NODE	38	ECS*	0	X.Y.Z*	10.379	636.14	11.053
NODE	39	ECS*	0	X.Y.Z*	10.379	636.14	11.918
NODE	9019	ECS*	0	X.Y.Z*	10.379	636.14	14.756
NODE	40	ECS*	0	X.Y.Z*	10.379	636.14	17.595
NODE	41	ECS*	0	X.Y.Z*	10.379	635.14	20.048
NODE	43	ECS*	0	X.Y.Z*	10.692	636.14	20.360
NODE	44	ECS*	0	X.Y.Z*	10.812	636.14	20.360
NODE	45	ECS*	0	X.Y.Z*	11.129	636.14	20.360
NODE	9020	ECS*	0	X.Y.Z*	13.507	636.14	20.360
NODE	46	ECS*	0	X.Y.Z*	15.885	636.14	20.360
NODE	47	ECS*	0	X.Y.Z*	16.135	636.14	20.360
NODE	48	ECS*	0	X.Y.Z*	16.385	636.14	20.360
NODE	49	ECS*	0	X.Y.Z*	16.801	636.14	20.360
NODE	50	ECS*	0	X.Y.Z*	17.218	636.14	20.360
NODE	51	ECS*	0	X.Y.Z*	17.343	636.14	20.360
NODE	52	ECS*	0	X.Y.Z*	17.801	636.14	20.360
NODE	53	ECS*	0	X.Y.Z*	19.822	636.14	20.360
NODE	54	ECS*	0	X.Y.Z*	22.801	636.14	20.360
NODE	55	ECS*	0	X.Y.Z*	22.864	636.14	20.360
NODE	56	ECS*	0	X.Y.Z*	33.176	636.14	20.673
NODE	57	ECS*	0	X.Y.Z*	33.176	636.14	20.860
NODE	58	ECS*	0	X.Y.Z*	23.176	636.14	21.027
NODE	59	ECS*	0	X.Y.Z*	23.176	636.14	21.277
NODE	60	ECS*	0	X.Y.Z*	33.176	636.14	21.527
NODE	61	ECS*	0	X.Y.Z*	33.176	636.14	21.777
NODE	62	ECS*	0	X.Y.Z*	23.176	636.14	21.798
NODE	63	ECS*	0	X.Y.Z*	22.864	636.14	22.110
NODE	64	ECS*	0	X.Y.Z*	21.947	636.14	22.130
NODE	65	ECS*	0	X.Y.Z*	21.530	636.14	22.130
NODE	66	ECS*	0	X.Y.Z*	21.113	636.14	22.110

NODE	67	ECS*	0	X.Y.Z*	20.789	636.14	22.110
NODE	68	ECS*	0	X.Y.Z*	20.509	636.14	22.112
NODE	69	ECS*	0	X.Y.Z*	20.259	636.14	22.110
NODE	70	ECS*	0	X.Y.Z*	20.071	636.14	22.110
NODE	71	ECS*	0	X.Y.Z*	19.654	636.14	22.110
NODE	72	ECS*	0	X.Y.Z*	19.237	636.14	22.110
NODE	73	ECS*	0	X.Y.Z*	17.383	636.14	22.110
NODE	74	ECS*	0	X.Y.Z*	17.175	636.14	22.110
NODE	75	ECS*	0	X.Y.Z*	16.758	636.14	22.110
NODE	76	ECS*	0	X.Y.Z*	16.341	636.14	22.110
NODE	77	ECS*	0	X.Y.Z*	16.133	636.14	22.110
NODE	78	ECS*	0	X.Y.Z*	15.799	636.14	22.110
NODE	9022	ECS*	0	X.Y.Z*	13.413	636.14	22.110
NODE	79	ECS*	0	X.Y.Z*	11.028	636.14	22.110
NODE	80	ECS*	0	X.Y.Z*	10.121	636.14	22.110
NODE	81	ECS*	0	X.Y.Z*	9.8970	636.14	22.110
NODE	82	ECS*	0	X.Y.Z*	9.5850	636.14	21.788
NODE	9022	ECS*	0	X.Y.Z*	9.5850	636.14	19.663
NODE	83	ECS*	0	X.Y.Z*	9.5850	636.14	17.527
NODE	84	ECS*	0	X.Y.Z*	9.5850	636.14	17.333
NODE	85	ECS*	0	X.Y.Z*	9.5850	636.14	17.194
NODE	87	ECS*	0	X.Y.Z*	9.2310	635.79	16.694
NODE	87	ECS*	0	X.Y.Z*	8.7600	635.32	16.694
NODE	47	ECS*	0	X.Y.Z*	16.135	636.14	20.360
NODE	91	ECS*	0	X.Y.Z*	16.135	636.39	20.360
NODE	92	ECS*	0	X.Y.Z*	16.135	637.33	20.360
NODE	93	ECS*	0	X.Y.Z*	16.135	637.64	20.873
NODE	94	ECS*	0	X.Y.Z*	16.135	637.64	20.944
NODE	95	ECS*	0	X.Y.Z*	16.135	637.64	21.361
NODE	96	ECS*	0	X.Y.Z*	16.135	637.64	21.778
NODE	97	ECS*	0	X.Y.Z*	16.135	637.64	21.795
NODE	98	ECS*	0	X.Y.Z*	16.135	637.33	22.111
NODE	100	ECS*	0	X.Y.Z*	16.135	636.96	22.111
NODE	101	ECS*	0	X.Y.Z*	16.135	636.71	22.111
NODE	102	ECS*	0	X.Y.Z*	16.135	636.39	22.111
NODE	77	ECS*	0	X.Y.Z*	16.135	636.14	22.111
NODE	59	ECS*	0	X.Y.Z*	23.176	636.14	21.277
NODE	103	ECS*	0	X.Y.Z*	22.868	636.14	21.277
NODE	104	ECS*	0	X.Y.Z*	22.092	636.14	21.277
NODE	105	ECS*	0	X.Y.Z*	21.842	636.14	21.277
NODE	106	ECS*	0	X.Y.Z*	21.592	636.14	21.277
NODE	107	ECS*	0	X.Y.Z*	20.634	636.14	21.277
NODE	108	ECS*	0	X.Y.Z*	20.509	636.14	21.402
NODE	111	ECS*	0	X.Y.Z*	20.509	636.14	21.683
NODE	112	ECS*	0	X.Y.Z*	20.509	636.14	21.801
NODE	68	ECS*	0	X.Y.Z*	20.509	636.14	22.111
NODE	101	ECS*	0	X.Y.Z*	16.135	636.71	22.111
NODE	113	ECS*	0	X.Y.Z*	16.135	636.71	22.611
NODE	114	ECS*	0	X.Y.Z*	16.135	636.71	22.96'
NODE	115	ECS*	0	X.Y.Z*	16.135	636.71	23.311

NODE	116	KCS*	0	X,Y,Z*	16,115	636.71	23.840
NODE	118	KCS*	0	X,Y,Z*	14,135	636.89	24.027
NODE	9023	KCS*	0	X,Y,Z*	7,135	639.27	24.027
NODE	120	KCS*	0	X,Y,Z*	16,135	641.65	24.027
NODE	122	KCS*	0	X,Y,Z*	16,135	641.84	24.214
NODE	124	KCS*	0	X,Y,Z*	16,135	641.84	24.567
NODE	125	KCS*	0	X,Y,Z*	16,135	641.84	25.411
NODE	127	KCS*	0	X,Y,Z*	16,135	641.65	25.598
NODE	129	KCS*	0	X,Y,Z*	16,135	639.51	25.598
NODE	9024	KCS*	0	X,Y,Z*	16,135	637.97	25.598
NODE	130	KCS*	0	X,Y,Z*	16,135	636.42	25.598
NODE	65	KCS*	0	X,Y,Z*	21,530	636.14	22.110
NODE	131	KCS*	0	X,Y,Z*	21,530	636.41	22.110
NODE	132	KCS*	0	X,Y,Z*	21,530	636.69	22.110
NODE	71	KCS*	0	X,Y,Z*	19,654	636.14	22.110
NODE	133	KCS*	0	X,Y,Z*	19,654	636.41	22.110
NODE	134	KCS*	0	X,Y,Z*	19,654	636.69	22.110
NODE	1001	KCS*	0	X,Y,Z*	0	574.00	0
NODE	1009	KCS*	0	X,Y,Z*	5,2370	583.70	-0.88400
NODE	1010	KCS*	0	X,Y,Z*	5,2370	584.23	-0.88400
NODE	1014	KCS*	0	X,Y,Z*	5,7590	593.25	-0.88400
NODE	1015	KCS*	0	X,Y,Z*	6,2590	593.25	-0.88400
NODE	1023	KCS*	0	X,Y,Z*	10,379	604.29	1.9440
NODE	1028	KCS*	0	X,Y,Z*	10,379	624.75	1.9440
NODE	1029	KCS*	0	X,Y,Z*	10,379	626.41	1.9440
NODE	1037	KCS*	0	X,Y,Z*	10,379	636.14	2.9590
NODE	1039	KCS*	0	X,Y,Z*	10,379	636.14	11.918
NODE	1044	KCS*	0	X,Y,Z*	10,812	636.14	20.360
NODE	1045	KCS*	0	X,Y,Z*	11,129	636.14	20.360
NODE	1052	KCS*	0	X,Y,Z*	17,601	636.14	20.360
NODE	1053	KCS*	0	X,Y,Z*	19,422	636.14	20.360
NODE	1054	KCS*	0	X,Y,Z*	22,601	636.14	20.360
NODE	1057	KCS*	0	X,Y,Z*	23,176	636.14	20.660
NODE	1061	KCS*	0	X,Y,Z*	23,176	636.14	21.777
NODE	1073	KCS*	0	X,Y,Z*	17,383	636.14	22.110
NODE	1078	KCS*	0	X,Y,Z*	15,799	636.14	22.110
NODE	1079	KCS*	0	X,Y,Z*	11,028	636.14	22.110
NODE	1087	KCS*	0	X,Y,Z*	8,7600	635.32	16.694
NODE	1124	KCS*	0	X,Y,Z*	16,135	641.84	24.567
NODE	1123	KCS*	0	X,Y,Z*	16,135	639.51	25.598
NODE	1130	KCS*	0	X,Y,Z*	16,135	636.42	25.598
NODE	1131	KCS*	0	X,Y,Z*	21,530	636.41	22.110
NODE	1133	KCS*	0	X,Y,Z*	19,654	636.41	22.110
ELEMENT TYPE SET TO							1
REAL CONSTANT NUMBER*							11
MATERIAL NUMBER SET TO							1
ELEMENT 1							1 2 0
ELEMENT TYPE SET TO							2
REAL CONSTANT NUMBER*							211
ELEMENT 2							2 3 1
ELEMENT TYPE SET TO							1

REAL CONSTANT NUMBER*							11
ELEMENT 3							1 4 0
ELEMENT 4							4 5 0
ELEMENT TYPE SET TO							2
REAL CONSTANT NUMBER*							21
ELEMENT 5							5 9001 4
ELEMENT 6							9001 9002 4
ELEMENT 7							9002 6 4
ELEMENT TYPE SET TO							1
REAL CONSTANT NUMBER*							11
ELEMENT 8							6 7 0
ELEMENT 9							7 9003 0
ELEMENT 10							9003 5004 0
ELEMENT 11							9004 9 0
ELEMENT 12							9 10 0
ELEMENT 13							10 9005 0
ELEMENT 14							9005 9006 0
ELEMENT 15							9006 11 0
ELEMENT 16							11 12 0
ELEMENT TYPE SET TO							2
REAL CONSTANT NUMBER*							21
ELEMENT 17							12 9007 11
ELEMENT 18							9007 9008 11
ELEMENT 19							9008 13 11
ELEMENT TYPE SET TO							1
REAL CONSTANT NUMBER*							11
ELEMENT 20							13 14 0
ELEMENT 21							14 15 0
ELEMENT 22							15 16 0
ELEMENT TYPE SET TO							2
REAL CONSTANT NUMBER*							21
ELEMENT 23							16 17 15
ELEMENT TYPE SET TO							1
REAL CONSTANT NUMBER*							11
ELEMENT 24							17 18 0
ELEMENT 25							18 19 0
ELEMENT 26							19 20 0
ELEMENT TYPE SET TO							2
REAL CONSTANT NUMBER*							21
ELEMENT 27							20 21 25
ELEMENT TYPE SET TO							1
REAL CONSTANT NUMBER*							11
ELEMENT 28							21 9009 0
ELEMENT 29							9009 9010 0
ELEMENT 30							9010 22 0
ELEMENT 31							22 23 0
ELEMENT 32							23 24 0
ELEMENT 33							24 9011 0
ELEMENT 34							9011 9012 0
ELEMENT 35							9012 25 0

ELEMENT	36	25	26	0
ELEMENT	37	26	9013	0
ELEMENT	38	9013	9014	0
ELEMENT	39	9014	27	0
ELEMENT	40	27	28	0
ELEMENT	41	28	29	0
ELEMENT	42	29	9015	0
ELEMENT	43	9015	9016	0
ELEMENT	44	9016	30	0
ELEMENT	45	30	31	0
ELEMENT TYPE SET TO	2			
REAL CONSTANT NUMBER=	21			
ELEMENT	46	31	32	30
ELEMENT	47	32	35	30
ELEMENT TYPE SET TO	1			
REAL CONSTANT NUMBER=	11			
ELEMENT	48	35	37	0
ELEMENT	49	37	9017	0
ELEMENT	50	9017	9018	0
ELEMENT	51	9018	38	0
ELEMENT	52	38	39	0
ELEMENT	53	39	9019	0
ELEMENT	54	9019	40	0
ELEMENT	55	40	41	0
ELEMENT TYPE SET TO	2			
REAL CONSTANT NUMBER=	21			
ELEMENT	56	41	43	40
ELEMENT TYPE SET TO	1			
REAL CONSTANT NUMBER=	11			
ELEMENT	57	43	44	0
ELEMENT	58	44	45	0
ELEMENT	59	45	9020	0
ELEMENT	60	9020	46	0
ELEMENT	61	46	47	0
ELEMENT	62	47	48	0
ELEMENT TYPE SET TO	1			
REAL CONSTANT NUMBER=	11			
MATERIAL NUMBER SET TO	2			
ELEMENT	63	48	49	0
ELEMENT	64	49	50	0
ELEMENT TYPE SET TO	1			
REAL CONSTANT NUMBER=	11			
MATERIAL NUMBER SET TO	1			
ELEMENT	65	50	51	0
ELEMENT	66	51	52	0
ELEMENT	67	52	53	0
ELEMENT	68	53	54	0
ELEMENT	69	54	55	0
ELEMENT TYPE SET TO	2			
REAL CONSTANT NUMBER=	21			
ELEMENT	70	55	56	54

ELEMENT TYPE SET TO	1			
REAL CONSTANT NUMBER=	11			
ELEMENT	71	56	57	0
ELEMENT	72	57	58	0
ELEMENT	73	58	59	0
ELEMENT	74	59	60	0
ELEMENT	75	60	61	0
ELEMENT	76	61	62	0
ELEMENT TYPE SET TO	2			
REAL CONSTANT NUMBER=	21			
ELEMENT	77	62	63	61
ELEMENT TYPE SET TO	1			
REAL CONSTANT NUMBER=	11			
ELEMENT	78	63	64	0
ELEMENT TYPE SET TO	1			
REAL CONSTANT NUMBER=	11			
MATERIAL NUMBER SET TO	2			
ELEMENT	79	64	65	0
ELEMENT	80	65	66	0
ELEMENT TYPE SET TO	1			
REAL CONSTANT NUMBER=	11			
MATERIAL NUMBER SET TO	1			
ELEMENT	81	66	67	0
ELEMENT	82	67	68	0
ELEMENT	83	68	69	0
ELEMENT	84	69	70	0
ELEMENT TYPE SET TO	1			
REAL CONSTANT NUMBER=	11			
MATERIAL NUMBER SET TO	2			
ELEMENT	85	70	71	0
ELEMENT	86	71	72	0
ELEMENT TYPE SET TO	1			
REAL CONSTANT NUMBER=	11			
MATERIAL NUMBER SET TO	1			
ELEMENT	87	72	73	0
ELEMENT	88	73	74	0
ELEMENT TYPE SET TO	2			
MATERIAL NUMBER SET TO	1			
ELEMENT	89	74	75	0
ELEMENT	90	75	76	0
MATERIAL NUMBER SET TO	1			
ELEMENT	91	76	77	0
ELEMENT	92	77	78	0
ELEMENT	93	78	9021	0
ELEMENT	94	9021	79	0
ELEMENT	95	79	80	0
ELEMENT	96	80	81	0
ELEMENT TYPE SET TO	2			
REAL CONSTANT NUMBER=	21			
ELEMENT	97	81	82	80
ELEMENT TYPE SET TO	1			

REAL CONSTANT NUMBER= 11
ELEMENT 98 82 9022 0
ELEMENT 99 9022 83 0
ELEMENT 100 83 84 0
ELEMENT 101 84 85 0
ELEMENT TYPE SET TO 2
REAL CONSTANT NUMBER= 212
ELEMENT 103 85 86 84
ELEMENT TYPE SET TO 1
REAL CONSTANT NUMBER= 11
ELEMENT 103 86 87 0
ELEMENT 104 47 91 0
ELEMENT 105 91 92 0
ELEMENT TYPE SET TO 2
REAL CONSTANT NUMBER= 213
ELEMENT 106 92 93 91
ELEMENT TYPE SET TO 1
REAL CONSTANT NUMBER= 11
ELEMENT 107 93 94 0
MATERIAL NUMBER SET TO 2
ELEMENT 108 94 95 0
ELEMENT 109 95 96 0
MATERIAL NUMBER SET TO 1
ELEMENT 110 96 97 0
ELEMENT TYPE SET TO 2
REAL CONSTANT NUMBER= 21
ELEMENT 111 97 98 96
ELEMENT TYPE SET TO 1
REAL CONSTANT NUMBER= 11
ELEMENT 112 98 100 0
ELEMENT 113 100 101 0
ELEMENT 114 101 102 0
ELEMENT 115 102 77 0
ELEMENT TYPE SET TO 1
MATERIAL NUMBER SET TO 3
REAL CONSTANT NUMBER= 13
ELEMENT 116 58 103 0
ELEMENT 117 103 104 0
MATERIAL NUMBER SET TO 4
ELEMENT 118 104 105 0
ELEMENT 119 105 106 0
MATERIAL NUMBER SET TO 3
ELEMENT 120 106 107 0
ELEMENT TYPE SET TO 2
MATERIAL NUMBER SET TO 3
REAL CONSTANT NUMBER= 23
ELEMENT 121 107 109 106
ELEMENT TYPE SET TO 1
MATERIAL NUMBER SET TO 3
REAL CONSTANT NUMBER= 13
ELEMENT 122 109 111 0

ELEMENT 123 111 112 0
ELEMENT TYPE SET TO 1
MATERIAL NUMBER SET TO 5
REAL CONSTANT NUMBER= 15
ELEMENT 124 112 68 0
ELEMENT 125 101 113 0
MATERIAL NUMBER SET TO 6
ELEMENT 126 113 114 0
ELEMENT 127 114 115 0
MATERIAL NUMBER SET TO 5
ELEMENT 128 115 116 0
ELEMENT TYPE SET TO 2
REAL CONSTANT NUMBER= 25
ELEMENT 129 116 116 115
ELEMENT TYPE SET TO 1
MATERIAL NUMBER SET TO 5
REAL CONSTANT NUMBER= 15
ELEMENT 130 118 9023 0
ELEMENT 131 9023 120 0
ELEMENT TYPE SET TO 2
REAL CONSTANT NUMBER= 25
ELEMENT 132 120 122 9023
ELEMENT TYPE SET TO 1
MATERIAL NUMBER SET TO 5
REAL CONSTANT NUMBER= 15
ELEMENT 133 122 124 0
ELEMENT 134 124 125 0
ELEMENT TYPE SET TO 2
REAL CONSTANT NUMBER= 25
ELEMENT 135 125 127 124
ELEMENT TYPE SET TO 1
MATERIAL NUMBER SET TO 5
REAL CONSTANT NUMBER= 15
ELEMENT 136 127 129 0
ELEMENT 137 129 9024 0
ELEMENT 138 9024 130 0
MATERIAL NUMBER SET TO 1
ELEMENT TYPE SET TO 1
REAL CONSTANT NUMBER= 11
ELEMENT 139 65 131 0
ELEMENT 140 131 132 0
ELEMENT 141 71 133 0
ELEMENT 142 133 134 0
REAL CONSTANT NUMBER= 58
ELEMENT TYPE SET TO 3
ELEMENT 143 1 1001
ELEMENT TYPE SET TO 4
ELEMENT 144 1 1001
ELEMENT TYPE SET TO 5
ELEMENT 145 1 1001

REAL CONSTANT NUMBER= 58
ELEMENT TYPE SET TO 6
ELEMENT 146 1 1001
ELEMENT TYPE SET TO 7
ELEMENT 147 1 1001
ELEMENT TYPE SET TO 8
ELEMENT 148 1 1001
REAL CONSTANT NUMBER= 51
ELEMENT TYPE SET TO 3
ELEMENT 149 8 1009
ELEMENT TYPE SET TO 5
ELEMENT 150 10 1010
ELEMENT TYPE SET TO 4
ELEMENT 151 15 1015
REAL CONSTANT NUMBER= 52
ELEMENT TYPE SET TO 4
ELEMENT 152 14 1014
REAL CONSTANT NUMBER= 51
ELEMENT TYPE SET TO 3
ELEMENT 153 23 1023
ELEMENT TYPE SET TO 5
ELEMENT 154 28 1028
REAL CONSTANT NUMBER= 53
ELEMENT TYPE SET TO 4
ELEMENT 155 37 1037
ELEMENT TYPE SET TO 3
ELEMENT 156 39 1039
REAL CONSTANT NUMBER= 51
ELEMENT TYPE SET TO 8
ELEMENT 157 44 1044
ELEMENT TYPE SET TO 5
ELEMENT 158 45 1045
REAL CONSTANT NUMBER= 54
ELEMENT TYPE SET TO 4
ELEMENT 159 53 1053
REAL CONSTANT NUMBER= 55
ELEMENT 160 79 1079
REAL CONSTANT NUMBER= 51
ELEMENT TYPE SET TO 3
ELEMENT 161 124 1124
ELEMENT TYPE SET TO 5
ELEMENT 162 129 1119
ELEMENT TYPE SET TO 4
ELEMENT 163 52 1052
ELEMENT TYPE SET TO 5
ELEMENT 164 54 1054
ELEMENT TYPE SET TO 3
ELEMENT 165 57 1057
REAL CONSTANT NUMBER= 56
ELEMENT TYPE SET TO 4
ELEMENT 166 78 1078

ELEMENT TYPE SET TO 5
REAL CONSTANT NUMBER= 51
ELEMENT 167 73 1073
REAL CONSTANT NUMBER= 57
ELEMENT TYPE SET TO 4
ELEMENT 168 61 1061
REAL CONSTANT NUMBER= 51
ELEMENT TYPE SET TO 3
ELEMENT 169 131 1131
ELEMENT TYPE SET TO 5
ELEMENT 170 131 1131
ELEMENT TYPE SET TO 3
ELEMENT 171 133 1133
ELEMENT TYPE SET TO 5
ELEMENT 172 133 1133
REAL CONSTANT NUMBER= 58
ELEMENT TYPE SET TO 3
ELEMENT 173 87 1087
ELEMENT TYPE SET TO 4
ELEMENT 174 87 1087
ELEMENT TYPE SET TO 5
ELEMENT 175 87 1087
REAL CONSTANT NUMBER= 59
ELEMENT TYPE SET TO 6
ELEMENT 176 87 1087
ELEMENT TYPE SET TO 7
ELEMENT 177 87 1087
ELEMENT TYPE SET TO 8
ELEMENT 178 87 1087
REAL CONSTANT NUMBER= 58
ELEMENT TYPE SET TO 3
ELEMENT 179 130 1130
ELEMENT TYPE SET TO 4
ELEMENT 180 130 1130
ELEMENT TYPE SET TO 5
ELEMENT 181 130 1130
REAL CONSTANT NUMBER= 59
ELEMENT TYPE SET TO 6
ELEMENT 182 130 1130
ELEMENT TYPE SET TO 7
ELEMENT 183 130 1130
ELEMENT TYPE SET TO 8
ELEMENT 184 130 1130
ELEMENT TYPE SET TO 30
REAL CONSTANT NUMBER= 31
ELEMENT 185 9
ELEMENT 186 10
ELEMENT 187 15
ELEMENT 188 23
ELEMENT 189 28

ELEMENT 190	44	
ELEMENT 191	45	
ELEMENT 192	52	
ELEMENT 193	54	
ELEMENT 194	57	
ELEMENT 195	73	
ELEMENT 196	114	
ELEMENT 197	124	
ELEMENT 198	129	
REAL CONSTANT NUMBER=	32	
ELEMENT 199	14	
ELEMENT 200	78	
REAL CONSTANT NUMBER=	33	
ELEMENT 201	37	
REAL CONSTANT NUMBER=	14	
ELEMENT 202	39	
REAL CONSTANT NUMBER=	35	
ELEMENT 203	49	
ELEMENT 204	75	
ELEMENT 205	95	
REAL CONSTANT NUMBER=	26	
ELEMENT 206	53	
REAL CONSTANT NUMBER=	37	
ELEMENT 207	61	
REAL CONSTANT NUMBER=	38	
ELEMENT 208	65	
ELEMENT 209	71	
REAL CONSTANT NUMBER=	39	
ELEMENT 210	78	
REAL CONSTANT NUMBER=	40	
ELEMENT 211	105	
REAL CONSTANT NUMBER=	41	
ELEMENT 212	131	
ELEMENT 213	133	
REAL CONSTANT NUMBER=	42	
ELEMENT 214	132	
ELEMENT 215	134	
MODE 301 KCS=	0	X.Y.Z=
MODE 302 KCS=	0	X.Y.Z=
MODE 303 KCS=	0	X.Y.Z=
MODE 304 KCS=	0	X.Y.Z=
MODE 305 KCS=	0	X.Y.Z=
MODE 306 KCS=	0	X.Y.Z=
MODE 307 KCS=	0	X.Y.Z=
MODE 308 KCS=	0	X.Y.Z=
MODE 309 KCS=	0	X.Y.Z=
MODE 310 PCS=	0	X.Y.Z=
MODE 311 KCS=	0	X.Y.Z=
MODE 312 KCS=	0	X.Y.Z=
MODE 313 KCS=	0	X.Y.Z=
ELEMENT TYPE SET TO	71	

MATERIAL NUMBER SET TO	71		
REAL CONSTANT NUMBER=	71		
ELEMENT 216	301	302	0
ELEMENT 217	302	303	0
ELEMENT 218	303	304	0
REAL CONSTANT NUMBER=	72		
ELEMENT 219	304	305	0
REAL CONSTANT NUMBER=	73		
ELEMENT 220	305	306	0
REAL CONSTANT NUMBER=	74		
ELEMENT 221	306	307	0
ELEMENT 222	307	308	0
REAL CONSTANT NUMBER=	75		
ELEMENT 223	308	309	0
ELEMENT 224	309	310	0
REAL CONSTANT NUMBER=	76		
ELEMENT 225	310	311	0
ELEMENT 226	311	312	0
ELEMENT 227	312	313	0
ELEMENT TYPE SET TO	72		
REAL CONSTANT NUMBER=	77		
ELEMENT 228	304		
REAL CONSTANT NUMBER=	78		
ELEMENT 229	306		
REAL CONSTANT NUMBER=	79		
ELEMENT 230	308		
REAL CONSTANT NUMBER=	80		
ELEMENT 231	310		
REAL CONSTANT NUMBER=	81		
ELEMENT 232	313		
COUPLED SET=	1	DIRECTION= UX	TOTAL MODES= 2
MODES ADDED =	304	1001	
MAXIMUM COUPLED SET NUMBER=	1		
COUPLED SET=	2	DIRECTION= UX	TOTAL MODES= 2
MODES ADDED =	309	1047	
MAXIMUM COUPLED SET NUMBER=	2		
COUPLED SET=	3	DIRECTION= UX	TOTAL MODES= 7
MODES ADDED =	312	1037	
MAXIMUM COUPLED SET NUMBER=	3		
*** WARNING ***			
Coupled set 3 already contains mode 312.			
Mode 312 will not be added to the set.			
CP=	6.720	TIME=	00:18:57
COUPLED SET=	3	DIRECTION= UX	TOTAL MODES= 13
MODES ADDED =	1124	1129	1052 1054 1057 1078
MAXIMUM COUPLED SET NUMBER=	3		
*** WARNING ***			
Coupled set 3 already contains mode 312.			
Mode 312 will not be added to the set.			
CP=	8.730	TIME=	00:18:57
COUPLED SET=	3	DIRECTION= UX	TOTAL MODES= 18
MODES ADDED =	1073	1061	1131 1133
MAXIMUM COUPLED SET NUMBER=	3		
COUPLED SET=	4	DIRECTION= UX	TOTAL MODES= 3
MODES ADDED =	306	1009	1010
MAXIMUM COUPLED SET NUMBER=	4		
COUPLED SET=	5	DIRECTION= UX	TOTAL MODES= 3
MODES ADDED =	308	1015	1016
MAXIMUM COUPLED SET NUMBER=	5		
COUPLED SET=	6	DIRECTION= UX	TOTAL MODES= 2
MODES ADDED =	308	1023	
MAXIMUM COUPLED SET NUMBER=	6		

```

COUPLED SET* 7 DIRECTION* UX TOTAL MODES* 2
NODES ACCOUD* 0
MAXIMUM COUPLED SET NUMBER* 7
GENERATE FROM SET 1 COUPLED SETS IN DIRECTIONS UY UZ BOTH ROTY ROTZ
COUPLED SET* 8 DIRECTION* UX TOTAL MODES* 2
COUPLED SET* 9 DIRECTION* UZ TOTAL MODES* 2
COUPLED SET* 10 DIRECTION* ROTX TOTAL MODES* 2
COUPLED SET* 11 DIRECTION* ROTY TOTAL MODES* 2
COUPLED SET* 12 DIRECTION* ROTZ TOTAL MODES* 2
MAXIMUM COUPLED SET NUMBER* 12
GENERATE FROM SET 2 COUPLED SETS IN DIRECTIONS UY UZ BOTH ROTY ROTZ
COUPLED SET* 13 DIRECTION* UY TOTAL MODES* 2
COUPLED SET* 14 DIRECTION* UZ TOTAL MODES* 2
COUPLED SET* 15 DIRECTION* ROTX TOTAL MODES* 2
COUPLED SET* 16 DIRECTION* ROTY TOTAL MODES* 2
COUPLED SET* 17 DIRECTION* ROTZ TOTAL MODES* 2
MAXIMUM COUPLED SET NUMBER* 17
GENERATE FROM SET 3 COUPLED SETS IN DIRECTIONS UY UZ BOTH ROTY ROTZ
COUPLED SET* 18 DIRECTION* UY TOTAL MODES* 18
COUPLED SET* 19 DIRECTION* UZ TOTAL MODES* 18
COUPLED SET* 20 DIRECTION* ROTX TOTAL MODES* 18
COUPLED SET* 21 DIRECTION* ROTY TOTAL MODES* 18
COUPLED SET* 22 DIRECTION* ROTZ TOTAL MODES* 18
MAXIMUM COUPLED SET NUMBER* 22
GENERATE FROM SET 4 COUPLED SETS IN DIRECTIONS UY UZ BOTH ROTY ROTZ
COUPLED SET* 23 DIRECTION* UY TOTAL MODES* 3
COUPLED SET* 24 DIRECTION* UZ TOTAL MODES* 3
COUPLED SET* 25 DIRECTION* ROTX TOTAL MODES* 3
COUPLED SET* 26 DIRECTION* ROTY TOTAL MODES* 3
COUPLED SET* 27 DIRECTION* ROTZ TOTAL MODES* 3
MAXIMUM COUPLED SET NUMBER* 27
GENERATE FROM SET 5 COUPLED SETS IN DIRECTIONS UY UZ BOTH ROTY ROTZ
COUPLED SET* 28 DIRECTION* UY TOTAL MODES* 3
COUPLED SET* 29 DIRECTION* UZ TOTAL MODES* 3
COUPLED SET* 30 DIRECTION* ROTX TOTAL MODES* 3
COUPLED SET* 31 DIRECTION* ROTY TOTAL MODES* 3
COUPLED SET* 32 DIRECTION* ROTZ TOTAL MODES* 3
MAXIMUM COUPLED SET NUMBER* 32
GENERATE FROM SET 6 COUPLED SETS IN DIRECTIONS UY UZ BOTH ROTY ROTZ
COUPLED SET* 33 DIRECTION* UY TOTAL MODES* 2
COUPLED SET* 34 DIRECTION* UZ TOTAL MODES* 2
COUPLED SET* 35 DIRECTION* ROTX TOTAL MODES* 2
COUPLED SET* 36 DIRECTION* ROTY TOTAL MODES* 2
COUPLED SET* 37 DIRECTION* ROTZ TOTAL MODES* 2
MAXIMUM COUPLED SET NUMBER* 37
GENERATE FROM SET 7 COUPLED SETS IN DIRECTIONS UY UZ BOTH ROTY ROTZ
COUPLED SET* 38 DIRECTION* UY TOTAL MODES* 2
COUPLED SET* 39 DIRECTION* UZ TOTAL MODES* 2
COUPLED SET* 40 DIRECTION* ROTX TOTAL MODES* 2
COUPLED SET* 41 DIRECTION* ROTY TOTAL MODES* 2
COUPLED SET* 42 DIRECTION* ROTZ TOTAL MODES* 2
MAXIMUM COUPLED SET NUMBER* 42

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SPECIFIED CONSTRAINT UX FOR SELECTED NODES 301 TO 301 BY 1
REAL* 0. IMAG* 0.
ADDITIONAL DOFS* UY UZ ROTX ROTY ROTZ
USE LIMITED MASS MATRIX APPROXIMATION
ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME* pb2tfx.db
FOR POSSIBLE RESUME FROM THIS POINT
***** ROUTINE COMPLETED ***** CP = 9.930
C*** Time History analysis for earthquake record (Taft)
/OUTPUT FILE= pb2tfx

```

```

ANSYS RUN COMPLETED
REV. 5.0 SUN46PARC
CP TIME (sec) = 19963.342 TIME * 07/25/91
ELAPSED TIME (sec) = 25623.000 DATE * 10/11/95

```

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
 40416-2 VERSION=SUM4SPARC 04.42.30 OCT 11, 1995 CP= 15439.920
 FOR SUPPORT CALL PHONE

Time-history analysis of coupled system (presuriser spray line)
 ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

***** TIME-HISTORY POSTPROCESSOR (POST26) *****
 ALL POST26 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS
 *** NOTE ***
 CP= 15439.920 TIME= 04.42.30
 Unable to open default results file pb2tfxi.rst
 Use FILE command to open a results file.
 DATA FILE CHANGED TO FILE= pb2tfxi.rdbp

MAXIMUM NUMBER OF VARIABLES= 15
 VARIABLE 2 IS AT NODE 12 ITEM= U COMP= X NAME= UX
 VARIABLE 3 IS AT NODE 12 ITEM= U COMP= Y NAME= UY
 VARIABLE 4 IS AT NODE 12 ITEM= U COMP= Z NAME= UZ
 VARIABLE 5 IS AT NODE 17 ITEM= U COMP= X NAME= UX
 VARIABLE 6 IS AT NODE 17 ITEM= U COMP= Y NAME= UY
 VARIABLE 7 IS AT NODE 17 ITEM= U COMP= Z NAME= UZ
 VARIABLE 8 IS AT NODE 21 ITEM= U COMP= X NAME= UX
 VARIABLE 9 IS AT NODE 21 ITEM= U COMP= Y NAME= UY
 VARIABLE 10 IS AT NODE 9010 ITEM= U COMP= Z NAME= UZ
 VARIABLE 11 IS AT NODE 24 ITEM= U COMP= X NAME= UX
 VARIABLE 12 IS AT NODE 9013 ITEM= U COMP= Y NAME= UY
 VARIABLE 13 IS AT NODE 26 ITEM= U COMP= X NAME= UX
 VARIABLE 14 IS AT NODE 35 ITEM= U COMP= X NAME= UX
 VARIABLE 15 IS AT NODE 9017 ITEM= U COMP= X NAME= UX

STORAGE COMPLETE FOR 2619 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES
 VARI TYPE IDENTIFIERS NAME MINIMUM AT TIME MAXIMUM AT TIME
 2 NSOL 12 UX -0.4135E-01 7.020 0.3934E-01 9.320
 3 NSOL 12 UY -0.2706E-02 5.320 0.1894E-02 7.648
 4 NSOL 12 UZ -0.4137E-01 7.020 0.4509E-01 9.320
 5 NSOL 17 UX -0.2665E-02 9.620 0.2787E-02 7.320
 6 NSOL 17 UY -0.4727E-01 7.000 0.4603E-01 7.360
 7 NSOL 17 UZ -0.5078E-01 5.920 0.4778E-01 6.880
 8 NSOL 21 UX -0.7218E-01 7.020 0.6190E-01 6.660
 9 NSOL 21 UY -0.7218E-01 7.020 0.6648E-01 6.660
 10 NSOL 21 UZ -0.2273E-01 7.020 0.2243E-01 6.660
 11 NSOL 9010 UX -0.1009 6.180 0.1013 9.060
 12 NSOL 9010 UY -0.8483E-01 8.740 0.9736E-01 6.480
 13 NSOL 28 UX -0.4817E-01 8.740 0.5581E-01 6.480
 14 NSOL 35 UX -0.4135E-01 7.020 0.3934E-01 9.320
 15 NSOL 9017 UX -0.2706E-02 5.320 0.2850E-02 14.04
 16 NSOL 12 UX -0.4137E-01 7.020 0.4482E-01 7.340
 17 NSOL 17 UX -0.2665E-02 9.620 0.4000E-01 9.320
 18 NSOL 17 UY -0.4727E-01 7.000 0.2978E-02 7.320
 19 NSOL 17 UZ -0.5078E-01 5.920 0.4603E-01 7.360
 20 NSOL 21 UX -0.7218E-01 7.020 0.6190E-01 6.660
 21 NSOL 21 UY -0.7218E-01 7.020 0.6648E-01 6.660
 22 NSOL 21 UZ -0.2273E-01 7.020 0.2243E-01 6.660
 23 NSOL 9010 UX -0.1009 6.180 0.1013 9.060
 24 NSOL 9010 UY -0.8483E-01 8.740 0.9736E-01 6.480
 25 NSOL 28 UX -0.4817E-01 8.740 0.5581E-01 6.480
 26 NSOL 35 UX -0.4135E-01 7.020 0.3934E-01 9.320

POST26 SUMMARY OF VARIABLE EXTREME VALUES
 VARI TYPE IDENTIFIERS NAME MINIMUM AT TIME MAXIMUM AT TIME
 2 NSOL 12 UX -0.4135E-01 7.020 0.3934E-01 9.320
 3 NSOL 12 UY -0.2706E-02 5.320 0.2850E-02 14.04
 4 NSOL 12 UZ -0.4137E-01 7.020 0.4482E-01 7.340
 5 NSOL 17 UX -0.2665E-02 9.620 0.4000E-01 9.320
 6 NSOL 17 UY -0.4727E-01 7.000 0.2978E-02 7.320
 7 NSOL 17 UZ -0.5078E-01 5.920 0.4603E-01 7.360
 8 NSOL 21 UX -0.7218E-01 7.020 0.6190E-01 6.660
 9 NSOL 21 UY -0.7218E-01 7.020 0.6648E-01 6.660
 10 NSOL 21 UZ -0.2273E-01 7.020 0.2243E-01 6.660
 11 NSOL 9010 UX -0.1009 6.180 0.1013 9.060
 12 NSOL 9010 UY -0.8483E-01 8.740 0.9736E-01 6.480
 13 NSOL 28 UX -0.1009 6.180 0.1013 9.060
 14 NSOL 35 UX -0.4817E-01 8.740 0.5581E-01 6.480
 15 NSOL 9017 UX -0.4135E-01 7.020 0.3934E-01 9.320

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2tfxi.db
 FOR POSSIBLE RESUME FROM THIS POINT
 ***** ROUTINE COMPLETED ***** CP = 15445.730
 ***** ANSYS SOLUTION ROUTINE *****
 PERFORM AN EXPANSION PASS

EXPAND 100 SOLUTIONS 0 TO 0.10000
 IN THE RANGE FROM 0 TO 0.10000
 CALCULATE ELEMENT RESULTS AS WELL AS THE GLOBAL DOF SOLUTION
 FOR ALL APPLICABLE ENTITIES

***** ANSYS SOLVE COMMAND *****
 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
 40416-2 VERSION=SUM4SPARC 04.42.49 OCT 11, 1995 CP= 15445.800
 FOR SUPPORT CALL PHONE

Time-history analysis of coupled system (presuriser spray line)
 ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

SOLUTION OPTIONS
 PROBLEM DIMENSIONALITY 3-D
 DEGREES OF FREEDOM UX UY UZ ROTX ROTY ROTZ
 ANALYSIS TYPE TRANSIENT
 SOLUTION METHOD REDUCED
 EXPANSION PASS ON

LOAD STEP OPTIONS
 LOAD STEP NUMBER 1
 NUMBER OF SOLUTIONS TO BE EXPANDED 100 TO 0.10000
 ELEMENT RESULTS CALCULATION ON
 PRINT OUTPUT CONTROLS
 LIST
 FILE
 DATABASE OUTPUT CONTROLS
 ITEM FREQUENCY COMPONENT
 NSOL LAST

*** ELEMENT RESULTS CALCULATION TIMES
 TYPE NUMBER NAME TOTAL CP AVE CP
 1 120 PIPE16 0.692 0.006
 2 22 PIPE16 0.210 0.010
 3 10 COMBIN14 0.040 0.004
 4 12 COMBIN14 0.029 0.002
 5 3 COMBIN14 0.000 0.000
 6 3 COMBIN14 0.000 0.000
 7 3 COMBIN14 0.010 0.003
 8 3 COMBIN14 0.000 0.000
 30 31 MASS21 0.031 0.001
 71 12 BEAM8 0.327 0.007
 72 5 MASS21 0.020 0.004

*** GLOBAL LOAD CALCULATION TIMES
 TYPE NUMBER NAME TOTAL CP AVE CP
 1 120 PIPE16 0.100 0.001
 2 22 PIPE16 0.010 0.000
 3 10 COMBIN14 0.000 0.000
 4 12 COMBIN14 0.000 0.000
 5 3 COMBIN14 0.000 0.000
 6 3 COMBIN14 0.000 0.000
 7 3 COMBIN14 0.000 0.000
 8 3 COMBIN14 0.000 0.000
 30 31 MASS21 0.000 0.000
 71 12 BEAM8 0.000 0.000
 72 5 MASS21 0.000 0.000

*** ANSYS BINARY FILE STATISTICS
 BUFFER SIZE USED= 4096
 33.078 MB WRITTEN ON RESULTS FILE: pb2tfxi.rst
 ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2tfxi.db
 FOR POSSIBLE RESUME FROM THIS POINT
 FINISH SOLUTION PROCESSING

***** ROUTINE COMPLETED ***** CP = 15678.270
 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
 40416-2 VERSION=SUM4SPARC 04.51.47 OCT 11, 1995 CP= 15678.280
 FOR SUPPORT CALL PHONE

Time-history analysis of coupled system (presuriser spray line)
 ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY
 ***** TIME-HISTORY POSTPROCESSOR (POST26) *****
 ALL POST26 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS


```

15 ESOE 155 F X FT -0.1042E-03 1.160 0.2178E-03 1.740
26 ESOE 156 F X FT -0.2120E-02 1.180 0.5672E-02 2.000
27 ESOE 157 F Y FT -0.1193E-03 2.000 0.6268E-04 0.9600
28 ESOE 158 F X FT -0.3961E-03 1.380 0.7486E-03 2.000
29 ESOE 161 F X FT -0.1948E-03 1.280 0.5742E-03 2.000
30 ESOE 162 F Z FT -0.6748E-05 1.040 0.1318E-04 2.000
31 ESOE 163 F Y FT -0.1052E-03 1.800 0.7942E-04 0.4800
32 ESOE 165 F X FT -0.7121E-03 1.260 0.2246E-03 2.000
33 ESOE 167 F X FT -0.1015E-02 2.000 0.3934E-03 1.400
34 ESOE 169 F X FT -0.1169E-02 1.280 0.3428E-02 2.000
35 ESOE 170 F X FT -0.7240E-04 1.240 0.1397E-03 2.000
36 ESOE 171 F X FT -0.1197E-03 1.280 0.3525E-02 2.000
37 ESOE 172 F Y FT -0.4218E-04 1.460 0.7928E-04 2.000
38 ESOE 173 F Y FT -0.6658E-05 1.000 0.2798E-05 1.440
39 ESOE 174 F Y FT -0.6658E-05 1.000 0.2798E-05 1.440
40 ESOE 175 F Y FT -0.6658E-05 1.000 0.2798E-05 1.440
41 ESOE 168 F Y FT -0.2760E-04 2.000 0.1232E-04 1.460
42 ESOE 166 F Y FT -0.4558E-05 1.320 0.1232E-04 2.000
43 ESOE 160 F Y FT -0.1234E-05 1.300 0.3421E-05 2.000

```

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2tfx.db
FOR POSSIBLE RESUME FROM THIS POINT

***** ROUTINE COMPLETED ***** CP = 15692.930

***** ANSYS SOLUTION ROUTINE *****

PERFORM AN EXPANSION PASS

EXPAND 100 SOLUTIONS
IN THE RANGE FROM 0.10000 TO 0.20000
CALCULATE ELEMENT RESULTS AS WELL AS THE NODAL DOP SOLUTION
PRINT NASTI ITEMS WITH A FREQUENCY OF NUSE
FOR ALL APPLICABLE ENTITIES

***** ANSYS SOLVE COMMAND *****

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION-SUBSPARC 04.12.10 OCT 11, 1995 CP= 15692.940
FOR SUPPORT CALL PHONE

Time-history analysis of coupled system (preuserizer spray line)

*****ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY**

SOLUTION OPTIONS

```

PROBLEM DIMENSIONALITY . . . . . 3-D
DEGREES OF FREEDOM . . . . . UX UY UZ ROTX ROTY ROTZ
ANALYSIS TYPE . . . . . TRANSIENT
SOLUTION METHOD . . . . . REDUCED
EXPANSION PASS . . . . . ON

```

LOAD STEP OPTIONS

```

LOAD STEP MEMBER . . . . . 1
RANGE . . . . . 100
ELEMENT RESULTS CALCULATION . . . . . 0.10000 TO 0.20000
PRINT OUTPUT COMPONENTS . . . . . ON
BASE . . . . . NONE
DATABASE OUTPUT CONTROLS
ITEM FREQUENCY COMPONENT
NSOL LAST

```

*** ELEMENT RESULT CALCULATION TIMES

TYPE NUMBER	ENNAME	TOTAL CP	AVE CP
1	120 PIPE16	0.610	0.005
2	22 PIPE18	0.159	0.007
3	10 COMBIN14	0.000	0.000
4	12 COMBIN14	0.000	0.000
5	11 COMBIN14	0.000	0.000
6	3 COMBIN14	0.000	0.000
7	3 COMBIN14	0.000	0.000
8	3 COMBIN14	0.000	0.000
30	31 MASS21	0.039	0.001
71	12 BEAM4	0.050	0.004
72	5 MASS21	0.000	0.000

*** NODAL LOAD CALCULATION TIMES

TYPE NUMBER	ENNAME	TOTAL CP	AVE CP
1	120 PIPE16	0.070	0.001
2	22 PIPE18	0.011	0.000
3	10 COMBIN14	0.010	0.001
4	12 COMBIN14	0.000	0.000
5	11 COMBIN14	0.000	0.000
6	3 COMBIN14	0.000	0.000
7	3 COMBIN14	0.030	0.010
8	3 COMBIN14	0.000	0.000
30	31 MASS21	0.011	0.000

71 12 BEAM4 0.010 0.001
72 5 MASS21 0.010 0.002

*** ANSYS PRIMARY FILE STATISTICS

BUFFER SIZE USED= 4096 ON RESULTS FILE: pb2tfx.rst
33.079 MB WRITTEN ON RESULTS FILE: pb2tfx.db

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2tfx.db
FOR POSSIBLE RESUME FROM THIS POINT

FINISH SOLUTION PROCESSING

***** ROUTINE COMPLETED ***** CP = 15907.090

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****

40416-2 VERSION-SUBSPARC 05.00.10 OCT 11, 1995 CP= 15907.110
FOR SUPPORT CALL PHONE FAX

Time-history analysis of coupled system (preuserizer spray line)

*****ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY**

***** TIME-HISTORY POSTPROCESSOR (POST26) *****

ALL POST26 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS

MAXIMUM NUMBER OF VARIABLES= 43

VARIABLE	IS AT ELEMENT	MODE
ITEM= F	COMP= X	NAME= FX 143
ITEM= F	COMP= Y	NAME= FY 144
ITEM= F	COMP= Z	NAME= FZ 145
ITEM= M	COMP= X	NAME= MX 146
ITEM= M	COMP= Y	NAME= MY 147
ITEM= M	COMP= Z	NAME= MZ 148
ITEM= F	COMP= X	NAME= FX 173
ITEM= F	COMP= Y	NAME= FY 174
ITEM= F	COMP= Z	NAME= FZ 175
ITEM= M	COMP= X	NAME= MX 176
ITEM= M	COMP= Y	NAME= MY 177
ITEM= M	COMP= Z	NAME= MZ 178
ITEM= F	COMP= X	NAME= FX 179
ITEM= F	COMP= Y	NAME= FY 180
ITEM= F	COMP= Z	NAME= FZ 181
ITEM= M	COMP= X	NAME= MX 182
ITEM= M	COMP= Y	NAME= MY 183
ITEM= M	COMP= Z	NAME= MZ 184
ITEM= F	COMP= X	NAME= FX 149
ITEM= F	COMP= Y	NAME= FY 150
ITEM= F	COMP= Z	NAME= FZ 151
ITEM= M	COMP= X	NAME= MX 152
ITEM= M	COMP= Y	NAME= MY 153
ITEM= M	COMP= Z	NAME= MZ 154

ITEM#	F	COMP#	Z	NAME	FE	MIN	MAX	AT TIME
VARIABLE 25	IS AT ELEMENT	155	NODE#					
ITEM#	F	COMP#	Z	NAME	FE	MIN	MAX	AT TIME
VARIABLE 26	IS AT ELEMENT	156	NODE#					
ITEM#	F	COMP#	Z	NAME	FE	MIN	MAX	AT TIME
VARIABLE 27	IS AT ELEMENT	157	NODE#					
ITEM#	F	COMP#	Z	NAME	FE	MIN	MAX	AT TIME
VARIABLE 28	IS AT ELEMENT	158	NODE#					
ITEM#	F	COMP#	Z	NAME	FE	MIN	MAX	AT TIME
VARIABLE 29	IS AT ELEMENT	161	NODE#					
ITEM#	F	COMP#	Z	NAME	FE	MIN	MAX	AT TIME
VARIABLE 30	IS AT ELEMENT	162	NODE#					
ITEM#	F	COMP#	Z	NAME	FE	MIN	MAX	AT TIME
VARIABLE 31	IS AT ELEMENT	163	NODE#					
ITEM#	F	COMP#	Z	NAME	FE	MIN	MAX	AT TIME
VARIABLE 32	IS AT ELEMENT	164	NODE#					
ITEM#	F	COMP#	Z	NAME	FE	MIN	MAX	AT TIME
VARIABLE 33	IS AT ELEMENT	165	NODE#					
ITEM#	F	COMP#	Z	NAME	FE	MIN	MAX	AT TIME
VARIABLE 34	IS AT ELEMENT	167	NODE#					
ITEM#	F	COMP#	Z	NAME	FE	MIN	MAX	AT TIME
VARIABLE 35	IS AT ELEMENT	169	NODE#					
ITEM#	F	COMP#	Z	NAME	FE	MIN	MAX	AT TIME
VARIABLE 36	IS AT ELEMENT	170	NODE#					
ITEM#	F	COMP#	Z	NAME	FE	MIN	MAX	AT TIME
VARIABLE 37	IS AT ELEMENT	171	NODE#					
ITEM#	F	COMP#	Z	NAME	FE	MIN	MAX	AT TIME
VARIABLE 38	IS AT ELEMENT	172	NODE#					
ITEM#	F	COMP#	Z	NAME	FE	MIN	MAX	AT TIME
VARIABLE 39	IS AT ELEMENT	152	NODE#					
ITEM#	F	COMP#	Z	NAME	FE	MIN	MAX	AT TIME
VARIABLE 40	IS AT ELEMENT	159	NODE#					
ITEM#	F	COMP#	Z	NAME	FE	MIN	MAX	AT TIME
VARIABLE 41	IS AT ELEMENT	168	NODE#					
ITEM#	F	COMP#	Z	NAME	FE	MIN	MAX	AT TIME
VARIABLE 42	IS AT ELEMENT	166	NODE#					
ITEM#	F	COMP#	Z	NAME	FE	MIN	MAX	AT TIME
VARIABLE 43	IS AT ELEMENT	160	NODE#					
ITEM#	F	COMP#	Z	NAME	FE	MIN	MAX	AT TIME

STORAGE COMPLETE FOR 98 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES

VARI TYPE	IDENTIFIERS	NAME	MINIMUM	MAXIMUM	AT TIME
2	ESOL	143 F	X	FX	-0.7273E-02 3.780
3	ESOL	144 F	Y	FY	-0.1455E-02 3.900
4	ESOL	145 F	Z	FZ	-0.4524E-02 3.680
5	ESOL	146 M	X	MX	-0.1821E-01 3.520
6	ESOL	147 M	Y	MY	-0.1821E-01 3.520
7	ESOL	148 M	Z	MZ	-0.7042E-02 3.640
8	ESOL	173 F	X	FX	-0.7800E-02 3.040
9	ESOL	174 F	Y	FY	-0.5463E-02 3.220
10	ESOL	175 F	Z	FZ	-0.1809E-02 3.640
11	ESOL	176 M	X	MX	-0.1812E-01 3.260
12	ESOL	177 M	Y	MY	-0.1218E-01 3.940
13	ESOL	178 M	Z	MZ	-0.5158E-02 3.840
14	ESOL	180 F	Y	FY	-0.9694E-03 3.840
15	ESOL	181 F	Z	FZ	0.9135E-03 3.360
16	ESOL	182 M	X	MX	-0.8922E-03 3.300
17	ESOL	183 M	Y	MY	-0.1239E-02 3.040
18	ESOL	184 M	Z	MZ	-0.6111E-02 3.340
19	ESOL	185 F	X	FX	-0.1209E-01 3.620
20	ESOL	186 F	Y	FY	-0.1211E-02 3.640
21	ESOL	187 F	Z	FZ	-0.6271E-02 3.980
22	ESOL	188 F	X	FX	-0.1238E-01 3.980
23	ESOL	189 F	Y	FY	-0.2318E-01 3.900
24	ESOL	154 F	Z	FZ	-0.5155E-02 4.000
25	ESOL	155 F	X	FX	-0.9532E-02 3.780
26	ESOL	156 F	Y	FY	-0.9532E-02 3.980
27	ESOL	157 F	Z	FZ	-0.2168E-02 3.620
28	ESOL	158 F	X	FX	-0.6713E-02 3.660
29	ESOL	161 F	X	FX	-0.8691E-02 3.040
30	ESOL	162 F	Y	FY	-0.1792E-02 3.480
31	ESOL	163 F	Z	FZ	-0.1792E-02 3.480
32	ESOL	164 F	X	FX	-0.3800E-02 3.300
33	ESOL	165 F	Y	FY	-0.7194E-01 3.040
34	ESOL	167 F	Z	FZ	-0.5944E-02 3.420
35	ESOL	169 F	X	FX	-0.4847E-01 3.040
36	ESOL	170 F	Y	FY	-0.5272E-02 3.300
37	ESOL	171 F	Z	FZ	-0.5421E-01 3.040
38	ESOL	172 F	X	FX	-0.1250E-02 3.660

POST26 SUMMARY OF VARIABLE EXTREME VALUES

VARI TYPE	IDENTIFIERS	NAME	MINIMUM	MAXIMUM	AT TIME
3	ESOL	143 F	X	FX	-0.5468E-04 3.620
4	ESOL	144 F	Y	FY	-0.1071E-03 3.540
5	ESOL	145 F	Z	FZ	-0.5708E-03 3.220
6	ESOL	146 M	X	MX	-0.2167E-01 3.840
7	ESOL	147 M	Y	MY	-0.1861E-03 3.220
8	ESOL	148 M	Z	MZ	-0.7042E-02 3.640
9	ESOL	173 F	X	FX	-0.7900E-02 3.040
10	ESOL	174 F	Y	FY	-0.5463E-02 3.220
11	ESOL	175 F	Z	FZ	-0.1809E-02 3.640
12	ESOL	176 M	X	MX	-0.1812E-01 3.260
13	ESOL	177 M	Y	MY	-0.1215E-01 3.040
14	ESOL	178 M	Z	MZ	-0.4334E-02 3.340
15	ESOL	179 F	X	FX	-0.5158E-02 3.840
16	ESOL	180 F	Y	FY	-0.9694E-03 3.840
17	ESOL	181 F	Z	FZ	-0.9135E-03 3.300
18	ESOL	182 M	X	MX	-0.8922E-03 3.300
19	ESOL	183 M	Y	MY	-0.1239E-02 3.040
20	ESOL	184 M	Z	MZ	-0.6111E-02 3.340
21	ESOL	185 F	X	FX	-0.1209E-01 3.620
22	ESOL	186 F	Y	FY	-0.1211E-02 3.640
23	ESOL	187 F	Z	FZ	-0.6271E-02 3.980
24	ESOL	188 F	X	FX	-0.1238E-01 3.980
25	ESOL	189 F	Y	FY	-0.2318E-01 3.900
26	ESOL	154 F	Z	FZ	-0.5155E-02 4.000
27	ESOL	155 F	X	FX	-0.9532E-02 3.780
28	ESOL	156 F	Y	FY	-0.9532E-02 3.980
29	ESOL	157 F	Z	FZ	-0.2168E-02 3.620
30	ESOL	158 F	X	FX	-0.6713E-02 3.660
31	ESOL	161 F	X	FX	-0.8691E-02 3.040
32	ESOL	162 F	Y	FY	-0.1792E-02 3.480
33	ESOL	163 F	Z	FZ	-0.1792E-02 3.480
34	ESOL	164 F	X	FX	-0.3800E-02 3.300
35	ESOL	165 F	Y	FY	-0.7194E-01 3.040
36	ESOL	167 F	Z	FZ	-0.5944E-02 3.420
37	ESOL	169 F	X	FX	-0.4847E-01 3.040
38	ESOL	170 F	Y	FY	-0.5272E-02 3.300
39	ESOL	171 F	Z	FZ	-0.5421E-01 3.040
40	ESOL	172 F	X	FX	-0.1250E-02 3.660

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2tfxi.db
FOR POSSIBLE RESUME FROM THIS POINT

***** ROUTINE COMPLETED ***** CP = 15918.010

***** ANSYS SOLUTION ROUTINE *****

PERFORM AN EXPANSION PASS

EXPAND 100 SOLUTIONS
IN THE RANGE FROM 0.20000 TO 0.30000
CALCULATE ELEMENT RESULTS AS WELL AS THE MODAL DOF SOLUTION

PRINT BARE ITEMS WITH A FREQUENCY OF NONE
FOR ALL APPLICABLE ENTITIES

***** ANSYS SOLVE COMMAND *****

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
4041E-2 VERSION-DUMFAC 05:00:36 OCT 11, 1995 CP= 15918.040
FOR SUPPORT CALL PHONE

Time-history analysis of coupled systems (precracker spray line)

*****ANYSI VERSION FOR EDUCATIONAL PURPOSES ONLY**

PROBLEM DIMENSIONALITY..... 3-D
DEGREES OF FREEDOM..... UN UY UZ ROTX ROTY ROTZ
ANALYSIS TYPE..... TRANSIENT
SOLUTION METHOD..... REDUCED
EXPANSION PASS..... ON

SOLUTION OPTIONS

LOAD STEP NUMBER..... 1
NUMBER OF SOLUTIONS TO BE EXPANDED..... 100
ELEMENT RESULTS CALCULATION..... ON
PRINT OUTPUT CONTROLS..... ON
ITEM FREQUENCY COMPONENT
BASE

DATABASE OUTPUT CONTROLS
PRINT ONLY COMPONENT
RESULTS

*** ELEMENT RESULT CALCULATION TIMES
TYPE NUMBER ENAME TOTAL CP AVE CP
1 120 PIPE16 0.480 0.004
2 22 PIPE10 0.200 0.009
3 10 COMBIN14 0.010 0.001
4 12 COMBIN14 0.020 0.002
5 11 COMBIN14 0.030 0.002
6 3 COMBIN14 0.000 0.000
7 3 COMBIN14 0.010 0.003
8 3 COMBIN14 0.020 0.001
9 3 MASS211 0.021 0.001
10 3 MASS211 0.060 0.005
11 22 BRAN4 0.060 0.000
12 5 MASS21 0.000 0.000

*** NODAL LOAD CALCULATION TIMES
TYPE NUMBER ENAME TOTAL CP AVE CP
1 120 PIPE16 0.101 0.001
2 22 PIPE10 0.019 0.002
3 10 COMBIN14 0.021 0.002
4 12 COMBIN14 0.000 0.000
5 11 COMBIN14 0.020 0.002
6 3 COMBIN14 0.000 0.000
7 3 COMBIN14 0.000 0.000
8 3 COMBIN14 0.020 0.001
9 3 MASS211 0.020 0.001
10 3 MASS211 0.011 0.001
11 22 BRAN4 0.010 0.002
12 5 MASS21 0.000 0.000

*** ANSYS BINARY FILE STATISTICS
BUFFER SIZE USED= 4096
33,076 MB WRITTEN ON RESULTS FILE: pb2tfx1.rst
ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2tfx.db
FOR POSSIBLE RESUME FROM THIS POINT

FINISH SOLUTION PROCESSING

***** ROUTINE COMPLETED ***** CP * 16131.210

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40414.2 VERSION-SUBSYSTEM 05.08/11 OCT 11, 1985 CP= 16131.230
FOR SUPPORT CALL PHONE

Time-history analysis of coupled system (pre-urizer spray line)

***ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY**

***** TIME HISTORY POSTPROCESSOR (POST26) *****
ALL POST26 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS

MAXIMUM NUMBER OF VARIABLES= 43

VARIABLE 2 IS AT ELEMENT 143 NODE= 1
ITEM= F COMP= X NAME= FX
VARIABLE 3 IS AT ELEMENT 144 NODE= 1
ITEM= F COMP= Y NAME= FY
VARIABLE 4 IS AT ELEMENT 145 NODE= 1
ITEM= F COMP= Z NAME= FZ
VARIABLE 5 IS AT ELEMENT 146 NODE= 1
ITEM= M COMP= X NAME= MX
VARIABLE 6 IS AT ELEMENT 147 NODE= 1
ITEM= M COMP= Y NAME= MY
VARIABLE 7 IS AT ELEMENT 148 NODE= 1
ITEM= M COMP= Z NAME= MZ
VARIABLE 8 IS AT ELEMENT 173 NODE= 87
ITEM= F COMP= X NAME= FX
VARIABLE 9 IS AT ELEMENT 174 NODE= 87
ITEM= F COMP= Y NAME= FY
VARIABLE 10 IS AT ELEMENT 175 NODE= 87
ITEM= F COMP= Z NAME= FZ
VARIABLE 11 IS AT ELEMENT 176 NODE= 87
ITEM= M COMP= X NAME= MX
VARIABLE 12 IS AT ELEMENT 177 NODE= 87
ITEM= M COMP= Y NAME= MY
VARIABLE 13 IS AT ELEMENT 178 NODE= 87
ITEM= M COMP= Z NAME= MZ

VARIABLE 14 IS AT ELEMENT 175 NODE= 130
ITEM= F COMP= X NAME= FX
VARIABLE 15 IS AT ELEMENT 180 NODE= 130
ITEM= F COMP= Y NAME= FY
VARIABLE 16 IS AT ELEMENT 181 NODE= 130
ITEM= F COMP= Z NAME= FZ
VARIABLE 17 IS AT ELEMENT 182 NODE= 130
ITEM= M COMP= X NAME= MX
VARIABLE 18 IS AT ELEMENT 183 NODE= 130
ITEM= M COMP= Y NAME= MY
VARIABLE 19 IS AT ELEMENT 184 NODE= 130
ITEM= M COMP= Z NAME= MZ
VARIABLE 20 IS AT ELEMENT 149 NODE= 9
ITEM= F COMP= X NAME= FX
VARIABLE 21 IS AT ELEMENT 150 NODE= 10
ITEM= F COMP= Z NAME= FZ
VARIABLE 22 IS AT ELEMENT 151 NODE= 15
ITEM= F COMP= Y NAME= FY
VARIABLE 23 IS AT ELEMENT 153 NODE= 23
ITEM= F COMP= X NAME= FX
VARIABLE 24 IS AT ELEMENT 154 NODE= 28
ITEM= F COMP= Z NAME= FZ
VARIABLE 25 IS AT ELEMENT 155 NODE= 37
ITEM= F COMP= Y NAME= FY
VARIABLE 26 IS AT ELEMENT 156 NODE= 39
ITEM= F COMP= X NAME= FX
VARIABLE 27 IS AT ELEMENT 157 NODE= 44
ITEM= F COMP= Y NAME= FY
VARIABLE 28 IS AT ELEMENT 158 NODE= 45
ITEM= F COMP= Z NAME= FZ
VARIABLE 29 IS AT ELEMENT 161 NODE= 124
ITEM= F COMP= X NAME= FX
VARIABLE 30 IS AT ELEMENT 162 NODE= 129
ITEM= F COMP= Z NAME= FZ
VARIABLE 31 IS AT ELEMENT 163 NODE= 52
ITEM= F COMP= Y NAME= FY
VARIABLE 32 IS AT ELEMENT 164 NODE= 54
ITEM= F COMP= Z NAME= FZ
VARIABLE 33 IS AT ELEMENT 165 NODE= 57
ITEM= F COMP= X NAME= FX
VARIABLE 34 IS AT ELEMENT 167 NODE= 73
ITEM= F COMP= Z NAME= FZ
VARIABLE 35 IS AT ELEMENT 169 NODE= 131
ITEM= F COMP= X NAME= FX
VARIABLE 36 IS AT ELEMENT 170 NODE= 131
ITEM= F COMP= Z NAME= FZ
VARIABLE 37 IS AT ELEMENT 171 NODE= 133
ITEM= F COMP= X NAME= FX
VARIABLE 38 IS AT ELEMENT 172 NODE= 133
ITEM= F COMP= Z NAME= FZ
VARIABLE 39 IS AT ELEMENT 153 NODE= 14
ITEM= F COMP= Y NAME= FY
VARIABLE 40 IS AT ELEMENT 159 NODE= 53
ITEM= F COMP= Y NAME= FY
VARIABLE 41 IS AT ELEMENT 168 NODE= 61
ITEM= F COMP= Y NAME= FY
VARIABLE 42 IS AT ELEMENT 166 NODE= 78
ITEM= F COMP= Y NAME= FY
VARIABLE 43 IS AT ELEMENT 160 NODE= 79
ITEM= F COMP= Y NAME= FY

STORAGE COMPLETE FOR 99 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES
VARI TYPE IDENTIFENS NAME MINIMUM AT TIME MAXIMUM AT TIME
2 ESOL 145 F X FX -0.4381E-01 5.900 0.2128E-01 5.780
3 ESOL 144 F Y FY -0.8216E-02 5.720 0.8955E-02 6.000
4 ESOL 145 F Z FZ -0.1128E-01 5.800 0.1558E-01 6.000
5 ESOL 146 M X MX -0.1574E-01 5.740 0.2784E-01 6.000
6 ESOL 147 M Y MY -0.4069E-01 5.360 0.1110 5.840

POST26 SUMMARY OF VARIABLE EXTREME VALUES

VARI TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
7	ESOL	148 M	-0.6601E-01	5.740	0.8904E-01	5.840
8	ESOL	173 F	-0.2016E-01	5.720	0.1345E-01	5.840
9	ESOL	174 F	-0.5337E-02	4.400	0.6036E-02	5.340
10	ESOL	175 F	-0.3183E-02	5.700	0.5706E-02	5.840
11	ESOL	176 M	-0.2141E-01	5.340	0.1844E-01	4.400
12	ESOL	177 M	-0.2971E-01	5.740	0.1762E-01	5.840
13	ESOL	178 M	-0.3396E-02	5.840	0.1264E-01	5.220
14	ESOL	179 F	-0.3100E-01	5.840	0.1465E-01	5.370
15	ESOL	180 F	-0.1161E-02	4.320	0.1184E-02	5.840
16	ESOL	181 F	-0.1137E-02	4.320	0.1139E-02	5.840
17	ESOL	182 M	-0.2576E-02	5.740	0.1864E-02	5.840
18	ESOL	183 M	-0.1026E-01	5.840	0.1678E-01	5.720
19	ESOL	184 M	-0.9048E-01	5.740	0.1493	5.920
20	ESOL	189 F	-0.4001E-01	6.000	0.2693E-01	5.800
21	ESOL	191 F	-0.1218E-01	5.700	0.4465E-01	5.800
22	ESOL	192 F	-0.2768E-01	6.000	0.1192E-01	5.760
23	ESOL	193 F	-0.2401E-01	5.840	0.5672E-01	6.000
24	ESOL	194 F	-0.1679	5.800	0.8696E-01	6.000
25	ESOL	195 F	-0.5818E-02	5.420	0.1441E-01	5.860
26	ESOL	196 F	-0.4410E-01	5.620	0.1841E-01	5.860
27	ESOL	197 F	-0.1962E-01	5.720	0.1235E-01	5.840
28	ESOL	198 F	-0.2331E-02	5.940	0.2124E-02	4.320
29	ESOL	199 F	-0.4318E-02	5.760	0.7819E-02	5.820
30	ESOL	199 F	-0.1188	5.700	0.1785	5.840
31	ESOL	199 F	-0.1600E-01	6.000	0.3205E-01	5.800
32	ESOL	199 F	-0.1309	5.720	0.7810E-01	5.840
33	ESOL	199 F	-0.7167E-02	5.700	0.6352E-02	5.260
34	ESOL	199 F	-0.1238	5.720	0.8306E-01	5.840
35	ESOL	199 F	-0.2712E-02	5.840	0.1942E-02	5.260
36	ESOL	199 F	-0.2548E-03	5.460	0.3054E-03	5.780
37	ESOL	199 F	-0.1138E-02	5.460	0.1151E-02	5.780
38	ESOL	199 F	-0.6652E-03	5.980	0.3854E-03	5.440
39	ESOL	199 F	-0.1877E-03	4.400	0.2210E-03	5.340

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2tfx1.db
FOR POSSIBLE RESUME FROM THIS POINT

***** ROUTINE COMPLETED ***** CP = 16144.310

***** ANSYS SOLUTION ROUTINE *****

PERFORM AN EXPANSION PASS

EXPAND 100 SOLUTIONS IN THE RANGE FROM 0.31000 TO 0.40000

CALCULATE ELEMENT RESULTS AS WELL AS THE NORMAL DOF SOLUTION

PRINT BARI ITEMS WITH A FREQUENCY OF MORE FOR ALL APPLICABLE ENTITIES

***** ANSYS SOLVE COMMAND *****

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUM64FARC 05.08.41 OCT 11, 1995 CP= 16144.310
FOR SUPPORT CALL PHONE FAX

Time-history analysis of coupled system (prescriber spray line)

***** ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY**

SOLUTION OPTIONS

PROBLEM DIMENSIONALITY 3-D
DEGREES OF FREEDOM UX UY UZ AOTX ROTY ROTZ
ANALYSIS TYPE TRANSCIENT
SOLUTION METHOD REDUCED
EXPANSION PASS ON

LOAD STEP OPTIONS

LOAD STEP NUMBER 1
NUMBER OF SOLUTIONS TO BE EXPANDED 100
ELEMENT RESULTS CALCULATION ON
PRINT OUTPUT FREQUENCY COMPONENT ON TO 0.40000

ITEM FREQUENCY COMPONENT
DATABASE OUTPUT CONTROLS
ITEM FREQUENCY COMPONENT
RESOL LAST

*** ELEMENT RESULT CALCULATION TIMES
TYPE NUMBER ENAME TOTAL CP AVE CP

1	120	PIPE16	0.559	0.005
2	22	PIPE18	0.159	0.007
3	10	COMBIN14	0.040	0.004
4	12	COMBIN14	0.010	0.001
5	11	COMBIN14	0.010	0.001
6	3	COMBIN14	0.000	0.000
7	3	COMBIN14	0.000	0.000
8	3	COMBIN14	0.000	0.000
30	31	MASS21	0.031	0.001
71	12	BEAM4	0.050	0.004
72	5	MASS21	0.011	0.002

*** NORMAL LOAD CALCULATION TIMES
TYPE NUMBER ENAME TOTAL CP AVE CP

1	120	PIPE16	0.029	0.000
2	22	PIPE18	0.021	0.001
3	10	COMBIN14	0.000	0.000
4	12	COMBIN14	0.000	0.000
5	11	COMBIN14	0.000	0.000
6	3	COMBIN14	0.000	0.000
7	3	COMBIN14	0.000	0.000
8	3	COMBIN14	0.000	0.000
30	31	MASS21	0.010	0.000
71	12	BEAM4	0.010	0.001
72	5	MASS21	0.000	0.000

***** ANSYS BINARY FILE STATISTICS
BUFFER SIZE USED= 4096
33,078 MB WRITTEN ON RESULTS FILE: pb2tfx1.rst

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2tfx1.db
FOR POSSIBLE RESUME FROM THIS POINT

FINISH SOLUTION PROCESSING

***** ROUTINE COMPLETED ***** CP = 16157.140

Time-history analysis of coupled system (prescriber spray line)

***** ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY**

***** TIME-HISTORY POSTPROCESSOR (POST26) *****

ALL POST26 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS

MAXIMUM NUMBER OF VARIABLES= 43

VARIABLE 2 IS AT ELEMENT 143 MODE= 1
ITEM= F COMP= X NAME= FX

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2tfx1.db
FOR POSSIBLE RESUME FROM THIS POINT

***** ROUTINE COMPLETED ***** CP = 16157.140

***** ANSYS SOLUTION ROUTINE *****

PERFORM AN EXPANSION PASS

EXPAND 100 SOLUTIONS IN THE RANGE FROM 0.31000 TO 0.40000

CALCULATE ELEMENT RESULTS AS WELL AS THE NORMAL DOF SOLUTION

VARIABLE	ITEM	IS AT ELEMENT	144	MODE
		COMP= X	NAME= FX	
VARIABLE 3	ITEM= F	IS AT ELEMENT	144	MODE=
VARIABLE 4	ITEM= F	IS AT ELEMENT	145	MODE=
VARIABLE 5	ITEM= M	IS AT ELEMENT	146	MODE=
VARIABLE 6	ITEM= M	IS AT ELEMENT	147	MODE=
VARIABLE 7	ITEM= M	IS AT ELEMENT	148	MODE=
VARIABLE 8	ITEM= F	IS AT ELEMENT	173	MODE=
VARIABLE 9	ITEM= F	IS AT ELEMENT	174	MODE=
VARIABLE 10	ITEM= F	IS AT ELEMENT	175	MODE=
VARIABLE 11	ITEM= M	IS AT ELEMENT	176	MODE=
VARIABLE 12	ITEM= M	IS AT ELEMENT	177	MODE=
VARIABLE 13	ITEM= M	IS AT ELEMENT	178	MODE=
VARIABLE 14	ITEM= F	IS AT ELEMENT	179	MODE=
VARIABLE 15	ITEM= F	IS AT ELEMENT	180	MODE=
VARIABLE 16	ITEM= F	IS AT ELEMENT	181	MODE=
VARIABLE 17	ITEM= M	IS AT ELEMENT	182	MODE=
VARIABLE 18	ITEM= M	IS AT ELEMENT	183	MODE=
VARIABLE 19	ITEM= M	IS AT ELEMENT	184	MODE=
VARIABLE 20	ITEM= F	IS AT ELEMENT	149	MODE=
VARIABLE 21	ITEM= F	IS AT ELEMENT	150	MODE=
VARIABLE 22	ITEM= F	IS AT ELEMENT	151	MODE=
VARIABLE 23	ITEM= F	IS AT ELEMENT	153	MODE=
VARIABLE 24	ITEM= F	IS AT ELEMENT	154	MODE=
VARIABLE 25	ITEM= F	IS AT ELEMENT	155	MODE=
VARIABLE 26	ITEM= F	IS AT ELEMENT	156	MODE=
VARIABLE 27	ITEM= F	IS AT ELEMENT	157	MODE=
VARIABLE 28	ITEM= F	IS AT ELEMENT	158	MODE=
VARIABLE 29	ITEM= F	IS AT ELEMENT	159	MODE=
VARIABLE 30	ITEM= F	IS AT ELEMENT	160	MODE=
VARIABLE 31	ITEM= F	IS AT ELEMENT	163	MODE=
VARIABLE 32	ITEM= F	IS AT ELEMENT	164	MODE=
VARIABLE 33	ITEM= F	IS AT ELEMENT	165	MODE=
VARIABLE 34	ITEM= F	IS AT ELEMENT	167	MODE=
VARIABLE 35	ITEM= F	IS AT ELEMENT	169	MODE=
VARIABLE 36	ITEM= F	IS AT ELEMENT	170	MODE=

VARIABLE	ITEM	IS AT ELEMENT	171	MODE=		
		COMP= X	NAME= FX			
VARIABLE 37	ITEM= F	IS AT ELEMENT	171	MODE=		
VARIABLE 38	ITEM= F	IS AT ELEMENT	172	MODE=		
VARIABLE 39	ITEM= F	IS AT ELEMENT	152	MODE=		
VARIABLE 40	ITEM= F	IS AT ELEMENT	159	MODE=		
VARIABLE 41	ITEM= F	IS AT ELEMENT	168	MODE=		
VARIABLE 42	ITEM= F	IS AT ELEMENT	166	MODE=		
VARIABLE 43	ITEM= F	IS AT ELEMENT	160	MODE=		
STORAGE COMPLETE FOR 95 DATA POINTS						
SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES						
VARI TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	ESOL 143 F	X	-0.6554E-01	7.020	0.5417E-01	6.900
3	ESOL 144 F	Y	-0.1213E-01	6.400	0.1637E-01	7.340
4	ESOL 145 F	Z	-0.3537E-01	6.960	0.4056E-01	7.320
5	ESOL 146 M	X	-0.5561E-01	7.000	0.6275E-01	7.340
6	ESOL 147 M	Y	-0.1190	6.140	0.1341	7.660
7	ESOL 148 M	Z	-0.813E-01	7.160	0.1036	7.220
8	ESOL 173 F	X	-0.1903E-01	6.580	0.192E-01	6.940
9	ESOL 174 F	Y	-0.1213E-01	6.220	0.1637E-01	7.340
10	ESOL 175 F	Z	-0.433E-01	6.220	0.559E-01	6.460
11	ESOL 176 M	X	-0.3857E-01	7.040	0.321E-01	7.080
12	ESOL 177 M	Y	-0.2374E-01	6.580	0.301E-01	6.940
13	ESOL 178 M	Z	-0.1304E-01	6.940	0.1054E-01	7.900
14	ESOL 179 M	X	-0.9615E-02	6.580	0.1214E-01	6.840
15	ESOL 180 F	Y	-0.439E-02	7.620	0.2819E-02	6.900
16	ESOL 181 F	Z	-0.3582E-02	6.900	0.586E-02	7.360
17	ESOL 182 M	X	-0.1542E-02	6.900	0.2771E-02	6.360
18	ESOL 183 M	Y	-0.1691E-02	6.580	0.311E-02	6.460
19	ESOL 184 M	Z	-0.1465	7.460	0.155E-01	6.840
20	ESOL 185 F	X	-0.9815E-01	7.540	0.8810E-01	7.020
21	ESOL 186 F	Y	-0.8621E-01	6.680	0.1134	7.860
22	ESOL 187 F	Z	-0.1063	7.140	0.1134	7.860
23	ESOL 188 F	X	-0.645E-01	6.680	0.6190E-01	7.020
24	ESOL 189 F	Y	-0.937E-01	7.020	0.760E-01	6.720
25	ESOL 190 F	Z	-0.185E-01	6.720	0.185E-01	7.20
26	ESOL 191 F	X	-0.242E-01	6.720	0.242E-01	7.20
27	ESOL 192 F	Y	-0.6197E-01	6.460	0.504E-01	7.400
28	ESOL 193 F	Z	-0.1692E-01	6.580	0.2545E-01	6.940
29	ESOL 161 F	X	-0.4714E-02	7.360	0.5004E-02	6.900
30	ESOL 162 F	Y	-0.1213E-01	7.360	0.1746E-01	7.940
31	ESOL 163 F	Z	-0.9615E-02	6.960	0.9582E-02	7.540
32	ESOL 164 F	X	-0.1527	6.220	0.1670	6.460
33	ESOL 165 F	Y	-0.2432E-01	6.260	0.413E-01	6.500
34	ESOL 166 F	Z	-0.317E-01	6.460	0.4056E-01	7.340
35	ESOL 194 F	X	-0.1057	6.580	0.1057	6.940
36	ESOL 172 F	Y	-0.1057	6.580	0.1057	6.940
37	ESOL 173 F	Z	-0.6054E-02	6.460	0.4226E-02	6.240
38	ESOL 174 F	X	-0.7369E-03	7.160	0.8033E-03	7.220
39	ESOL 175 F	Y	-0.7307E-03	7.880	0.7712E-03	7.740
40	ESOL 176 M	X	-0.430E-02	7.880	0.430E-02	7.740
41	ESOL 177 M	Y	-0.1045E-02	7.360	0.114E-02	7.660
42	ESOL 178 M	Z	-0.1045E-02	7.360	0.114E-02	7.660
43	ESOL 160 F	Y	-0.1288E-03	7.080	0.3814E-03	7.040
44	ESOL 143 F	X	-0.6554E-01	7.020	0.5417E-01	6.900
45	ESOL 144 F	Y	-0.1213E-01	6.400	0.1637E-01	7.340
124	ESOL 146 M	X	-0.5561E-01	7.000	0.6275E-01	7.340
129	ESOL 173 F	X	-0.1903E-01	6.580	0.192E-01	6.940
129	ESOL 174 F	Y	-0.1213E-01	6.220	0.1637E-01	7.340
129	ESOL 175 F	Z	-0.433E-01	6.220	0.559E-01	6.460
52	ESOL 176 M	X	-0.3857E-01	7.040	0.321E-01	7.080
52	ESOL 177 M	Y	-0.2374E-01	6.580	0.301E-01	6.940
52	ESOL 178 M	Z	-0.1304E-01	6.940	0.1054E-01	7.900
54	ESOL 180 F	Y	-0.439E-02	7.620	0.2819E-02	6.900
54	ESOL 181 F	Z	-0.3582E-02	6.900	0.586E-02	7.360
57	ESOL 183 M	X	-0.1542E-02	6.900	0.2771E-02	6.360
57	ESOL 184 M	Y	-0.1691E-02	6.580	0.311E-02	6.940
57	ESOL 185 F	X	-0.9815E-01	7.540	0.8810E-01	7.020
73	ESOL 186 F	Y	-0.8621E-01	6.680	0.1134	7.860
73	ESOL 187 F	Z	-0.1063	7.140	0.1134	7.860
131	ESOL 188 F	X	-0.645E-01	6.680	0.6190E-01	7.020
131	ESOL 189 F	Y	-0.937E-01	7.020	0.760E-01	6.720
131	ESOL 190 F	Z	-0.185E-01	6.720	0.185E-01	7.20
131	ESOL 191 F	X	-0.242E-01	6.720	0.242E-01	7.20
131	ESOL 192 F	Y	-0.6197E-01	6.460	0.504E-01	7.400
131	ESOL 193 F	Z	-0.1692E-01	6.580	0.2545E-01	6.940

30 ESOL 162 F Z FZ -0.4714E-02 7.360 0.5004E-02 6.900
 31 ESOL 163 F Y FV -0.1212E-01 7.360 0.1766E-01 7.940
 32 ESOL 164 F Z FE -0.9515E-02 6.980 0.9582E-02 7.540
 33 ESOL 165 F X FE -0.3271E-01 6.220 0.1671E-01 6.400
 34 ESOL 166 F Y FE -0.9813E-01 6.580 0.1138E-01 6.940
 35 ESOL 167 F Z FE -0.1173E-01 7.160 0.1058E-01 7.340
 36 ESOL 170 F Z FZ -0.1057E-02 6.560 0.1234E-02 6.940
 37 ESOL 171 F X FZ -0.6054E-02 6.480 0.4226E-02 6.240
 38 ESOL 172 F Y FZ -0.7369E-03 7.160 0.8023E-03 7.320
 39 ESOL 152 F Y FV -0.7712E-03 7.880 0.7712E-03 7.740
 40 ESOL 159 F Y FV -0.4335E-02 7.960 0.1133E-02 7.960
 41 ESOL 168 F Y FV -0.3248E-03 7.060 0.3513E-03 7.040
 42 ESOL 169 F Y FV -0.3248E-03 7.060 0.3513E-03 7.040

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2tfx.db
 FOR POSSIBLE RESUME FROM THIS POINT

***** ROUTINE COMPLETED ***** CP = 15169.790

***** ANSYS SOLUTION ROUTINE *****

PERFORM AN EXPANSION PASS

EXPAND 100 SOLUTIONS
 IN THE RANGE FROM 0.40000 TO 0.50000
 CALCULATE ELEMENT RESULTS AS WELL AS THE NODAL DOF SOLUTION

PRINT MAST ITEMS WITH A FREQUENCY OF NONE
 FOR ALL APPLICABLE ENTITIES

***** ANSYS SOLVE COMMAND *****

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
 40416-2 VERSION=SUBSPARC 05.24.19 OCT 11, 1995 CP= 16369.830
 FOR SUPPORT CALL HOME FAX

Time-history analysis of coupled system (preanalyzer spray line)
 ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

SOLUTION OPTIONS
 PROBLEM DIMENSIONALITY 3-D
 DEGREES OF FREEDOM UN UT UR ROTX ROTY ROTZ
 ANALYSIS TYPE TRANSDIENT
 SOLUTION METHOD REDUCED
 EXPANSION PASS ON

LOAD STEP OPTIONS
 LOAD STEP NUMBER 1
 NUMBER OF SOLUTIONS TO BE EXPANDED 100
 RANGE 0.40000 TO 0.50000
 ELEMENT RESULTS CALCULATION ON
 PRINT OUTPUT CONTROLS

ITEM FREQUENCY COMPONENT
 BASIC FREQUENCY COMPONENT
 DYNAMIC OUTPUTS CONTROLS
 ITEM FREQUENCY COMPONENT
 NSOL LAST

*** ELEMENT RESULT CALCULATION TIMES

TYPE NUMBER	ENNAME	TOTAL CP	AVE CP
1	120 PIPE16	0.603	0.005
2	120 PIPE16	0.183	0.004
3	120 COMBIN14	0.000	0.000
4	120 COMBIN14	0.030	0.002
5	11 COMBIN14	0.000	0.000
6	3 COMBIN14	0.000	0.000
7	3 COMBIN14	0.000	0.000
8	3 COMBIN14	0.000	0.000
9	3 COMBIN14	0.000	0.000
10	11 MASS21	0.048	0.003
11	11 MASS21	0.048	0.003
12	5 MASS21	0.011	0.002

*** NODAL LOAD CALCULATION TIMES

TYPE NUMBER	ENNAME	TOTAL CP	AVE CP
1	120 PIPE16	0.050	0.000
2	120 PIPE16	0.000	0.000
3	120 COMBIN14	0.000	0.000
4	120 COMBIN14	0.000	0.000
5	11 COMBIN14	0.000	0.000
6	3 COMBIN14	0.000	0.000
7	3 COMBIN14	0.011	0.004
8	3 COMBIN14	0.000	0.000
9	3 COMBIN14	0.000	0.000
10	11 MASS21	0.010	0.003
11	11 MASS21	0.010	0.003
12	5 MASS21	0.000	0.000

*** ANSYS BINARY FILE STATISTICS

BUFFER SIZE USED= 4096
 33.078 MB WRITTEN ON RESULTS FILE: pb2tfx.rst
 ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2tfx.db
 FOR POSSIBLE RESUME FROM THIS POINT
 FINISH SOLUTION PROCESSING

***** ROUTINE COMPLETED ***** CP = 16582.940

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
 40416-2 VERSION=SUBSPARC 05.24.19 OCT 11, 1995 CP= 16582.960
 FOR SUPPORT CALL HOME FAX

Time-history analysis of coupled system (preanalyzer spray line)
 ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

***** TIME-HISTORY POSTPROCESSOR (POST26) *****

ALL POST26 SPECIFICATIONS ARE HEET TO INITIAL DEFAULTS

MAXIMUM NUMBER OF VARIABLES= 43

VARIABLE	IS AT ELEMENT	MODE
VARIABLE 2	IS AT ELEMENT 143	MODE= FX
ITEM= F	COMP= X	
VARIABLE 3	IS AT ELEMENT 144	MODE=
ITEM= F	COMP= Y	NAME= FY
VARIABLE 4	IS AT ELEMENT 145	MODE=
ITEM= F	COMP= Z	NAME= FZ
VARIABLE 5	IS AT ELEMENT 146	MODE=
ITEM= M	COMP= X	NAME= MX
VARIABLE 6	IS AT ELEMENT 147	MODE=
ITEM= M	COMP= Y	NAME= MY
VARIABLE 7	IS AT ELEMENT 148	MODE=
ITEM= M	COMP= Z	NAME= MZ
VARIABLE 8	IS AT ELEMENT 173	MODE=
ITEM= F	COMP= X	NAME= FX
VARIABLE 9	IS AT ELEMENT 174	MODE=
ITEM= F	COMP= Y	NAME= FY
VARIABLE 10	IS AT ELEMENT 175	MODE=
ITEM= F	COMP= Z	NAME= FZ
VARIABLE 11	IS AT ELEMENT 176	MODE=
ITEM= M	COMP= X	NAME= MX
VARIABLE 12	IS AT ELEMENT 177	MODE=
ITEM= M	COMP= Y	NAME= MY
VARIABLE 13	IS AT ELEMENT 178	MODE=
ITEM= M	COMP= Z	NAME= MZ
VARIABLE 14	IS AT ELEMENT 179	MODE=
ITEM= F	COMP= X	NAME= FX
VARIABLE 15	IS AT ELEMENT 180	MODE=
ITEM= F	COMP= Y	NAME= FY
VARIABLE 16	IS AT ELEMENT 181	MODE=
ITEM= F	COMP= Z	NAME= FZ
VARIABLE 17	IS AT ELEMENT 182	MODE=
ITEM= M	COMP= X	NAME= MX
VARIABLE 18	IS AT ELEMENT 183	MODE=
ITEM= M	COMP= Y	NAME= MY
VARIABLE 19	IS AT ELEMENT 184	MODE=
ITEM= M	COMP= Z	NAME= MZ
VARIABLE 20	IS AT ELEMENT 149	MODE=
ITEM= F	COMP= X	NAME= FX
VARIABLE 21	IS AT ELEMENT 150	MODE=
ITEM= F	COMP= Y	NAME= FY
VARIABLE 22	IS AT ELEMENT 151	MODE=
ITEM= F	COMP= Z	NAME= FZ
VARIABLE 23	IS AT ELEMENT 153	MODE=
ITEM= M	COMP= X	NAME= MX
VARIABLE 24	IS AT ELEMENT 154	MODE=
ITEM= M	COMP= Y	NAME= MY
VARIABLE 25	IS AT ELEMENT 155	MODE=
ITEM= M	COMP= Z	NAME= MZ

*** ELEMENT RESULT CALCULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	120	PIPE16	0.541	0.005
2	120	PIPE16	0.169	0.008
3	10	COMBIN14	0.600	0.000
4	11	COMBIN14	0.010	0.001
5	11	COMBIN14	0.010	0.000
6	3	COMBIN14	0.000	0.000
7	3	COMBIN14	0.000	0.000
8	3	COMBIN14	0.010	0.001
30	31	MASS21	0.020	0.001
71	12	BEAM4	0.069	0.006
72	5	MASS21	0.010	0.002

*** GLOBAL LOAD CALCULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	120	PIPE16	6.111	0.001
2	120	PIPE16	0.010	0.000
3	10	COMBIN14	0.000	0.000
4	11	COMBIN14	0.011	0.001
5	11	COMBIN14	0.011	0.001
6	3	COMBIN14	0.000	0.000
7	3	COMBIN14	0.000	0.000
8	3	COMBIN14	0.000	0.000
30	31	MASS21	0.010	0.000
71	12	BEAM4	0.010	0.001
72	5	MASS21	0.000	0.000

*** ANSYS BINARY FILE STATISTICS

ECFEN SIZE USED= 4096

31.406 MB WRITTEN ON RESULTS FILE: pb2tfxi.rst

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME: pb2tfxi.db

FOR POSSIBLE RESUME FROM THIS POINT

FINISH SOLUTION PROCESSING

***** ROUTINE COMPLETED ***** CP = 16811.280

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****

40416-2 VTSRION=SUN4PARC 05:32:24 OCT 11, 1995 CP= 16811.300

FOR SUPPORT CALL PHONE FAX

Time-history analysis of coupled system (presenter spray line)

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

***** TIME-HISTORY POSTPROCESSOR (POST26) *****

ALL POST26 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS

MAXIMUM NUMBER OF VARIABLES= 43

VARIABLE 2	IS AT ELEMENT	143	NODE=	1
ITEM= F	COMP= X	NAME= FX		
VARIABLE 3	IS AT ELEMENT	144	NODE=	1
ITEM= F	COMP= Y	NAME= FY		
VARIABLE 4	IS AT ELEMENT	145	NODE=	1
ITEM= F	COMP= Z	NAME= FZ		
VARIABLE 5	IS AT ELEMENT	146	NODE=	1
ITEM= M	COMP= X	NAME= MX		
VARIABLE 6	IS AT ELEMENT	147	NODE=	1
ITEM= M	COMP= Y	NAME= MY		
VARIABLE 7	IS AT ELEMENT	148	NODE=	1
ITEM= M	COMP= Z	NAME= MZ		
VARIABLE 8	IS AT ELEMENT	171	NODE=	87
ITEM= F	COMP= X	NAME= FX		
VARIABLE 9	IS AT ELEMENT	174	NODE=	87
ITEM= F	COMP= Y	NAME= FY		
VARIABLE 10	IS AT ELEMENT	175	NODE=	87
ITEM= F	COMP= Z	NAME= FZ		
VARIABLE 11	IS AT ELEMENT	176	NODE=	87
ITEM= M	COMP= X	NAME= MX		
VARIABLE 12	IS AT ELEMENT	177	NODE=	87
ITEM= M	COMP= Y	NAME= MY		
VARIABLE 13	IS AT ELEMENT	178	NODE=	87
ITEM= M	COMP= Z	NAME= MZ		
VARIABLE 14	IS AT ELEMENT	179	NODE=	130
ITEM= F	COMP= X	NAME= FX		
VARIABLE 15	IS AT ELEMENT	180	NODE=	130
ITEM= F	COMP= Y	NAME= FY		

ITEM= F	COMP= Y	NAME= FY	131	NODE=	130
VARIABLE 16	IS AT ELEMENT	NAME= FZ			
ITEM= F	COMP= Z	NAME= FZ			
VARIABLE 17	IS AT ELEMENT	NAME= MX			
ITEM= M	COMP= X	NAME= MX			
VARIABLE 18	IS AT ELEMENT	NAME= MY			
ITEM= M	COMP= Y	NAME= MY			
VARIABLE 19	IS AT ELEMENT	NAME= MZ			
ITEM= M	COMP= Z	NAME= MZ			
VARIABLE 20	IS AT ELEMENT	NAME= FX			
ITEM= F	COMP= X	NAME= FX			
VARIABLE 21	IS AT ELEMENT	NAME= FY			
ITEM= F	COMP= Y	NAME= FY			
VARIABLE 22	IS AT ELEMENT	NAME= FZ			
ITEM= F	COMP= Z	NAME= FZ			
VARIABLE 23	IS AT ELEMENT	NAME= MX			
ITEM= M	COMP= X	NAME= MX			
VARIABLE 24	IS AT ELEMENT	NAME= MY			
ITEM= M	COMP= Y	NAME= MY			
VARIABLE 25	IS AT ELEMENT	NAME= MZ			
ITEM= M	COMP= Z	NAME= MZ			
VARIABLE 26	IS AT ELEMENT	NAME= FX			
ITEM= F	COMP= X	NAME= FX			
VARIABLE 27	IS AT ELEMENT	NAME= FY			
ITEM= F	COMP= Y	NAME= FY			
VARIABLE 28	IS AT ELEMENT	NAME= FZ			
ITEM= F	COMP= Z	NAME= FZ			
VARIABLE 29	IS AT ELEMENT	NAME= MX			
ITEM= M	COMP= X	NAME= MX			
VARIABLE 30	IS AT ELEMENT	NAME= MY			
ITEM= M	COMP= Y	NAME= MY			
VARIABLE 31	IS AT ELEMENT	NAME= MZ			
ITEM= M	COMP= Z	NAME= MZ			
VARIABLE 32	IS AT ELEMENT	NAME= FX			
ITEM= F	COMP= X	NAME= FX			
VARIABLE 33	IS AT ELEMENT	NAME= FY			
ITEM= F	COMP= Y	NAME= FY			
VARIABLE 34	IS AT ELEMENT	NAME= FZ			
ITEM= F	COMP= Z	NAME= FZ			
VARIABLE 35	IS AT ELEMENT	NAME= MX			
ITEM= M	COMP= X	NAME= MX			
VARIABLE 36	IS AT ELEMENT	NAME= MY			
ITEM= M	COMP= Y	NAME= MY			
VARIABLE 37	IS AT ELEMENT	NAME= MZ			
ITEM= M	COMP= Z	NAME= MZ			
VARIABLE 38	IS AT ELEMENT	NAME= FX			
ITEM= F	COMP= X	NAME= FX			
VARIABLE 39	IS AT ELEMENT	NAME= FY			
ITEM= F	COMP= Y	NAME= FY			
VARIABLE 40	IS AT ELEMENT	NAME= FZ			
ITEM= F	COMP= Z	NAME= FZ			
VARIABLE 41	IS AT ELEMENT	NAME= MX			
ITEM= M	COMP= X	NAME= MX			
VARIABLE 42	IS AT ELEMENT	NAME= MY			
ITEM= M	COMP= Y	NAME= MY			
VARIABLE 43	IS AT ELEMENT	NAME= MZ			
ITEM= M	COMP= Z	NAME= MZ			

STORAGE COMPLETE FOR 100 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES

VARI TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	ESOL	143 F	X	FX	-0.3866E-01	11.68
3	ESOL	144 F	Y	FY	-0.3908E-02	11.00
4	ESOL	145 F	Z	FZ	-0.4421E-01	10.32
5	ESOL	146 M	X	MX	-0.5313E-01	10.66
6	ESOL	147 M	Y	MY	-0.1117	11.02
7	ESOL	148 M	Z	MZ	-0.6729E-01	11.66
8	ESOL	149 F	X	FX	-0.4729E-01	11.48
9	ESOL	173 F	Y	FY	-0.1754E-01	11.34
10	ESOL	175 F	Z	FZ	-0.6389E-02	10.42
11	ESOL	176 M	X	MX	-0.5158E-01	10.46
12	ESOL	177 M	Y	MY	-0.4132E-01	11.84
13	ESOL	178 M	Z	MZ	-0.1294E-01	11.36
14	ESOL	179 F	X	FX	-0.274E-01	11.20
15	ESOL	180 F	Y	FY	-0.1577E-01	10.46
16	ESOL	180 F	Z	FZ	-0.5376E-02	10.54

POST26 SUMMARY OF VARIABLE EXTREMUM VALUES

VARI TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	ESOL 143 F	X	-0.3688E-01	11.68	0.4132E-01	11.84
3	ESOL 144 F	Y	-0.9908E-02	11.00	0.1294E-01	11.26
4	ESOL 145 F	Z	-0.4813E-01	10.32	0.5513E-01	10.62
5	ESOL 146 F	X	-0.7428E-01	11.86	0.1072E-01	11.82
6	ESOL 147 F	Y	-0.7228E-01	11.48	0.9454E-01	10.60
7	ESOL 148 F	Z	-0.3328E-01	11.34	0.2274E-01	11.20
8	ESOL 149 F	X	-0.1748E-01	10.42	0.1572E-01	10.46
9	ESOL 150 F	Y	-0.6389E-02	10.08	0.5292E-02	10.54
10	ESOL 151 F	Z	-0.3502E-01	11.34	0.3452E-01	11.20
11	ESOL 152 F	X	-0.1232E-01	10.54	0.1834E-01	10.68
12	ESOL 153 F	Y	-0.1371E-01	10.08	0.1328E-01	11.20
13	ESOL 154 F	Z	-0.3842E-02	10.54	0.4748E-02	10.20
14	ESOL 155 F	X	-0.3927E-02	10.34	0.3708E-02	10.54
15	ESOL 156 F	Y	-0.1902E-01	10.34	0.1282E-02	10.54
16	ESOL 157 F	Z	-0.1454E-01	10.58	0.2812E-02	11.28
17	ESOL 158 F	X	-0.1214E-01	10.74	0.1158E-01	11.28
18	ESOL 159 F	Y	-0.7868E-01	10.62	0.8330E-01	11.00
19	ESOL 160 F	Z	-0.7442E-01	10.70	0.8402E-01	11.00
20	ESOL 161 F	X	-0.8911E-01	11.00	0.3122E-01	10.58
21	ESOL 162 F	Y	-0.1062E-01	10.68	0.5092E-01	10.28
22	ESOL 163 F	Z	-0.1948E-01	10.88	0.6282E-01	10.70
23	ESOL 164 F	X	-0.1719E-01	11.84	0.1708E-01	12.02
24	ESOL 165 F	Y	-0.4474E-01	11.54	0.5422E-01	11.34
25	ESOL 166 F	Z	-0.3332E-01	11.34	0.2128E-01	11.20
26	ESOL 167 F	X	-0.5808E-02	11.38	0.5167E-02	10.34
27	ESOL 168 F	Y	-0.1440E-01	10.30	0.1342E-01	10.30
28	ESOL 169 F	Z	-0.2782E-01	10.22	0.3092E-01	11.50
29	ESOL 170 F	X	-0.1351E-01	11.34	0.1412E-01	11.20
30	ESOL 171 F	Y	-0.1930E-01	10.42	0.1668E-01	10.54
31	ESOL 172 F	Z	-0.1563E-01	11.34	0.1353E-01	11.20
32	ESOL 173 F	X	-0.4086E-02	11.54	0.5057E-02	10.26
33	ESOL 174 F	Y	-0.5232E-03	11.48	0.7768E-03	10.60
34	ESOL 175 F	Z	-0.6572E-03	10.84	0.9608E-03	10.70
35	ESOL 176 F	X	-0.3694E-02	10.84	0.3608E-02	10.84
36	ESOL 177 F	Y	-0.1182E-02	11.18	0.1228E-02	11.48
37	ESOL 178 F	Z	-0.5780E-03	10.42	0.5120E-03	11.84

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME=pb2tfxi.db
FOR POSSIBLE RESUME FROM THIS POINT

***** ROUTINE COMPLETED ***** CP = 16823.180

***** ANSYS SOLUTION ROUTINE *****
PERFORM AN EXPANSION PASS

EXPAND 100 SOLUTIONS TO 0.70000
CALCULATE ELEMENT RESULTS AS WELL AS THE NODAL DOP SOLUTION
PRINT NODAL ITEMS WITH A FREQUENCY OF NONE
FOR ALL APPLICABLE ENTITIES

***** ANSYS SOLVE COMMAND *****

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION-SUMSPARC 05:12:51 OCT 11, 1995 CP= 16823.180
FOR SUPPORT CALL PHONE FAX

Time-history analysis of coupled system (prestresser spray line)
*****ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY**

SOLUTION OPTIONS

PROBLEM DIMENSIONALITY 3-D
DESIGNS OF FREEDOM UN US UE MOTH ROTY ROTZ
ANALYSIS METHOD PRESTRESSER
SOLUTION METHOD FULL
EXPANSION PASS ON

LOAD STEP NUMBER 1
NUMBER OF SOLUTIONS TO BE EXPANDED 100
ELEMENT RESULTS CALCULATION 0.60000 TO 0.70000
PRINT OUTPUT CONTROLS ON

ITEM FREQUENCY COMPONENT
BASIC NONE
DATABASE OUTPUT CONTROLS
ITEM FREQUENCY COMPONENT
NSOL LAST

*** ELEMENT RESULT CALCULATION TIMES

TYPE NUMBER	ENAME	TOTAL CP	AVE CP
1	120 PIPE16	0.551	0.005
2	22 PIPE18	0.189	0.009
3	10 COMBIN14	0.000	0.000
4	11 COMBIN14	0.010	0.003
5	11 COMBIN14	0.010	0.003
6	11 COMBIN14	0.010	0.003
7	3 COMBIN14	0.000	0.000
8	3 COMBIN14	0.000	0.000
9	3 COMBIN14	0.000	0.000
10	31 MASS21	0.049	0.002
11	12 MASS21	0.049	0.002
12	12 MASS21	0.049	0.002
72	5 MASS21	0.000	0.000

*** NODAL LOAD CALCULATION TIMES

TYPE NUMBER	ENAME	TOTAL CP	AVE CP
1	120 PIPE16	0.050	0.000
2	22 PIPE18	0.011	0.001
3	10 COMBIN14	0.000	0.000
4	11 COMBIN14	0.000	0.000
5	11 COMBIN14	0.010	0.003
6	11 COMBIN14	0.010	0.003
7	3 COMBIN14	0.000	0.000
8	3 COMBIN14	0.000	0.000
9	3 COMBIN14	0.000	0.000
10	31 MASS21	0.000	0.000
11	12 MASS21	0.021	0.001
12	12 MASS21	0.021	0.001
72	5 MASS21	0.000	0.000

***** ANSYS BINARY FILE STATISTICS
BUFFER SIZE USED= 4096
33.078 MB WRITTEN ON RESULTS FILE: pb2tfxi.rst

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2tfxi.db
FOR POSSIBLE RESUME FROM THIS POINT

FINISH SOLUTION PROCESSING

***** ROUTINE COMPLETED ***** CP = 17036.430

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION-SUMSPARC 05:40:27 OCT 11, 1995 CP= 17036.460
FOR SUPPORT CALL PHONE FAX

Time-history analysis of coupled system (prestresser spray line)
*****ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY**

***** TIME-HISTORY POSTPROCESSOR (POST26) *****
ALL POST26 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS
MAXIMUM NUMBER OF VARIABLES= 43

VARIABLE 2 IS AT ELEMENT 143 MODE= 1
ITEM= F COMP= X NAME= FX
VARIABLE 3 IS AT ELEMENT 144 MODE= 1
ITEM= F COMP= Y NAME= FY
VARIABLE 4 IS AT ELEMENT 145 MODE= 1
ITEM= F COMP= Z NAME= FZ


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35 ESOL 169 F X FT -0.6550E-01 13.16 0.6701E-03 13.06
36 ESOL 170 F X FT -0.1000E-01 12.72 0.8495E-03 12.72
37 ESOL 171 F X FT -0.7458E-01 13.16 0.7842E-03 13.06
38 ESOL 172 F X FT -0.4168E-02 13.62 0.3393E-02 13.20
39 ESOL 173 F Y FT -0.6713E-03 14.00 0.5943E-03 12.04
40 ESOL 174 F Y FT -0.5113E-03 12.18 0.4191E-03 12.34
41 ESOL 175 F Y FT -0.2668E-03 12.18 0.2732E-02 12.04
42 ESOL 176 F Y FT -0.1344E-03 12.72 0.1393E-03 12.72
43 ESOL 177 F Y FT -0.2872E-03 12.68 0.2200E-03 12.16

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ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME=pb2tfr.db
FOR POSSIBLE RESUME FROM THIS POINT

***** ROUTINE COMPLETED ***** CP = 17049.400

***** ANSYS SOLUTION ROUTINE *****

PERFORM AN EXPANSION PASS

EXPAND 100 SOLUTIONS
IN THE RANGE FROM 0.70000 TO 0.80000
CALCULATE ELEMENT RESULTS AS WELL AS THE MODAL DOP SOLUTION
PRINT BASIC ITEMS WITH A FREQUENCY OF NONE
FOR ALL APPLICABLE ENTITIES

***** ANSYS SOLVE COMMAND *****

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUBSPARC 05/40/58 OCT 11, 1995 CP= 17049.400
FOR SUPPORT CALL PHONE

Time-history analysis of coupled system (pressurizer spray line)

*****ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY**

SOLUTION OPTIONS

PROBLEM DIMENSIONALITY 3-D
DEGREES OF FREEDOM UX UY UZ ROTX ROTY ROTZ
ANALYSIS TYPE TRANSIENT
SOLUTION METHOD REDUCED
EXPANSION PASS ON

LOAD STEP OPTIONS

LOAD STEP NUMBER 1
NUMBER OF SOLUTIONS TO BE EXPANDED 100
RANGE 0.70000 TO 0.80000
ELEMENT RESULTS CALCULATION ON

PRINT OUTPUT CONTROLS

ITEM FREQUENCY COMPONENT
DATABASE OUTPUT CONTROLS
ITEM FREQUENCY COMPONENT
NSOL LAST

*** ELEMENT RESULT CALCULATION TIMES

TYPE	NUMBER	ENAME	TOTAL	CP	AVE	CP
1	120	PIPE16	0.598	0.005		
2	12	PIPE18	0.179	0.008		
3	10	COMBIN14	0.010	0.001		
4	12	COMBIN14	0.000	0.000		
5	11	COMBIN14	0.000	0.000		
6	3	COMBIN14	0.000	0.000		
7	3	COMBIN14	0.000	0.000		
8	3	COMBIN14	0.000	0.000		
9	1	MASS21	0.000	0.000		
10	1	MASS21	0.000	0.000		
11	12	MASS21	0.050	0.004		
12	5	MASS21	0.000	0.000		

*** MODAL LOAD CALCULATION TIMES

TYPE	NUMBER	ENAME	TOTAL	CP	AVE	CP
1	120	PIPE16	0.061	0.000		
2	12	PIPE18	0.040	0.002		
3	10	COMBIN14	0.010	0.001		
4	12	COMBIN14	0.010	0.001		
5	11	COMBIN14	0.000	0.000		
6	3	COMBIN14	0.010	0.003		
7	3	COMBIN14	0.000	0.000		
8	3	COMBIN14	0.011	0.004		
9	1	MASS21	0.010	0.000		
10	1	MASS21	0.010	0.000		
11	12	MASS21	0.010	0.001		
12	5	MASS21	0.011	0.002		

*** ANSYS BINARY FILE STATISTICS

BUFFER SIZE USED= 4096
33,078 MB WRITTEN ON RESULTS FILE: pb2tfr.rst

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME=pb2tfr.db
FOR POSSIBLE RESUME FROM THIS POINT

FINISH SOLUTION PROCESSING

***** ROUTINE COMPLETED ***** CP = 17262.230

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUBSPARC 05/40/58 OCT 11, 1995 CP= 17262.260
FOR SUPPORT CALL PHONE

Time-history analysis of coupled system (pressurizer spray line)

*****ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY**

***** TIME-HISTORY POSTPROCESSOR (POST26) *****

ALL POST26 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS

MAXIMUM NUMBER OF VARIABLES= 43

VARIABLE 2	IS AT ELEMENT	143	MODE=	1
ITEM= F	COMP= X	NAME= FX		
VARIABLE 3	IS AT ELEMENT	144	MODE=	1
ITEM= F	COMP= Y	NAME= FY		
VARIABLE 4	IS AT ELEMENT	145	MODE=	1
ITEM= F	COMP= Z	NAME= FZ		
VARIABLE 5	IS AT ELEMENT	146	MODE=	1
ITEM= M	COMP= X	NAME= MX		
VARIABLE 6	IS AT ELEMENT	147	MODE=	1
ITEM= M	COMP= Y	NAME= MY		
VARIABLE 7	IS AT ELEMENT	148	MODE=	1
ITEM= M	COMP= Z	NAME= MZ		
VARIABLE 8	IS AT ELEMENT	173	MODE=	87
ITEM= F	COMP= X	NAME= FX		
VARIABLE 9	IS AT ELEMENT	174	MODE=	87
ITEM= F	COMP= Y	NAME= FY		
VARIABLE 10	IS AT ELEMENT	175	MODE=	87
ITEM= F	COMP= Z	NAME= FZ		
VARIABLE 11	IS AT ELEMENT	176	MODE=	87
ITEM= M	COMP= X	NAME= MX		
VARIABLE 12	IS AT ELEMENT	177	MODE=	87
ITEM= M	COMP= Y	NAME= MY		
VARIABLE 13	IS AT ELEMENT	178	MODE=	87
ITEM= M	COMP= Z	NAME= MZ		
VARIABLE 14	IS AT ELEMENT	179	MODE=	130
ITEM= F	COMP= X	NAME= FX		
VARIABLE 15	IS AT ELEMENT	180	MODE=	130
ITEM= F	COMP= Y	NAME= FY		
VARIABLE 16	IS AT ELEMENT	181	MODE=	130
ITEM= F	COMP= Z	NAME= FZ		
VARIABLE 17	IS AT ELEMENT	182	MODE=	130
ITEM= M	COMP= X	NAME= MX		
VARIABLE 18	IS AT ELEMENT	183	MODE=	130
ITEM= M	COMP= Y	NAME= MY		
VARIABLE 19	IS AT ELEMENT	184	MODE=	130
ITEM= M	COMP= Z	NAME= MZ		
VARIABLE 20	IS AT ELEMENT	149	MODE=	9
ITEM= F	COMP= X	NAME= FX		
VARIABLE 21	IS AT ELEMENT	150	MODE=	10
ITEM= F	COMP= Z	NAME= FZ		
VARIABLE 22	IS AT ELEMENT	151	MODE=	15
ITEM= F	COMP= Y	NAME= FY		
VARIABLE 23	IS AT ELEMENT	153	MODE=	23
ITEM= F	COMP= X	NAME= FX		
VARIABLE 24	IS AT ELEMENT	154	MODE=	28
ITEM= F	COMP= Z	NAME= FZ		
VARIABLE 25	IS AT ELEMENT	155	MODE=	37
ITEM= F	COMP= Y	NAME= FY		
VARIABLE 26	IS AT ELEMENT	156	MODE=	39
ITEM= F	COMP= X	NAME= FX		
VARIABLE 27	IS AT ELEMENT	157	MODE=	44
ITEM= F	COMP= Y	NAME= FY		

VARIABLE	IS AT ELEMENT	NAME	VALUE	MINIMUM	MAXIMUM	AT TIME
VARIABLE 28	IS AT ELEMENT	158 NODE=	45			
ITEM= F	COMP= 2	NAME= FE				
VARIABLE 29	IS AT ELEMENT	161 NODE=	124			
ITEM= F	COMP= X	NAME= FX				
VARIABLE 30	IS AT ELEMENT	162 NODE=	129			
ITEM= F	COMP= 2	NAME= FE				
VARIABLE 31	IS AT ELEMENT	163 NODE=	52			
ITEM= F	COMP= Y	NAME= FY				
VARIABLE 32	IS AT ELEMENT	164 NODE=	54			
ITEM= F	COMP= 2	NAME= FE				
VARIABLE 33	IS AT ELEMENT	165 NODE=	57			
ITEM= F	COMP= X	NAME= FX				
VARIABLE 34	IS AT ELEMENT	167 NODE=	73			
ITEM= F	COMP= 2	NAME= FE				
VARIABLE 35	IS AT ELEMENT	168 NODE=	131			
ITEM= F	COMP= X	NAME= FX				
VARIABLE 36	IS AT ELEMENT	170 NODE=	131			
ITEM= F	COMP= 2	NAME= FE				
VARIABLE 37	IS AT ELEMENT	171 NODE=	133			
ITEM= F	COMP= X	NAME= FX				
VARIABLE 38	IS AT ELEMENT	172 NODE=	133			
ITEM= F	COMP= 2	NAME= FE				
VARIABLE 39	IS AT ELEMENT	152 NODE=	14			
ITEM= F	COMP= Y	NAME= FY				
VARIABLE 40	IS AT ELEMENT	159 NODE=	53			
ITEM= F	COMP= Y	NAME= FY				
VARIABLE 41	IS AT ELEMENT	166 NODE=	61			
ITEM= F	COMP= Y	NAME= FY				
VARIABLE 42	IS AT ELEMENT	166 NODE=	78			
ITEM= F	COMP= Y	NAME= FY				
VARIABLE 43	IS AT ELEMENT	160 NODE=	79			
ITEM= F	COMP= Y	NAME= FY				

STORAGE COMPLETE FOR 99 DATA POINTS

VARI TYPE	IDENTIFIERS	NAME	MINIMUM	MAXIMUM	AT TIME
2	ESOL	143 F	X	FX	-0.4569E-01 14.04
3	ESOL	145 F	Y	FY	-0.1121E-01 14.80
4	ESOL	146 M	X	MX	-0.2608E-01 14.76
5	ESOL	146 M	Y	MY	-0.3858E-01 14.44
6	ESOL	148 M	X	MX	-0.9609E-01 14.44
7	ESOL	148 M	Y	MY	-0.9609E-01 14.44
8	ESOL	173 F	X	FX	-0.5778E-02 15.08
9	ESOL	173 F	Y	FY	-0.5778E-02 15.08
10	ESOL	176 M	X	MX	-0.1348E-01 14.20
11	ESOL	176 M	Y	MY	-0.1348E-01 14.20
12	ESOL	177 M	X	MX	-0.1894E-02 14.96
13	ESOL	177 M	Y	MY	-0.1894E-02 14.96
14	ESOL	181 F	X	FX	-0.4597E-02 14.20
15	ESOL	181 F	Y	FY	-0.4597E-02 14.20
16	ESOL	182 F	X	FX	-0.4597E-02 14.20
17	ESOL	182 F	Y	FY	-0.4597E-02 14.20
18	ESOL	183 M	X	MX	-0.1348E-01 14.20
19	ESOL	183 M	Y	MY	-0.1348E-01 14.20
20	ESOL	184 M	X	MX	-0.1348E-01 14.20
21	ESOL	184 M	Y	MY	-0.1348E-01 14.20
22	ESOL	150 F	X	FX	-0.6358E-01 15.12
23	ESOL	150 F	Y	FY	-0.6358E-01 15.12
24	ESOL	153 F	X	FX	-0.6485E-01 14.82
25	ESOL	153 F	Y	FY	-0.6485E-01 14.82
26	ESOL	154 F	X	FX	-0.7218E-01 14.14
27	ESOL	154 F	Y	FY	-0.7218E-01 14.14
28	ESOL	156 F	X	FX	-0.1348E-01 15.90
29	ESOL	156 F	Y	FY	-0.1348E-01 15.90
30	ESOL	157 F	X	FX	-0.1218E-01 15.58
31	ESOL	157 F	Y	FY	-0.1218E-01 15.58
32	ESOL	158 F	X	FX	-0.1916E-01 14.80
33	ESOL	158 F	Y	FY	-0.1916E-01 14.80
34	ESOL	161 F	X	FX	-0.4597E-02 14.20
35	ESOL	161 F	Y	FY	-0.4597E-02 14.20
36	ESOL	162 F	X	FX	-0.4597E-02 14.20
37	ESOL	162 F	Y	FY	-0.4597E-02 14.20
38	ESOL	163 F	X	FX	-0.1348E-01 14.20
39	ESOL	163 F	Y	FY	-0.1348E-01 14.20
40	ESOL	168 F	X	FX	-0.2568E-02 15.26
41	ESOL	168 F	Y	FY	-0.2568E-02 15.26
42	ESOL	166 F	X	FX	-0.1894E-02 14.96
43	ESOL	166 F	Y	FY	-0.1894E-02 14.96

VARIABLE	IS AT ELEMENT	NAME	VALUE	MINIMUM	MAXIMUM	AT TIME
VARIABLE 28	IS AT ELEMENT	158 NODE=	45			
ITEM= F	COMP= 2	NAME= FE				
VARIABLE 29	IS AT ELEMENT	161 NODE=	124			
ITEM= F	COMP= X	NAME= FX				
VARIABLE 30	IS AT ELEMENT	162 NODE=	129			
ITEM= F	COMP= 2	NAME= FE				
VARIABLE 31	IS AT ELEMENT	163 NODE=	52			
ITEM= F	COMP= Y	NAME= FY				
VARIABLE 32	IS AT ELEMENT	164 NODE=	54			
ITEM= F	COMP= 2	NAME= FE				
VARIABLE 33	IS AT ELEMENT	165 NODE=	57			
ITEM= F	COMP= X	NAME= FX				
VARIABLE 34	IS AT ELEMENT	167 NODE=	73			
ITEM= F	COMP= 2	NAME= FE				
VARIABLE 35	IS AT ELEMENT	168 NODE=	131			
ITEM= F	COMP= X	NAME= FX				
VARIABLE 36	IS AT ELEMENT	170 NODE=	131			
ITEM= F	COMP= 2	NAME= FE				
VARIABLE 37	IS AT ELEMENT	171 NODE=	133			
ITEM= F	COMP= X	NAME= FX				
VARIABLE 38	IS AT ELEMENT	172 NODE=	133			
ITEM= F	COMP= 2	NAME= FE				
VARIABLE 39	IS AT ELEMENT	152 NODE=	14			
ITEM= F	COMP= Y	NAME= FY				
VARIABLE 40	IS AT ELEMENT	159 NODE=	53			
ITEM= F	COMP= Y	NAME= FY				
VARIABLE 41	IS AT ELEMENT	166 NODE=	61			
ITEM= F	COMP= Y	NAME= FY				
VARIABLE 42	IS AT ELEMENT	166 NODE=	78			
ITEM= F	COMP= Y	NAME= FY				
VARIABLE 43	IS AT ELEMENT	160 NODE=	79			
ITEM= F	COMP= Y	NAME= FY				

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2tfx.db FOR POSSIBLE RESUME FROM THIS POINT

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***** ROUTINE COMPLETED ***** CP = 17272.551
***** ANSYS SOLUTION ROUTINE *****
PERFORM AN EXPANSION PASS

EXPAND 100 SOLUTIONS
IN THE RANGE FROM 0.48000 TO 0.90000
CALCULATE ELEMENT RESULTS AS WELL AS THE MODAL DOP SOLUTION
PRINT BARI ITEMS WITH A FREQUENCY OF MORE
FOR ALL APPLICABLE ENTITIES

***** ANSYS SOLVE COMMAND *****
***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=JUN85PARC 08:48:56 OCT 11, 1985 CP= 17272.540
FOR SUPPORT CALL PHONE

Time-history analysis of coupled system (presurizer spray line)
**ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY**

SOLUTION OPTIONS
PROBLEM DIMENSIONALITY . . . . .3-D
DEGREES OF FREEDOM . . . . .UX UY UZ ROTX ROTY ROTZ
ANALYSIS TYPE . . . . .TRANSIENT
SOLUTION METHOD . . . . .REDUCED
EXPANSION PASS . . . . .ON

LOAD STEP OPTIONS
LOAD STEP NUMBER . . . . .1
NUMBER OF SOLUTIONS TO BE EXPANDED . . . . .100
RANGE . . . . .FROM 0.48000 TO 0.90000
PRINT OUTPUT FREQUENCY . . . . .10
ITEM FREQUENCY COMPONENT . . . . .%
BASE . . . . .NONE
DATABASE OUTPUT CONTROLS
ITEM FREQUENCY COMPONENT
RESOL LAST

*** ELEMENT RESULT CALCULATION TIMES
TYPE NUMBER SHAPE TOTAL CP AVE CP
1 120 PIPE16 0.519 0.064
2 22 PIPE16 0.190 0.009

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3 10 COMB1M4 0.030 0.003
 4 17 COMB1M4 0.031 0.003
 5 11 COMB1M4 0.000 0.000
 6 3 COMB1M4 0.000 0.000
 7 3 COMB1M4 0.000 0.000
 8 3 COMB1M4 0.000 0.000
 30 31 MASS21 0.039 0.001
 71 12 BEAMA4 0.049 0.004
 72 5 MASS21 0.000 0.000

*** MORAL LOAD CALCULATION TIMES
 TYPE NUMBER ERRORS TOTAL CP AVE CP
 1 120 F1P216 0.100 0.001
 2 22 F1P218 0.020 0.001
 3 10 COMB1M4 0.020 0.002
 4 12 COMB1M4 0.000 0.000
 5 11 COMB1M4 0.021 0.002
 6 3 COMB1M4 0.000 0.000
 7 3 COMB1M4 0.000 0.000
 8 3 COMB1M4 0.000 0.000
 30 31 MASS21 0.012 0.000
 71 12 BEAMA4 0.010 0.001
 72 5 MASS21 0.000 0.000

*** ANSYS BINARY FILE STATISTICS
 BUFFER SIZE USED= 4096
 33,078 MB WRITTEN ON RESULTS FILE: pb2tfx1.rst
 ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME: pb2tfx1.db
 FOR POSSIBLE RESUME FROM THIS POINT
 FINISH SOLUTION PROCESSING

***** ROUTINE COMPLETED ***** CP = 17425.999

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
 40416-2 VERASON-GUNASPARC 05.56.34 OCT 11, 1995 CP= 17446.031
 FOR SUPPORT CALL PHONE FAX

Time-history analysis of coupled system (premaster spray line)
 ***ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY**

***** TIME-HISTORY POSTPROCESSOR (POST26) *****
 ALL POST26 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS
 MAXIMUM NUMBER OF VARIABLES= 43

VARIABLE	IS AT ELEMENT	NAME	MODE	1
VARIABLE 2	IS AT ELEMENT	COMP X	143	MODE
ITEM F	COMP X	NAME= FX		
VARIABLE 3	IS AT ELEMENT	COMP Y	144	MODE
ITEM F	COMP Y	NAME= FY		
VARIABLE 4	IS AT ELEMENT	COMP Z	145	MODE
ITEM F	COMP Z	NAME= FZ		
VARIABLE 5	IS AT ELEMENT	COMP X	146	MODE
ITEM M	COMP X	NAME= MX		
VARIABLE 6	IS AT ELEMENT	COMP Y	147	MODE
ITEM M	COMP Y	NAME= MY		
VARIABLE 7	IS AT ELEMENT	COMP Z	148	MODE
ITEM M	COMP Z	NAME= MZ		
VARIABLE 8	IS AT ELEMENT	COMP X	173	MODE
ITEM F	COMP X	NAME= FX		
VARIABLE 9	IS AT ELEMENT	COMP Y	174	MODE
ITEM F	COMP Y	NAME= FY		
VARIABLE 10	IS AT ELEMENT	COMP Z	175	MODE
ITEM F	COMP Z	NAME= FZ		
VARIABLE 11	IS AT ELEMENT	COMP X	176	MODE
ITEM M	COMP X	NAME= MX		
VARIABLE 12	IS AT ELEMENT	COMP Y	177	MODE
ITEM M	COMP Y	NAME= MY		
VARIABLE 13	IS AT ELEMENT	COMP Z	178	MODE
ITEM M	COMP Z	NAME= MZ		
VARIABLE 14	IS AT ELEMENT	COMP X	179	MODE
ITEM F	COMP X	NAME= FX		
VARIABLE 15	IS AT ELEMENT	COMP Y	180	MODE
ITEM F	COMP Y	NAME= FY		
VARIABLE 16	IS AT ELEMENT	COMP Z	181	MODE
ITEM F	COMP Z	NAME= FZ		

VARIABLE	IS AT ELEMENT	NAME	MODE	130
VARIABLE 17	IS AT ELEMENT	COMP X	182	MODE
ITEM M	COMP X	NAME= MX		
VARIABLE 18	IS AT ELEMENT	COMP Y	183	MODE
ITEM M	COMP Y	NAME= MY		
VARIABLE 19	IS AT ELEMENT	COMP Z	184	MODE
ITEM M	COMP Z	NAME= MZ		
VARIABLE 20	IS AT ELEMENT	COMP X	189	MODE
ITEM F	COMP X	NAME= FX		
VARIABLE 21	IS AT ELEMENT	COMP Z	190	MODE
ITEM F	COMP Z	NAME= FZ		
VARIABLE 22	IS AT ELEMENT	COMP Y	191	MODE
ITEM F	COMP Y	NAME= FY		
VARIABLE 23	IS AT ELEMENT	COMP X	193	MODE
ITEM F	COMP X	NAME= FX		
VARIABLE 24	IS AT ELEMENT	COMP Z	194	MODE
ITEM F	COMP Z	NAME= FZ		
VARIABLE 25	IS AT ELEMENT	COMP Y	195	MODE
ITEM F	COMP Y	NAME= FY		
VARIABLE 26	IS AT ELEMENT	COMP X	196	MODE
ITEM F	COMP X	NAME= FX		
VARIABLE 27	IS AT ELEMENT	COMP Y	197	MODE
ITEM F	COMP Y	NAME= FY		
VARIABLE 28	IS AT ELEMENT	COMP Z	198	MODE
ITEM F	COMP Z	NAME= FZ		
VARIABLE 29	IS AT ELEMENT	COMP X	199	MODE
ITEM F	COMP X	NAME= FX		
VARIABLE 30	IS AT ELEMENT	COMP Z	200	MODE
ITEM F	COMP Z	NAME= FZ		
VARIABLE 31	IS AT ELEMENT	COMP Y	201	MODE
ITEM F	COMP Y	NAME= FY		
VARIABLE 32	IS AT ELEMENT	COMP X	202	MODE
ITEM F	COMP X	NAME= FX		
VARIABLE 33	IS AT ELEMENT	COMP X	203	MODE
ITEM F	COMP X	NAME= FX		
VARIABLE 34	IS AT ELEMENT	COMP Z	204	MODE
ITEM F	COMP Z	NAME= FZ		
VARIABLE 35	IS AT ELEMENT	COMP X	205	MODE
ITEM F	COMP X	NAME= FX		
VARIABLE 36	IS AT ELEMENT	COMP Z	206	MODE
ITEM F	COMP Z	NAME= FZ		
VARIABLE 37	IS AT ELEMENT	COMP X	207	MODE
ITEM F	COMP X	NAME= FX		
VARIABLE 38	IS AT ELEMENT	COMP Z	208	MODE
ITEM F	COMP Z	NAME= FZ		
VARIABLE 39	IS AT ELEMENT	COMP Y	209	MODE
ITEM F	COMP Y	NAME= FY		
VARIABLE 40	IS AT ELEMENT	COMP X	210	MODE
ITEM F	COMP X	NAME= FX		
VARIABLE 41	IS AT ELEMENT	COMP Y	211	MODE
ITEM F	COMP Y	NAME= FY		
VARIABLE 42	IS AT ELEMENT	COMP Z	212	MODE
ITEM F	COMP Z	NAME= FZ		
VARIABLE 43	IS AT ELEMENT	COMP X	213	MODE
ITEM F	COMP X	NAME= FX		

STORAGE COMPLETE FOR 99 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND ESTIMATE VALUES

VARI TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	ESOL	143 F	X	FX	-0.3246E-01	16.10
3	ESOL	144 F	Y	FY	-0.4504E-02	17.96
4	ESOL	145 F	Z	FZ	-0.1659E-01	17.54
5	ESOL	146 M	X	MX	-0.2032E-01	17.94
6	ESOL	147 M	Y	MY	-0.7177E-01	16.28
7	ESOL	148 M	Z	MZ	-0.4947E-01	17.22
8	ESOL	173 F	X	FX	-0.9210E-02	17.80
9	ESOL	174 F	Y	FY	-0.4380E-02	18.26
10	ESOL	175 F	Z	FZ	-0.1010E-02	17.10
11	ESOL	176 M	X	MX	-0.1122E-01	16.28
12	ESOL	177 M	Y	MY	-0.1244E-01	17.80
13	ESOL	178 M	Z	MZ	-0.6684E-02	16.96
14	ESOL	179 F	X	FX	-0.4618E-02	16.84
15	ESOL	180 F	Y	FY	-0.1760E-02	16.62
16	ESOL	181 F	Z	FZ	-0.1365E-02	16.42
17	ESOL	182 F	X	FX	-0.2420E-01	17.22
18	ESOL	183 F	Y	FY	0.4069E-02	16.40
19	ESOL	184 F	Z	FZ	0.1253E-01	17.60
20	ESOL	185 M	X	MX	0.1592E-01	17.60
21	ESOL	186 M	Y	MY	0.9042E-01	17.96
22	ESOL	187 M	Z	MZ	0.3732E-01	17.40
23	ESOL	188 M	X	MX	0.1151E-01	16.26
24	ESOL	189 M	Y	MY	0.2892E-02	16.96
25	ESOL	190 M	Z	MZ	0.1167E-01	17.10
26	ESOL	191 M	X	MX	0.1691E-01	16.96
27	ESOL	192 M	Y	MY	0.5013E-02	16.04
28	ESOL	193 M	Z	MZ	-0.6373E-02	16.96
29	ESOL	194 F	X	FX	-0.2198E-02	16.42
30	ESOL	195 F	Y	FY	-0.1087E-02	17.36

40 ESOL 159 F Y FY -0.1172E-03 18.14 0.2278E-03 18.10
 41 ESOL 160 F Y FY -0.1094E-03 18.14 0.1171E-02 18.10
 42 ESOL 166 F Y FY -0.1094E-03 18.14 0.1171E-02 18.10
 43 ESOL 160 F Y FY -0.1422E-03 20.02 0.1065E-03 18.42

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2tfx.db
 FOR POSSIBLE RESUME FROM THIS POINT

***** ROUTINE COMPLETED ***** CP = 17725.581

***** ANSYS SOLUTION ROUTINE *****

PERFORM AN EXPANSION PASS

EXPAND 100 SOLUTIONS 0. TO 0.10000
 IN THE RANGE FROM
 CALCULATE ELEMENT RESULTS AS WELL AS THE LOCAL DMP SOLUTION
 PRINT BASE ITEMS WITH A FREQUENCY OF NONE
 FOR ALL APPLICABLE ENTITIES

***** ANSYS SOLVE COMMAND *****

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
 40416-2 VELDIS08-SUBSTRAC 06/05/04 OCT 11, 1995 CP= 17725.600
 FOR SUPPORT CALL PHONE

Time-history analysis of coupled system (precrusher spray line)

***** ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY*****

SOLUTION OPTIONS

PROBLEM DIMENSIONALITY 3-D
 DEGREES OF FREEDOM UX UY UZ ROTX ROTY ROTZ
 ANALYSIS TYPE TRANSIENT
 SOLUTION METHOD REDUCED
 EXPANSION PASS ON

LOAD STEP OPTIONS

LOAD STEP NUMBER 1
 NUMBER OF SOLUTIONS TO BE EXPANDED 100
 RANGE OF ELEMENTS TO BE EXPANDED 0.
 PRINT OUTPUT CONTROLS ON
 ITEM FREQUENCY COMPONENT

BASEI NONE
 DATABASE OUTPUT CONTROLS
 ITEM FREQUENCY COMPONENT
 NSOL LAST

*** ELEMENT RESULT CALCULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	120	PIPE16	0.466	0.004
2	22	PIPE18	0.201	0.009
3	22	COMBIN14	0.000	0.000
4	12	COMBIN14	0.030	0.001
5	31	COMBIN14	0.010	0.001
6	3	COMBIN14	0.010	0.003
7	3	COMBIN14	0.010	0.003
8	3	COMBIN14	0.000	0.000
10	31	MASS21	0.088	0.003
11	3	MASS21	0.088	0.003
72	5	MASS21	0.000	0.000

*** NODAL LOAD CALCULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	120	PIPE16	0.061	0.001
2	22	PIPE18	0.000	0.000
3	22	COMBIN14	0.000	0.000
4	12	COMBIN14	0.000	0.000
5	11	COMBIN14	0.000	0.000
6	3	COMBIN14	0.000	0.000
7	3	COMBIN14	0.000	0.000
8	3	COMBIN14	0.000	0.000
10	31	MASS21	0.043	0.001
11	3	MASS21	0.043	0.001
72	5	MASS21	0.000	0.000

*** ANSYS BINARY FILE STATISTICS

BUFFER SIZE USED= 4096
 33,076 MB WRITTEN ON RESULTS FILE, pb2tfx.rst

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2tfx.db
 FOR POSSIBLE RESUME FROM THIS POINT

FINISH SOLUTION PROCESSING

***** ROUTINE COMPLETED ***** CP = 17939.809

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
 40416-2 VELDIS08-SUBSTRAC 06/12/99 OCT 11, 1995 CP= 17939.839
 FOR SUPPORT CALL PHONE

Time-history analysis of coupled system (precrusher spray line)

***** ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY*****

***** TIME-HISTORY POSTPROCESSOR (POST28) *****

ALL POST28 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS

MAXIMUM NUMBER OF VARIABLES= 30

VARIABLE 2 IS AT ELEMENT 1 NODE= 1

ITEM= F COMP= X NAME= FX

VARIABLE 3 IS AT ELEMENT 1 NODE= 1

ITEM= F COMP= Y NAME= FY

VARIABLE 4 IS AT ELEMENT 1 NODE= 1

ITEM= M COMP= X NAME= MX

VARIABLE 5 IS AT ELEMENT 1 NODE= 1

ITEM= M COMP= Y NAME= MY

VARIABLE 6 IS AT ELEMENT 8 NODE= 6

ITEM= F COMP= X NAME= FX

VARIABLE 7 IS AT ELEMENT 8 NODE= 6

ITEM= M COMP= Z NAME= MZ

VARIABLE 8 IS AT ELEMENT 12 NODE= 10

ITEM= F COMP= X NAME= FX

VARIABLE 9 IS AT ELEMENT 12 NODE= 10

ITEM= F COMP= Z NAME= FZ

VARIABLE 10 IS AT ELEMENT 12 NODE= 10

ITEM= M COMP= X NAME= MX

VARIABLE 11 IS AT ELEMENT 12 NODE= 10

ITEM= M COMP= Z NAME= MZ

VARIABLE 12 IS AT ELEMENT 22 NODE= 15

ITEM= F COMP= Y NAME= FY

VARIABLE 13 IS AT ELEMENT 22 NODE= 15

ITEM= M COMP= Z NAME= MZ

VARIABLE 14 IS AT ELEMENT 32 NODE= 23

ITEM= M COMP= X NAME= MX

VARIABLE 15 IS AT ELEMENT 32 NODE= 23

ITEM= M COMP= Z NAME= MZ

VARIABLE 16 IS AT ELEMENT 48 NODE= 35

ITEM= F COMP= Y NAME= FY

VARIABLE 17 IS AT ELEMENT 52 NODE= 39

ITEM= F COMP= X NAME= FX

VARIABLE 18 IS AT ELEMENT 52 NODE= 39

ITEM= M COMP= Y NAME= MY

VARIABLE 19 IS AT ELEMENT 58 NODE= 45

ITEM= F COMP= Z NAME= FZ

VARIABLE 20 IS AT ELEMENT 58 NODE= 45

ITEM= M COMP= Z NAME= MZ

VARIABLE 21 IS AT ELEMENT 72 NODE= 56

ITEM= F COMP= X NAME= FX

VARIABLE 22 IS AT ELEMENT 88 NODE= 72

ITEM= F COMP= X NAME= FX

VARIABLE 23 IS AT ELEMENT 107 NODE= 93

ITEM= M COMP= X NAME= MX

VARIABLE 24 IS AT ELEMENT 114 NODE= 102

ITEM= F COMP= X NAME= FX

VARIABLE 25 IS AT ELEMENT 114 NODE= 102

ITEM= F COMP= Z NAME= FZ

VARIABLE 26 IS AT ELEMENT 117 NODE= 103

ITEM= F COMP= X NAME= FX

VARIABLE 27 IS AT ELEMENT 123 NODE= 112

ITEM= M COMP= Y NAME= MY

VARIABLE 28 IS AT ELEMENT 125 NODE= 101

ITEM= F COMP= X NAME= FX

VARIABLE 29 IS AT ELEMENT 125 NODE= 101

ITEM= M COMP= Y NAME= MY
VARIABLE 30 IS AT ELEMENT 139 NODE= 65
ITEM= F COMP= X NAME= FX

STORAGE COMPLETE FOR 99 DATA POINTS

Table with columns: VARI TYPE, IDENTIFIERS, NAME, MINIMUM, AT TIME, MAXIMUM, AT TIME. Lists 30 variables and their extreme values.

POST26 SUMMARY OF VARIABLE EXTREME VALUES

Table with columns: VARI TYPE, IDENTIFIERS, NAME, MINIMUM, AT TIME, MAXIMUM, AT TIME. Lists 30 variables and their extreme values.

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2tfx.db
FOR POSSIBLE RESUME FROM THIS POINT

***** ROUTINE COMPLETED ***** CP = 17949.300

***** ANSYS SOLUTION ROUTINE *****

PERFORM AN EXPANSION PASS

EXPAND 100 SOLUTIONS
IN THE RANGE FROM 0.10000 TO 0.20000
CALCULATE ELEMENT RESULTS AS WELL AS THE NODAL DOF SOLUTION

PRINT BASIC ITEMS WITH A FREQUENCY OF NONE
FOR ALL APPLICABLE ENTITIES

***** ANSYS SOLVE COMMAND *****

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUMASPARC 06/13/04 OCT 11, 1995 CP= 17949.329
FOR SUPPORT CALL PHONE FAX

Time-history analysis of coupled system (presurizer spray line)

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

SOLUTION OPTIONS

PROBLEM DIMENSIONALITY 3-D
DEGREES OF FREEDOM UX UY UZ ROTX ROTY ROTZ
ANALYSIS TYPE TRANSIENT
SOLUTION METHOD REDUCED
EXPANSION PASS ON

LOAD STEP OPTIONS

LOAD STEP NUMBER 1
NUMBER OF SOLUTIONS TO BE EXPANDED 100
RANGE 0.10000 TO 0.20000

ELEMENT RESULTS CALCULATION ON
PRINT OUTPUT CONTROLS
ITEM FREQUENCY COMPONENT
BASIC NONE
DATABASE OUTPUT CONTROLS
ITEM FREQUENCY COMPONENT
NSOL LAST

*** ELEMENT RESULT CALCULATION TIMES

Table with columns: TYPE, NUMBER, EIDNAME, TOTAL CP, AVE CP. Lists element calculation times for various elements.

*** NODAL LOAD CALCULATION TIMES

Table with columns: TYPE, NUMBER, EIDNAME, TOTAL CP, AVE CP. Lists nodal load calculation times for various elements.

*** ANSYS BINARY FILE STATISTICS

BUFFER SIZE USED= 4096
33.078 MB WRITTEN ON RESULTS FILE: pb2tfx.rst

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2tfx.db
FOR POSSIBLE RESUME FROM THIS POINT

FINISH SOLUTION PROCESSING

***** ROUTINE COMPLETED ***** CP = 18162.760

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUMASPARC 06/20/98 OCT 11, 1995 CP= 18162.780
FOR SUPPORT CALL PHONE FAX

Time-history analysis of coupled system (presurizer spray line)

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

***** TIME-HISTORY POSTPROCESSOR (POST26) *****

ALL POST26 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS

MAXIMUM NUMBER OF VARIABLES= 30

VARIABLE 2 IS AT ELEMENT 1 NODE= 1
ITEM= F COMP= X NAME= FX

VARIABLE 3 IS AT ELEMENT 1 NODE= 1
ITEM= F COMP= Y NAME= FY

VARIABLE 4 IS AT ELEMENT 1 NODE= 1
ITEM= M COMP= X NAME= MX

VARIABLE 5 IS AT ELEMENT 1 NODE= 1
ITEM= M COMP= Y NAME= MY

VARIABLE 6 IS AT ELEMENT 8 NODE= 6
ITEM= F COMP= X NAME= FX

VARIABLE	IS AT ELEMENT	NAME	8	MINIMUM	MAXIMUM	AT TIME
VARIABLE 7	IS AT ELEMENT	NAME= MZ	6			
ITEM= M	COMP= I					
VARIABLE 8	IS AT ELEMENT	NAME= MX	10			
ITEM= F	COMP= X					
VARIABLE 9	IS AT ELEMENT	NAME= MY	10			
ITEM= F	COMP= Y					
VARIABLE 10	IS AT ELEMENT	NAME= MZ	10			
ITEM= M	COMP= X					
VARIABLE 11	IS AT ELEMENT	NAME= MX	10			
ITEM= M	COMP= Y					
VARIABLE 12	IS AT ELEMENT	NAME= MY	15			
ITEM= F	COMP= Z					
VARIABLE 13	IS AT ELEMENT	NAME= MZ	15			
ITEM= M	COMP= Z					
VARIABLE 14	IS AT ELEMENT	NAME= MX	23			
ITEM= M	COMP= X					
VARIABLE 15	IS AT ELEMENT	NAME= MY	23			
ITEM= M	COMP= Y					
VARIABLE 16	IS AT ELEMENT	NAME= MZ	35			
ITEM= F	COMP= Z					
VARIABLE 17	IS AT ELEMENT	NAME= MX	39			
ITEM= F	COMP= X					
VARIABLE 18	IS AT ELEMENT	NAME= MY	39			
ITEM= M	COMP= Y					
VARIABLE 19	IS AT ELEMENT	NAME= MZ	45			
ITEM= F	COMP= Z					
VARIABLE 20	IS AT ELEMENT	NAME= MX	45			
ITEM= M	COMP= X					
VARIABLE 21	IS AT ELEMENT	NAME= MY	56			
ITEM= F	COMP= Y					
VARIABLE 22	IS AT ELEMENT	NAME= MZ	72			
ITEM= F	COMP= Z					
VARIABLE 23	IS AT ELEMENT	NAME= MX	93			
ITEM= M	COMP= X					
VARIABLE 24	IS AT ELEMENT	NAME= MY	102			
ITEM= F	COMP= Y					
VARIABLE 25	IS AT ELEMENT	NAME= MZ	102			
ITEM= F	COMP= Z					
VARIABLE 26	IS AT ELEMENT	NAME= MX	103			
ITEM= F	COMP= X					
VARIABLE 27	IS AT ELEMENT	NAME= MY	112			
ITEM= M	COMP= Y					
VARIABLE 28	IS AT ELEMENT	NAME= MZ	101			
ITEM= F	COMP= Z					
VARIABLE 29	IS AT ELEMENT	NAME= MX	101			
ITEM= M	COMP= X					
VARIABLE 30	IS AT ELEMENT	NAME= MY	65			
ITEM= F	COMP= Y					

STORAGE COMPLETE FOR 99 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES

VARI TYPE	IDENTIFIERS	NAME	MINIMUM	MAXIMUM	AT TIME
2	ESOL	1 F X	-0.5912E-02	3.520	0.7182E-02 3.780
3	ESOL	1 F Y	-0.1477E-02	3.340	0.1455E-02 3.900
4	ESOL	1 M X	-0.5571E-02	4.000	0.4926E-02 3.680
5	ESOL	1 M Y	-0.2174E-01	3.800	0.5748E-02 3.780
6	ESOL	1 M Z	-0.4098E-02	3.520	0.5129E-02 3.520
7	ESOL	8 M X	-0.6819E-02	3.780	0.5019E-02 3.620
8	ESOL	12 F X	-0.7576E-02	3.620	0.2948E-02 4.000
9	ESOL	12 F Y	-0.2559E-02	3.720	0.2626E-01 3.720
10	ESOL	12 M X	-0.2044E-01	4.000	0.2971E-01 3.600
11	ESOL	12 M Y	-0.2409E-01	3.780	0.5803E-02 3.780
12	ESOL	22 F X	-0.5174E-02	3.760	0.4466E-01 3.780
13	ESOL	22 F Y	-0.3786E-02	3.600	0.4466E-01 3.460
14	ESOL	12 M Z	-0.1465E-01	4.000	0.5993E-02 3.780
15	ESOL	12 M X	-0.7234E-01	3.920	0.6341E-01 3.580
16	ESOL	48 F X	-0.9343E-02	3.780	0.4744E-02 3.460
17	ESOL	52 F Y	-0.9261E-02	3.420	0.5129E-02 3.680
18	ESOL	52 M X	-0.1147	3.940	0.4897E-01 3.180
19	ESOL	58 M Y	-0.3786E-02	3.600	0.4653E-02 3.420
20	ESOL	58 M Z	-0.4997E-02	3.500	0.4897E-01 3.180
21	ESOL	58 F X	-0.8576E-02	3.500	0.5912E-02 4.000
22	ESOL	58 F Y	-0.4977E-01	3.040	0.4897E-01 3.180
23	ESOL	107 M X	-0.6401E-02	3.840	0.4653E-02 3.420
24	ESOL	114 F X	-0.1605E-01	3.160	0.1850E-01 3.040
25	ESOL	114 F Y	-0.5860E-02	3.840	0.3410E-02 3.420
26	ESOL	117 F X	-0.2524E-02	3.140	0.2574E-02 3.040
27	ESOL	122 M Y	-0.2524E-02	3.140	0.4148E-02 3.180
28	ESOL	125 F X	-0.7450E-02	3.340	0.8777E-02 3.040
29	ESOL	125 F Y	-0.7450E-02	3.340	0.8777E-02 3.040
30	ESOL	139 F X	-0.2495E-02	3.040	0.1985E-01 2.920
31	ESOL	139 F Y	-0.2495E-02	3.040	0.1985E-01 2.920

VARI TYPE	IDENTIFIERS	NAME	MINIMUM	MAXIMUM	AT TIME
35	ESOL	114 F X	-0.5860E-02	3.840	0.3410E-02 3.420
36	ESOL	117 F X	-0.2524E-02	3.140	0.2574E-02 3.040
37	ESOL	125 M Y	-0.2524E-02	3.140	0.4148E-02 3.180
38	ESOL	125 F X	-0.7490E-02	3.340	0.8777E-02 3.040
39	ESOL	125 F Y	-0.7490E-02	3.340	0.8777E-02 3.040
40	ESOL	139 F X	-0.2495E-01	3.040	0.1985E-01 2.920
41	ESOL	139 F Y	-0.2495E-01	3.040	0.1985E-01 2.920

POST'S SUMMARY OF VARIABLE EXTREME VALUES

ALL CURRENT ANALYSIS DATA WRITTEN TO FILE NAME= pb2tfx.db
FOR POSSIBLE RESUME FROM THIS POINT

***** ROUTINE COMPLETED ***** CP = 18172.191

***** ANSYS SOLUTION ROUTINE *****

PERFORM AN EXPANSION PASS

EXPAND 100 SOLUTIONS
IN THE RANGE FROM 0.10000 TO 0.10000
CALCULATE ELEMENT RESULTS AS WELL AS THE NODAL DWP SOLUTION

PRINT B&I ITEMS WITH A FREQUENCY OF MORE
FOR ALL APPLICABLE ENTITIES

***** ANSYS SOLVE COMMAND *****

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
4016-2 VERSION=SUBSPARC 06.21.03 OCT 31, 1995 CP= 18172.211
FOR SUPPORT CALL PHONE

Time-history analysis of coupled system (presurizer spray line)

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

SOLUTION OPTIONS

PROBLEM DIMENSIONALITY 3-D
DEGREE OF FREEDOM UX UY UZ ROTX ROTY ROTZ
ANALYSIS TYPE TRANSIENT
SOLUTION METHOD REDUCED
EXPANSION PASS ON

LOAD STEP NUMBER

NUMBER OF SOLUTIONS TO BE EXPANDED

RANGE

PRINT OFFSET CONTROLS

ITEM FREQUENCY

INCREASE OFFSET CONTROLS

ITEM FREQUENCY

NSOL LAST

*** ELEMENT RESULT CALCULATION TIMES ***

TYPE NUMBER	ELEMENT	TOTAL CP	AVE CP
1	120 PIPE16	0.602	0.005
2	22 PIPE16	0.158	0.007
3	10 COMP114	0.010	0.001
4	12 COMP114	0.020	0.002

25 EROL 114 F Z FE -0.331E-01 5.820 0.1492E-01 4.000
 26 EROL 117 F X FX -0.4893E-02 5.240 0.8402E-02 5.720
 27 EROL 123 M Y MY -0.2553E-03 6.900 0.1492E-01 5.720
 28 EROL 125 F X MX -0.1285E-01 5.840 0.2126E-01 5.720
 30 EROL 139 F X FX -0.6195E-01 5.720 0.4443E-01 5.840

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb3tfx.db
 FOR POSSIBLE RESUME FROM THIS POINT

***** ROUTINE COMPLETED ***** CP = 18395.329

***** ANSYS SOLUTION ROUTINE *****

PERFORM AN EXPANSION PASS

EXPAND 100 SOLUTIONS
 IN THE RANGE FROM 0.30000 TO 0.40000
 CALCULATE ELEMENT RESULTS AS WELL AS THE GLOBAL DOF SOLUTION

PRINT BASIC ITEMS WITH A FREQUENCY OF NONE
 FOR ALL APPLICABLE ENTITIES

***** ANSYS SOLVE COMMAND *****

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
 40416-2 VERSION=SUN4SPARC 06,19-01 OCT 11, 1995 CP= 18395.361
 FOR SUPPORT CALL PHONE

Time-history analysis of coupled system (presurizer spray line)

*****ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY**

SOLUTION OPTIONS

PROBLEM DIMENSIONALITY 3-D
 ANALYSIS TYPE US UY UZ ROTX ROTY ROTZ
 SOLUTION METHOD REDUCED
 EXPANSION PASS ON

LOAD STEP OPTIONS

LOAD STEP NUMBER 1
 NUMBER OF SOLUTIONS TO BE EXPANDED 100
 RANGE 0.30000 0.40000
 ELEMENT RESULTS CALCULATION ON
 PRINT OUTPUT CONTROL ON

DATABASE OUTPUT CONTROLS

BASIC NONE
 ITEM FREQUENCY COMPONENT
 MASSX FREQUENCY COMPONENT
 MASSY LAST

*** ELEMENT RESULT CALCULATION TIMES

TYPE NUMBER	ENAME	TOTAL CP	AVE CP
1	120 PIPE16	0.517	0.004
2	122 PIPE18	0.150	0.007
3	10 COMBIN14	0.020	0.002
4	12 COMBIN14	0.000	0.000
5	11 COMBIN14	0.030	0.003
6	3 COMB-N14	0.010	0.003
7	3 COMB-N14	0.010	0.003
8	3 COMB-N14	0.000	0.000
9	3 COMB-N14	0.000	0.000
10	3 COMB-N14	0.000	0.000
11	3 MASS21	0.019	0.003
12	3 MASS21	0.010	0.002
13	3 MASS21	0.010	0.002

*** GLOBAL LOAD CALCULATION TIMES

TYPE NUMBER	ENAME	TOTAL CP	AVE CP
1	120 PIPE16	0.088	0.001
2	122 PIPE18	0.010	0.001
3	10 COMBIN14	0.000	0.000
4	12 COMBIN14	0.010	0.001
5	11 COMBIN14	0.000	0.000
6	3 COMB-N14	0.000	0.000
7	3 COMB-N14	0.000	0.000
8	3 COMB-N14	0.000	0.000
9	3 COMB-N14	0.000	0.000
10	3 COMB-N14	0.000	0.000
11	3 MASS21	0.000	0.000
12	3 MASS21	0.010	0.001
13	3 MASS21	0.010	0.001

*** ANSYS BINARY FILE STATISTICS
 BUFFER SIZE USED= 4096
 31.078 MB WRITTEN ON RESULTS FILE: pb3tfx.rst

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb3tfx.db
 FOR POSSIBLE RESUME FROM THIS POINT

FINISH SOLUTION PROCESSING

***** ROUTINE COMPLETED ***** CP = 18608.640

***** ANSYS SOLUTION ROUTINE *****

PERFORM AN EXPANSION PASS

EXPAND 100 SOLUTIONS
 IN THE RANGE FROM 0.30000 TO 0.40000
 CALCULATE ELEMENT RESULTS AS WELL AS THE GLOBAL DOF SOLUTION

PRINT BASIC ITEMS WITH A FREQUENCY OF NONE
 FOR ALL APPLICABLE ENTITIES

***** ANSYS SOLVE COMMAND *****

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
 40416-2 VERSION=SUN4SPARC 06,18-91 OCT 11, 1995 CP= 18608.640
 FOR SUPPORT CALL PHONE

Time-history analysis of coupled system (presurizer spray line)

*****ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY**

SOLUTION OPTIONS

PROBLEM DIMENSIONALITY 3-D
 ANALYSIS TYPE US UY UZ ROTX ROTY ROTZ
 SOLUTION METHOD REDUCED
 EXPANSION PASS ON

LOAD STEP OPTIONS

LOAD STEP NUMBER 1
 NUMBER OF SOLUTIONS TO BE EXPANDED 100
 RANGE 0.30000 0.40000
 ELEMENT RESULTS CALCULATION ON
 PRINT OUTPUT CONTROL ON

DATABASE OUTPUT CONTROLS

BASIC NONE
 ITEM FREQUENCY COMPONENT
 MASSX FREQUENCY COMPONENT
 MASSY LAST

*** ELEMENT RESULT CALCULATION TIMES

TYPE NUMBER	ENAME	TOTAL CP	AVE CP
1	120 PIPE16	0.517	0.004
2	122 PIPE18	0.150	0.007
3	10 COMBIN14	0.020	0.002
4	12 COMBIN14	0.000	0.000
5	11 COMBIN14	0.030	0.003
6	3 COMB-N14	0.010	0.003
7	3 COMB-N14	0.010	0.003
8	3 COMB-N14	0.000	0.000
9	3 COMB-N14	0.000	0.000
10	3 COMB-N14	0.000	0.000
11	3 MASS21	0.019	0.003
12	3 MASS21	0.010	0.002
13	3 MASS21	0.010	0.002

*** GLOBAL LOAD CALCULATION TIMES

TYPE NUMBER	ENAME	TOTAL CP	AVE CP
1	120 PIPE16	0.088	0.001
2	122 PIPE18	0.010	0.001
3	10 COMBIN14	0.000	0.000
4	12 COMBIN14	0.010	0.001
5	11 COMBIN14	0.000	0.000
6	3 COMB-N14	0.000	0.000
7	3 COMB-N14	0.000	0.000
8	3 COMB-N14	0.000	0.000
9	3 COMB-N14	0.000	0.000
10	3 COMB-N14	0.000	0.000
11	3 MASS21	0.000	0.000
12	3 MASS21	0.010	0.001
13	3 MASS21	0.010	0.001

*** ANSYS BINARY FILE STATISTICS
 BUFFER SIZE USED= 4096
 31.078 MB WRITTEN ON RESULTS FILE: pb2tfx.rst

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2tfx.db
 FOR POSSIBLE RESUME FROM THIS POINT

FINISH SOLUTION PROCESSING

VARIABLE 29 IS AT ELEMENT 125 NODE= 101
 ITEM= M COMP= Y NAME= MY
 VARIABLE 30 IS AT ELEMENT 139 NODE= 65
 ITEM= F COMP= X NAME= FX
 STORAGE COMPLETE FOR 99 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES

VARIABLE	IS AT ELEMENT	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	ESOL	1 F	X	FX	-0.5383E-01	6.940
3	ESOL	1 M	X	FX	-0.157E-01	7.340
4	ESOL	1 M	X	FX	-0.5383E-01	6.940
5	ESOL	1 M	X	FX	-0.1344	7.660
6	ESOL	6 F	X	FX	-0.5064E-01	6.880
7	ESOL	6 M	Z	FX	-0.8034E-01	7.020
8	ESOL	12 F	X	FX	-0.9127E-01	7.460
9	ESOL	12 M	X	FX	-0.3081E-01	7.000
10	ESOL	12 M	X	FX	-0.3531	7.340
11	ESOL	12 F	Z	FX	-0.4931E-01	7.380
12	ESOL	22 M	X	FX	-0.4480	7.040
13	ESOL	22 M	X	FX	-0.1746	6.700
14	ESOL	32 M	Z	FX	-0.3425	7.140
15	ESOL	42 F	Y	FX	-0.9568E-01	7.020
16	ESOL	42 F	Y	FX	-0.7279E-01	7.740
17	ESOL	52 F	X	FX	-0.3218E-01	6.480
18	ESOL	52 F	X	FX	-0.3218E-01	6.480
19	ESOL	52 F	X	FX	-0.3218E-01	6.480
20	ESOL	58 M	Z	FX	-0.1113	6.220
21	ESOL	71 F	X	FX	-0.7689E-01	6.220
22	ESOL	86 F	X	FX	-0.4752E-01	6.480
23	ESOL	107 M	X	FX	-0.4109E-01	6.460
24	ESOL	114 F	X	FX	-0.4339E-01	6.480
25	ESOL	114 F	X	FX	-0.2615E-01	7.740
26	ESOL	123 M	X	FX	-0.2062E-01	6.940
27	ESOL	123 M	X	FX	-0.2394E-01	6.940
28	ESOL	125 M	X	FX	-0.5152E-01	6.940
29	ESOL	139 F	X	FX	-0.5383E-01	6.940
30	ESOL	139 F	X	FX	-0.5383E-01	6.940

POST6 SUMMARY OF VARIABLE EXTREME VALUES

VARIABLE	IS AT ELEMENT	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	ESOL	1 F	X	FX	-0.5383E-01	6.940
3	ESOL	1 F	X	FX	-0.157E-01	7.340
4	ESOL	1 M	X	FX	-0.5383E-01	6.940
5	ESOL	1 M	X	FX	-0.1344	7.660
6	ESOL	6 F	X	FX	-0.5064E-01	6.880
7	ESOL	6 M	Z	FX	-0.8034E-01	7.020
8	ESOL	12 F	X	FX	-0.9127E-01	7.460
9	ESOL	12 M	X	FX	-0.3081E-01	7.000
10	ESOL	12 M	X	FX	-0.3531	7.340
11	ESOL	12 F	Z	FX	-0.4931E-01	7.380
12	ESOL	22 M	X	FX	-0.4480	7.040
13	ESOL	22 M	X	FX	-0.1746	6.700
14	ESOL	32 M	Z	FX	-0.3425	7.140
15	ESOL	42 F	Y	FX	-0.9568E-01	7.020
16	ESOL	42 F	Y	FX	-0.7279E-01	7.740
17	ESOL	52 F	X	FX	-0.3218E-01	6.480
18	ESOL	52 F	X	FX	-0.3218E-01	6.480
19	ESOL	52 F	X	FX	-0.3218E-01	6.480
20	ESOL	58 M	Z	FX	-0.1113	6.220
21	ESOL	71 F	X	FX	-0.7689E-01	6.220
22	ESOL	86 F	X	FX	-0.4752E-01	6.480
23	ESOL	107 M	X	FX	-0.4109E-01	6.460
24	ESOL	114 F	X	FX	-0.4339E-01	6.480
25	ESOL	114 F	X	FX	-0.2615E-01	7.740
26	ESOL	123 M	X	FX	-0.2062E-01	6.940
27	ESOL	123 M	X	FX	-0.2394E-01	6.940
28	ESOL	125 M	X	FX	-0.5152E-01	6.940
29	ESOL	139 F	X	FX	-0.5383E-01	6.940
30	ESOL	139 F	X	FX	-0.5383E-01	6.940

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2tfx1.db
 FOR POSSIBLE RESUME FROM THIS POINT

***** ROUTINE COMPLETED ***** CP = 18617.961

***** ANSYS SOLUTION ROUTINE *****

PERFORM AN EXPANSION PASS

EXPAND 100 SOLUTIONS
 IN THE RANGE FROM 0.40000 TO 0.50000
 CALCULATE ELEMENT RESULTS AS WELL AS THE NODAL DOF SOLUTION

PRINT NAEI ITEMS WITH A FREQUENCY OF NONE
 FOR ALL APPLICABLE ENTITIES

***** ANSYS SOLVE COMMAND *****

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
 40416-2 VERSION= SUN4SPARC 06.37.06 OCT 11, 1995 CP= 18617.960

FOR SUPPORT CALL PHONE FAX
 Time-history analysis of coupled system (presurizer spray line)
 * * * 2 IS VERSION FOR EDUCATIONAL PURPOSES ONLY **

SOLUTION OPTIONS
 PROBLEM DIMENSIONALITY 3-D
 DEGREES OF FREEDOM UN UX UY UZ
 ANALYSIS TYPE TRANSIENT
 SOLUTION METHOD REDUCED
 EXPANSION PASS ON

LOAD STEP OPTIONS
 LOAD STEP NUMBER 1
 NUMBER OF SOLUTIONS TO BE EXPANDED 100
 ELEMENT RESULTS CALCULATION ON
 PRINT OUTPUT CONTROLS ON
 NODAL FREQUENCY COMPONENT ON
 BASE
 DATABASE OUTPUT CONTROLS
 ITEM
 LAST

*** ELEMENT RESULT CALCULATION TIMES

TYPE NUMBER	ENAME	TOTAL CP	AVE CP
1	120 PIPE16	0.553	0.005
2	22 PIPE16	0.168	0.008
3	10 COMBIN14	0.010	0.001
4	12 COMBIN14	0.020	0.002
5	11 COMBIN14	0.010	0.001
6	11 COMBIN14	0.010	0.001
7	3 COMBIN14	0.000	0.000
8	3 COMBIN14	0.010	0.003
30	31 MASS21	0.033	0.001
71	12 BEAM4	0.069	0.006
72	5 MASS21	0.000	0.000

*** NODAL LOAD CALCULATION TIMES

TYPE NUMBER	ENAME	TOTAL CP	AVE CP
1	120 PIPE16	0.070	0.001
2	22 PIPE16	0.049	0.002
3	10 COMBIN14	0.000	0.000
4	12 COMBIN14	0.010	0.002
5	11 COMBIN14	0.010	0.001
6	11 COMBIN14	0.010	0.001
7	3 COMBIN14	0.000	0.000
8	3 COMBIN14	0.000	0.000
30	31 MASS21	0.010	0.000
71	12 BEAM4	0.000	0.000
72	5 MASS21	0.000	0.000

*** ANSYS BINARY FILE STATISTICS
 BUFFER SIZE USED= 4076
 33.078 MB WRITTEN ON RESULTS FILE: pb2tfx1.rst

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2tfx1.db
 FOR POSSIBLE RESUME FROM THIS POINT

FINISH SOLUTION PROCESSING

***** ROUTINE COMPLETED ***** CP = 18631.691

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
 40416-2 VERSION= SUN4SPARC 06.44.43 OCT 11, 1995 CP= 18631.711
 FOR SUPPORT CALL PHONE FAX

Time-history analysis of coupled system (presurizer spray line)
 * * * 2 IS VERSION FOR EDUCATIONAL PURPOSES ONLY **

***** TIME-MISTORY POSTPROCESSOR (POST26) *****

ALL POST26 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS
 MAXIMUM NUMBER OF VARIABLES= 10

VARIABLE 2 IS AT ELEMENT 1 NODE= 1
 ITEM= F COMP= X NAME= FX

VARIABLE 3 IS AT ELEMENT 1 NODE= 1
 ITEM= F COMP= Y NAME= FY

VARIABLE 4 IS AT ELEMENT 1 NODE= 1
 ITEM= M COMP= X NAME= MX

VARIABLE 5 IS AT ELEMENT 1 NODE= 1
 ITEM= M COMP= Y NAME= MY

VARIABLE 6 IS AT ELEMENT 8 NODE= 6
 ITEM= F COMP= X NAME= FX
 VARIABLE 7 IS AT ELEMENT 8 NODE= 6
 ITEM= M COMP= Z NAME= MY
 VARIABLE 8 IS AT ELEMENT 10 NODE= 10
 ITEM= F COMP= Z NAME= FX
 VARIABLE 9 IS AT ELEMENT 12 NODE= 10
 ITEM= F COMP= Z NAME= FX
 VARIABLE 10 IS AT ELEMENT 12 NODE= 10
 ITEM= M COMP= X NAME= MY
 VARIABLE 11 IS AT ELEMENT 12 NODE= 10
 ITEM= M COMP= X NAME= MY
 VARIABLE 12 IS AT ELEMENT 22 NODE= 15
 ITEM= F COMP= Z NAME= FX
 VARIABLE 13 IS AT ELEMENT 22 NODE= 15
 ITEM= M COMP= Z NAME= MY
 VARIABLE 14 IS AT ELEMENT 32 NODE= 23
 ITEM= M COMP= X NAME= MY
 VARIABLE 15 IS AT ELEMENT 32 NODE= 23
 ITEM= M COMP= X NAME= MY
 VARIABLE 16 IS AT ELEMENT 48 NODE= 35
 ITEM= F COMP= Y NAME= FX
 VARIABLE 17 IS AT ELEMENT 52 NODE= 39
 ITEM= F COMP= X NAME= FX
 VARIABLE 18 IS AT ELEMENT 52 NODE= 39
 ITEM= M COMP= Y NAME= MY
 VARIABLE 19 IS AT ELEMENT 58 NODE= 45
 ITEM= F COMP= Z NAME= FX
 VARIABLE 20 IS AT ELEMENT 58 NODE= 45
 ITEM= M COMP= Z NAME= MY
 VARIABLE 21 IS AT ELEMENT 71 NODE= 56
 ITEM= F COMP= X NAME= FX
 VARIABLE 22 IS AT ELEMENT 86 NODE= 72
 ITEM= F COMP= X NAME= FX
 VARIABLE 23 IS AT ELEMENT 107 NODE= 93
 ITEM= M COMP= X NAME= MY
 VARIABLE 24 IS AT ELEMENT 114 NODE= 102
 ITEM= F COMP= X NAME= FX
 VARIABLE 25 IS AT ELEMENT 114 NODE= 102
 ITEM= F COMP= Y NAME= MY
 VARIABLE 26 IS AT ELEMENT 117 NODE= 103
 ITEM= F COMP= X NAME= FX
 VARIABLE 27 IS AT ELEMENT 123 NODE= 112
 ITEM= M COMP= Y NAME= MY
 VARIABLE 28 IS AT ELEMENT 125 NODE= 101
 ITEM= M COMP= X NAME= MY
 VARIABLE 29 IS AT ELEMENT 125 NODE= 101
 ITEM= M COMP= Y NAME= MY
 VARIABLE 30 IS AT ELEMENT 139 NODE= 65
 ITEM= F COMP= X NAME= FX

STORAGE COMPLETE FOR 99 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES
 VARI TYPE IDENTIFIERS NAME MINIMUM AT TIME MAXIMUM AT TIME
 1 ESOL 1 P X FX -0.6008E-01 9.320 0.5124E-01 8.120
 2 ESOL 1 P X FX -0.1387E-01 9.940 0.1341E-01 9.520
 3 ESOL 1 M X MY -0.5054E-01 9.940 0.4640E-01 9.520
 4 ESOL 1 M X MY -0.1173 9.080 0.1347 8.720
 5 ESOL 6 F X FX -0.5725E-01 9.320 0.5237E-01 9.480
 6 ESOL 8 F X FX -0.5981E-01 9.480 0.6628E-01 9.320
 7 ESOL 8 F X FX -0.5981E-01 9.480 0.6628E-01 9.320
 8 ESOL 12 F X FX -0.2482E-01 9.960 0.9078E-01 9.480
 9 ESOL 12 M X MY -0.3418 9.240 0.3594 9.600
 10 ESOL 12 M X MY -0.3418 9.240 0.3594 9.600
 11 ESOL 12 M X MY -0.3418 9.240 0.3594 9.600
 12 ESOL 12 M X MY -0.3418 9.240 0.3594 9.600
 13 ESOL 22 F X FX -0.3588E-01 9.520 0.3748 9.320
 14 ESOL 22 F X FX -0.3588E-01 9.520 0.3748 9.320
 15 ESOL 22 M X MY -0.3490 9.480 0.3840 9.300
 16 ESOL 32 M X MY -0.3490 9.480 0.3840 9.300
 17 ESOL 48 F X FX -0.3855 9.060 0.4724 8.660
 18 ESOL 48 F X FX -0.3855 9.060 0.4724 8.660
 19 ESOL 52 M X MY -0.6734E-01 8.220 0.7293 8.740
 20 ESOL 52 M X MY -0.6734E-01 8.220 0.7293 8.740
 21 ESOL 58 M X MY -0.2768E-01 9.920 0.2636E-01 9.080
 22 ESOL 71 F X FX -0.1539 9.580 0.1382 9.960
 23 ESOL 86 F X FX -0.1539 9.580 0.1382 9.960

POSTS SUMMARY OF VARIABLE EXTREME VALUES
 VARI TYPE IDENTIFIERS NAME MINIMUM AT TIME MAXIMUM AT TIME
 1 ESOL 1 P X FX -0.6008E-01 9.320 0.5124E-01 8.120
 2 ESOL 1 P X FX -0.1387E-01 9.940 0.1341E-01 9.520
 3 ESOL 1 M X MY -0.5054E-01 9.940 0.4640E-01 9.520
 4 ESOL 1 M X MY -0.1173 9.080 0.1347 8.720
 5 ESOL 6 F X FX -0.5725E-01 9.320 0.5237E-01 9.480
 6 ESOL 8 F X FX -0.5981E-01 9.480 0.6628E-01 9.320
 7 ESOL 8 F X FX -0.5981E-01 9.480 0.6628E-01 9.320
 8 ESOL 12 F X FX -0.2482E-01 9.960 0.9078E-01 9.480
 9 ESOL 12 M X MY -0.3418 9.240 0.3594 9.600
 10 ESOL 12 M X MY -0.3418 9.240 0.3594 9.600
 11 ESOL 12 M X MY -0.3418 9.240 0.3594 9.600
 12 ESOL 12 M X MY -0.3418 9.240 0.3594 9.600
 13 ESOL 22 F X FX -0.3588E-01 9.520 0.3748 9.320
 14 ESOL 22 M X MY -0.3490 9.480 0.3840 9.300
 15 ESOL 32 M X MY -0.3490 9.480 0.3840 9.300
 16 ESOL 48 F X FX -0.3855 9.060 0.4724 8.660
 17 ESOL 48 F X FX -0.3855 9.060 0.4724 8.660
 18 ESOL 52 M X MY -0.6734E-01 8.220 0.7293 8.740
 19 ESOL 52 M X MY -0.6734E-01 8.220 0.7293 8.740
 20 ESOL 58 M X MY -0.2768E-01 9.920 0.2636E-01 9.080
 21 ESOL 71 F X FX -0.1539 9.580 0.1382 9.960
 22 ESOL 86 F X FX -0.1539 9.580 0.1382 9.960
 23 ESOL 107 M X MY -0.3978E-01 8.220 0.4551E-01 8.780
 24 ESOL 114 F X FX -0.4613E-01 9.960 0.4348E-01 8.780
 25 ESOL 114 F X FX -0.4613E-01 9.960 0.4348E-01 8.780
 26 ESOL 117 F X FX -0.3796E-02 8.780 0.2352E-02 8.960
 27 ESOL 123 M X MY -0.1948E-01 9.960 0.1823E-01 8.640
 28 ESOL 125 F X FX -0.1948E-01 9.960 0.1823E-01 8.640
 29 ESOL 125 M X MY -0.2286E-01 9.960 0.2078E-01 9.640
 30 ESOL 139 F X FX -0.5748E-01 9.640 0.5168E-01 9.960

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2tfx.db
 FOR POSSIBLE RESUME FROM THIS POINT

***** ROUTINE COMPLETED ***** CP * 18841.750

***** ANSYS SOLUTION ROUTINE *****

PERFORM AN EXPANSION PASS

EXPAND 100 SOLUTIONS
 ELEMENT MESH FROM CP 0.60000
 CALCULATE ELEMENT RESULTS AS WELL AS THE GLOBAL DOP SOLUTION

PRINT BASIC ITEMS WITH A FREQUENCY OF NONE
 FOR ALL APPLICABLE ENTITIES

***** ANSYS SOLVE COMMAND *****

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
 40416-2 VERSION=SUBSPARC 06.45.09 OCT 11, 1995 CP= 18841.780
 FOR SUPPORT CALL PHONE FAX

Time-history analysis of coupled system (presurizer spray line)
 ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

SOLUTION OPTIONS

PROBLEM DIMENSIONALITY.....3-D
 DEGREES OF FREEDOM.....UX UY UZ ROTX ROTY ROTZ
 ANALYSIS TYPE.....TRANSIENT
 SOLUTION METHOD.....REDUCED
 EXPANSION PASS.....ON

LOAD STEP OPTIONS

LOAD STEP NUMBER.....1
 NUMBER OF SOLUTIONS TO BE EXPANDED.....100
 RANGE OF ELEMENTS TO BE CALCULATED.....0.50000 TO 0.60000
 PRINT OUTPUT CONTROLS
 ITEM FREQUENCY COMPONENT
 BASIC NONE
 DATABASE OUTPUT CONTROLS
 ITEM FREQUENCY COMPONENT
 ESOL LAST

*** ELEMENT RESULT CALCULATION TIMES ***
 TYPE NUMBER ENAME TOTAL CP AVE CP
 1 120 PIPE16 0.577 0.005
 2 22 PIPE16 0.189 0.009

VARIABLE	IS AT ELEMENT	NAME	MODE
VARIABLE 17	IS AT ELEMENT	NAME	52
ITEM= F	COMP= X		FX
VARIABLE 18	IS AT ELEMENT	NAME	52
ITEM= M	COMP= Y		MY
VARIABLE 19	IS AT ELEMENT	NAME	56
ITEM= F	COMP= Z		FZ
VARIABLE 20	IS AT ELEMENT	NAME	58
ITEM= M	COMP= T		MT
VARIABLE 21	IS AT ELEMENT	NAME	71
ITEM= F	COMP= X		FX
VARIABLE 22	IS AT ELEMENT	NAME	86
ITEM= F	COMP= X		FX
VARIABLE 23	IS AT ELEMENT	NAME	107
ITEM= M	COMP= X		MX
VARIABLE 24	IS AT ELEMENT	NAME	114
ITEM= F	COMP= X		FX
VARIABLE 25	IS AT ELEMENT	NAME	114
ITEM= F	COMP= Z		FZ
VARIABLE 26	IS AT ELEMENT	NAME	117
ITEM= F	COMP= X		FX
VARIABLE 27	IS AT ELEMENT	NAME	133
ITEM= M	COMP= Y		MY
VARIABLE 28	IS AT ELEMENT	NAME	125
ITEM= F	COMP= X		FX
VARIABLE 29	IS AT ELEMENT	NAME	125
ITEM= F	COMP= Y		MY
VARIABLE 30	IS AT ELEMENT	NAME	119
ITEM= F	COMP= X		FX

STORAGE COMPLETE FOR 100 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES

VARIABLE IDENTIFIERS NAME MINIMUM AT TIME MAXIMUM AT TIME

VARIABLE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	ESOL	F	-0.4110E-01	11.84	0.3864E-01	11.68
3	ESOL	F	-0.1294E-01	11.36	0.9908E-02	11.00
4	ESOL	M	-0.5512E-01	10.62	0.4821E-01	10.32
5	ESOL	M	-0.4072	11.02	0.1137	11.86
6	ESOL	F	-0.4051E-01	10.76	0.3757E-01	10.26
7	ESOL	F	-0.7732E-01	10.24	0.9459E-01	10.24
8	ESOL	F	-0.2698E-01	11.02	0.3084E-01	10.62
9	ESOL	F	-0.2656	10.64	0.2677	11.00
10	ESOL	F	-0.2701	10.60	0.2915	10.76
11	ESOL	F	-0.3776E-01	10.30	0.3416E-01	10.66
12	ESOL	F	-0.3000	10.28	0.3026	10.74
13	ESOL	F	-0.2501	10.60	0.3418	10.52
14	ESOL	F	-0.2501	10.60	0.3418	10.52
15	ESOL	F	-0.2501	10.60	0.3418	10.52
16	ESOL	F	-0.8012E-01	10.98	0.6017E-01	10.70
17	ESOL	F	-0.7600E-01	12.02	0.6956E-01	11.50
18	ESOL	F	-0.5210	11.50	0.5240	12.02
19	ESOL	F	-0.3059E-01	10.66	0.3224E-01	10.30
20	ESOL	F	-0.8262E-01	11.86	0.7572E-01	12.02
21	ESOL	F	-0.1502	11.34	0.1262	10.24
22	ESOL	F	-0.1502	11.34	0.1262	10.24
23	ESOL	F	-0.3517E-01	11.40	0.3484E-01	12.02
24	ESOL	F	-0.5719E-01	11.20	0.5998E-01	11.34
25	ESOL	F	-0.2749E-01	11.50	0.2710E-01	12.02
26	ESOL	F	-0.8820E-02	10.20	0.9652E-02	10.84
27	ESOL	F	-0.2250E-02	11.00	0.1995E-02	10.54
28	ESOL	F	-0.2431E-01	10.54	0.1856E-01	10.68
29	ESOL	F	-0.0000E-01	11.50	0.0000E-01	11.50
30	ESOL	F	-0.7088E-01	11.34	0.7488E-01	11.20

VARIABLE	IS AT ELEMENT	NAME	MODE
VARIABLE 1	IS AT ELEMENT	NAME	52
ITEM= F	COMP= X		FX
VARIABLE 2	IS AT ELEMENT	NAME	52
ITEM= M	COMP= Y		MY
VARIABLE 3	IS AT ELEMENT	NAME	56
ITEM= F	COMP= Z		FZ
VARIABLE 4	IS AT ELEMENT	NAME	58
ITEM= M	COMP= T		MT
VARIABLE 5	IS AT ELEMENT	NAME	71
ITEM= F	COMP= X		FX
VARIABLE 6	IS AT ELEMENT	NAME	86
ITEM= F	COMP= X		FX
VARIABLE 7	IS AT ELEMENT	NAME	107
ITEM= M	COMP= X		MX
VARIABLE 8	IS AT ELEMENT	NAME	114
ITEM= F	COMP= X		FX
VARIABLE 9	IS AT ELEMENT	NAME	114
ITEM= F	COMP= Z		FZ
VARIABLE 10	IS AT ELEMENT	NAME	117
ITEM= F	COMP= X		FX
VARIABLE 11	IS AT ELEMENT	NAME	133
ITEM= M	COMP= Y		MY
VARIABLE 12	IS AT ELEMENT	NAME	125
ITEM= F	COMP= X		FX
VARIABLE 13	IS AT ELEMENT	NAME	125
ITEM= F	COMP= Y		MY
VARIABLE 14	IS AT ELEMENT	NAME	119
ITEM= F	COMP= X		FX
VARIABLE 15	IS AT ELEMENT	NAME	119
ITEM= F	COMP= X		FX

FINISH SOLUTION PROCESING

***** ROUTINE COMPLETED ***** CP = 19058.050

***** ANSYS BINARY FILE STATISTICS

BUFFER SIZE USED= 4096

33,406 MB WRITTEN ON RESULTS FILE: pb2tfxi.rst

VARIABLE	IS AT ELEMENT	NAME	MODE
VARIABLE 16	IS AT ELEMENT	NAME	52
ITEM= F	COMP= X		FX
VARIABLE 17	IS AT ELEMENT	NAME	52
ITEM= M	COMP= Y		MY
VARIABLE 18	IS AT ELEMENT	NAME	56
ITEM= F	COMP= Z		FZ
VARIABLE 19	IS AT ELEMENT	NAME	58
ITEM= M	COMP= T		MT
VARIABLE 20	IS AT ELEMENT	NAME	71
ITEM= F	COMP= X		FX
VARIABLE 21	IS AT ELEMENT	NAME	86
ITEM= F	COMP= X		FX
VARIABLE 22	IS AT ELEMENT	NAME	107
ITEM= M	COMP= X		MX
VARIABLE 23	IS AT ELEMENT	NAME	114
ITEM= F	COMP= X		FX
VARIABLE 24	IS AT ELEMENT	NAME	114
ITEM= F	COMP= Z		FZ
VARIABLE 25	IS AT ELEMENT	NAME	117
ITEM= F	COMP= X		FX
VARIABLE 26	IS AT ELEMENT	NAME	133
ITEM= M	COMP= Y		MY
VARIABLE 27	IS AT ELEMENT	NAME	125
ITEM= F	COMP= X		FX
VARIABLE 28	IS AT ELEMENT	NAME	125
ITEM= F	COMP= Y		MY
VARIABLE 29	IS AT ELEMENT	NAME	119
ITEM= F	COMP= X		FX
VARIABLE 30	IS AT ELEMENT	NAME	119
ITEM= F	COMP= X		FX

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****

40415-2 ENGINEERING ANALYSIS SYSTEM REVISION 5.0

06.52.50 OCT 11, 1995 CP= 19058.070

~R SUPPORT CALL PHONE FAX

Time-history analysis of coupled system (presurizer spray line)

***** ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY*****

***** TIME-HISTORY POSTPROCESSOR (POST26) *****

ALL POST16 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS

MAXIMUM NUMBER OF VARIABLES= 30

```

23 ESOL 107 M X MK -0.3617E-01 11.50 0.1444E-01 11.02
24 ESOL 114 P X FK -0.5719E-01 11.34 0.5982E-01 11.14
25 ESOL 114 P Z FK -0.2710E-01 11.50 0.2710E-01 11.02
26 ESOL 117 P X FK -0.8410E-02 10.20 0.8951E-02 10.44
27 ESOL 123 M Y MY -0.2250E-02 11.60 0.1395E-02 10.54
28 ESOL 123 M X FK -0.2243E-01 10.54 0.2456E-01 10.08
29 ESOL 125 M X MY -0.2472E-01 11.20 0.2838E-01 10.08
30 ESOL 139 P X FK -0.7488E-01 11.34 0.7488E-01 11.20

```

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb3tfx.db
FOR POSSIBLE RESUME *UM THIS POINT

**** ROUTINE COMPLETED ***** CP = 19067.420

**** ANSYS SOLUTION ROUTINE *****

PERFORM AN EXPANSION PASS

EXPAND 100 SOLUTIONS
IN THE RANGE FROM 0.60000 TO 0.70000
CALCULATE ELEMENT RESULTS AS WELL AS THE NODAL DOF SOLUTION
PRINT BARI ITEMS WITH A FREQUENCY OF NONE
FOR ALL APPLICABLE ENTITIES

***** ANSYS SOLVE COMMAND *****

**** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUBPARC 06.53.16 OCT 11, 1995 CP= 19067.449
FOR SUPPORT CALL PHONE FAX

Time-history analysis of coupled system (prescriber spray line)

***** ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY*****

SOLUTION OPTIONS

PROBLEM DIMENSIONALITY 3 D
DEGREE OF FREEDOM UN UT UE ROT VCTY ROTZ
ANALYSIS METHOD REDUCED
SOLUTION METHOD REDUCED
EXPANSION PASS ON

LOAD STEP OPTIONS

LOAD STEP NUMBER 1
NUMBER OF SOLUTIONS TO BE EXPANDED 100
ELEMENT RESULTS CALCULATION ON TO 0.70000
PRINT OUTPUT CONTROLS ON

*** ELEMENT RESULT CALCULATION TIMES

TYPE NUMBER	ENAME	TOTAL CP	AVE CP
1	PIPE16	0.580	0.005
2	MASS21	0.016	0.001
3	COMBIN14	0.012	0.001
4	COMBIN14	0.000	0.000
5	COMBIN14	0.000	0.000
6	COMBIN14	0.010	0.003
7	COMBIN14	0.000	0.000
8	COMBIN14	0.010	0.000
30	MASS21	0.011	0.001
11	MASS21	0.009	0.000
12	MASS21	0.009	0.000
72	MASS21	0.008	0.000

*** NODAL LOAD CALCULATION TIMES

TYPE NUMBER	ENAME	TOTAL CP	AVE CP
1	PIPE16	0.680	0.001
2	MASS21	0.010	0.001
3	COMBIN14	0.010	0.001
4	COMBIN14	0.010	0.001
5	COMBIN14	0.000	0.000
6	COMBIN14	0.000	0.000
7	COMBIN14	0.000	0.000
8	COMBIN14	0.000	0.000
30	MASS21	0.020	0.001
11	MASS21	0.014	0.001
12	MASS21	0.010	0.001
72	MASS21	0.010	0.002

*** ANSYS BINARY FILE STATISTICS

BUFFER SIZE USED= 4096
31.076 MB WRITTEN ON RESULTS FILE, pb3tfx.rst

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb3tfx.db
FOR POSSIBLE RESUME FROM THIS POINT

FINISH SOLUTION PROCESSING

**** ROUTINE COMPLETED ***** CP = 19261.181

**** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUBPARC 07.00.52 OCT 11, 1995 CP= 19261.201
FOR SUPPORT CALL PHONE FAX

Time-history analysis of coupled system (prescriber spray line)

***** ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY*****

**** TIME-HISTORY POSTPROCESSOR (POST26) *****

ALL POST26 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS

MAXIMUM NUMBER OF VARIABLES= 30

VARIABLE	ITEM= F	COMP= X	NAME= FX	NODE=
VARIABLE 2	1			1
VARIABLE 3	1			1
VARIABLE 4	1			1
VARIABLE 5	1			1
VARIABLE 6	8			6
VARIABLE 7	8			6
VARIABLE 8	12			10
VARIABLE 9	12			10
VARIABLE 10	13			10
VARIABLE 11	12			10
VARIABLE 12	22			15
VARIABLE 13	22			15
VARIABLE 14	32			23
VARIABLE 15	32			23
VARIABLE 16	48			55
VARIABLE 17	52			38
VARIABLE 18	52			39
VARIABLE 19	58			45
VARIABLE 20	58			45
VARIABLE 21	71			56
VARIABLE 22	85			72
VARIABLE 23	107			93
VARIABLE 24	114			102
VARIABLE 25	114			102
VARIABLE 26	117			103
VARIABLE 27	123			112

VARIABLE 28 IS AT ELEMENT 125 NODE= 101
ITEM= F COMP= X NAME= FX
VARIABLE 29 IS AT ELEMENT 125 NODE= 101
ITEM= M COMP= Y NAME= MY
VARIABLE 30 IS AT ELEMENT 139 NODE= 65
ITEM= F COMP= X NAME= FX

STORAGE COMPLETE FOR 99 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES
VARI TYPE IDENTIFIERS NAME MINIMUM AT TIME MAXIMUM AT TIME

2	ESOL	1 F	X	FX	-0.5311E-01	13.26	0.4416E-01	12.42
3	ESOL	1 F	Y	FY	-0.1105E-01	12.04	0.8208E-02	12.20
4	ESOL	1 M	X	MX	-0.2439E-01	12.04	0.1950E-01	12.32
5	ESOL	1 M	Y	MY	-0.1353	13.58	0.1431	13.94
6	ESOL	8 F	X	FX	-0.4701E-01	13.26	0.4237E-01	12.42
7	ESOL	8 M	Z	MZ	-0.5048E-01	12.42	0.5361E-01	13.26
8	ESOL	12 F	X	FX	-0.7763E-01	14.00	0.7405E-01	12.40
9	ESOL	12 F	Z	FZ	-0.1303E-01	12.34	0.1378E-01	13.90
10	ESOL	12 M	X	MX	-0.1524	13.92	0.1337	13.56
11	ESOL	12 M	Z	MZ	-0.2952	12.40	0.3127	14.00
12	ESOL	22 F	Z	FZ	-0.2039E-01	12.36	0.2039E-01	13.80
13	ESOL	22 M	Z	MZ	-0.3033	12.40	0.3033	13.26
14	ESOL	32 M	X	MX	-0.7401E-01	12.04	0.6244E-01	12.30
15	ESOL	32 M	Z	MZ	-0.2763	13.48	0.3311	13.90
16	ESOL	48 F	Y	FY	-0.4907E-01	12.38	0.4438E-01	12.58
17	ESOL	52 F	X	FX	-0.7083E-01	12.04	0.7326E-01	13.62
18	ESOL	52 M	Y	MY	-0.5617	13.62	0.4931	12.04
19	ESOL	58 F	Z	FZ	-0.1441E-01	12.04	0.1505E-01	12.38
20	ESOL	58 M	Z	MZ	-0.7354E-01	13.32	0.7292E-01	12.04
21	ESOL	71 F	X	FX	-0.1069	13.18	0.8265E-01	12.96
22	ESOL	86 F	X	FX	-0.6323E-01	13.18	0.5507E-01	13.06
23	ESOL	107 M	X	MX	-0.3367E-01	13.62	0.3274E-01	12.04
24	ESOL	114 F	X	FX	-0.2438E-01	12.96	0.3153E-01	13.18
25	ESOL	114 F	Z	FZ	-0.2802E-01	13.62	0.2637E-01	12.04
26	ESOL	117 F	X	FX	-0.6896E-02	12.04	0.7140E-02	12.92
27	ESOL	123 M	Y	MY	-0.1753E-02	12.04	0.2003E-02	13.64
28	ESOL	125 F	X	FX	-0.1200E-01	13.06	0.1179E-01	12.92
29	ESOL	125 M	Y	MY	-0.1363E-01	13.06	0.1367E-01	12.92
30	ESOL	139 F	X	FX	-0.3466E-01	13.18	0.3265E-01	13.06

POST16 SUMMARY OF VARIABLE EXTREME VALUES
VARI TYPE IDENTIFIERS NAME MINIMUM AT TIME MAXIMUM AT TIME

2	ESOL	1 F	X	FX	-0.5311E-01	13.26	0.4416E-01	12.42
3	ESOL	1 F	Y	FY	-0.1105E-01	12.04	0.8208E-02	12.20
4	ESOL	1 M	X	MX	-0.2439E-01	12.04	0.1950E-01	12.32
5	ESOL	1 M	Y	MY	-0.1353	13.58	0.1431	13.94
6	ESOL	8 F	X	FX	-0.4701E-01	13.26	0.4237E-01	12.42
7	ESOL	8 M	Z	MZ	-0.5048E-01	12.42	0.5361E-01	13.26
8	ESOL	12 F	X	FX	-0.7763E-01	14.00	0.7405E-01	12.40
9	ESOL	12 F	Z	FZ	-0.1303E-01	12.34	0.1378E-01	13.90
10	ESOL	12 M	X	MX	-0.1524	13.92	0.1337	13.56
11	ESOL	12 M	Z	MZ	-0.2952	12.40	0.3127	14.00
12	ESOL	22 F	Z	FZ	-0.2039E-01	12.36	0.2039E-01	13.80
13	ESOL	22 M	Z	MZ	-0.3033	12.40	0.3033	13.26
14	ESOL	32 M	X	MX	-0.7401E-01	12.04	0.6244E-01	12.30
15	ESOL	32 M	Z	MZ	-0.2763	13.48	0.3311	13.90
16	ESOL	48 F	Y	FY	-0.4907E-01	12.38	0.4438E-01	12.58
17	ESOL	52 F	X	FX	-0.7083E-01	12.04	0.7326E-01	13.62
18	ESOL	52 M	Y	MY	-0.5617	13.62	0.4931	12.04
19	ESOL	58 F	Z	FZ	-0.1441E-01	12.04	0.1505E-01	12.38
20	ESOL	58 M	Z	MZ	-0.7354E-01	13.32	0.7292E-01	12.04
21	ESOL	71 F	X	FX	-0.1069	13.18	0.8265E-01	12.96
22	ESOL	86 F	X	FX	-0.6323E-01	13.18	0.5507E-01	13.06
23	ESOL	107 M	X	MX	-0.3367E-01	13.62	0.3274E-01	12.04
24	ESOL	114 F	X	FX	-0.2438E-01	12.96	0.3153E-01	13.18
25	ESOL	114 F	Z	FZ	-0.2802E-01	13.62	0.2637E-01	12.04
26	ESOL	117 F	X	FX	-0.6896E-02	12.04	0.7140E-02	12.92
27	ESOL	123 M	Y	MY	-0.1753E-02	12.04	0.2003E-02	13.64
28	ESOL	125 F	X	FX	-0.1200E-01	13.06	0.1179E-01	12.92
29	ESOL	125 M	Y	MY	-0.1363E-01	13.06	0.1367E-01	12.92
30	ESOL	139 F	X	FX	-0.3466E-01	13.18	0.3265E-01	13.06

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2tfx.db
FOR POSSIBLE RESUME FROM THIS POINT

***** ROUTIN COMPLETED ***** CP = 19290.850

***** ANSYS SOLUTION ROUTINE *****

PERFORM AN EXPANSION PASS

EXPAND 100 SOLUTIONS
IN THE RANGE FROM 0.70000 TO 0.80000
CALCULATE ELEMENT RESULTS AS WELL AS THE NODAL DOP SOLUTION

PRINT BASI ITEMS WITH A FREQUENCY OF NONE
FOR ALL APPLICABLE ENTITIES

***** ANSYS SOLVE COMMAND *****

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUN4SPARC 07:01:19 OCT 11, 1995 CP= 19290.880
FOR SUPPORT CALL PHONE FAX

Time-history analysis of coupled system (presurizer spray line)

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

SOLUTION OPTIONS

PROBLEM DIMENSIONALITY 3-D
DEGREES OF FREEDOM UX UY UZ ROTX ROTY ROTZ
ANALYSIS TYPE TRANSIENT
SOLUTION METHOD CRUCED
EXPANSION PASS ON

LOAD STEP OPTIONS

LOAD STEP NUMBER 1
NUMBER OF SOLUTIONS TO BE EXPANDED 100
RANGE 0.70000 TO 0.80000
ELEMENT RESULTS CALCULATION ON

PRINT OUTPUT CONTROLS
ITEM FREQUENCY COMPONENT
BASE NONE
DATABASE OUTPUT CONTROLS
ITEM FREQUENCY COMPONENT
NSOL LAST

*** ELEMENT RESULT CALCULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	120	PIPE16	0.612	0.005
2	22	PIPE18	0.203	0.009
3	10	COMBIN14	0.020	0.002
4	12	COMBIN14	0.000	0.000
5	11	COMBIN14	0.010	0.001
6	3	COMBIN14	0.000	0.000
7	3	COMBIN14	0.000	0.000
8	3	COMBIN14	0.000	0.000
30	31	MASS21	0.039	0.007
71	12	BEAM4	0.049	0.004
72	5	MASS21	0.000	0.000

*** NODAL LOAD CALCULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
1	120	PIPE16	0.068	0.001
2	22	PIPE18	0.000	0.000
3	10	COMBIN14	0.000	0.000
4	12	COMBIN14	0.000	0.000
5	11	COMBIN14	0.000	0.000
6	3	COMBIN14	0.000	0.000
7	3	COMBIN14	0.000	0.000
8	3	COMBIN14	0.000	0.000
30	31	MASS21	0.020	0.001
71	12	BEAM4	0.000	0.000
72	5	MASS21	0.000	0.000

*** ANSYS BINARY FILE STATISTICS

BUFFER SIZE USED= 4096
33.078 MB WRITTEN ON RESULTS FILE: pb2tfx.rst

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2tfx.db
FOR POSSIBLE RESUME FROM THIS POINT

FINISH SOLUTION PROCESSING

***** ROUTINE COMPLETED ***** CP = 19503.981

1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUN4SPARC 07:08:57 OCT 11, 1995 CP= 19504.011
FOR SUPPORT CALL PHONE FAX

Time-history analysis of coupled system (presurizer spray line)

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

***** TIME-HISTORY POSTPROCESSOR (POST26) *****

ALL POST26 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS

MAXIMUM NUMBER OF VARIABLES= 30

VARIABLE 2 IS AT ELEMENT 1 NODE= 1
ITEM= F COMP= X NAME= FX
VARIABLE 3 IS AT ELEMENT 1 NODE= 1
ITEM= F COMP= Y NAME= FY
VARIABLE 4 IS AT ELEMENT 1 NODE= 1
ITEM= M COMP= X NAME= MX
VARIABLE 5 IS AT ELEMENT 1 NODE= 1

1 120 PIPE16 0.651 0.005
 2 22 PIPE18 0.180 0.008
 3 10 COMBIN14 0.000 0.000
 4 12 COMBIN14 0.031 0.003
 5 3 COMBIN14 0.000 0.000
 6 1 COMBIN14 0.010 0.003
 7 3 COMBIN14 0.000 0.000
 8 3 COMBIN14 0.000 0.000
 30 31 MASS211 0.010 0.000
 71 12 BEAM6 0.061 0.005
 72 5 MASS21 0.000 0.000

*** NODAL LOAD CALCULATION TIME
 TYPE NUMBER ENAME TOTAL CP AVE CP

1 120 PIPE16 0.020 0.000
 2 22 PIPE18 0.000 0.000
 3 10 COMBIN14 0.000 0.000
 4 12 COMBIN14 0.000 0.000
 5 11 COMBIN14 0.010 0.001
 6 3 COMBIN14 0.000 0.000
 7 3 COMBIN14 0.010 0.003
 8 3 COMBIN14 0.000 0.000
 30 31 MASS211 0.020 0.003
 71 12 BEAM6 0.000 0.000
 72 5 MASS21 0.000 0.000

*** ANSYS BINARY FILE STATISTICS
 BUFFER SIZE USED= 4096
 33,078 MB WRITTEN ON RESULTS FILE: pb2tfx.rst
 ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2tfx.db
 FOR POSSIBLE RESUME FROM THIS POINT

FINISH SOLUTION PROCESSING

***** ROUTINE COMPLETED ***** CP * 19721.240

1
 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM VERSION 5.0 *****
 40416 MB VERSION-SUBSPACE 07.17.02 OCT 11, 1995 CP* 19727.260
 FOR SUPPORT CALL PHONE

Time-history analysis of coupled system (preautotizer spray line)

***ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY**

***** TIME-HISTORY POSTPROCESSOR (POST26) *****

ALL POST26 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS.

MAXIMUM NUMBER OF VARIABLES= 30

VARIABLE 2 IS AT ELEMENT 1 NODE= 1
 ITEM= F COMP= X NAME= FX
 VARIABLE 3 IS AT ELEMENT 1 NODE= 1
 ITEM= F COMP= Y NAME= FY
 VARIABLE 4 IS AT ELEMENT 1 NODE= 1
 ITEM= M COMP= X NAME= MX
 VARIABLE 5 IS AT ELEMENT 1 NODE= 1
 ITEM= M COMP= Y NAME= MY
 VARIABLE 6 IS AT ELEMENT 8 NODE= 6
 ITEM= F COMP= X NAME= FX
 VARIABLE 7 IS AT ELEMENT 6 NODE= 6
 ITEM= M COMP= Z NAME= MZ
 VARIABLE 8 IS AT ELEMENT 10 NODE= 10
 ITEM= F COMP= X NAME= FX
 VARIABLE 9 IS AT ELEMENT 10 NODE= 10
 ITEM= F COMP= Z NAME= FZ
 VARIABLE 10 IS AT ELEMENT 10 NODE= 10
 ITEM= M COMP= X NAME= MX
 VARIABLE 11 IS AT ELEMENT 10 NODE= 10
 ITEM= M COMP= Z NAME= MZ
 VARIABLE 12 IS AT ELEMENT 10 NODE= 10
 ITEM= F COMP= X NAME= FX
 VARIABLE 13 IS AT ELEMENT 10 NODE= 10
 ITEM= F COMP= Z NAME= FZ
 VARIABLE 14 IS AT ELEMENT 22 NODE= 22
 ITEM= M COMP= X NAME= MX
 VARIABLE 15 IS AT ELEMENT 22 NODE= 22
 ITEM= M COMP= Z NAME= MZ
 VARIABLE 16 IS AT ELEMENT 48 NODE= 48
 ITEM= M COMP= X NAME= MX
 VARIABLE 17 IS AT ELEMENT 52 NODE= 52
 ITEM= M COMP= Z NAME= MZ
 VARIABLE 18 IS AT ELEMENT 56 NODE= 56
 ITEM= M COMP= X NAME= MX
 VARIABLE 19 IS AT ELEMENT 56 NODE= 56
 ITEM= M COMP= Z NAME= MZ

ITEM= F COMP= Y NAME= FY
 VARIABLE 17 IS AT ELEMENT 52 NODE= 52
 ITEM= F COMP= X NAME= FX
 VARIABLE 18 IS AT ELEMENT 52 NODE= 52
 ITEM= M COMP= Y NAME= MY
 VARIABLE 19 IS AT ELEMENT 58 NODE= 58
 ITEM= F COMP= Z NAME= FZ
 VARIABLE 20 IS AT ELEMENT 58 NODE= 58
 ITEM= M COMP= X NAME= MX
 VARIABLE 21 IS AT ELEMENT 71 NODE= 71
 ITEM= F COMP= X NAME= FX
 VARIABLE 22 IS AT ELEMENT 86 NODE= 86
 ITEM= F COMP= X NAME= FX
 VARIABLE 23 IS AT ELEMENT 107 NODE= 107
 ITEM= M COMP= X NAME= MX
 VARIABLE 24 IS AT ELEMENT 114 NODE= 114
 ITEM= F COMP= X NAME= FX
 VARIABLE 25 IS AT ELEMENT 114 NODE= 114
 ITEM= F COMP= Z NAME= FZ
 VARIABLE 26 IS AT ELEMENT 117 NODE= 117
 ITEM= F COMP= X NAME= FX
 VARIABLE 27 IS AT ELEMENT 123 NODE= 123
 ITEM= M COMP= Y NAME= MY
 VARIABLE 28 IS AT ELEMENT 135 NODE= 135
 ITEM= F COMP= X NAME= FX
 VARIABLE 29 IS AT ELEMENT 125 NODE= 125
 ITEM= M COMP= Y NAME= MY
 VARIABLE 30 IS AT ELEMENT 139 NODE= 139
 ITEM= F COMP= X NAME= FX

STORAGE COMPLETE FOR 59 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES

VARI TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
1	ESOL	X	-0.14231E-01	17.22	0.3272E-01	16.10
1	ESOL	Y	-0.4069E-02	16.40	0.8504E-02	17.96
1	ESOL	Z	-0.1592E-01	17.60	0.2032E-01	17.94
1	ESOL	X	-0.8049E-01	17.96	0.7177E-01	16.38
1	ESOL	Y	-0.2495E-01	17.22	0.2988E-01	16.10
1	ESOL	Z	-0.3278E-01	16.10	0.2871E-01	17.62
1	ESOL	X	-0.4477E-01	17.20	0.4569E-01	17.38
1	ESOL	Y	-0.1067E-01	17.80	0.1564E-01	17.90
1	ESOL	Z	-0.1015E-01	17.80	0.1184E-01	17.90
1	ESOL	X	-0.1469E-01	17.62	0.1358E-01	17.62
1	ESOL	Y	-0.1884E-01	16.10	0.1609E-01	17.62
1	ESOL	Z	-0.4580E-01	17.60	0.6895E-01	17.94
1	ESOL	X	-0.1654E-01	16.72	0.1565E-01	16.32
1	ESOL	Y	-0.2135E-01	16.10	0.2551E-01	17.92
1	ESOL	Z	-0.1902E-01	17.96	0.1732E-01	16.38
1	ESOL	X	-0.1036E-01	17.58	0.1202E-01	17.94
1	ESOL	Y	-0.5693E-01	16.28	0.5359E-01	17.44
1	ESOL	Z	-0.8414E-01	17.10	0.7040E-01	16.96
1	ESOL	X	-0.4724E-01	17.80	0.5697E-01	16.96
1	ESOL	Y	-0.2361E-01	17.95	0.2070E-01	16.40
1	ESOL	Z	-0.1851E-01	16.96	0.1785E-01	16.48
1	ESOL	X	-0.1979E-01	17.22	0.1858E-01	17.40
1	ESOL	Y	-0.4058E-02	16.38	0.4388E-02	17.98
1	ESOL	Z	-0.1217E-02	16.42	0.1324E-02	17.94
1	ESOL	X	-0.1055E-01	16.96	0.6013E-02	16.84
1	ESOL	Y	-0.1181E-01	16.96	0.9236E-02	16.84
1	ESOL	Z	-0.1008E-01	17.40	0.3375E-01	16.96

SUMMARY OF VARIABLE EXTREME VALUES

VARI TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	ESOL	X	-0.2423E-01	17.22	0.3272E-01	16.10
3	ESOL	Y	-0.4069E-02	16.40	0.8504E-02	17.96
4	ESOL	Z	-0.1592E-01	17.60	0.2032E-01	17.94
5	ESOL	X	-0.8049E-01	17.96	0.7177E-01	16.38
6	ESOL	Y	-0.2495E-01	17.22	0.2988E-01	16.10
7	ESOL	Z	-0.3278E-01	16.10	0.2871E-01	17.38
8	ESOL	X	-0.4477E-01	17.20	0.4569E-01	17.38
9	ESOL	Y	-0.1067E-01	17.94	0.1564E-01	17.60
10	ESOL	Z	-0.1015E-01	17.94	0.1184E-01	17.60
11	ESOL	X	-0.1469E-01	17.60	0.1358E-01	17.60
12	ESOL	Y	-0.1884E-01	16.10	0.1609E-01	17.62
13	ESOL	Z	-0.4580E-01	17.60	0.6895E-01	17.62
14	ESOL	X	-0.1654E-01	16.10	0.1565E-01	16.32
15	ESOL	Y	-0.2135E-01	16.10	0.2551E-01	17.92
16	ESOL	Z	-0.1902E-01	17.96	0.1732E-01	16.38
17	ESOL	X	-0.1036E-01	17.58	0.1202E-01	17.94
18	ESOL	Y	-0.5693E-01	16.28	0.5359E-01	17.44
19	ESOL	Z	-0.8414E-01	17.10	0.7040E-01	16.96
20	ESOL	X	-0.4724E-01	17.80	0.5697E-01	16.96
21	ESOL	Y	-0.2361E-01	17.95	0.2070E-01	16.40
22	ESOL	Z	-0.1851E-01	16.96	0.1785E-01	16.48
23	ESOL	X	-0.1979E-01	17.22	0.1858E-01	17.40
24	ESOL	Y	-0.4058E-02	16.38	0.4388E-02	17.98
25	ESOL	Z	-0.1217E-02	16.42	0.1324E-02	17.94
26	ESOL	X	-0.1055E-01	16.96	0.6013E-02	16.84
27	ESOL	Y	-0.1181E-01	16.96	0.9236E-02	16.84
28	ESOL	Z	-0.1008E-01	17.40	0.3375E-01	16.96

21 ESOL 71 F X FX -0.8414E-01 17.10 0.7040E-01 16.96
 22 ESOL 86 F X FX -0.4724E-01 17.80 0.5697E-01 16.96
 23 ESOL 107 M X MX -0.2376E-01 17.96 0.2070E-01 16.40
 24 ESOL 114 F X FX -0.2417E-01 16.96 0.2180E-01 17.08
 25 ESOL 114 F X FX -0.1951E-01 17.96 0.1654E-01 16.40
 26 ESOL 117 F X FX -0.1959E-02 16.43 0.1858E-02 17.84
 27 ESOL 125 F X FX -0.1055E-01 16.96 0.8015E-02 16.84
 28 ESOL 125 F X FX -0.1183E-01 16.96 0.9132E-02 16.84
 29 ESOL 139 F X FX -0.3008E-01 17.80 0.3372E-01 16.96

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2tfx.db
 FOR SUPPORT CALL VERSION=SUMSTATC 07.17.26 C T 11. 1995 CP= 19737.041

***** ROUTINE COMPLETED ***** CP = 19737.041

***** ANSYS SOLUTION ROUTINE *****

PERFORM AN EXPANSION PASS

EXPAND 100 SOLUTIONS
 IN THE RANGE FROM 0.90000 TO 1.0000
 CALCULATE ELEMENT RESULTS AS WELL AS THE NODAL DAP SOLUTION
 PRINT MAXI ITEMS WITH A FREQUENCY OF NOMB
 FOR ALL APPLICABLE ENTITIES

***** ANSYS SOLVE COMMAND *****

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVIS. N 5.0 *****
 40416-2 VERSION=SUMSTATC 07.17.26 C T 11. 1995 CP= 19737.070
 FOR SUPPORT CALL VERSION=SUMSTATC 07.17.26 C T 11. 1995 CP= 19737.070

Time-history analysis of coupled system (preuser spray line)

*****ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY**

SOLUTION OPTIONS

PROBLEM DIMENSIONALITY 3-D
 DEGREES OF FREEDOM UN BY UZ ROTX ROTY ROTZ
 ANALYSIS TYPE TRANSLIENT
 SOLUTION METHOD REDUCED
 EXPANSION PASS ON

LOAD STEP NUMBER 1

RANGE 0.90000 TO 1.0000

ELEMENT RESULTS CALCULATION ON

PRINT OUTPUT CONTROLS

ITEM FREQUENCY COMPONENT

DATABASE OUTPUT CONTROLS

ITEM FREQUENCY COMPONENT

NSOL LAST

*** ELEMENT RESULT CALCULATION TIMES

TYPE NUMBER	ENAME	TOTAL CP	AVE CP
1	120 PIPE16	0.578	0.005
2	22 PIPE18	0.172	0.008
3	10 COMBIN14	0.020	0.002
4	12 COMBIN14	0.039	0.003
5	11 COMBIN14	0.000	0.000
6	3 COMBIN14	0.000	0.000
7	3 COMBIN14	0.000	0.000
8	3 COMBIN14	0.000	0.000
10	31 MASS21	0.021	0.001
71	12 BEAM4	0.059	0.005
72	5 MASS21	0.010	0.002

*** NODAL LOAD CALCULATION TIMES

TYPE NUMBER	ENAME	TOTAL CP	AVE CP
1	120 PIPE16	0.070	0.001
2	22 PIPE18	0.020	0.001
3	10 COMBIN14	0.000	0.000
4	12 COMBIN14	0.012	0.001
5	11 COMBIN14	0.010	0.001
6	3 COMBIN14	0.016	0.003
7	3 COMBIN14	0.000	0.000
8	3 COMBIN14	0.000	0.000
10	31 MASS21	0.000	0.000
71	12 BEAM4	0.010	0.001
72	5 MASS21	0.000	0.000

*** ANSYS BINARY FILE STATISTICS

BUFFER SIZE USED= 4096

33.406 MB WRITTEN ON RESULTS FILE: pb2tfx.rst

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2tfx.db

FOR POSSIBLE RESUME FROM THIS POINT
 FINISH SOLUTION PROCESSING

***** ROUTINE COMPLETED ***** CP = 19952.421

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****

40416-2 VERSION=SUMSTATC 07.25.09 OCT 11. 1995 CP= 19952.451
 FOR SUPPORT CALL VERSION=SUMSTATC 07.25.09 OCT 11. 1995 CP= 19952.451

Time-history analysis of coupled system (preuser spray line)

*****ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY**

***** TIME-HISTORY POSTPROCESSOR (POST26) *****

ALL POST26 SPECIFICATIONS ARE RESET TO INITIAL DEFAULTS

MAXIMUM NUMBER OF VARIABLES= 30

VARIABLE 2 IS AT ELEMENT 1 NODE= 1

ITEM= F COMP= X NAME= FX

VARIABLE 3 IS AT ELEMENT 1 NODE= 1

ITEM= F COMP= Y NAME= FY

VARIABLE 4 IS AT ELEMENT 1 NODE= 1

ITEM= M COMP= X NAME= MX

VARIABLE 5 IS AT ELEMENT 1 NODE= 1

ITEM= M COMP= Y NAME= MY

VARIABLE 6 IS AT ELEMENT 8 NODE= 6

ITEM= F COMP= X NAME= FX

VARIABLE 7 IS AT ELEMENT 8 NODE= 6

ITEM= M COMP= 2 NAME= M2

VARIABLE 8 IS AT ELEMENT 12 NODE= 10

ITEM= F COMP= X NAME= FX

VARIABLE 9 IS AT ELEMENT 12 NODE= 10

ITEM= F COMP= 2 NAME= F2

VARIABLE 10 IS AT ELEMENT 12 NODE= 10

ITEM= M COMP= X NAME= MX

VARIABLE 11 IS AT ELEMENT 12 NODE= 10

ITEM= M COMP= 2 NAME= M2

VARIABLE 12 IS AT ELEMENT 22 NODE= 15

ITEM= F COMP= 2 NAME= F2

VARIABLE 13 IS AT ELEMENT 22 NODE= 15

ITEM= M COMP= 2 NAME= M2

VARIABLE 14 IS AT ELEMENT 32 NODE= 23

ITEM= M COMP= X NAME= MX

VARIABLE 15 IS AT ELEMENT 32 NODE= 23

ITEM= M COMP= 2 NAME= M2

VARIABLE 16 IS AT ELEMENT 48 NODE= 35

ITEM= F COMP= Y NAME= FY

VARIABLE 17 IS AT ELEMENT 52 NODE= 39

ITEM= F COMP= X NAME= FX

VARIABLE 18 IS AT ELEMENT 52 NODE= 39

ITEM= M COMP= Y NAME= MY

VARIABLE 19 IS AT ELEMENT 58 NODE= 45

ITEM= F COMP= 2 NAME= F2

VARIABLE 20 IS AT ELEMENT 58 NODE= 45

ITEM= M COMP= 2 NAME= M2

VARIABLE 21 IS AT ELEMENT 71 NODE= 56

ITEM= F COMP= X NAME= FX

VARIABLE 22 IS AT ELEMENT 86 NODE= 72

ITEM= F COMP= X NAME= FX

VARIABLE 23 IS AT ELEMENT 107 NODE= 93

ITEM= M COMP= X NAME= MX

VARIABLE 24 IS AT ELEMENT 114 NODE= 102

ITEM= F COMP= X NAME= FX

VARIABLE 25 IS AT ELEMENT 114 NODE= 102

ITEM= F COMP= 2 NAME= F2

VARIABLE 26 IS AT ELEMENT 117 NODE= 103

ITEM= F COMP= X NAME= FX

VARIABLE 27 IS AT ELEMENT 123 NODE= 112

ITEM= M COMP= Y NAME= MY
 VARIABLE 28 IS AT ELEMENT 125 NODE= 101
 ITEM= F COMP= X NAME= FX
 VARIABLE 29 IS AT ELEMENT 125 NODE= 101
 ITEM= M COMP= Y NAME= MY
 VARIABLE 30 IS AT ELEMENT 139 NODE= 65
 ITEM= F COMP= X NAME= FX

STORAGE COMPLETE FOR 100 DATA POINTS

SUMMARY OF VARIABLES STORED THIS STEP AND EXTREME VALUES

VARI TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	ESOL 1 F X	FX	-0.2670E-01	18.34	0.2424E-01	18.52
3	ESOL 1 F Y	FY	-0.6822E-02	18.60	0.7009E-02	19.16
4	ESOL 1 M X	MX	-0.2942E-01	19.52	0.3054E-01	19.86
5	ESOL 1 M Y	MY	-0.9323E-01	18.64	0.1186	18.30
6	ESOL 8 F X	FX	-0.2777E-01	18.34	0.2508E-01	18.52
7	ESOL 8 M Z	ME	-0.3213E-01	18.52	0.3582E-01	18.34
8	ESOL 12 F X	FX	-0.5172E-01	18.36	0.4598E-01	18.54
9	ESOL 12 F Z	FZ	-0.1659E-01	19.18	0.1628E-01	18.84
10	ESOL 12 M X	MX	-0.1582	18.28	0.1459	19.16
11	ESOL 12 M Z	ME	-0.1766	18.52	0.2008	18.36
12	ESOL 22 F Z	FZ	-0.2583E-01	18.54	0.2515E-01	18.88
13	ESOL 32 M Z	ME	-0.1919	18.54	0.2169	18.34
14	ESOL 32 M X	MX	-0.8042E-01	19.54	0.9014E-01	19.18
15	ESOL 32 M Z	ME	-0.1413	18.08	0.1929	18.24
16	ESOL 48 F Y	FY	-0.4698E-01	18.54	0.4372E-01	18.28
17	ESOL 52 F X	FX	-0.2769E-01	18.96	0.2472E-01	19.38
18	ESOL 52 M Y	MY	-0.1976	19.40	0.2123	18.94
19	ESOL 58 F Z	FZ	-0.1546E-01	19.54	0.1657E-01	19.88
20	ESOL 58 M Z	ME	-0.4441E-01	18.26	0.4657E-01	18.10
21	ESOL 71 F X	FX	-0.6481E-01	19.76	0.4400E-01	18.58
22	ESOL 86 F X	FX	-0.4019E-01	19.76	0.2649E-01	18.12
23	ESOL 107 M X	MX	-0.1222E-01	18.62	0.1264E-01	18.96
24	ESOL 114 F X	FX	-0.1129E-01	18.58	0.1882E-01	19.76
25	ESOL 114 F Z	FZ	-0.1066E-01	18.62	0.1168E-01	18.94
26	ESOL 117 F X	FX	-0.3216E-02	18.12	0.3401E-02	19.36
27	ESOL 123 M Y	MY	-0.7751E-03	19.76	0.6522E-03	19.42
28	ESOL 125 F X	FX	-0.6439E-02	18.12	0.7305E-02	19.76
29	ESOL 125 M Y	MY	-0.7521E-02	18.12	0.8097E-02	19.76
30	ESOL 139 F X	FX	-0.2293E-01	19.76	0.1519E-01	18.12

POST26 SUMMARY OF VARIABLE EXTREME VALUES

VARI TYPE	IDENTIFIERS	NAME	MINIMUM	AT TIME	MAXIMUM	AT TIME
2	ESOL 1 F X	FX	-0.2670E-01	18.34	0.2424E-01	18.52
3	ESOL 1 F Y	FY	-0.6822E-02	18.60	0.7009E-02	19.16
4	ESOL 1 M X	MX	-0.2942E-01	19.52	0.3054E-01	19.86
5	ESOL 1 M Y	MY	-0.9323E-01	18.64	0.1186	18.30
6	ESOL 8 F X	FX	-0.2777E-01	18.34	0.2508E-01	18.52
7	ESOL 8 M Z	ME	-0.3213E-01	18.52	0.3582E-01	18.34
8	ESOL 12 F X	FX	-0.5172E-01	18.36	0.4598E-01	18.54
9	ESOL 12 F Z	FZ	-0.1659E-01	19.18	0.1628E-01	18.84
10	ESOL 12 M X	MX	-0.1582	18.28	0.1459	19.16
11	ESOL 12 M Z	ME	-0.1766	18.52	0.2008	18.36
12	ESOL 22 F Z	FZ	-0.2583E-01	18.54	0.2515E-01	18.88
13	ESOL 32 M Z	ME	-0.1919	18.54	0.2169	18.34
14	ESOL 32 M X	MX	-0.8042E-01	19.54	0.9014E-01	19.18
15	ESOL 32 M Z	ME	-0.1413	18.08	0.1929	18.24
16	ESOL 48 F Y	FY	-0.4698E-01	18.54	0.4372E-01	18.28
17	ESOL 52 F X	FX	-0.2769E-01	18.96	0.2472E-01	19.38
18	ESOL 52 M Y	MY	-0.1976	19.40	0.2123	18.94
19	ESOL 58 F Z	FZ	-0.1546E-01	19.54	0.1657E-01	19.88
20	ESOL 58 M Z	ME	-0.4441E-01	18.26	0.4657E-01	18.10
21	ESOL 71 F X	FX	-0.6481E-01	19.76	0.4400E-01	18.58
22	ESOL 86 F X	FX	-0.4019E-01	19.76	0.2649E-01	18.12
23	ESOL 107 M X	MX	-0.1222E-01	18.62	0.1264E-01	18.96
24	ESOL 114 F X	FX	-0.1129E-01	18.58	0.1882E-01	19.76
25	ESOL 114 F Z	FZ	-0.1066E-01	18.62	0.1168E-01	18.94
26	ESOL 117 F X	FX	-0.3216E-02	18.12	0.3401E-02	19.36
27	ESOL 123 M Y	MY	-0.7751E-03	19.76	0.6522E-03	19.42
28	ESOL 125 F X	FX	-0.6439E-02	18.12	0.7305E-02	19.76
29	ESOL 125 M Y	MY	-0.7521E-02	18.12	0.8097E-02	19.76
30	ESOL 139 F X	FX	-0.2293E-01	19.76	0.1519E-01	18.12

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2tfx.db
 FOR POSSIBLE RESUME FROM THIS POINT

***** ROUTINE COMPLETED ***** CP = 19962.120

***** END OF INPUT ENCOUNTERED *****

PURGE ALL SOLUTION AND POST DATA
 SAVE ALL MODEL DATA

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= pb2tfx.db
 FOR POSSIBLE RESUME FROM THIS POINT

NUMBER OF WARNING MESSAGES ENCOUNTERED= 11
 NUMBER OF ERROR MESSAGES ENCOUNTERED= 0

TRM	SR	CD	CM	CR	CR	CR	CR	CR	CR
3.430/0.1137	2.801/0.2019	3.430/0.1137	2.801/0.2019	3.430/0.1137	2.801/0.2019	3.430/0.1137	2.801/0.2019	3.430/0.1137	2.801/0.2019
5.690/0.1347	4.258/0.2028	5.690/0.1347	4.258/0.2028	5.690/0.1347	4.258/0.2028	5.690/0.1347	4.258/0.2028	5.690/0.1347	4.258/0.2028
10.630/0.1337	8.316/0.1201	10.630/0.1337	8.316/0.1201	10.630/0.1337	8.316/0.1201	10.630/0.1337	8.316/0.1201	10.630/0.1337	8.316/0.1201
16.940/0.0735	14.790/0.1290	16.940/0.0735	14.790/0.1290	16.940/0.0735	14.790/0.1290	16.940/0.0735	14.790/0.1290	16.940/0.0735	14.790/0.1290
19.640/0.0535	18.250/0.1394	19.640/0.0535	18.250/0.1394	19.640/0.0535	18.250/0.1394	19.640/0.0535	18.250/0.1394	19.640/0.0535	18.250/0.1394
23.490/0.0500	23.490/0.0500	23.490/0.0500	23.490/0.0500	23.490/0.0500	23.490/0.0500	23.490/0.0500	23.490/0.0500	23.490/0.0500	23.490/0.0500

TRM	SR	CD	CM	CR	CR	CR	CR	CR	CR
3.430/0.1137	2.801/0.2019	3.430/0.1137	2.801/0.2019	3.430/0.1137	2.801/0.2019	3.430/0.1137	2.801/0.2019	3.430/0.1137	2.801/0.2019
5.690/0.1347	4.258/0.2028	5.690/0.1347	4.258/0.2028	5.690/0.1347	4.258/0.2028	5.690/0.1347	4.258/0.2028	5.690/0.1347	4.258/0.2028
10.630/0.1337	8.316/0.1201	10.630/0.1337	8.316/0.1201	10.630/0.1337	8.316/0.1201	10.630/0.1337	8.316/0.1201	10.630/0.1337	8.316/0.1201
16.940/0.0735	14.790/0.1290	16.940/0.0735	14.790/0.1290	16.940/0.0735	14.790/0.1290	16.940/0.0735	14.790/0.1290	16.940/0.0735	14.790/0.1290
19.640/0.0535	18.250/0.1394	19.640/0.0535	18.250/0.1394	19.640/0.0535	18.250/0.1394	19.640/0.0535	18.250/0.1394	19.640/0.0535	18.250/0.1394
23.490/0.0500	23.490/0.0500	23.490/0.0500	23.490/0.0500	23.490/0.0500	23.490/0.0500	23.490/0.0500	23.490/0.0500	23.490/0.0500	23.490/0.0500

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BRAD PT-35 MA=0.3125
TANG PT-36 DX=0.4771
* SPRING FSH23
* SNURBER FSH15
LJMP PT-37 MA=0.043
SNIB PT-37 FR=1 LO=0 DV=1 SP=212.0 LV=6
TANG PT-38 DX=0.8063
TANG PT-39 DX=0.8646
* SNURBER FSH10
LJMP PT-40 MA=0.040
SNIB PT-40 FR=1 LO=0 DV=1 SP=212.0 LV=6
TANG PT-41 DX=2.4531
TANG PT-42 DX=0.3125
* ELBOW # 7
BRAD PT-43 MA=0.3125
TANG PT-44 DX=0.4125
* SNURBER FSH20
LJMP PT-44 MA=0.025
SNIB PT-44 FR=1 LO=0 DV=1 SP=77.0 LV=6
TANG PT-45 DX=0.31775
* SNURBER FSH21
LJMP PT-45 MA=0.025
SNIB PT-45 FR=1 LO=0 DV=1 SP=77.0 LV=6
TANG PT-46 DX=0.4750
TANG PT-47 DX=0.25
* JUNCTION FOR 2.5 IN LOOP
TANG PT-48 DX=0.25
* VALVE RC-48
CHOS TY=0 OD=2.875 WT=0.375 MA=15.504 SO=1.0 EL=1
TANG PT-49 DX=0.0187
TANG PT-50 DX=0.4167
TANG PT-51 DX=0.4167
CHOS TY=0 OD=2.875 WT=0.375 MA=14.183 SO=1.0
TANG PT-51 DX=0.125
TANG PT-52 DX=0.458
* SNURBER FSH27
LJMP PT-52 MA=0.035
TANG PT-53 DX=0.2021
TANG PT-54 DX=0.2021
* SPRING FSH22
LJMP PT-53 MA=0.005
RSTN PT-53 FR=1 LO=0 DV=1 SP=1.126 LV=6
TANG PT-54 DX=2.979
* SNURBER FSH29
SNIB PT-54 FR=1 LO=0 DV=1 SP=77.0 LV=6
TANG PT-55 DX=0.375
* ELBOW # 8
BRAD PT-56 MA=0.3125
TANG PT-57 DX=0.5
* SNURBER FSH1
SNIB PT-57 FR=1 LO=0 DV=1 SP=77.0 LV=6
TANG PT-58 DX=0.16667
TANG PT-59 DX=0.25
TANG PT-60 DX=0.25
TANG PT-61 DX=0.2500
* SPRING FSH15
LJMP PT-61 MA=0.1000
TANG PT-62 DX=0.3333
* ELBOW # 9
BRAD PT-63 MA=0.3125
TANG PT-64 DX=1.229
CHOS TY=0 OD=2.875 WT=0.375 MA=15.504 SO=1.0 EL=1
TANG PT-65 DX=0.417
TANG PT-66 DX=0.105
LJMP PT-66 MA=0.052
* LJMP PT-66 MA=0.052
TANG PT-67 DX=0.1543
* JUNCTION OF 0.5 IN. INGS AT 68
TANG PT-68 DX=0.25
TANG PT-70 DX=0.1875
* LJMP PT-70 MA=0.052
CHOS TY=0 OD=2.875 WT=0.375 MA=15.504 SO=1.0 EL=1
TANG PT-71 DX=0.417
* VALVE RC10
LJMP PT-71 MA=0.105
TANG PT-72 DX=0.2021
* LJMP PT-72 MA=0.052
CHOS TY=0 OD=2.875 WT=0.375 MA=14.183 SO=1.0
TANG PT-73 DX=1.854
* SNURBER FSH14
LJMP PT-73 MA=0.025
SNIB PT-73 FR=1 LO=0 DV=1 SP=77.0 LV=6
* VALVE RC25
LJMP PT-74 MA=0.075
CHOS TY=0 OD=2.875 WT=0.375 MA=15.504 SO=1.0 EL=1
TANG PT-75 DX=0.417
TANG PT-76 DX=0.417
CHOS TY=0 OD=2.875 WT=0.375 MA=14.183 SO=1.0
TANG PT-77 SP=100.0
TANG PT-78 DX=0.1334
* SPRING FSH33
LJMP PT-78 MA=0.010

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RSTN PT-78 FR=1 LO=0 DV=1 SP=0.400 LV=6
TANG PT-79 DX=0.771
* SPRING FSH23
LJMP PT-79 MA=0.004
RSTN PT-79 FR=1 LO=0 DV=1 SP=0.035 LV=6
TANG PT-80 DX=0.8063
TANG PT-81 DX=0.5185
* ELBOW # 10
BRAD PT-82 MA=0.3125
TANG PT-83 DX=1.5433
TANG PT-84 DX=0.1944
TANG PT-85 DX=0.639
* ELBOW # 10
BRAD PT-86 MA=0.5
TANG PT-87 DX=0.8250
ANCH PT-87 LO=0 LV=7
JUNC PT-87
CHOS TY=0 OD=2.875 WT=0.375 MA=14.183 SO=1.0
TANG PT-91 DX=0.25
TANG PT-92 DX=1.25
* ELBOW-1 OF 2.5 IN. LOOP
TANG PT-93 MA=0.3125
TANG PT-94 DX=0.5833
* VALVE RC262
CHOS TY=0 OD=2.875 WT=0.375 MA=15.504 SO=1.0 EL=1
TANG PT-95 DX=0.417
LJMP PT-95 MA=0.075
TANG PT-96 DX=0.417
CHOS TY=0 OD=2.875 WT=0.375 MA=14.183 SO=1.0
* VALVE RC262
* ELBOW-2 OF 2.5 IN. LOOP
BRAD PT-98 MA=0.3125
TANG PT-99 DX=0.3125
TANG PT-100 DX=0.375
TANG PT-101 DX=0.25
TANG PT-102 DX=0.3125
TANG PT-103 DX=0.3125
* SPRING FSH1
LJMP PT-103
CHOS TY=0 OD=0.840 WT=0.188 MA=4.291 SO=1.0
TANG PT-103 DX=0.310
TANG PT-104 DX=0.774
* VALVE DAR-1
LJMP PT-105 DX=0.25
TANG PT-105 MA=0.012
LJMP PT-106 DX=0.25
CHOS TY=0 OD=0.840 WT=0.188 MA=4.291 SO=1.0
TANG PT-107 DX=0.958
TANG PT-108 DX=0.125
* SNURBER FSH25
BRAD PT-109 MA=0.3125
TANG PT-110 DX=0.125
TANG PT-111 DX=0.281
TANG PT-112 DX=0.118
CHOS TY=0 OD=1.900 WT=0.281 MA=8.565 SO=1.0
TANG PT-109 DX=0.310
TANG PT-110 DX=0.310
TANG PT-111 DX=0.310
* REPEATER TO END TUBE 0.5 IN. LOOP
* ELBOW-1 OF 1.5 IN. BRANCH
LJMP PT-113 DX=0.500
CHOS TY=0 OD=1.900 WT=0.281 MA=44.30 SO=1.0 EL=1
TANG PT-114 DX=0.354
LJMP PT-114 MA=0.025
TANG PT-115 DX=0.354
TANG PT-116 DX=0.523
TANG PT-117 DX=0.187
* ELBOW-1 OF 1.5 IN. LOOP
BRAD PT-118 MA=0.187
TANG PT-119 DX=0.187
TANG PT-120 DX=4.760
TANG PT-121 DX=0.187
* ELBOW-3 OF 1.5 IN. LOOP
BRAD PT-122 MA=0.187
TANG PT-123 DX=0.187
TANG PT-124 DX=0.353
* SNURBER FSH25
LJMP PT-124 MA=0.025
SNIB PT-124 FR=1 LO=0 DV=1 SP=77.0 LV=6
TANG PT-125 DX=0.187
TANG PT-126 DX=0.187
* ELBOW-3 OF 1.5 IN. LOOP
BRAD PT-127 MA=0.187
TANG PT-128 DX=0.187
TANG PT-129 DX=2.146
* SNURBER FSH26
LJMP PT-129 MA=0.025
SNIB PT-129 FR=1 LO=0 DV=1 SP=77.0 LV=6
TANG PT-130 DX=3.083
ANCH PT-130 LO=0 LV=6
* ENO-1
JUNC PT-130
CHOS TY=0 OD=2.875 WT=0.375 MA=14.183 SO=1.0
TANG PT-131 DX=0.271
TANG PT-132 DX=0.271
SNIB PT-131 FR=1 LO=0 DV=1 SP=77.0 LV=6
SNIB PT-131 FR=1 LO=0 DV=1 SP=77.0 LV=6
TANG PT-132 DX=0.271
LJMP PT-132 MA=0.230
* ENO-2

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JUMC PT-71
TANG PT-131 DV=0.271
LUMP PT-131 RA=0.015
SMBR PT-131 RA=0.015
TANG PT-134 DV=0.271
LUMP PT-134 RA=0.130
22229000 #9

30006E+01 .91156E+00
 38984E+01 .12078E+01
 42591E+01 .93831E+00
 56890E+01 .93070E+00
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 .18256E+02 .18608E+00
 .19641E+02 .1851E+00
 .20889E+02 .18676E+00
 .22170E+02 .18526E+00
 .23057E+02 .18650E+00
 .23492E+02 .18763E+00
 .23625E+02 .18792E+00
 .24181E+02 .18669E+00
 .25319E+02 .18910E+00
 .26236E+02 .18855E+00
 .26733E+02 .18786E+00
 .26866E+02 .18756E+00
 .27543E+02 .18604E+00
 .32918E+02 .18350E+00
 34 0.0408371
 .13145E+01 .25637E+00
 .15867E+01 .32657E+00
 .28009E+01 .46203E+00
 .34301E+01 .40279E+00
 .36006E+01 .40134E+00
 .38944E+01 .37762E+00
 .42591E+01 .46969E+00
 .56890E+01 .41947E+00
 .74677E+01 .29851E+00
 .80710E+01 .22989E+00
 .83071E+01 .22822E+00
 .10179E+02 .21553E+00
 .10627E+02 .19919E+00
 .12037E+02 .19902E+00
 .13130E+02 .19812E+00
 .13439E+02 .19585E+00
 .14793E+02 .19149E+00
 .16090E+02 .18996E+00
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 .17959E+02 .18550E+00
 .18256E+02 .18612E+00
 .19641E+02 .18844E+00
 .20889E+02 .18675E+00
 .22170E+02 .18533E+00
 .23057E+02 .18649E+00
 .23492E+02 .18758E+00
 .23625E+02 .18786E+00
 .24181E+02 .18860E+00
 .25319E+02 .18902E+00
 .26236E+02 .18847E+00
 .26733E+02 .18778E+00
 .26866E+02 .18750E+00
 .27543E+02 .18604E+00
 .32918E+02 .18353E+00
 34 0.0415193
 .13145E+01 .25526E+00
 .15867E+01 .32504E+00
 .28009E+01 .45763E+00
 .34301E+01 .39925E+00
 .36006E+01 .39416E+00
 .38944E+01 .37656E+00
 .42591E+01 .46662E+00
 .56890E+01 .41732E+00
 .74677E+01 .29649E+00
 .80710E+01 .22828E+00
 .83071E+01 .22714E+00
 .10179E+02 .21513E+00
 .10627E+02 .19884E+00
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 .13130E+02 .19791E+00
 .13439E+02 .19571E+00
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 .25319E+02 .18898E+00
 .26236E+02 .18843E+00
 .26733E+02 .18774E+00
 .26866E+02 .18746E+00
 .27543E+02 .18605E+00
 .32918E+02 .18354E+00
 34 0.0417302
 .13145E+01 .25492E+00
 .15867E+01 .32457E+00
 .28009E+01 .45628E+00

.34301E+01 .39822E+00
 .36006E+01 .39719E+00
 .38944E+01 .37623E+00
 .42591E+01 .46568E+00
 .56890E+01 .41666E+00
 .74677E+01 .29588E+00
 .80710E+01 .22798E+00
 .83071E+01 .22681E+00
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 .27543E+02 .18605E+00
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 .38944E+01 .37558E+00
 .42591E+01 .46382E+00
 .56890E+01 .41535E+00
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 .80710E+01 .22681E+00
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 .26236E+02 .18839E+00
 .26733E+02 .18771E+00
 .26866E+02 .18743E+00
 .27543E+02 .18605E+00
 .32918E+02 .18355E+00
 34 0.0426370
 .13145E+01 .25458E+00
 .15867E+01 .32256E+00
 .28009E+01 .45062E+00
 .34301E+01 .39369E+00
 .36006E+01 .39305E+00
 .38944E+01 .37482E+00
 .42591E+01 .46170E+00
 .56890E+01 .41382E+00
 .74677E+01 .29327E+00
 .80710E+01 .22570E+00
 .83071E+01 .22542E+00
 .10179E+02 .21448E+00
 .10627E+02 .19828E+00
 .12037E+02 .19860E+00
 .13130E+02 .19757E+00
 .13439E+02 .19548E+00
 .14793E+02 .19134E+00
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 .23492E+02 .18750E+00
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 .26866E+02 .18741E+00
 .27543E+02 .18605E+00
 .32918E+02 .18356E+00

34 0.0500001

13145E+01 .24200E+00
 15667E+01 .30693E+00
 28009E+01 .41018E+00
 34301E+01 .56248E+00
 36098E+01 .62135E+00
 42591E+01 .83203E+00
 56802E+01 .95143E+00
 74677E+01 .27448E+00
 80710E+01 .21207E+00
 10179E+02 .22048E+00
 10675E+02 .18735E+00
 11110E+02 .15578E+00
 11439E+02 .15413E+00
 14733E+02 .15041E+00
 16090E+02 .13006E+00
 16598E+02 .18754E+00
 17909E+02 .18548E+00
 18205E+02 .18611E+00
 19089E+02 .18668E+00
 21170E+03 .18503E+00
 21077E+03 .18643E+00
 21428E+03 .18733E+00
 21625E+03 .18744E+00
 24191E+03 .18803E+00
 25139E+03 .18849E+00
 26733E+03 .18775E+00
 26866E+03 .18708E+00
 27543E+03 .18603E+00
 33918E+03 .18347E+00

Crescent.out

0.0000E+00 0.0000E+00 0.0000E+00

MODE SHAPE OF P.S. AT CONNECTING DOP 1093

0.1178E+00 0.0000E+00 0.0000E+00

PARTICIPATION FACTOR FOR P.S.---GAMP

0.0000E+00 0.5388E-01 0.3758E-01

A COMPUTER PROGRAM FOR

COUPLED RESPONSE SPECTRUM ANALYSIS OF SECONDARY SYSTEMS

* C R E S T *

DEVELOPED BY

AJAYA KUMAR GUPTA,

JING-MEN JAW AMUNAV GU-TA

NORTH CAROLINA STATE UNIVERSITY

RALEIGH, NORTH CAROLINA

REVISION-1.0

C O U P L E D F R E Q U E N C I E S A N D M O D E S H A P E S E X T R A C T I O N

NUMBER OF ITERATIONS TO BE APPLIED FOR COUPLED FREQUENCIES EXTRACTION ITER = 900

CONVERGENCE TOLERANCE FOR COUPLED FREQUENCIES

COUPLED MODE SHAPE (FOR PRIMARY MODE) MODE 1

MODAL DISP AT PRIMARY SYSTEM CONNECTING DOP 10.17603

DOP # DISPLACEMENT

3041 0.1681E-04

3042 0.0000E+00

3043 0.4540E-02

3044 0.3272E-04

3063 0.1526E-01

3072 0.0000E+00

3081 0.4883E-03

3101 0.5579E-04

3121 0.0000E+00

3123 0.7165E-01

3091 7.2532E-04

3092 -0.0000E+00

3093 0.3403E-01

Crescent.out

0.1102E-01 0.1725E-02 0.1511E-01 0.3327E-01 0.7122E-01 0.8122E-04

-0.1078E-02 -0.5607E-02 0.1519E-01 0.2442E-01 0.4315E-03 0.1015E-03

0.1783E-01 -0.6159E-02 -0.3735E-02 0.3017E-03 0.1094E-03 0.9381E-03

0.2094E-01 -0.5478E-02 -0.4039E-02 -0.4543E-02 0.1072E-02 -0.1048E-03

0.1920E-01 -0.5501E-02 -0.2577E-01 0.1111E-03 0.8421E-03 0.1384E-03

0.1544E-02 -0.5608E-02 0.1786E-01 0.7481E-03 0.8170E-03 0.2514E-03

0.1316E-01 -0.5558E-02 0.1570E-01 0.4678E-04 0.9219E-03 0.1301E-03

-0.1150E-02 -0.5718E-02 -0.4542E-01 0.7246E-03 0.8142E-03 0.4918E-04

0.6554E-03 -0.5838E-02 -0.2065E-01 0.1505E-03 0.4060E-03 0.7462E-04

0.3844E-02 -0.5948E-02 -0.4466E-02 0.9061E-03 0.3018E-03 -0.1157E-03

0.4888E-02 -0.5982E-02 0.7519E-02 0.5581E-03 0.7212E-03 -0.1232E-03

0.8637E-02 -0.6168E-02 0.3492E-01 0.1854E-03 0.1618E-03 -0.1842E-04

0.1712E-02 -0.6258E-02 0.1725E-01 0.8092E-03 0.5076E-04 0.2481E-03

0.4424E-03 -0.6452E-02 0.6684E-02 0.1465E-03 0.5076E-04 0.1892E-03

-0.8452E-02 -0.6572E-02 0.5631E-02 0.1465E-03 0.1900E-03 0.2475E-03

0.8452E-02 -0.6572E-02 0.5631E-02 0.1465E-03 0.1900E-03 0.2475E-03

0.8141E-02 -0.6804E-02 0.1606E-02 0.1606E-02 -0.2794E-03 0.1845E-03

0.9489E-03 -0.7028E-02 0.1531E-02 0.1345E-02 -0.3961E-03 0.2524E-03

0.7841E-02 -0.7262E-02 0.5604E-01 0.2022E-02 -0.5128E-03 -0.8177E-04

0.7559E-02 -0.7288E-02 0.5604E-01 0.1932E-02 -0.5138E-03 -0.7599E-04

0.7432E-02 -0.7558E-02 0.5128E-01 0.1412E-02 0.1248E-03 0.1822E-03

0.1542E-01 -0.7742E-01 0.4742E-01 0.8452E-03 0.7348E-03 0.1949E-03

0.1542E-01 -0.7742E-01 0.4742E-01 0.8452E-03 0.7348E-03 0.1949E-03

0.1542E-01 -0.7742E-01 0.4742E-01 0.8452E-03 0.7348E-03 0.1949E-03

0.1542E-01 -0.7742E-01 0.4742E-01 0.8452E-03 0.7348E-03 0.1949E-03

0.1542E-01 -0.7742E-01 0.4742E-01 0.8452E-03 0.7348E-03 0.1949E-03

0.1542E-01 -0.7742E-01 0.4742E-01 0.8452E-03 0.7348E-03 0.1949E-03

0.1542E-01 -0.7742E-01 0.4742E-01 0.8452E-03 0.7348E-03 0.1949E-03

0.1542E-01 -0.7742E-01 0.4742E-01 0.8452E-03 0.7348E-03 0.1949E-03

0.1542E-01 -0.7742E-01 0.4742E-01 0.8452E-03 0.7348E-03 0.1949E-03

0.1542E-01 -0.7742E-01 0.4742E-01 0.8452E-03 0.7348E-03 0.1949E-03

0.1542E-01 -0.7742E-01 0.4742E-01 0.8452E-03 0.7348E-03 0.1949E-03

0.1542E-01 -0.7742E-01 0.4742E-01 0.8452E-03 0.7348E-03 0.1949E-03

0.1542E-01 -0.7742E-01 0.4742E-01 0.8452E-03 0.7348E-03 0.1949E-03

0.1542E-01 -0.7742E-01 0.4742E-01 0.8452E-03 0.7348E-03 0.1949E-03

Creilcent out

Creilcent out

Table with 2 columns: Node # (74-87) and Displacement (e.g., -0.8178E-03, -0.1548E-01, etc.)

COUPLED MODE SHAPES (FOR PRIMARY MODE) WIDE

Table with 2 columns: Node # (3041-3043) and Displacement (e.g., 0.6579E-02, 0.0000E+00, etc.)

MODAL DISPLACEMENTS AT SECONDARY SYSTEM JOINT

Table with 4 columns: Node # (1-40), X, Y, Z displacements (e.g., 0.2322E-09, -0.2186E-10, -0.6648E-10, etc.)

Table with 2 columns: Node # (41-87) and Displacement (e.g., 0.1116E-01, -0.7039E-04, -0.8743E-02, etc.)

COUPLED MODE SHAPES (FOR PRIMARY MODE) WIDE

Table with 2 columns: Node # (3041-3043) and Displacement (e.g., 0.6579E-02, 0.0000E+00, etc.)

MODAL DISP AT PRIMARY SYSTEM CONNECTING JOINT

Table with 4 columns: Node # (1-40), X, Y, Z displacements (e.g., 0.1842E-10, -0.4434E-10, -0.4434E-10, etc.)

MODAL DISP AT PRIMARY SYSTEM CONNECTING JOINT
DOF # DISPLACEMENT
3041 0.1705E+00
3042 0.0000E+00
3043 0.4355E-05
3044 0.5566E-01
3045 0.1463E-04
3046 0.0000E-00

COUPLED MODE SHAPES (FOR PRIMARY MODE) WIDE
FREQUENCY (HZ.) = 12.51754
MODAL DISP AT PRIMARY SYSTEM CONNECTING JOINT
DOF # DISPLACEMENT
3041 0.1705E+00
3042 0.0000E+00
3043 0.4355E-05
3044 0.5566E-01
3045 0.1463E-04
3046 0.0000E-00

9018	-0.1199E-01	-0.3066E-01	0.4412E-01	0.1150E-03	0.3617E-01	-0.1472E-01
76	-0.4148E-03	-0.2222E-02	0.4500E-01	0.4071E-02	0.1737E-01	0.6571E-02
9019	0.1008E-00	-0.1772E-01	0.4808E-01	0.2144E-03	0.1893E-02	0.6265E-02
40	0.2111E-00	0.3467E-01	0.4775E-01	-0.3165E-03	-0.5680E-02	0.1355E-02
41	0.2814E-01	0.6698E-01	0.4782E-01	-0.5608E-02	0.1978E-02	0.1480E-02
43	0.7817E-02	0.2660E-02	0.2852E-01	0.6661E-03	0.4547E-02	-0.1490E-02
44	0.7819E-02	0.4328E-02	0.2313E-01	0.6770E-03	0.4342E-02	-0.1490E-02
45	0.7819E-02	0.4328E-02	0.2313E-01	0.6770E-03	0.4342E-02	-0.1490E-02
9020	0.7819E-02	0.4328E-02	0.2313E-01	0.6770E-03	0.4342E-02	-0.1490E-02
9	0.1618E-01	0.1137E-01	0.3188E-01	0.1714E-03	0.6751E-03	0.5550E-03
47	0.7478E-02	0.1155E-01	0.2811E-01	-0.1157E-02	0.6165E-03	0.5656E-03
91	0.7478E-02	0.1155E-01	0.2811E-01	-0.1157E-02	0.6165E-03	0.5656E-03
92	-0.7700E-03	0.1155E-01	0.1512E-01	-0.1062E-02	0.3180E-03	0.5122E-03
93	-0.1478E-02	0.8312E-02	0.1171E-01	-0.7184E-03	0.1701E-03	0.4605E-03
94	-0.1478E-02	0.6179E-02	0.1170E-01	-0.6002E-03	0.1292E-03	0.4034E-03
95	-0.9128E-03	0.5316E-02	0.1169E-01	-0.4128E-03	0.9122E-04	0.1151E-03
96	-0.9128E-03	0.2043E-02	0.1168E-01	-0.2106E-03	0.8308E-04	0.2724E-03
97	0.4068E-03	-0.1773E-02	0.1167E-01	0.7109E-03	0.2724E-03	0.1192E-03
98	0.4068E-03	-0.1773E-02	0.1167E-01	0.7109E-03	0.2724E-03	0.1192E-03
100	0.1058E-02	-0.1773E-02	0.9418E-02	0.3212E-03	0.1512E-03	0.1132E-04
102	0.1414E-02	-0.1772E-02	0.8609E-02	0.3278E-03	0.2088E-03	0.8466E-04
103	0.2165E-02	-0.3507E-02	0.9418E-02	0.2812E-03	0.1693E-03	0.8769E-04
114	0.2836E-02	-0.4368E-02	0.9417E-02	0.1686E-03	0.1616E-03	0.9102E-04
115	0.3509E-02	-0.4943E-02	0.9417E-02	0.1071E-03	0.1548E-03	0.9500E-04
116	0.4448E-02	-0.5382E-02	0.9398E-01	0.1468E-03	0.2453E-03	0.9328E-04
923	0.1922E-02	-0.5377E-02	0.5377E-02	0.2120E-03	0.8432E-04	0.8753E-04
120	-0.2025E-03	0.4573E-02	0.2673E-02	0.3101E-03	0.5513E-04	0.5637E-04
122	-0.2025E-03	0.4573E-02	0.3172E-02	0.3096E-03	0.5017E-04	0.4862E-04
124	-0.2468E-05	0.5374E-02	0.3372E-02	0.3018E-03	0.4585E-04	0.3989E-04
125	-0.5268E-03	0.9822E-05	0.2881E-02	0.2495E-03	0.3848E-04	0.1903E-04
127	0.4348E-03	0.5912E-05	0.3184E-02	0.2008E-03	0.3513E-04	0.1060E-04
129	0.4348E-03	0.5912E-05	0.3184E-02	0.2008E-03	0.3513E-04	0.1060E-04
930	0.5608E-01	0.6311E-10	0.2958E-11	0.2874E-11	0.1554E-11	0.1554E-11
46	0.7453E-02	0.8841E-02	0.2968E-01	-0.1125E-02	0.6401E-03	0.5683E-03
45	0.7442E-02	0.7600E-02	0.2568E-01	-0.1071E-02	0.6406E-03	0.5623E-03
48	0.7442E-02	0.4218E-02	0.2348E-01	-0.1017E-02	0.6338E-03	0.5450E-03
51	0.7431E-02	0.4301E-02	0.2253E-01	-0.1001E-02	0.6304E-03	0.5400E-03
52	0.7398E-02	0.5301E-02	0.1911E-02	-0.9420E-03	0.6112E-03	0.5300E-03
53	0.7376E-02	0.5912E-02	0.1615E-02	-0.9841E-03	0.5748E-03	0.5126E-03
54	0.7136E-02	0.7455E-01	0.5953E-01	0.2891E-03	0.1881E-03	0.1254E-03
55	0.7136E-02	0.2145E-01	0.5953E-01	0.2891E-03	0.1881E-03	0.1254E-03
56	0.5817E-02	0.2490E-01	0.1617E-02	-0.2168E-03	0.3345E-03	0.3355E-03
57	0.5057E-02	0.2477E-01	0.1617E-02	-0.1998E-03	0.3152E-03	0.3199E-03
58	0.4466E-02	0.2452E-01	0.1617E-02	-0.1858E-03	0.2939E-03	0.3045E-03
59	0.3628E-02	0.2517E-01	0.1618E-02	-0.1651E-03	0.2573E-03	0.3540E-03
103	0.3658E-02	0.2497E-01	0.1618E-02	-0.1628E-03	0.2628E-03	0.3432E-03
104	0.3658E-02	0.2497E-01	0.1618E-02	-0.1628E-03	0.2628E-03	0.3432E-03
105	0.3658E-02	0.2497E-01	0.1618E-02	-0.1628E-03	0.2628E-03	0.3432E-03
106	0.3658E-02	0.2497E-01	0.1618E-02	-0.1628E-03	0.2628E-03	0.3432E-03
107	0.3658E-02	0.2497E-01	0.1618E-02	-0.1628E-03	0.2628E-03	0.3432E-03
108	0.3658E-02	0.2497E-01	0.1618E-02	-0.1628E-03	0.2628E-03	0.3432E-03
109	0.3658E-02	0.2497E-01	0.1618E-02	-0.1628E-03	0.2628E-03	0.3432E-03
110	0.3658E-02	0.2497E-01	0.1618E-02	-0.1628E-03	0.2628E-03	0.3432E-03
111	0.3658E-02	0.2497E-01	0.1618E-02	-0.1628E-03	0.2628E-03	0.3432E-03
112	0.3658E-02	0.2497E-01	0.1618E-02	-0.1628E-03	0.2628E-03	0.3432E-03
60	0.3658E-02	0.2497E-01	0.1618E-02	-0.1628E-03	0.2628E-03	0.3432E-03
61	0.3658E-02	0.2497E-01	0.1618E-02	-0.1628E-03	0.2628E-03	0.3432E-03
62	0.3658E-02	0.2497E-01	0.1618E-02	-0.1628E-03	0.2628E-03	0.3432E-03
63	0.3658E-02	0.2497E-01	0.1618E-02	-0.1628E-03	0.2628E-03	0.3432E-03
64	0.3658E-02	0.2497E-01	0.1618E-02	-0.1628E-03	0.2628E-03	0.3432E-03
65	0.3658E-02	0.2497E-01	0.1618E-02	-0.1628E-03	0.2628E-03	0.3432E-03
66	0.3658E-02	0.2497E-01	0.1618E-02	-0.1628E-03	0.2628E-03	0.3432E-03
67	0.3658E-02	0.2497E-01	0.1618E-02	-0.1628E-03	0.2628E-03	0.3432E-03
68	0.3658E-02	0.2497E-01	0.1618E-02	-0.1628E-03	0.2628E-03	0.3432E-03
69	0.3658E-02	0.2497E-01	0.1618E-02	-0.1628E-03	0.2628E-03	0.3432E-03
70	0.3658E-02	0.2497E-01	0.1618E-02	-0.1628E-03	0.2628E-03	0.3432E-03
71	0.3658E-02	0.2497E-01	0.1618E-02	-0.1628E-03	0.2628E-03	0.3432E-03
72	0.3658E-02	0.2497E-01	0.1618E-02	-0.1628E-03	0.2628E-03	0.3432E-03
73	0.3658E-02	0.2497E-01	0.1618E-02	-0.1628E-03	0.2628E-03	0.3432E-03
74	0.3658E-02	0.2497E-01	0.1618E-02	-0.1628E-03	0.2628E-03	0.3432E-03
75	0.3658E-02	0.2497E-01	0.1618E-02	-0.1628E-03	0.2628E-03	0.3432E-03
76	0.3658E-02	0.2497E-01	0.1618E-02	-0.1628E-03	0.2628E-03	0.3432E-03
77	0.3658E-02	0.2497E-01	0.1618E-02	-0.1628E-03	0.2628E-03	0.3432E-03
78	0.3658E-02	0.2497E-01	0.1618E-02	-0.1628E-03	0.2628E-03	0.3432E-03
133	0.3348E-03	0.9112E-02	0.7778E-02	0.1701E-03	0.6584E-03	0.1650E-03
134	-0.3348E-03	0.9112E-02	0.2073E-02	0.1701E-03	0.6584E-03	0.1650E-03
131	-0.1648E-02	0.1637E-01	0.6788E-04	0.3437E-04	0.5889E-04	0.4194E-03
67	0.1648E-02	0.1637E-01	0.5768E-03	0.8928E-04	0.4713E-04	0.4111E-03
68	0.1698E-02	0.1392E-01	0.6718E-03	0.1072E-03	0.2922E-03	0.4067E-03
69	0.1671E-02	0.1157E-01	0.9058E-03	0.1349E-03	0.1529E-03	0.1970E-03
70	0.1671E-02	0.1157E-01	0.9058E-03	0.1349E-03	0.1529E-03	0.1970E-03
71	0.1671E-02	0.1157E-01	0.9058E-03	0.1349E-03	0.1529E-03	0.1970E-03
65	0.1621E-02	0.1462E-01	0.2921E-02	0.3402E-03	0.1694E-03	0.1652E-03
64	0.1621E-02	0.1462E-01	0.2921E-02	0.3402E-03	0.1694E-03	0.1652E-03
132	0.3098E-02	0.1391E-01	0.8715E-03	0.1662E-03	0.1064E-03	0.8194E-03
113	0.2968E-02	0.1378E-01	0.8173E-03	0.1662E-03	0.1064E-03	0.8194E-03
60	0.2968E-02	0.1378E-01	0.8173E-03	0.1662E-03	0.1064E-03	0.8194E-03
61	0.2968E-02	0.1378E-01	0.8173E-03	0.1662E-03	0.1064E-03	0.8194E-03
62	0.2968E-02	0.1378E-01	0.8173E-03	0.1662E-03	0.1064E-03	0.8194E-03
63	0.2968E-02	0.1378E-01	0.8173E-03	0.1662E-03	0.1064E-03	0.8194E-03
64	0.2968E-02	0.1378E-01	0.8173E-03	0.1662E-03	0.1064E-03	0.8194E-03
65	0.2968E-02	0.1378E-01	0.8173E-03	0.1662E-03	0.1064E-03	0.8194E-03
66	0.2968E-02	0.1378E-01	0.8173E-03	0.1662E-03	0.1064E-03	0.8194E-03
67	0.2968E-02	0.1378E-01	0.8173E-03	0.1662E-03	0.1064E-03	0.8194E-03
68	0.2968E-02	0.1378E-01	0.8173E-03	0.1662E-03	0.1064E-03	0.8194E-03
69	0.2968E-02	0.1378E-01	0.8173E-03	0.1662E-03	0.1064E-03	0.8194E-03
70	0.2968E-02	0.1378E-01	0.8173E-03	0.1662E-03	0.1064E-03	0.8194E-03
71	0.2968E-02	0.1378E-01	0.8173E-03	0.1662E-03	0.1064E-03	0.8194E-03
72	0.2968E-02	0.1378E-01	0.8173E-03	0.1662E-03	0.1064E-03	0.8194E-03
73	0.2968E-02	0.1378E-01	0.8173E-03	0.1662E-03	0.1064E-03	0.8194E-03
74	0.2968E-02	0.1378E-01	0.8173E-03	0.1662E-03	0.1064E-03	0.8194E-03
75	0.2968E-02	0.1378E-01	0.8173E-03	0.1662E-03	0.1064E-03	0.8194E-03
76	0.2968E-02	0.1378E-01	0.8173E-03	0.1662E-03	0.1064E-03	0.8194E-03
77	0.2968E-02	0.1378E-01	0.8173E-03	0.1662E-03	0.1064E-03	0.8194E-03
78	0.2968E-02	0.1378E-01	0.8173E-03	0.1662E-03	0.1064E-03	0.8194E-03
9021	0.1706E-02	0.4698E-02	0.7778E-02	0.1701E-03	0.6584E-03	0.1650E-03
79	0.1701E-02	0.5188E-02	0.2768E-02	0.2139E-03	0.1828E-03	0.5673E-04
80	0.1700E-02	0.7102E-02	0.9647E-02	0.1890E-03	0.1446E-03	0.4977E-04
81	0.1700E-02	0.7102E-02	0.5212E-02	0.1678E-03	0.1300E-03	0.4433E-04
82	0.2072E-02	0.6638E-02	0.1917E-02	0.1678E-03	0.1234E-04	0.4454E-04
9022	0.1966E-02	0.3139E-02	0.1852E-02	0.1268E-03	0.8722E-04	0.2466E-04
83	0.1966E-02	0.3139E-02	0.1852E-02	0.1268E-03	0.8722E-04	0.2466E-04
84	0.1966E-02	0.3139E-02	0.1852E-02	0.1268E-03	0.8722E-04	0.2466E-04
85	0.1966E-02	0.3139E-02	0.1852E-02	0.1268E-03	0.8722E-04	0.2466E-04
86	0.1966E-02	0.3139E-02	0.1852E-02	0.1268E-03	0.8722E-04	0.2466E-04
87	0.1966E-02	0.3139E-02	0.1852E-02	0.1268E-03	0.8722E-04	0.2466E-04

COUPLED MODE SHAFTS (FOR SECONDARY MODE) MODE 6
 FREQUENCY (HZ.) * 2.800E1
 MODAL DISP AT PRIMARY SYSTEM CONNECTING DOF
 DOF # DISPLACEMENT
 1041 0.1720E-05

3042	0.6000E-00	0.7950E-09	0.1102E-10	0.7457E-10	0.3818E-09	0.1558E-08
3043	0.2459E-02	0.3978E-02	-0.7873E-02	-0.1741E-0		

Table of displacement values for nodes 125 to 87, including columns for X, Y, Z, ROT-X, ROT-Y, and ROT-Z coordinates.

COUPLED MODE SHAPES (FOR SECONDARY NODE) MODE 7

FREQUENCY (HZ.) = 3.43011

MODAL DISP AT PRIMARY SYSTEM CONTAINING DOF

Table with columns DOF # and DISPLACEMENT, listing displacement values for various degrees of freedom.

MODAL DISPLACEMENTS AT SECONDARY SYSTEM DOF

Table with columns NODE, DX, DY, DZ, ROT-X, ROT-Y, and ROT-Z, listing modal displacements for secondary system degrees of freedom.

Large table of displacement values for nodes 9005 to 131, including columns for X, Y, Z, ROT-X, ROT-Y, and ROT-Z coordinates.

Table with columns: DFP #, Displacement, ROT-X, ROT-Y, ROT-Z. Rows 1-30.

COUPLED MOOR SHAPES (FOR SECONDARY MOOR) MOOR FREQUENCY (Hz.) = 3.8953

MUODL DISE AT PRIMARY SYSTEM CONNECTING JOG

Table with columns: DFP #, Displacement, ROT-X, ROT-Y, ROT-Z. Rows 301-303.

MUODL DISPLACEMENTS AT SECONDARY SYSTEM DDF

Table with columns: DFP #, Displacement, ROT-X, ROT-Y, ROT-Z. Rows 1-30.

Table with columns: DFP #, Displacement, ROT-X, ROT-Y, ROT-Z. Rows 31-60.

COUPLED MOOR SHAPES (FOR SECONDARY MOOR) MOOR FREQUENCY (Hz.) = 3.8953

MUODL DISE AT PRIMARY SYSTEM CONNECTING JOG

Table with columns: DFP #, Displacement, ROT-X, ROT-Y, ROT-Z. Rows 301-303.

MUODL DISPLACEMENTS AT SECONDARY SYSTEM DDF

Table with columns: DFP #, Displacement, ROT-X, ROT-Y, ROT-Z. Rows 1-30.

MODAL DISP AT PRIMARY SYSTEM CONNECTING DOP

Table with columns: DOP #, DISPLACEMENT, ROT-X, ROT-Y, ROT-Z. Rows 1 to 3093.

MODAL DISPLACEMENTS AT SECONDARY SYSTEM DOP

Table with columns: NODE, DX, DY, DZ, ROT-X, ROT-Y, ROT-Z. Rows 1 to 3093.

MODAL DISP AT PRIMARY SYSTEM CONNECTING DOP

Table with columns: DOP #, DISPLACEMENT, ROT-X, ROT-Y, ROT-Z. Rows 1 to 3093.

MODAL DISPLACEMENTS AT SECONDARY SYSTEM DOP

Table with columns: NODE, DX, DY, DZ, ROT-X, ROT-Y, ROT-Z. Rows 1 to 3093.

COUPLED MODE SHAPES (FOR SECONDARY NODE) MODE

Table with columns: DOP #, DISPLACEMENT. Rows 1 to 3093.

MODAL DISPLACEMENTS AT SECONDARY SYSTEM DOP

Table with columns: NODE, DX, DY, DZ, ROT-X, ROT-Y, ROT-Z. Rows 1 to 3093.

MODAL DISP AT PRIMARY SYSTEM CONNECTING DOP

Table with columns: DOP #, DISPLACEMENT. Rows 1 to 3093.

MODAL DISPLACEMENTS AT SECONDARY SYSTEM DOP

Table with columns: NODE, DX, DY, DZ, ROT-X, ROT-Y, ROT-Z. Rows 1 to 3093.

NO	DISPLACEMENT	MODAL DISP AT PRIMARY SYSTEM CONNECTING JOINT	FREQUENCY (HZ.) * 5.68905
7	-0.10918E-02	-0.10918E-02	0.10918E-02
8	-0.25648E-02	-0.25648E-02	0.25648E-02
9	-0.48950E-02	-0.48950E-02	0.48950E-02
10	-0.81268E-02	-0.81268E-02	0.81268E-02
11	-0.13188E-01	-0.13188E-01	0.13188E-01
12	-0.21748E-01	-0.21748E-01	0.21748E-01
13	-0.36078E-01	-0.36078E-01	0.36078E-01
14	-0.51628E-01	-0.51628E-01	0.51628E-01
15	-0.68498E-01	-0.68498E-01	0.68498E-01
16	-0.86708E-01	-0.86708E-01	0.86708E-01
17	-0.10624E-00	-0.10624E-00	0.10624E-00
18	-0.12728E-00	-0.12728E-00	0.12728E-00
19	-0.14998E-00	-0.14998E-00	0.14998E-00
20	-0.17428E-00	-0.17428E-00	0.17428E-00
21	-0.20018E-00	-0.20018E-00	0.20018E-00
22	-0.22768E-00	-0.22768E-00	0.22768E-00
23	-0.25678E-00	-0.25678E-00	0.25678E-00
24	-0.28748E-00	-0.28748E-00	0.28748E-00
25	-0.31978E-00	-0.31978E-00	0.31978E-00
26	-0.35368E-00	-0.35368E-00	0.35368E-00
27	-0.38918E-00	-0.38918E-00	0.38918E-00
28	-0.42628E-00	-0.42628E-00	0.42628E-00
29	-0.46508E-00	-0.46508E-00	0.46508E-00
30	-0.50558E-00	-0.50558E-00	0.50558E-00
31	-0.54778E-00	-0.54778E-00	0.54778E-00
32	-0.59168E-00	-0.59168E-00	0.59168E-00
33	-0.63728E-00	-0.63728E-00	0.63728E-00
34	-0.68458E-00	-0.68458E-00	0.68458E-00
35	-0.73368E-00	-0.73368E-00	0.73368E-00
36	-0.78458E-00	-0.78458E-00	0.78458E-00
37	-0.83728E-00	-0.83728E-00	0.83728E-00
38	-0.89178E-00	-0.89178E-00	0.89178E-00
39	-0.94808E-00	-0.94808E-00	0.94808E-00
40	-0.10061E-00	-0.10061E-00	0.10061E-00
41	-0.10736E-00	-0.10736E-00	0.10736E-00
42	-0.11434E-00	-0.11434E-00	0.11434E-00
43	-0.12154E-00	-0.12154E-00	0.12154E-00
44	-0.12896E-00	-0.12896E-00	0.12896E-00
45	-0.13660E-00	-0.13660E-00	0.13660E-00
46	-0.14446E-00	-0.14446E-00	0.14446E-00
47	-0.15254E-00	-0.15254E-00	0.15254E-00
48	-0.16084E-00	-0.16084E-00	0.16084E-00
49	-0.16936E-00	-0.16936E-00	0.16936E-00
50	-0.17810E-00	-0.17810E-00	0.17810E-00
51	-0.18706E-00	-0.18706E-00	0.18706E-00
52	-0.19624E-00	-0.19624E-00	0.19624E-00
53	-0.20564E-00	-0.20564E-00	0.20564E-00
54	-0.21526E-00	-0.21526E-00	0.21526E-00
55	-0.22510E-00	-0.22510E-00	0.22510E-00
56	-0.23516E-00	-0.23516E-00	0.23516E-00
57	-0.24544E-00	-0.24544E-00	0.24544E-00
58	-0.25594E-00	-0.25594E-00	0.25594E-00
59	-0.26666E-00	-0.26666E-00	0.26666E-00
60	-0.27760E-00	-0.27760E-00	0.27760E-00
61	-0.28876E-00	-0.28876E-00	0.28876E-00
62	-0.30014E-00	-0.30014E-00	0.30014E-00
63	-0.31174E-00	-0.31174E-00	0.31174E-00
64	-0.32356E-00	-0.32356E-00	0.32356E-00
65	-0.33560E-00	-0.33560E-00	0.33560E-00
66	-0.34786E-00	-0.34786E-00	0.34786E-00
67	-0.36034E-00	-0.36034E-00	0.36034E-00
68	-0.37304E-00	-0.37304E-00	0.37304E-00
69	-0.38596E-00	-0.38596E-00	0.38596E-00
70	-0.39910E-00	-0.39910E-00	0.39910E-00
71	-0.41246E-00	-0.41246E-00	0.41246E-00
72	-0.42604E-00	-0.42604E-00	0.42604E-00
73	-0.43984E-00	-0.43984E-00	0.43984E-00
74	-0.45386E-00	-0.45386E-00	0.45386E-00
75	-0.46810E-00	-0.46810E-00	0.46810E-00
76	-0.48256E-00	-0.48256E-00	0.48256E-00
77	-0.49724E-00	-0.49724E-00	0.49724E-00
78	-0.51214E-00	-0.51214E-00	0.51214E-00
79	-0.52726E-00	-0.52726E-00	0.52726E-00
80	-0.54260E-00	-0.54260E-00	0.54260E-00
81	-0.55816E-00	-0.55816E-00	0.55816E-00
82	-0.57394E-00	-0.57394E-00	0.57394E-00
83	-0.58994E-00	-0.58994E-00	0.58994E-00
84	-0.60616E-00	-0.60616E-00	0.60616E-00
85	-0.62260E-00	-0.62260E-00	0.62260E-00
86	-0.63926E-00	-0.63926E-00	0.63926E-00
87	-0.65614E-00	-0.65614E-00	0.65614E-00
88	-0.67324E-00	-0.67324E-00	0.67324E-00
89	-0.69056E-00	-0.69056E-00	0.69056E-00
90	-0.70810E-00	-0.70810E-00	0.70810E-00
91	-0.72586E-00	-0.72586E-00	0.72586E-00
92	-0.74384E-00	-0.74384E-00	0.74384E-00
93	-0.76204E-00	-0.76204E-00	0.76204E-00
94	-0.78046E-00	-0.78046E-00	0.78046E-00
95	-0.79910E-00	-0.79910E-00	0.79910E-00
96	-0.81796E-00	-0.81796E-00	0.81796E-00
97	-0.83704E-00	-0.83704E-00	0.83704E-00
98	-0.85634E-00	-0.85634E-00	0.85634E-00
99	-0.87586E-00	-0.87586E-00	0.87586E-00
100	-0.89560E-00	-0.89560E-00	0.89560E-00
101	-0.91556E-00	-0.91556E-00	0.91556E-00
102	-0.93574E-00	-0.93574E-00	0.93574E-00
103	-0.95614E-00	-0.95614E-00	0.95614E-00
104	-0.97676E-00	-0.97676E-00	0.97676E-00
105	-0.99760E-00	-0.99760E-00	0.99760E-00
106	-1.01866E-00	-1.01866E-00	1.01866E-00
107	-1.03994E-00	-1.03994E-00	1.03994E-00
108	-1.06144E-00	-1.06144E-00	1.06144E-00
109	-1.08316E-00	-1.08316E-00	1.08316E-00
110	-1.10510E-00	-1.10510E-00	1.10510E-00
111	-1.12726E-00	-1.12726E-00	1.12726E-00
112	-1.14964E-00	-1.14964E-00	1.14964E-00
113	-1.17224E-00	-1.17224E-00	1.17224E-00
114	-1.19506E-00	-1.19506E-00	1.19506E-00
115	-1.21810E-00	-1.21810E-00	1.21810E-00
116	-1.24136E-00	-1.24136E-00	1.24136E-00
117	-1.26484E-00	-1.26484E-00	1.26484E-00
118	-1.28854E-00	-1.28854E-00	1.28854E-00
119	-1.31246E-00	-1.31246E-00	1.31246E-00
120	-1.33660E-00	-1.33660E-00	1.33660E-00
121	-1.36096E-00	-1.36096E-00	1.36096E-00
122	-1.38554E-00	-1.38554E-00	1.38554E-00
123	-1.41034E-00	-1.41034E-00	1.41034E-00
124	-1.43536E-00	-1.43536E-00	1.43536E-00
125	-1.46060E-00	-1.46060E-00	1.46060E-00
126	-1.48606E-00	-1.48606E-00	1.48606E-00
127	-1.51174E-00	-1.51174E-00	1.51174E-00
128	-1.53764E-00	-1.53764E-00	1.53764E-00
129	-1.56376E-00	-1.56376E-00	1.56376E-00
130	-1.58910E-00	-1.58910E-00	1.58910E-00
131	-1.61466E-00	-1.61466E-00	1.61466E-00
132	-1.64044E-00	-1.64044E-00	1.64044E-00
133	-1.66644E-00	-1.66644E-00	1.66644E-00
134	-1.69266E-00	-1.69266E-00	1.69266E-00
135	-1.71910E-00	-1.71910E-00	1.71910E-00
136	-1.74576E-00	-1.74576E-00	1.74576E-00
137	-1.77264E-00	-1.77264E-00	1.77264E-00
138	-1.80074E-00	-1.80074E-00	1.80074E-00
139	-1.82906E-00	-1.82906E-00	1.82906E-00
140	-1.85760E-00	-1.85760E-00	1.85760E-00
141	-1.88636E-00	-1.88636E-00	1.88636E-00
142	-1.91534E-00	-1.91534E-00	1.91534E-00
143	-1.94454E-00	-1.94454E-00	1.94454E-00
144	-1.97396E-00	-1.97396E-00	1.97396E-00
145	-2.00360E-00	-2.00360E-00	2.00360E-00
146	-2.03346E-00	-2.03346E-00	2.03346E-00
147	-2.06354E-00	-2.06354E-00	2.06354E-00
148	-2.09384E-00	-2.09384E-00	2.09384E-00
149	-2.12436E-00	-2.12436E-00	2.12436E-00
150	-2.15510E-00	-2.15510E-00	2.15510E-00
151	-2.18606E-00	-2.18606E-00	2.18606E-00
152	-2.21724E-00	-2.21724E-00	2.21724E-00
153	-2.24864E-00	-2.24864E-00	2.24864E-00
154	-2.28026E-00	-2.28026E-00	2.28026E-00
155	-2.31210E-00	-2.31210E-00	2.31210E-00
156	-2.34416E-00	-2.34416E-00	2.34416E-00
157	-2.37644E-00	-2.37644E-00	2.37644E-00
158	-2.40894E-00	-2.40894E-00	2.40894E-00
159	-2.44166E-00	-2.44166E-00	2.44166E-00
160	-2.47460E-00	-2.47460E-00	2.47460E-00
161	-2.50776E-00	-2.50776E-00	2.50776E-00
162	-2.54114E-00	-2.54114E-00	2.54114E-00
163	-2.57474E-00	-2.57474E-00	2.57474E-00
164	-2.60856E-00	-2.60856E-00	2.60856E-00
165	-2.64260E-00	-2.64260E-00	2.64260E-00
166	-2.67686E-00	-2.67686E-00	2.67686E-00
167	-2.71134E-00	-2.71134E-00	2.71134E-00
168	-2.74604E-00	-2.74604E-00	2.74604E-00
169	-2.78096E-00	-2.78096E-00	2.78096E-00
170	-2.81610E-00	-2.81610E-00	2.81610E-00
171	-2.85146E-00	-2.85146E-00	2.85146E-00
172	-2.88704E-00	-2.88704E-00	2.88704E-00
173	-2.92284E-00	-2.92284E-00	2.92284E-00
174	-2.95886E-00	-2.95886E-00	2.95886E-00
175	-3.00510E-00	-3.00510E-00	3.00510E-00
176	-3.05156E-00	-3.05156E-00	3.05156E-00
177	-3.09824E-00	-3.09824E-00	3.09824E-00
178	-3.14514E-00	-3.14514E-00	3.14514E-00
179	-3.19226E-00	-3.19226E-00	3.19226E-00
180	-3.23960E-00	-3.23960E-00	3.23960E-00
181	-3.28716E-00	-3.28716E-00	3.28716E-00
182	-3.33494E-00	-3.33494E-00	3.33494E-00
183	-3.38294E-00	-3.38294E-00	3.38294E-00
184	-3.43116E-00	-3.43116E-00	3.43116E-00
185	-3.47960E-00	-3.47960E-00	3.47960E-00
186	-3.52826E-00	-3.52826E-00	3.52826E-00
187	-3.57714E-00	-3.57714E-00	3.57714E-00
188	-3.62624E-00	-3.62624E-00	3.62624E-00
189	-3.67556E-00	-3.67556E-00	3.67556E-00
190	-3.72510E-00	-3.72510E-00	3.72510E-00
191	-3.77486E-00	-3.77486E-00	3.77486E-00
192	-3.82484E-00	-3.82484E-00	3.82484E-00
193	-3.87504E-00	-3.87504E-00	3.87504E-00
194	-3.92546E-00	-3.92546E-00	3.92546E-00
195	-3.97610E-00	-3.97610E-00	3.97610E-00
196	-4.02696E-00	-4.02696E-00	4.02696E-00
197	-4.07804E-00	-4.07804E-00	4.07804E-00
198	-4.12934E-00	-4.12934E-00	4.12934E-00
199	-4.18086E-00	-4.18086E-00	4.18086E-00
200	-4.23260E-00	-4.23260E-00	4.23260E-00
201	-4.28456E-00	-4.28456E-00	4.28456E-00
202	-4.33674E-00	-4.33674E-00	4.33674E-00
203	-4.38914E-00	-4.38914E-00	4.38914E-00
204	-4.44176E-00	-4.44176E-00	4.44176E-00
205	-4.49460E-00	-4.49460E-00	4.49460E-00
206	-4.54766E-00	-4.54766E-00	4.54766E-00
207	-4.600		

Table with 3 columns: DOP #, DISPLACEMENT, and FREQUENCY (Hz). Contains data for DOP #s 28 through 3093.

COUPLED MODE SHAPES (FOR SECONDARY MODE) MODE

FREQUENCY (Hz) = 7.46773

NODAL DISP AT PRIMARY SYSTEM CORRECTIVE DOP

DOP # DISPLACEMENT

Table with 2 columns: DOP #, DISPLACEMENT. Contains data for DOP #s 3041 through 3093.

NODAL DISPLACEMENTS AT SECONDARY SYSTEM DOP

MODE DX DY DZ

Large table with 4 columns: MODE, DX, DY, DZ. Contains data for MODEs 1 through 101.

MODE-X

MODE-Y

MODE-Z

crcelcent.out

Table with 3 columns: DOP #, FREQUENCY (Hz.), and ROTATION (ROT-X, ROT-Y, ROT-Z). Contains data for modes 102 through 87.

COUPLED MODE SHAPES (FOR SECONDARY MODE) MIXED

FREQUENCY (Hz.) = 8.07028

MODAL DISP AT PRIMARY SYSTEM CORRECTING DOP

Table with 3 columns: DOP #, ROT-X, ROT-Y, ROT-Z. Contains data for modes 3041 through 3093.

MODAL DISPLACEMENTS AT SECONDARY SYSTEM DOP

Table with 3 columns: MODE, DX, DY, DZ. Contains data for modes 1 through 107.

crcelcent.out

Table with 3 columns: DOP #, ROTATION (ROT-X, ROT-Y, ROT-Z). Contains data for modes 4 through 107.

crclocent.out

Table with columns: Dof #, Dof X, Dof Y, Dof Z, and numerical values for various modes.

14

COUPLED MODE SHAPES (FOR SECONDARY MODE) WXYZ
FREQUENCY (Hz) = 8.30712

MODAL DISP AT PRIMARY SYSTEM CONSISTING DOF

Table with columns: Dof #, Dof X, Dof Y, Dof Z, and numerical values for various modes.

crclocent.out

Table with columns: Dof #, Dof X, Dof Y, Dof Z, and numerical values for various modes.

14

COUPLED MODE SHAPES (FOR SECONDARY MODE) WXYZ
FREQUENCY (Hz) = 8.30712

MODAL DISP AT PRIMARY SYSTEM CONSISTING DOF

Table with columns: Dof #, Dof X, Dof Y, Dof Z, and numerical values for various modes.

Table with 2 columns: Node ID and Displacement values. Rows 83-87.

COUPLED MODE SHAPES (FOR SECONDARY NODE) NODE FREQUENCY (HZ.) = 10.62667

MODAL DISP AT PRIMARY SYSTEM CONNECTING DOF

DOF # DISPLACEMENT

Table with 2 columns: DOF # and Displacement. Rows 3041-3093.

MODAL DISPLACEMENTS AT SECONDARY SYSTEM DOF

Table with 7 columns: Node, DX, DY, DZ, ROT-X, ROT-Y, ROT-Z. Rows 1-95.

Table with 2 columns: Node ID and Displacement values. Rows 96-115.

COUPLED MODE SHAPES (FOR SECONDARY NODE) NODE FREQUENCY (HZ.) = 13.12996

MODAL DISP AT PRIMARY SYSTEM CONNECTING DOF

DOF # DISPLACEMENT

Table with 2 columns: DOF # and Displacement. Rows 3041-3093.

COUPLED MODE SHAPES (FOR SECONDARY NODE) NODE FREQUENCY (HZ.) = 13.12996

MODAL DISP AT PRIMARY SYSTEM CONNECTING DOF

DOF # DISPLACEMENT

Table with 2 columns: DOF # and Displacement. Rows 3041-3093.

crescent.out							29/71
NODE	DX	DY	DZ	ROT-X	ROT-Y	ROT-Z	
1	-0.1774E-08	-0.4302E-08	0.1439E-08	-0.4291E-09	-0.3992E-09	-0.1460E-08	
2	0.9341E-03	-0.4374E-02	0.9600E-03	-0.1777E-03	-0.4044E-03	-0.2255E-02	
3	0.5182E-02	-0.4748E-01	0.1376E-01	-0.1010E-03	-0.1305E-02	-0.3931E-02	
4	0.5115E-02	-0.1690E+00	0.5867E-01	-0.1815E-04	-0.1815E-04	-0.4366E-02	
5	0.5096E-02	-0.2189E+00	0.8165E-01	0.1081E-03	-0.1559E-02	-0.3062E-02	
9001	0.6475E-02	-0.2243E+00	0.8453E-01	0.1101E-03	-0.1449E-02	-0.2580E-02	
9002	0.9644E-02	-0.2275E+00	0.8661E-01	0.1006E-03	-0.1346E-02	-0.2081E-02	
6	0.1305E-01	-0.2285E+00	0.8746E-01	0.9265E-04	-0.1253E-02	-0.1585E-02	
9	0.1305E-01	-0.2285E+00	0.8746E-01	0.9265E-04	-0.1253E-02	-0.1585E-02	
9003	-0.4004E-03	-0.2285E+00	0.8305E-01	-0.4892E-03	0.5415E-03	-0.1528E-03	
9004	-0.4916E-01	-0.2285E+00	0.4994E-01	-0.1210E-02	-0.2233E-02	0.4391E-03	
9	0.8621E-02	-0.2284E+00	0.6310E-02	-0.9097E-03	0.3924E-02	-0.4115E-02	
10	0.8266E-01	-0.2284E+00	0.1102E-02	-0.7075E-03	0.4217E-02	-0.5008E-02	
9005	0.2146E+00	-0.2281E+00	-0.4155E-02	0.3555E-03	0.5654E-02	0.5017E-02	
9006	0.2914E+00	-0.2278E+00	0.2219E-01	0.1307E-02	0.7091E-02	0.9615E-03	
11	-0.1211E+00	-0.2274E+00	0.7741E-01	0.2245E-02	0.8527E-02	0.1025E-02	
12	-0.7919E-02	-0.2273E+00	0.1035E+00	0.2625E-02	0.9022E-02	0.1379E-01	
9007	-0.3489E-01	-0.2199E+00	0.1039E+00	0.2105E-02	0.2498E-02	0.1498E-01	
1008	-0.5622E-01	-0.1984E+00	0.9523E-01	0.2866E-02	0.9189E-02	0.1612E-01	
13	-0.6453E-01	-0.1671E+00	0.7936E-01	0.2970E-02	0.9293E-02	0.1717E-01	
14	-0.6453E-01	-0.1186E+00	0.5364E-01	0.3123E-02	0.9376E-02	0.1785E-01	
15	-0.6452E-01	-0.7649E-02	-0.1117E-02	0.3455E-02	0.9524E-02	0.1888E-01	
16	-0.6450E-01	0.2638E+00	-0.1375E+00	0.4227E-02	0.9698E-02	0.1967E-01	
17	-0.5383E-01	0.1112E+00	-0.1633E+00	0.4426E-02	0.9709E-02	0.1958E-01	
18	-0.6277E-02	0.3838E+00	-0.2108E+00	0.4937E-02	0.9661E-02	0.1927E-01	
19	-0.6014E-01	0.4773E+00	-0.2773E+00	0.6064E-02	0.9460E-02	0.1845E-01	
20	0.2273E+00	-0.4349E+00	-0.4442E+00	0.1048E-01	0.8758E-02	0.1488E-01	
21	0.1949E+00	0.6447E+00	-0.4230E+00	0.1252E-01	0.8556E-02	0.1301E-01	
9009	-0.1731E+00	0.6446E+00	-0.1427E+00	0.1358E-01	0.7706E-02	0.5248E-02	
9010	-0.2240E+00	0.6441E+00	0.5236E+00	0.3845E-02	0.6857E-02	-0.2342E-02	
22	-0.4682E-01	0.6434E+00	0.4079E+00	-0.9164E-02	0.6007E-02	-0.5263E-02	
23	-0.3049E-02	0.6432E+00	0.3199E+00	-0.1146E-01	0.5827E-02	-0.4942E-02	
24	0.6904E-01	0.6427E+00	0.1048E+00	-0.1436E-01	0.5480E-02	-0.3797E-02	
9011	0.1457E+00	0.6416E+00	-0.3760E+00	-0.1260E-01	0.4772E-02	0.6421E-03	
9012	0.1113E+00	0.6413E+00	-0.6471E+00	-0.2468E-02	0.4471E-02	0.2449E-02	
25	0.1127E-02	0.6388E+00	-0.5361E+00	0.8816E-02	0.3378E-02	0.3799E-02	
26	-0.3442E-01	0.6383E+00	-0.4396E+00	0.1140E-01	0.3156E-02	0.3702E-02	
9013	-0.1416E+00	0.6364E+00	0.4343E-01	0.1372E-01	0.2405E-02	0.1874E-02	
9014	-0.1519E+00	0.6343E+00	0.3917E+00	0.3909E-02	0.1654E-02	-0.1237E-02	
27	-0.5762E-01	0.6320E+00	0.2193E+00	-0.1462E-01	0.9035E-02	-0.3620E-02	
28	-0.7342E-02	0.6311E+00	-0.2816E-01	-0.2284E-01	0.6226E-03	-0.3689E-02	
29	0.6875E-01	0.6295E+00	-0.5757E+00	-0.1986E-01	0.2969E-02	-0.3550E-02	
9015	0.1601E+00	0.6265E+00	-0.1514E-01	-0.1486E-01	-0.5928E-02	0.9839E-03	
9016	0.1318E+00	0.6232E+00	-0.6232E-01	-0.1449E-01	-0.1348E-02	0.2368E-02	
30	0.9303E-02	0.6197E+00	-0.1662E+00	0.4578E-01	-0.2178E-02	0.3772E-02	
31	0.3193E-02	0.6196E+00	-0.1201E+00	0.4620E-01	-0.2197E-02	0.3767E-02	
32	-0.5255E-02	0.5669E+00	0.5475E-02	0.4806E-01	-0.2255E-02	0.3724E-02	
35	-0.1944E-01	0.4372E+00	0.5900E-01	0.4843E-01	-0.2303E-02	0.3671E-02	
37	-0.3900E-01	0.4076E-01	0.5911E-01	0.4307E-01	-0.2288E-02	0.3505E-02	
9017	-0.9878E-01	-0.7730E+00	0.5950E-01	0.8063E-02	-0.1127E-02	0.2860E-02	
9018	-0.1014E+00	-0.5824E+00	0.5987E-01	-0.1736E-01	0.1038E-02	0.2217E-02	
38	-0.3363E-01	-0.1852E+00	0.6022E-01	-0.2513E-01	0.3008E-02	0.1574E-02	
39	-0.3718E-04	-0.4186E+00	0.6032E-01	-0.2322E-01	0.3458E-02	0.1368E-02	
9019	-0.1325E+00	0.9714E+00	0.6065E-01	-0.7095E-02	0.4090E-02	0.6511E-03	
40	0.2742E+00	0.8323E+00	0.6096E-01	0.1530E-01	0.4319E-02	0.1448E-04	
41	0.4218E+00	0.1403E+00	0.6121E-01	0.3024E-01	0.6240E-02	-0.5703E-03	
43	0.4459E+00	0.1872E-01	0.3449E-01	0.3339E-01	0.7804E-02	-0.9039E-03	
44	0.4459E+00	0.1739E-01	0.2312E-01	0.3400E-01	0.8070E-02	-0.8579E-03	
45	0.4469E+00	0.1446E-01	-0.8983E-02	0.3561E-01	0.8870E-02	-0.7754E-03	
9020	0.4465E+00	-0.4074E-01	-0.3500E+00	0.4768E-01	0.1534E-01	-0.4421E-02	
46	0.4461E+00	-0.6232E-01	-0.8958E-02	0.5975E-01	0.2342E-01	-0.1574E-03	
47	0.4460E+00	-0.3582E+00	-0.9659E+00	0.6102E-01	0.4012E-01	-0.1740E-01	
91	0.5042E+00	-0.3582E+00	-0.7835E+00	0.5991E-01	0.2684E-01	-0.2360E-01	
92	0.9787E+00	-0.3581E+00	-0.1624E+00	0.4962E-01	0.4722E-01	-0.5573E-01	
93	0.1424E+01	-0.5149E+00	0.7618E-02	0.3669E-01	0.5919E-01	-0.7075E-01	
94	0.1621E+01	-0.6273E+00	0.7703E-02	0.3246E-01	0.6076E-01	-0.7600E-01	
95	0.1928E+01	-0.7731E+00	0.7834E-02	0.2564E-01	0.5974E-01	-0.8410E-01	
96	0.2219E+01	-0.8839E+00	0.7965E-02	0.1866E-01	0.5609E-01	-0.9219E-01	
97	0.2212E+01	-0.8885E+00	0.7971E-02	0.1834E-01	0.5478E-01	-0.9259E-01	
98	0.2040E+01	-0.9370E+00	-0.2546E-01	0.4009E-02	0.2951E-01	-0.1073E+00	
100	0.1541E+01	-0.9370E+00	-0.3091E-02	-0.1252E-02	0.2918E-01	-0.1161E-00	
101	0.1148E+01	-0.9370E+00	-0.2197E-01	-0.4390E-02	0.2249E-01	-0.1230E+00	
102	0.6998E+00	-0.9364E+00	0.3993E-02	-0.9091E-02	0.1366E-01	-0.1357E+00	
112	0.1321E+01	-0.9237E+00	-0.2198E-01	0.3435E-03	0.2285E-01	-0.1058E+00	
114	0.1416E+01	-0.9309E+00	-0.2200E-01	0.2190E-02	0.2135E-01	-0.8950E-01	
115	0.1502E+01	-0.9411E+00	-0.2201E-01	0.2126E-02	0.1691E-01	-0.7325E-01	
116	0.1608E+01	-0.9467E+00	-0.2203E-01	-0.3947E-03	0.1523E-01	-0.4932E-01	
9024	0.1378E+01	-0.9479E-03	-0.1528E-02	0.4648E-02	0.1083E-01	-0.1574E-01	
9025	0.1651E+01	-0.9452E+00	-0.4379E+00	-0.2300E-01	-0.9157E-02	0.3320E-01	
120	0.3203E+00	-0.9454E+00	-0.1334E+01	-0.4050E-01	-0.2925E-01	0.4789E-02	
122	0.1473E+00	-0.8484E+00	-0.1429E+01	-0.4491E-01	-0.3129E-01	0.4358E-01	
124	0.1222E-01	-0.6513E+00	-0.1429E+01	-0.4817E-01	-0.3187E-01	0.3844E-01	
125	-0.3039E+00	-0.1267E+00	-0.1428E+01	-0.5500E-01	-0.3005E-01	0.2615E-01	
127	-0.3181E+00	-0.4669E-03	-0.1300E-01	-0.5775E-01	-0.2871E-01	0.2144E-01	
129	-0.1001E-01	-0.2754E-03	-0.3976E-01	-0.2689E-01	-0.1693E-01	0.4473E-02	
9026	0.1378E+01	-0.9479E-03	-0.1528E-02	0.4648E-02	0.1083E-01	-0.1574E-01	
130	0.2337E-08	-0.3011E-08	0.1472E-07	0.1719E-08	-0.4807E-09	-0.2656E-09	
48	0.4456E+00	-0.3931E+00	-0.1033E+01	0.6479E-01	0.2075E-01	-0.6172E-02	
49	0.4448E+00	-0.3777E+00	-0.1123E+01	0.7108E-01	0.1494E-01	0.1394E-01	
50	0.4439E+00	-0.2737E+00	-0.1183E+01	0.7736E-01	0.8943E-02	0.2919E-01	
51	0.4477E+00	-0.2259E+00	-0.1195E+01	0.7172E-01	0.7172E-01	0.3418E-01	
52	0.4428E+00	-0.1152E-01	-0.1216E+01	0.8616E-01	0.8333E-03	0.5171E-01	
53	0.4388E+00	0.2053E-01	-0.8523E+00	-0.1999E-01	0.1111E-01	0.1111E-01	
54	0.4324E+00	0.8183E+00	-0.1183E+00	0.1616E+00	-0.1934E-01	0.1557E+00	
55	0.4322E+00	0.7063E-01	-0.1041E+00	0.1625E+00	-0.1892E-01	0.1562E+00	
56	0.3725E+00	0.7031E-01	-0.4068E-01	0.1696E+00	-0.1231E-01	0.1634E+00	
57	0.3456E+00	0.6647E-01	-0.4106E-01	0.1710E+00	-0.9483E-02	0.1662E+00	
58	0.3309E+00	0.6303E-01	-0.4122E-01	0.1719E+00	-0.6787E-02	0.1687E+00	
59	0.3178E+00	0.5785E-01	-0.4147E-01	0.1722E+00	-0.4024E-02	0.1725E+00	

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NODE	DX	DY	DZ	ROT-X	ROT-Y	ROT-Z	
103	0.3117E+00	0.5165E+01	-0.5924E-01	0.1690E+00	-0.6325E-02	0.1561E+00	
104	0.3117E+00	0.5165E+01	-0.5924E-01	0.1690E+00	-0.6325E-02	0.1561E+00	
105	0.3170E+00	0.3227E-01	-0.1724E-01	0.1514E+00	-0.9511E-03	0.1925E-00	
106	0.3169E+00	0.2608E-01	-0.1995E+00	0.1476E+00	-0.8584E-02	0.2184E-00	
107	0.3166E+00	-0.7204E-01	-0.2883E+00	0.1315E+00	-0.7745E-02	0.2191E-00	
109	0.3047E+00	-0.5861E-00	-0.3001E+00	0.1288E+00	-0.7605E-02	0.1965E-00	
110	0.2846E+00	-0.9968E+00	-0.3001E+00	0.1117E+00	-0.3101E-03	0.1554E-00	
112	0.2824E+00	-0.1148E+01	-0.3001E+00	0.1005E+00	0.4888E-03	0.1396E-00	
60	0.3095E+00	0.5268E+01	-0.4170E-01	0.1712E+00	-0.2768E-02	0.1768E-00	
61	0.3012E+00	0.4795E+01	-0.4194E-01	0.1688E+00	-0.3061E-02	0.1810E-00	
62	0.3025E+00	0.4713E+01	-0.4194E-01	0.1685E+00	-0.3139E-02	0.1813E-00	
63	0.2839E+00	0.3394E+01	-0.7063E-01	0.1562E+00	-0.1039E-01	0.1877E-00	
64	0.2854E+00	0.1334E+01	-0.2075E+00	0.1322E+00	-0.1681E-01	0.1827E-00	
65	0.2861E+00	0.4374E+00	-0.2605E+00	0.1214E+00	-0.8287E-02	0.1737E-00	
131	-0.2764E+00	0.4375E+00	0.1331E+00	-			

Table with 11 columns of numerical data representing displacement values for various nodes. The data is organized in a grid format with rows numbered 22 to 9021.

Table with 11 columns of numerical data representing displacement values for various nodes. The data is organized in a grid format with rows numbered 79 to 87.

COUPLED MODE SHAPE (FOR SECONDARY MODE) MODE 18
FREQUENCY (HZ.) = 14.79765

MODAL DISP AT PRIMARY SYSTEM CONNECTING DOF

DOF # DISPLACEMENT

Table with 2 columns: DOF # and DISPLACEMENT. Lists displacement values for DOFs 3041 through 3093.

MODAL DISPLACEMENTS AT SECONDARY SYSTEM DOF

Table with 6 columns: NODE, DX, DY, DZ, ROT-X, ROT-Y, ROT-Z. Lists displacement and rotation values for nodes 1 through 47.

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Table with columns: NODE, DIX, DOP, ROT-X, ROT-Y, ROT-Z. Contains displacement data for nodes 55 through 94.

COUPLED NODE SHAPES (FOR SECONDARY MODEL) WIDE FREQUENCY (Hz.) = 10.53782

MODAL DISP AT PRIMARY SYSTEM CONNECTING DOP

Table with columns: DOP #, DISPLACEMENT, ROT-X, ROT-Y, ROT-Z. Contains displacement data for DOP nodes 3041 through 3093.

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Table with columns: NODE, DIX, DOP, ROT-X, ROT-Y, ROT-Z. Contains displacement data for nodes 19 through 74.

MODAL DISP AT PRIMARY SYSTEM CONNECTING DOP

Table with columns: DOP #, DISPLACEMENT, ROT-X, ROT-Y, ROT-Z. Contains displacement data for DOP nodes 3041 through 3093.

Circulant cut

Table with 2 columns: Node ID and Displacement values. Includes nodes 75-87 and 9020-9028.

COUPLED MODE SHAPES (FOR SECONDARY MODE) MODE FREQUENCY (Hz.) = 17.9551

MODAL DISP AT PRIMARY SYSTEM CONNECTING DOF

Table with 2 columns: DOF # and Displacement values. Includes DOFs 3041-3093.

MODAL DISPLACEMENTS AT SECONDARY SYSTEM DOF

Table with 4 columns: Mode, DX, DY, and ROT-Z. Lists modes 1 through 43 with their respective displacement components.

Circulant cut

Table with 2 columns: Node ID and Displacement values. Includes nodes 44-58 and 9029-9037.

COUPLED MODE SHAPES (FOR SECONDARY MODE) MODE FREQUENCY (Hz.) = 18.2560

MODAL DISP AT PRIMARY SYSTEM CONNECTING DOF

Table with 2 columns: DOF # and Displacement values. Includes DOFs 3041-3093.

MODAL DISPLACEMENTS AT SECONDARY SYSTEM DOF

Table with 4 columns: Mode, DX, DY, and ROT-Z. Lists modes 44 through 87 with their respective displacement components.

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MODE	DX	DY	DZ	ROT-X	ROT-Y	ROT-Z
50	-0.3544E+00	0.1245E+00	0.1648E+01	-0.3862E-02	0.1848E+01	-0.4772E-02
51	-0.2543E+00	0.1988E+00	0.1857E+01	-0.2092E-02	0.4726E-02	-0.1301E-02
52	-0.2543E+00	0.1988E+00	0.1857E+01	0.4193E-02	0.2895E-02	0.3944E-02
53	-0.2543E+00	0.1988E+00	0.1857E+01	0.3302E-01	0.3302E-01	0.3302E-01
54	-0.2543E+00	0.1988E+00	0.1857E+01	0.4466E-02	0.7212E-01	0.4115E-02
55	-0.1470E+00	0.1870E+00	0.1732E+00	0.8409E-01	0.2560E-01	0.3182E-01
56	-0.9905E-01	0.5792E-01	0.1472E+00	0.8578E-01	0.1839E-01	0.3938E-01
57	-0.6558E-01	0.1505E-01	0.1472E+00	0.8578E-01	0.1646E-01	0.3938E-01
58	-0.2081E-01	0.1148E-01	0.1472E+00	0.8578E-01	0.1139E-01	0.3938E-01
59	-0.2081E-01	0.1148E-01	0.1472E+00	0.8578E-01	0.2880E-02	0.2466E-01
100	-0.2078E-01	0.9977E-00	0.1910E+00	0.8748E-01	-0.1414E-01	0.1347E-01
101	-0.2078E-01	0.9977E-00	0.1910E+00	0.8748E-01	-0.1414E-01	0.1448E-01
102	-0.2078E-01	0.9977E-00	0.1910E+00	0.8748E-01	0.2543E-01	0.2543E-01
103	-0.1911E-02	0.3107E-00	0.2575E+00	0.8558E-01	0.9248E-02	0.4132E-01
104	-0.1748E-02	0.1233E+00	0.2515E+00	0.8558E-01	0.1197E-01	0.3187E-01
111	0.3366E-01	-0.1569E-00	0.2515E+00	0.7842E-01	0.6437E-02	0.1408E-02
112	0.3927E-01	-0.2637E-00	0.2515E+00	0.7122E-01	0.5367E-02	0.6542E-02
60	0.1038E-01	0.3725E-00	0.1472E+00	0.8968E-01	0.8906E-02	0.3940E-01
61	0.1038E-01	0.3725E-00	0.1472E+00	0.8968E-01	0.8906E-02	0.3940E-01
62	0.4308E-01	0.9977E-00	0.1910E+00	0.8748E-01	0.2552E-02	0.2864E-02
63	0.4308E-01	0.9977E-00	0.1910E+00	0.8748E-01	0.2552E-02	0.2864E-02
64	0.4308E-01	0.9977E-00	0.1910E+00	0.8748E-01	0.2552E-02	0.2864E-02
65	0.4066E-01	0.3442E+00	0.3442E+00	0.7980E-01	0.4492E-02	0.2475E-01
131	-0.3940E-01	-0.3443E+00	0.4083E-01	0.8008E-01	-0.4492E-02	0.2475E-01
132	-0.1205E+00	-0.3444E+00	0.3013E+00	0.8013E-01	-0.4492E-02	0.2466E-01
66	0.4013E-01	-0.4498E-00	0.2485E+00	0.7691E-01	-0.3109E-02	0.1705E-01
67	0.4022E-01	-0.5096E-00	0.2485E+00	0.7842E-01	-0.1491E-02	0.1075E-01
68	0.3923E-01	-0.2485E-00	0.2485E+00	0.7842E-01	-0.1491E-02	0.1075E-01
69	0.3923E-01	-0.2485E-00	0.2485E+00	0.7842E-01	-0.1491E-02	0.1075E-01
70	0.3948E-01	-0.4418E-00	0.2485E+00	0.8242E-01	0.2194E-02	0.2648E-02
71	0.3948E-01	-0.4418E-00	0.2485E+00	0.8242E-01	0.2194E-02	0.2648E-02
72	0.3948E-01	-0.4418E-00	0.2485E+00	0.8242E-01	0.2194E-02	0.2648E-02
133	0.1122E-00	-0.5097E-00	0.2021E+00	0.6631E-01	0.5091E-02	-0.1122E-01
134	0.1122E-00	-0.5097E-00	0.2021E+00	0.6631E-01	0.5091E-02	-0.1122E-01
73	0.3816E-01	-0.4287E-00	0.1955E+00	0.6134E-01	0.8657E-02	-0.1968E-01
74	0.3816E-01	-0.4287E-00	0.1955E+00	0.6134E-01	0.8657E-02	-0.1968E-01
75	0.3816E-01	-0.4287E-00	0.1955E+00	0.6134E-01	0.8657E-02	-0.1968E-01
76	0.3816E-01	-0.4287E-00	0.1955E+00	0.6134E-01	0.8657E-02	-0.1968E-01
77	0.3816E-01	-0.4287E-00	0.1955E+00	0.6134E-01	0.8657E-02	-0.1968E-01
78	0.3816E-01	-0.4287E-00	0.1955E+00	0.6134E-01	0.8657E-02	-0.1968E-01
79	0.3816E-01	-0.4287E-00	0.1955E+00	0.6134E-01	0.8657E-02	-0.1968E-01
80	0.1014E-00	-0.1174E-01	0.1344E+00	0.2176E-01	0.2176E-01	0.1312E-01
81	0.1014E-00	-0.1174E-01	0.1344E+00	0.2176E-01	0.2176E-01	0.1312E-01
82	0.1014E-00	-0.1174E-01	0.1344E+00	0.2176E-01	0.2176E-01	0.1312E-01
9022	0.1970E+00	-0.1217E+00	0.5961E-01	0.2107E-01	0.1525E-02	0.1317E-01
83	0.1970E+00	-0.1217E+00	0.5961E-01	0.2107E-01	0.1525E-02	0.1317E-01
84	0.2402E-01	-0.6749E-01	0.5842E-01	0.1512E-01	0.5602E-02	0.5213E-02
85	0.1488E-01	-0.6749E-01	0.5842E-01	0.1445E-01	0.5602E-02	0.4459E-02
86	-0.1912E-03	0.6505E-03	0.2402E-03	0.1802E-03	0.1488E-03	0.2160E-03
87	-0.1912E-03	0.6505E-03	0.2402E-03	0.1802E-03	0.1488E-03	0.2160E-03

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COUPLED MODE SHARES (FOR SECONDARY MODE) MODE FREQUENCY (Hz.) = 19.64076

NODAL DISP AT PRIMARY SYSTEM CORRECTING DOP

DOP # DISPLACEMENT

DOP #	DISPLACEMENT
3041	0.6671E-05
3042	0.6000E+00
3043	-0.1607E-04
3061	-0.2868E-05
3063	0.6072E-04
3064	-0.2103E-04
3101	-0.1386E-03
3121	-0.1102E-03
3122	0.0000E+00
3123	7.4852E-04
3091	-0.4613E-04
3092	0.0000E+00
3093	0.1348E-03

NODAL DISPLACEMENTS AT SECONDARY SYSTEM DOP

MODE	DX	DY	DZ	ROT-X	ROT-Y	ROT-Z
1	-0.3740E-03	0.6311E-07	-0.2483E-07	-0.1329E-08	0.1428E-07	0.1922E-07
2	-0.3740E-03	0.6311E-07	-0.2483E-07	0.5390E-07	0.1329E-07	0.2052E-07
3	-0.1538E+00	-0.5545E-03	-0.3709E+00	0.9825E-02	0.3994E-01	-0.5167E-01
4	-0.1538E+00	-0.5545E-03	-0.3709E+00	0.2723E-01	0.3651E-01	-0.5167E-01
5	-0.1538E+00	-0.5545E-03	-0.3709E+00	0.3402E-01	0.2801E-01	-0.3116E-01
9001	-0.1413E+00	-0.2728E-01	-0.1745E+01	0.374E-01	0.2708E-01	-0.1743E-01
9002	-0.1135E+00	-0.2728E-01	-0.1811E+01	0.393E-01	0.2558E-01	-0.1743E-01
9	-0.6671E-05	-0.7252E-01	-0.1655E+01	0.425E-01	0.2558E-01	-0.1743E-01
9003	-0.5716E+00	-0.7955E-01	-0.2812E+01	0.4250E-01	0.2078E-02	0.2184E-02
9004	-0.9913E+00	-0.7955E-01	-0.1031E+01	0.5903E-01	-0.2408E-01	-0.4542E-02
10	0.4845E+00	-0.2737E-01	0.2661E+00	-0.4674E-01	-0.5408E-01	-0.5582E-01
9005	0.1233E+00	-0.2737E-01	-0.2034E-01	-0.552E-01	-0.8069E-01	-0.4102E-01
9006	0.5330E+00	-0.2737E-01	-0.2403E-01	-0.2603E-01	-0.374E-01	-0.1148E-01
9007	0.1233E+00	-0.2737E-01	-0.2403E-01	-0.2603E-01	-0.374E-01	-0.1148E-01
11	-0.2127E+01	-0.2740E-01	-0.2104E-01	-0.3158E-01	-0.1137E+00	0.1628E+00
9007	-0.2482E+01	-0.2740E-01	-0.2104E-01	-0.3158E-01	-0.1137E+00	0.1628E+00
9008	-0.2739E+01	-0.2740E-01	-0.2104E-01	-0.2898E-01	-0.1147E+00	0.1616E+00
13	-0.2818E+01	-0.2036E-01	-0.1607E+01	-0.2784E-01	-0.1352E+00	0.1815E+00

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MODE	DX	DY	DZ	ROT-X	ROT-Y	ROT-Z
1	-0.1061E-06	-0.1461E-06	0.1910E-08	-0.1108E-07	0.8815E-08	-0.4215E-07
2	0.1174E-01	-0.1174E-01	0.1511E+00	0.7117E-02	0.9604E-02	-0.1078E+00
3	-0.8421E-01	-0.4315E-01	-0.3748E+00	0.1131E-01	0.7358E-02	0.9651E-02
4	-0.7051E-01	-0.5131E-01	-0.4790E+00	0.185E-01	0.8118E-02	0.9228E-01
5	-0.8518E-01	-0.5418E-01	-0.4848E+00	0.1948E-01	0.8813E-02	0.8448E-02
9001	-0.5048E-01	-0.5440E-01	-0.4593E+00	0.2041E-01	0.8843E-02	0.9037E-01
6	-0.5048E-01	-0.5441E-01	-0.4593E+00	0.2041E-01	0.9242E-02	0.1078E-01
7	-0.9995E-01	-0.5441E-01	-0.3852E+00	0.2148E-01	0.7421E-02	0.1078E-01
9002	-0.3848E-01	-0.5441E-01	-0.3852E+00	0.2148E-01	0.7421E-02	0.1078E-01
9003	-0.3848E-01	-0.5441E-01	-0.3852E+00	0.2148E-01	0.7421E-02	0.1078E-01
10	0.2661E+00	-0.4402E-01	0.1504E+00	0.2513E-01	0.3517E-01	-0.1943E+00
9005	0.8117E+01	-0.5415E-01	0.2457E+00	0.2852E-01	0.3664E-01	-0.2158E+00
9006	0.9803E+01	-0.5398E-01	0.4631E+00	0.1801E-01	0.4184E-01	-0.1500E+00
11	0.3793E-01	-0.5379E-01	0.8232E+00	0.8128E-01	0.5814E-01	0.2948E+00
12	0.3611E+00	-0.5372E-01	0.1818E+00	0.1038E+00	0.6013E-01	0.1948E+00
9007	0.1818E+00	-0.5372E-01	0.1818E+00	0.1038E+00	0.6013E-01	0.1948E+00
9008	-0.7842E+00	-0.4700E-01	0.2068E+01	0.1172E+00	0.5998E-01	0.3528E+00
13	-0.9663E+00	-0.4017E-01	0.2008E+01	0.1172E+00	0.5998E-01	0.3528E+00
14	-0.9675E+00	-0.3934E-00	0.1841E+01	0.1153E+00	0.5982E-01	0.3568E+00
15	-0.9675E+00	-0.3934E-00	0.1841E+01	0.1153E+00	0.5982E-01	0.3568E+00
16	-0.9675E+00	-0.3934E-00	0.1841E+01	0.1153E+00	0.5982E-01	0.3568E+00
17	-0.9675E+00	-0.3934E-00	0.1841E+01	0.1153E+00	0.5982E-01	0.3568E+00
18	-0.9675E+00	-0.3934E-00	0.1841E+01	0.1153E+00	0.5982E-01	0.3568E+00
19	-0.9675E+00	-0.3934E-00	0.1841E+01	0.1153E+00	0.5982E-01	0.3568E+00
20	-0.9675E+00	-0.3934E-00	0.1841E+01	0.1153E+00	0.5982E-01	0.3568E+00
21	-0.9675E+00	-0.3934E-00	0.1841E+01	0.1153E+00	0.5982E-01	0.3568E+00
9009	-0.4277E+01	0.6240E+00	0.8271E+00	0.5302E-01	0.2005E-01	0.6243E-01
9010	-0.4277E+01	0.6240E+00	0.8271E+00	0.5302E-01	0.2005E-01	0.6243E-01
22	-0.7693E+00	0.6177E-00	0.2843E+01	0.4445E-01	0.2808E-01	-0.5911E-01
23	-0.7693E+00	0.6177E-00	0.2843E+01	0.4445E-01	0.2808E-01	-0.5911E-01
24	-0.7693E+00	0.6177E-00	0.2843E+01	0.4445E-01	0.2808E-01	-0.5911E-01
25	-0.7693E+00	0.6177E-00	0.2843E+01	0.4445E-01	0.2808E-01	-0.5911E-01
26	-0.7693E+00	0.6177E-00	0.2843E+01	0.4445E-01	0.2808E-01	-0.5911E-01
27	-0.7693E+00	0.6177E-00	0.2843E+01	0.4445E-01	0.2808E-01	-0.5911E-01
28	-0.7693E+00	0.6177E-00	0.2843E+01	0.4445E-01	0.2808E-01	-0.5911E-01
29	-0.7693E+00	0.6177E-00	0.2843E+01	0.4445E-01	0.2808E-01	-0.5911E-01
9011	-0.9848E-01	0.6000E+00	0.2356E+01	0.8495E-01	0.3413E-01	-0.3349E-01
9012	-0.1163E+01	0.4092E+00	0.3505E+01	0.3664E-02	0.3751E-01	0.3411E-01
25	-0.1767E+01	0.5816E+00	0.2132E+01	0.9028E-01	0.4098E-01	0.3067E-01
26	-0.1672E+01	0.5789E+00	0.1502E+01	0.8425E-01	0.4186E-01	0.1670E-01
9013	-0.1672E+01	0.5789E+00				

14	-0.2831E+01	-0.1530E+01	-0.1233E+01	0.2489E-01	-0.1353E+00	0.1843E+00
15	-0.2931E+01	-0.4401E+00	-0.4236E+00	0.1346E+01	-0.1322E+00	0.1678E+00
16	-0.2830E+01	0.1445E+01	0.1283E+01	0.3520E-02	-0.1076E+00	0.1000E+00
17	-0.2930E+01	0.1673E+01	0.1551E+01	0.2899E-02	-0.9251E-01	0.7307E-01
18	-0.1342E+01	0.1937E+01	0.1956E+01	-0.6089E-02	-0.7264E-01	0.2833E-01
19	-0.3753E+01	0.2013E+01	0.2369E+01	-0.2146E-01	-0.4667E-01	-0.3715E-01
20	-0.4187E+01	0.3959E+00	0.2809E-01	-0.1192E-01	-0.2142E+00	
21	-0.3275E+01	-0.9050E-01	-0.2646E-01	-0.5131E-01	-0.9459E-02	-0.2657E+00
9009	0.4297E+01	-0.9048E-01	-0.4504E-00	-0.5400E-01	-0.1113E-01	-0.2228E+00
9010	0.1084E+02	-0.9017E-01	-0.1307E-01	-0.2053E-01	-0.5276E-01	0.1086E+00
9011	0.2216E+01	-0.9017E-01	-0.9717E-01	0.2995E-01	-0.7441E-01	0.2400E+00
23	0.2899E+00	-0.9012E-01	-0.6797E-01	0.3825E-01	-0.7900E-01	0.2062E+00
24	-0.2345E+01	-0.8998E-01	0.3286E-01	0.4652E-01	-0.8784E-01	0.1153E+00
9011	-0.3282E+01	-0.8966E-01	0.1407E+01	0.2752E-01	-0.1059E+00	-0.5202E-01
9012	0.1606E+00	-0.8928E-01	0.1573E-01	-0.1880E-01	-0.1239E+00	-0.1305E+00
25	0.3964E+01	-0.8884E-01	0.3286E-01	-0.4894E-01	-0.1419E+00	-0.7448E-01
26	0.4501E+01	-0.8870E-01	-0.1463E+00	-0.5012E-01	-0.1471E+00	-0.3740E-01
9013	0.1424E+01	-0.8814E-01	-0.1601E-01	-0.2378E-01	-0.1662E+00	0.9226E-01
9014	-0.9421E+00	-0.8751E-01	-0.1601E+01	0.2239E-01	-0.1853E+00	0.1276E+00
27	-0.4024E+01	-0.8682E-01	-0.4320E+00	0.3256E-01	-0.2045E+00	0.2544E-01
28	-0.3951E+01	-0.8654E-01	-0.7447E-01	0.1920E-01	-0.2116E+00	-0.3718E-01
29	-0.2349E+01	-0.8608E-01	0.6062E-01	-0.3818E-02	-0.2224E+00	-0.1162E+00
9015	0.2895E+01	-0.8517E-01	-0.4895E+00	-0.1934E-01	-0.2426E+00	-0.1303E+00
9016	0.5658E+01	-0.8418E-01	-0.1059E+01	-0.8337E-02	-0.2627E+00	-0.3739E-02
30	0.3593E+01	-0.8312E-01	-0.1175E-01	-0.2463E-02	-0.2829E+00	0.8854E-01
31	0.2503E+01	-0.8309E-01	-0.1177E-01	-0.2683E-02	-0.4883E+00	0.8933E-01
32	0.3952E+01	-0.7905E-01	-0.1186E+01	-0.1862E-02	-0.2849E+00	0.8948E-01
35	0.2096E+01	-0.6550E-01	-0.1191E-01	-0.5717E-02	-0.2848E+00	0.8844E-01
37	-0.2854E+00	-0.1093E-01	-0.1191E+01	-0.6469E-04	-0.2764E+00	0.8462E-01
9017	-0.7354E+01	-0.1456E+00	-0.1188E+01	-0.2642E-02	-0.1291E+00	0.7093E-01
9018	-0.7789E+01	0.1467E+00	-0.1185E+01	0.2459E-02	0.2503E+00	0.1370E-01
38	-0.2175E+01	-0.1407E-01	-0.1181E-01	0.4936E-02	0.2061E+00	0.4314E-01
39	-0.5780E-01	-0.1360E-01	-0.1179E+01	0.1935E-02	0.1936E+00	0.3869E-01
9019	0.4520E+01	-0.1343E+00	-0.1173E+01	0.1524E-02	0.6148E-01	0.2407E-01
40	0.4025E+01	-0.1274E+00	-0.1164E+01	-0.2893E-02	-0.8002E-01	0.5447E-02
41	0.4670E+00	-0.1096E-01	-0.1160E+01	-0.4370E-02	-0.1099E+00	-0.3187E-02
43	0.4941E+00	-0.1407E-01	-0.7879E+00	-0.3835E-02	-0.8795E-01	-0.6317E-02
44	0.4939E+00	-0.2357E-01	-0.6627E+00	-0.3762E-02	-0.8335E-01	-0.6821E-02
45	0.4934E+00	-0.5222E-01	-0.3677E+00	-0.3642E-02	-0.6804E-01	-0.8003E-02
9020	0.4891E+00	-0.3108E+00	0.7193E-01	-0.2593E-02	0.2277E-01	-0.7111E-02
46	0.4845E+00	-0.3269E+00	-0.9072E+00	-0.1548E-02	0.3118E-01	0.7997E-02
47	0.4840E+00	-0.2997E+00	-0.9962E+00	-0.1437E-02	0.2723E-01	0.1022E-01
48	0.4519E+00	-0.2997E+00	-0.1090E+01	-0.1090E-02	0.2470E-01	0.1046E-01
92	0.3304E+00	-0.3003E+00	-0.1002E+01	0.1546E-03	0.6031E-02	0.1002E-01
93	0.2926E+00	-0.2997E+00	-0.1002E+01	-0.1301E-02	-0.4779E-02	0.7765E-02
94	0.2709E+00	-0.2943E+00	-0.1002E+01	-0.2643E-02	-0.8162E-02	0.5908E-02
95	0.2179E+00	-0.2746E+00	-0.1002E+01	-0.5949E-02	-0.1246E-01	0.3041E-02
96	0.1463E+00	-0.2347E+00	-0.2001E+01	-0.1058E-01	-0.1549E-01	0.1738E-03
97	0.1423E+00	-0.2320E+00	-0.1001E+01	-0.1064E-01	-0.1560E-01	0.3081E-04
98	0.6793E-01	-0.1757E+00	-0.9323E+00	-0.2210E-01	-0.1897E-01	-0.3568E-02
100	0.4939E-01	-0.1759E+00	-0.8235E+00	-0.2523E-01	-0.2038E-01	-0.4023E-02
101	0.3699E-01	-0.1760E+00	-0.7447E+00	-0.2634E-01	-0.2132E-01	-0.3622E-02
102	0.2437E-01	-0.1760E+00	-0.6397E+00	-0.2820E-01	-0.2164E-01	-0.2577E-02
113	-0.9837E-01	-0.4149E-01	-0.7451E+00	-0.1699E-01	-0.2415E-01	-0.4211E-02
114	-0.2049E+00	0.1591E-01	-0.7453E+00	-0.1095E-01	-0.2563E-01	-0.4695E-02
115	-0.3156E+00	0.5306E-01	-0.7455E+00	-0.7467E-02	-0.2626E-01	-0.5179E-02
116	-0.4804E+00	0.9403E-01	-0.7457E+00	-0.7084E-02	-0.2620E-01	-0.5891E-02
118	-0.5248E+00	0.1120E+00	-0.7861E+00	-0.1053E-01	-0.2552E-01	-0.6510E-02
9023	-0.2817E+00	-0.1626E+00	-0.1094E+01	-0.1264E-01	-0.1264E-01	-0.1264E-01
49	0.4870E-01	-0.1090E+00	-0.9575E+00	0.1225E-01	-0.1535E-01	-0.1073E-01
122	0.5809E-01	-0.7897E-01	-0.9283E+00	0.1314E-01	-0.1480E-01	-0.9458E-02
124	-0.3685E-02	-0.2528E-01	-0.9282E+00	0.1117E-01	-0.1445E-01	-0.8005E-02
125	-0.3454E+00	-0.2093E-01	-0.9277E+00	-0.5404E-02	-0.1345E-01	-0.4539E-02
127	-0.1834E+00	-0.3464E-02	-0.8911E+00	-0.2094E-02	-0.1254E-01	-0.3042E-02
129	-0.1697E+00	0.2043E-02	-0.4949E-01	-0.2350E-01	-0.7392E-02	0.4121E-02
9024	-0.6654E-01	0.1022E-02	0.8488E-01	0.3635E-02	-0.3696E-02	0.5793E-02
130	-0.1142E-08	0.2234E-07	0.1251E-07	0.1426E-08	-0.2099E-09	0.7204E-09
48	0.4834E+00	-0.2665E+00	-0.1078E+01	-0.2303E-02	0.2638E-01	0.1136E-01
49	0.4830E+00	-0.2060E+00	-0.1204E+01	-0.3747E-02	0.2789E-01	0.1210E-01
50	0.4822E+00	-0.1455E+00	-0.1307E+01	-0.5190E-02	0.1747E-01	0.1129E-01
51	0.4820E+00	-0.1285E+00	-0.1333E+01	-0.5623E-02	0.1601E-01	0.1072E-01
52	0.4811E+00	-0.7648E-01	-0.1403E+01	-0.9075E-02	0.7210E-02	0.7321E-02
53	0.4770E+00	-0.9377E-01	-0.1242E+01	-0.1421E-01	-0.2164E-01	-0.6788E-02
54	0.4707E+00	-0.4448E+00	-0.4465E-02	-0.2483E-01	-0.3887E-01	-0.9284E-02
55	0.4706E+00	-0.4517E+00	0.2473E-01	-0.2475E-01	-0.3869E-01	-0.9119E-02
56	0.3348E+00	-0.3946E+00	0.1658E+00	-0.2705E-01	-0.3193E-01	-0.6804E-02
57	0.2653E+00	-0.3121E+00	0.1658E+00	-0.2757E-01	-0.2819E-01	-0.6146E-02
58	0.2128E+00	-0.2675E+00	0.1659E+00	-0.2802E-01	-0.2472E-01	-0.5552E-02
59	0.1467E+00	-0.1824E+00	0.1660E+00	-0.2866E-01	-0.2000E-01	-0.4815E-02
103	0.1464E+00	-0.1740E+00	0.1052E+00	-0.2927E-01	-0.8692E-02	0.2534E-02
104	0.1455E+00	-0.2654E+00	0.1539E+00	-0.3171E-01	0.1224E-01	0.1162E-01
105	0.1451E+00	-0.2959E+00	0.1896E+00	-0.3205E-01	0.1068E-01	0.8096E-02
106	0.1448E+00	-0.3132E+00	0.2158E+00	-0.3329E-01	0.6393E-02	0.3572E-02
107	0.1434E+00	-0.3034E+00	0.1466E+00	-0.3632E-01	-0.2103E-01	-0.1412E-02
109	0.2055E+00	-0.2471E+00	0.1115E+00	-0.3674E-01	-0.2572E-01	0.6811E-03
111	0.3019E-01	-0.1251E-00	0.1115E+00	-0.3349E-01	-0.1375E-01	0.4516E-02
112	0.1803E-01	-0.7657E-07	0.1115E+00	-0.3344E-01	-0.1527E-02	0.6126E-02
60	0.9370E-01	-0.9544E-01	0.1660E+00	-0.2924E-01	-0.1611E-01	-0.3924E-02
61	0.5129E-01	-0.6853E-02	0.1661E+00	-0.2973E-01	-0.1294E-01	-0.3186E-02
62	0.4817E-01	-0.5807E-03	0.1861E+00	-0.2976E-01	-0.1271E-01	-0.3125E-02
63	0.3141E-01	-0.1219E+00	0.1384E+00	-0.3071E-01	-0.5277E-02	-0.1308E-02
64	0.1413E-01	-0.1219E+00	0.1078E+00	-0.3229E-01	-0.9508E-03	-0.3572E-02
65	0.1444E-01	-0.1097E+00	0.1064E+00	-0.3302E-01	0.9366E-04	-0.3338E-02
131	0.1095E+00	-0.1771E+00	0.1115E+00	-0.3674E-01	-0.2933E-02	0.3332E-02
132	-0.7400E-02	-0.1097E+00	-0.1093E+00	-0.3320E-01	0.9366E-04	0.3358E-02
66	0.1477E-01	-0.8870E-01	0.1067E+00	-0.3312E-01	0.4915E-03	0.4835E-02
67	0.1504E-01	-0.8576E-01	0.1110E+00	-0.3322E-01	0.2617E-03	0.5772E-02
68	0.1524E-01	-0.8748E-01	0.1115E+00	-0.3328E-01	0.2105E-03	0.6245E-02
69	0.1541E-01	-0.8800E-01	0.1109E+00	-0.3327E-01	-0.4293E-03	0.6597E-02
70	0.1553E-01	-0.1280E-01	0.1099E+00	-0.3326E-01	-0.7618E-03	0.6771E-02
71	0.1578E-01	-0.2183E-01	0.1038E+00	-0.3324E-01	-0.2012E-02	0.6881E-02

133	-0.6581E-02	-0.2143E-01	-0.4455E-02	-0.3335E-01	-0.2012E-02	0.6899E-02
134	-0.2912E-01	-0.2184E-01	-0.2137E-02	-0.3342E-01	-0.2012E-02	0.6920E-02
72	0.1602E-01	-0.5603E-01	0.8972E-01	-0.3266E-01	-0.4009E-02	0.8662E-02
73	0.1707E-01	-0.1700E+00	-0.1711E+00	-0.3011E-01	-0.2221E-01	0.2720E-02
74	0.1713E-01	-0.1759E+00	-0.2314E+00	-0.2983E-01	-0.2459E-01	0.1969E-02
75	0.1743E-01	-0.1820E+00	-0.3638E+00	-0.2925E-01	-0.2631E-01	0.4031E-03
76	0.1766E-01	-0.1800E+00	-0.4946E+00	-0.2864E-01	-0.2419E-01	-0.1178E-02
77	0.1777E-01	-0.1760E+00	-0.5817E+00	-0.2815E-01	-0.2178E-01	-0.1930E-02
78	0.1804E-01	-0.1702E+00	-0.6324E+00	-0.2694E-01	-0.1746E-01	-0.1126E-02
9021	0.1812E-01	-0.1858E+00	-0.7313E+00	-0.1669E-01	-0.8750E-02	0.1607E-02
79	0.1841E-01	-0.2315E+00	-0.2807E+00	-0.6425E-02	0.1883E-01	0.1034E-02
80	0.1852E-01	-0.2403E+00	-0.8438E-01	-0.2525E-02	0.1636E-01	0.6461E-03
81	0.1855E-01	-0.2419E+00	-0.4161E-01	-0.1561E-02	0.1515E-01	0.5943E-03
82	-0.2415E-01	-0.2438E+00	0.7703E-02	0.9312E-03	0.9115E-02	0.2711E-03
9022	-0.1031E+00	-0.1540E+00	0.8387E-02	0.5224E-02	-0.1461E-02	0.2946E-03
83	-0.2323E-01	-0.2340E-01	0.9068E-02	0.3757E-02	-0.3040E-02	0.3181E-03
84	-0.1638E-01	-0.1508E-01	0.9130E-02	0.3287E-02	-0.2702E-02	0.3203E-03
85	-0.1201E-01	-0.9827E-02	0.9174E			

CrawlCent Out

Table with columns: NODE, DX, DY, DE, ROT-K, ROT-Y, ROT-Z. Contains numerical data for nodes 39 through 137.

CrawlCent Out

Table with columns: NODE, DX, DY, DE, ROT-K, ROT-Y, ROT-Z. Contains numerical data for nodes 3061 through 3093.

MODAL DISPLACEMENTS AT SECONDARY SYSTEM DOF

MODAL DISPLACEMENTS AT SECONDARY SYSTEM DOF

25

COUPLED MORE SHAPES (FOR SECONDARY NODE) MODE FREQUENCY (Hz.) = 22.16978

MODAL DIF AT PRIMARY SYSTEM CONNECTING DOF

DISPLACEMENT

Small table with columns: DOF #, values for nodes 3021, 3042, 3043.

COUPLED MODE SHAPES (FOR SECONDARY MODE) WIDE
 FREQUENCY (Hz.) = 23.0556
 MODAL DISP AT PRIMARY SYSTEM CONNECTING DOP

DOP #	DISPLACEMENT	NOT-X	NOT-Y	NOT-Z
3041	-0.1172E+04			
3042	0.0000E+00			
3043	-0.1172E+04			
3044	0.0000E+00			
3063	-0.1404E+04			
3072	0.0000E+00			
3081	0.2066E+05			
3103	-0.8656E+04			
3121	0.2198E+04			
3122	-0.1172E+03			
3091	0.1248E+04			
3092	0.6000E+00			
3093	-0.5363E+04			

MODAL DISPLACEMENTS AT SECONDARY SYSTEM DOP

MZIDE	DX	DY	DZ	NOT-X	NOT-Y	NOT-Z
1	-0.2066E+06	-0.1124E+06	0.1791E+06	-0.3865E+07	-0.5124E+07	-0.1748E+07
2	0.1218E+00	-0.1101E+00	0.1247E+00	-0.3972E+01	-0.5232E+01	-0.1702E+01
3	0.6697E+00	-0.7843E+00	0.1768E+01	-0.1278E+01	-0.1671E+01	-0.1708E+01
4	0.6697E+00	-0.7843E+00	0.1768E+01	-0.1278E+01	-0.1671E+01	-0.1708E+01
9001	0.5831E+00	0.7781E+00	0.1112E+02	-0.3451E+00	-0.2313E+00	0.1592E+00
9002	0.3675E+01	0.9101E+00	0.1096E+02	-0.3579E+00	-0.2267E+00	0.1688E+00
6	0.1058E+01	0.1082E+01	0.1039E+02	-0.3717E+00	-0.2262E+00	0.1882E+00
9003	-0.8286E+01	0.1081E+01	0.9847E+01	-0.3801E+00	-0.2242E+00	0.2014E+00
9004	-0.8286E+01	0.1076E+01	0.4431E+01	-0.3095E+00	-0.1361E+00	0.1708E+00
9	-0.9375E+01	0.1093E+01	0.7258E+01	-0.1598E+01	-0.1042E+00	0.1448E+00
10	-0.1142E+01	0.1061E+01	-0.4731E+01	0.3165E+00	-0.1062E+00	0.1398E+00
9005	0.4952E+01	0.1061E+01	0.8121E+01	0.1674E+00	0.1353E+00	-0.1121E+00
9006	0.3452E+01	0.1043E+01	0.8806E+01	-0.1400E+00	-0.4189E+01	0.1081E+00

11	-0.1934E+00	0.1091E+01	0.8361E+00	-0.3317E+00	-0.1032E+01	0.8491E+01
12	-0.8521E+00	0.1029E+01	-0.2672E+01	-0.3221E+00	0.3212E+00	0.2928E+01
9007	-0.8521E+00	0.1031E+01	-0.2713E+01	-0.3155E+00	0.2058E+02	0.2062E+02
9008	-0.8492E+00	0.1016E+01	-0.3707E+01	-0.3088E+00	0.2103E+02	-0.4424E+01
13	-0.8492E+00	0.9501E+00	-0.3672E+01	-0.3014E+00	0.1742E+02	-0.5879E+01
14	-0.8492E+00	0.8031E+00	-0.3873E+01	-0.2928E+00	0.1879E+02	-0.5879E+01
15	-0.8492E+00	0.8454E+00	-0.3858E+01	-0.2712E+00	0.1928E+02	-0.7171E+01
16	-0.8492E+00	0.8454E+00	-0.3858E+01	-0.2712E+00	0.1928E+02	-0.7171E+01
17	-0.8492E+00	0.8454E+00	-0.3858E+01	-0.2712E+00	0.1928E+02	-0.7171E+01
18	-0.1305E+01	-0.4372E+00	-0.2012E+01	-0.2112E+00	-0.7047E+01	-0.1122E+00
19	-0.2058E+01	-0.5688E+02	-0.2151E+01	-0.1654E+00	-0.1006E+00	-0.1018E+00
20	-0.4608E+01	-0.4411E+01	-0.3778E+01	-0.3959E+00	-0.1048E+00	-0.1658E+00
21	-0.4608E+01	-0.4411E+01	-0.3778E+01	-0.3959E+00	-0.1048E+00	-0.1658E+00
9009	0.1248E+00	-0.4678E+01	-0.1171E+01	-0.4578E+01	-0.1120E+00	-0.1094E+00
9010	0.1248E+00	-0.4678E+01	-0.1171E+01	-0.4578E+01	-0.1120E+00	-0.1094E+00
22	0.7148E+00	-0.5568E+01	0.1360E+01	0.9592E+01	0.1642E+00	0.7828E+01
23	0.9017E+01	-0.4578E+01	0.1011E+01	-0.3438E+01	-0.1314E+00	0.7051E+01
24	-0.6524E+00	-0.4528E+01	0.1011E+01	-0.3438E+01	-0.9376E+01	0.4354E+01
9011	-0.1929E+01	-0.4818E+01	-0.5718E+00	-0.4892E+01	-0.8424E+01	-0.1649E+01
9012	-0.1929E+01	-0.4818E+01	-0.5718E+00	-0.4892E+01	-0.8424E+01	-0.1649E+01
25	-0.1328E+01	-0.4661E+01	-0.1021E+01	-0.4392E+01	-0.6123E+01	-0.2581E+01
26	-0.1328E+01	-0.4661E+01	-0.1021E+01	-0.4392E+01	-0.6123E+01	-0.2581E+01
27	-0.9557E+00	-0.4678E+01	0.2564E+01	0.4018E+01	0.1348E+01	0.1348E+01
9014	-0.6892E+00	-0.4667E+01	0.1732E+01	-0.1448E+01	-0.1348E+01	0.4732E+01
28	-0.1440E+01	-0.4691E+01	0.5622E+00	-0.4052E+01	-0.2127E+01	-0.6066E+02
29	-0.1929E+01	-0.4818E+01	-0.7148E+01	-0.3087E+01	-0.1870E+01	-0.2394E+01
9015	-0.1929E+01	-0.4818E+01	-0.7148E+01	-0.3087E+01	-0.1870E+01	-0.2394E+01
9016	-0.1929E+01	-0.4818E+01	-0.7148E+01	-0.3087E+01	-0.1870E+01	-0.2394E+01
30	-0.9892E+00	-0.4641E+01	0.6642E+00	-0.4318E+01	0.2386E+01	0.7847E+01
31	-0.1062E+01	-0.4641E+01	0.6642E+00	-0.4318E+01	0.2386E+01	0.7847E+01
32	-0.1131E+01	-0.4431E+01	0.8545E+00	-0.2112E+01	0.3040E+01	0.7463E+01
33	-0.1131E+01	-0.4431E+01	0.8545E+00	-0.2112E+01	0.3040E+01	0.7463E+01
34	-0.9440E+00	0.1352E+01	0.8545E+00	-0.4318E+01	0.3040E+01	0.7463E+01
9017	-0.9440E+00	0.1352E+01	0.8545E+00	-0.4318E+01	0.3040E+01	0.7463E+01
35	-0.1328E+01	-0.4661E+01	0.6642E+00	-0.4318E+01	0.2386E+01	0.7847E+01
36	-0.1328E+01	-0.4661E+01	0.6642E+00	-0.4318E+01	0.2386E+01	0.7847E+01
37	-0.1328E+01	-0.4661E+01	0.6642E+00	-0.4318E+01	0.2386E+01	0.7847E+01
9018	-0.1328E+01	-0.4661E+01	0.6642E+00	-0.4318E+01	0.2386E+01	0.7847E+01
38	-0.1401E+01	-0.2197E+00	0.8440E+00	-0.3661E+01	-0.3377E+01	0.3806E+01
39	-0.1401E+01	-0.2197E+00	0.8440E+00	-0.3661E+01	-0.3377E+01	0.3806E+01
9019	-0.1401E+01	-0.2197E+00	0.8440E+00	-0.3661E+01	-0.3377E+01	0.3806E+01
40	-0.1501E+01	-0.1968E+00	0.8276E+00	-0.3377E+01	-0.3377E+01	0.2995E+01
41	-0.1501E+01	-0.1968E+00	0.8276E+00	-0.3377E+01	-0.3377E+01	0.2995E+01
42	-0.2018E+01	-0.1538E+01	0.9392E+00	-0.1538E+01	0.5898E+01	0.2095E+01
43	-0.2018E+01	-0.1538E+01	0.9392E+00	-0.1538E+01	0.5898E+01	0.2095E+01
44	-0.2018E+01	-0.1538E+01	0.9392E+00	-0.1538E+01	0.5898E+01	0.2095E+01
45	-0.2008E+00	0.7922E+01	0.1041E+00	-0.4392E+01	0.1894E+01	0.1894E+01
9020	-0.1992E+00	0.7922E+01	0.1041E+00	-0.4392E+01	0.1894E+01	0.1894E+01
46	-0.1974E+00	0.4017E+00	0.8402E+01	0.1311E+01	-0.1400E+01	-0.1068E+01
47	-0.1974E+00	0.4017E+00	0.8402E+01	0.1311E+01	-0.1400E+01	-0.1068E+01
48	-0.1601E+01	0.3872E+00	0.1444E+00	0.1768E+01	-0.1304E+01	-0.1217E+01
91	-0.1601E+01	0.3872E+00	0.1444E+00	0.1768E+01	-0.1304E+01	-0.1217E+01
92	-0.1601E+01	0.3872E+00	0.1444E+00	0.1768E+01	-0.1304E+01	-0.1217E+01
93	-0.1601E+01	0.3872E+00	0.1444E+00	0.1768E+01	-0.1304E+01	-0.1217E+01
94	-0.1548E+01	0.3117E+00	0.2878E+00	0.1768E+01	-0.2020E+02	-0.7142E+02
95	-0.2492E+01	0.2768E+00	0.2879E+00	0.7235E+00	-0.7134E+01	-0.5275E+02
96	-0.2492E+01	0.2768E+00	0.2879E+00	0.7235E+00	-0.7134E+01	-0.5275E+02
97	-0.2692E+01	0.2373E+00	0.2879E+00	0.8114E+02	-0.2152E+03	-0.3408E+03
98	-0.2692E+01	0.2373E+00	0.2879E+00	0.8114E+02	-0.2152E+03	-0.3408E+03
99	-0.2878E+01	0.2058E+00	0.2059E+00	0.1102E+01	0.1891E+02	-0.7870E+03
100	-0.2878E+01	0.2058E+00	0.2059E+00	0.1102E+01	0.1891E+02	-0.7870E+03
101	-0.2892E+01	0.2016E+00	0.1601E+00	0.1118E+01	0.2384E+02	0.6854E+04
102	-0.2892E+01	0.2016E+00	0.1601E+00	0.1118E+01	0.2384E+02	0.6854E+04
103	-0.2642E+01	0.2037E+00	0.1097E+00	0.1363E+01	0.2528E+02	0.7162E+03
113	-0.1462E+01	0.1205E+00	0.1602E+00	0.1668E+01	0.2528E+02	0.5895E+03
114	-0.3462E+02	0.5636E+01	0.1802E+00	0.1518E+01	0.2744E+02	0.6758E+03
115	-0.3462E+02	0.5636E+01	0.1802E+00	0.1518E+01	0.2744E+02	0.6758E+03
116	-0.2792E+01	0.4088E+01	0.1602E+00	0.1178E+01	0.3178E+02	0.9878E+03
117	-0.2792E+01	0.4088E+01	0.1602E+00	0.1178E+01	0.3178E+02	0.9878E+03
9023	-0.1998E+01	-0.1157E+00	0.1242E+00	-0.9438E+01	0.5482E+02	0.1194E+02
120	-0.3542E+01	-0.1161E+00	-0.1871E+00	-0.9121E+02	0.5766E+02	0.9556E+03
122	-0.2428E+01	-0.9888E+01	-0.2054E+00	-0.6572E+02	0.5841E+02	0.8356E+03
124	-0.1552E+02	-0.7190E+01	-0.2058E+00	-0.6010E+02	0.6059E+02	0.7117E+03
125	-0.1552E+02	-0.7190E+01	-0.2058E+00	-0.6010E+02	0.6059E+02	0.7117E+03
127	-0.6842E+01	0.9347E+03	-0.1905E+00	0.7248E+02	0.5656E+02	0.3278E+03
128	-0.6842E+01	0.9347E+03	-0.1905E+00	0.7248E+02	0.5656E+02	0.3278E+03
9024	0.2598E+01	0.1873E+03	0.1618E+01	0.7792E+02	0.7482E+02	0.2242E+02
130	-0.1778E+08	0.4096E+08	0.1352E+08	0.2715E+09	0.2302E+10	-0.2835E+08
48	-0.1970E+00	0.3272E+00	0.1433E+00	0.1324E+01	-0.1251E+01	-0.1171E+01
49	-0.1970E+00	0.3272E+00	0.1433E+00	0.1324E+01	-0.1251E+01	-0.1171E+01
50	-0.1970E+00	0.3272E+00	0.1433E+00	0.1324E+01	-0.1251E+01	-0.1171E+01
51	-0.1970E+00	0.3272E+00	0.1433E+00	0.1324E+01	-0.1251E+01	-0.1171E+01
52	-0.1970E+00	0.3272E+00	0.1433E+00	0.1324E+01	-0.1251E+01	-0.1171E+01
53	-0.1970E+00	0.3272E+00	0.1433E+00	0.1324E+01	-0.1251E+01	-0.1171E+01
54	-0.1913E+00	0.3935E+00	-0.1402E+01	0.2541E+01	0.1334E+01	0.8667E+02
55	-0.1913E+00	0.3935E+00	-0.1402E+01	0.2541E+01	0.1334E+01	0.8667E+02
56	-0.1431E+00	0.3292E+00	-0.2424E+01	0.2691E+01	0.1185E+01	0.5802E+02
57	-0.1431E+00	0.3292E+00	-0.2424E+01	0.2691E+01	0.1185E+01	0.5802E+02
58	-0.1431E+00	0.3292E+00	-0.2424E+01	0.2691E+01	0.1185E+01	0.5802E+02
59	-0.1431E+00	0.3292E+00	-0.2424E+01	0.2691E+01	0.1185E+01	0.5802E+02
101	-0.7017E+01	0.1377E+00	-0.1444E+01	0.2792E+02	0.7482E+02	0.4574E+02
104	-0.6594E+01	0.2459E+00	-0.9649E+01	0.2698E+02	0.6610E+02	-0.1181E+01
105	-0.6594E+01	0.2459E+00	-0.9649E+01	0.2698E+02	0.6610E+02	-0.1181E+01
106	-0.6594E+01	0.2459E+00	-0.9649E+01	0.2698E+02	0.6610E+02	-0.1181E+01
107	-0.6594E+01	0.2459E+00	-0.9649E+01	0.2698E+02	0.6610E+02	-0.1181E+01
108	-0.6594E+01	0.2459E+00	-0.9649E+01	0.2698E+02	0.6610E+02	-0.1181E+01
109	-0.6594E+01	0.2459E+00	-0.9649E+01	0.2698E+02	0.6610E+02	-0.1181E+01
110	-0.6594E+01	0.2459E+00	-0.9649E+01	0.2698E+02	0.6610E+02	-0.11

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Table with columns: MODE, DX, DY, DE, ROT-X, ROT-Y, ROT-Z. Contains data for modes 67 through 87, including values for displacement and rotation.

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COUPLED MODE SHAPES (FOR SECONDARY MODE) MEDE
FREQUENCY (Hz.) = 23.4354

MODAL DISP AT PRIMARY SYSTEM CONNECTING JOP

MODE DX DY DE ROT-X ROT-Y ROT-Z

Table with columns: MODE, DX, DY, DE, ROT-X, ROT-Y, ROT-Z. Contains data for modes 1 through 32, including values for displacement and rotation.

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Table with columns: MODE, DX, DY, DE, ROT-X, ROT-Y, ROT-Z. Contains data for modes 35 through 87, including values for displacement and rotation.

28

COUPLED MODE SHAPES (FOR SECONDARY MODE) MEDE
FREQUENCY (Hz.) = 23.6259

MODAL DISP AT PRIMARY SYSTEM CONNECTING JOP

MODE DX DY DE ROT-X ROT-Y ROT-Z

Table with columns: MODE, DX, DY, DE, ROT-X, ROT-Y, ROT-Z. Contains data for modes 104 through 132, including values for displacement and rotation.

DISPLACEMENT

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DOF #	DISPLACEMENT	DOF #	DISPLACEMENT
1041	0.1173E-04	120	-0.2057E-01
1042	-0.3653E-05	121	-0.1447E-01
1043	0.9184E-05	122	0.1071E-02
1044	-0.1295E-04	123	0.1971E-02
1045	-0.3188E-05	124	0.1071E-02
1046	-0.4662E-04	125	0.1662E-01
1047	0.6002E-04	126	0.1662E-01
1048	-0.3188E-05	127	0.1662E-01
1049	-0.4662E-04	128	0.1662E-01
1050	0.6002E-04	129	0.1662E-01
1051	-0.3188E-05	130	0.1662E-01
1052	-0.4662E-04	131	0.1662E-01
1053	0.6002E-04	132	0.1662E-01
1054	-0.3188E-05	133	0.1662E-01
1055	-0.4662E-04	134	0.1662E-01
1056	0.6002E-04	135	0.1662E-01
1057	-0.3188E-05	136	0.1662E-01
1058	-0.4662E-04	137	0.1662E-01
1059	0.6002E-04	138	0.1662E-01
1060	-0.3188E-05	139	0.1662E-01
1061	-0.4662E-04	140	0.1662E-01
1062	0.6002E-04	141	0.1662E-01
1063	-0.3188E-05	142	0.1662E-01
1064	-0.4662E-04	143	0.1662E-01
1065	0.6002E-04	144	0.1662E-01
1066	-0.3188E-05	145	0.1662E-01
1067	-0.4662E-04	146	0.1662E-01
1068	0.6002E-04	147	0.1662E-01
1069	-0.3188E-05	148	0.1662E-01
1070	-0.4662E-04	149	0.1662E-01
1071	0.6002E-04	150	0.1662E-01
1072	-0.3188E-05	151	0.1662E-01
1073	-0.4662E-04	152	0.1662E-01
1074	0.6002E-04	153	0.1662E-01
1075	-0.3188E-05	154	0.1662E-01
1076	-0.4662E-04	155	0.1662E-01
1077	0.6002E-04	156	0.1662E-01
1078	-0.3188E-05	157	0.1662E-01
1079	-0.4662E-04	158	0.1662E-01
1080	0.6002E-04	159	0.1662E-01
1081	-0.3188E-05	160	0.1662E-01
1082	-0.4662E-04	161	0.1662E-01
1083	0.6002E-04	162	0.1662E-01
1084	-0.3188E-05	163	0.1662E-01
1085	-0.4662E-04	164	0.1662E-01
1086	0.6002E-04	165	0.1662E-01
1087	-0.3188E-05	166	0.1662E-01
1088	-0.4662E-04	167	0.1662E-01
1089	0.6002E-04	168	0.1662E-01
1090	-0.3188E-05	169	0.1662E-01
1091	-0.4662E-04	170	0.1662E-01
1092	0.6002E-04	171	0.1662E-01
1093	-0.3188E-05	172	0.1662E-01
1094	-0.4662E-04	173	0.1662E-01
1095	0.6002E-04	174	0.1662E-01
1096	-0.3188E-05	175	0.1662E-01
1097	-0.4662E-04	176	0.1662E-01
1098	0.6002E-04	177	0.1662E-01
1099	-0.3188E-05	178	0.1662E-01
1100	-0.4662E-04	179	0.1662E-01
1101	0.6002E-04	180	0.1662E-01
1102	-0.3188E-05	181	0.1662E-01
1103	-0.4662E-04	182	0.1662E-01
1104	0.6002E-04	183	0.1662E-01
1105	-0.3188E-05	184	0.1662E-01
1106	-0.4662E-04	185	0.1662E-01
1107	0.6002E-04	186	0.1662E-01
1108	-0.3188E-05	187	0.1662E-01
1109	-0.4662E-04	188	0.1662E-01
1110	0.6002E-04	189	0.1662E-01
1111	-0.3188E-05	190	0.1662E-01
1112	-0.4662E-04	191	0.1662E-01
1113	0.6002E-04	192	0.1662E-01
1114	-0.3188E-05	193	0.1662E-01
1115	-0.4662E-04	194	0.1662E-01
1116	0.6002E-04	195	0.1662E-01
1117	-0.3188E-05	196	0.1662E-01
1118	-0.4662E-04	197	0.1662E-01
1119	0.6002E-04	198	0.1662E-01
1120	-0.3188E-05	199	0.1662E-01
1121	-0.4662E-04	200	0.1662E-01
1122	0.6002E-04	201	0.1662E-01
1123	-0.3188E-05	202	0.1662E-01
1124	-0.4662E-04	203	0.1662E-01

MODAL DISPLACEMENTS AT SECONDARY SYSTEM DOF

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DOF #	DOF #	DOF #	DOF #	DOF #	DOF #
1	0.8162E-07	0.3468E-07	0.2869E-07	0.4283E-08	0.1819E-07
2	0.4233E-01	0.6031E-01	0.4191E-01	0.5651E-02	0.1591E-02
3	0.1878E-00	0.4908E-01	0.4392E-00	0.2181E-01	0.3515E-01
4	0.1901E-00	0.2968E-00	0.1513E-01	0.5028E-01	0.4154E-01
5	0.2127E-00	0.5719E-00	0.2048E-01	0.7544E-01	0.3856E-01
6	0.2778E-00	0.7431E-00	0.2038E-01	0.7837E-01	0.3779E-01
7	0.3052E-00	0.7683E-00	0.1502E-01	0.8150E-01	0.3716E-01
8	0.2612E-01	0.7683E-00	0.1717E-01	0.8314E-01	0.3716E-01
9	0.3114E-01	0.7636E-00	0.2207E-01	0.1778E-01	0.3078E-01
10	0.1178E-00	0.7098E-00	0.4402E-00	0.6092E-01	0.4097E-01
11	-0.4106E-00	0.7478E-00	0.3113E-00	0.1183E-01	0.1602E-01
12	0.1817E-00	0.7478E-00	0.1003E-01	0.2855E-01	0.2189E-01
13	0.5352E-00	0.7452E-00	0.3459E-00	0.4741E-01	0.1868E-01
14	0.3346E-00	0.7428E-00	0.8112E-00	0.4308E-01	0.1793E-01
15	0.2943E-00	0.6812E-00	0.9519E-00	0.3862E-01	0.1820E-01
16	0.2792E-00	0.6115E-00	0.9668E-00	0.3668E-01	0.1782E-01
17	0.2792E-00	0.5711E-00	0.7415E-00	0.2818E-01	0.1399E-01
18	0.2792E-00	0.4445E-01	0.4359E-00	0.1857E-01	0.2316E-01
19	0.1217E-00	0.3351E-00	0.3770E-00	0.1091E-01	0.2458E-01
20	0.3504E-00	0.2744E-00	0.4528E-00	0.3018E-02	0.2678E-01
21	0.2615E-00	0.3492E-00	0.4792E-00	0.3507E-02	0.2663E-01
22	0.7514E-00	0.1476E-00	0.3092E-00	0.4578E-02	0.1647E-01
23	0.3423E-01	0.3470E-00	0.1892E-01	0.1071E-01	0.1314E-01
24	0.2018E-00	0.3465E-00	0.6323E-01	0.1303E-01	0.1621E-01
25	0.8002E-00	0.3473E-00	0.2968E-00	0.6411E-02	0.5466E-02
26	0.1813E-01	0.3412E-00	0.2696E-01	0.1997E-01	0.2542E-01
27	0.4951E-00	0.3387E-00	0.4165E-00	0.5824E-03	0.6986E-02
28	0.3768E-00	0.3322E-00	0.1914E-01	0.1848E-01	0.2125E-01
29	0.6278E-00	0.3320E-00	0.3842E-00	0.1490E-01	0.2047E-01
30	0.9528E-02	0.3245E-00	0.9743E-00	0.3433E-02	0.2278E-01
31	0.6913E-00	0.3144E-00	0.2813E-00	0.4537E-02	0.1816E-01
32	0.4717E-00	0.3143E-00	0.2863E-00	0.5897E-02	0.3112E-01
33	0.3913E-00	0.3135E-00	0.3122E-00	0.1387E-01	0.1798E-01
34	0.2844E-00	0.2533E-00	0.3304E-00	0.2034E-01	0.3220E-01
35	0.1527E-01	0.5983E-01	0.3300E-00	0.2179E-01	0.3523E-01
36	0.7862E-00	0.3253E-00	0.3260E-00	0.2062E-02	0.1818E-01
37	0.8424E-00	0.3478E-00	0.1402E-00	0.1103E-01	0.1284E-01
38	0.1793E-01	0.3423E-00	0.3222E-00	0.4094E-02	0.1594E-01
39	0.3029E-01	0.1827E-00	0.3189E-00	0.9467E-02	0.5744E-02
40	0.1819E-00	0.3348E-00	0.3152E-00	0.1778E-01	0.3248E-01
41	0.6818E-01	0.5506E-00	0.3110E-00	0.7830E-02	0.1282E-01
42	0.9632E-02	0.3432E-01	0.2457E-00	0.5500E-02	0.1847E-01
43	0.9702E-01	0.7112E-00	0.1469E-00	0.4161E-02	0.1584E-01
44	0.1012E-01	0.1844E-01	0.2276E-03	0.1038E-01	0.1853E-01
45	0.3073E-00	0.3553E-01	0.2468E-00	0.1162E-01	0.2014E-01
46	0.1422E-01	0.3559E-01	0.2064E-00	0.1702E-01	0.3801E-01
47	0.2607E-01	0.3479E-01	0.4912E-00	0.9661E-01	0.4878E-01
48	0.3438E-01	0.4148E-01	0.4513E-00	0.9088E-01	0.5214E-01
49	0.4711E-05	0.4970E-01	0.4513E-00	0.5525E-01	0.6033E-01
50	0.3841E-00	0.5105E-01	0.4318E-00	0.1078E-01	0.5910E-01
51	0.1523E-01	0.5107E-01	0.6581E-00	0.3934E-01	0.6054E-01
52	0.3278E-00	0.5108E-01	0.9332E-00	0.6880E-01	0.8262E-01
53	0.4502E-00	0.4912E-01	0.7052E-00	0.1241E-00	0.1168E-01
54	0.1398E-01	0.3901E-01	0.1232E-00	0.1531E-00	0.2918E-01
55	0.3298E-01	0.2509E-01	0.7057E-00	0.7691E-01	0.1475E-00
56	0.4457E-01	0.2410E-01	0.7203E-00	0.5614E-01	0.2050E-01
57	0.1985E-00	0.4410E-01	0.7488E-01	0.1614E-00	0.8502E-01

MODAL DISPLACEMENTS AT SECONDARY SYSTEM DOF

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Creilcent.out

DOF #	DOF #	DOF #	DOF #	DOF #	DOF #
58	0.3073E-00	0.3553E-01	0.2468E-00	0.1778E-01	0.3248E-01
59	0.1422E-01	0.3559E-01	0.2064E-00	0.1702E-01	0.3801E-01
60	0.2607E-01	0.3479E-01	0.4912E-00	0.9661E-01	0.4878E-01
61	0.3438E-01	0.4148E-01	0.4513E-00	0.9088E-01	0.5214E-01
62	0.4711E-05	0.4970E-01	0.4513E-00	0.5525E-01	0.6033E-01
63	0.3841E-00	0.5105E-01	0.4318E-00	0.1078E-01	0.5910E-01
64	0.1523E-01	0.5107E-01	0.6581E-00	0.3934E-01	0.6054E-01
65	0.3278E-00	0.5108E-01	0.9332E-00	0.6880E-01	0.8262E-01
66	0.4502E-00	0.4912E-01	0.7052E-00	0.1241E-00	0.1168E-01
67	0.1398E-01	0.3901E-01	0.1232E-00	0.1531E-00	0.2918E-01
68	0.3298E-01	0.2509E-01	0.7057E-00	0.7691E-01	0.1475E-00
69	0.4457E-01	0.2410E-01	0.7203E-00	0.5614E-01	0.2050E-01
70	0.1985E-00	0.4410E-01	0.7488E-01	0.1614E-00	0.8502E-01
71	0.3073E-00	0.3553E-01	0.2468E-00	0.1778E-01	0.3248E-01
72	0.1422E-01	0.3559E-01	0.2064E-00	0.1702E-01	0.3801E-01
73	0.2607E-01	0.3479E-01	0.4912E-00	0.9661E-01	0.4878E-01
74	0.3438E-01	0.4148E-01	0.4513E-00	0.9088E-01	0.5214E-01
75	0.4711E-05	0.4970E-01	0.4513E-00	0.5525E-01	0.6033E-01
76	0.3841E-00	0.5105E-01	0.4318E-00	0.1078E-01	0.5910E-01
77	0.1523E-01	0.5107E-01	0.6581E-00	0.3934E-01	0.6054E-01
78	0.3278E-00	0.5108E-01	0.9332E-00	0.6880E-01	0.8262E-01
79	0.4502E-00	0.4912E-01	0.7052E-00	0.1241E-00	0.1168E-01
80	0.1398E-01	0.3901E-01	0.1232E-00	0.1531E-00	0.2918E-01
81	0.3298E-01	0.2509E-01	0.7057E-00	0.7691E-01	0.1475E-00
82	0.4457E-01	0.2410E-01	0.7203E-00	0.5614E-01	0.2050E-01
83	0.1985E-00	0.4410E-01	0.7488E-01		

circulcent.out

circulcent.out

MODE	DX	DY	DE	ROT-X	ROT-Y	ROT-Z
114	-0.2152E+01	-0.1640E+01	0.6539E+00	0.1162E+00	-0.1450E+00	0.7762E-01
115	-0.3011E+01	-0.2707E+01	0.8572E+00	0.1362E+00	-0.1591E+00	0.7362E-01
116	-0.4024E+01	-0.3103E+01	0.6352E+00	0.1312E+00	-0.1592E+00	0.6672E-01
118	-0.4192E+01	-0.3458E+01	0.1054E+00	0.1582E+00	-0.1472E+00	0.5782E-01
9023	-0.4698E+01	-0.3458E+01	0.5174E+01	0.9582E+01	0.4212E+01	-0.1392E-01
9003	-0.4862E+01	-0.3458E+01	0.9372E+01	0.9372E+01	0.4212E+01	-0.1392E-01
9004	-0.5782E+00	-0.3982E+01	0.3712E+01	0.2102E+00	0.6232E-01	-0.1332E+00
120	-0.5782E+01	-0.3982E+01	0.3712E+01	0.2102E+00	0.6232E-01	-0.1332E+00
124	-0.5612E+00	-0.3212E+00	0.3712E+00	0.2132E+00	0.7052E-01	-0.1222E+00
125	-0.6402E+00	-0.3152E+01	0.2842E+01	0.1432E+01	0.6562E-01	-0.8362E-01
127	-0.2052E+00	-0.1842E+01	0.2562E+00	0.9612E-01	0.3562E+01	-0.6842E-01
9024	-0.1852E+07	-0.9252E+07	0.3352E+00	0.1392E+01	0.1932E+01	0.1332E+01
130	-0.1462E+07	-0.9252E+07	0.3352E+00	0.1392E+01	0.1932E+01	0.1332E+01
48	-0.5248E+00	0.1162E+01	0.1192E+00	0.5932E-02	0.5932E-02	0.6672E-01
50	-0.5248E+00	0.1162E+01	0.1192E+00	0.5932E-02	0.5932E-02	0.6672E-01
51	-0.5862E+00	0.8452E+00	0.1742E+01	0.2332E+00	0.2267E-02	-0.3962E-01
53	-0.5862E+00	0.792E+00	0.1742E+01	0.2332E+00	0.8551E-03	-0.3752E-01
54	-0.5612E+00	0.1232E+01	0.1252E+01	0.2422E+00	0.5712E-02	-0.1842E-01
55	-0.5612E+00	0.2702E-01	0.1252E+01	0.2332E+00	0.3182E+00	-0.7871E-02
56	-0.5582E+00	0.2062E-01	0.1252E+00	0.3192E+00	0.6302E-02	-0.8092E-02
57	-0.5312E+00	0.6582E-01	0.2242E+00	0.3312E+00	0.9692E-03	-0.5041E-01
58	-0.5312E+00	0.6582E-01	0.2242E+00	0.3312E+00	0.9692E-03	-0.5041E-01
58	-0.5152E+00	-0.1372E+01	0.2282E+00	0.3352E+00	0.2142E-02	-0.5392E-01
103	-0.5052E+00	-0.6092E+00	0.2812E+00	0.3362E+00	0.6732E-02	-0.7342E-01
104	-0.5052E+00	-0.2122E+01	0.7102E+00	0.3552E+00	0.4201E-01	-0.8052E+00
105	-0.5482E+00	0.2912E-01	0.8092E+00	0.3522E+00	0.2192E-01	-0.3072E+00
106	-0.5582E+00	0.1492E+01	0.8402E+00	0.3622E+00	0.2192E-01	-0.3072E+00
107	-0.6682E+00	0.3942E+01	0.8402E+00	0.3622E+00	0.2192E-01	-0.3072E+00
109	-0.5132E+00	0.3492E+01	0.7672E+00	0.3812E+00	0.2602E-01	-0.4712E-01
111	-0.6782E+00	0.3332E+01	0.7662E+00	0.3842E+00	0.1652E-02	-0.1312E+00
112	-0.6912E+00	0.3872E+01	0.7662E+00	0.3842E+00	0.1652E-02	-0.1312E+00
60	-0.5752E+00	-0.2032E+01	0.2302E+00	0.3772E+00	0.1031E-01	-0.8572E-01
62	-0.6122E+00	-0.3052E+01	0.2302E+00	0.3772E+00	0.1031E-01	-0.8572E-01
63	-0.6152E+00	-0.1142E+01	0.2302E+00	0.3772E+00	0.1402E-01	-0.8712E-01
64	-0.6882E+00	0.3942E+01	0.8402E+00	0.3622E+00	0.2192E-01	-0.3072E+00
65	-0.6882E+00	0.3942E+01	0.8402E+00	0.3622E+00	0.2192E-01	-0.3072E+00
65	-0.6882E+00	0.3942E+01	0.8402E+00	0.3622E+00	0.2192E-01	-0.3072E+00
65	-0.6882E+00	0.3942E+01	0.8402E+00	0.3622E+00	0.2192E-01	-0.3072E+00
65	-0.6882E+00	0.3942E+01	0.8402E+00	0.3622E+00	0.2192E-01	-0.3072E+00
131	-0.5012E+01	-0.1492E+01	0.1542E+00	0.3162E+00	0.1592E-01	-0.8312E-01
132	-0.5012E+01	-0.1492E+01	0.1542E+00	0.3162E+00	0.1592E-01	-0.8312E-01
66	-0.6842E+00	0.3572E+00	0.7472E+00	0.3482E+00	0.1692E-02	-0.1862E+00
67	-0.6842E+00	0.3572E+00	0.7472E+00	0.3482E+00	0.1692E-02	-0.1862E+00
68	-0.6842E+00	0.3572E+00	0.7472E+00	0.3482E+00	0.1692E-02	-0.1862E+00
68	-0.6842E+00	0.3572E+00	0.7472E+00	0.3482E+00	0.1692E-02	-0.1862E+00
68	-0.6842E+00	0.3572E+00	0.7472E+00	0.3482E+00	0.1692E-02	-0.1862E+00
70	-0.6822E+00	0.1592E+01	0.7282E+00	0.2662E+00	0.1142E-01	-0.1332E+00
71	-0.6822E+00	0.1592E+01	0.7282E+00	0.2662E+00	0.1142E-01	-0.1332E+00
133	-0.4072E+00	0.2122E+01	0.2352E+00	0.2752E+00	0.1840E-01	-0.8622E-01
134	-0.4072E+00	0.2122E+01	0.2352E+00	0.2752E+00	0.1840E-01	-0.8622E-01
72	-0.6812E+00	0.2402E+01	0.5452E+00	0.2552E+00	0.2362E-01	-0.3162E+01
73	-0.6812E+00	0.2402E+01	0.5452E+00	0.2552E+00	0.2362E-01	-0.3162E+01
73	-0.6812E+00	0.2402E+01	0.5452E+00	0.2552E+00	0.2362E-01	-0.3162E+01
74	-0.7042E+00	0.3702E+00	0.1042E+00	0.1462E+00	0.5102E-02	-0.1132E+00
74	-0.7042E+00	0.3702E+00	0.1042E+00	0.1462E+00	0.5102E-02	-0.1132E+00
76	-0.7012E+00	-0.4662E+00	0.6802E+00	0.1762E+00	0.1870E-01	0.9602E-01
77	-0.7012E+00	-0.4662E+00	0.6802E+00	0.1762E+00	0.1870E-01	0.9602E-01
77	-0.7012E+00	-0.4662E+00	0.6802E+00	0.1762E+00	0.1870E-01	0.9602E-01
78	-0.7012E+00	-0.4662E+00	0.6802E+00	0.1762E+00	0.1870E-01	0.9602E-01
78	-0.7012E+00	-0.4662E+00	0.6802E+00	0.1762E+00	0.1870E-01	0.9602E-01
9021	-0.7042E+00	-0.1022E+01	0.5132E+00	0.6592E-01	0.1192E+00	0.2242E-01
79	-0.7032E+00	0.1022E+01	0.2642E+00	0.1922E+00	0.1092E-01	0.9702E-01
79	-0.7032E+00	0.1022E+01	0.2642E+00	0.1922E+00	0.1092E-01	0.9702E-01
80	-0.7032E+00	0.1022E+01	0.2642E+00	0.1922E+00	0.1092E-01	0.9702E-01
81	-0.7042E+00	0.1162E+01	0.1352E+00	0.2702E-02	0.7002E-02	0.8242E-01
82	-0.7042E+00	0.1162E+01	0.1352E+00	0.2702E-02	0.7002E-02	0.8242E-01
9022	-0.5204E+00	0.6472E+01	0.1342E+00	0.4542E+01	0.1404E-01	-0.4312E-01
83	-0.1022E+00	0.3712E+00	0.1332E+00	0.4502E+00	0.4502E-01	-0.1492E-01
84	-0.7092E-01	0.2642E+00	0.1332E+00	0.4502E+00	0.1352E-01	-0.1352E-01
85	-0.3082E-01	0.3402E+00	0.1332E+00	0.4502E+00	0.4042E-01	-0.1272E-01
86	-0.3082E-01	0.3402E+00	0.1332E+00	0.4502E+00	0.4042E-01	-0.1272E-01
87	-0.2192E-01	0.3692E+01	-0.3402E+01	-0.1362E+01	-0.1244E+00	0.1972E+00

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COUPLED MODE SHAPES (FOR SECONDARY MODE) HXZ
FREQUENCY (HZ.) * 26.71311

MODAL DISP AT PRIMARY SYSTEM CORRECTING DOF

DOF #

DISPLACEMENT

ROT-X

ROT-Y

ROT-Z

HXZ

MODAL DISPLACEMENTS AT SECONDARY SYSTEM DOF

DOF #

DISPLACEMENT

ROT-X

ROT-Y

ROT-Z

HXZ

Table with columns for node numbers and displacement values in scientific notation. Includes rows 110 through 87.

COUPLED MODE SHAPES (FOR SECONDARY MODE) MODE 33
FREQUENCY (HZ.) = 26.88599

MODAL DISP AT PRIMARY SYSTEM CONNECTING DOF

Table with columns for DOF and DISPLACEMENT values. Includes rows 3041 through 3091.

MODAL DISPLACEMENTS AT SECONDARY SYSTEM DOF

Table with columns for NODE, DX, DY, DZ, ROT-X, ROT-Y, ROT-Z and displacement values. Includes rows 1 through 26.

Table with columns for node numbers and displacement values in scientific notation. Includes rows 9011 through 84.

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85 0.6640E-02 0.1501E-01 0.2581E-01 0.7897E-02 0.2111E-01 0.2771E-02 0.1527E-01
86 0.3474E-02 0.1039E-01 0.5441E-02 0.2940E-02 0.1733E-03 0.1227E-09

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Coupled Mode Shapes (For Secondary Mode) Mode 14
Modal Displ. At Primary System Connecting DOF
27.54 39

MOI-E-DISPLACEMENT

Table with columns MOI-E, DX, DY, DE, ROT-X, ROT-Y, ROT-Z. Contains data for modes 3041 through 3091.

crelcant out

84 0.1242E-01 0.5415E-03 0.2989E-01 0.2552E-00 0.6559E-01 0.1707E-00
85 0.7151E-01 0.2551E-00 0.7545E-01 0.2572E-00 0.8184E-01 0.1352E-00

COUPLED FREQUENCY DAMPING RATIO

Table with columns MOI-E, FREQUENCY [Hz], DAMPING RATIO. Contains data for modes 1 through 24.

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cralcent.out

40	0.1228E+00	0.1022E-01	0.1805E-01	0.2116E-03	0.2657E-02	0.2534E-02
41	0.7122E-01	0.5789E-02	0.1805E-01	0.2489E-03	0.2529E-02	0.1251E-02
43	0.6934E-01	0.1756E-02	0.1014E-01	0.2661E-03	0.1856E-02	0.9405E-03
44	0.6937E-01	0.4833E-03	0.7557E-02	0.2702E-03	0.1759E-02	0.8923E-03
45	0.6937E-01	0.2751E-02	0.1662E-02	0.2816E-03	0.1502E-02	0.7682E-03
9020	0.6937E-01	0.1347E-01	0.1876E-01	0.3929E-03	0.1162E-03	0.6534E-04
46	0.6937E-01	0.8585E-02	0.1372E-01	0.5279E-03	0.3284E-03	0.3460E-03
47	0.6937E-01	0.7580E-02	0.1302E-01	0.5428E-03	0.3116E-03	0.3705E-03
91	0.6974E-01	0.7596E-02	0.1176E-02	0.5471E-03	0.2978E-03	0.3869E-03
92	0.7190E-01	0.7594E-02	0.8464E-02	0.5224E-03	0.2126E-03	0.4976E-03
93	0.7493E-01	0.6939E-02	0.8374E-02	0.4458E-03	0.2359E-03	0.5597E-03
94	0.7841E-01	0.6675E-02	0.8372E-02	0.4237E-03	0.2319E-03	0.5865E-03
95	0.7407E-01	0.6853E-02	0.8368E-02	0.3926E-03	0.2161E-03	0.6317E-03
96	0.7660E-01	0.7542E-02	0.8365E-02	0.3676E-03	0.1956E-03	0.6800E-03
97	0.7662E-01	0.7586E-02	0.8365E-02	0.3665E-03	0.1946E-03	0.6834E-03
98	0.7468E-01	0.8103E-02	0.7265E-02	0.3507E-03	0.1593E-03	0.7490E-03
100	0.7182E-01	0.8303E-02	0.8337E-02	0.3506E-03	0.1518E-03	0.7670E-03
101	0.6993E-01	0.8304E-02	0.8893E-02	0.3460E-03	0.1508E-03	0.7706E-03
102	0.6766E-01	0.8304E-02	0.3757E-02	0.3485E-03	0.1042E-03	0.7726E-03
113	0.7134E-01	0.9362E-02	0.4893E-02	0.2635E-03	0.3964E-03	0.6617E-03
114	0.7134E-01	0.9956E-02	0.4893E-02	0.3984E-03	0.5379E-03	0.5604E-03
115	0.7576E-01	0.1077E-01	0.4893E-02	0.1449E-03	0.6141E-03	0.4592E-03
116	0.7975E-01	0.1068E-01	0.4892E-02	0.8766E-04	0.6665E-03	0.3111E-03
118	0.8166E-01	0.1070E-01	0.4892E-02	0.5700E-04	0.6683E-03	0.2155E-03
9023	0.7746E-01	0.1070E-01	0.1475E-02	0.2325E-03	0.6945E-03	0.5174E-03
120	0.5655E-01	0.1069E-01	0.1060E-01	0.4844E-03	0.7257E-03	0.8102E-03
122	0.6448E-01	0.9519E-02	0.1169E-01	0.5412E-03	0.7442E-03	0.7519E-03
124	0.5956E-01	0.7158E-02	0.1169E-01	0.5694E-03	0.7843E-03	0.6829E-03
125	0.6772E-01	0.1263E-02	0.1169E-01	0.5725E-03	0.8244E-03	0.5181E-03
127	0.7051E-01	0.2089E-04	0.1046E-01	0.5379E-03	0.7753E-03	0.4405E-03
129	0.7409E-01	0.1212E-04	0.2745E-03	0.1973E-03	0.4571E-03	0.2501E-03
9024	0.6541E-01	0.6159E-05	0.7847E-03	0.3760E-04	0.2286E-03	0.5715E-03
130	0.5853E-01	0.1347E-06	0.9354E-04	0.1288E-10	0.1298E-10	0.8098E-10
48	0.6925E-01	0.6586E-02	0.1240E-01	0.5402E-03	0.3099E-03	0.3644E-03
49	0.6933E-01	0.4841E-02	0.1144E-01	0.5372E-03	0.3030E-03	0.3676E-03
50	0.6922E-01	0.2989E-02	0.1056E-01	0.5355E-03	0.2920E-03	0.3645E-03
51	0.6921E-01	0.2410E-02	0.1031E-01	0.5353E-03	0.2861E-03	0.3914E-03
52	0.6919E-01	0.3864E-03	0.9468E-02	0.5357E-03	0.2714E-03	0.4223E-03
53	0.6908E-01	0.1233E-01	0.6851E-02	0.5580E-03	0.1813E-03	0.6106E-03
54	0.6891E-01	0.3766E-01	0.5611E-03	0.8441E-03	0.3141E-03	0.7964E-03
55	0.6890E-01	0.3825E-01	0.4942E-03	0.6664E-03	0.3220E-03	0.7984E-03
56	0.6763E-01	0.4032E-01	0.1458E-02	0.6626E-03	0.3492E-03	0.8242E-03
57	0.6694E-01	0.3943E-01	0.1458E-02	0.6660E-03	0.3028E-03	0.8342E-03
58	0.6659E-01	0.3943E-01	0.1458E-02	0.6678E-03	0.2531E-03	0.8430E-03
59	0.6620E-01	0.3890E-01	0.1457E-02	0.6677E-03	0.1990E-03	0.8563E-03
103	0.6621E-01	0.3601E-01	0.8728E-03	0.6570E-03	0.1366E-03	0.8126E-03
104	0.6623E-01	0.2942E-01	0.6758E-03	0.6143E-03	0.5223E-04	0.8593E-03
105	0.6623E-01	0.2726E-01	0.7828E-03	0.6099E-03	0.5432E-04	0.9396E-03
106	0.6623E-01	0.2505E-01	0.9020E-03	0.5877E-03	0.4828E-04	0.1019E-02
107	0.6623E-01	0.1832E-01	0.1357E-02	0.5393E-03	0.2188E-03	0.1017E-02

COMBINED VALUES OF COUPLED MEMBER FORCES

NODE	PX	PY	PZ	MX	MY	MZ
1	0.9816E-01	0.3502E-01	0.9375E-01	0.1510E+00	0.3575E+00	0.1617E+00
2	0.9816E-01	0.3502E-01	0.9375E-01	0.1584E+00	0.3144E+00	0.1536E+00
3	0.9726E-01	0.3501E-01	0.9374E-01	0.1386E+00	0.3148E+00	0.1536E+00
2	0.9726E-01	0.3501E-01	0.9374E-01	0.1331E+00	0.2413E+00	0.1352E+00
3	0.9599E-01	0.3493E-01	0.9343E-01	0.1231E+00	0.2413E+00	0.1352E+00
4	0.9589E-01	0.3493E-01	0.9343E-01	0.1231E+00	0.2543E+00	0.1327E+00
4	0.9499E-01	0.3479E-01	0.9210E-01	0.1231E+00	0.2543E+00	0.1327E+00
5	0.9499E-01	0.3479E-01	0.9210E-01	0.1231E+00	0.3169E+00	0.1484E+00
5	0.9478E-01	0.3479E-01	0.9175E-01	0.1231E+00	0.3169E+00	0.1484E+00
9001	0.9474E-01	0.3479E-01	0.9175E-01	0.1195E+00	0.3377E+00	0.1475E+00

9001	0.9469E+01	0.1480E-01	0.9161E-01	0.1195E+00	0.3273E+00	0.1475E+00
9002	0.9469E+01	0.1480E-01	0.9161E-01	0.1096E+00	0.3351E+00	0.1394E+00
9003	0.9469E+01	0.1480E-01	0.9161E-01	0.1096E+00	0.3351E+00	0.1394E+00
6	0.9469E+01	0.1480E-01	0.9161E-01	0.9622E-01	0.3380E+00	0.1264E+00
7	0.9457E-01	0.1482E-01	0.9132E-01	0.9622E-01	0.3380E+00	0.1264E+00
6	0.9457E-01	0.1482E-01	0.9132E-01	0.8062E-01	0.3380E+00	0.1099E+00
7	0.9409E-01	0.1500E-01	0.9018E-01	0.8061E-01	0.3380E+00	0.1099E+00
9003	0.9409E-01	0.1500E-01	0.9018E-01	0.2057E+00	0.3380E+00	0.1914E+00
9003	0.9398E-01	0.1505E-01	0.8819E-01	0.2057E+00	0.3380E+00	0.1914E+00
9004	0.9298E-01	0.1565E-01	0.8439E-01	0.4730E+00	0.3380E+00	0.4729E+00
9004	0.9298E-01	0.1565E-01	0.8439E-01	0.4730E+00	0.3380E+00	0.4729E+00
9	0.9298E-01	0.1565E-01	0.8439E-01	0.7376E+00	0.3380E+00	0.7607E+00
9	0.9298E-01	0.1565E-01	0.8439E-01	0.7376E+00	0.3380E+00	0.7607E+00
10	0.1783E+00	0.1826E-01	0.8688E-01	0.7833E+00	0.3380E+00	0.6675E+00
10	0.1697E+00	0.1805E-01	0.1498E-00	0.7833E+00	0.3380E+00	0.6675E+00
9005	0.1697E+00	0.1805E-01	0.1498E-00	0.3945E+00	0.3380E+00	0.2355E+00
9005	0.1576E+00	0.4376E-01	0.1469E+00	0.3945E+00	0.3380E+00	0.2355E+00
9006	0.1576E+00	0.4376E-01	0.1469E+00	0.3613E-01	0.3380E+00	0.2073E+00
9006	0.1385E+00	0.4364E-01	0.1408E+00	0.3613E-01	0.3380E+00	0.2073E+00
11	0.1385E+00	0.4364E-01	0.1408E+00	0.3576E+00	0.3380E+00	0.5590E+00
11	0.1211E+00	0.4499E-01	0.1349E+00	0.3576E+00	0.3380E+00	0.5590E+00
12	0.1211E+00	0.4499E-01	0.1349E+00	0.4777E+00	0.3380E+00	0.6675E+00
12	0.1172E+00	0.4541E-01	0.1330E+00	0.4777E+00	0.3380E+00	0.6675E+00
9007	0.1172E+00	0.4541E-01	0.1330E+00	0.4984E+00	0.3380E+00	0.6689E+00
9007	0.1157E+00	0.4553E-01	0.1325E+00	0.4984E+00	0.3380E+00	0.6689E+00
9008	0.1157E+00	0.4553E-01	0.1325E+00	0.5135E+00	0.3216E+00	0.7031E+00
9008	0.1142E+00	0.4565E-01	0.1319E+00	0.5135E+00	0.3216E+00	0.7031E+00
13	0.1142E+00	0.4565E-01	0.1319E+00	0.5190E+00	0.3097E+00	0.7122E+00
13	0.1124E+00	0.4576E-01	0.1311E+00	0.5190E+00	0.3097E+00	0.7122E+00
14	0.1124E+00	0.4576E-01	0.1311E+00	0.5190E+00	0.2835E+00	0.7185E+00
14	0.1071E+00	0.4579E-01	0.1288E+00	0.5190E+00	0.2835E+00	0.7185E+00
15	0.1071E+00	0.4579E-01	0.1288E+00	0.5190E+00	0.2414E+00	0.7324E+00
15	0.9086E-01	0.2285E-00	0.1194E-00	0.5190E+00	0.2414E+00	0.7324E+00
16	0.9086E-01	0.2285E-00	0.1194E-00	0.5190E+00	0.1935E+00	0.5767E+00
16	0.8748E-01	0.2284E-00	0.1160E-00	0.5190E+00	0.1935E+00	0.5767E+00
17	0.8748E-01	0.2284E-00	0.1160E-00	0.4984E+00	0.1892E+00	0.5566E+00
17	0.8652E-01	0.2284E-00	0.1140E-00	0.4984E+00	0.1892E+00	0.5566E+00
18	0.8652E-01	0.2284E-00	0.1140E-00	0.4062E+00	0.1717E+00	0.5299E+00
18	0.8514E-01	0.2384E+00	0.1104E+00	0.4062E+00	0.1717E+00	0.5299E+00
19	0.8514E-01	0.2384E+00	0.1104E+00	0.2774E+00	0.1534E+00	0.5190E+00
19	0.8508E-01	0.2383E+00	0.1097E+00	0.2774E+00	0.1534E+00	0.5190E+00
20	0.8508E-01	0.2383E+00	0.1097E+00	0.1097E+00	0.1504E+00	0.4367E+00
20	0.8011E-01	0.2283E+00	0.9257E-01	0.1097E+00	0.1504E+00	0.4367E+00
21	0.8011E-01	0.2283E+00	0.9257E-01	0.1272E+00	0.1530E+00	0.4500E+00
21	0.1013E+00	0.2283E+00	0.7899E-01	0.1272E+00	0.1530E+00	0.4500E+00
9009	0.1013E+00	0.2283E+00	0.7899E-01	0.1792E+00	0.1530E+00	0.4761E+00
9009	0.1200E+00	0.2283E+00	0.5456E-01	0.1792E+00	0.1530E+00	0.4761E+00
9010	0.1200E+00	0.2283E+00	0.5456E-01	0.3507E+00	0.1530E+00	0.4884E+00
9010	0.1342E+00	0.2284E+00	0.2986E-01	0.3507E+00	0.1530E+00	0.4884E+00
9011	0.1342E+00	0.2284E+00	0.2986E-01	0.4446E+00	0.1530E+00	0.7725E+00
22	0.1419E+00	0.2284E+00	0.1597E-01	0.4446E+00	0.1530E+00	0.7725E+00

23	0.1419E+00	0.2284E+00	0.1597E-01	0.4541E+00	0.1550E+00	0.8538E+00
23	0.1551E+00	0.2284E+00	0.1103E-01	0.4541E+00	0.1550E+00	0.8538E+00
24	0.1551E+00	0.2284E+00	0.1103E-01	0.4462E+00	0.1550E+00	0.8695E+00
24	0.1456E+00	0.2285E+00	0.2295E-01	0.4462E+00	0.1550E+00	0.8695E+00
9011	0.1456E+00	0.2285E+00	0.2295E-01	0.3901E+00	0.1550E+00	0.3855E+00
9011	0.1253E+00	0.2285E+00	0.1960E-01	0.3901E+00	0.1550E+00	0.3855E+00
9012	0.1253E+00	0.2285E+00	0.1960E-01	0.2869E+00	0.1550E+00	0.3587E+00
9012	0.1009E+00	0.2285E+00	0.8401E-01	0.2869E+00	0.1550E+00	0.3587E+00
25	0.1009E+00	0.2285E+00	0.8401E-01	0.2495E+00	0.1550E+00	0.5009E+00
25	0.8647E-01	0.2286E+00	0.8137E-01	0.2495E+00	0.1550E+00	0.5009E+00
26	0.8647E-01	0.2286E+00	0.8137E-01	0.1103E+00	0.1550E+00	0.5421E+00
26	0.7816E-01	0.2286E+00	0.6866E-01	0.1103E+00	0.1550E+00	0.5421E+00
9013	0.7816E-01	0.2286E+00	0.6866E-01	0.1383E+00	0.1550E+00	0.6668E+00
9013	0.7150E-01	0.2287E+00	0.7647E-01	0.1383E+00	0.1550E+00	0.6668E+00
9014	0.7150E-01	0.2287E+00	0.7647E-01	0.3488E+00	0.1550E+00	0.7447E+00
9014	0.6333E-01	0.2287E+00	0.8061E-01	0.3488E+00	0.1550E+00	0.7447E+00
27	0.6333E-01	0.2287E+00	0.8061E-01	0.5820E+00	0.1550E+00	0.7750E+00
27	0.5375E-01	0.2288E+00	0.8125E-01	0.5820E+00	0.1550E+00	0.7750E+00
28	0.5375E-01	0.2288E+00	0.8125E-01	0.6702E+00	0.1550E+00	0.7903E+00
28	0.5588E-01	0.2288E+00	0.7939E-01	0.6702E+00	0.1550E+00	0.7903E+00
29	0.5588E-01	0.2288E+00	0.7939E-01	0.5388E+00	0.1550E+00	0.7097E+00
29	0.7199E-01	0.2289E+00	0.7990E-01	0.5388E+00	0.1550E+00	0.7097E+00
9015	0.7199E-01	0.2289E+00	0.7990E-01	0.2917E+00	0.1550E+00	0.5213E+00
9015	0.9562E-01	0.2290E+00	0.8094E-01	0.2917E+00	0.1550E+00	0.5213E+00
9016	0.9562E-01	0.2290E+00	0.8094E-01	0.4830E-01	0.1550E+00	0.2590E+00
9016	0.1115E+00	0.2290E+00	0.8177E-01	0.4830E-01	0.1550E+00	0.2590E+00
30	0.1115E+00	0.2290E+00	0.8177E-01	0.2175E+00	0.1550E+00	0.1564E+00
30	0.1166E+00	0.2291E+00	0.8188E-01	0.2175E+00	0.1550E+00	0.1564E+00
31	0.1166E+00	0.2291E+00	0.8188E-01	0.2242E+00	0.1550E+00	0.1621E+00
31	0.1163E+00	0.2291E+00	0.8189E-01	0.2242E+00	0.1550E+00	0.1621E+00
32	0.1163E+00	0.2291E+00	0.8189E-01	0.2216E+00	0.1509E+00	0.1792E+00
32	0.1173E+00	0.2291E+00	0.8191E-01	0.2216E+00	0.1509E+00	0.1792E+00
35	0.1173E+00	0.2291E+00	0.8191E-01	0.1799E+00	0.1433E+00	0.1866E+00
35	0.1195E+00	0.2291E+00	0.8194E-01	0.1799E+00	0.1433E+00	0.1866E+00
37	0.1195E+00	0.2291E+00	0.8194E-01	0.4857E-01	0.1477E+00	0.1866E+00
37	0.1513E+00	0.5088E-02	0.8229E-01	0.4857E-01	0.1477E+00	0.1866E+00
9017	0.1513E+00	0.5088E-02	0.8229E-01	0.3913E-01	0.4513E+00	0.1866E+00
9017	0.1628E+00	0.5277E-02	0.8256E-01	0.3913E-01	0.4513E+00	0.1866E+00
9018	0.1628E+00	0.5277E-02	0.8256E-01	0.2835E-01	0.8856E+00	0.1866E+00
9018	0.1786E+00	0.5511E-02	0.8288E-01	0.2835E-01	0.8856E+00	0.1866E+00
38	0.1786E+00	0.5511E-02	0.8288E-01	0.2102E-01	0.1354E+01	0.1866E+00
38	0.1834E+00	0.5286E-02	0.8312E-01	0.2102E-01	0.1354E+01	0.1866E+00
39	0.1834E+00	0.5286E-02	0.8312E-01	0.2099E-01	0.1508E+01	0.1866E+00
39	0.2253E+00	0.4742E-02	0.8378E-01	0.2099E-01	0.1508E+01	0.1866E+00
9019	0.2253E+00	0.4742E-02	0.8378E-01	0.1865E-01	0.8829E+00	0.1866E+00
9019	0.3228E+00	0.4269E-02	0.8426E-01	0.1865E-01	0.8829E+00	0.1866E+00
40	0.3228E+00	0.4269E-02	0.8426E-01	0.1932E-01	0.2595E+00	0.1866E+00
40	0.2274E+00	0.4583E-02	0.8470E-01	0.1932E-01	0.2595E+00	0.1866E+00
41	0.2274E+00	0.4583E-02	0.8470E-01	0.2266E-01	0.3037E+00	0.1866E+00
41	0.2317E+00	0.4813E-02	0.8505E-01	0.2266E-01	0.3037E+00	0.1866E+00

cyl cent. out

43	0.2317E+00	0.4832E-02	0.8505E-01	0.2347E-01	0.3748E+00	0.1877E+00
43	0.2324E+00	0.4839E-02	0.8509E-01	0.2347E-01	0.3748E+00	0.1877E+00
44	0.2324E+00	0.4839E-02	0.8509E-01	0.2347E-01	0.3750E+00	0.1880E+00
44	0.2405E+00	0.3374E-01	0.8510E-01	0.2347E-01	0.3750E+00	0.1880E+00
45	0.2405E+00	0.3374E-01	0.8510E-01	0.2347E-01	0.3775E+00	0.1781E+00
45	0.2575E+00	0.3355E-01	0.8548E-01	0.2347E-01	0.3775E+00	0.1781E+00
9020	0.2575E+00	0.3355E-01	0.8548E-01	0.2347E-01	0.3759E+00	0.1079E+00
9020	0.2748E+00	0.3303E-01	0.8510E-01	0.2347E-01	0.3759E+00	0.1079E+00
46	0.2748E+00	0.3303E-01	0.8510E-01	0.2347E-01	0.2864E-01	0.5751E-01
46	0.2850E+00	0.3296E-01	0.8507E-01	0.2347E-01	0.2864E-01	0.5751E-01
47	0.2850E+00	0.3296E-01	0.8507E-01	0.2347E-01	0.4813E-01	0.5579E-01
47	0.3043E+00	0.3492E-01	0.1957E-01	0.2393E-01	0.1940E-01	0.1022E+00
48	0.3043E+00	0.3492E-01	0.1957E-01	0.2393E-01	0.1957E-01	0.9819E-01
48	0.3049E+00	0.2683E-01	0.1921E-01	0.2393E-01	0.1910E-01	0.9819E-01
48	0.3049E+00	0.2683E-01	0.1921E-01	0.2393E-01	0.2378E-01	0.9229E-01
49	0.3665E+00	0.2631E-01	0.1403E-01	0.1393E-01	0.1393E-01	0.9229E-01
50	0.3665E+00	0.2631E-01	0.1403E-01	0.2393E-01	0.2878E-01	0.8600E-01
50	0.3698E+00	0.2630E-01	0.1379E-01	0.2393E-01	0.2678E-01	0.8600E-01
51	0.3698E+00	0.2630E-01	0.1379E-01	0.2393E-01	0.2779E-01	0.8694E-01
51	0.3732E+00	0.2630E-01	0.1345E-01	0.2393E-01	0.2779E-01	0.8694E-01
52	0.3732E+00	0.2630E-01	0.1345E-01	0.2393E-01	0.3184E-01	0.6409E-01
52	0.4048E+00	0.1553E-01	0.1191E-01	0.2393E-01	0.3184E-01	0.6409E-01
53	0.4048E+00	0.1553E-01	0.1191E-01	0.2393E-01	0.4718E-01	0.5594E-01
53	0.4412E+00	0.1368E-01	0.1200E-01	0.2393E-01	0.4718E-01	0.5594E-01
54	0.4412E+00	0.1368E-01	0.1200E-01	0.2393E-01	0.7209E-01	0.2353E-01
54	0.4796E+00	0.1403E-01	0.1488E-01	0.2393E-01	0.7209E-01	0.2393E-01
55	0.4796E+00	0.1403E-01	0.1488E-01	0.2393E-01	0.7253E-01	0.2422E-01
55	0.4831E+00	0.1547E-01	0.3488E-01	0.2393E-01	0.7253E-01	0.2422E-01
56	0.4831E+00	0.1547E-01	0.3488E-01	0.2008E-01	0.9045E-01	0.2827E-01
56	0.4873E+00	0.1741E-01	0.3488E-01	0.2008E-01	0.9045E-01	0.2827E-01
57	0.4873E+00	0.1741E-01	0.3488E-01	0.1780E-01	0.1784E+00	0.2827E-01
57	0.4873E+00	0.1741E-01	0.3488E-01	0.1780E-01	0.1784E+00	0.2827E-01
58	0.1872E+00	0.2809E-01	0.3502E-01	0.1558E-01	0.1480E+00	0.2827E-01
58	0.1872E+00	0.2809E-01	0.3502E-01	0.1558E-01	0.1480E+00	0.2827E-01
58	0.1845E+00	0.2938E-01	0.3504E-01	0.1558E-01	0.1480E+00	0.2827E-01
59	0.1845E+00	0.2938E-01	0.3504E-01	0.1465E-01	0.1078E+00	0.2827E-01
59	0.1556E+00	0.3439E-01	0.3517E-01	0.1449E-01	0.1027E+00	0.2827E-01
60	0.1556E+00	0.3439E-01	0.3517E-01	0.1779E-01	0.6606E-01	0.2845E-01
60	0.1524E+00	0.3583E-01	0.3519E-01	0.1779E-01	0.6606E-01	0.2845E-01
61	0.1524E+00	0.3583E-01	0.3519E-01	0.2422E-01	0.3538E-01	0.2845E-01
61	0.1458E+00	0.3515E-01	0.3523E-01	0.2422E-01	0.3538E-01	0.2845E-01
62	0.1458E+00	0.3515E-01	0.3523E-01	0.2481E-01	0.3359E-01	0.2845E-01
62	0.1423E+00	0.3648E-01	0.3525E-01	0.2481E-01	0.3359E-01	0.2845E-01
63	0.1423E+00	0.3648E-01	0.3525E-01	0.3478E-01	0.2884E-01	0.1917E-01
63	0.1336E+00	0.3943E-01	0.3530E-01	0.3478E-01	0.2884E-01	0.1917E-01
64	0.1336E+00	0.3943E-01	0.3530E-01	0.3478E-01	0.2077E-01	0.2206E-01
64	0.1250E+00	0.4073E-01	0.3527E-01	0.3478E-01	0.2077E-01	0.2206E-01
65	0.1250E+00	0.4073E-01	0.3527E-01	0.3478E-01	0.3068E-01	0.3796E-01
65	0.2348E+00	0.6552E-01	0.1278E-01	0.2542E-01	0.3068E-01	0.3297E-01
66	0.2348E+00	0.6552E-01	0.1278E-01	0.2542E-01	0.2575E-01	0.5918E-01
66	0.2292E+00	0.6552E-01	0.1281E-01	0.2542E-01	0.2575E-01	0.5918E-01
67	0.2292E+00	0.6552E-01	0.1281E-01	0.2542E-01	0.2169E-01	0.8195E-01

47 JUNCTION

cyl cent. out

67	0.2252E+00	0.6544E-01	0.1289E-01	0.2642E-01	0.2169E-01	0.8195E-01
68	0.2252E+00	0.6544E-01	0.1289E-01	0.2642E-01	0.3895E-01	0.9809E-01
68	0.2142E+00	0.6683E-01	0.1362E-01	0.2746E-01	0.2653E-01	0.9969E-01
69	0.2142E+00	0.6683E-01	0.1362E-01	0.2746E-01	0.2397E-01	0.1161E+00
69	0.2113E+00	0.6637E-01	0.1364E-01	0.2746E-01	0.2397E-01	0.1161E+00
70	0.2113E+00	0.6637E-01	0.1364E-01	0.2746E-01	0.2193E-01	0.1368E+00
70	0.2077E+00	0.6559E-01	0.1367E-01	0.2746E-01	0.2193E-01	0.1368E+00
71	0.2077E+00	0.6559E-01	0.1367E-01	0.2746E-01	0.1785E-01	0.1559E+00
71	0.3214E+00	0.1815E-01	0.1151E-01	0.2835E-01	0.1785E-01	0.1748E+00
72	0.3214E+00	0.1815E-01	0.1151E-01	0.2835E-01	0.1843E-01	0.1748E+00
72	0.3663E+00	0.2138E-01	0.1160E-01	0.2835E-01	0.1843E-01	0.1748E+00
73	0.3663E+00	0.2138E-01	0.1160E-01	0.2835E-01	0.3151E-01	0.1445E+00
73	0.3320E+00	0.2797E-01	0.7408E-01	0.2835E-01	0.3151E-01	0.1445E+00
74	0.3320E+00	0.2797E-01	0.7408E-01	0.2835E-01	0.1729E-01	0.1405E+00
74	0.3277E+00	0.2878E-01	0.7407E-01	0.2835E-01	0.1729E-01	0.1405E+00
75	0.3277E+00	0.2878E-01	0.7407E-01	0.2835E-01	0.1845E-01	0.1326E+00
75	0.2600E+00	0.3839E-01	0.7391E-01	0.2835E-01	0.1845E-01	0.1326E+00
76	0.2600E+00	0.3839E-01	0.7391E-01	0.2835E-01	0.4777E-01	0.1317E+00
76	0.2557E+00	0.3877E-01	0.7370E-01	0.2835E-01	0.4777E-01	0.1317E+00
77	0.2557E+00	0.3877E-01	0.7370E-01	0.2835E-01	0.6296E-01	0.1161E+00
77	0.8782E-01	0.1697E-01	0.2322E-01	0.5655E-01	0.6613E-01	0.1161E+00
78	0.8782E-01	0.1697E-01	0.2322E-01	0.5655E-01	0.5669E-01	0.1044E+00
78	0.6149E-01	0.3658E-01	0.2313E-01	0.5655E-01	0.5669E-01	0.1044E+00
9021	0.6149E-01	0.3658E-01	0.2313E-01	0.5655E-01	0.1556E-01	0.3892E-01
9021	0.3008E-01	0.2294E-01	0.2269E-01	0.5655E-01	0.1556E-01	0.3892E-01
79	0.3008E-01	0.2294E-01	0.2269E-01	0.5655E-01	0.5532E-01	0.4899E-01
79	0.7108E-02	0.1125E-01	0.2135E-01	0.5655E-01	0.5532E-01	0.4899E-01
80	0.7108E-02	0.1125E-01	0.2135E-01	0.5655E-01	0.7405E-01	0.4899E-01
80	0.6447E-02	0.1508E-01	0.2100E-01	0.5655E-01	0.7405E-01	0.4899E-01
81	0.6447E-02	0.1508E-01	0.2100E-01	0.5655E-01	0.1558E-01	0.4312E-01
81	0.9699E-02	0.1912E-01	0.2080E-01	0.5655E-01	0.7864E-01	0.4312E-01
82	0.9699E-02	0.1912E-01	0.2080E-01	0.5655E-01	0.8227E-01	0.3836E-01
82	0.2576E-01	0.3648E-01	0.2022E-01	0.5096E-01	0.8227E-01	0.3836E-01
9022	0.2576E-01	0.3648E-01	0.2022E-01	0.5096E-01	0.2774E-01	0.3836E-01
9022	0.4860E-01	0.5192E-01	0.1935E-01	0.2967E-01	0.2774E-01	0.3836E-01
83	0.4860E-01	0.5192E-01	0.1935E-01	0.2967E-01	0.7904E-01	0.3836E-01
83	0.6104E-01	0.5346E-01	0.1891E-01	0.1390E+00	0.7904E-01	0.3836E-01
84	0.6104E-01	0.5346E-01	0.1891E-01	0.1494E+00	0.9087E-01	0.3836E-01
84	0.6261E-01	0.5362E-01	0.1885E-01	0.1494E+00	0.9087E-01	0.3836E-01
85	0.6261E-01	0.5362E-01	0.1885E-01	0.1868E+00	0.9954E-01	0.3836E-01
85	0.6705E-01	0.5393E-01	0.1869E-01	0.1868E+00	0.9954E-01	0.3836E-01
86	0.6705E-01	0.5393E-01	0.1869E-01	0.1805E+00	0.1268E+00	0.3450E-01
86	0.7384E-01	0.5392E-01	0.1861E-01	0.1805E+00	0.1268E+00	0.3450E-01
87	0.7384E-01	0.5392E-01	0.1861E-01	0.1766E+00	0.1188E+00	0.4908E-01
47 JUNCTION						
47	0.7907E-01	0.2165E-01	0.7630E-01	0.3790E-01	0.5728E-01	0.1375E+00
91	0.7907E-01	0.2165E-01	0.7630E-01	0.2241E-01	0.5728E-01	0.1192E+00
91	0.7318E-01	0.2190E-01	0.7641E-01	0.2241E-01	0.5728E-01	0.1192E+00
92	0.7318E-01	0.2190E-01	0.7641E-01	0.5918E-01	0.5728E-01	0.6569E-01
92	0.6619E-01	0.2223E-01	0.7644E-01	0.5918E-01	0.5728E-01	0.6569E-01

93	0.6613E-01	0.2223E-01	0.7644E-01	0.8319E-01	0.4248E-01	0.5837E-01	0.5837E-01
93	0.6269E-01	0.2234E-01	0.7644E-01	0.8319E-01	0.4248E-01	0.5837E-01	0.5837E-01
94	0.6269E-01	0.2234E-01	0.7644E-01	0.8319E-01	0.4248E-01	0.5837E-01	0.5837E-01
94	0.5967E-01	0.2239E-01	0.7644E-01	0.8319E-01	0.4248E-01	0.5837E-01	0.5837E-01
95	0.5837E-01	0.2239E-01	0.7644E-01	0.8319E-01	0.4248E-01	0.5837E-01	0.5837E-01
95	0.7061E-01	0.2225E-01	0.7652E-01	0.8694E-01	0.3363E-01	0.5837E-01	0.5837E-01
96	0.7061E-01	0.2225E-01	0.7652E-01	0.8694E-01	0.3363E-01	0.5837E-01	0.5837E-01
96	0.7321E-01	0.2222E-01	0.7653E-01	0.9018E-01	0.2281E-01	0.5837E-01	0.5837E-01
97	0.7321E-01	0.2222E-01	0.7653E-01	0.9018E-01	0.2281E-01	0.5837E-01	0.5837E-01
97	0.7611E-01	0.2217E-01	0.7654E-01	0.9038E-01	0.2309E-01	0.5837E-01	0.5837E-01
98	0.7611E-01	0.2217E-01	0.7654E-01	0.9038E-01	0.2309E-01	0.5837E-01	0.5837E-01
98	0.8119E-01	0.2205E-01	0.7655E-01	0.9018E-01	0.2281E-01	0.4231E-01	0.4231E-01
100	0.8119E-01	0.2205E-01	0.7655E-01	0.9018E-01	0.2281E-01	0.4231E-01	0.4231E-01
100	0.8484E-01	0.2196E-01	0.7655E-01	0.9038E-01	0.2309E-01	0.3643E-01	0.3643E-01
101	0.8484E-01	0.2196E-01	0.7655E-01	0.9038E-01	0.2309E-01	0.3643E-01	0.3643E-01
101	0.1618E+00	0.2417E-01	0.7588E-01	0.4439E-01	0.8862E-01	0.4565E-01	0.4565E-01
102	0.1618E+00	0.2417E-01	0.7588E-01	0.4439E-01	0.8862E-01	0.4565E-01	0.4565E-01
102	0.1618E+00	0.2417E-01	0.7588E-01	0.4439E-01	0.8862E-01	0.4565E-01	0.4565E-01
102	0.1654E+00	0.2413E-01	0.7589E-01	0.4374E-01	0.8862E-01	0.4565E-01	0.4565E-01
77	0.1654E+00	0.2413E-01	0.7589E-01	0.4374E-01	0.8862E-01	0.4565E-01	0.4565E-01
77	0.1654E+00	0.2413E-01	0.7589E-01	0.4374E-01	0.8862E-01	0.4565E-01	0.4565E-01
59	JUNCTION						
59	JUNCTION						
58	0.2923E-01	0.3532E-02	0.1441E-02	0.2318E-03	0.1830E-02	0.1930E-02	0.1930E-02
103	0.2923E-01	0.3532E-02	0.1441E-02	0.2318E-03	0.1830E-02	0.1930E-02	0.1930E-02
103	0.2748E-01	0.2728E-02	0.1433E-02	0.2318E-03	0.1830E-02	0.8954E-03	0.8954E-03
104	0.2748E-01	0.2728E-02	0.1433E-02	0.2318E-03	0.1830E-02	0.1349E-02	0.1349E-02
104	0.3368E-01	0.1612E-02	0.1408E-02	0.2318E-03	0.2836E-03	0.1349E-02	0.1349E-02
105	0.3368E-01	0.1612E-02	0.1408E-02	0.2318E-03	0.2836E-03	0.1725E-02	0.1725E-02
105	0.1394E-01	0.1932E-02	0.1332E-02	0.2318E-03	0.1082E-03	0.1725E-02	0.1725E-02
106	0.1394E-01	0.1932E-02	0.1332E-02	0.2318E-03	0.1082E-03	0.1250E-02	0.1250E-02
106	0.1333E-01	0.2670E-02	0.1318E-02	0.2318E-03	0.4143E-03	0.1250E-02	0.1250E-02
107	0.1333E-01	0.2670E-02	0.1318E-02	0.2318E-03	0.4143E-03	0.1250E-02	0.1250E-02
107	0.1357E-01	0.2565E-02	0.1319E-02	0.2318E-03	0.1670E-02	0.1327E-02	0.1327E-02
109	0.1357E-01	0.2565E-02	0.1319E-02	0.2318E-03	0.1670E-02	0.1644E-02	0.1644E-02
109	0.1376E-01	0.2496E-02	0.1319E-02	0.2318E-03	0.2103E-03	0.1644E-02	0.1644E-02
111	0.1376E-01	0.2496E-02	0.1319E-02	0.2318E-03	0.2103E-03	0.1644E-02	0.1644E-02
111	0.1396E-01	0.2429E-02	0.1320E-02	0.2318E-03	0.3739E-02	0.1644E-02	0.1644E-02
112	0.1396E-01	0.2429E-02	0.1320E-02	0.2318E-03	0.3739E-02	0.1644E-02	0.1644E-02
112	0.1444E-01	0.2292E-02	0.1322E-02	0.2318E-03	0.5384E-02	0.1644E-02	0.1644E-02
68	0.1444E-01	0.2292E-02	0.1322E-02	0.2318E-03	0.5384E-02	0.1644E-02	0.1644E-02
68	JUNCTION						
101	JUNCTION						
101	JUNCTION						
101	0.7928E-01	0.1040E-01	0.2680E-02	0.2495E-01	0.9082E-01	0.2095E-01	0.2095E-01
113	0.7928E-01	0.1040E-01	0.2680E-02	0.2495E-01	0.9082E-01	0.2095E-01	0.2095E-01
113	0.6991E-01	0.1032E-01	0.2581E-02	0.2072E-01	0.5124E-01	0.2095E-01	0.2095E-01
114	0.6991E-01	0.1032E-01	0.2581E-02	0.2072E-01	0.5124E-01	0.2095E-01	0.2095E-01
114	0.3154E-01	0.1049E-01	0.2581E-02	0.1792E-01	0.2659E-01	0.2095E-01	0.2095E-01
115	0.3154E-01	0.1049E-01	0.2581E-02	0.1792E-01	0.2659E-01	0.2095E-01	0.2095E-01
115	0.2154E-01	0.1078E-01	0.2148E-02	0.1488E-01	0.1550E-01	0.2095E-01	0.2095E-01
115	0.2154E-01	0.1078E-01	0.2148E-02	0.1488E-01	0.1550E-01	0.2095E-01	0.2095E-01
116	0.2154E-01	0.1066E-01	0.2134E-02	0.1090E-01	0.4572E-02	0.2095E-01	0.2095E-01
116	0.1774E-01	0.1074E-01	0.2162E-02	0.1090E-01	0.4572E-02	0.2095E-01	0.2095E-01
118	0.1774E-01	0.1074E-01	0.2162E-02	0.1090E-01	0.4572E-02	0.2095E-01	0.2095E-01

118	0.5306E-02	0.1103E-01	0.2108E-02	0.9699E-02	0.2020E-02	0.2303E-01	0.2303E-01
8023	0.5306E-02	0.1103E-01	0.2108E-02	0.9699E-02	0.2020E-02	0.2303E-01	0.2303E-01
9023	0.1763E-01	0.1176E-01	0.2140E-02	0.9331E-02	0.2020E-02	0.2303E-01	0.2303E-01
120	0.1763E-01	0.1176E-01	0.2140E-02	0.9331E-02	0.2020E-02	0.2303E-01	0.2303E-01
120	0.2676E-01	0.1228E-01	0.2078E-02	0.1188E-01	0.2020E-02	0.9333E-02	0.9333E-02
122	0.2676E-01	0.1228E-01	0.2078E-02	0.1188E-01	0.2020E-02	0.9333E-02	0.9333E-02
122	0.2900E-01	0.1240E-01	0.2148E-02	0.1024E-01	0.5906E-02	0.1428E-01	0.1428E-01
124	0.2900E-01	0.1240E-01	0.2148E-02	0.1024E-01	0.5906E-02	0.1428E-01	0.1428E-01
124	0.2674E-01	0.1343E-01	0.6494E-02	0.6777E-02	0.1593E-01	0.1428E-01	0.1428E-01
125	0.2674E-01	0.1343E-01	0.6494E-02	0.6777E-02	0.1593E-01	0.1428E-01	0.1428E-01
125	0.2199E-01	0.1346E-01	0.7109E-02	0.7822E-02	0.6728E-02	0.1428E-01	0.1428E-01
127	0.2199E-01	0.1346E-01	0.7109E-02	0.7822E-02	0.6728E-02	0.1428E-01	0.1428E-01
127	0.1144E-01	0.1346E-01	0.8320E-02	0.1024E-01	0.1081E-01	0.1827E-01	0.1827E-01
129	0.1144E-01	0.1346E-01	0.8320E-02	0.1024E-01	0.1081E-01	0.4255E-01	0.4255E-01
129	0.2949E-01	0.1347E-01	0.1082E-01	0.2279E-01	0.1081E-01	0.4255E-01	0.4255E-01
9024	0.2949E-01	0.1347E-01	0.1082E-01	0.2279E-01	0.1081E-01	0.4255E-01	0.4255E-01
9024	0.4181E-01	0.1347E-01	0.1092E-01	0.6109E-02	0.1081E-01	0.2989E-02	0.2989E-02
130	0.4181E-01	0.1347E-01	0.1092E-01	0.6109E-02	0.1081E-01	0.2989E-02	0.2989E-02
130	0.2161E+00	0.2210E-01	0.4571E-01	0.1207E-01	0.0000E+00	0.0000E+00	0.0000E+00
65	JUNCTION						
65	JUNCTION						
131	0.2161E+00	0.2210E-01	0.4571E-01	0.1207E-01	0.0000E+00	0.4836E-01	0.4836E-01
131	0.1785E+00	0.1914E-01	0.5981E-02	0.1621E-02	0.0000E+00	0.4836E-01	0.4836E-01
132	0.1785E+00	0.1914E-01	0.5981E-02	0.1621E-02	0.0000E+00	0.0000E+00	0.0000E+00
71	JUNCTION						
71	JUNCTION						
71	0.2704E+00	0.5448E-01	0.1403E-01	0.3839E-02	0.0000E+00	0.2393E-01	0.2393E-01
133	0.2704E+00	0.5448E-01	0.1403E-01	0.3839E-02	0.0000E+00	0.5024E-01	0.5024E-01
133	0.1854E+00	0.4720E-01	0.3429E-02	0.9294E-03	0.0000E+00	0.5024E-01	0.5024E-01
134	0.1854E+00	0.4720E-01	0.3429E-02	0.9294E-03	0.0000E+00	0.0000E+00	0.0000E+00

COMBINED VALUES OF COUPLED SUPPORT REACTIONS

TYPE	NODE	SUPPORT REACTION
FX	1	0.3845E-01
FY	1	0.3502E-01
FZ	1	0.9375E-01
MX	1	0.1510E-00
MY	1	0.1575E-00
MZ	1	0.1617E-00
FX	9	0.2853E-00
FY	10	0.2359E+00
FZ	14	0.1370E-02
FX	15	0.2621E+00
FY	23	0.2821E+00
FZ	28	0.1601E+00
FZ	37	0.2288E+00
FX	39	0.4228E+00
FY	44	0.3706E-01
FZ	45	0.1272E+06
FY	52	0.2975E-01
FY	53	0.1554E-02
FZ	54	0.4082E-01

FX	57	0.6868E+00
FY	61	0.8545E-02
FZ	73	0.8114E-01
FX	78	0.1205E-02
FY	79	0.1779E-02
FZ	87	0.7697E-01
FX	87	0.5392E-01
FY	87	0.1861E-01
FZ	87	0.1766E+00
MX	87	0.1188E+00
FY	87	0.4506E-01
FZ	124	0.7987E-01
FX	129	0.1879E-01
FY	130	0.4743E-01
FZ	130	0.1347E-01
MX	130	0.1082E-01
FY	130	0.1073E-01
FZ	130	0.1081E-01
MX	130	0.6737E-01
FX	131	0.4211E+00
FY	131	0.4766E-01
FZ	133	0.4643E+00
MX	133	0.1402E-01

PRESSURIZER SPRAY LINE - X DIRECTION RUN

NUMBER OF PRIMARY DOP HP= 76
 NUMBER OF CONNECTING DOP SC= 14
 NUMBER OF PIPING ANCHORS NA= 3
 NUMBER OF PRIMARY MOLES NPM= 3
 NUMBER OF SECONDARY MOLES NSM= 31
 NORMALIZATION INDEX FOR P.S. NRMF= 1
 NORMALIZATION INDEX FOR S.S. NRMNS= 0
 OUTPUT TYPE INDICATOR IPRINT= 0
 OUTPUT TYPE INDICATOR IPRINTS= 1
 PRIMARY RESIDUAL MOLE KEY NRES= 0
 SECONDARY RESIDUAL MOLE KEY KRES= 1

NUMBER OF NEWZNO IN PRIMARY SYSTEM STIFFNESS MATRIX MNRSP=1191
 GLOBAL EARTHQUAKE DIRECTION X=1, Y=2 (VERTICAL) Z=3 EPLG= 1
 NUMBER OF ITERATIONS NITER= 900
 NUMBER OF SPECTRA CURVES NCURVE= 34
 NUMBER OF SPECTRA POINTS NPLP= 34
 ITERATION TOLERANCE TOL= 0.1000E-05
 RIGID FREQUENCY FR= 24.180
 SPECTRUM FACTOR SPTF= 366.400
 CORRELATION TOLERANCE ET= 0.010

TOTAL STORAGE REQUIRED = 1415037
 ACTUAL PROVIDED STORAGE = 55000000
 PRIMARY DAMPING RATIOS
 0.2111E-01 0.2267E-01 0.5000E-01
 SECONDARY DAMPING RATIOS
 0.8000E-01 0.8150E-01 0.3566E-01 0.2140E-01 0.2182E-01
 0.2100E-01 0.1940E-01 0.1940E-01 0.1877E-01 0.2111E-01
 0.2404E-01 0.2498E-01 0.2548E-01 0.2750E-01 0.2942E-01
 0.3020E-01 0.3198E-01 0.3162E-01 0.3363E-01 0.3710E-01
 0.3724E-01 0.3803E-01 0.3926E-01 0.4084E-01 0.4132E-01
 0.4264E-01

CONNECTING DOP # OF PRIMARY SYSTEM
 3041 3042 3043 3061 3063 3072 3081 3103 3121 3122 3123 3051 3092 3093
 CONNECTING DOP # OF PIPING SUPPORTS
 1 2 3 4 6 8 10 15 16 17 18 19 20 21
 STIFFNESS OF CONNECTING DOP OF S.S.

0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
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 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

MODE # OF PIPING ANCHORS
 1 87 130
 JCTAB = 1 2 3 4 5 9001 9002 6 7 9003 9004 9 10 9005 9006 11 12
 9007 9008 13 14 15 16 17 18 19 20 21 9009 9010 22 23 9011
 9012 25 26 9013 9014 27 28 29 9015 9016 30 31 32 35 37 9017
 97 98 100 101 102 103 113 114 115 116 118 9023 120 122 124 125 127
 129 9024 130 48 49 50 51 52 53 54 55 56 57 58 59 103 104 108
 106 107 109 111 112 60 61 62 63 64 65 131 132 66 67 68 69 70
 71 133 134 72 73 74 75 76 77 78 9021 79 80 81 82 9012 83 84
 85 86 87

SECONDARY FREQUENCY, Z (HZ)
 1.1145174 1.7467480 2.8009113 3.4310110 3.6005707 3.8783602
 4.2580651 7.6894922 7.4677160 8.0709835 8.3071158 10.6266291
 13.1288684 13.4392027 14.7926822 16.0903496 16.5975174 17.8593901
 18.2548554 19.6403358 20.8923353 21.1695460 23.0565499 23.4925415
 23.6250718 24.1808508 25.3192702 26.2362872 26.7325045 26.8657538
 27.5411523

PRIMARY FREQUENCY, Z (HZ)
 10.1792000 12.0367000 32.9170000
 MODE SHAPE OF P.S. AT CONNECTING DOP 3041
 0.0000E+00 0.2317E-01 0.1283E+00
 MODE SHAPE OF P.S. AT CONNECTING DOP 3042
 0.0000E+00 0.0000E+00 0.0000E+00
 MODE SHAPE OF P.S. AT CONNECTING DOP 3043
 0.1573E-01 0.0000E+00 0.0000E+00
 MODE SHAPE OF P.S. AT CONNECTING DOP 3061
 0.0000E+00 0.6344E-01 0.1916E+00
 MODE SHAPE OF P.S. AT CONNECTING DOP 3063
 0.5284E-01 0.0000E+00 0.0000E+00
 MODE SHAPE OF P.S. AT CONNECTING DOP 3072
 0.0000E+00 0.0000E+00 0.0000E+00
 MODE SHAPE OF P.S. AT CONNECTING DOP 3081
 0.0000E+00 0.1114E+00 0.1635E+00
 MODE SHAPE OF P.S. AT CONNECTING DOP 3103
 0.1930E+00 0.0000E+00 0.0000E+00
 MODE SHAPE OF P.S. AT CONNECTING DOP 3121
 0.0000E+00 0.2428E+00 -0.9249E-01
 MODE SHAPE OF P.S. AT CONNECTING DOP 3122
 0.0000E+00 0.0000E+00 0.0000E+00
 MODE SHAPE OF P.S. AT CONNECTING DOP 3123
 0.2483E+00 0.0000E+00 0.0000E+00
 MODE SHAPE OF P.S. AT CONNECTING DOP 3091
 0.0000E+00 0.1323E+00 0.1277E+00
 MODE SHAPE OF P.S. AT CONNECTING DOP 3092
 0.0000E+00 0.0000E+00 0.0000E+00

0.0000E+00 0.0000E+00 0.0000E+00

NODE SHAPE OF P.S. AT CONNECTING DOF 1093

0.1179E+00 0.0000E+00 0.0000E+00

PARTICIPATION FACTOR FOR P.S. --- GAMMA

0.0000E+00 0.5348E-01 0.3756E-01

INPUT SPECTRUM CURVE NUMBER = 1

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.19000E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION
1	0.1315E+01	0.3012E+00
2	0.1587E+01	0.3829E+00
3	0.2801E+01	0.7058E+00
4	0.3430E+01	0.5727E+00
5	0.3601E+01	0.5737E+00
6	0.3898E+01	0.5001E+00
7	0.4259E+01	0.6502E+00
8	0.5689E+01	0.4877E+00
9	0.7468E+01	0.4020E+00
10	0.8071E+01	0.3116E+00
11	0.8307E+01	0.2837E+00
12	0.1018E+02	0.2340E+00
13	0.1063E+02	0.2189E+00
14	0.1204E+02	0.227E+00
15	0.1313E+02	0.211E+00
16	0.1344E+02	0.20E+00
17	0.1479E+02	0.1952E+00
18	0.1609E+02	0.1862E+00
19	0.1660E+02	0.1877E+00
20	0.1796E+02	0.18E+00
21	0.1826E+02	0.1845E+00
22	0.1964E+02	0.1895E+00
23	0.2089E+02	0.1867E+00
24	0.2217E+02	0.1832E+00
25	0.2306E+02	0.1867E+00
26	0.2349E+02	0.1890E+00
27	0.2362E+02	0.1895E+00
28	0.2418E+02	0.1908E+00
29	0.2532E+02	0.1902E+00
30	0.2624E+02	0.1903E+00
31	0.2673E+02	0.1895E+00
32	0.2689E+02	0.1892E+00
33	0.2754E+02	0.1853E+00
34	0.3292E+02	0.1829E+00

INPUT SPECTRUM CURVE NUMBER = 2

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.19400E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION
1	0.1315E+01	0.2999E+00
2	0.1587E+01	0.3817E+00
3	0.2801E+01	0.6982E+00
4	0.3430E+01	0.5684E+00
5	0.3601E+01	0.5684E+00
6	0.3898E+01	0.4969E+00
7	0.4259E+01	0.6423E+00
8	0.5689E+01	0.4855E+00
9	0.7468E+01	0.3988E+00
10	0.8071E+01	0.3091E+00
11	0.8307E+01	0.2820E+00
12	0.1018E+02	0.2334E+00
13	0.1063E+02	0.2183E+00
14	0.1204E+02	0.2264E+00
15	0.1313E+02	0.2129E+00
16	0.1344E+02	0.2071E+00
17	0.1479E+02	0.1952E+00
18	0.1609E+02	0.1862E+00
19	0.1660E+02	0.1877E+00
20	0.1796E+02	0.1842E+00
21	0.1826E+02	0.1866E+00
22	0.1964E+02	0.1895E+00
23	0.2089E+02	0.1867E+00
24	0.2217E+02	0.1832E+00
25	0.2306E+02	0.1867E+00
26	0.2349E+02	0.1890E+00
27	0.2362E+02	0.1895E+00
28	0.2418E+02	0.1907E+00
29	0.2532E+02	0.1902E+00
30	0.2624E+02	0.1902E+00
31	0.2673E+02	0.1894E+00
32	0.2689E+02	0.1889E+00
33	0.2754E+02	0.1853E+00
34	0.3292E+02	0.1829E+00

INPUT SPECTRUM CURVE NUMBER = 3

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.19441E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION
1	0.1315E+01	0.2998E+00
2	0.1587E+01	0.3816E+00
3	0.2801E+01	0.6975E+00
4	0.3430E+01	0.5680E+00
5	0.3601E+01	0.5682E+00
6	0.3898E+01	0.4968E+00
7	0.4259E+01	0.6415E+00
8	0.5689E+01	0.4864E+00
9	0.7468E+01	0.3984E+00
10	0.8071E+01	0.3089E+00
11	0.8307E+01	0.2818E+00
12	0.1018E+02	0.2333E+00
13	0.1063E+02	0.2192E+00
14	0.1204E+02	0.2262E+00
15	0.1313E+02	0.2129E+00
16	0.1344E+02	0.2071E+00
17	0.1479E+02	0.1952E+00
18	0.1609E+02	0.1862E+00
19	0.1660E+02	0.1877E+00
20	0.1796E+02	0.1842E+00
21	0.1826E+02	0.1865E+00
22	0.1964E+02	0.1895E+00
23	0.2089E+02	0.1867E+00
24	0.2217E+02	0.1832E+00
25	0.2306E+02	0.1867E+00
26	0.2349E+02	0.1890E+00
27	0.2362E+02	0.1895E+00
28	0.2418E+02	0.1907E+00
29	0.2532E+02	0.1902E+00
30	0.2624E+02	0.1902E+00
31	0.2673E+02	0.1894E+00
32	0.2689E+02	0.1889E+00
33	0.2754E+02	0.1853E+00
34	0.3292E+02	0.1829E+00

INPUT SPECTRUM CURVE NUMBER = 4

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.19651E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION
1	0.1315E+01	0.2991E+00
2	0.1587E+01	0.3809E+00
3	0.2801E+01	0.6936E+00
4	0.3430E+01	0.5658E+00
5	0.3601E+01	0.5666E+00
6	0.3898E+01	0.4950E+00
7	0.4259E+01	0.6375E+00
8	0.5689E+01	0.4859E+00
9	0.7468E+01	0.3968E+00
10	0.8071E+01	0.3076E+00
11	0.8307E+01	0.2810E+00
12	0.1018E+02	0.2330E+00
13	0.1063E+02	0.2180E+00
14	0.1204E+02	0.2253E+00
15	0.1313E+02	0.2128E+00
16	0.1344E+02	0.2068E+00
17	0.1479E+02	0.1952E+00
18	0.1609E+02	0.1862E+00
19	0.1660E+02	0.1876E+00
20	0.1796E+02	0.1842E+00
21	0.1826E+02	0.1860E+00
22	0.1964E+02	0.1895E+00
23	0.2089E+02	0.1867E+00
24	0.2217E+02	0.1833E+00
25	0.2306E+02	0.1867E+00
26	0.2349E+02	0.1890E+00
27	0.2362E+02	0.1894E+00
28	0.2418E+02	0.1907E+00
29	0.2532E+02	0.1902E+00
30	0.2624E+02	0.1902E+00
31	0.2673E+02	0.1894E+00
32	0.2689E+02	0.1888E+00
33	0.2754E+02	0.1853E+00
34	0.3292E+02	0.1830E+00

INPUT SPECTRUM CURVE NUMBER = 5

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.19775E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION
1	0.1315E+01	0.2988E+00
2	0.1587E+01	0.3806E+00
3	0.2801E+01	0.6913E+00
4	0.3430E+01	0.5645E+00

5	0.3601E+01	0.5653E+00
6	0.3898E+01	0.4940E+00
7	0.4259E+01	0.6351E+00
8	0.5689E+01	0.4855E+00
9	0.7468E+01	0.3958E+00
10	0.8071E+01	0.3068E+00
11	0.8307E+01	0.2805E+00
12	0.1018E+02	0.2329E+00
13	0.1063E+02	0.2178E+00
14	0.1204E+02	0.2248E+00
15	0.1313E+02	0.2224E+00
16	0.1344E+02	0.2067E+00
17	0.1479E+02	0.1951E+00
18	0.1609E+02	0.1863E+00
19	0.1660E+02	0.1876E+00
20	0.1796E+02	0.1842E+00
21	0.1826E+02	0.1846E+00
22	0.1964E+02	0.1895E+00
23	0.2089E+02	0.1867E+00
24	0.2217E+02	0.1835E+00
25	0.2306E+02	0.1867E+00
26	0.2349E+02	0.1889E+00
27	0.2362E+02	0.1894E+00
28	0.2418E+02	0.1907E+00
29	0.2532E+02	0.1902E+00
30	0.2624E+02	0.1902E+00
31	0.2673E+02	0.1894E+00
32	0.2689E+02	0.1888E+00
33	0.2754E+02	0.1853E+00
34	0.3292E+02	0.1830E+00

INPUT SPECTRUM CURVE NUMBER = 6

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.21076E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION
1	0.1315E+01	0.2948E+00
2	0.1587E+01	0.3768E+00
3	0.2801E+01	0.6684E+00
4	0.3430E+01	0.5512E+00
5	0.3601E+01	0.5515E+00
6	0.3898E+01	0.4841E+00
7	0.4259E+01	0.6110E+00
8	0.5689E+01	0.4610E+00
9	0.7468E+01	0.3859E+00
10	0.8071E+01	0.2993E+00
11	0.8307E+01	0.2754E+00
12	0.1018E+02	0.2312E+00
13	0.1063E+02	0.2160E+00
14	0.1204E+02	0.2195E+00
15	0.1313E+02	0.2108E+00
16	0.1344E+02	0.2052E+00
17	0.1479E+02	0.1948E+00
18	0.1609E+02	0.1869E+00
19	0.1660E+02	0.1875E+00
20	0.1796E+02	0.1843E+00
21	0.1826E+02	0.1848E+00
22	0.1964E+02	0.1894E+00
23	0.2089E+02	0.1867E+00
24	0.2217E+02	0.1835E+00
25	0.2306E+02	0.1867E+00
26	0.2349E+02	0.1888E+00
27	0.2362E+02	0.1893E+00
28	0.2418E+02	0.1905E+00
29	0.2532E+02	0.1901E+00
30	0.2624E+02	0.1901E+00
31	0.2673E+02	0.1893E+00
32	0.2689E+02	0.1888E+00
33	0.2754E+02	0.1855E+00
34	0.3292E+02	0.1830E+00

INPUT SPECTRUM CURVE NUMBER = 7

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.21110E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION
1	0.1315E+01	0.2947E+00
2	0.1587E+01	0.3767E+00
3	0.2801E+01	0.6679E+00
4	0.3430E+01	0.5508E+00
5	0.3601E+01	0.5511E+00
6	0.3898E+01	0.4838E+00
7	0.4259E+01	0.6110E+00
8	0.5689E+01	0.4817E+00
9	0.7468E+01	0.3857E+00
10	0.8071E+01	0.2991E+00
11	0.8307E+01	0.2753E+00
12	0.1018E+02	0.2311E+00
13	0.1063E+02	0.2160E+00
14	0.1204E+02	0.2193E+00
15	0.1313E+02	0.2108E+00
16	0.1344E+02	0.2052E+00
17	0.1479E+02	0.1948E+00

18	0.1609E+02	0.1869E+00
19	0.1660E+02	0.1875E+00
20	0.1796E+02	0.1843E+00
21	0.1826E+02	0.1848E+00
22	0.1964E+02	0.1894E+00
23	0.2089E+02	0.1867E+00
24	0.2217E+02	0.1835E+00
25	0.2306E+02	0.1867E+00
26	0.2349E+02	0.1888E+00
27	0.2362E+02	0.1893E+00
28	0.2418E+02	0.1905E+00
29	0.2532E+02	0.1901E+00
30	0.2624E+02	0.1901E+00
31	0.2673E+02	0.1893E+00
32	0.2689E+02	0.1888E+00
33	0.2754E+02	0.1855E+00
34	0.3292E+02	0.1830E+00

INPUT SPECTRUM CURVE NUMBER = 8

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.21512E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION
1	0.1315E+01	0.2935E+00
2	0.1587E+01	0.3756E+00
3	0.2801E+01	0.6612E+00
4	0.3430E+01	0.5466E+00
5	0.3601E+01	0.5470E+00
6	0.3898E+01	0.4808E+00
7	0.4259E+01	0.6041E+00
8	0.5689E+01	0.4805E+00
9	0.7468E+01	0.3827E+00
10	0.8071E+01	0.2969E+00
11	0.8307E+01	0.2739E+00
12	0.1018E+02	0.2307E+00
13	0.1063E+02	0.2154E+00
14	0.1204E+02	0.2178E+00
15	0.1313E+02	0.2103E+00
16	0.1344E+02	0.2048E+00
17	0.1479E+02	0.1947E+00
18	0.1609E+02	0.1870E+00
19	0.1660E+02	0.1874E+00
20	0.1796E+02	0.1843E+00
21	0.1826E+02	0.1849E+00
22	0.1964E+02	0.1894E+00
23	0.2089E+02	0.1867E+00
24	0.2217E+02	0.1835E+00
25	0.2306E+02	0.1867E+00
26	0.2349E+02	0.1888E+00
27	0.2362E+02	0.1892E+00
28	0.2418E+02	0.1904E+00
29	0.2532E+02	0.1901E+00
30	0.2624E+02	0.1900E+00
31	0.2673E+02	0.1892E+00
32	0.2689E+02	0.1887E+00
33	0.2754E+02	0.1855E+00
34	0.3292E+02	0.1830E+00

INPUT SPECTRUM CURVE NUMBER = 9

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.21520E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION
1	0.1315E+01	0.2933E+00
2	0.1587E+01	0.3744E+00
3	0.2801E+01	0.6546E+00
4	0.3430E+01	0.5428E+00
5	0.3601E+01	0.5428E+00
6	0.3898E+01	0.4779E+00
7	0.4259E+01	0.5973E+00
8	0.5689E+01	0.4793E+00
9	0.7468E+01	0.3792E+00
10	0.8071E+01	0.2947E+00
11	0.8307E+01	0.2724E+00
12	0.1018E+02	0.2302E+00
13	0.1063E+02	0.2149E+00
14	0.1204E+02	0.2162E+00
15	0.1313E+02	0.2099E+00
16	0.1344E+02	0.2044E+00
17	0.1479E+02	0.1946E+00
18	0.1609E+02	0.1873E+00
19	0.1660E+02	0.1874E+00
20	0.1796E+02	0.1844E+00
21	0.1826E+02	0.1849E+00
22	0.1964E+02	0.1894E+00
23	0.2089E+02	0.1867E+00
24	0.2217E+02	0.1836E+00
25	0.2306E+02	0.1867E+00
26	0.2349E+02	0.1887E+00
27	0.2362E+02	0.1892E+00
28	0.2418E+02	0.1904E+00
29	0.2532E+02	0.1901E+00
30	0.2624E+02	0.1900E+00

31	0.2673E+02	0.1892E+00
32	0.2658E+02	0.1867E+00
33	0.2754E+02	0.1856E+00
34	0.3292E+02	0.1830E+00

INPUT SPECTRUM CURVE NUMBER = 10

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.22825E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION
1	0.1315E+01	0.2898E+00
2	0.1587E+01	0.3715E+00
3	0.2801E+01	0.6405E+00
4	0.3430E+01	0.5341E+00
5	0.3601E+01	0.5338E+00
6	0.3898E+01	0.4713E+00
7	0.4259E+01	0.5823E+00
8	0.5689E+01	0.4766E+00
9	0.7468E+01	0.3735E+00
10	0.8071E+01	0.2902E+00
11	0.8307E+01	0.2693E+00
12	0.1018E+02	0.2292E+00
13	0.1063E+02	0.2138E+00
14	0.1204E+02	0.2131E+00
15	0.1313E+02	0.2088E+00
16	0.1344E+02	0.2036E+00
17	0.1479E+02	0.1943E+00
18	0.1609E+02	0.1875E+00
19	0.1660E+02	0.1873E+00
20	0.1796E+02	0.1844E+00
21	0.1826E+02	0.1850E+00
22	0.1964E+02	0.1894E+00
23	0.2089E+02	0.1868E+00
24	0.2217E+02	0.1839E+00
25	0.2306E+02	0.1867E+00
26	0.2349E+02	0.1866E+00
27	0.2362E+02	0.1891E+00
28	0.2418E+02	0.1903E+00
29	0.2512E+02	0.1908E+00
30	0.2624E+02	0.1899E+00
31	0.2673E+02	0.1891E+00
32	0.2689E+02	0.1866E+00
33	0.2754E+02	0.1856E+00
34	0.3292E+02	0.1830E+00

INPUT SPECTRUM CURVE NUMBER = 11

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.22875E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION
1	0.1315E+01	0.2894E+00
2	0.1587E+01	0.3717E+00
3	0.2801E+01	0.6397E+00
4	0.3430E+01	0.5337E+00
5	0.3601E+01	0.5333E+00
6	0.3898E+01	0.4710E+00
7	0.4259E+01	0.5821E+00
8	0.5689E+01	0.4765E+00
9	0.7468E+01	0.3731E+00
10	0.8071E+01	0.2899E+00
11	0.8307E+01	0.2692E+00
12	0.1018E+02	0.2291E+00
13	0.1063E+02	0.2137E+00
14	0.1204E+02	0.2129E+00
15	0.1313E+02	0.2088E+00
16	0.1344E+02	0.2036E+00
17	0.1479E+02	0.1943E+00
18	0.1609E+02	0.1875E+00
19	0.1660E+02	0.1873E+00
20	0.1796E+02	0.1844E+00
21	0.1826E+02	0.1850E+00
22	0.1964E+02	0.1894E+00
23	0.2089E+02	0.1868E+00
24	0.2217E+02	0.1839E+00
25	0.2306E+02	0.1867E+00
26	0.2349E+02	0.1866E+00
27	0.2362E+02	0.1891E+00
28	0.2418E+02	0.1903E+00
29	0.2512E+02	0.1908E+00
30	0.2624E+02	0.1899E+00
31	0.2673E+02	0.1891E+00
32	0.2689E+02	0.1866E+00
33	0.2754E+02	0.1856E+00
34	0.3292E+02	0.1830E+00

INPUT SPECTRUM CURVE NUMBER = 12

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.23447E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION
1	0.1315E+01	0.2851E+00
2	0.1587E+01	0.3675E+00
3	0.2801E+01	0.6178E+00
4	0.3430E+01	0.5197E+00
5	0.3601E+01	0.5187E+00
6	0.3898E+01	0.4603E+00
7	0.4259E+01	0.5667E+00
8	0.5689E+01	0.4719E+00
9	0.7468E+01	0.3638E+00
10	0.8071E+01	0.2829E+00
11	0.8307E+01	0.2643E+00
12	0.1018E+02	0.2276E+00

POINT	FREQUENCY (HZ)	ACCELERATION
1	0.1315E+01	0.2878E+00
2	0.1587E+01	0.3701E+00
3	0.2801E+01	0.6312E+00
4	0.3430E+01	0.5283E+00
5	0.3601E+01	0.5273E+00
6	0.3898E+01	0.4669E+00
7	0.4259E+01	0.5741E+00
8	0.5689E+01	0.4747E+00
9	0.7468E+01	0.3693E+00
10	0.8071E+01	0.2872E+00
11	0.8307E+01	0.2673E+00
12	0.1018E+02	0.2285E+00
13	0.1063E+02	0.2130E+00
14	0.1204E+02	0.2110E+00
15	0.1313E+02	0.2083E+00
16	0.1344E+02	0.2032E+00
17	0.1479E+02	0.1942E+00
18	0.1609E+02	0.1877E+00
19	0.1660E+02	0.1873E+00
20	0.1796E+02	0.1845E+00
21	0.1826E+02	0.1851E+00
22	0.1964E+02	0.1894E+00
23	0.2089E+02	0.1868E+00
24	0.2217E+02	0.1838E+00
25	0.2306E+02	0.1867E+00
26	0.2349E+02	0.1866E+00
27	0.2362E+02	0.1890E+00
28	0.2418E+02	0.1902E+00
29	0.2512E+02	0.1900E+00
30	0.2624E+02	0.1899E+00
31	0.2673E+02	0.1891E+00
32	0.2689E+02	0.1866E+00
33	0.2754E+02	0.1856E+00
34	0.3292E+02	0.1831E+00

INPUT SPECTRUM CURVE NUMBER = 13

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.24044E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION
1	0.1315E+01	0.2861E+00
2	0.1587E+01	0.3685E+00
3	0.2801E+01	0.6226E+00
4	0.3430E+01	0.5228E+00
5	0.3601E+01	0.5220E+00
6	0.3898E+01	0.4627E+00
7	0.4259E+01	0.5694E+00
8	0.5689E+01	0.4729E+00
9	0.7468E+01	0.3656E+00
10	0.8071E+01	0.2845E+00
11	0.8307E+01	0.2654E+00
12	0.1018E+02	0.2279E+00
13	0.1063E+02	0.2124E+00
14	0.1204E+02	0.2092E+00
15	0.1313E+02	0.2077E+00
16	0.1344E+02	0.2027E+00
17	0.1479E+02	0.1941E+00
18	0.1609E+02	0.1878E+00
19	0.1660E+02	0.1872E+00
20	0.1796E+02	0.1852E+00
21	0.1826E+02	0.1852E+00
22	0.1964E+02	0.1893E+00
23	0.2089E+02	0.1868E+00
24	0.2217E+02	0.1839E+00
25	0.2306E+02	0.1866E+00
26	0.2349E+02	0.1865E+00
27	0.2362E+02	0.1890E+00
28	0.2418E+02	0.1901E+00
29	0.2512E+02	0.1900E+00
30	0.2624E+02	0.1898E+00
31	0.2673E+02	0.1890E+00
32	0.2689E+02	0.1865E+00
33	0.2754E+02	0.1856E+00
34	0.3292E+02	0.1831E+00

INPUT SPECTRUM CURVE NUMBER = 14

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.24167E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION
1	0.1315E+01	0.2851E+00
2	0.1587E+01	0.3675E+00
3	0.2801E+01	0.6178E+00
4	0.3430E+01	0.5197E+00
5	0.3601E+01	0.5187E+00
6	0.3898E+01	0.4603E+00
7	0.4259E+01	0.5667E+00
8	0.5689E+01	0.4719E+00
9	0.7468E+01	0.3638E+00
10	0.8071E+01	0.2829E+00
11	0.8307E+01	0.2643E+00
12	0.1018E+02	0.2276E+00

INPUT SPECTRUM CURVE NUMBER = 15
 NUMBER OF DEFINITION POINTS = 34
 DAMPING RATIO FOR THIS CURVE = 0.25539E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION
1	0.1061E+02	0.2128E+00
2	0.1113E+02	0.2074E+00
3	0.1165E+02	0.2020E+00
4	0.1217E+02	0.1966E+00
5	0.1269E+02	0.1912E+00
6	0.1321E+02	0.1858E+00
7	0.1373E+02	0.1804E+00
8	0.1425E+02	0.1750E+00
9	0.1477E+02	0.1696E+00
10	0.1529E+02	0.1642E+00
11	0.1581E+02	0.1588E+00
12	0.1633E+02	0.1534E+00
13	0.1685E+02	0.1480E+00
14	0.1737E+02	0.1426E+00
15	0.1789E+02	0.1372E+00
16	0.1841E+02	0.1318E+00
17	0.1893E+02	0.1264E+00
18	0.1945E+02	0.1210E+00
19	0.1997E+02	0.1156E+00
20	0.2049E+02	0.1102E+00
21	0.2101E+02	0.1048E+00
22	0.2153E+02	0.0994E+00
23	0.2205E+02	0.0940E+00
24	0.2257E+02	0.0886E+00
25	0.2309E+02	0.0832E+00
26	0.2361E+02	0.0778E+00
27	0.2413E+02	0.0724E+00
28	0.2465E+02	0.0670E+00
29	0.2517E+02	0.0616E+00
30	0.2569E+02	0.0562E+00
31	0.2621E+02	0.0508E+00
32	0.2673E+02	0.0454E+00
33	0.2725E+02	0.0400E+00
34	0.2777E+02	0.0346E+00

INPUT SPECTRUM CURVE NUMBER = 16
 NUMBER OF DEFINITION POINTS = 34
 DAMPING RATIO FOR THIS CURVE = 0.26665E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION
1	0.1115E+01	0.2607E+00
2	0.1547E+01	0.3615E+00
3	0.2401E+01	0.5462E+00
4	0.3405E+01	0.8995E+00
5	0.3601E+01	0.4905E+00
6	0.3898E+01	0.4478E+00
7	0.4195E+01	0.4051E+00
8	0.4492E+01	0.3624E+00
9	0.4789E+01	0.3197E+00
10	0.5086E+01	0.2770E+00
11	0.5383E+01	0.2343E+00
12	0.5680E+01	0.1916E+00
13	0.5977E+01	0.1489E+00
14	0.6274E+01	0.1062E+00
15	0.6571E+01	0.0635E+00
16	0.6868E+01	0.0208E+00
17	0.7165E+01	0.0181E+00
18	0.7462E+01	0.0154E+00
19	0.7759E+01	0.0127E+00
20	0.8056E+01	0.0100E+00
21	0.8353E+01	0.0073E+00
22	0.8650E+01	0.0046E+00
23	0.8947E+01	0.0019E+00
24	0.9244E+01	0.0016E+00
25	0.9541E+01	0.0013E+00
26	0.9838E+01	0.0010E+00
27	1.0135E+01	0.0007E+00
28	1.0432E+01	0.0004E+00
29	1.0729E+01	0.0001E+00
30	1.1026E+01	0.0001E+00
31	0.2678E+02	0.1684E+00
32	0.2649E+02	0.1644E+00
33	0.2745E+02	0.1857E+00
34	0.3292E+02	0.1831E+00

INPUT SPECTRUM CURVE NUMBER = 17
 NUMBER OF DEFINITION POINTS = 34
 DAMPING RATIO FOR THIS CURVE = 0.27495E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION
1	0.1315E+01	0.2792E+00
2	0.1547E+01	0.3591E+00
3	0.2401E+01	0.5781E+00
4	0.3405E+01	0.8971E+00
5	0.3601E+01	0.4871E+00
6	0.3898E+01	0.4471E+00
7	0.4195E+01	0.4071E+00
8	0.4492E+01	0.3671E+00
9	0.4789E+01	0.3271E+00
10	0.5086E+01	0.2871E+00
11	0.5383E+01	0.2471E+00
12	0.5680E+01	0.2071E+00
13	0.5977E+01	0.1671E+00
14	0.6274E+01	0.1271E+00
15	0.6571E+01	0.0871E+00
16	0.6868E+01	0.0471E+00
17	0.7165E+01	0.0471E+00
18	0.7462E+01	0.0471E+00
19	0.7759E+01	0.0471E+00
20	0.8056E+01	0.0471E+00
21	0.8353E+01	0.0471E+00
22	0.8650E+01	0.0471E+00
23	0.8947E+01	0.0471E+00
24	0.9244E+01	0.0471E+00
25	0.9541E+01	0.0471E+00
26	0.9838E+01	0.0471E+00
27	1.0135E+01	0.0471E+00
28	1.0432E+01	0.0471E+00
29	1.0729E+01	0.0471E+00
30	1.1026E+01	0.0471E+00
31	0.2678E+02	0.1894E+00
32	0.2649E+02	0.1854E+00
33	0.2745E+02	0.1894E+00
34	0.3292E+02	0.1894E+00

INPUT SPECTRUM CURVE NUMBER = 18
 NUMBER OF DEFINITION POINTS = 34
 DAMPING RATIO FOR THIS CURVE = 0.28118E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION
1	0.1315E+01	0.2781E+00
2	0.1547E+01	0.3570E+00
3	0.2401E+01	0.5760E+00
4	0.3405E+01	0.8950E+00
5	0.3601E+01	0.4850E+00
6	0.3898E+01	0.4450E+00
7	0.4195E+01	0.4050E+00
8	0.4492E+01	0.3650E+00
9	0.4789E+01	0.3250E+00
10	0.5086E+01	0.2850E+00
11	0.5383E+01	0.2450E+00
12	0.5680E+01	0.2050E+00
13	0.5977E+01	0.1650E+00
14	0.6274E+01	0.1250E+00
15	0.6571E+01	0.0850E+00
16	0.6868E+01	0.0450E+00
17	0.7165E+01	0.0450E+00
18	0.7462E+01	0.0450E+00
19	0.7759E+01	0.0450E+00
20	0.8056E+01	0.0450E+00
21	0.8353E+01	0.0450E+00
22	0.8650E+01	0.0450E+00
23	0.8947E+01	0.0450E+00
24	0.9244E+01	0.0450E+00
25	0.9541E+01	0.0450E+00
26	0.9838E+01	0.0450E+00
27	1.0135E+01	0.0450E+00
28	1.0432E+01	0.0450E+00
29	1.0729E+01	0.0450E+00
30	1.1026E+01	0.0450E+00
31	0.2678E+02	0.1884E+00
32	0.2649E+02	0.1844E+00
33	0.2745E+02	0.1884E+00
34	0.3292E+02	0.1884E+00

INPUT SPECTRUM CURVE NUMBER = 19
 NUMBER OF DEFINITION POINTS = 34
 DAMPING RATIO FOR THIS CURVE = 0.28741E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION
1	0.1315E+01	0.2770E+00
2	0.1547E+01	0.3560E+00
3	0.2401E+01	0.5750E+00
4	0.3405E+01	0.8940E+00
5	0.3601E+01	0.4840E+00
6	0.3898E+01	0.4440E+00
7	0.4195E+01	0.4040E+00
8	0.4492E+01	0.3640E+00
9	0.4789E+01	0.3240E+00
10	0.5086E+01	0.2840E+00
11	0.5383E+01	0.2440E+00
12	0.5680E+01	0.2040E+00
13	0.5977E+01	0.1640E+00
14	0.6274E+01	0.1240E+00
15	0.6571E+01	0.0840E+00
16	0.6868E+01	0.0440E+00
17	0.7165E+01	0.0440E+00
18	0.7462E+01	0.0440E+00
19	0.7759E+01	0.0440E+00
20	0.8056E+01	0.0440E+00
21	0.8353E+01	0.0440E+00
22	0.8650E+01	0.0440E+00
23	0.8947E+01	0.0440E+00
24	0.9244E+01	0.0440E+00
25	0.9541E+01	0.0440E+00
26	0.9838E+01	0.0440E+00
27	1.0135E+01	0.0440E+00
28	1.0432E+01	0.0440E+00
29	1.0729E+01	0.0440E+00
30	1.1026E+01	0.0440E+00
31	0.2678E+02	0.1874E+00
32	0.2649E+02	0.1834E+00
33	0.2745E+02	0.1874E+00
34	0.3292E+02	0.1874E+00

NUMBER OF DEFINITION POINTS = 34
 DAMPING RATIO FOR THIS CURVE = 0.3922E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION
1	0.111E+01	0.2750E+00
2	0.1567E+01	0.3511E+00
3	0.2401E+01	0.5527E+00
4	0.3430E+01	0.4746E+00
5	0.3601E+01	0.4711E+00
6	0.3898E+01	0.5268E+00
7	0.5488E+01	0.4547E+00
8	0.7468E+01	0.3379E+00
10	0.8071E+01	0.2415E+00
11	0.8307E+01	0.2495E+00
12	0.1018E+02	0.2229E+00
13	0.1063E+02	0.2067E+00
14	0.1204E+02	0.2031E+00
15	0.1144E+02	0.1935E+00
17	0.1479E+02	0.1328E+00
18	0.1609E+02	0.1891E+00
19	0.1660E+02	0.1871E+00
20	0.1798E+02	0.1849E+00
21	0.1826E+02	0.1850E+00
22	0.1964E+02	0.1891E+00
23	0.208E+02	0.1895E+00
24	0.2106E+02	0.1865E+00
26	0.2149E+02	0.1881E+00
27	0.2162E+02	0.1865E+00
28	0.2418E+02	0.1895E+00
29	0.252E+02	0.1897E+00
30	0.2624E+02	0.1895E+00
31	0.2684E+02	0.1881E+00
33	0.2754E+02	0.1859E+00
34	0.3522E+02	0.1833E+00

INPUT SPECTRUM CURVE NUMBER = 20
 NUMBER OF DEFINITION POINTS = 34
 DAMPING RATIO FOR THIS CURVE = 0.3020E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION
1	0.111E+01	0.2750E+00
2	0.1567E+01	0.3511E+00
3	0.2401E+01	0.5527E+00
4	0.3430E+01	0.4746E+00
5	0.3601E+01	0.4711E+00
6	0.3898E+01	0.5268E+00
7	0.4259E+01	0.5268E+00
8	0.5688E+01	0.4533E+00
9	0.7668E+01	0.3379E+00
10	0.8071E+01	0.2415E+00
11	0.8307E+01	0.2495E+00
12	0.1018E+02	0.2229E+00
13	0.1063E+02	0.2067E+00
14	0.1204E+02	0.2031E+00
15	0.1144E+02	0.1935E+00
16	0.1479E+02	0.1328E+00
17	0.1609E+02	0.1891E+00
18	0.1660E+02	0.1871E+00
19	0.1798E+02	0.1849E+00
20	0.1826E+02	0.1850E+00
21	0.1964E+02	0.1891E+00
22	0.208E+02	0.1895E+00
23	0.2106E+02	0.1865E+00
24	0.2149E+02	0.1881E+00
26	0.2162E+02	0.1865E+00
27	0.2418E+02	0.1895E+00
28	0.252E+02	0.1897E+00
29	0.2624E+02	0.1895E+00
30	0.2684E+02	0.1881E+00
31	0.2754E+02	0.1859E+00
33	0.3522E+02	0.1833E+00

INPUT SPECTRUM CURVE NUMBER = 21
 NUMBER OF DEFINITION POINTS = 34
 DAMPING RATIO FOR THIS CURVE = 0.3194E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION
1	0.111E+01	0.2750E+00
2	0.1567E+01	0.3511E+00
3	0.2401E+01	0.5527E+00
4	0.3430E+01	0.4746E+00
5	0.3601E+01	0.4711E+00
6	0.3898E+01	0.5268E+00
7	0.4259E+01	0.5268E+00
8	0.5688E+01	0.4533E+00
9	0.7668E+01	0.3379E+00
10	0.8071E+01	0.2415E+00
11	0.8307E+01	0.2495E+00
12	0.1018E+02	0.2229E+00
13	0.1063E+02	0.2067E+00
14	0.1204E+02	0.2031E+00
15	0.1144E+02	0.1935E+00
16	0.1479E+02	0.1328E+00
17	0.1609E+02	0.1891E+00
18	0.1660E+02	0.1871E+00
19	0.1798E+02	0.1849E+00
20	0.1826E+02	0.1850E+00
21	0.1964E+02	0.1891E+00
22	0.208E+02	0.1895E+00
23	0.2106E+02	0.1865E+00
24	0.2149E+02	0.1881E+00
26	0.2162E+02	0.1865E+00
27	0.2418E+02	0.1895E+00
28	0.252E+02	0.1897E+00
29	0.2624E+02	0.1895E+00
30	0.2684E+02	0.1881E+00
31	0.2754E+02	0.1859E+00
33	0.3522E+02	0.1833E+00

8	0.5688E+01	0.4478E+00
9	0.7468E+01	0.3292E+00
10	0.8071E+01	0.2543E+00
11	0.8307E+01	0.2447E+00
12	0.1018E+02	0.2213E+00
13	0.1063E+02	0.2050E+00
14	0.1204E+02	0.2079E+00
15	0.1144E+02	0.1945E+00
17	0.1479E+02	0.1244E+00
18	0.1609E+02	0.1894E+00
19	0.1660E+02	0.1872E+00
20	0.1798E+02	0.1850E+00
21	0.1826E+02	0.1854E+00
22	0.1964E+02	0.1899E+00
23	0.208E+02	0.1892E+00
24	0.2106E+02	0.1865E+00
26	0.2149E+02	0.1880E+00
27	0.2162E+02	0.1884E+00
28	0.2418E+02	0.1893E+00
29	0.252E+02	0.1896E+00
30	0.2624E+02	0.1891E+00
31	0.2684E+02	0.1882E+00
32	0.2754E+02	0.1859E+00
33	0.3522E+02	0.1833E+00

INPUT SPECTRUM CURVE NUMBER = 22
 NUMBER OF DEFINITION POINTS = 34
 DAMPING RATIO FOR THIS CURVE = 0.3922E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION
1	0.111E+01	0.2684E+00
2	0.1567E+01	0.3433E+00
3	0.2401E+01	0.5163E+00
4	0.3430E+01	0.4423E+00
5	0.3601E+01	0.4423E+00
6	0.3898E+01	0.4076E+00
7	0.4259E+01	0.5062E+00
8	0.5688E+01	0.4423E+00
9	0.7468E+01	0.3272E+00
10	0.8071E+01	0.2492E+00
11	0.8307E+01	0.2512E+00
12	0.1018E+02	0.2038E+00
14	0.1204E+02	0.2013E+00
15	0.1144E+02	0.2010E+00
16	0.1479E+02	0.1378E+00
17	0.1609E+02	0.1922E+00
18	0.1660E+02	0.1896E+00
19	0.1798E+02	0.1851E+00
20	0.1826E+02	0.1854E+00
21	0.1964E+02	0.1888E+00
22	0.208E+02	0.1868E+00
23	0.2106E+02	0.1848E+00
24	0.2149E+02	0.1879E+00
26	0.2162E+02	0.1892E+00
27	0.2418E+02	0.1895E+00
28	0.252E+02	0.1895E+00
29	0.2624E+02	0.1892E+00
30	0.2684E+02	0.1882E+00
31	0.2754E+02	0.1879E+00
32	0.2754E+02	0.1860E+00
33	0.3522E+02	0.1833E+00

INPUT SPECTRUM CURVE NUMBER = 23
 NUMBER OF DEFINITION POINTS = 34
 DAMPING RATIO FOR THIS CURVE = 0.3522E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION
1	0.111E+01	0.2655E+00
2	0.1567E+01	0.3394E+00
3	0.2401E+01	0.5022E+00
4	0.3430E+01	0.4359E+00
5	0.3601E+01	0.4302E+00
6	0.3898E+01	0.3992E+00
7	0.4259E+01	0.4971E+00
8	0.5688E+01	0.4371E+00
9	0.7468E+01	0.3165E+00
10	0.8071E+01	0.2442E+00
11	0.8307E+01	0.2378E+00
12	0.1018E+02	0.2182E+00
13	0.1063E+02	0.2025E+00
14	0.1204E+02	0.2002E+00
15	0.1144E+02	0.1971E+00
16	0.1479E+02	0.1320E+00
17	0.1609E+02	0.1920E+00
18	0.1660E+02	0.1897E+00
19	0.1798E+02	0.1872E+00
20	0.1826E+02	0.1852E+00

21	0.1826E+02	0.1859E+00
22	0.1942E+02	0.1888E+00
23	0.2089E+02	0.1868E+00
24	0.2217E+02	0.1850E+00
25	0.2306E+02	0.1855E+00
26	0.2349E+02	0.1878E+00
27	0.2352E+02	0.1882E+00
28	0.2418E+02	0.1890E+00
29	0.2512E+02	0.1894E+00
30	0.2624E+02	0.1888E+00
31	0.2673E+02	0.1881E+00
32	0.2689E+02	0.1878E+00
33	0.2754E+02	0.1860E+00
34	0.3292E+02	0.1834E+00

INPUT SPECTRUM CURVE NUMBER = 24

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.36512E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION
1	0.1315E+01	0.2635E+00
2	0.1587E+01	0.3366E+00
3	0.2801E+01	0.4928E+00
4	0.3430E+01	0.4283E+00
5	0.3601E+01	0.4226E+00
6	0.3898E+01	0.3934E+00
7	0.4259E+01	0.4903E+00
8	0.5689E+01	0.4332E+00
9	0.7468E+01	0.3123E+00
10	0.8071E+01	0.2409E+00
11	0.8307E+01	0.2356E+00
12	0.1018E+02	0.2182E+00
13	0.1073E+02	0.2019E+00
14	0.1204E+02	0.2002E+00
15	0.1313E+02	0.1997E+00
16	0.1344E+02	0.1969E+00
17	0.1479E+02	0.1919E+00
18	0.1609E+02	0.1897E+00
19	0.1660E+02	0.1872E+00
20	0.1796E+02	0.1853E+00
21	0.1826E+02	0.1860E+00
22	0.1942E+02	0.1887E+00
23	0.2089E+02	0.1868E+00
24	0.2217E+02	0.1851E+00
25	0.2306E+02	0.1865E+00
26	0.2349E+02	0.1878E+00
27	0.2352E+02	0.1881E+00
28	0.2418E+02	0.1899E+00
29	0.2512E+02	0.1893E+00
30	0.2624E+02	0.1888E+00
31	0.2673E+02	0.1880E+00
32	0.2689E+02	0.1877E+00
33	0.2754E+02	0.1860E+00
34	0.3292E+02	0.1834E+00

INPUT SPECTRUM CURVE NUMBER = 25

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.37098E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION
1	0.1315E+01	0.2625E+00
2	0.1587E+01	0.3352E+00
3	0.2801E+01	0.4883E+00
4	0.3430E+01	0.4247E+00
5	0.3601E+01	0.4196E+00
6	0.3898E+01	0.3906E+00
7	0.4259E+01	0.4876E+00
8	0.5689E+01	0.4314E+00
9	0.7468E+01	0.3103E+00
10	0.8071E+01	0.2394E+00
11	0.8307E+01	0.2346E+00
12	0.1018E+02	0.2178E+00
13	0.1063E+02	0.2015E+00
14	0.1204E+02	0.2000E+00
15	0.1313E+02	0.1995E+00
16	0.1344E+02	0.1967E+00
17	0.1479E+02	0.1918E+00
18	0.1609E+02	0.1898E+00
19	0.1660E+02	0.1872E+00
20	0.1796E+02	0.1853E+00
21	0.1826E+02	0.1860E+00
22	0.1942E+02	0.1887E+00
23	0.2089E+02	0.1868E+00
24	0.2217E+02	0.1851E+00
25	0.2306E+02	0.1865E+00
26	0.2349E+02	0.1878E+00
27	0.2352E+02	0.1880E+00
28	0.2418E+02	0.1899E+00
29	0.2512E+02	0.1893E+00
30	0.2624E+02	0.1888E+00
31	0.2673E+02	0.1880E+00
32	0.2689E+02	0.1877E+00
33	0.2754E+02	0.1860E+00

34 0.3292E+02 0.1835E+00

INPUT SPECTRUM CURVE NUMBER = 26

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.37275E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION
1	0.1315E+01	0.2622E+00
2	0.1587E+01	0.3348E+00
3	0.2801E+01	0.4869E+00
4	0.3430E+01	0.4235E+00
5	0.3601E+01	0.4187E+00
6	0.3898E+01	0.3897E+00
7	0.4259E+01	0.4867E+00
8	0.5689E+01	0.4308E+00
9	0.7468E+01	0.3097E+00
10	0.8071E+01	0.2389E+00
11	0.8307E+01	0.2342E+00
12	0.1018E+02	0.2177E+00
13	0.1063E+02	0.2014E+00
14	0.1204E+02	0.2000E+00
15	0.1313E+02	0.1994E+00
16	0.1344E+02	0.1967E+00
17	0.1479E+02	0.1918E+00
18	0.1609E+02	0.1898E+00
19	0.1660E+02	0.1873E+00
20	0.1796E+02	0.1853E+00
21	0.1826E+02	0.1860E+00
22	0.1942E+02	0.1886E+00
23	0.2089E+02	0.1868E+00
24	0.2217E+02	0.1851E+00
25	0.2306E+02	0.1865E+00
26	0.2349E+02	0.1878E+00
27	0.2352E+02	0.1880E+00
28	0.2418E+02	0.1899E+00
29	0.2512E+02	0.1892E+00
30	0.2624E+02	0.1887E+00
31	0.2673E+02	0.1880E+00
32	0.2689E+02	0.1877E+00
33	0.2754E+02	0.1860E+00
34	0.3292E+02	0.1835E+00

INPUT SPECTRUM CURVE NUMBER = 27

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.38031E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION
1	0.1315E+01	0.2610E+00
2	0.1587E+01	0.3330E+00
3	0.2801E+01	0.4814E+00
4	0.3430E+01	0.4190E+00
5	0.3601E+01	0.4149E+00
6	0.3898E+01	0.3862E+00
7	0.4259E+01	0.4830E+00
8	0.5689E+01	0.4284E+00
9	0.7468E+01	0.3073E+00
10	0.8071E+01	0.2369E+00
11	0.8307E+01	0.2329E+00
12	0.1018E+02	0.2172E+00
13	0.1063E+02	0.2009E+00
14	0.1204E+02	0.1998E+00
15	0.1313E+02	0.1991E+00
16	0.1344E+02	0.1965E+00
17	0.1479E+02	0.1917E+00
18	0.1609E+02	0.1898E+00
19	0.1660E+02	0.1873E+00
20	0.1796E+02	0.1854E+00
21	0.1826E+02	0.1860E+00
22	0.1942E+02	0.1886E+00
23	0.2089E+02	0.1868E+00
24	0.2217E+02	0.1852E+00
25	0.2306E+02	0.1865E+00
26	0.2349E+02	0.1878E+00
27	0.2352E+02	0.1880E+00
28	0.2418E+02	0.1899E+00
29	0.2512E+02	0.1892E+00
30	0.2624E+02	0.1887E+00
31	0.2673E+02	0.1880E+00
32	0.2689E+02	0.1878E+00
33	0.2754E+02	0.1860E+00
34	0.3292E+02	0.1835E+00

INPUT SPECTRUM CURVE NUMBER = 28

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.38561E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION
1	0.1315E+01	0.2564E+00
2	0.1587E+01	0.3294E+00

3	0.2801E+01	0.4704E+00
4	0.3430E+01	0.4099E+00
5	0.3601E+01	0.4073E+00
6	0.3898E+01	0.3796E+00
7	0.4259E+01	0.4755E+00
8	0.5689E+01	0.4234E+00
9	0.7468E+01	0.3023E+00
10	0.8071E+01	0.2329E+00
11	0.8307E+01	0.2303E+00
12	0.1018E+02	0.2163E+00
13	0.1063E+02	0.1999E+00
14	0.1204E+02	0.1993E+00
15	0.1313E+02	0.1986E+00
16	0.1344E+02	0.1961E+00
17	0.1479E+02	0.1916E+00
18	0.1609E+02	0.1899E+00
19	0.1660E+02	0.1873E+00
20	0.1796E+02	0.1854E+00
21	0.1826E+02	0.1863E+00
22	0.1964E+02	0.1885E+00
23	0.2089E+02	0.1868E+00
24	0.2217E+02	0.1853E+00
25	0.2306E+02	0.1865E+00
26	0.2349E+02	0.1876E+00
27	0.2362E+02	0.1879E+00
28	0.2418E+02	0.1887E+00
29	0.2532E+02	0.1893E+00
30	0.2624E+02	0.1885E+00
31	0.2673E+02	0.1879E+00
32	0.2689E+02	0.1876E+00
33	0.2754E+02	0.1860E+00
34	0.3292E+02	0.1835E+00

INPUT SPECTRUM CURVE NUMBER = 29

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.408377-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION
1	0.1315E+01	0.254E+00
2	0.1587E+01	0.326E+00
3	0.2801E+01	0.462E+00
4	0.3430E+01	0.402E+00
5	0.3601E+01	0.4013E+00
6	0.3898E+01	0.377E+00
7	0.4259E+01	0.4697E+00
8	0.5689E+01	0.4192E+00
9	0.7468E+01	0.2945E+00
10	0.8071E+01	0.2299E+00
11	0.8307E+01	0.2282E+00
12	0.1018E+02	0.2155E+00
13	0.1063E+02	0.1992E+00
14	0.1204E+02	0.1998E+00
15	0.1344E+02	0.1958E+00
16	0.1479E+02	0.1958E+00
17	0.1609E+02	0.1915E+00
18	0.1660E+02	0.1900E+00
19	0.1660E+02	0.1873E+00
20	0.1796E+02	0.1855E+00
21	0.1826E+02	0.1861E+00
22	0.1964E+02	0.1884E+00
23	0.2089E+02	0.1867E+00
24	0.2217E+02	0.1853E+00
25	0.2306E+02	0.1865E+00
26	0.2349E+02	0.1876E+00
27	0.2362E+02	0.1879E+00
28	0.2418E+02	0.1886E+00
29	0.2532E+02	0.1890E+00
30	0.2624E+02	0.1885E+00
31	0.2673E+02	0.1879E+00
32	0.2689E+02	0.1875E+00
33	0.2754E+02	0.1860E+00
34	0.3292E+02	0.1835E+00

INPUT SPECTRUM CURVE NUMBER = 30

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.41519E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION
1	0.1315E+01	0.2553E+00
2	0.1587E+01	0.3250E+00
3	0.2801E+01	0.4576E+00
4	0.3430E+01	0.3992E+00
5	0.3601E+01	0.3982E+00
6	0.3898E+01	0.3766E+00
7	0.4259E+01	0.4666E+00
8	0.5689E+01	0.4173E+00
9	0.7468E+01	0.2965E+00
10	0.8071E+01	0.2283E+00
11	0.8307E+01	0.2271E+00
12	0.1018E+02	0.2151E+00
13	0.1063E+02	0.1988E+00
14	0.1204E+02	0.1988E+00
15	0.1344E+02	0.1979E+00

16	0.1344E+02	0.1957E+00
17	0.1479E+02	0.1914E+00
18	0.1609E+02	0.1900E+00
19	0.1660E+02	0.1874E+00
20	0.1796E+02	0.1855E+00
21	0.1826E+02	0.1861E+00
22	0.1964E+02	0.1884E+00
23	0.2089E+02	0.1867E+00
24	0.2217E+02	0.1854E+00
25	0.2306E+02	0.1865E+00
26	0.2349E+02	0.1875E+00
27	0.2362E+02	0.1878E+00
28	0.2418E+02	0.1885E+00
29	0.2532E+02	0.1890E+00
30	0.2624E+02	0.1884E+00
31	0.2673E+02	0.1877E+00
32	0.2689E+02	0.1875E+00
33	0.2754E+02	0.1860E+00
34	0.3292E+02	0.1835E+00

INPUT SPECTRUM CURVE NUMBER = 31

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.41730E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION
1	0.1315E+01	0.2549E+00
2	0.1587E+01	0.3246E+00
3	0.2801E+01	0.4563E+00
4	0.3430E+01	0.3982E+00
5	0.3601E+01	0.3972E+00
6	0.3898E+01	0.3762E+00
7	0.4259E+01	0.4657E+00
8	0.5689E+01	0.4167E+00
9	0.7468E+01	0.2959E+00
10	0.8071E+01	0.2278E+00
11	0.8307E+01	0.2268E+00
12	0.1018E+02	0.2150E+00
13	0.1063E+02	0.1987E+00
14	0.1204E+02	0.1988E+00
15	0.1344E+02	0.1978E+00
16	0.1479E+02	0.1957E+00
17	0.1609E+02	0.1914E+00
18	0.1660E+02	0.1900E+00
19	0.1660E+02	0.1874E+00
20	0.1796E+02	0.1855E+00
21	0.1826E+02	0.1862E+00
22	0.1964E+02	0.1884E+00
23	0.2089E+02	0.1867E+00
24	0.2217E+02	0.1854E+00
25	0.2306E+02	0.1865E+00
26	0.2349E+02	0.1875E+00
27	0.2362E+02	0.1878E+00
28	0.2418E+02	0.1885E+00
29	0.2532E+02	0.1890E+00
30	0.2624E+02	0.1884E+00
31	0.2673E+02	0.1877E+00
32	0.2689E+02	0.1875E+00
33	0.2754E+02	0.1860E+00
34	0.3292E+02	0.1835E+00

INPUT SPECTRUM CURVE NUMBER = 32

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.42150E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION
1	0.1315E+01	0.2542E+00
2	0.1587E+01	0.3236E+00
3	0.2801E+01	0.4536E+00
4	0.3430E+01	0.3962E+00
5	0.3601E+01	0.3953E+00
6	0.3898E+01	0.3756E+00
7	0.4259E+01	0.4638E+00
8	0.5689E+01	0.4153E+00
9	0.7468E+01	0.2947E+00
10	0.8071E+01	0.2268E+00
11	0.8307E+01	0.2262E+00
12	0.1018E+02	0.2148E+00
13	0.1063E+02	0.1985E+00
14	0.1204E+02	0.1987E+00
15	0.1344E+02	0.1977E+00
16	0.1479E+02	0.1956E+00
17	0.1609E+02	0.1914E+00
18	0.1660E+02	0.1900E+00
19	0.1660E+02	0.1874E+00
20	0.1796E+02	0.1855E+00
21	0.1826E+02	0.1862E+00
22	0.1964E+02	0.1884E+00
23	0.2089E+02	0.1867E+00
24	0.2217E+02	0.1854E+00
25	0.2306E+02	0.1865E+00
26	0.2349E+02	0.1875E+00
27	0.2362E+02	0.1878E+00
28	0.2418E+02	0.1885E+00

INPUT SPECTRUM CURVE NUMBER = 33

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.42637E-01

INPUT POINT	FREQ. Hz	INPUT SPECTRAL ACCELERATION
1	0.1315E+01	0.2535E+00
2	0.1587E+01	0.3226E+00
3	0.2801E+01	0.4506E+00
4	0.3430E+01	0.5939E+00
5	0.3601E+01	0.3931E+00
6	0.3988E+01	0.3790E+00
7	0.4489E+01	0.4138E+00
8	0.5689E+01	0.2935E+00
9	0.7468E+01	0.2257E+00
10	0.8078E+01	0.2254E+00
11	0.8307E+01	0.2254E+00
12	0.1018E+02	0.2145E+00
13	0.1063E+02	0.1983E+00
14	0.1131E+02	0.1876E+00
15	0.1315E+02	0.1976E+00
16	0.1344E+02	0.1955E+00
17	0.1479E+02	0.1913E+00
18	0.1609E+02	0.1900E+00
19	0.1660E+02	0.1874E+00
20	0.1796E+02	0.1850E+00
21	0.1845E+02	0.1863E+00
22	0.2049E+02	0.1867E+00
23	0.2049E+02	0.1867E+00
24	0.2217E+02	0.1854E+00
25	0.2306E+02	0.1865E+00
26	0.2349E+02	0.1875E+00
27	0.2362E+02	0.1875E+00
28	0.2418E+02	0.1898E+00
29	0.2524E+02	0.1888E+00
30	0.2624E+02	0.1884E+00
31	0.2673E+02	0.1875E+00
32	0.2689E+02	0.1874E+00
33	0.2745E+02	0.1860E+00
34	0.3292E+02	0.1856E+00

INPUT SPECTRUM CURVE NUMBER = 34

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.50000E-01

INPUT POINT	FREQ. Hz	INPUT SPECTRAL ACCELERATION
1	0.1315E+01	0.3402E+00
2	0.1587E+01	0.3069E+00
3	0.2801E+01	0.4104E+00
4	0.3430E+01	0.3655E+00
5	0.3601E+01	0.3652E+00
6	0.3988E+01	0.3653E+00
7	0.4489E+01	0.3544E+00
8	0.5689E+01	0.3544E+00
9	0.7468E+01	0.2744E+00
10	0.8078E+01	0.2177E+00
11	0.8307E+01	0.2205E+00
12	0.1018E+02	0.2104E+00
13	0.1063E+02	0.1908E+00
14	0.1131E+02	0.1948E+00
15	0.1315E+02	0.1948E+00
16	0.1344E+02	0.1942E+00
17	0.1479E+02	0.1908E+00
18	0.1609E+02	0.1901E+00
19	0.1660E+02	0.1875E+00
20	0.1796E+02	0.1875E+00
21	0.1845E+02	0.1863E+00
22	0.2049E+02	0.1889E+00
23	0.2049E+02	0.1873E+00
24	0.2217E+02	0.1875E+00
25	0.2306E+02	0.1864E+00
26	0.2349E+02	0.1872E+00
27	0.2362E+02	0.1874E+00
28	0.2418E+02	0.1880E+00
29	0.2524E+02	0.1899E+00
30	0.2624E+02	0.1898E+00
31	0.2673E+02	0.1873E+00
32	0.2689E+02	0.1871E+00
33	0.2745E+02	0.1860E+00
34	0.3292E+02	0.1857E+00

A COMPUTER PROGRAM FOR

COUPLED RESPONSE SPECTRUM ANALYSIS OF SECONDARY SYSTEMS

* C H S R T *

DEVELOPED BY

ATAVA KUMAR GUPTA

JING-WEI JAM ANINDYAN GUPTA

NORTH CAROLINA STATE UNIVERSITY

RALEIGH, NORTH CAROLINA

REVISION-1.0

C O U P L E D P R E Q U E N C I E S A N D M O D E S H A P E S E X T R A C T I O N

NUMBER OF ITERATIONS TO BE APPLIED FOR COUPLED FREQUENCIES EXTRACTION ITER = 900

CONVERGENCE TOLERANCE FOR COUPLED FREQUENCIES TOL = 0.10000E-05

C O U P L E D M O D E S H A P E S (F O R P R I M A R Y M O D E) M O D E

FREQUENCY (Hz.) = 10.17803

M O D A L D I S P A T P R I M A R Y S Y S T E M C O N N E C T I N G D O F

D O F #

D O F #	D I S P L A C E M E N T
3041	0.1681E-04
3042	0.0000E+00
3043	0.4540E-02
3044	0.1574E-01
3045	0.1574E-01
3072	0.0000E+00
3081	0.4264E-04
3103	0.5492E-01
3121	0.5575E-04
3122	0.0000E+00
3123	0.7150E-01
3187	0.0000E+00
3292	0.8003E-00
3053	0.3403E-01

M O D A L D I S P L A C E M E N T S A T S E C O N D A R Y S Y S T E M D O F

MODE

EX

BY

DE

M O D - X

M O D - Y

M O D - Z

MODE	EX	BY	DE	M O D - X	M O D - Y	M O D - Z
1	0.2057E-09	0.4413E-10	0.1451E-04	-0.8188E-11	-0.7718E-09	0.7145E-11
2	0.1814E-02	0.4021E-05	0.1842E-02	-0.1162E-04	-0.7346E-03	0.8466E-05
3	0.9203E-02	0.5948E-04	0.2154E-01	-0.4756E-04	-0.2128E-02	0.1658E-04
4	0.9211E-02	0.2816E-03	0.9843E-01	-0.1142E-03	3.2899E-02	-0.7710E-05
5	0.2211E-02	0.4492E-04	0.1437E+00	-0.1472E-03	0.7453E-02	-0.3344E-04
9001	0.9211E-02	0.5988E-04	0.4892E+00	-0.1508E-07	-0.3325E-02	-0.4194E-04
9002	0.9366E-03	0.1442E-03	0.1555E+00	-0.1174E-03	0.3248E-02	-0.5598E-04
7	0.9528E-02	0.4451E-03	0.1551E+00	-0.2147E-03	-0.3248E-02	-0.5902E-04
9003	0.1109E-01	0.1438E-03	0.1349E+00	-0.1036E-02	-0.2654E-02	-0.1308E-04
9004	0.7516E-02	-0.1423E-03	0.7615E-01	-0.1915E-02	-0.2084E-02	0.1724E-03
9	0.2056E-03	-0.1405E-03	0.1024E-01	-0.1448E-02	-0.1514E-02	0.1724E-03
10	-0.8020E-03	-0.1405E-03	0.1822E-02	-0.1712E-02	0.1415E-02	0.1933E-03
9005	-0.8172E-02	0.1352E-03	0.1440E-01	0.7937E-04	-0.4654E-03	0.1033E-03
11	-0.1113E-01	-0.1352E-03	0.2146E-01	0.8631E-03	0.3794E-04	0.6837E-04
12	-0.1170E-01	-0.1352E-03	0.2519E-01	0.7968E-03	0.2045E-03	0.3833E-04
9007	-0.1176E-01	-0.1352E-03	0.3772E-01	0.7504E-03	0.2386E-03	0.2604E-04
9006	-0.1176E-01	-0.1352E-03	0.4037E-01	0.7133E-03	0.2814E-03	0.1301E-04
13	-0.1180E-01	-0.1352E-03	0.3815E-01	0.6827E-03	0.3290E-03	-0.7028E-06
14	-0.1180E-01	-0.1352E-03	0.4250E-01	0.6634E-03	0.2559E-03	-0.1798E-04
15	-0.1180E-01	-0.1352E-03	0.4697E-01	0.6371E-03	0.1874E-03	-0.4270E-04
16	-0.1180E-01	-0.1352E-03	0.5079E-01	0.6125E-03	0.1417E-03	-0.8071E-04
17	-0.1180E-01	-0.1352E-03	0.5519E-01	0.5898E-03	0.1027E-03	-0.6312E-04
18	-0.1180E-01	-0.1352E-03	0.5979E-01	0.5692E-03	0.7322E-03	-0.8312E-04
19	-0.1180E-01	-0.1352E-03	0.6476E-01	0.5498E-03	0.8436E-03	-0.1015E-03
20	-0.1180E-01	-0.1352E-03	0.7006E-01	0.5319E-03	0.9381E-03	-0.1185E-03
21	-0.1180E-01	-0.1352E-03	0.7556E-01	0.5159E-03	0.1071E-02	-0.1044E-03
22	-0.1180E-01	-0.1352E-03	0.8124E-01	0.5017E-03	0.1067E-02	-0.1101E-04
9009	-0.1180E-01	-0.1352E-03	0.8706E-01	0.4883E-03	0.1071E-02	-0.1101E-04
9010	-0.1180E-01	-0.1352E-03	0.9300E-01	0.4756E-03	0.1071E-02	-0.1101E-04
23	-0.1180E-01	-0.1352E-03	0.9906E-01	0.4644E-03	0.1071E-02	-0.1101E-04
24	-0.1180E-01	-0.1352E-03	0.1058E+00	0.4544E-03	0.1071E-02	-0.1101E-04
25	-0.1180E-01	-0.1352E-03	0.1113E+00	0.4452E-03	0.1071E-02	-0.1101E-04
26	-0.1180E-01	-0.1352E-03	0.1169E+00	0.4368E-03	0.1071E-02	-0.1101E-04
27	-0.1180E-01	-0.1352E-03	0.1226E+00	0.4292E-03	0.1071E-02	-0.1101E-04
28	-0.1180E-01	-0.1352E-03	0.1283E+00	0.4224E-03	0.1071E-02	-0.1101E-04
29	-0.1180E-01	-0.1352E-03	0.1341E+00	0.4164E-03	0.1071E-02	-0.1101E-04
30	-0.1180E-01	-0.1352E-03	0.1400E+00	0.4111E-03	0.1071E-02	-0.1101E-04
31	-0.1180E-01	-0.1352E-03	0.1459E+00	0.4063E-03	0.1071E-02	-0.1101E-04
32	-0.1180E-01	-0.1352E-03	0.1519E+00	0.4021E-03	0.1071E-02	-0.1101E-04
33	-0.1180E-01	-0.1352E-03	0.1579E+00	0.3984E-03	0.1071E-02	-0.1101E-04
34	-0.1180E-01	-0.1352E-03	0.1640E+00	0.3952E-03	0.1071E-02	-0.1101E-04

COUPLED MODE SHAPES (FOR PRIMARY MODE) WSES
 FREQUENCY (HZ.) = 12.03604

MODAL DISP AT PRIMARY SYSTEM CONNECTING DOF

DOF # DISPLACEMENT

3041 0.6578E-02
 3042 0.6500E-02
 3043 0.4501E-05
 3061 0.1846E-01
 3063 -0.1514E-04
 3072 0.9000E-00
 3081 0.2201E-01
 3101 0.7843E-01
 3122 0.0500E-00
 3123 -0.7112E-04
 3091 0.3808E-02
 3093 0.0000E-00
 3093 -0.3377E-04

MODAL DISPLACEMENTS AT SECONDARY SYSTEM DOF

NODE	EX	DY	DZ	ROT-X	ROT-Y	ROT-Z
1	0.2233E-09	-0.2166E-10	-0.6648E-10	-0.1992E-10	-0.1842E-10	-0.2434E-10
2	-0.4575E-04	-0.1052E-03	-0.4816E-04	-0.1868E-04	0.2284E-04	-0.2609E-04
3	-0.1106E-03	-0.1044E-03	-0.8608E-04	-0.9608E-03	0.1725E-03	-0.1511E-03
4	-0.3992E-03	-0.6415E-03	-0.7016E-03	-0.2545E-03	0.1723E-03	-0.1948E-03
5	-0.1963E-03	-0.8745E-03	-0.7442E-03	-0.2110E-03	-0.1678E-03	-0.2097E-03
6	0.1024E-03	-0.7092E-03	-0.7865E-03	-0.2142E-03	0.1630E-03	-0.2262E-03
7	0.1059E-03	-0.7206E-03	-0.8462E-03	-0.2271E-03	0.1515E-03	-0.2295E-03
8	0.8998E-03	-0.1188E-03	-0.1568E-01	-0.9476E-04	0.672E-04	-0.1245E-03
9	0.3979E-03	-0.1162E-03	-0.1948E-03	-0.1822E-03	-0.1610E-03	0.1827E-03
10	-0.3348E-03	-0.7127E-03	-0.8118E-03	-0.1504E-03	-0.1790E-03	0.1555E-03
9005	-0.4814E-03	-0.7127E-03	-0.8118E-03	-0.1912E-03	-0.2673E-03	0.1588E-04
9006	-0.2888E-03	-0.7052E-03	-0.8412E-03	-0.1823E-03	-0.3560E-03	-0.2061E-04
11	-0.4534E-03	-0.7052E-03	-0.9412E-03	-0.1864E-04	-0.4444E-03	0.1757E-03
12	-0.1095E-02	-0.7077E-02	-0.1413E-01	-0.3325E-04	-0.4788E-03	-0.4170E-03
9008	-0.2562E-03	-0.6399E-03	-0.1952E-03	-0.2133E-04	-0.4698E-03	0.4270E-03
13	-0.8504E-02	-0.5473E-02	-0.1128E-01	-0.2452E-04	-0.6915E-03	0.4575E-02
14	-0.8504E-02	-0.5473E-02	-0.1128E-01	-0.2057E-04	-0.4938E-03	0.4771E-03
15	-0.8544E-02	-0.1218E-02	-0.6978E-02	-0.1646E-04	-0.4850E-03	0.4721E-03
16	-0.8494E-02	0.4566E-02	-0.2008E-02	-0.6909E-05	-0.3932E-03	0.8473E-03
17	-0.8802E-02	-0.5399E-02	-0.1038E-02	-0.2348E-05	-0.3312E-03	0.2771E-03
18	-0.1710E-01	0.6912E-01	0.1854E-01	0.2137E-04	-0.1613E-03	-0.9850E-05
20	-0.1317E-01	0.6310E-01	0.1552E-01	0.4528E-03	-0.2913E-04	-0.5450E-03
21	-0.6749E-01	-0.1510E-03	0.4152E-03	-0.2410E-03	-0.1608E-04	-0.7519E-03
9009	-0.2179E-01	-0.1501E-02	0.1418E-02	0.3159E-03	-0.1748E-04	0.5643E-03
9010	0.4249E-01	-0.1488E-02	0.5691E-02	-0.1173E-03	-0.1861E-04	0.4055E-03
22	0.3740E-02	-0.1471E-02	-0.5078E-02	-0.2848E-03	-0.1978E-04	0.4691E-03
23	0.5614E-02	-0.1456E-02	-0.4972E-02	-0.4897E-03	-0.2008E-04	-0.4653E-03
9011	0.1517E-01	-0.1437E-02	-0.2460E-02	0.2813E-03	-0.2125E-04	-0.2407E-03
9012	0.1517E-01	-0.1437E-02	-0.2460E-02	0.1415E-03	-0.2125E-04	-0.6684E-03
25	-0.1448E-01	-0.1386E-02	0.5011E-02	-0.1443E-03	-0.2382E-04	0.8473E-03
26	-0.1609E-01	-0.1346E-02	-0.5165E-02	-0.1501E-03	-0.2410E-04	0.8091E-03
9013	-0.1199E-01	-0.1311E-02	-0.7142E-02	-0.1545E-03	-0.2521E-04	0.1864E-03
27	-0.1199E-01	-0.1311E-02	-0.7142E-02	-0.1545E-03	-0.2521E-04	0.1864E-03
28	-0.2228E-01	-0.1284E-02	-0.7442E-02	-0.1585E-03	-0.2595E-05	0.1579E-03
29	0.2228E-01	-0.1284E-02	-0.7442E-02	-0.2048E-03	-0.2786E-04	0.1579E-03
9015	-0.1147E-01	-0.1168E-02	-0.1150E-01	-0.2168E-03	-0.2867E-04	0.6643E-03
30	0.1349E-01	-0.1082E-02	-0.1614E-01	-0.3329E-04	-0.3084E-04	-0.2833E-03
31	0.1349E-01	-0.1082E-02	-0.1614E-01	-0.4490E-04	-0.3202E-04	-0.5088E-03
32	0.2238E-03	-0.1080E-02	0.1982E-02	0.1761E-04	0.1206E-04	-0.5013E-03
33	0.1565E-02	-0.1031E-02	-0.1286E-02	0.3141E-04	-0.3141E-04	-0.4218E-03
37	0.1945E-02	-0.7462E-03	-0.1365E-01	-0.7958E-04	-0.9177E-04	-0.1153E-03
9017	-0.4739E-02	-0.3292E-02	-0.1382E-02	-0.1382E-02	-0.2844E-03	0.9332E-04
38	-0.7245E-02	-0.2149E-02	-0.1771E-01	-0.1109E-04	-0.1394E-03	0.5050E-03
39	0.7245E-02	-0.2149E-02	-0.1771E-01	-0.2313E-03	0.4011E-03	0.9107E-03
9019	0.4024E-02	-0.1800E-02	-0.1698E-01	-0.3693E-03	0.3455E-03	0.1042E-02
40	0.4024E-02	-0.1800E-02	-0.1698E-01	-0.1782E-03	0.1782E-03	0.1620E-02
41	0.1161E-01	-0.6193E-03	-0.1342E-01	-0.6453E-03	-0.1008E-02	0.2273E-02
43	0.2738E-01	-0.7029E-04	-0.8745E-02	0.7646E-03	-0.8841E-03	0.3350E-02
44	0.2738E-01	-0.7029E-04	-0.8745E-02	0.7646E-03	-0.8841E-03	0.3350E-02
45	0.2777E-01	0.2443E-01	-0.1454E-02	-0.8292E-03	-0.7191E-03	-0.2371E-02
46	0.2777E-01	0.2443E-01	-0.1454E-02	-0.1752E-03	0.3088E-03	0.3475E-02
47	0.1748E-01	-0.5020E-02	-0.1212E-01	-0.1782E-03	0.8338E-03	0.1838E-02
91	0.1748E-01	-0.5020E-02	-0.1212E-01	-0.1782E-03	0.8338E-03	0.1838E-02
92	0.1748E-01	-0.5020E-02	-0.1212E-01	-0.1782E-03	0.8338E-03	0.1838E-02
93	0.7618E-01	0.4049E-01	-0.1611E-01	-0.2507E-02	0.7419E-03	0.2815E-02
94	0.7618E-01	0.4049E-01	-0.1611E-01	-0.1947E-02	0.6925E-03	0.3137E-02
95	0.8138E-01	0.2348E-01	-0.1614E-01	-0.1882E-02	0.6441E-03	-0.3262E-02
96	0.8138E-01	0.2348E-01	-0.1614E-01	-0.1614E-01	0.1528E-02	-0.3471E-02
97	0.8392E-01	0.1674E-01	-0.1628E-01	-0.1578E-02	0.1182E-03	-0.3693E-02
98	0.8392E-01	0.1674E-01	-0.1628E-01	-0.1184E-02	0.9191E-03	-0.3873E-02
100	0.5447E-01	0.1130E-01	-0.4306E-02	0.6691E-03	0.6995E-03	-0.3841E-02
101	0.5447E-01	0.1130E-01	-0.4306E-02	0.5214E-03	0.1031E-03	-0.3741E-02
102	0.2874E-01	0.1188E-01	-0.5019E-02	0.3044E-03	0.7022E-03	-0.3541E-02
113	0.5336E-01	0.1177E-02	-0.6548E-03	0.7821E-03	0.7821E-03	-0.3268E-02

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114	0.6717E-01	0.4026E-02	0.6551E-02	0.6913E-01	0.3794E-02	-0.2842E-02	0.9342E-04	0.7455E-03
115	0.8318E-01	0.5033E-04	0.6551E-02	0.9702E-03	0.4397E-02	-0.2842E-02	0.9342E-04	0.7455E-03
116	0.1145E-01	-0.5587E-02	0.6551E-02	0.8088E-03	0.4810E-02	-0.2842E-02	0.9342E-04	0.7455E-03
118	0.1872E-01	-0.5746E-02	0.6551E-02	0.5018E-03	0.4810E-02	-0.2842E-02	0.9342E-04	0.7455E-03
120	-0.1327E-01	-0.5299E-02	-0.1704E-01	-0.6053E-03	0.4987E-02	-0.2842E-02	0.9342E-04	0.7455E-03
122	-0.1928E-01	-0.6273E-02	-0.1844E-01	-0.6433E-03	0.5071E-02	-0.2842E-02	0.9342E-04	0.7455E-03
124	0.1141E-02	-0.6511E-02	-0.1844E-01	-0.3336E-03	0.5226E-02	-0.2842E-02	0.9342E-04	0.7455E-03
125	0.3713E-01	-0.1004E-02	-0.1844E-01	-0.4553E-03	0.5280E-02	-0.2842E-02	0.9342E-04	0.7455E-03
127	0.9401E-01	0.1795E-04	-0.7362E-03	-0.4014E-03	0.2921E-02	-0.2842E-02	0.9342E-04	0.7455E-03
129	0.9319E-01	0.1898E-04	0.1511E-02	0.6648E-04	0.2921E-02	-0.2842E-02	0.9342E-04	0.7455E-03
130	0.1332E-01	0.1392E-02	-0.1221E-02	-0.2411E-03	0.1461E-02	-0.2842E-02	0.9342E-04	0.7455E-03
140	0.2713E-01	0.4139E-01	-0.2241E-01	0.1811E-02	0.8762E-03	-0.2842E-02	0.9342E-04	0.7455E-03
49	0.2701E-01	0.1039E-01	-0.2682E-01	0.1153E-02	0.8405E-03	-0.2842E-02	0.9342E-04	0.7455E-03
50	0.2701E-01	0.1973E-01	-0.3081E-01	0.1060E-02	0.7313E-03	-0.2842E-02	0.9342E-04	0.7455E-03
51	0.2701E-01	0.1599E-01	-0.3189E-01	0.9769E-03	0.6292E-03	-0.2842E-02	0.9342E-04	0.7455E-03
52	0.2701E-01	0.4722E-02	-0.3522E-01	0.6739E-03	0.5026E-03	-0.2842E-02	0.9342E-04	0.7455E-03
53	0.2672E-01	-0.1106E-01	-0.3582E-01	-0.6628E-02	0.4913E-03	-0.2842E-02	0.9342E-04	0.7455E-03
54	0.2672E-01	-0.1308E-01	-0.2673E-02	-0.1309E-02	0.2887E-03	-0.2842E-02	0.9342E-04	0.7455E-03
55	0.2672E-01	-0.1455E-01	-0.3198E-02	-0.1309E-02	0.1662E-03	-0.2842E-02	0.9342E-04	0.7455E-03
56	0.2672E-01	-0.1548E-01	-0.3358E-02	-0.1309E-02	0.1548E-03	-0.2842E-02	0.9342E-04	0.7455E-03
57	0.2672E-01	-0.1641E-01	-0.3518E-02	-0.1309E-02	0.1432E-03	-0.2842E-02	0.9342E-04	0.7455E-03
58	0.2672E-01	-0.1734E-01	-0.3678E-02	-0.1309E-02	0.1316E-03	-0.2842E-02	0.9342E-04	0.7455E-03
59	0.2672E-01	-0.1827E-01	-0.3846E-02	-0.1309E-02	0.1200E-03	-0.2842E-02	0.9342E-04	0.7455E-03
60	0.2672E-01	-0.1920E-01	-0.4014E-02	-0.1309E-02	0.1084E-03	-0.2842E-02	0.9342E-04	0.7455E-03
61	0.2672E-01	-0.2013E-01	-0.4182E-02	-0.1309E-02	0.9682E-03	-0.2842E-02	0.9342E-04	0.7455E-03
62	0.2672E-01	-0.2106E-01	-0.4350E-02	-0.1309E-02	0.8480E-03	-0.2842E-02	0.9342E-04	0.7455E-03
63	0.2672E-01	-0.2200E-01	-0.4518E-02	-0.1309E-02	0.7278E-03	-0.2842E-02	0.9342E-04	0.7455E-03
64	0.2672E-01	-0.2293E-01	-0.4686E-02	-0.1309E-02	0.6076E-03	-0.2842E-02	0.9342E-04	0.7455E-03
65	0.2672E-01	-0.2387E-01	-0.4854E-02	-0.1309E-02	0.4874E-03	-0.2842E-02	0.9342E-04	0.7455E-03
66	0.2672E-01	-0.2480E-01	-0.5022E-02	-0.1309E-02	0.3672E-03	-0.2842E-02	0.9342E-04	0.7455E-03
67	0.2672E-01	-0.2574E-01	-0.5190E-02	-0.1309E-02	0.2470E-03	-0.2842E-02	0.9342E-04	0.7455E-03
68	0.2672E-01	-0.2668E-01	-0.5358E-02	-0.1309E-02	0.1268E-03	-0.2842E-02	0.9342E-04	0.7455E-03
69	0.2672E-01	-0.2761E-01	-0.5526E-02	-0.1309E-02	0.0066E-03	-0.2842E-02	0.9342E-04	0.7455E-03
70	0.2672E-01	-0.2855E-01	-0.5694E-02	-0.1309E-02	-0.1138E-03	-0.2842E-02	0.9342E-04	0.7455E-03
71	0.2672E-01	-0.2949E-01	-0.5862E-02	-0.1309E-02	-0.2340E-03	-0.2842E-02	0.9342E-04	0.7455E-03
72	0.2672E-01	-0.3043E-01	-0.6030E-02	-0.1309E-02	-0.3542E-03	-0.2842E-02	0.9342E-04	0.7455E-03
73	0.2672E-01	-0.3137E-01	-0.6198E-02	-0.1309E-02	-0.4744E-03	-0.2842E-02	0.9342E-04	0.7455E-03
74	0.2672E-01	-0.3231E-01	-0.6366E-02	-0.1309E-02	-0.5946E-03	-0.2842E-02	0.9342E-04	0.7455E-03
75	0.2672E-01	-0.3325E-01	-0.6534E-02	-0.1309E-02	-0.7148E-03	-0.2842E-02	0.9342E-04	0.7455E-03
76	0.2672E-01	-0.3419E-01	-0.6702E-02	-0.1309E-02	-0.8350E-03	-0.2842E-02	0.9342E-04	0.7455E-03
77	0.2672E-01	-0.3513E-01	-0.6870E-02	-0.1309E-02	-0.9552E-03	-0.2842E-02	0.9342E-04	0.7455E-03
78	0.2672E-01	-0.3607E-01	-0.7038E-02	-0.1309E-02	-1.0754E-03	-0.2842E-02	0.9342E-04	0.7455E-03
79	0.2672E-01	-0.3701E-01	-0.7206E-02	-0.1309E-02	-1.1956E-03	-0.2842E-02	0.9342E-04	0.7455E-03
80	0.2672E-01	-0.3795E-01	-0.7374E-02	-0.1309E-02	-1.3158E-03	-0.2842E-02	0.9342E-04	0.7455E-03
81	0.2672E-01	-0.3889E-01	-0.7542E-02	-0.1309E-02	-1.4360E-03	-0.2842E-02	0.9342E-04	0.7455E-03
82	0.2672E-01	-0.3983E-01	-0.7710E-02	-0.1309E-02	-1.5562E-03	-0.2842E-02	0.9342E-04	0.7455E-03
83	0.2672E-01	-0.4077E-01	-0.7878E-02	-0.1309E-02	-1.6764E-03	-0.2842E-02	0.9342E-04	0.7455E-03
84	0.2672E-01	-0.4171E-01	-0.8046E-02	-0.1309E-02	-1.7966E-03	-0.2842E-02	0.9342E-04	0.7455E-03
85	0.2672E-01	-0.4265E-01	-0.8214E-02	-0.1309E-02	-1.9168E-03	-0.2842E-02	0.9342E-04	0.7455E-03
86	0.2672E-01	-0.4359E-01	-0.8382E-02	-0.1309E-02	-2.0370E-03	-0.2842E-02	0.9342E-04	0.7455E-03
87	0.2672E-01	-0.4453E-01	-0.8550E-02	-0.1309E-02	-2.1572E-03	-0.2842E-02	0.9342E-04	0.7455E-03

MODE	DX	EY	DE	ROT-X	ROT-Y	ROT-Z
1	0.1309E-08	0.3109E-09	-0.2217E-10	-0.6719E-11	0.1214E-09	-0.3279E-10
2	-0.7242E-03	-0.5925E-04	-0.2647E-03	0.1560E-05	0.9297E-04	-0.1741E-04
3	-0.1021E-02	-0.1248E-02	-0.2082E-02	0.6603E-04	0.1245E-02	-0.1343E-04
4	-0.1038E-02	0.1840E-02	-0.5007E-02	0.2127E-02	0.9342E-04	-0.3439E-03
5	-0.1074E-02	0.1039E-01	-0.6202E-02	0.8216E-03	0.1406E-02	-0.6471E-03

MODAL DISPLACEMENTS AT SECONDARY SYSTEM DOF

FREQUENCY (HZ.) = 32.91754

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MODAL DISPLACEMENTS AT PRIMARY SYSTEM CONNECTING DOF

DOF # DISPLACEMENT

3041	0.1706E-01
3042	0.0000E+00
3043	0.4355E-05
3044	0.5396E-01
3045	0.1463E-04
3072	0.0000E+00
3073	0.0000E+00
3103	0.5248E-04
3121	-0.2647E-01
3122	0.0000E+00
3123	0.6874E-04
3091	0.3702E-01
3092	0.0000E+00
3093	0.2648E-04

Table with 7 columns of numerical data representing displacement components for various nodes (112 to 87).

COUPLED NODE SHAPES (FOR SECONDARY NODE) MODE 4
FREQUENCY (HZ.) = 1.31452

MODAL DISP AT PRIMARY SYSTEM CONNECTING DOF

DOF # DISPLACEMENT

Table with 2 columns: DOF # and DISPLACEMENT, listing values for DOFs 3043 to 3093.

MODAL DISPLACEMENTS AT SECONDARY SYSTEM DOF

Table with 7 columns: NODE, DX, DY, DZ, ROT-X, ROT-Y, ROT-Z, showing displacement data for nodes 1 to 26.

Table with 7 columns of numerical data representing displacement components for various nodes (9013 to 84).

MODE	DX	BY	DZ	MOT-X	MOT-Y	MOT-Z
81	0.6170E-02	0.6279E-02	-0.4778E-02	-0.4945E-03	-0.1071E-03	-0.2219E-03
82	0.5752E-02	0.3996E-02	-0.4567E-02	-0.3471E-03	-0.1185E-03	-0.1285E-03
9022	0.2874E-02	-0.7374E-03	-0.6431E-04	-0.5692E-04	-0.1063E-04	-0.1068E-04
83	0.3508E-03	-0.4268E-03	-0.6312E-04	-0.4632E-04	-0.6880E-04	-0.3213E-04
26	-0.6072E-01	-0.3177E-01	-0.6302E-04	-0.6362E-04	-0.6362E-04	0.2533E-04
84	0.3991E-03	-0.3372E-03	-0.4392E-04	-0.4531E-04	-0.6012E-04	-0.2057E-04
9016	0.2578E-02	0.1923E-02	-0.1519E-02	-0.1519E-02	-0.2195E-02	-0.2223E-02
87	0.3218E-02	-0.1945E-02	-0.4155E-02	0.1392E-02	0.2195E-02	-0.2223E-02

COUPLER MODE SHAPE (FOR SECONDARY MODE) MODE
FREQUENCY (Hz.) = 3.60057

MODAL DISP AT PRIMARY SYSTEM CONNECTING DOP

DOP #	DISPLACEMENT
3041	0.3816E-03
3042	0.0000E+00
3043	-0.1179E-04
3063	-0.1066E-05
3064	-0.1950E-06
3065	-0.3950E-06
3081	0.6684E-05
3082	-0.1426E-05
3103	0.9364E-05
3122	0.0000E+00
3123	-0.1860E-05
3091	0.4893E-05
3092	-0.0000E+00
3093	-0.4893E-06

MODAL DISPLACEMENTS AT SECONDARY SYSTEM DOP

MODE	DX	BY	DZ	MOT-X	MOT-Y	MOT-Z
1	-0.1019E-03	0.0044E-03	0.1174E-06	0.1838E-09	-0.2328E-09	0.2318E-08
2	0.6460E-03	0.5214E-03	0.7575E-03	-0.1445E-03	-0.4501E-03	-0.2034E-02
3	0.7058E-02	0.3377E-01	0.2293E-01	-0.3179E-01	-0.2752E-02	-0.7158E-02
4	0.6709E-02	0.3619E-02	0.1487E-02	0.9068E-04	-0.6490E-02	0.1488E-02
5	0.6546E-02	0.3619E-02	0.2453E-02	0.2862E-03	-0.7910E-02	0.1768E-01
9001	-0.2796E-01	0.6132E-02	0.2608E-02	0.3502E-03	-0.4841E-02	0.1864E-01
9002	-0.2899E-01	0.6373E-02	0.2782E-02	0.4263E-03	-0.8253E-02	0.1968E-01
6	0.1323E-02	0.6437E-02	0.7793E-02	0.1434E-02	-0.9023E-02	0.2027E-02
7	-0.1323E-02	0.6437E-02	0.7793E-02	0.1434E-02	-0.9023E-02	0.2027E-02
9003	-0.4443E-02	0.6473E-02	0.2467E-02	0.4623E-03	-0.1328E-01	-0.5872E-02
9004	-0.4443E-02	0.6473E-02	0.2467E-02	0.3045E-02	-0.1753E-01	-0.8902E-02
8	0.3407E-01	0.6472E-02	0.4553E-02	-0.7102E-02	-0.1792E-01	-0.5213E-01
10	0.3974E-01	0.6472E-02	0.2261E-02	-0.7923E-02	-0.1252E-01	-0.6112E-01
9005	0.2800E-01	0.6472E-02	0.3066E-02	-0.1129E-01	-0.2614E-01	-0.8824E-01
9006	0.4811E-01	0.6472E-02	0.1670E-02	-0.1160E-01	-0.1334E-01	-0.7402E-01
9	0.4811E-01	0.6472E-02	0.1670E-02	-0.1160E-01	-0.1334E-01	-0.7402E-01
12	0.9062E-01	0.6470E-02	0.1254E-01	-0.1163E-01	-0.1460E-01	-0.6458E-01
9007	0.9140E-01	0.6157E-02	0.1262E-01	-0.1161E-01	-0.1460E-01	-0.6098E-01
9008	0.9261E-01	0.4308E-02	-0.1133E-01	-0.1357E-01	-0.1541E-01	-0.5379E-01
13	0.9289E-01	0.4308E-02	-0.1173E-01	-0.1356E-01	-0.1541E-01	-0.5379E-01
14	0.9289E-01	0.4308E-02	-0.1173E-01	-0.1356E-01	-0.1541E-01	-0.5379E-01
15	0.9289E-01	0.4308E-02	-0.1173E-01	-0.1356E-01	-0.1541E-01	-0.5379E-01
9009	0.3518E-01	-0.2212E-01	0.1473E-01	-0.1062E-01	-0.1827E-01	0.1752E-01
9010	0.3518E-01	-0.2212E-01	0.1473E-01	-0.1062E-01	-0.1827E-01	0.1752E-01
17	0.9248E-01	-0.5632E-02	-0.2473E-02	-0.1415E-01	-0.1415E-01	-0.2347E-01
18	0.9042E-01	-0.5632E-02	-0.2473E-02	-0.1415E-01	-0.1415E-01	-0.2347E-01
19	0.8796E-01	-0.5645E-02	-0.2548E-02	-0.1408E-01	-0.1408E-01	-0.2338E-01
20	0.8796E-01	-0.5645E-02	-0.2548E-02	-0.1408E-01	-0.1408E-01	-0.2338E-01
21	0.7856E-01	-0.2212E-01	0.1473E-01	-0.1062E-01	-0.1827E-01	0.1752E-01
22	0.7856E-01	-0.2212E-01	0.1473E-01	-0.1062E-01	-0.1827E-01	0.1752E-01
23	0.7856E-01	-0.2212E-01	0.1473E-01	-0.1062E-01	-0.1827E-01	0.1752E-01
24	0.7856E-01	-0.2212E-01	0.1473E-01	-0.1062E-01	-0.1827E-01	0.1752E-01
25	0.7856E-01	-0.2212E-01	0.1473E-01	-0.1062E-01	-0.1827E-01	0.1752E-01
9011	0.5520E-01	-0.2212E-01	0.1473E-01	-0.1062E-01	-0.1827E-01	0.1752E-01
9012	0.5520E-01	-0.2212E-01	0.1473E-01	-0.1062E-01	-0.1827E-01	0.1752E-01
28	0.5003E-01	-0.2212E-01	0.1473E-01	-0.1062E-01	-0.1827E-01	0.1752E-01
29	0.5003E-01	-0.2212E-01	0.1473E-01	-0.1062E-01	-0.1827E-01	0.1752E-01
30	0.5003E-01	-0.2212E-01	0.1473E-01	-0.1062E-01	-0.1827E-01	0.1752E-01
31	0.5003E-01	-0.2212E-01	0.1473E-01	-0.1062E-01	-0.1827E-01	0.1752E-01
32	0.5003E-01	-0.2212E-01	0.1473E-01	-0.1062E-01	-0.1827E-01	0.1752E-01
33	0.5003E-01	-0.2212E-01	0.1473E-01	-0.1062E-01	-0.1827E-01	0.1752E-01
34	0.5003E-01	-0.2212E-01	0.1473E-01	-0.1062E-01	-0.1827E-01	0.1752E-01
35	0.5003E-01	-0.2212E-01	0.1473E-01	-0.1062E-01	-0.1827E-01	0.1752E-01
36	0.5003E-01	-0.2212E-01	0.1473E-01	-0.1062E-01	-0.1827E-01	0.1752E-01
37	0.5003E-01	-0.2212E-01	0.1473E-01	-0.1062E-01	-0.1827E-01	0.1752E-01
9013	0.2078E-01	0.7903E-01	-0.6592E-01	-0.6592E-01	-0.6592E-01	0.6592E-01
9014	0.2078E-01	0.7903E-01	-0.6592E-01	-0.6592E-01	-0.6592E-01	0.6592E-01
9015	0.2078E-01	0.7903E-01	-0.6592E-01	-0.6592E-01	-0.6592E-01	0.6592E-01
9016	0.2078E-01	0.7903E-01	-0.6592E-01	-0.6592E-01	-0.6592E-01	0.6592E-01
9017	0.2078E-01	0.7903E-01	-0.6592E-01	-0.6592E-01	-0.6592E-01	0.6592E-01
9018	0.2078E-01	0.7903E-01	-0.6592E-01	-0.6592E-01	-0.6592E-01	0.6592E-01
9019	0.2078E-01	0.7903E-01	-0.6592E-01	-0.6592E-01	-0.6592E-01	0.6592E-01
40	0.3628E-02	0.5955E-02	-0.6601E-01	0.1091E-02	-0.1014E-02	0.2178E-02
41	0.3628E-02	0.5955E-02	-0.6601E-01	0.1091E-02	-0.1014E-02	0.2178E-02
42	0.3628E-02	0.5955E-02	-0.6601E-01	0.1091E-02	-0.1014E-02	0.2178E-02
43	0.3628E-02	0.5955E-02	-0.6601E-01	0.1091E-02	-0.1014E-02	0.2178E-02
44	0.3628E-02	0.5955E-02	-0.6601E-01	0.1091E-02	-0.1014E-02	0.2178E-02
45	0.3628E-02	0.5955E-02	-0.6601E-01	0.1091E-02	-0.1014E-02	0.2178E-02
46	0.3628E-02	0.5955E-02	-0.6601E-01	0.1091E-02	-0.1014E-02	0.2178E-02
47	0.3628E-02	0.5955E-02	-0.6601E-01	0.1091E-02	-0.1014E-02	0.2178E-02
48	0.3628E-02	0.5955E-02	-0.6601E-01	0.1091E-02	-0.1014E-02	0.2178E-02
49	0.3628E-02	0.5955E-02	-0.6601E-01	0.1091E-02	-0.1014E-02	0.2178E-02
9020	0.1578E-02	0.1742E-02	0.1742E-02	0.1742E-02	0.1742E-02	0.1742E-02
9021	0.1578E-02	0.1742E-02	0.1742E-02	0.1742E-02	0.1742E-02	0.1742E-02

MODE	DX	BY	DZ	MOT-X	MOT-Y	MOT-Z
24	-0.1473E-01	0.3009E-02	0.6035E-01	0.3168E-01	0.3451E-02	0.3168E-01
9011	-0.1473E-01	0.3009E-02	0.6035E-01	0.3168E-01	0.3451E-02	0.3168E-01
9012	-0.1473E-01	0.3009E-02	0.6035E-01	0.3168E-01	0.3451E-02	0.3168E-01
25	-0.6192E-01	0.2014E-02	0.9531E-01	0.9120E-02	0.2776E-01	-0.5472E-02
26	-0.6192E-01	0.2014E-02	0.9531E-01	0.9120E-02	0.2776E-01	-0.5472E-02
9013	-0.6192E-01	0.2014E-02	0.9531E-01	0.9120E-02	0.2776E-01	-0.5472E-02
9014	-0.6192E-01	0.2014E-02	0.9531E-01	0.9120E-02	0.2776E-01	-0.5472E-02
27	-0.4609E-01	0.2028E-02	0.6527E-01	0.4512E-01	0.2054E-01	-0.2076E-02
28	-0.4609E-01	0.2028E-02	0.6527E-01	0.4512E-01	0.2054E-01	-0.2076E-02
9015	-0.4609E-01	0.2028E-02	0.6527E-01	0.4512E-01	0.2054E-01	-0.2076E-02
9016	-0.4609E-01	0.2028E-02	0.6527E-01	0.4512E-01	0.2054E-01	-0.2076E-02
30	0.3009E-02	0.2028E-02	0.7991E-02	-0.3046E-02	0.1142E-01	-0.6667E-02
31	0.3009E-02	0.2028E-02	0.7991E-02	-0.3046E-02	0.1142E-01	-0.6667E-02
9017	0.3009E-02	0.2028E-02	0.7991E-02	-0.3046E-02	0.1142E-01	-0.6667E-02
9018	0.3009E-02	0.2028E-02	0.7991E-02	-0.3046E-02	0.1142E-01	-0.6667E-02
32	0.1264E-01	-0.3778E-02	0.2701E-01	0.5795E-02	-0.1274E-02	0.1274E-02
33	0.1264E-01	-0.3778E-02	0.2701E-01	0.5795E-02	-0.1274E-02	0.1274E-02
9019	0.1264E-01	-0.3778E-02	0.2701E-01	0.5795E-02	-0.1274E-02	0.1274E-02
9020	0.1264E-01	-0.3778E-02	0.2701E-01	0.5795E-02	-0.1274E-02	0.1274E-02
34	0.1264E-01	-0.3778E-02	0.2701E-01	0.5795E-02	-0.1274E-02	0.1274E-02
35	0.1264E-01	-0.3778E-02	0.2701E-01	0.5795E-02	-0.1274E-02	0.1274E-02
36	0.1264E-01	-0.3778E-02	0.2701E-01	0.5795E-02	-0.1274E-02	0.1274E-02
37	0.1264E-01	-0.3778E-02	0.2701E-01	0.5795E-02	-0.1274E-02	0.1274E-02
38	0.1264E-01	-0.3778E-02	0.2701E-01	0.5795E-02	-0.1274E-02	0.1274E-02
39	0.1264E-01	-0.3778E-02	0.2701E-01	0.5795E-02	-0.1274E-02	0.1274E-02
40	0.1264E-01	-0.3778E-02	0.2701E-01	0.5795E-02	-0.1274E-02	0.1274E-02
41	0.1264E-01	-0.3778E-02	0.2701E-01	0.5795E-02	-0.1274E-02	0.1274E-02
42	0.1264E-01	-0.3778E-02	0.2701E-01	0.5795E-02	-0.1274E-02	0.1274E-02
43	0.1264E-01	-0.3778E-02	0.2701E-01	0.5795E-02	-0.1274E-02	0.1274E-02
44	0.1264E-01	-0.3778E-02	0.2701E-01	0.5795E-02	-0.1274E-02	0.1274E-02
45	0.1264E-01	-0.3778E-02	0.2701E-01	0.5795E-02	-0.1274E-02	0.1274E-02
46	0.1264E-01	-0.3778E-02	0.2701E-01	0.5795E-02	-0.1274E-02	0.1274E-02
47	0.1264E-01	-0.3778E-02	0.2701E-01	0.5795E-02	-0.1274E-02	0.1274E-02
48	0.1264E-01	-0.3778E-02	0.2701E-01	0.5795E-02	-0.1274E-02	0.1274E-02
49	0.1264E-01	-0.3778E-02	0.2701E-01	0.5795E-02	-0.1274E-02	0.1274E-02
9021	0.1264E-01	-0.3778E-02	0.2701E-01	0.5795E-02	-0.1274E-02	0.1274E-02
9022	0.1264E-01	-0.3778E-02	0.2701E-01	0.5795E-02	-0.1274E-02	0.1274E-02
9023	0.1264E-01	-0.3778E-02	0.2701E-01	0.5795E-02	-0.1274E-02	0.1274E-02
9024	0.1264E-01	-0.3778E-02	0.2701E-01	0.5795E-02	-0.1274E-02	

77 -0.145E-02 0.327E-01 0.541E-02 0.812E-03 -0.515E-03 -0.242E-03 0.342E-03
 78 -0.116E-02 0.307E-01 0.514E-02 0.787E-03 -0.470E-03 -0.231E-03 0.324E-03
 9022 -0.116E-02 0.307E-01 0.514E-02 0.787E-03 -0.470E-03 -0.231E-03 0.324E-03
 79 -0.116E-02 0.307E-01 0.514E-02 0.787E-03 -0.470E-03 -0.231E-03 0.324E-03
 80 -0.116E-02 0.307E-01 0.514E-02 0.787E-03 -0.470E-03 -0.231E-03 0.324E-03
 81 -0.116E-02 0.307E-01 0.514E-02 0.787E-03 -0.470E-03 -0.231E-03 0.324E-03
 82 -0.116E-02 0.307E-01 0.514E-02 0.787E-03 -0.470E-03 -0.231E-03 0.324E-03
 83 -0.116E-02 0.307E-01 0.514E-02 0.787E-03 -0.470E-03 -0.231E-03 0.324E-03
 84 -0.116E-02 0.307E-01 0.514E-02 0.787E-03 -0.470E-03 -0.231E-03 0.324E-03
 85 -0.116E-02 0.307E-01 0.514E-02 0.787E-03 -0.470E-03 -0.231E-03 0.324E-03
 86 -0.116E-02 0.307E-01 0.514E-02 0.787E-03 -0.470E-03 -0.231E-03 0.324E-03
 87 -0.116E-02 0.307E-01 0.514E-02 0.787E-03 -0.470E-03 -0.231E-03 0.324E-03

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COUPLED MODE SHAPES (FOR SECONDARY MODE) MODE
 FREQUNCY (HZ) 4

MODAL DEFP AT PRIMARY SYSTEM CONNECTING DCF

DOF # DISPLACEMENT

3041 -0.534E-07
 3042 0.471E+00
 3043 -0.306E-06
 3044 0.158E-05
 3061 0.0000E+00
 3072 -0.424E-06
 3103 0.571E-05
 3112 -0.109E-05
 3122 0.745E-06
 3081 0.0000E+00
 3092 -0.424E-06
 3093 0.353E-05

MODAL DISPLACEMENTS AT SECONDARY SYSTEM DCF

MODE DX DY DE
 1 0.140E+08 0.155E+02 0.407E-09
 2 -0.540E-03 0.147E-02 0.488E-03
 3 -0.381E-02 0.167E-01 0.104E-01
 4 -0.381E-02 0.167E-01 0.104E-01
 5 0.167E-01 0.104E-01 0.104E-01
 6002 -0.243E-02 0.137E-01 0.137E-01
 6003 -0.243E-02 0.137E-01 0.137E-01
 7 -0.137E-01 0.137E-01 0.137E-01
 8 -0.137E-01 0.137E-01 0.137E-01
 9004 0.805E-01 0.724E-01 0.240E-01
 9005 0.805E-01 0.724E-01 0.240E-01
 9006 0.805E-01 0.724E-01 0.240E-01
 9007 0.805E-01 0.724E-01 0.240E-01
 9008 0.805E-01 0.724E-01 0.240E-01
 9009 0.805E-01 0.724E-01 0.240E-01
 9010 0.805E-01 0.724E-01 0.240E-01
 9011 0.805E-01 0.724E-01 0.240E-01
 9012 0.805E-01 0.724E-01 0.240E-01
 9013 0.805E-01 0.724E-01 0.240E-01
 9014 0.805E-01 0.724E-01 0.240E-01
 9015 0.805E-01 0.724E-01 0.240E-01
 9016 0.805E-01 0.724E-01 0.240E-01
 9017 0.805E-01 0.724E-01 0.240E-01
 9018 0.805E-01 0.724E-01 0.240E-01
 9019 0.805E-01 0.724E-01 0.240E-01
 9020 0.805E-01 0.724E-01 0.240E-01
 9021 0.805E-01 0.724E-01 0.240E-01
 9022 0.805E-01 0.724E-01 0.240E-01
 9023 0.805E-01 0.724E-01 0.240E-01
 9024 0.805E-01 0.724E-01 0.240E-01
 9025 0.805E-01 0.724E-01 0.240E-01
 9026 0.805E-01 0.724E-01 0.240E-01
 9027 0.805E-01 0.724E-01 0.240E-01
 9028 0.805E-01 0.724E-01 0.240E-01
 9029 0.805E-01 0.724E-01 0.240E-01
 9030 0.805E-01 0.724E-01 0.240E-01
 9031 0.805E-01 0.724E-01 0.240E-01
 9032 0.805E-01 0.724E-01 0.240E-01
 9033 0.805E-01 0.724E-01 0.240E-01
 9034 0.805E-01 0.724E-01 0.240E-01
 9035 0.805E-01 0.724E-01 0.240E-01
 9036 0.805E-01 0.724E-01 0.240E-01
 9037 0.805E-01 0.724E-01 0.240E-01
 9038 0.805E-01 0.724E-01 0.240E-01
 9039 0.805E-01 0.724E-01 0.240E-01
 9040 0.805E-01 0.724E-01 0.240E-01
 9041 0.805E-01 0.724E-01 0.240E-01
 9042 0.805E-01 0.724E-01 0.240E-01
 9043 0.805E-01 0.724E-01 0.240E-01
 9044 0.805E-01 0.724E-01 0.240E-01
 9045 0.805E-01 0.724E-01 0.240E-01
 9046 0.805E-01 0.724E-01 0.240E-01
 9047 0.805E-01 0.724E-01 0.240E-01
 9048 0.805E-01 0.724E-01 0.240E-01
 9049 0.805E-01 0.724E-01 0.240E-01
 9050 0.805E-01 0.724E-01 0.240E-01

9020 0.132E-02 0.219E+00 0.181E-01
 46 -0.128E-01 -0.209E+00 0.103E-00
 47 -0.101E-01 -0.181E+00 -0.115E+00
 51 -0.101E-01 -0.181E+00 -0.115E+00
 52 -0.106E-01 -0.187E+00 -0.145E+00
 54 -0.172E-01 -0.310E+00 0.501E+00
 56 -0.117E-01 -0.162E+00 0.501E+00
 57 -0.103E-01 -0.171E+00 0.500E+00
 58 -0.107E-01 -0.160E+00 0.443E+00
 100 -0.102E-01 -0.160E+00 0.443E+00
 101 -0.102E-01 -0.160E+00 0.443E+00
 111 0.114E-01 -0.163E+00 0.443E+00
 114 0.114E-01 -0.163E+00 0.443E+00
 115 0.219E-01 -0.109E+01 0.243E+00
 116 0.219E-01 -0.109E+01 0.243E+00
 118 -0.353E-01 -0.108E+01 0.210E+00
 9023 -0.353E-01 -0.108E+01 0.210E+00
 120 -0.317E-01 -0.104E+01 -0.976E+00
 121 -0.317E-01 -0.104E+01 -0.976E+00
 122 -0.317E-01 -0.104E+01 -0.976E+00
 123 -0.317E-01 -0.104E+01 -0.976E+00
 124 -0.317E-01 -0.104E+01 -0.976E+00
 125 -0.317E-01 -0.104E+01 -0.976E+00
 126 -0.317E-01 -0.104E+01 -0.976E+00
 127 -0.317E-01 -0.104E+01 -0.976E+00
 128 -0.317E-01 -0.104E+01 -0.976E+00
 9024 0.104E-01 -0.157E+00 0.171E+01
 130 0.230E-01 -0.159E+00 0.119E+01
 131 0.230E-01 -0.159E+00 0.119E+01
 48 0.132E-01 -0.168E+00 -0.108E+00
 49 0.132E-01 -0.168E+00 -0.108E+00
 50 0.132E-01 -0.168E+00 -0.108E+00
 51 0.132E-01 -0.168E+00 -0.108E+00
 52 0.132E-01 -0.168E+00 -0.108E+00
 53 0.132E-01 -0.168E+00 -0.108E+00
 54 0.132E-01 -0.168E+00 -0.108E+00
 55 0.132E-01 -0.168E+00 -0.108E+00
 56 0.132E-01 -0.168E+00 -0.108E+00
 57 0.132E-01 -0.168E+00 -0.108E+00
 58 0.132E-01 -0.168E+00 -0.108E+00
 59 0.132E-01 -0.168E+00 -0.108E+00
 103 0.505E-01 0.157E+00 -0.207E-01
 104 0.505E-01 0.157E+00 -0.207E-01
 105 0.505E-01 0.157E+00 -0.207E-01
 106 0.505E-01 0.157E+00 -0.207E-01
 107 0.505E-01 0.157E+00 -0.207E-01
 108 0.505E-01 0.157E+00 -0.207E-01
 109 0.505E-01 0.157E+00 -0.207E-01
 110 0.505E-01 0.157E+00 -0.207E-01
 111 0.505E-01 0.157E+00 -0.207E-01
 112 0.505E-01 0.157E+00 -0.207E-01
 60 0.805E-01 0.724E-01 0.240E-01
 61 0.805E-01 0.724E-01 0.240E-01
 62 0.805E-01 0.724E-01 0.240E-01
 63 0.805E-01 0.724E-01 0.240E-01
 64 0.805E-01 0.724E-01 0.240E-01
 65 0.805E-01 0.724E-01 0.240E-01
 66 0.805E-01 0.724E-01 0.240E-01
 67 0.805E-01 0.724E-01 0.240E-01
 68 0.805E-01 0.724E-01 0.240E-01
 69 0.805E-01 0.724E-01 0.240E-01
 70 0.805E-01 0.724E-01 0.240E-01
 71 0.805E-01 0.724E-01 0.240E-01
 133 -0.103E-01 -0.162E+00 0.501E+00
 72 0.805E-01 0.724E-01 0.240E-01
 73 0.805E-01 0.724E-01 0.240E-01
 74 0.805E-01 0.724E-01 0.240E-01
 75 0.805E-01 0.724E-01 0.240E-01
 76 0.805E-01 0.724E-01 0.240E-01
 77 0.805E-01 0.724E-01 0.240E-01
 78 0.805E-01 0.724E-01 0.240E-01
 9021 0.805E-01 0.724E-01 0.240E-01
 79 0.805E-01 0.724E-01 0.240E-01
 80 0.805E-01 0.724E-01 0.240E-01
 81 0.805E-01 0.724E-01 0.240E-01
 82 0.805E-01 0.724E-01 0.240E-01
 83 0.805E-01 0.724E-01 0.240E-01
 84 0.805E-01 0.724E-01 0.240E-01
 85 0.805E-01 0.724E-01 0.240E-01
 86 0.805E-01 0.724E-01 0.240E-01
 87 0.805E-01 0.724E-01 0.240E-01

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COUPLED MODE SHAPES (FOR SECONDARY MODE) MODE
 FREQUNCY (HZ) 4

MODAL DEFP AT PRIMARY SYSTEM CONNECTING DCF

DOF # DISPLACEMENT

3041 0.113E-04
 3042 0.0000E+00
 3043 0.723E-05
 3061 0.265E-04
 3063 0.243E-05
 3072 0.0000E+00
 3081 0.412E-04
 3092 0.797E-05
 3121 0.0000E+00

3123 0.1143E-04
3091 0.4704E-04
3092 0.0000E+00
3093 0.5428E-05

MODAL DISPLACEMENTS AT SECONDARY SYSTEM DOP

Table with columns: NODE, DX, DY, DZ, ROT-X, ROT-Y, ROT-Z. Contains 50 rows of displacement data for various nodes.

Table with columns: NODE, DX, DY, DZ, ROT-X, ROT-Y, ROT-Z. Contains 87 rows of displacement data for various nodes.

COUPLED MODE SHAPES (FOR SECONDARY MODE) MODE 13
FREQUENCY (Hz.) = 8.07088

MODAL DISP AT PRIMARY SYSTEM CONNECTING DOP

DOP # DISPLACEMENT

Table with columns: DOP #, DISPLACEMENT. Lists displacement values for DOPs 3041 through 3093.

MODAL DISPLACEMENTS AT SECONDARY SYSTEM DOP

Table with columns: NODE, DX, DY, DZ, ROT-X, ROT-Y, ROT-Z. Contains 15 rows of displacement data for various nodes.

Table with 3 columns: Node, DX, DY, DZ. Nodes range from 1 to 909. DX values range from -0.11628 to 0.11792. DY values range from -0.00000 to 0.11875. DZ values range from -0.00000 to 0.00000.

14

Coupled Node Shapes (For Secondary Node) Node Frequency (Hz.) = 8.30711

Modal Displacement

Modal Shape At Primary System Connecting DOF

DOF #

Table with 3 columns: DOF #, Displacement, Node. DOF # values range from 0.6944E-06 to 0.8900E-05. Displacement values range from -0.11875 to 0.00000. Node values range from 3041 to 3093.

Modal Displacements At Secondary System DOF

Table with 3 columns: Node, DX, DY, DZ. Nodes range from 1 to 909. DX values range from -0.11628 to 0.11792. DY values range from -0.00000 to 0.11875. DZ values range from -0.00000 to 0.00000.

Table with 3 columns: Node, DX, DY, DZ. Nodes range from 1 to 909. DX values range from -0.11628 to 0.11792. DY values range from -0.00000 to 0.11875. DZ values range from -0.00000 to 0.00000.

Modal Displacements At Secondary System DOF

Table with 3 columns: Node, DX, DY, DZ. Nodes range from 1 to 909. DX values range from -0.11628 to 0.11792. DY values range from -0.00000 to 0.11875. DZ values range from -0.00000 to 0.00000.

CRAFT OUT

Table with columns: MODE, DISPLACEMENT, DOP #, and numerical values. Includes sub-headers for COILED WIRE SHAPES and MODAL DISP AT PRIMARY SYSTEM CONNECTING DOF.

17

COILED WIRE SHAPES (FOR SECONDARY MODE) WIRE FREQUENCY (Hz.) = 13.4593

MODAL DISP AT PRIMARY SYSTEM CONNECTING DOF

DOP #

Table with columns: MODE, DISPLACEMENT, DOP #, and numerical values. Includes sub-headers for COILED WIRE SHAPES and MODAL DISP AT PRIMARY SYSTEM CONNECTING DOF.

CRAFT OUT

Table with columns: MODE, DISPLACEMENT, DOP #, and numerical values. Includes sub-headers for COILED WIRE SHAPES and MODAL DISP AT PRIMARY SYSTEM CONNECTING DOF.

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COILED WIRE SHAPES (FOR SECONDARY MODE) WIRE FREQUENCY (Hz.) = 14.7263

MODAL DISP AT PRIMARY SYSTEM CONNECTING DOF

DOP #

Table with columns: MODE, DISPLACEMENT, DOP #, and numerical values. Includes sub-headers for COILED WIRE SHAPES and MODAL DISP AT PRIMARY SYSTEM CONNECTING DOF.

18

COILED WIRE SHAPES (FOR SECONDARY MODE) WIRE FREQUENCY (Hz.) = 14.7263

MODAL DISP AT PRIMARY SYSTEM CONNECTING DOF

DOP #

Table with columns: MODE, DISPLACEMENT, DOP #, and numerical values. Includes sub-headers for COILED WIRE SHAPES and MODAL DISP AT PRIMARY SYSTEM CONNECTING DOF.

Table of numerical data for crtraft.out, page 49. Contains columns of numbers and scientific notation values.

Table of numerical data for crtraft.out, page 50. Contains columns of numbers and scientific notation values.

COUPLED MODE DISP (FOR SECONDARY MODE) MODE
FREQUENCY (Hz) = 14.59753

MODAL DISP AT PRIMARY SYSTEM CONNECTING DOF

Table showing MODAL DISP AT PRIMARY SYSTEM CONNECTING DOF with columns for DOF # and DISPLACEMENT.

MODAL DISPLACEMENTS AT SECONDARY SYSTEM DOF

Table showing MODAL DISPLACEMENTS AT SECONDARY SYSTEM DOF with columns for NODE, DX, DY, DZ, ROT-X, ROT-Y, ROT-Z.

Table with columns for node number and 12 displacement values. Rows include nodes 116, 118, 9023, 120, 122, 124, 125, 127, 129, 9024, 130, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 103, 104, 105, 106, 107, 108, 111, 112, 113, 60, 61, 62, 63, 64, 65, 111, 112, 113, 66, 67, 68, 69, 70, 71, 113, 114, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87.

COUPLED NODE SHAPES (FOR SECONDARY NODE) MOME
FREQUENCY (HZ.) = 18.25603

MODAL DISP AT PRIMARY SYSTEM CONNECTING DOP

Table with columns for DOP # and DIAPLACEMENT. Rows include DOP values 3041, 3042, 3043, 3041, 3043, 3072, 3041, 3103, 3121, 3122, 3123, 3091, 3092, 3093.

MODAL DISPLACEMENTS AT SECONDARY SYSTEM DOP

Table with columns for NODE, DX, DY, DZ, ROT-X, ROT-Y, ROT-Z. Rows include nodes 1, 2, 3, 4, 5, 9001, 9002.

Table with columns for node number and 12 displacement values. Rows include nodes 6, 7, 9003, 9004, 9, 10, 9005, 9006, 11, 12, 9007, 9008, 13, 14, 15, 16, 17, 18, 19, 20, 21, 9009, 9010, 22, 23, 24, 9011, 9012, 25, 26, 9013, 9014, 27, 28, 29, 9015, 9016, 30, 31, 32, 33, 35, 37, 9017, 9018, 36, 39, 9019, 40, 41, 43, 44, 45, 9020, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 118, 9021, 120, 122, 123, 124, 125, 127, 129, 9024, 130, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 60, 61, 62, 63, 64, 65, 111, 112, 113, 66, 67, 68, 69, 70, 71, 113, 114, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87.

Table with 10 columns of numerical data representing displacement components for various nodes.

COUPLED MODE SHAPES (FOR SECONDARY MODE) MODE FREQUENCY (HZ.) = 19.64076

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MODAL DISP AT PRIMARY SYSTEM CONNECTING DOF

DOF # DISPLACEMENT

Table with 2 columns: DOF # and DISPLACEMENT, listing values for nodes 3041 through 3093.

MODAL DISPLACEMENTS AT SECONDARY SYSTEM DOF

Table with 7 columns: NODE, DX, DY, DZ, ROT-X, ROT-Y, ROT-Z, listing displacement and rotation values for nodes 1 through 9014.

Table with 10 columns of numerical data representing displacement components for various nodes, continuing from the previous page.

87 -0.1004E-07 -0.7083E-08 -0.2205E-07 -0.2142E-09 0.3336E-09 0.2679E-09

COUPLED MODE SHAPES (FOR SECONDARY MODE) MODE 24
FREQUENCY (HZ.) = 20.88973

MODAL DISP AT PRIMARY SYSTEM CONNECTING DOP

Table with 2 columns: DOP # and DISPLACEMENT. Rows 3041 to 3093.

MODAL DISPLACEMENTS AT SECONDARY SYSTEM DOP

Table with 7 columns: NODE, DX, DY, DZ, ROT-X, ROT-Y, ROT-Z. Rows 1 to 300.

101 -0.7046E-01 0.2912E+00 0.1257E+01 0.5607E-01 0.2954E-01 0.4303E-02

COUPLED MODE SHAPES (FOR SECONDARY MODE) MODE 25
FREQUENCY (HZ.) = 22.16975

MODAL DISP AT PRIMARY SYSTEM CONNECTING DOP

Table with 7 columns: DOP # and DISPLACEMENT. Rows 3041 to 3093.

MODAL DISPLACEMENTS AT SECONDARY SYSTEM DOP

Table with 7 columns: NODE, DX, DY, DZ, ROT-X, ROT-Y, ROT-Z. Rows 1 to 300.

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COUPLED MODE SHARES (FOR SECONDARY MODE) MODE

FREQUENCY (Mc.) = 33.0545

MODAL DISP AT PRIMARY SYSTEM CONNECTING DDF

DOF # DISPLACEMENT

107	0.1438E+00	0.1716E+00	-0.4552E-02	0.4153E-02	-0.1838E-01	-0.2093E-01
109	0.1148E+00	0.2074E+00	-0.3491E-02	0.3765E-02	-0.1742E-01	-0.1665E-01
111	0.4702E-01	0.2159E+00	-0.3489E-02	0.1263E-02	-0.1331E-01	-0.3244E-02
112	0.3552E-01	0.2163E+00	-0.3488E-02	0.6054E-01	-0.2882E-02	-0.5010E-02
9001	0.1448E+00	0.2154E+00	-0.3489E-02	0.1172E+00	0.1184E-01	-0.1657E-01
9002	0.6408E+00	0.2163E+00	-0.3488E-02	0.1172E+00	0.1184E-01	-0.1657E-01
60	0.5152E-01	0.2074E+00	-0.3491E-02	0.1172E+00	0.1184E-01	-0.1657E-01
61	0.5152E-01	0.2074E+00	-0.3491E-02	0.1172E+00	0.1184E-01	-0.1657E-01
62	0.5152E-01	0.2074E+00	-0.3491E-02	0.1172E+00	0.1184E-01	-0.1657E-01
63	0.5152E-01	0.2074E+00	-0.3491E-02	0.1172E+00	0.1184E-01	-0.1657E-01
64	0.2621E-01	0.1204E-01	0.1713E-01	0.6670E-02	0.4388E-02	-0.1643E-01
65	0.2648E-01	0.8910E-01	-0.2206E-01	0.4603E-01	-0.3193E-02	-0.1379E-01
131	0.1163E+00	0.8917E-01	-0.3091E-02	0.4413E-02	-0.3519E-02	-0.1528E-01
132	0.3861E-01	0.1528E+00	-0.3843E-01	0.5079E-01	-0.1805E-02	-0.8048E-02
66	0.3861E-01	0.1528E+00	-0.3843E-01	0.5079E-01	-0.1805E-02	-0.8048E-02
67	0.2742E-01	0.2217E+00	-0.3488E-02	0.7542E-01	-0.1805E-02	-0.8048E-02
68	0.2742E-01	0.2217E+00	-0.3488E-02	0.7542E-01	-0.1805E-02	-0.8048E-02
70	0.2742E-01	0.2217E+00	-0.3488E-02	0.7542E-01	-0.1805E-02	-0.8048E-02
71	0.2742E-01	0.2217E+00	-0.3488E-02	0.7542E-01	-0.1805E-02	-0.8048E-02
133	0.6408E-02	0.2298E+00	-0.4510E-02	0.5213E-02	0.9248E-03	0.2262E-02
134	0.2813E-01	0.2074E+00	-0.3491E-02	0.1172E+00	0.1184E-01	-0.1657E-01
72	0.2813E-01	0.2074E+00	-0.3491E-02	0.1172E+00	0.1184E-01	-0.1657E-01
73	0.2813E-01	0.2074E+00	-0.3491E-02	0.1172E+00	0.1184E-01	-0.1657E-01
74	0.2813E-01	0.2074E+00	-0.3491E-02	0.1172E+00	0.1184E-01	-0.1657E-01
75	0.2813E-01	0.2074E+00	-0.3491E-02	0.1172E+00	0.1184E-01	-0.1657E-01
76	0.2813E-01	0.2074E+00	-0.3491E-02	0.1172E+00	0.1184E-01	-0.1657E-01
77	0.3043E-01	-0.1248E+00	0.3536E+00	0.1884E-01	0.1648E-01	0.1108E-02
78	0.3043E-01	-0.1248E+00	0.3536E+00	0.1884E-01	0.1648E-01	0.1108E-02
79	0.3043E-01	-0.1248E+00	0.3536E+00	0.1884E-01	0.1648E-01	0.1108E-02
80	0.3043E-01	-0.1248E+00	0.3536E+00	0.1884E-01	0.1648E-01	0.1108E-02
81	0.3043E-01	-0.1248E+00	0.3536E+00	0.1884E-01	0.1648E-01	0.1108E-02
82	0.3043E-01	-0.1248E+00	0.3536E+00	0.1884E-01	0.1648E-01	0.1108E-02
83	0.2442E-01	0.1955E+00	-0.1132E-01	-0.4392E-02	0.1632E-02	-0.3399E-02
84	0.1664E-01	0.7523E-01	-0.1132E-01	-0.2232E-02	0.2689E-02	-0.1012E-02
85	0.1992E-01	0.1132E-01	-0.1132E-01	-0.2632E-02	0.2064E-02	-0.9296E-03
86	0.1992E-01	0.1132E-01	-0.1132E-01	-0.2632E-02	0.2064E-02	-0.9296E-03
87	0.1992E-01	0.1132E-01	-0.1132E-01	-0.2632E-02	0.2064E-02	-0.9296E-03

COUPLED MODE SHARES (FOR SECONDARY MODE) MODE

FREQUENCY (Mc.) = 33.0545

MODAL DISP AT PRIMARY SYSTEM CONNECTING DDF

DOF # DISPLACEMENT

3041	-0.1378E-04	0.1791E-04	-0.2348E-07	0.3242E-07	-0.1378E-07	-0.1378E-07
3042	0.0050E+00	0.1247E+00	-0.3972E-01	0.3972E-01	-0.5232E-01	-0.1170E-01
3043	-0.1378E-04	0.1791E-04	-0.2348E-07	0.3242E-07	-0.1378E-07	-0.1378E-07
3061	-0.2404E-04	0.7621E-01	-0.2632E-01	0.2445E+00	0.5018E-01	-0.5018E-01
3062	-0.2404E-04	0.7621E-01	-0.2632E-01	0.2445E+00	0.5018E-01	-0.5018E-01
3101	-0.6656E-05	0.1066E-02	-0.3422E-01	0.3422E-01	-0.4592E-01	-0.1228E-01
3102	-0.6656E-05	0.1066E-02	-0.3422E-01	0.3422E-01	-0.4592E-01	-0.1228E-01
3121	0.0000E+00	0.1066E-02	-0.3422E-01	0.3422E-01	-0.4592E-01	-0.1228E-01
3122	0.0000E+00	0.1066E-02	-0.3422E-01	0.3422E-01	-0.4592E-01	-0.1228E-01
3123	0.1239E-04	0.1066E-02	-0.3422E-01	0.3422E-01	-0.4592E-01	-0.1228E-01
3091	0.0000E+00	0.1066E-02	-0.3422E-01	0.3422E-01	-0.4592E-01	-0.1228E-01
3092	0.0000E+00	0.1066E-02	-0.3422E-01	0.3422E-01	-0.4592E-01	-0.1228E-01

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COUPLED MODE SHARES (FOR SECONDARY MODE) MODE

FREQUENCY (Mc.) = 33.0545

MODAL DISP AT PRIMARY SYSTEM CONNECTING DDF

DOF # DISPLACEMENT

1	0.2065E-05	-0.1132E-04	0.1791E-04	-0.2348E-07	0.3242E-07	-0.1378E-07
1	0.2065E-05	-0.1132E-04	0.1791E-04	-0.2348E-07	0.3242E-07	-0.1378E-07
3	0.6687E+00	-0.7843E+00	0.1743E-01	-0.1743E-01	-0.1671E+00	-0.1708E-01
4	0.6687E+00	-0.7843E+00	0.1743E-01	-0.2632E-01	0.2445E+00	0.5018E-01
5	0.6687E+00	-0.7843E+00	0.1743E-01	0.1066E-02	-0.3422E-01	-0.4592E-01
9001	0.5881E+00	0.7761E-01	0.1132E-01	0.3422E-01	-0.4592E-01	-0.1228E-01
9002	0.6972E+00	0.9930E+00	0.1066E-02	0.3422E-01	-0.4592E-01	-0.1228E-01
9	-0.4133E-01	0.1081E-01	0.8472E-01	0.3422E-01	-0.4592E-01	-0.1228E-01
9003	-0.8248E+01	0.1076E+01	-0.4412E-01	0.3092E-01	0.1663E+00	0.1470E+00
9004	-0.8248E+01	0.1076E+01	-0.4412E-01	0.3092E-01	0.1663E+00	0.1470E+00
9	-0.1574E+00	0.1066E-01	-0.2059E-02	0.3092E-01	0.1663E+00	0.1470E+00
10	-0.1574E+00	0.1066E-01	-0.2059E-02	0.3092E-01	0.1663E+00	0.1470E+00
9005	0.4902E-01	0.1028E-01	0.8212E-01	0.1678E-01	0.7851E-01	-0.3212E-01
9006	0.1583E+00	0.1033E-01	0.8333E-01	0.3322E-01	0.1528E-01	0.8493E-01
11	-0.8243E+00	0.1039E+01	-0.2622E-01	0.3222E-01	0.6254E-01	0.2602E-02
9007	-0.8243E+00	0.1039E+01	-0.2622E-01	0.3222E-01	0.6254E-01	0.2602E-02
9008	-0.8243E+00	0.1039E+01	-0.2622E-01	0.3222E-01	0.6254E-01	0.2602E-02
13	-0.8243E+00	0.1039E+01	-0.2622E-01	0.3222E-01	0.6254E-01	0.2602E-02
14	-0.8243E+00	0.1039E+01	-0.2622E-01	0.3222E-01	0.6254E-01	0.2602E-02
15	-0.8243E+00	0.1039E+01	-0.2622E-01	0.3222E-01	0.6254E-01	0.2602E-02
16	-0.8243E+00	0.1039E+01	-0.2622E-01	0.3222E-01	0.6254E-01	0.2602E-02
17	-0.8243E+00	0.1039E+01	-0.2622E-01	0.3222E-01	0.6254E-01	0.2602E-02
18	-0.8243E+00	0.1039E+01	-0.2622E-01	0.3222E-01	0.6254E-01	0.2602E-02
19	-0.8243E+00	0.1039E+01	-0.2622E-01	0.3222E-01	0.6254E-01	0.2602E-02
20	-0.8243E+00	0.1039E+01	-0.2622E-01	0.3222E-01	0.6254E-01	0.2602E-02
21	-0.4669E-01	-0.4413E-01	0.4526E-01	-0.8092E-01	-0.1558E+00	-0.1431E+00
9009	0.1024E-01	-0.4659E-01	-0.1372E-01	0.4328E-01	-0.1372E-01	-0.1372E-01
9010	0.1024E-01	-0.4659E-01	-0.1372E-01	0.4328E-01	-0.1372E-01	-0.1372E-01
22	0.9017E-01	-0.4576E-01	0.1340E-01	0.6548E-02	-0.1014E+00	0.7051E-01
104	-0.1431E+00	-0.4552E-02	0.1011E-01	-0.8432E-01	-0.1574E-01	-0.1574E-01
9011	-0.1431E+00	-0.4552E-02	0.1011E-01	-0.8432E-01	-0.1574E-01	-0.1574E-01
9012	-0.1431E+00	-0.4552E-02	0.1011E-01	-0.8432E-01	-0.1574E-01	-0.1574E-01

craft-out

craft-out

9012	-0.5433E-01	-0.6443E-01	-0.1857E+01	-0.853E-02	-0.273E-01	-0.466E-01	-0.866E-01
23	0.1548E-01	-0.605E-01	-0.5823E-01	-0.571E-01	-0.571E-01	-0.1044E-01	0.285E-02
24	0.9557E-00	-0.4659E-01	-0.125E+02	0.401E-01	-0.1047E-01	0.1874E-01	0.1076E-03
9013	-0.6898E+00	-0.647E-01	-0.4681E-01	-0.144E-01	-0.134E-01	-0.216E-01	0.8652E-04
9014	-0.1440E+01	-0.4681E-01	-0.5632E+00	-0.4057E-01	-0.217E-01	-0.604E-02	0.3947E-04
28	-0.1193E-01	-0.4681E-01	-0.163E-01	-0.163E-01	-0.163E-01	-0.294E-01	0.3294E-09
29	-0.3230E+00	-0.4681E-01	-0.163E-01	-0.4681E-01	-0.4681E-01	-0.4681E-01	0.2866E-08
9015	0.1548E-01	-0.467E-01	-0.542E-01	-0.170E-01	0.108E-02	-0.304E-01	0.1394E-03
30	0.1395E-01	-0.467E-01	-0.627E-01	-0.149E-01	0.265E-01	-0.374E-01	0.171E-02
31	-0.1065E-01	-0.4681E-01	0.8637E-00	-0.755E-01	0.290E-01	0.251E-01	0.1052E-01
32	-0.1213E+01	-0.443E-01	-0.854E+00	-0.231E-02	0.304E-01	0.746E-01	0.1301E-02
35	-0.1240E+00	-0.355E-01	-0.856E+00	-0.352E-02	0.319E-01	0.737E-01	0.1301E-02
9017	0.1065E+00	-0.179E+00	-0.856E+00	-0.431E-02	0.359E-01	0.715E-01	0.1289E-02
9018	0.3065E+00	-0.223E+00	-0.854E+00	-0.197E-02	0.348E-01	0.640E-01	0.1289E-02
34	0.4135E+00	-0.661E-01	-0.867E+00	-0.704E-02	0.307E-01	0.486E-01	0.1289E-02
38	0.1603E-01	-0.357E-01	-0.846E+00	-0.366E-02	0.307E-01	0.486E-01	0.1289E-02
9019	-0.1762E-01	-0.328E-01	-0.854E+00	-0.274E-02	0.274E-01	0.299E-01	0.1289E-02
41	-0.4301E+00	-0.116E-01	-0.837E+00	-0.337E-02	0.296E-01	0.229E-01	0.1289E-02
43	-0.2013E+00	-0.275E-01	-0.596E+00	-0.163E-02	0.361E-01	0.209E-01	0.1289E-02
44	-0.2013E+00	-0.275E-01	-0.513E+00	-0.130E-02	0.361E-01	0.209E-01	0.1289E-02
45	-0.2008E+00	-0.275E-01	-0.304E+00	-0.479E-03	0.497E-01	0.196E-01	0.1289E-02
9020	-0.1948E+00	-0.407E-01	-0.294E+00	-0.565E-02	-0.156E-01	0.621E-02	0.1289E-02
46	-0.1948E+00	-0.407E-01	-0.349E-01	-0.171E-01	-0.160E-01	0.139E-01	0.1289E-02
47	-0.1803E+00	-0.167E-01	-0.114E+00	-0.129E-01	-0.129E-01	0.121E-01	0.1289E-02
92	-0.1053E-01	-0.336E+00	0.251E+00	-0.109E-02	-0.624E-02	0.104E-01	0.1289E-02
93	-0.184E-01	-0.117E+00	0.287E+00	-0.717E-02	-0.204E-02	-0.714E-02	0.1289E-02
94	-0.244E-01	-0.276E+00	0.287E+00	-0.723E-02	-0.714E-02	-0.714E-02	0.1289E-02
96	-0.259E-01	-0.233E+00	0.287E+00	-0.605E-02	-0.215E-03	-0.340E-02	0.1289E-02
97	-0.259E-01	-0.233E+00	0.287E+00	-0.811E-02	-0.310E-03	-0.311E-02	0.1289E-02
98	-0.259E-01	-0.233E+00	0.198E+00	-0.133E-01	0.130E-01	0.664E-04	0.1289E-02
100	-0.289E-01	-0.203E+00	0.140E+00	-0.224E-02	0.224E-02	0.455E-03	0.1289E-02
102	-0.264E-01	-0.203E+00	0.160E+00	-0.146E-02	0.146E-02	0.569E-02	0.1289E-02
113	-0.146E-01	-0.125E+00	0.160E+00	-0.168E-02	0.168E-02	0.748E-02	0.1289E-02
114	-0.146E-01	-0.125E+00	0.151E+00	-0.142E-02	0.142E-02	0.748E-02	0.1289E-02
115	-0.146E-01	-0.125E+00	0.160E+00	-0.142E-02	0.142E-02	0.748E-02	0.1289E-02
116	-0.146E-01	-0.125E+00	0.160E+00	-0.142E-02	0.142E-02	0.748E-02	0.1289E-02
918	-0.242E-01	-0.111E+00	0.160E+00	-0.975E-02	0.975E-02	0.129E-02	0.1289E-02
120	-0.146E-01	-0.125E+00	0.160E+00	-0.142E-02	0.142E-02	0.748E-02	0.1289E-02
122	-0.142E-01	-0.118E+00	0.160E+00	-0.697E-02	0.697E-02	0.855E-02	0.1289E-02
124	-0.115E-02	-0.719E-01	-0.205E+00	-0.601E-02	-0.609E-02	0.431E-03	0.1289E-02
125	-0.627E-01	-0.136E-02	-0.205E+00	-0.601E-02	-0.550E-02	0.483E-03	0.1289E-02
127	-0.647E-01	-0.637E-03	-0.190E+00	-0.722E-02	-0.722E-02	0.323E-03	0.1289E-02
129	-0.350E-01	-0.187E-01	-0.187E-02	-0.479E-02	0.282E-02	0.135E-02	0.1289E-02
9024	-0.350E-01	-0.187E-01	-0.187E-02	-0.479E-02	0.282E-02	0.135E-02	0.1289E-02
130	-0.350E-01	-0.187E-01	-0.187E-02	-0.479E-02	0.282E-02	0.135E-02	0.1289E-02
138	-0.114E+00	-0.372E+00	0.114E+00	-0.124E-02	0.124E-02	0.137E-02	0.1289E-02
49	-0.196E+00	-0.254E+00	0.254E+00	-0.140E-02	-0.140E-02	0.525E-02	0.1289E-02
50	-0.196E+00	-0.254E+00	0.228E+00	-0.142E-02	-0.142E-02	0.460E-02	0.1289E-02
51	-0.196E+00	-0.254E+00	0.243E+00	-0.150E-02	-0.150E-02	0.335E-02	0.1289E-02
52	-0.196E+00	-0.254E+00	0.197E-01	-0.289E-02	0.197E-01	-0.289E-02	0.1289E-02
53	-0.196E+00	-0.254E+00	0.134E+00	-0.197E-02	0.197E-02	0.363E-02	0.1289E-02
54	-0.196E+00	-0.254E+00	0.197E-01	-0.289E-02	0.197E-01	-0.289E-02	0.1289E-02
55	-0.196E+00	-0.254E+00	0.134E+00	-0.197E-02	0.197E-02	0.363E-02	0.1289E-02
57	-0.114E+00	-0.372E+00	0.114E+00	-0.124E-02	0.124E-02	0.137E-02	0.1289E-02
59	-0.196E+00	-0.254E+00	0.254E+00	-0.140E-02	-0.140E-02	0.525E-02	0.1289E-02
58	-0.196E+00	-0.254E+00	0.228E+00	-0.142E-02	-0.142E-02	0.460E-02	0.1289E-02
56	-0.196E+00	-0.254E+00	0.243E+00	-0.150E-02	-0.150E-02	0.335E-02	0.1289E-02
103	-0.701E-01	-0.137E+00	-0.514E-01	-0.279E-02	-0.192E-02	-0.474E-02	0.1289E-02
104	-0.694E-01	-0.289E-01	-0.904E-01	-0.289E-02	0.289E-02	0.136E-02	0.1289E-02
105	-0.694E-01	-0.289E-01	-0.904E-01	-0.289E-02	0.289E-02	0.136E-02	0.1289E-02
106	-0.694E-01	-0.289E-01	-0.904E-01	-0.289E-02	0.289E-02	0.136E-02	0.1289E-02
107	-0.694E-01	-0.289E-01	-0.904E-01	-0.289E-02	0.289E-02	0.136E-02	0.1289E-02
109	-0.694E-01	-0.289E-01	-0.904E-01	-0.289E-02	0.289E-02	0.136E-02	0.1289E-02
111	-0.254E-01	-0.705E-01	-0.682E-01	-0.279E-02	0.279E-02	0.255E-02	0.1289E-02
60	-0.504E-01	-0.478E-01	-0.725E-01	-0.279E-02	0.279E-02	0.255E-02	0.1289E-02
61	-0.349E-01	-0.349E-01	-0.726E-01	-0.280E-02	0.280E-02	0.255E-02	0.1289E-02
62	-0.349E-01	-0.349E-01	-0.726E-01	-0.280E-02	0.280E-02	0.255E-02	0.1289E-02
63	-0.224E-01	-0.134E+00	-0.643E-01	-0.279E-02	0.279E-02	0.255E-02	0.1289E-02
64	-0.224E-01	-0.134E+00	-0.643E-01	-0.279E-02	0.279E-02	0.255E-02	0.1289E-02
65	-0.224E-01	-0.134E+00	-0.643E-01	-0.279E-02	0.279E-02	0.255E-02	0.1289E-02
114	-0.124E-02	-0.112E+00	0.109E+00	-0.109E-02	0.109E-02	0.466E-02	0.1289E-02
66	-0.325E-01	-0.405E-01	-0.683E-01	-0.262E-02	0.262E-02	0.136E-02	0.1289E-02
67	-0.325E-01	-0.405E-01	-0.683E-01	-0.262E-02	0.262E-02	0.136E-02	0.1289E-02
68	-0.325E-01	-0.405E-01	-0.683E-01	-0.262E-02	0.262E-02	0.136E-02	0.1289E-02
69	-0.325E-01	-0.405E-01	-0.683E-01	-0.262E-02	0.262E-02	0.136E-02	0.1289E-02
70	-0.325E-01	-0.405E-01	-0.683E-01	-0.262E-02	0.262E-02	0.136E-02	0.1289E-02
71	-0.325E-01	-0.405E-01	-0.683E-01	-0.262E-02	0.262E-02	0.136E-02	0.1289E-02
72	-0.325E-01	-0.405E-01	-0.683E-01	-0.262E-02	0.262E-02	0.136E-02	0.1289E-02
73	-0.325E-01	-0.405E-01	-0.683E-01	-0.262E-02	0.262E-02	0.136E-02	0.1289E-02
74	-0.325E-01	-0.405E-01	-0.683E-01	-0.262E-02	0.262E-02	0.136E-02	0.1289E-02
75	-0.325E-01	-0.405E-01	-0.683E-01	-0.262E-02	0.262E-02	0.136E-02	0.1289E-02
76	-0.325E-01	-0.405E-01	-0.683E-01	-0.262E-02	0.262E-02	0.136E-02	0.1289E-02
77	-0.325E-01	-0.405E-01	-0.683E-01	-0.262E-02	0.262E-02	0.136E-02	0.1289E-02
78	-0.325E-01	-0.405E-01	-0.683E-01	-0.262E-02	0.262E-02	0.136E-02	0.1289E-02
9025	-0.325E-01	-0.405E-01	-0.683E-01	-0.262E-02	0.262E-02	0.136E-02	0.1289E-02
75	-0.325E-01	-0.405E-01	-0.683E-01	-0.262E-02	0.262E-02	0.136E-02	0.1289E-02
80	-0.443E-01	-0.433E-01	-0.433E-01	-0.455E-02	-0.244E-02	0.469E-02	0.1289E-02
81	-0.443E-01	-0.433E-01	-0.433E-01	-0.455E-02	-0.244E-02	0.469E-02	0.1289E-02
82	-0.443E-01	-0.433E-01	-0.433E-01	-0.455E-02	-0.244E-02	0.469E-02	0.1289E-02
83	-0.443E-01	-0.433E-01	-0.433E-01	-0.455E-02	-0.244E-02	0.469E-02	0.1289E-02
84	-0.443E-01	-0.433E-01	-0.433E-01	-0.455E-02	-0.244E-02	0.469E-02	0.1289E-02

COUPLED MODE SHAPES (FOR SECONDARY MODE) MEZE
 FREQUENCY (HE.) = 21.49134
 MODAL DISP AT PRIMARY SYSTEM CONNECTING DOF
 DOF # DISPLACEMENT

9022	-0.814E-03	-0.154E-01	-0.287E-02	-0.184E-03	-0.134E-03	-0.285E-02	0.104E-02
84	-0.134E-02	-0.170E-02	-0.276E-02	-0.318E-03	-0.107E-03	-0.107E-03	0.107E-03
85	-0.150E-02	-0.170E-02	-0.276E-02	-0.318E-03	-0.107E-03	-0.107E-03	0.107E-03
86	-0.109E-02	-0.137E-02	-0.139E-02	-0.244E-03	-0.187E-04	-0.3947E-04	0.3947E-04
87	-0.340E-09	-0.8681E-09	-0.3277E-08	-0.2866E-08	-0.1701E-09	-0.3294E-09	0.3294E-09
3041	0.7545E-04	0.0000E-00	0.0000E-00	0.0000E-00	0.0000E-00	0.0000E-00	0.0000E-00
3042	0.773E-05	0.0000E-00	0.0000E-00	0.0000E-00	0.0000E-00	0.0000E-00	0.0000E-00
3043	0.773E-05	0.0000E-00	0.0000E-00	0.0000E-00	0.0000E-00	0.0000E-00	0.0000E-00
3052	0.1791E-04	0.0000E-00	0.0000E-00	0.0000E-00	0.0000E-00	0.0000E-00	0.0000E-00
3072	0.7872E-04	0.114E-03	0.114E-03	0.114E-03	0.114E-03	0.114E-03	0.114E-03
3103	-0.1180E-03	0.0000E-00	0.0000E-00	0.0000E-00	0.0000E-00	0.0000E-00	0.0000E-00
3122	0.154E-03	0.0000E-00	0.0000E-00	0.0000E-00	0.0000E-00	0.0000E-00	0.0000E-00
3123	0.154E-03	0.0000E-00	0.0000E-00	0.0000E-00	0.0000E-00	0.0000E-00	0.0000E-00
3092	0.0000E-00	0.0000E-00	0.0000E-00	0.0000E-00	0.0000E-00	0.0000E-00	0.0000E-00
3093	0.7340E-04	0.0000E-00	0.0000E-00	0.0000E-00	0.0000E-00	0.0000E-00	0.0000E-00
9023	0.993E-06	0.117E-06	0.932E-07	-0.964E-08	-0.711E-07	0.126E-02	0.126E-02
1	0.601E-00	-0.75					

MEDIAL DISPLACEMENTS AT PRIMARY SYSTEM CONNECTING JOG		MEDIAL DISPLACEMENTS AT SECONDARY SYSTEM DDF	
DOF #	DISPLACEMENT	DOF #	DISPLACEMENT
59	0.6141E-01	-0.1016E+00	0.2116E+00
103	0.6078E-01	-0.2648E-01	0.4753E+00
104	0.6849E-01	-0.4308E-01	0.2807E+00
105	0.6782E-01	-0.4678E-01	0.4438E+00
106	0.6948E-01	-0.4748E-01	0.3926E+00
107	0.6842E-01	-0.4188E-01	0.4705E+00
109	0.6335E+00	-0.2285E-01	0.4351E+00
111	0.2688E+00	-0.7811E+00	0.4693E+00
112	0.1079E+00	-0.1509E-01	0.2118E+00
60	0.1663E+00	-0.1509E-01	0.4779E+00
61	0.1663E+00	-0.1509E-01	0.4779E+00
62	0.1714E+00	-0.1319E-01	0.3107E+00
64	0.2747E+00	-0.3335E-01	0.4348E+00
65	0.1742E+00	-0.2278E-01	0.4561E+00
131	0.1848E+00	-0.2278E-01	0.4089E+00
132	0.1651E-01	-0.2228E-01	0.4102E+00
66	0.2752E+00	-0.1878E-01	0.3293E+00
67	0.2752E+00	-0.1878E-01	0.3293E+00
68	0.2752E+00	-0.1878E-01	0.3293E+00
69	0.2752E+00	-0.1878E-01	0.3293E+00
70	0.2761E+00	-0.4062E-00	0.3368E+00
71	0.2761E+00	-0.4062E-00	0.3368E+00
133	0.1314E+00	-0.3413E+00	0.2289E+00
134	0.2702E+00	-0.3413E+00	0.1365E+00
72	0.2761E+00	-0.4138E-01	0.3935E+00
73	0.2761E+00	-0.4138E-01	0.3935E+00
74	0.2761E+00	-0.4138E-01	0.3935E+00
75	0.2761E+00	-0.4138E-01	0.3935E+00
76	0.2761E+00	-0.4138E-01	0.3935E+00
77	0.2761E+00	-0.4138E-01	0.3935E+00
78	0.2761E+00	-0.4138E-01	0.3935E+00
79	0.2761E+00	-0.4138E-01	0.3935E+00
80	0.2761E+00	-0.4138E-01	0.3935E+00
81	0.2761E+00	-0.4138E-01	0.3935E+00
82	0.2761E+00	-0.4138E-01	0.3935E+00
83	0.4917E+00	-0.2258E-01	0.2095E+00
84	0.1814E+00	-0.2142E+00	0.1118E+00
85	0.1814E+00	-0.2142E+00	0.1118E+00
86	0.3402E-01	-0.5952E-01	0.2128E+00
87	0.3304E-01	-0.5609E-01	0.4391E-01

DOF #	DISPLACEMENT	DOF #	DISPLACEMENT
9020	-0.2053E+00	0.1993E-00	-0.1191E+00
46	-0.2048E+00	0.1993E-00	-0.1191E+00
67	-0.2048E+00	0.1993E-00	-0.1191E+00
91	-0.2723E+00	0.1525E+00	-0.1547E+00
43	-0.2060E+00	-0.1266E-01	0.5932E-01
44	-0.2060E+00	-0.1266E-01	0.5932E-01
45	-0.2060E+00	-0.1266E-01	0.5932E-01
9021	-0.2053E+00	0.1993E-00	-0.1191E+00
46	-0.2048E+00	0.1993E-00	-0.1191E+00
67	-0.2048E+00	0.1993E-00	-0.1191E+00
91	-0.2723E+00	0.1525E+00	-0.1547E+00
43	-0.2060E+00	-0.1266E-01	0.5932E-01
44	-0.2060E+00	-0.1266E-01	0.5932E-01
45	-0.2060E+00	-0.1266E-01	0.5932E-01
9022	0.4801E+00	-0.2258E-01	0.2095E+00
83	0.1817E+00	-0.2142E+00	0.1118E+00
84	0.1814E+00	-0.2142E+00	0.1118E+00
85	0.1814E+00	-0.2142E+00	0.1118E+00
86	0.3402E-01	-0.5952E-01	0.2128E+00
87	0.3304E-01	-0.5609E-01	0.4391E-01

COUPLED MODE SHAPE (FOR SECONDARY MODE) X
 FREQUENCY (Hz.) = 24.18094

DOF #	DISPLACEMENT	DOF #	DISPLACEMENT
3041	-0.6423E-04	3041	0.6293E-09
3042	-0.0000E+00	3042	0.0000E+00
3043	-0.2817E-05	3043	0.2817E-05
3061	-0.1243E-03	3061	0.1243E-03
3063	-0.9501E-03	3063	0.9501E-03
3064	-0.1885E-03	3064	0.1885E-03
3103	0.3421E-04	3103	0.3421E-04
3121	0.0000E+00	3121	0.0000E+00
3123	0.4443E-04	3123	0.4443E-04
3091	-0.1676E-03	3091	0.1676E-03
3092	-0.0000E+00	3092	0.0000E+00
3093	-0.2119E-04	3093	0.2119E-04

CITAF OUT

9010	-0.2210E+00	0.3388E-01	-0.2275E-01	0.4058E-03	-0.2040E-02	-0.4013E-02
22	-0.3135E-01	0.1306E-01	0.7532E-01	0.5749E-01	-0.3270E-02	-0.7143E-03
24	-0.7051E+00	0.1346E-01	0.1461E-01	0.2662E-03	-0.4091E-02	0.5347E-02
9011	-0.2705E+00	0.3340E-01	-0.1370E-01	-0.3262E-03	-0.5143E-02	0.3886E-02
9012	-0.2587E+00	0.3313E-01	-0.3090E-02	-0.5668E-03	-0.6199E-02	-0.4311E-02
9013	-0.2587E+00	0.3313E-01	-0.1673E-01	-0.1628E-03	-0.7251E-02	-0.9103E-02
26	0.9004E-01	0.1242E-01	-0.1743E-01	0.2728E-04	-0.7553E-02	-0.8529E-02
9014	-0.2689E+00	0.1242E-01	-0.6692E-02	0.4373E-02	-0.8971E-02	-0.7678E-03
28	-0.1339E+00	0.1146E-01	0.7243E-02	-0.5004E-03	-0.7093E-01	0.6140E-02
29	-0.2118E+00	0.1168E-01	-0.1742E-02	-0.8635E-03	-0.1133E-01	0.2347E-02
9015	0.6512E-01	0.3041E-01	-0.4284E-01	0.2013E-02	-0.1146E-01	-0.8021E-02
9016	0.2737E+00	0.2979E-01	-0.3299E-02	0.1742E-02	-0.1432E-01	-0.1675E-02
30	0.1893E+00	0.2913E-01	0.7391E-01	0.1792E-02	-0.1549E-02	0.4764E-02
31	0.1648E+00	0.2911E-01	0.7609E-01	0.2172E-02	-0.1553E-01	0.4813E-02
32	0.1648E+00	0.2911E-01	0.7609E-01	0.2172E-02	-0.1553E-01	0.4813E-02
33	0.1648E+00	0.2911E-01	0.7609E-01	0.2172E-02	-0.1553E-01	0.4813E-02
34	0.1648E+00	0.2911E-01	0.7609E-01	0.2172E-02	-0.1553E-01	0.4813E-02
35	0.1648E+00	0.2911E-01	0.7609E-01	0.2172E-02	-0.1553E-01	0.4813E-02
36	0.1648E+00	0.2911E-01	0.7609E-01	0.2172E-02	-0.1553E-01	0.4813E-02
37	-0.3905E+00	0.1034E-01	0.8462E-01	0.2789E-02	-0.1508E-01	0.5161E-02
9017	-0.3905E+00	0.1034E-01	0.8462E-01	0.2789E-02	-0.1508E-01	0.5161E-02
9018	-0.3572E+00	0.1863E+00	0.8371E-01	-0.5242E-03	-0.6877E-13	0.5308E-02
38	-0.7042E-01	0.1104E+00	0.8336E-01	0.4878E-02	0.7499E-02	0.5263E-02
39	-0.8956E-01	-0.1504E+00	0.8332E-01	0.6078E-02	0.3552E-02	0.6401E-02
9019	-0.8956E-01	-0.1504E+00	0.8332E-01	0.6078E-02	0.3552E-02	0.6401E-02
40	-0.2060E+00	-0.4524E-01	0.8565E-02	0.4652E-02	0.5676E-02	0.7148E-02
41	-0.2060E+00	-0.4524E-01	0.8565E-02	0.4652E-02	0.5676E-02	0.7148E-02
42	-0.2060E+00	-0.4524E-01	0.8565E-02	0.4652E-02	0.5676E-02	0.7148E-02
43	-0.2060E+00	-0.4524E-01	0.8565E-02	0.4652E-02	0.5676E-02	0.7148E-02
44	-0.2060E+00	-0.4524E-01	0.8565E-02	0.4652E-02	0.5676E-02	0.7148E-02
45	-0.2060E+00	-0.4524E-01	0.8565E-02	0.4652E-02	0.5676E-02	0.7148E-02
46	-0.2060E+00	-0.4524E-01	0.8565E-02	0.4652E-02	0.5676E-02	0.7148E-02
47	-0.2060E+00	-0.4524E-01	0.8565E-02	0.4652E-02	0.5676E-02	0.7148E-02
48	-0.2060E+00	-0.4524E-01	0.8565E-02	0.4652E-02	0.5676E-02	0.7148E-02
49	-0.2060E+00	-0.4524E-01	0.8565E-02	0.4652E-02	0.5676E-02	0.7148E-02
50	-0.2060E+00	-0.4524E-01	0.8565E-02	0.4652E-02	0.5676E-02	0.7148E-02
51	-0.2060E+00	-0.4524E-01	0.8565E-02	0.4652E-02	0.5676E-02	0.7148E-02
52	-0.2060E+00	-0.4524E-01	0.8565E-02	0.4652E-02	0.5676E-02	0.7148E-02
53	-0.2060E+00	-0.4524E-01	0.8565E-02	0.4652E-02	0.5676E-02	0.7148E-02
54	-0.2060E+00	-0.4524E-01	0.8565E-02	0.4652E-02	0.5676E-02	0.7148E-02
55	-0.2060E+00	-0.4524E-01	0.8565E-02	0.4652E-02	0.5676E-02	0.7148E-02
56	-0.1513E+00	0.1274E-01	0.1118E+00	0.1005E+00	0.1134E-01	0.1712E-01
57	-0.1057E+00	0.8438E-00	-0.1119E+00	0.1023E+00	0.1042E-01	0.1617E-01
58	-0.1057E+00	0.8438E-00	-0.1119E+00	0.1023E+00	0.1042E-01	0.1617E-01
59	-0.8058E-01	0.5120E-00	-0.8586E-01	0.1034E+00	0.7440E-02	0.1344E-01
104	-0.8051E-01	0.4640E-00	-0.2342E+00	0.9605E-01	-0.4930E-01	0.1140E-01
108	-0.8044E-01	0.8648E-00	-0.2515E+00	0.9675E-01	-0.2705E-02	0.9865E-02
109	-0.8024E-01	0.5642E-00	-0.1935E+00	0.9178E-02	0.9394E-02	0.2135E-01
107	-0.6518E-01	0.4012E-00	-0.1797E+00	0.9062E-01	0.8211E-02	0.6233E-02
111	-0.4421E-01	0.1125E+00	-0.1796E+00	0.7782E-01	0.3873E-02	0.3034E-01
112	-0.4073E-01	0.2144E+00	-0.1122E+00	0.1048E-02	0.1642E-01	0.1279E-01
60	-0.4948E-01	-0.2741E+00	-0.1122E+00	0.1039E+00	0.3897E-02	0.1205E-01
61	-0.4948E-01	-0.2741E+00	-0.1122E+00	0.1039E+00	0.3897E-02	0.1205E-01
62	-0.4948E-01	-0.2741E+00	-0.1122E+00	0.1039E+00	0.3897E-02	0.1205E-01
63	-0.4948E-01	-0.2741E+00	-0.1122E+00	0.1039E+00	0.3897E-02	0.1205E-01
64	-0.3865E-01	-0.5810E+00	-0.1459E+00	0.8702E-02	-0.3877E-02	0.4243E-02
65	-0.3844E-02	-0.5322E+00	-0.1672E+00	0.8420E-01	-0.2709E-02	-0.1362E-01
131	0.3422E-01	-0.5397E-00	0.3698E+00	0.8287E-01	-0.2368E-02	-0.1668E-01
132	0.4999E-01	-0.5397E-00	0.3698E+00	0.8287E-01	-0.2368E-02	-0.1668E-01
66	-0.1882E-01	0.4460E-00	-0.1800E+00	0.7121E-01	-0.1258E-02	0.2823E-01
68	-0.3876E-01	-0.2423E-00	-0.1795E+00	0.6777E-02	0.4082E-03	0.3115E-01
69	-0.3876E-01	-0.2423E-00	-0.1795E+00	0.6777E-02	0.4082E-03	0.3115E-01
70	-0.3876E-01	-0.2423E-00	-0.1795E+00	0.6777E-02	0.4082E-03	0.3115E-01
71	-0.3876E-01	-0.2423E-00	-0.1795E+00	0.6777E-02	0.4082E-03	0.3115E-01
72	-0.3876E-01	-0.2423E-00	-0.1795E+00	0.6777E-02	0.4082E-03	0.3115E-01
73	-0.3876E-01	-0.2423E-00	-0.1795E+00	0.6777E-02	0.4082E-03	0.3115E-01
134	0.1915E-01	0.1028E+00	0.4637E-02	0.5437E-01	0.1371E-02	0.3545E-01
135	0.1915E-01	0.1028E+00	0.4637E-02	0.5437E-01	0.1371E-02	0.3545E-01
136	0.1915E-01	0.1028E+00	0.4637E-02	0.5437E-01	0.1371E-02	0.3545E-01
137	0.1915E-01	0.1028E+00	0.4637E-02	0.5437E-01	0.1371E-02	0.3545E-01
138	0.1915E-01	0.1028E+00	0.4637E-02	0.5437E-01	0.1371E-02	0.3545E-01
74	-0.3724E-01	0.9268E+00	-0.1363E+00	0.6885E-02	0.6022E-03	0.1190E-01
75	-0.3724E-01	0.9268E+00	-0.1363E+00	0.6885E-02	0.6022E-03	0.1190E-01
76	-0.3724E-01	0.9268E+00	-0.1363E+00	0.6885E-02	0.6022E-03	0.1190E-01
77	-0.3724E-01	0.9268E+00	-0.1363E+00	0.6885E-02	0.6022E-03	0.1190E-01
78	-0.3724E-01	0.9268E+00	-0.1363E+00	0.68		

CIT/CFT/OUT

CIT/CFT/OUT

COUPLED NODE SHAPES (FOR SECONDARY NODE) NODE FREQUENCY (HZ.) = 25.1367

NODAL DISP AT PRIMARY SYSTEM CONNECTING DOF

DOF #	DISPLACEMENT
3041	-0.3975E-04
3042	0.0000E+00
3043	0.1234E-04
3061	-0.7018E-04
3073	0.0000E+00
3081	-0.1392E-03
3103	-0.3702E-03
3121	-0.2541E-03
3122	0.0000E+00
3123	0.3526E-03
3091	-0.1581E-03
3092	0.1674E-03
3093	0.1674E-03

NODAL DISPLACEMENTS AT SECONDARY SYSTEM DOF

NODE	DOF	DISPLACEMENT
1	1	-0.5348E-03
1	2	-0.1703E-01
1	3	0.1018E+00
1	4	0.1018E+00
1	5	0.1018E+00
1	6	0.1018E+00
1	7	0.1018E+00
1	8	0.1018E+00
1	9	0.1018E+00
1	10	0.1018E+00
1	11	0.1018E+00
1	12	0.1018E+00
1	13	0.1018E+00
1	14	0.1018E+00
1	15	0.1018E+00
1	16	0.1018E+00
1	17	0.1018E+00
1	18	0.1018E+00
1	19	0.1018E+00
1	20	0.1018E+00
1	21	0.1018E+00
1	22	0.1018E+00
1	23	0.1018E+00
1	24	0.1018E+00
1	25	0.1018E+00
1	26	0.1018E+00
1	27	0.1018E+00
1	28	0.1018E+00
1	29	0.1018E+00
1	30	0.1018E+00
1	31	0.1018E+00
1	32	0.1018E+00
1	33	0.1018E+00
1	34	0.1018E+00
1	35	0.1018E+00
1	36	0.1018E+00
1	37	0.1018E+00
1	38	0.1018E+00
1	39	0.1018E+00
1	40	0.1018E+00
1	41	0.1018E+00
1	42	0.1018E+00
1	43	0.1018E+00
1	44	0.1018E+00
1	45	0.1018E+00
1	46	0.1018E+00

COUPLED NODE SHAPES (FOR SECONDARY NODE) NODE FREQUENCY (HZ.) = 26.2363

NODAL DISP AT PRIMARY SYSTEM CONNECTING DOF

DOF #	DISPLACEMENT
3041	0.1046E-03
3042	-0.0000E+00
3043	-0.1879E-05
3061	-0.1879E-04
3073	0.0000E+00
3081	-0.1282E-04
3103	-0.1547E-03
3121	-0.0500E-03
3122	-0.6067E-04
3123	0.2178E-03

NODAL DISPLACEMENTS AT SECONDARY SYSTEM DOF

NODE	DOF	DISPLACEMENT
1	1	-0.5348E-03
1	2	-0.1703E-01
1	3	0.1018E+00
1	4	0.1018E+00
1	5	0.1018E+00
1	6	0.1018E+00
1	7	0.1018E+00
1	8	0.1018E+00
1	9	0.1018E+00
1	10	0.1018E+00
1	11	0.1018E+00
1	12	0.1018E+00
1	13	0.1018E+00
1	14	0.1018E+00
1	15	0.1018E+00
1	16	0.1018E+00
1	17	0.1018E+00
1	18	0.1018E+00
1	19	0.1018E+00
1	20	0.1018E+00
1	21	0.1018E+00
1	22	0.1018E+00
1	23	0.1018E+00
1	24	0.1018E+00
1	25	0.1018E+00
1	26	0.1018E+00
1	27	0.1018E+00
1	28	0.1018E+00
1	29	0.1018E+00
1	30	0.1018E+00
1	31	0.1018E+00
1	32	0.1018E+00
1	33	0.1018E+00
1	34	0.1018E+00
1	35	0.1018E+00
1	36	0.1018E+00
1	37	0.1018E+00
1	38	0.1018E+00
1	39	0.1018E+00
1	40	0.1018E+00
1	41	0.1018E+00
1	42	0.1018E+00
1	43	0.1018E+00
1	44	0.1018E+00
1	45	0.1018E+00
1	46	0.1018E+00

Table with columns: 3092, 0.0000E+00, 3091, -0.2890E-04, MODAL DISPLACEMENTS AT SECONDARY SYSTEM DOF, NODE, DX, DY, DE, ROT-X, ROT-Y, ROT-Z. Contains numerical data for nodes 1 through 53.

Table with columns: 54, -0.5619E+00, 0.2710E+01, 0.2289E+00, 0.3187E+00, 0.7871E-02, 0.2824E-03, 55, -0.5616E+00, 0.2706E+01, 0.2241E+00, 0.3197E+00, 0.8308E-02, 0.5609E-02, MODAL DISPLACEMENTS AT SECONDARY SYSTEM DOF, NODE, DX, DY, DE, ROT-X, ROT-Y, ROT-Z. Contains numerical data for nodes 54 through 17.

COUPLED MODE SURFACES (FOR SECONDARY MODE) MOSE

FREQUENCY (HZ) * * * * * 26.84593

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MODAL DIFF AT PRIMARY SYSTEM CORRECTING DOF

DOP # DISPLACEMENT

18	0.2068E+00	-0.9847E-01	0.1377E-01	-0.351E-01	-0.4652E-01
19	-0.5758E+00	-0.1378E-01	0.1562E-01	-0.2742E-01	-0.1913E-01
20	-0.5910E+00	-0.1175E-01	0.1442E-01	-0.2502E-01	-0.1037E-01
21	0.5955E+00	-0.1148E-01	0.1418E-01	-0.2502E-01	-0.1037E-01
9009	-0.8558E+00	-0.1378E-01	0.1562E-01	-0.2742E-01	-0.1913E-01
9010	-0.7855E+00	-0.1378E-01	0.1562E-01	-0.2742E-01	-0.1913E-01
22	-0.1424E+00	-0.1108E-01	0.1308E-01	-0.3498E-01	-0.1544E-01
23	-0.9168E-01	-0.1198E-01	0.2518E-01	0.6572E-02	-0.3292E-02
24	-0.2842E+00	-0.1108E-01	0.1308E-01	-0.3498E-01	-0.1544E-01
9011	-0.7135E+00	-0.1378E-01	0.1562E-01	-0.2742E-01	-0.1913E-01
9012	-0.4142E+00	-0.1028E-01	0.2812E-01	0.5108E-01	0.1642E-01
25	0.4142E+00	-0.1028E-01	0.2812E-01	0.5108E-01	0.1642E-01
26	0.4844E+00	-0.1028E-01	0.2812E-01	0.5108E-01	0.1642E-01
9013	-0.8563E+00	-0.1078E-01	0.1702E-01	-0.4542E-01	-0.3048E-01
9014	0.1324E+00	-0.1068E-01	0.1712E-01	-0.4542E-01	-0.3048E-01
27	-0.7411E+00	-0.1048E-01	0.1732E-01	-0.4542E-01	-0.3048E-01
28	-0.7402E+00	-0.1048E-01	0.1732E-01	-0.4542E-01	-0.3048E-01
9015	-0.4142E+00	-0.1028E-01	0.2812E-01	0.5108E-01	0.1642E-01
9016	0.7328E+00	-0.9902E-01	0.8112E-01	0.2872E-01	0.4368E-01
30	-0.8928E+00	-0.9692E-01	0.8812E-01	0.4132E-01	0.6352E-01
31	-0.8450E+00	-0.9638E-01	0.8452E-01	0.4132E-01	0.6352E-01
32	-0.9013E+00	-0.9068E-01	0.9018E-01	0.5478E-01	0.8082E-01
33	-0.9013E+00	-0.9458E-01	0.9458E-01	0.5718E-01	0.8512E-01
34	-0.9013E+00	-0.9458E-01	0.9458E-01	0.5718E-01	0.8512E-01
9017	-0.9548E+00	-0.9458E-01	0.9458E-01	0.5718E-01	0.8512E-01
9018	-0.9548E+00	-0.9458E-01	0.9458E-01	0.5718E-01	0.8512E-01
35	0.3945E+00	-0.9232E-01	0.9232E-01	0.5118E-01	0.7512E-01
36	0.2578E+00	-0.9232E-01	0.9232E-01	0.5118E-01	0.7512E-01
9019	-0.1088E+00	-0.8818E-01	0.8818E-01	0.4798E-01	0.6428E-01
40	0.5073E+00	-0.8092E-01	0.8092E-01	0.4322E-01	0.6058E-01
41	0.1276E+01	-0.7608E-01	0.7608E-01	0.4278E-01	0.5942E-01
42	0.1276E+01	-0.7608E-01	0.7608E-01	0.4278E-01	0.5942E-01
43	0.1276E+01	-0.7608E-01	0.7608E-01	0.4278E-01	0.5942E-01
44	0.1276E+01	-0.7608E-01	0.7608E-01	0.4278E-01	0.5942E-01
45	0.1276E+01	-0.7608E-01	0.7608E-01	0.4278E-01	0.5942E-01
9020	0.1276E+01	-0.7608E-01	0.7608E-01	0.4278E-01	0.5942E-01
9021	0.1276E+01	-0.7608E-01	0.7608E-01	0.4278E-01	0.5942E-01
46	0.1276E+01	-0.7608E-01	0.7608E-01	0.4278E-01	0.5942E-01
47	0.1276E+01	-0.7608E-01	0.7608E-01	0.4278E-01	0.5942E-01
48	0.1276E+01	-0.7608E-01	0.7608E-01	0.4278E-01	0.5942E-01
49	0.1276E+01	-0.7608E-01	0.7608E-01	0.4278E-01	0.5942E-01
50	0.1276E+01	-0.7608E-01	0.7608E-01	0.4278E-01	0.5942E-01
51	0.1276E+01	-0.7608E-01	0.7608E-01	0.4278E-01	0.5942E-01
52	0.1276E+01	-0.7608E-01	0.7608E-01	0.4278E-01	0.5942E-01
53	0.1276E+01	-0.7608E-01	0.7608E-01	0.4278E-01	0.5942E-01
54	0.1276E+01	-0.7608E-01	0.7608E-01	0.4278E-01	0.5942E-01
55	0.1276E+01	-0.7608E-01	0.7608E-01	0.4278E-01	0.5942E-01
56	0.1276E+01	-0.7608E-01	0.7608E-01	0.4278E-01	0.5942E-01
57	0.1276E+01	-0.7608E-01	0.7608E-01	0.4278E-01	0.5942E-01
58	0.1276E+01	-0.7608E-01	0.7608E-01	0.4278E-01	0.5942E-01
59	0.1276E+01	-0.7608E-01	0.7608E-01	0.4278E-01	0.5942E-01
60	0.1276E+01	-0.7608E-01	0.7608E-01	0.4278E-01	0.5942E-01
61	0.1276E+01	-0.7608E-01	0.7608E-01	0.4278E-01	0.5942E-01
62	0.1276E+01	-0.7608E-01	0.7608E-01	0.4278E-01	0.5942E-01
63	0.1276E+01	-0.7608E-01	0.7608E-01	0.4278E-01	0.5942E-01
64	0.1276E+01	-0.7608E-01	0.7608E-01	0.4278E-01	0.5942E-01
65	0.1276E+01	-0.7608E-01	0.7608E-01	0.4278E-01	0.5942E-01
66	0.1276E+01	-0.7608E-01	0.7608E-01	0.4278E-01	0.5942E-01
67	0.1276E+01	-0.7608E-01	0.7608E-01	0.4278E-01	0.5942E-01
68	0.1276E+01	-0.7608E-01	0.7608E-01	0.4278E-01	0.5942E-01
69	0.1276E+01	-0.7608E-01	0.7608E-01	0.4278E-01	0.5942E-01
70	0.1276E+01	-0.7608E-01	0.7608E-01	0.4278E-01	0.5942E-01
71	0.1276E+01	-0.7608E-01	0.7608E-01	0.4278E-01	0.5942E-01
72	0.1276E+01	-0.7608E-01	0.7608E-01	0.4278E-01	0.5942E-01
73	0.1276E+01	-0.7608E-01	0.7608E-01	0.4278E-01	0.5942E-01

MODAL DISPLACEMENTS AT SECONDARY SYSTEM DOF

DOF # DOF-X DOF-Y DOF-Z

1	-0.3858E-07	-0.3700E-08	0.8923E-08	-0.8016E-10	0.1102E-09	0.1260E-08
2	-0.1868E-07	-0.2922E-07	-0.1497E-02	-0.1849E-03	0.2381E-03	0.1562E-02
3	0.4479E-03	0.5311E-01	0.1481E-01	0.1542E-03	-0.2772E-02	0.5608E-02
4	-0.7739E-02	0.1310E-01	0.1158E-02	0.1769E-02	0.2773E-02	0.6108E-01
5	-0.1392E-02	0.5958E-01	0.1268E-01	0.2607E-02	0.8523E-03	0.2452E-01
9001	-0.1488E-02	0.6414E-01	0.1226E-01	0.2656E-02	0.1076E-02	0.2972E-01
9002	-0.1108E-02	0.6970E-01	0.1287E-01	0.2548E-02	0.4174E-02	0.1168E-01
6	-0.1842E-02	0.6970E-01	0.1345E-01	0.2552E-02	0.2579E-02	0.3243E-01
9003	-0.1010E-01	0.6958E-01	0.1848E-01	0.9152E-05	0.2335E-01	0.1487E-01
9004	-0.1274E-01	0.6958E-01	0.1848E-01	0.9152E-05	0.4278E-02	0.2358E-01
9005	-0.1274E-01	0.6958E-01	0.1848E-01	0.9152E-05	0.2335E-01	0.1487E-01
9006	-0.1274E-01	0.6958E-01	0.1848E-01	0.9152E-05	0.2335E-01	0.1487E-01
9007	-0.1274E-01	0.6958E-01	0.1848E-01	0.9152E-05	0.2335E-01	0.1487E-01
9008	-0.2643E-01	0.6033E-01	0.8933E-01	0.3182E-01	0.1149E-03	0.3244E-01
13	-0.9933E-02	0.4634E-01	0.3749E-01	0.4027E-01	0.1154E-03	0.2544E-01
14	-0.9933E-02	0.4634E-01	0.3749E-01	0.4027E-01	0.1154E-03	0.2544E-01
15	-0.9933E-02	0.4634E-01	0.3749E-01	0.4027E-01	0.1154E-03	0.2544E-01
16	-0.9933E-02	0.4634E-01	0.3749E-01	0.4027E-01	0.1154E-03	0.2544E-01
17	-0.9933E-02	0.4634E-01	0.3749E-01	0.4027E-01	0.1154E-03	0.2544E-01
18	-0.9933E-02	0.4634E-01	0.3749E-01	0.4027E-01	0.1154E-03	0.2544E-01
19	-0.9933E-02	0.4634E-01	0.3749E-01	0.4027E-01	0.1154E-03	0.2544E-01
20	-0.9933E-02	0.4634E-01	0.3749E-01	0.4027E-01	0.1154E-03	0.2544E-01
21	-0.9933E-02	0.4634E-01	0.3749E-01	0.4027E-01	0.1154E-03	0.2544E-01
9009	-0.2513E-01	-0.2428E-01	-0.1196E-01	0.1196E-01	0.2428E-01	0.2428E-01
9010	-0.2513E-01	-0.2428E-01	-0.1196E-01	0.1196E-01	0.2428E-01	0.2428E-01
22	-0.4098E-01	-0.3133E-01	-0.3852E-01	-0.1614E-01	0.1614E-01	0.3852E-01
23	-0.4098E-01	-0.3133E-01	-0.3852E-01	-0.1614E-01	0.1614E-01	0.3852E-01
24	-0.4098E-01	-0.3133E-01	-0.3852E-01	-0.1614E-01	0.1614E-01	0.3852E-01
9011	-0.4098E-01	-0.3133E-01	-0.3852E-01	-0.1614E-01	0.1614E-01	0.3852E-01
9012	-0.4098E-01	-0.3133E-01	-0.3852E-01	-0.1614E-01	0.1614E-01	0.3852E-01
25	0.4203E-01	0.8770E-01	0.8881E-01	0.5184E-01	0.9902E-01	0.1393E-01
26	0.4203E-01	0.8770E-01	0.8881E-01	0.5184E-01	0.9902E-01	0.1393E-01
27	0.4203E-01	0.8770E-01	0.8881E-01	0.5184E-01	0.9902E-01	0.1393E-01
28	0.4203E-01	0.8770E-01	0.8881E-01	0.5184E-01	0.9902E-01	0.1393E-01
29	0.4203E-01	0.8770E-01	0.8881E-01	0.5184E-01	0.9902E-01	0.1393E-01
9013	0.4203E-01	0.8770E-01	0.8881E-01	0.5184E-01	0.9902E-01	0.1393E-01
9014	0.4203E-01	0.8770E-01	0.8881E-01	0.5184E-01	0.9902E-01	0.1393E-01
30	0.3766E-01	0.8737E-01	0.8603E-01	0.4162E-01	0.1011E-01	0.1948E-01
31	0.3766E-01	0.8737E-01	0.8603E-01	0.4162E-01	0.1011E-01	0.1948E-01
32	0.3766E-01	0.8737E-01	0.8603E-01	0.4162E-01	0.1011E-01	0.1948E-01
33	0.3766E-01	0.8737E-01	0.8603E-01	0.4162E-01	0.1011E-01	0.1948E-01
34	0.3766E-01	0.8737E-01	0.8603E-01	0.4162E-01	0.1011E-01	0.1948E-01
35	0.3766E-01	0.8737E-01	0.8603E-01	0.4162E-01	0.1011E-01	0.1948E-01
9015	0.3766E-01	0.8737E-01	0.8603E-01	0.4162E-01	0.1011E-01	0.1948E-01
9016	0.3766E-01	0.8737E-01	0.8603E-01	0.4162E-01	0.1011E-01	0.1948E-01
36	0.1746E-01	0.3717E-01	0.3531E-01	0.7327E-02	0.7740E-01	0.1948E-01
37	0.1746E-01	0.3717E-01	0.3531E-01	0.7327E-02	0.7740E-01	0.1948E-01
38	0.1746E-01	0.3717E-01	0.3531E-01	0.7327E-02	0.7740E-01	0.1948E-01
9017	0.1746E-01	0.3717E-01	0.3531E-01	0.7327E-02	0.7740E-01	0.1948E-01
9018	0.1746E-01	0.3717E-01	0.3531E-01	0.7327E-02	0.7740E-01	0.1948E-01
39	0.4474E-01	0.6004E-01	0.6042E-01	0.2408E-01	0.2408E-01	0.6042E-01
40	0.4474E-01	0.6004E-01	0.6042E-01	0.2408E-01	0.2408E-01	0.6042E-01
41	0.4474E-01	0.6004E-01	0.6042E-01	0.2408E-01	0.2408E-01	0.6042E-01
42	0.4474E-01	0.6004E-01	0.6042E-01	0.2408E-01	0.2408E-01	0.6042E-01
43	0.4474E-01	0.6004E-01	0.6042E-01	0.2408E-01	0.2408E-01	0.6042E-01
44	0.4474E-01	0.6004E-01	0.6042E-01	0.2408E-01	0.2408E-01	0.6042E-01
45	0.4474E-01	0.6004E-01	0.6042E-01	0.2408E-01	0.2408E-01	0.6042E-01
46	0.4474E-01	0.6004E-01	0.6042E-01	0.2408E-01	0.2408E-01	0.6042E-01
47	0.4474E-01	0.6004E-01	0.6042E-01	0.2408E-01	0.2408E-01	0.6042E-01
48	0.4474E-01	0.6004E-01	0.6042E-01	0.2408E-01	0.2408E-01	0.6042E-01
49	0.4474E-01	0.6004E-01	0.6042E-01	0.2408E-01	0.2408E-01	0.6042E-01
50	0.4474E-01	0.6004E-01	0.6042E-01	0.2408E-01	0.2408E-	

craft.out

NODE	DX	DY	DZ	ROT-X	ROT-Y	ROT-Z
3103	-0.6038E-04					
3121	-0.2668E-03					
3122	0.7842E-04					
3091	-0.3162E-03					
3092	0.0002E-00					
3093	-0.3733E-04					

MODAL DISPLACEMENTS AT SECONDARY SYSTEM DOP

MODE	DX	DY	DZ	ROT-X	ROT-Y	ROT-Z
1	0.3130E-07	-0.1051E-07	0.1054E-07	-0.2408E-06	-0.8618E-09	-0.1120E-08
2	0.2525E-02	-0.8028E-02	0.2525E-02	-0.2371E-02	-0.1368E-02	-0.6848E-03
3	0.2008E-01	-0.4169E-01	0.6251E-01	-0.8740E-02	-0.6931E-02	-0.1871E-03
4	0.1898E-01	-0.4194E-01	0.3217E-00	-0.1348E-01	-0.1008E-01	0.1645E-01
5	0.1848E-01	0.2058E-00	0.4719E-00	-0.1748E-01	-0.5478E-02	0.1908E-02
6	0.1802E-01	0.2663E-00	0.4602E-00	-0.1804E-01	-0.9331E-02	0.2348E-02
7	-0.1178E-00	0.2758E-00	0.3842E-00	-0.3108E-01	-0.8858E-02	0.2518E-01
8	-0.1018E-01	0.2748E-00	0.2851E-00	-0.1338E-01	-0.5183E-02	0.1328E-01
9	-0.1028E-00	0.2774E-00	0.4420E-00	0.518E-02	-0.1111E-02	0.2058E-02
10	-0.1028E-00	0.2774E-00	0.8589E-01	0.8628E-02	0.7918E-02	0.1666E-02
11	-0.1148E-00	0.2663E-00	0.4810E-01	-0.4382E-02	0.5818E-02	0.1838E-02
12	-0.0318E-00	0.2614E-00	0.1973E-00	-0.3328E-02	0.9048E-02	0.6697E-04
13	-0.4158E-00	0.2538E-00	-0.1518E-00	0.5338E-02	0.1218E-01	-0.1848E-01
14	-0.3848E-00	0.2388E-00	-0.1601E-00	0.6278E-02	0.1388E-01	0.1281E-01
15	-0.3848E-00	0.2148E-00	-0.1211E-00	0.7098E-02	0.1388E-01	0.1038E-01
16	-0.3478E-00	0.4828E-00	-0.5501E-00	0.1068E-01	0.2018E-01	0.2817E-01
17	-0.3248E-00	0.4508E-00	-0.6078E-00	0.1098E-01	0.2348E-01	0.3368E-01
18	-0.4388E-00	0.6558E-00	-0.7310E-00	0.2498E-01	0.2848E-01	0.3518E-01
19	-0.5898E-00	0.4058E-00	-0.4438E-00	0.3798E-01	0.2848E-01	0.3518E-01
20	0.6988E-00	0.2048E-00	0.2778E-01	0.5848E-02	0.1858E-01	0.1848E-02
21	0.7658E-00	0.2078E-00	0.2168E-01	0.8098E-01	0.1448E-01	0.2050E-01
22	0.6908E-00	0.2078E-00	0.1778E-01	0.7138E-01	0.6478E-02	0.1050E-02
23	0.1485E-00	0.2078E-00	-0.2398E-01	0.2878E-01	0.5198E-02	-0.1522E-01
24	0.1824E-01	0.2078E-00	-0.2798E-01	0.9418E-01	0.2748E-02	-0.4098E-01
25	0.1198E-01	0.2068E-00	0.6278E-01	0.8418E-01	0.2848E-02	-0.1808E-01
26	0.1198E-01	0.2068E-00	0.2068E-01	0.4538E-01	0.2331E-01	0.8408E-02
27	-0.1848E-01	0.2058E-00	0.1392E-01	0.8848E-01	0.7838E-01	-0.4137E-01
28	-0.1773E-00	0.2042E-00	0.1048E-01	0.7838E-01	-0.1948E-01	-0.2433E-01
29	-0.1398E-01	0.2042E-00	-0.2981E-01	0.3098E-01	-0.2438E-01	-0.5638E-02
30	0.1398E-01	0.1980E-00	-0.5478E-00	0.3708E-01	0.4708E-01	0.5168E-01
31	0.1398E-01	0.1980E-00	0.3948E-01	0.5248E-01	0.4858E-01	0.5243E-01
32	0.1410E-01	0.1898E-00	0.7988E-00	0.4388E-01	-0.5158E-01	-0.2798E-01
33	0.1538E-01	0.1518E-00	0.9188E-00	0.2878E-01	-0.5188E-01	-0.7178E-01
34	0.1462E-01	0.1518E-00	0.8538E-00	0.1372E-01	-0.5457E-01	-0.4601E-01
35	0.9910E-00	0.2258E-01	0.8653E-00	0.1582E-01	-0.5768E-01	-0.4588E-01
36	0.8098E-00	0.1810E-01	0.8542E-00	0.619E-01	-0.6218E-01	0.288E-02
37	0.4128E-00	0.1810E-01	0.8465E-00	0.8620E-01	-0.4108E-01	0.1328E-02
38	0.1918E-01	-0.3328E-01	0.8588E-00	0.9608E-01	0.1838E-01	0.1368E-00
39	0.6842E-00	0.2432E-01	0.9518E-00	0.4322E-01	0.1180E-01	0.1347E-00
40	0.9540E-00	-0.2832E-01	0.9482E-00	-0.4068E-01	0.4878E-03	0.2535E-00
41	0.1438E-01	-0.2678E-00	0.8988E-00	0.1478E-01	0.4462E-01	0.3028E-00
42	0.1608E-01	-0.2678E-00	0.6948E-00	0.2058E-01	0.7068E-01	0.3078E-00
43	0.1608E-01	-0.2678E-00	0.8288E-01	0.2888E-01	0.7068E-01	0.3058E-00
44	0.1638E-01	-0.2428E-01	0.9648E-00	0.2072E-00	0.5968E-01	0.1278E-00
45	0.1628E-01	-0.3248E-01	-0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
46	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
47	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
48	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
49	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
50	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
51	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
52	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
53	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
54	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
55	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
56	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
57	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
58	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
59	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
60	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
61	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
62	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
63	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
64	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
65	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
66	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
67	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
68	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
69	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
70	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
71	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
72	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
73	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
74	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
75	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
76	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
77	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
78	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
79	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
80	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
81	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
82	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
83	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
84	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
85	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
86	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
87	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
88	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
89	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
90	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
91	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
92	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
93	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
94	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
95	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
96	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
97	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
98	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
99	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
100	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
101	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
102	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
103	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
104	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
105	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
106	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
107	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
108	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
109	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
110	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
111	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
112	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
113	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
114	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
115	0.1628E-01	-0.3248E-01	0.1048E-01	0.3648E-00	0.3948E-01	-0.1798E-00
116	0.1					

49	0.1622E+01	0.4840E-01	-0.3644E-01	0.3514E+00	0.5908E-01	-0.2805E+00
50	0.1621E+01	0.3372E+01	-0.3938E-01	0.3327E+00	0.5450E-01	-0.2498E+00
51	0.1620E+01	0.2932E+01	-0.4019E-01	0.3273E+00	0.5166E-01	-0.2859E+00
52	0.1618E+01	0.1422E+01	-0.4270E-01	0.3065E+00	0.3613E-01	-0.2451E+00
53	0.1607E+01	-0.1625E+01	-0.4012E-01	0.2157E+00	-0.6164E-01	-0.2520E-01
54	0.1589E+01	-0.7420E-01	-0.1861E+00	0.8190E-01	-0.1150E+00	0.5417E-01
55	0.1588E+01	-0.3346E-01	-0.1005E+00	0.7909E-01	-0.1138E+00	0.5226E-01
56	0.1203E+01	-0.1190E+00	0.3040E+00	0.5950E-01	-0.8750E-01	0.2485E+00
57	0.1211E+01	-0.2461E+00	0.5039E+00	0.5591E-01	-0.7421E-01	0.1412E-01
58	0.8734E+00	-0.3536E+00	0.3039E+00	0.5391E-01	-0.6525E-01	0.4720E-02
59	0.7036E+00	-0.5098E+00	0.3037E+00	0.5295E-01	-0.9491E-02	0.1209E+00
101	0.7031E+00	-0.3518E+00	0.1288E+00	0.6614E-01	-0.3723E-01	-0.1094E+00
104	0.7020E+00	0.1579E+01	-0.2573E-01	0.1097E+00	-0.2251E+00	0.2673E+00
105	0.7015E+00	0.2180E+01	-0.2794E-01	0.1244E+00	-0.3036E+00	0.1668E+00
106	0.7008E+00	0.2565E+01	-0.2783E-01	0.1391E+00	-0.1261E-03	-0.9121E-01
107	0.6975E+00	0.2599E-01	-0.2633E-00	0.1955E+00	-0.5197E-01	0.2455E+00
109	0.6013E+00	0.2253E-01	-0.3508E+00	0.2027E+00	-0.6454E-01	0.1552E-01
111	0.4096E+00	0.1594E-01	-0.3506E+00	0.1798E+00	-0.3753E-01	-0.1755E-01
112	0.3716E+00	0.1352E-01	-0.3506E+00	0.1583E+00	-0.8483E-02	-0.3143E-01
60	0.5691E+00	-0.6672E+00	0.3036E+00	0.5414E-01	-0.4181E-01	-0.2159E-01
61	0.4589E+00	-0.6311E+00	0.3035E+00	0.5741E-01	-0.3550E-01	-0.3369E-02
62	0.4505E+00	-0.8453E+00	0.3035E+00	0.5777E-01	-0.3514E-01	-0.3470E-01
63	0.3372E+00	-0.8925E+00	-0.1921E+00	0.7376E-01	-0.2902E-01	-0.5702E-01
64	0.3404E+00	-0.8722E+00	-0.1921E+00	0.1608E+00	-0.2317E-01	-0.6686E-01
65	0.3419E+00	-0.1601E+00	-0.2107E+00	0.1236E+00	-0.1818E-01	-0.6081E-01
131	0.5370E+00	0.1602E+00	0.1916E+00	0.1245E+00	-0.1818E-01	-0.6134E-01
132	0.7414E+00	0.1603E+00	0.6004E+00	0.1253E+00	-0.1818E-01	-0.6240E-01
66	0.3449E+00	0.6543E+00	-0.2871E+00	0.1368E+00	-0.1256E-01	-0.5251E-01
67	0.3473E+00	0.6522E+00	-0.3307E+00	0.1481E+00	-0.8171E-02	-0.4189E-01
68	0.3491E+00	0.7643E+00	-0.3505E+00	0.1560E+00	-0.5304E-02	-0.3246E-01
69	0.3507E+00	0.8923E+00	-0.3602E+00	0.1628E+00	-0.1437E-02	-0.2185E-01
70	0.3519E+00	0.8923E+00	-0.3600E+00	0.1678E+00	-0.1271E-02	-0.1310E-01
71	0.3546E+00	0.9073E+00	-0.3391E+00	0.1791E+00	0.6660E-02	0.8661E-02
133	0.3242E+00	0.9077E+00	0.2441E+00	0.1803E+00	0.6660E-02	0.8648E-02
134	0.2981E+00	0.9084E+00	0.8362E+00	0.1815E+00	0.6660E-02	0.8222E-02
72	0.3582E+00	0.8139E+00	-0.2934E+00	0.1865E+00	0.1002E-01	0.2525E-01
73	0.3742E+00	0.1200E+00	-0.2153E+00	0.2197E+00	-0.1505E-01	0.1050E-01
74	0.3759E+00	0.1044E+00	-0.2618E+00	0.2234E+00	-0.2124E-01	-0.5403E-03
75	0.3794E+00	-0.1662E+00	-0.3974E+00	0.2309E+00	-0.3166E-01	-0.2792E-01
76	0.3828E+00	0.3840E+00	-0.5786E+00	0.2383E+00	-0.3996E-01	-0.6307E-01
77	0.3845E+00	0.5636E+00	-0.6837E+00	0.2420E+00	-0.4350E-01	-0.8361E-01
78	0.3847E+00	0.8691E+00	-0.8476E+00	0.2329E+00	-0.3790E-01	-0.6880E-01
9021	0.3862E+00	0.1417E-01	-0.1302E+01	0.1675E+00	0.7235E-02	0.2698E-01
79	0.3872E+00	-0.2510E+00	-0.5987E+00	0.1022E+00	0.3473E-01	0.7691E-01
80	0.3875E+00	-0.2103E+00	-0.3168E+00	0.7396E-01	0.3314E-01	0.7305E-01
81	0.3878E+00	-0.1321E+00	-0.1291E+00	0.7122E-01	0.3144E-01	0.7644E-01
82	0.3915E+00	-0.1380E-01	-0.2239E-01	0.5651E-01	0.2200E-01	0.7194E-01
9022	-0.2346E-01	-0.3484E+00	-0.5086E-02	0.2540E-01	0.4836E-02	0.4668E-01
83	-0.4142E-01	0.4105E-01	-0.1931E-01	3.6344E-02	0.4614E-03	0.2142E-01
84	-0.6256E-01	0.5413E-01	-0.2917E-01	0.4985E-02	0.7171E-03	0.1912E-01
85	-0.6342E-01	0.6158E-01	-0.1906E-01	0.4055E-02	0.9711E-03	0.1748E-01
86	-0.2415E-01	0.2413E-01	-0.1281E-01	-0.3772E-02	0.8964E-02	0.8664E-02
87	-0.1487E-07	0.8905E-08	-0.5099E-07	-0.1923E-08	0.3032E-08	0.9386E-08

COUPLED FREQUENCY DAMPING RATIO
MODE (HZ) (%)

1	0.13145E+01	0.50000E+01
2	0.15867E+01	0.41150E+01
3	0.28009E+01	0.26665E+01
4	0.34301E+01	0.23447E+01
5	0.36006E+01	0.22825E+01
6	0.38944E+01	0.21920E+01
7	0.42591E+01	0.21076E+01
8	0.56890E+01	0.19441E+01
9	0.74877E+01	0.19400E+01
10	0.80710E+01	0.19651E+01
11	0.83071E+01	0.19775E+01
12	0.10178E+02	0.21110E+01
13	0.10627E+02	0.21512E+01
14	0.12036E+02	0.22875E+01
15	0.13130E+02	0.24044E+01
16	0.13439E+02	0.24387E+01
17	0.14793E+02	0.25393E+01
18	0.16091E+02	0.27495E+01
19	0.16598E+02	0.28118E+01
20	0.17960E+02	0.29824E+01
21	0.18256E+02	0.30201E+01
22	0.19641E+02	0.31985E+01
23	0.20890E+02	0.33622E+01
24	0.22170E+02	0.35328E+01
25	0.23057E+02	0.36512E+01
26	0.23492E+02	0.37098E+01
27	0.23635E+02	0.37279E+01
28	0.24181E+02	0.38031E+01
29	0.25320E+02	0.39581E+01
30	0.26236E+02	0.40837E+01
31	0.26733E+02	0.41519E+01
32	0.26866E+02	0.41730E+01
33	0.27543E+02	0.42637E+01
34	0.32918E+02	0.50030E+01

BASE RESPONSE SPECTRA DATA

TOTAL NUMBER OF INPUT SPECTRUM CURVE = 34

MAXIMUM NUMBER OF DEFINITION POINTS IN INPUT SPECTRUM CURVES = 34

SPECTRUM SCALE FACTOR = 0.38640E+03

RIGID FREQUENCY = 0.38160E+02

SPECTRUM PARAMETERS

CURVE NO 1 F1 = 2.40877 F2 = 23.67120 FL = 1.44586 PH = 6.85301

INPUT SPECTRUM CURVE NUMBER = 1

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.19000E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION	CALCULATED VELOCITY SPECTRAL ACCELERATION
1	0.1315E+01	0.3012E+00	0.3313E+00
2	0.1587E+01	0.3829E+00	0.3827E+00
3	0.2801E+01	0.7058E+00	0.7302E+00
4	0.3430E+01	0.5727E+00	0.5851E+00
5	0.3601E+01	0.5737E+00	0.5880E+00
6	0.3898E+01	0.5001E+00	0.5146E+00
7	0.4259E+01	0.6502E+00	0.6707E+00
8	0.5689E+01	0.4867E+00	0.4985E+00
9	0.7449E+01	0.4020E+00	0.3960E+00
10	0.8071E+01	0.3116E+00	0.3021E+00
11	0.8507E+01	0.2817E+00	0.2731E+00
12	0.1018E+02	0.2340E+00	0.2121E+00
13	0.1063E+02	0.2189E+00	0.1953E+00
14	0.1204E+02	0.2282E+00	0.1928E+00
15	0.1313E+02	0.2135E+00	0.1722E+00
16	0.1349E+02	0.2076E+00	0.1652E+00
17	0.1479E+02	0.1953E+00	0.1456E+00
18	0.1609E+02	0.1860E+00	0.1292E+00
19	0.1660E+02	0.1877E+00	0.1266E+00
20	0.1796E+02	0.1842E+00	0.1136E+00
21	0.1826E+02	0.1845E+00	0.1113E+00
22	0.1964E+02	0.1895E+00	0.1021E+00
23	0.2089E+02	0.1867E+00	0.8853E-01
24	0.2217E+02	0.1832E+00	0.7398E-01
25	0.2306E+02	0.1832E+00	0.7398E-01
26	0.2349E+02	0.1878E+00	0.6318E-01
27	0.2363E+02	0.1890E+00	0.5756E-01
28	0.2418E+02	0.1895E+00	0.5562E-01
29	0.2532E+02	0.1902E+00	0.5407E-01
30	0.2624E+02	0.1902E+00	0.5147E-01
31	0.2673E+02	0.1885E+00	0.4970E-01
32	0.2686E+02	0.1889E+00	0.4857E-01
33	0.2754E+02	0.1863E+00	0.4815E-01
34	0.3292E+02	0.1829E+00	0.3808E-01

SPECTRUM PARAMETERS

CURVE NO 2 F1 = 2.40877 F2 = 23.67120 FL = 1.43621 PH = 6.85301

INPUT SPECTRUM CURVE NUMBER = 2

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.19400E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION	CALCULATED VELOCITY SPECTRAL ACCELERATION
1	0.1315E+01	0.2999E+00	0.3277E+00
2	0.1587E+01	0.3817E+00	0.3817E+00
3	0.2801E+01	0.6942E+00	0.7027E+00
4	0.3430E+01	0.5684E+00	0.5810E+00
5	0.3601E+01	0.5694E+00	0.5839E+00
6	0.3898E+01	0.4969E+00	0.5117E+00
7	0.4259E+01	0.6423E+00	0.6631E+00
8	0.5689E+01	0.4865E+00	0.4976E+00
9	0.7468E+01	0.3988E+00	0.3928E+00
10	0.8071E+01	0.3091E+00	0.2995E+00
11	0.8307E+01	0.2820E+00	0.2714E+00
12	0.1018E+02	0.2334E+00	0.2114E+00
13	0.1063E+02	0.2183E+00	0.1946E+00
14	0.1204E+02	0.2264E+00	0.1910E+00
15	0.1313E+02	0.2129E+00	0.1715E+00
16	0.1344E+02	0.2071E+00	0.1645E+00
17	0.1479E+02	0.1952E+00	0.1452E+00
18	0.1608E+02	0.1862E+00	0.1290E+00
19	0.1660E+02	0.1878E+00	0.1262E+00
20	0.1796E+02	0.1842E+00	0.1133E+00
21	0.1826E+02	0.1845E+00	0.1111E+00
22	0.1964E+02	0.1895E+00	0.1018E+00
23	0.2089E+02	0.1867E+00	0.8853E-01
24	0.2217E+02	0.1832E+00	0.7398E-01
25	0.2306E+02	0.1857E+00	0.6318E-01
26	0.2349E+02	0.1890E+00	0.5753E-01
27	0.2363E+02	0.1895E+00	0.5560E-01
28	0.2418E+02	0.1907E+00	0.5406E-01
29	0.2532E+02	0.1902E+00	0.5147E-01
30	0.2624E+02	0.1902E+00	0.4969E-01

Crtaft.out

SPECTRUM PARAMETERS

CURVE NO 5 F1 = 2.40877 F2 = 23.67120 FL = 1.42747 PH = 6.85301

INPUT SPECTRUM CURVE NUMBER = 5

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.19775E-01

INPUT POINT	FREQUENCY (Hz)	INPUT SPECTRAL ACCELERATION	CALCULATED VELOCITY SPECTRAL ACCELERATION
1	0.1315E+01	0.2048E+00	0.2244E+00
2	0.1587E+01	0.3606E+00	0.3806E+00
3	0.2801E+01	0.6913E+00	0.6959E+00
4	0.4401E+01	0.8453E+00	0.8453E+00
5	0.5885E+01	0.4940E+00	0.5090E+00
6	0.6511E+01	0.6151E+00	0.6561E+00
7	0.6589E+01	0.4855E+00	0.4867E+00
8	0.7468E+01	0.3958E+00	0.3898E+00
9	0.8071E+01	0.3068E+00	0.2972E+00
10	0.8307E+01	0.2855E+00	0.2858E+00
11	0.8307E+01	0.2712E+00	0.2698E+00
12	0.1042E+02	0.2378E+00	0.1932E+00
13	0.1042E+02	0.2248E+00	0.1894E+00
14	0.1204E+02	0.2248E+00	0.1894E+00
15	0.1313E+02	0.2124E+00	0.1708E+00
16	0.1344E+02	0.2067E+00	0.1674E+00
17	0.1479E+02	0.1951E+00	0.1489E+00
18	0.1609E+02	0.1863E+00	0.1269E+00
19	0.1660E+02	0.1878E+00	0.1269E+00
20	0.1863E+02	0.1863E+00	0.1130E+00
21	0.1863E+02	0.1863E+00	0.1130E+00
22	0.1964E+02	0.1863E+00	0.1016E+00
23	0.2089E+02	0.1863E+00	0.8814E-01
24	0.2217E+02	0.1863E+00	0.7248E-01
25	0.2306E+02	0.1867E+00	0.6304E-01
26	0.2349E+02	0.1889E+00	0.5742E-01
27	0.2452E+02	0.1922E+00	0.5267E-01
28	0.2452E+02	0.1922E+00	0.5040E-01
29	0.2532E+02	0.1922E+00	0.5147E-01
30	0.2624E+02	0.1922E+00	0.4968E-01
31	0.2673E+02	0.1894E+00	0.4856E-01
32	0.2689E+02	0.1888E+00	0.4813E-01
33	0.2754E+02	0.1853E+00	0.4612E-01
34	0.3292E+02	0.1894E+00	0.3809E-01

SPECTRUM PARAMETERS

CURVE NO 6 F1 = 2.40877 F2 = 23.67120 FL = 1.39888 PH = 6.85301

INPUT SPECTRUM CURVE NUMBER = 6

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.21074E-01

INPUT POINT	FREQUENCY (Hz)	INPUT SPECTRAL ACCELERATION	CALCULATED VELOCITY SPECTRAL ACCELERATION
1	0.1315E+01	0.2948E+00	0.3137E+00
2	0.1587E+01	0.3768E+00	0.3768E+00
3	0.2801E+01	0.6644E+00	0.6733E+00
4	0.4401E+01	0.5525E+00	0.5647E+00
5	0.5885E+01	0.5515E+00	0.5670E+00
6	0.6511E+01	0.6116E+00	0.6333E+00
7	0.6589E+01	0.4818E+00	0.4935E+00
8	0.7468E+01	0.3658E+00	0.3798E+00
9	0.8071E+01	0.2993E+00	0.2895E+00
10	0.8307E+01	0.2754E+00	0.2645E+00
11	0.8307E+01	0.2328E+00	0.2048E+00
12	0.1042E+02	0.2328E+00	0.1840E+00
13	0.1042E+02	0.2195E+00	0.1685E+00
14	0.1204E+02	0.2195E+00	0.1685E+00
15	0.1313E+02	0.2052E+00	0.1617E+00
16	0.1344E+02	0.2052E+00	0.1494E+00
17	0.1479E+02	0.1948E+00	0.1283E+00
18	0.1609E+02	0.1869E+00	0.1249E+00
19	0.1660E+02	0.1875E+00	0.1249E+00
20	0.1863E+02	0.1843E+00	0.1103E+00
21	0.1863E+02	0.1843E+00	0.1103E+00
22	0.1964E+02	0.1843E+00	0.1007E+00
23	0.2089E+02	0.1843E+00	0.8750E-01
24	0.2217E+02	0.1835E+00	0.7252E-01
25	0.2306E+02	0.1867E+00	0.6281E-01
26	0.2349E+02	0.1888E+00	0.5734E-01
27	0.2452E+02	0.1922E+00	0.5267E-01
28	0.2452E+02	0.1922E+00	0.5040E-01
29	0.2532E+02	0.1901E+00	0.5146E-01
30	0.2624E+02	0.1901E+00	0.4965E-01
31	0.2673E+02	0.1893E+00	0.4852E-01
32	0.2689E+02	0.1888E+00	0.4811E-01

Crtaft.out

SPECTRUM PARAMETERS

CURVE NO 3 F1 = 2.40877 F2 = 23.67120 FL = 1.43526 PH = 6.85301

INPUT SPECTRUM CURVE NUMBER = 3

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.19441E-01

INPUT POINT	FREQUENCY (Hz)	INPUT SPECTRAL ACCELERATION	CALCULATED VELOCITY SPECTRAL ACCELERATION
1	0.1315E+01	0.2998E+00	0.3273E+00
2	0.1587E+01	0.3816E+00	0.3816E+00
3	0.2801E+01	0.6975E+00	0.7026E+00
4	0.4401E+01	0.6508E+00	0.6588E+00
5	0.5885E+01	0.4896E+00	0.5114E+00
6	0.6511E+01	0.6415E+00	0.6623E+00
7	0.6589E+01	0.4844E+00	0.4875E+00
8	0.7468E+01	0.3984E+00	0.3925E+00
9	0.8071E+01	0.3098E+00	0.2993E+00
10	0.8307E+01	0.2818E+00	0.2818E+00
11	0.8307E+01	0.2712E+00	0.2698E+00
12	0.1042E+02	0.2335E+00	0.1945E+00
13	0.1042E+02	0.2335E+00	0.1945E+00
14	0.1204E+02	0.2242E+00	0.1809E+00
15	0.1313E+02	0.2198E+00	0.1714E+00
16	0.1344E+02	0.2071E+00	0.1644E+00
17	0.1479E+02	0.1925E+00	0.1452E+00
18	0.1609E+02	0.1862E+00	0.1290E+00
19	0.1660E+02	0.1878E+00	0.1290E+00
20	0.1863E+02	0.1863E+00	0.1130E+00
21	0.1863E+02	0.1863E+00	0.1130E+00
22	0.1964E+02	0.1863E+00	0.1016E+00
23	0.2089E+02	0.1867E+00	0.8813E-01
24	0.2217E+02	0.1825E+00	0.7297E-01
25	0.2306E+02	0.1867E+00	0.6309E-01
26	0.2349E+02	0.1890E+00	0.5728E-01
27	0.2452E+02	0.1922E+00	0.5267E-01
28	0.2452E+02	0.1922E+00	0.5040E-01
29	0.2532E+02	0.1902E+00	0.5147E-01
30	0.2624E+02	0.1902E+00	0.4969E-01
31	0.2673E+02	0.1894E+00	0.4856E-01
32	0.2689E+02	0.1888E+00	0.4814E-01
33	0.2754E+02	0.1853E+00	0.4611E-01
34	0.3292E+02	0.1894E+00	0.3809E-01

SPECTRUM PARAMETERS

CURVE NO 4 F1 = 2.40877 F2 = 23.67120 FL = 1.43032 PH = 6.85301

INPUT SPECTRUM CURVE NUMBER = 4

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.19651E-01

INPUT POINT	FREQUENCY (Hz)	INPUT SPECTRAL ACCELERATION	CALCULATED VELOCITY SPECTRAL ACCELERATION
1	0.1315E+01	0.2991E+00	0.3255E+00
2	0.1587E+01	0.3609E+00	0.3609E+00
3	0.2801E+01	0.6916E+00	0.6916E+00
4	0.4401E+01	0.5658E+00	0.5795E+00
5	0.5885E+01	0.5665E+00	0.5813E+00
6	0.6511E+01	0.6374E+00	0.6598E+00
7	0.6589E+01	0.4853E+00	0.4870E+00
8	0.7468E+01	0.3968E+00	0.3908E+00
9	0.8071E+01	0.3076E+00	0.2979E+00
10	0.8307E+01	0.2810E+00	0.2793E+00
11	0.8307E+01	0.2308E+00	0.2308E+00
12	0.1042E+02	0.2308E+00	0.1909E+00
13	0.1042E+02	0.2151E+00	0.1803E+00
14	0.1204E+02	0.2151E+00	0.1803E+00
15	0.1313E+02	0.2028E+00	0.1710E+00
16	0.1344E+02	0.2028E+00	0.1641E+00
17	0.1479E+02	0.1925E+00	0.1450E+00
18	0.1609E+02	0.1863E+00	0.1289E+00
19	0.1660E+02	0.1863E+00	0.1289E+00
20	0.1863E+02	0.1842E+00	0.1206E+00
21	0.1863E+02	0.1842E+00	0.1206E+00
22	0.1964E+02	0.1842E+00	0.1109E+00
23	0.2089E+02	0.1842E+00	0.8208E-01
24	0.2217E+02	0.1832E+00	0.7217E-01
25	0.2306E+02	0.1867E+00	0.6306E-01
26	0.2349E+02	0.1890E+00	0.5742E-01
27	0.2452E+02	0.1922E+00	0.5267E-01
28	0.2452E+02	0.1922E+00	0.5040E-01
29	0.2532E+02	0.1902E+00	0.5146E-01
30	0.2624E+02	0.1902E+00	0.4968E-01
31	0.2673E+02	0.1894E+00	0.4852E-01

33 0.2754E+02 0.1855E+00 0.4614E-01
 34 0.3292E+02 0.1830E+00 0.3810E-01

SPECTRUM PARAMETERS

CURVE NO 7 F1 = 2.40877 F2 = 23.67120 FL = 1.39814 FH = 6.85301

INPUT SPECTRUM CURVE NUMBER = 7

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.21110E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION	CALCULATED VELOCITY SPECTRAL ACCELERATION
1	0.1315E+01	0.2947E+00	0.3134E+00
2	0.1587E+01	0.3767E+00	0.3744E+00
3	0.2801E+01	0.6679E+00	0.6737E+00
4	0.3430E+01	0.5508E+00	0.5644E+00
5	0.3601E+01	0.5511E+00	0.5666E+00
6	0.3898E+01	0.4838E+00	0.4996E+00
7	0.4259E+01	0.6110E+00	0.6326E+00
8	0.5689E+01	0.4817E+00	0.4934E+00
9	0.7468E+01	0.3857E+00	0.3796E+00
10	0.8071E+01	0.2891E+00	0.2893E+00
11	0.8307E+01	0.2753E+00	0.2648E+00
12	0.1018E+02	0.3111E+00	0.2084E+00
13	0.1063E+02	0.2160E+00	0.1915E+00
14	0.1204E+02	0.2193E+00	0.1838E+00
15	0.1313E+02	0.2108E+00	0.1684E+00
16	0.1344E+02	0.2052E+00	0.1616E+00
17	0.1479E+02	0.1948E+00	0.1436E+00
18	0.1609E+02	0.1869E+00	0.1283E+00
19	0.1660E+02	0.1875E+00	0.1248E+00
20	0.1796E+02	0.1843E+00	0.1122E+00
21	0.1826E+02	0.1848E+00	0.1101E+00
22	0.1964E+02	0.1894E+00	0.1007E+00
23	0.2089E+02	0.1867E+00	0.8748E-01
24	0.2217E+02	0.1835E+00	0.7252E-01
25	0.2306E+02	0.1867E+00	0.6281E-01
26	0.2349E+02	0.1888E+00	0.5737E-01
27	0.2362E+02	0.1893E+00	0.5551E-01
28	0.2418E+02	0.1905E+00	0.5398E-01
29	0.2532E+02	0.1901E+00	0.5146E-01
30	0.2624E+02	0.1901E+00	0.4955E-01
31	0.2673E+02	0.1893E+00	0.4852E-01
32	0.2689E+02	0.1887E+00	0.4811E-01
33	0.2754E+02	0.1855E+00	0.4614E-01
34	0.3292E+02	0.1830E+00	0.3810E-01

SPECTRUM PARAMETERS

CURVE NO 8 F1 = 2.40234 F2 = 23.67120 FL = 1.19360 FH = 6.84299

INPUT SPECTRUM CURVE NUMBER = 8

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.21512E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION	CALCULATED VELOCITY SPECTRAL ACCELERATION
1	0.1315E+01	0.2935E+00	0.3111E+00
2	0.1587E+01	0.3756E+00	0.3756E+00
3	0.2801E+01	0.6612E+00	0.6663E+00
4	0.3430E+01	0.5468E+00	0.5608E+00
5	0.3601E+01	0.5470E+00	0.5628E+00
6	0.3898E+01	0.4808E+00	0.4970E+00
7	0.4259E+01	0.6041E+00	0.6260E+00
8	0.5689E+01	0.4805E+00	0.4923E+00
9	0.7468E+01	0.3827E+00	0.3765E+00
10	0.8071E+01	0.2969E+00	0.2859E+00
11	0.8307E+01	0.2739E+00	0.2628E+00
12	0.1018E+02	0.3107E+00	0.2076E+00
13	0.1063E+02	0.2154E+00	0.1907E+00
14	0.1204E+02	0.2178E+00	0.1822E+00
15	0.1313E+02	0.2103E+00	0.1677E+00
16	0.1344E+02	0.2048E+00	0.1609E+00
17	0.1479E+02	0.1947E+00	0.1431E+00
18	0.1609E+02	0.1870E+00	0.1280E+00
19	0.1660E+02	0.1874E+00	0.1244E+00
20	0.1796E+02	0.1843E+00	0.1118E+00
21	0.1826E+02	0.1849E+00	0.1098E+00
22	0.1964E+02	0.1894E+00	0.1004E+00
23	0.2089E+02	0.1867E+00	0.8721E-01
24	0.2217E+02	0.1835E+00	0.7233E-01
25	0.2306E+02	0.1867E+00	0.6266E-01
26	0.2349E+02	0.1888E+00	0.5727E-01
27	0.2362E+02	0.1892E+00	0.5549E-01
28	0.2418E+02	0.1904E+00	0.5389E-01
29	0.2532E+02	0.1901E+00	0.5138E-01
30	0.2624E+02	0.1900E+00	0.4957E-01
31	0.2673E+02	0.1892E+00	0.4844E-01
32	0.2689E+02	0.1887E+00	0.4803E-01
33	0.2754E+02	0.1855E+00	0.4608E-01

34 0.3292E+02 0.1830E+00 0.3804E-01

SPECTRUM PARAMETERS

CURVE NO 9 F1 = 2.38569 F2 = 23.67120 FL = 1.39506 FH = 6.81703

INPUT SPECTRUM CURVE NUMBER = 9

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.21920E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION	CALCULATED VELOCITY SPECTRAL ACCELERATION
1	0.1315E+01	0.2923E+00	0.3102E+00
2	0.1587E+01	0.3744E+00	0.3744E+00
3	0.2801E+01	0.6546E+00	0.6601E+00
4	0.3430E+01	0.5428E+00	0.5573E+00
5	0.3601E+01	0.5428E+00	0.5592E+00
6	0.3898E+01	0.4779E+00	0.4944E+00
7	0.4259E+01	0.5973E+00	0.6195E+00
8	0.5689E+01	0.4793E+00	0.4911E+00
9	0.7468E+01	0.3798E+00	0.3732E+00
10	0.8071E+01	0.2947E+00	0.2844E+00
11	0.8307E+01	0.2724E+00	0.2610E+00
12	0.1018E+02	0.2302E+00	0.2067E+00
13	0.1063E+02	0.2149E+00	0.1898E+00
14	0.1204E+02	0.2162E+00	0.1803E+00
15	0.1313E+02	0.2099E+00	0.1668E+00
16	0.1344E+02	0.2044E+00	0.1601E+00
17	0.1479E+02	0.1946E+00	0.1425E+00
18	0.1609E+02	0.1872E+00	0.1279E+00
19	0.1660E+02	0.1874E+00	0.1239E+00
20	0.1796E+02	0.1844E+00	0.1114E+00
21	0.1826E+02	0.1849E+00	0.1093E+00
22	0.1964E+02	0.1894E+00	0.9993E-01
23	0.2089E+02	0.1867E+00	0.8681E-01
24	0.2217E+02	0.1836E+00	0.7203E-01
25	0.2306E+02	0.1867E+00	0.6239E-01
26	0.2349E+02	0.1887E+00	0.5703E-01
27	0.2362E+02	0.1892E+00	0.5518E-01
28	0.2418E+02	0.1904E+00	0.5367E-01
29	0.2532E+02	0.1901E+00	0.5118E-01
30	0.2624E+02	0.1900E+00	0.4937E-01
31	0.2673E+02	0.1892E+00	0.4825E-01
32	0.2689E+02	0.1887E+00	0.4784E-01
33	0.2754E+02	0.1855E+00	0.4591E-01
34	0.3292E+02	0.1830E+00	0.3790E-01

SPECTRUM PARAMETERS

CURVE NO 10 F1 = 2.35031 F2 = 23.67120 FL = 1.39833 FH = 6.76190

INPUT SPECTRUM CURVE NUMBER = 10

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.22825E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION	CALCULATED VELOCITY SPECTRAL ACCELERATION
1	0.1315E+01	0.2896E+00	0.3081E+00
2	0.1587E+01	0.3719E+00	0.3719E+00
3	0.2801E+01	0.6405E+00	0.6471E+00
4	0.3430E+01	0.5341E+00	0.5489E+00
5	0.3601E+01	0.5338E+00	0.5513E+00
6	0.3898E+01	0.4713E+00	0.4888E+00
7	0.4259E+01	0.5829E+00	0.6057E+00
8	0.5689E+01	0.4766E+00	0.4884E+00
9	0.7468E+01	0.3793E+00	0.3662E+00
10	0.8071E+01	0.2902E+00	0.2793E+00
11	0.8307E+01	0.2693E+00	0.2572E+00
12	0.1018E+02	0.2292E+00	0.2048E+00
13	0.1063E+02	0.2138E+00	0.1878E+00
14	0.1204E+02	0.2131E+00	0.1766E+00
15	0.1313E+02	0.2089E+00	0.1648E+00
16	0.1344E+02	0.2036E+00	0.1564E+00
17	0.1479E+02	0.1943E+00	0.1412E+00
18	0.1609E+02	0.1875E+00	0.1267E+00
19	0.1660E+02	0.1873E+00	0.1228E+00
20	0.1796E+02	0.1841E+00	0.1104E+00
21	0.1826E+02	0.1850E+00	0.1083E+00
22	0.1964E+02	0.1894E+00	0.9894E-01
23	0.2089E+02	0.1867E+00	0.8596E-01
24	0.2217E+02	0.1837E+00	0.7138E-01
25	0.2306E+02	0.1867E+00	0.6182E-01
26	0.2349E+02	0.1886E+00	0.5652E-01
27	0.2362E+02	0.1892E+00	0.5470E-01
28	0.2418E+02	0.1903E+00	0.5320E-01
29	0.2532E+02	0.1901E+00	0.5076E-01
30	0.2624E+02	0.1899E+00	0.4895E-01
31	0.2673E+02	0.1891E+00	0.4783E-01
32	0.2689E+02	0.1886E+00	0.4744E-01
33	0.2754E+02	0.1856E+00	0.4556E-01
34	0.3292E+02	0.1830E+00	0.3760E-01

SPECTRUM PARAMETERS
 CURVE NO 11 F1 = 2.34840 F2 = 23.67120 FL = 1.39848 FH = 6.75894

INPUT SPECTRUM CURVE NUMBER = 11
 NUMBER OF DEFINITION POINTS = 34
 DAMPING RATIO FOR THIS CURVE = 0.22875E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION	CALCULATED VELOCITY SPECTRAL ACCELERATION
1	0.1315E+01	0.2894E+00	0.3079E+00
2	0.1587E+01	0.3197E+00	0.3365E+00
3	0.1875E+01	0.3517E+00	0.3672E+00
4	0.2178E+01	0.3854E+00	0.4002E+00
5	0.2497E+01	0.4208E+00	0.4354E+00
6	0.2832E+01	0.4588E+00	0.4727E+00
7	0.3183E+01	0.5000E+00	0.5121E+00
8	0.3550E+01	0.5444E+00	0.5536E+00
9	0.3934E+01	0.5920E+00	0.6072E+00
10	0.4335E+01	0.6428E+00	0.6630E+00
11	0.4753E+01	0.6968E+00	0.7210E+00
12	0.5188E+01	0.7540E+00	0.7812E+00
13	0.5640E+01	0.8144E+00	0.8436E+00
14	0.6109E+01	0.8780E+00	0.9082E+00
15	0.6595E+01	0.9448E+00	0.9750E+00
16	0.7098E+01	0.1014E+01	0.1044E+01
17	0.7618E+01	0.1078E+01	0.1116E+01
18	0.8154E+01	0.1140E+01	0.1188E+01
19	0.8706E+01	0.1200E+01	0.1260E+01
20	0.9274E+01	0.1258E+01	0.1332E+01
21	0.9858E+01	0.1314E+01	0.1404E+01
22	0.1045E+02	0.1368E+01	0.1476E+01
23	0.1103E+02	0.1420E+01	0.1548E+01
24	0.1162E+02	0.1470E+01	0.1620E+01
25	0.1222E+02	0.1518E+01	0.1692E+01
26	0.1283E+02	0.1564E+01	0.1764E+01
27	0.1345E+02	0.1608E+01	0.1836E+01
28	0.1408E+02	0.1650E+01	0.1908E+01
29	0.1472E+02	0.1690E+01	0.1980E+01
30	0.1537E+02	0.1728E+01	0.2052E+01
31	0.1603E+02	0.1764E+01	0.2124E+01
32	0.1670E+02	0.1798E+01	0.2196E+01
33	0.1738E+02	0.1830E+01	0.2268E+01
34	0.1807E+02	0.1860E+01	0.2340E+01

SPECTRUM PARAMETERS
 CURVE NO 12 F1 = 2.32714 F2 = 23.67120 FL = 1.40049 FH = 6.72581

INPUT SPECTRUM CURVE NUMBER = 12
 NUMBER OF DEFINITION POINTS = 34
 DAMPING RATIO FOR THIS CURVE = 0.23447E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION	CALCULATED VELOCITY SPECTRAL ACCELERATION
1	0.1315E+01	0.2878E+00	0.3066E+00
2	0.1587E+01	0.3197E+00	0.3365E+00
3	0.1875E+01	0.3517E+00	0.3672E+00
4	0.2178E+01	0.3854E+00	0.4002E+00
5	0.2497E+01	0.4208E+00	0.4354E+00
6	0.2832E+01	0.4588E+00	0.4727E+00
7	0.3183E+01	0.5000E+00	0.5121E+00
8	0.3550E+01	0.5444E+00	0.5536E+00
9	0.3934E+01	0.5920E+00	0.6072E+00
10	0.4335E+01	0.6428E+00	0.6630E+00
11	0.4753E+01	0.6968E+00	0.7210E+00
12	0.5188E+01	0.7540E+00	0.7812E+00
13	0.5640E+01	0.8144E+00	0.8436E+00
14	0.6109E+01	0.8780E+00	0.9082E+00
15	0.6595E+01	0.9448E+00	0.9750E+00
16	0.7098E+01	0.1014E+01	0.1044E+01
17	0.7618E+01	0.1078E+01	0.1116E+01
18	0.8154E+01	0.1140E+01	0.1188E+01
19	0.8706E+01	0.1200E+01	0.1260E+01
20	0.9274E+01	0.1258E+01	0.1332E+01
21	0.9858E+01	0.1314E+01	0.1404E+01
22	0.1045E+02	0.1368E+01	0.1476E+01
23	0.1103E+02	0.1420E+01	0.1548E+01
24	0.1162E+02	0.1470E+01	0.1620E+01
25	0.1222E+02	0.1518E+01	0.1692E+01
26	0.1283E+02	0.1564E+01	0.1764E+01
27	0.1345E+02	0.1608E+01	0.1836E+01
28	0.1408E+02	0.1650E+01	0.1908E+01
29	0.1472E+02	0.1690E+01	0.1980E+01
30	0.1537E+02	0.1728E+01	0.2052E+01
31	0.1603E+02	0.1764E+01	0.2124E+01
32	0.1670E+02	0.1798E+01	0.2196E+01
33	0.1738E+02	0.1830E+01	0.2268E+01
34	0.1807E+02	0.1860E+01	0.2340E+01

SPECTRUM PARAMETERS
 CURVE NO 13 F1 = 2.30579 F2 = 23.67120 FL = 1.40163 FH = 6.69254

INPUT SPECTRUM CURVE NUMBER = 13
 NUMBER OF DEFINITION POINTS = 34
 DAMPING RATIO FOR THIS CURVE = 0.24048E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION	CALCULATED VELOCITY SPECTRAL ACCELERATION
1	0.1315E+01	0.2861E+00	0.3052E+00
2	0.1587E+01	0.3181E+00	0.3359E+00
3	0.1875E+01	0.3501E+00	0.3666E+00
4	0.2178E+01	0.3838E+00	0.3996E+00
5	0.2497E+01	0.4192E+00	0.4348E+00
6	0.2832E+01	0.4562E+00	0.4721E+00
7	0.3183E+01	0.4948E+00	0.5115E+00
8	0.3550E+01	0.5350E+00	0.5526E+00
9	0.3934E+01	0.5768E+00	0.5954E+00
10	0.4335E+01	0.6202E+00	0.6400E+00
11	0.4753E+01	0.6652E+00	0.6862E+00
12	0.5188E+01	0.7118E+00	0.7340E+00
13	0.5640E+01	0.7598E+00	0.7834E+00
14	0.6109E+01	0.8092E+00	0.8344E+00
15	0.6595E+01	0.8598E+00	0.8870E+00
16	0.7098E+01	0.9116E+00	0.9412E+00
17	0.7618E+01	0.9646E+00	0.9970E+00
18	0.8154E+01	0.1018E+01	0.1058E+01
19	0.8706E+01	0.1078E+01	0.1118E+01
20	0.9274E+01	0.1136E+01	0.1178E+01
21	0.9858E+01	0.1192E+01	0.1238E+01
22	0.1045E+02	0.1246E+01	0.1298E+01
23	0.1103E+02	0.1298E+01	0.1358E+01
24	0.1162E+02	0.1348E+01	0.1418E+01
25	0.1222E+02	0.1396E+01	0.1478E+01
26	0.1283E+02	0.1442E+01	0.1538E+01
27	0.1345E+02	0.1486E+01	0.1598E+01
28	0.1408E+02	0.1528E+01	0.1658E+01
29	0.1472E+02	0.1568E+01	0.1718E+01
30	0.1537E+02	0.1606E+01	0.1778E+01
31	0.1603E+02	0.1642E+01	0.1838E+01
32	0.1670E+02	0.1676E+01	0.1898E+01
33	0.1738E+02	0.1708E+01	0.1958E+01
34	0.1807E+02	0.1738E+01	0.2018E+01

SPECTRUM PARAMETERS
 CURVE NO 14 F1 = 2.29352 F2 = 23.67120 FL = 1.40183 FH = 6.67405

INPUT SPECTRUM CURVE NUMBER = 14
 NUMBER OF DEFINITION POINTS = 34
 DAMPING RATIO FOR THIS CURVE = 0.24387E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION	CALCULATED VELOCITY SPECTRAL ACCELERATION
1	0.1315E+01	0.2852E+00	0.3045E+00
2	0.1587E+01	0.3172E+00	0.3352E+00
3	0.1875E+01	0.3492E+00	0.3660E+00
4	0.2178E+01	0.3830E+00	0.3990E+00
5	0.2497E+01	0.4184E+00	0.4342E+00
6	0.2832E+01	0.4554E+00	0.4715E+00
7	0.3183E+01	0.4940E+00	0.5109E+00
8	0.3550E+01	0.5342E+00	0.5520E+00
9	0.3934E+01	0.5760E+00	0.5948E+00
10	0.4335E+01	0.6194E+00	0.6394E+00
11	0.4753E+01	0.6644E+00	0.6856E+00
12	0.5188E+01	0.7110E+00	0.7334E+00
13	0.5640E+01	0.7590E+00	0.7828E+00
14	0.6109E+01	0.8084E+00	0.8338E+00
15	0.6595E+01	0.8590E+00	0.8864E+00
16	0.7098E+01	0.9108E+00	0.9406E+00
17	0.7618E+01	0.9638E+00	0.9964E+00
18	0.8154E+01	0.1018E+01	0.1058E+01
19	0.8706E+01	0.1078E+01	0.1118E+01
20	0.9274E+01	0.1136E+01	0.1178E+01
21	0.9858E+01	0.1192E+01	0.1238E+01
22	0.1045E+02	0.1246E+01	0.1298E+01
23	0.1103E+02	0.1298E+01	0.1358E+01
24	0.1162E+02	0.1348E+01	0.1418E+01
25	0.1222E+02	0.1396E+01	0.1478E+01
26	0.1283E+02	0.1442E+01	0.1538E+01
27	0.1345E+02	0.1486E+01	0.1598E+01
28	0.1408E+02	0.1528E+01	0.1658E+01
29	0.1472E+02	0.1568E+01	0.1718E+01
30	0.1537E+02	0.1606E+01	0.1778E+01
31	0.1603E+02	0.1642E+01	0.1838E+01
32	0.1670E+02	0.1676E+01	0.1898E+01
33	0.1738E+02	0.1708E+01	0.1958E+01
34	0.1807E+02	0.1738E+01	0.2018E+01

SPECTRUM PARAMETERS
CURVE NO 15 FL = 2.24336 F2 = 23.67120 FL = 1.40261 PH = 6.59550

INPUT SPECTRUM CURVE NUMBER = 15
NUMBER OF DEFINITION POINTS = 34
DAMPING RATIO FOR THIS CURVE = 0.25493E-01

Table with 4 columns: INPUT POINT, FREQUENCY (HZ), INPUT SPECTRAL ACCELERATION, CALCULATED VELOCITY SPECTRAL ACCELERATION. Contains 34 rows of data.

SPECTRUM PARAMETERS

CURVE NO 16 FL = 2.22143 F2 = 23.67120 FL = 1.40170 PH = 6.56109

INPUT SPECTRUM CURVE NUMBER = 16
NUMBER OF DEFINITION POINTS = 34
DAMPING RATIO FOR THIS CURVE = 0.24665E-01

Table with 4 columns: INPUT POINT, FREQUENCY (HZ), INPUT SPECTRAL ACCELERATION, CALCULATED VELOCITY SPECTRAL ACCELERATION. Contains 34 rows of data.

SPECTRUM PARAMETERS

SPECTRUM PARAMETERS
CURVE NO 17 FL = 2.19744 F2 = 23.67120 FL = 1.40073 PH = 6.52372

INPUT SPECTRUM CURVE NUMBER = 17
NUMBER OF DEFINITION POINTS = 34
DAMPING RATIO FOR THIS CURVE = 0.27495E-01

Table with 4 columns: INPUT POINT, FREQUENCY (HZ), INPUT SPECTRAL ACCELERATION, CALCULATED VELOCITY SPECTRAL ACCELERATION. Contains 34 rows of data.

SPECTRUM PARAMETERS

CURVE NO 18 FL = 2.18019 F2 = 23.67120 FL = 1.39996 PH = 6.49664

INPUT SPECTRUM CURVE NUMBER = 18
NUMBER OF DEFINITION POINTS = 34
DAMPING RATIO FOR THIS CURVE = 0.28182E-01

Table with 4 columns: INPUT POINT, FREQUENCY (HZ), INPUT SPECTRAL ACCELERATION, CALCULATED VELOCITY SPECTRAL ACCELERATION. Contains 34 rows of data.

SPECTRUM PARAMETERS

CURVE NO 19 F1 = 2.11601 F2 = 23.67120 F3 = 1.39563 FH = 6.42800

INPUT SPECTRUM CURVE NUMBER = 19

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.29824E-01

Table with 4 columns: INPUT POINT, FREQUENCY (HZ), INPUT SPECTRAL ACCELERATION, CALCULATED VELOCITY SPECTRAL ACCELERATION. Contains 34 rows of data.

SPECTRUM PARAMETERS

CURVE NO 20 F1 = 2.12682 F2 = 23.67120 F3 = 1.39757 FH = 6.41366

INPUT SPECTRUM CURVE NUMBER = 20

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.30201E-01

Table with 4 columns: INPUT POINT, FREQUENCY (HZ), INPUT SPECTRAL ACCELERATION, CALCULATED VELOCITY SPECTRAL ACCELERATION. Contains 34 rows of data.

SPECTRUM PARAMETERS

CURVE NO 21 F1 = 2.08563 F2 = 23.67120 F3 = 1.39565 FH = 6.34950

INPUT SPECTRUM CURVE NUMBER = 21

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.31895E-01

Table with 4 columns: INPUT POINT, FREQUENCY (HZ), INPUT SPECTRAL ACCELERATION, CALCULATED VELOCITY SPECTRAL ACCELERATION. Contains 34 rows of data.

SPECTRUM PARAMETERS

CURVE NO 22 F1 = 2.05155 F2 = 23.67120 F3 = 1.39393 FH = 6.29640

INPUT SPECTRUM CURVE NUMBER = 22

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.31622E-01

Table with 4 columns: INPUT POINT, FREQUENCY (HZ), INPUT SPECTRAL ACCELERATION, CALCULATED VELOCITY SPECTRAL ACCELERATION. Contains 34 rows of data.

SPECTRUM PARAMETERS

CURVE NO 23 F1 = 2.01910 F2 = 23.67120 F3 = 1.39222 FH = 6.24584

INPUT SPECTRUM CURVE NUMBER = 23

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.35322E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION	CALCULATED VELOCITY SPECTRAL ACCELERATION
1	0.1315E+01	0.2658E+00	0.2812E+00
2	0.1587E+01	0.3394E+00	0.3394E+00
3	0.2801E+01	0.5022E+00	0.5231E+00
4	0.3430E+01	0.4359E+00	0.4628E+00
5	0.3601E+01	0.4302E+00	0.4576E+00
6	0.3898E+01	0.3991E+00	0.4245E+00
7	0.4259E+01	0.4969E+00	0.5260E+00
8	0.5687E+01	0.4371E+00	0.4460E+00
9	0.7468E+01	0.3165E+00	0.3012E+00
10	0.8071E+01	0.2442E+00	0.2265E+00
11	0.8307E+01	0.2378E+00	0.2183E+00
12	0.1018E+02	0.2189E+00	0.1844E+00
13	0.1063E+02	0.2026E+00	0.1670E+00
14	0.1204E+02	0.2007E+00	0.1543E+00
15	0.1313E+02	0.2002E+00	0.1454E+00
16	0.1344E+02	0.1973E+00	0.1409E+00
17	0.1479E+02	0.1920E+00	0.1272E+00
18	0.1609E+02	0.1897E+00	0.1231E+00
19	0.1660E+02	0.1872E+00	0.1108E+00
20	0.1796E+02	0.1852E+00	0.9962E-01
21	0.1826E+02	0.1859E+00	0.9776E-01
22	0.1964E+02	0.1848E+00	0.8832E-01
23	0.2089E+02	0.1864E+00	0.7702E-01
24	0.2217E+02	0.1850E+00	0.6473E-01
25	0.2306E+02	0.1865E+00	0.5622E-01
26	0.2349E+02	0.1878E+00	0.5170E-01
27	0.2362E+02	0.1882E+00	0.5021E-01
28	0.2418E+02	0.1850E+00	0.4862E-01
29	0.2532E+02	0.1894E+00	0.4671E-01
30	0.2624E+02	0.1888E+00	0.4495E-01
31	0.2673E+02	0.1881E+00	0.4395E-01
32	0.2689E+02	0.1878E+00	0.4363E-01
33	0.2754E+02	0.1860E+00	0.4218E-01
34	0.3292E+02	0.1834E+00	0.3480E-01

SPECTRUM PARAMETERS

CURVE NO 24 F1 = 1.99785 F2 = 23.67120 FL = 1.39103 FH = 6.21272

INPUT SPECTRUM CURVE NUMBER = 24

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.36512E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION	CALCULATED VELOCITY SPECTRAL ACCELERATION
1	0.1315E+01	0.2635E+00	0.2788E+00
2	0.1587E+01	0.3360E+00	0.3360E+00
3	0.2801E+01	0.4928E+00	0.5147E+00
4	0.3430E+01	0.4283E+00	0.4559E+00
5	0.3601E+01	0.4226E+00	0.4505E+00
6	0.3898E+01	0.3934E+00	0.4392E+00
7	0.4259E+01	0.4906E+00	0.5207E+00
8	0.5689E+01	0.4312E+00	0.4418E+00
9	0.7468E+01	0.3113E+00	0.2965E+00
10	0.8071E+01	0.2409E+00	0.2227E+00
11	0.8307E+01	0.2356E+00	0.2155E+00
12	0.1018E+02	0.2142E+00	0.1828E+00
13	0.1063E+02	0.2019E+00	0.1655E+00
14	0.1204E+02	0.2002E+00	0.1530E+00
15	0.1313E+02	0.1997E+00	0.1441E+00
16	0.1344E+02	0.1969E+00	0.1397E+00
17	0.1479E+02	0.1919E+00	0.1261E+00
18	0.1609E+02	0.1897E+00	0.1152E+00
19	0.1660E+02	0.1872E+00	0.1100E+00
20	0.1796E+02	0.1853E+00	0.9982E-01
21	0.1826E+02	0.1860E+00	0.9695E-01
22	0.1964E+02	0.1887E+00	0.8752E-01
23	0.2089E+02	0.1868E+00	0.7637E-01
24	0.2217E+02	0.1851E+00	0.6425E-01
25	0.2306E+02	0.1865E+00	0.5584E-01
26	0.2349E+02	0.1878E+00	0.5135E-01
27	0.2362E+02	0.1881E+00	0.4992E-01
28	0.2418E+02	0.1869E+00	0.4854E-01
29	0.2532E+02	0.1893E+00	0.4645E-01
30	0.2624E+02	0.1888E+00	0.4470E-01
31	0.2673E+02	0.1880E+00	0.4370E-01
32	0.2689E+02	0.1877E+00	0.4338E-01
33	0.2754E+02	0.1860E+00	0.4196E-01
34	0.3292E+02	0.1834E+00	0.3462E-01

SPECTRUM PARAMETERS

CURVE NO 25 F1 = 1.98785 F2 = 23.67120 FL = 1.39046 FH = 6.19715

INPUT SPECTRUM CURVE NUMBER = 25

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.37098E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION	CALCULATED VELOCITY SPECTRAL ACCELERATION
1	0.1315E+01	0.2625E+00	0.2777E+00
2	0.1587E+01	0.3352E+00	0.3352E+00
3	0.2801E+01	0.4883E+00	0.5104E+00
4	0.3430E+01	0.4247E+00	0.4526E+00
5	0.3601E+01	0.4196E+00	0.4478E+00
6	0.3898E+01	0.3906E+00	0.4166E+00
7	0.4259E+01	0.4876E+00	0.5179E+00
8	0.5689E+01	0.4316E+00	0.4398E+00
9	0.7468E+01	0.3103E+00	0.2942E+00
10	0.8071E+01	0.2394E+00	0.2208E+00
11	0.8307E+01	0.2346E+00	0.2142E+00
12	0.1018E+02	0.2178E+00	0.1821E+00
13	0.1063E+02	0.2015E+00	0.1648E+00
14	0.1204E+02	0.2000E+00	0.1524E+00
15	0.1313E+02	0.1995E+00	0.1435E+00
16	0.1344E+02	0.1967E+00	0.1391E+00
17	0.1479E+02	0.1918E+00	0.1256E+00
18	0.1609E+02	0.1898E+00	0.1147E+00
19	0.1660E+02	0.1872E+00	0.1095E+00
20	0.1796E+02	0.1853E+00	0.9843E-01
21	0.1826E+02	0.1860E+00	0.9657E-01
22	0.1964E+02	0.1887E+00	0.8715E-01
23	0.2089E+02	0.1868E+00	0.7605E-01
24	0.2217E+02	0.1851E+00	0.6402E-01
25	0.2306E+02	0.1865E+00	0.5566E-01
26	0.2349E+02	0.1878E+00	0.5134E-01
27	0.2362E+02	0.1880E+00	0.4978E-01
28	0.2418E+02	0.1889E+00	0.4840E-01
29	0.2532E+02	0.1893E+00	0.4632E-01
30	0.2624E+02	0.1887E+00	0.4457E-01
31	0.2673E+02	0.1880E+00	0.4358E-01
32	0.2689E+02	0.1877E+00	0.4326E-01
33	0.2754E+02	0.1860E+00	0.4185E-01
34	0.3292E+02	0.1835E+00	0.3454E-01

SPECTRUM PARAMETERS

CURVE NO 26 F1 = 1.98480 F2 = 23.67120 FL = 1.39031 FH = 6.19240

INPUT SPECTRUM CURVE NUMBER = 26

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.37279E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION	CALCULATED VELOCITY SPECTRAL ACCELERATION
1	0.1315E+01	0.2622E+00	0.2773E+00
2	0.1587E+01	0.3348E+00	0.3348E+00
3	0.2801E+01	0.4869E+00	0.5096E+00
4	0.3430E+01	0.4235E+00	0.4516E+00
5	0.3601E+01	0.4187E+00	0.4470E+00
6	0.3898E+01	0.3897E+00	0.4158E+00
7	0.4259E+01	0.4867E+00	0.5170E+00
8	0.5689E+01	0.4308E+00	0.4392E+00
9	0.7468E+01	0.3097E+00	0.2935E+00
10	0.8071E+01	0.2389E+00	0.2203E+00
11	0.8307E+01	0.2342E+00	0.2138E+00
12	0.1018E+02	0.2177E+00	0.1819E+00
13	0.1063E+02	0.2014E+00	0.1646E+00
14	0.1204E+02	0.2000E+00	0.1522E+00
15	0.1313E+02	0.1994E+00	0.1433E+00
16	0.1344E+02	0.1967E+00	0.1390E+00
17	0.1479E+02	0.1918E+00	0.1255E+00
18	0.1609E+02	0.1898E+00	0.1146E+00
19	0.1660E+02	0.1873E+00	0.1094E+00
20	0.1796E+02	0.1853E+00	0.9831E-01
21	0.1826E+02	0.1860E+00	0.9645E-01
22	0.1964E+02	0.1888E+00	0.8703E-01
23	0.2089E+02	0.1868E+00	0.7596E-01
24	0.2217E+02	0.1851E+00	0.6395E-01
25	0.2306E+02	0.1865E+00	0.5561E-01
26	0.2349E+02	0.1877E+00	0.5119E-01
27	0.2362E+02	0.1880E+00	0.4973E-01
28	0.2418E+02	0.1889E+00	0.4835E-01
29	0.2532E+02	0.1892E+00	0.4628E-01
30	0.2624E+02	0.1887E+00	0.4454E-01
31	0.2673E+02	0.1880E+00	0.4355E-01
32	0.2689E+02	0.1877E+00	0.4323E-01
33	0.2754E+02	0.1860E+00	0.4182E-01
34	0.3292E+02	0.1835E+00	0.3451E-01

SPECTRUM PARAMETERS

CURVE NO 27 F1 = 1.97915 F2 = 23.67120 FL = 1.38968 FH = 6.18359

INPUT SPECTRUM CURVE NUMBER = 27

NUMBER OF DEFINITION POINTS = 34
DAMPING RATIO FOR THIS CURVE = 0.16018E-01

Table with 5 columns: INPUT POINT, FREQUENCY (HZ), INPUT SPECTRAL ACCELERATION, CALCULATED VELOCITY SPECTRAL ACCELERATION, and SPECTRUM PARAMETERS.

SPECTRUM PARAMETERS
CURVE NO 28 F1 = 1.86971 F2 = 23.67120 FL = 1.38830 FH = 6.16887

INPUT SPECTRUM CURVE NUMBER = 28

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.19561E-01

Table with 5 columns: INPUT POINT, FREQUENCY (HZ), INPUT SPECTRAL ACCELERATION, CALCULATED VELOCITY SPECTRAL ACCELERATION, and SPECTRUM PARAMETERS.

SPECTRUM PARAMETERS
CURVE NO 29 F1 = 1.66158 F2 = 23.67120 FL = 1.38719 FH = 6.15776

INPUT SPECTRUM CURVE NUMBER = 29

NUMBER OF DEFINITION POINTS = 34
DAMPING RATIO FOR THIS CURVE = 0.40817E-01

Table with 5 columns: INPUT POINT, FREQUENCY (HZ), INPUT SPECTRAL ACCELERATION, CALCULATED VELOCITY SPECTRAL ACCELERATION, and SPECTRUM PARAMETERS.

SPECTRUM PARAMETERS
CURVE NO 30 F1 = 1.95893 F2 = 23.67120 FL = 1.38663 FH = 6.15269

INPUT SPECTRUM CURVE NUMBER = 30

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.41519E-01

Table with 5 columns: INPUT POINT, FREQUENCY (HZ), INPUT SPECTRAL ACCELERATION, CALCULATED VELOCITY SPECTRAL ACCELERATION, and SPECTRUM PARAMETERS.

SPECTRUM PARAMETERS
CURVE NO 31 F1 = 1.95762 F2 = 23.67120 FL = 1.38653 FH = 6.15035

INPUT SPECTRUM CURVE NUMBER = 31

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.41730E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION	CALCULATED VELOCITY SPECTRAL ACCELERATION
1	0.1315E+01	0.2549E+00	0.2689E+00
2	0.1587E+01	0.3246E+00	0.3246E+00
3	0.2801E+01	0.4563E+00	0.4808E+00
4	0.3430E+01	0.3982E+00	0.4275E+00
5	0.3601E+01	0.3972E+00	0.4258E+00
6	0.3898E+01	0.3762E+00	0.4038E+00
7	0.4259E+01	0.4657E+00	0.4970E+00
8	0.5689E+01	0.4347E+00	0.4247E+00
9	0.7468E+01	0.5970E+00	0.7488E+00
10	0.8071E+01	0.2218E+00	0.2086E+00
11	0.8307E+01	0.2042E+00	0.2053E+00
12	0.1018E+02	0.2108E+00	0.1774E+00
13	0.1063E+02	0.1878E+00	0.1602E+00
14	0.1204E+02	0.1988E+00	0.1489E+00
15	0.1313E+02	0.1978E+00	0.1390E+00
16	0.1344E+02	0.1958E+00	0.1357E+00
17	0.1479E+02	0.1914E+00	0.1227E+00
18	0.1609E+02	0.1900E+00	0.1122E+00
19	0.1660E+02	0.1874E+00	0.1070E+00
20	0.1796E+02	0.1855E+00	0.9615E-01
21	0.1826E+02	0.1862E+00	0.9429E-01
22	0.1964E+02	0.1884E+00	0.8493E-01
23	0.2089E+02	0.1867E+00	0.7421E-01
24	0.2217E+02	0.1854E+00	0.6285E-01
25	0.2306E+02	0.1865E+00	0.5480E-01
26	0.2349E+02	0.1875E+00	0.5067E-01
27	0.2362E+02	0.1878E+00	0.4931E-01
28	0.2418E+02	0.1885E+00	0.4795E-01
29	0.2512E+02	0.1890E+00	0.4590E-01
30	0.2624E+02	0.1884E+00	0.4417E-01
31	0.2673E+02	0.1875E+00	0.4318E-01
32	0.2689E+02	0.1875E+00	0.4288E-01
33	0.2754E+02	0.1850E+00	0.4154E-01
34	0.3252E+02	0.1835E+00	0.3429E-01

SPECTRUM PARAMETERS

CURVE NO 32 F1 = 1.95566 F2 = 23.67120 FL = 1.38616 FH = 6.14700

INPUT SPECTRUM CURVE NUMBER = 32

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.42150E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION	CALCULATED VELOCITY SPECTRAL ACCELERATION
1	0.1315E+01	0.2542E+00	0.2681E+00
2	0.1587E+01	0.3216E+00	0.3236E+00
3	0.2801E+01	0.4538E+00	0.4783E+00
4	0.3430E+01	0.3967E+00	0.4256E+00
5	0.3601E+01	0.3953E+00	0.4250E+00
6	0.3898E+01	0.3756E+00	0.4033E+00
7	0.4259E+01	0.4638E+00	0.4952E+00
8	0.5689E+01	0.4153E+00	0.4234E+00
9	0.7468E+01	0.2947E+00	0.2775E+00
10	0.8071E+01	0.2268E+00	0.2075E+00
11	0.8307E+01	0.2262E+00	0.2046E+00
12	0.1018E+02	0.2148E+00	0.1770E+00
13	0.1063E+02	0.1985E+00	0.1599E+00
14	0.1204E+02	0.1987E+00	0.1468E+00
15	0.1313E+02	0.1977E+00	0.1392E+00
16	0.1344E+02	0.1956E+00	0.1354E+00
17	0.1479E+02	0.1918E+00	0.1224E+00
18	0.1609E+02	0.1900E+00	0.1123E+00
19	0.1660E+02	0.1874E+00	0.1068E+00
20	0.1796E+02	0.1855E+00	0.9596E-01
21	0.1826E+02	0.1862E+00	0.9409E-01
22	0.1964E+02	0.1884E+00	0.8472E-01
23	0.2089E+02	0.1867E+00	0.7414E-01
24	0.2217E+02	0.1854E+00	0.6276E-01
25	0.2306E+02	0.1865E+00	0.5479E-01
26	0.2349E+02	0.1875E+00	0.5063E-01
27	0.2362E+02	0.1878E+00	0.4927E-01
28	0.2418E+02	0.1885E+00	0.4792E-01
29	0.2512E+02	0.1890E+00	0.4587E-01
30	0.2624E+02	0.1884E+00	0.4414E-01
31	0.2673E+02	0.1875E+00	0.4316E-01
32	0.2689E+02	0.1875E+00	0.4285E-01
33	0.2754E+02	0.1850E+00	0.4152E-01
34	0.3252E+02	0.1835E+00	0.3428E-01

SPECTRUM PARAMETERS

CURVE NO 33 F1 = 1.95318 F2 = 23.67120 FL = 1.38589 FH = 6.14713

INPUT SPECTRUM CURVE NUMBER = 33

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.42637E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION	CALCULATED VELOCITY SPECTRAL ACCELERATION
1	0.1315E+01	0.2535E+00	0.2672E+00
2	0.1587E+01	0.3228E+00	0.3226E+00
3	0.2801E+01	0.4506E+00	0.4755E+00
4	0.3430E+01	0.3939E+00	0.4234E+00
5	0.3601E+01	0.3931E+00	0.4223E+00
6	0.3898E+01	0.3748E+00	0.4027E+00
7	0.4259E+01	0.4617E+00	0.4932E+00
8	0.5689E+01	0.4318E+00	0.4218E+00
9	0.7468E+01	0.2933E+00	0.2760E+00
10	0.8071E+01	0.2257E+00	0.2064E+00
11	0.8307E+01	0.2254E+00	0.2037E+00
12	0.1018E+02	0.2145E+00	0.1765E+00
13	0.1063E+02	0.1983E+00	0.1594E+00
14	0.1204E+02	0.1986E+00	0.1482E+00
15	0.1313E+02	0.1976E+00	0.1389E+00
16	0.1344E+02	0.1955E+00	0.1350E+00
17	0.1479E+02	0.1913E+00	0.1223E+00
18	0.1609E+02	0.1900E+00	0.1118E+00
19	0.1660E+02	0.1874E+00	0.1066E+00
20	0.1796E+02	0.1856E+00	0.9574E-01
21	0.1826E+02	0.1862E+00	0.9387E-01
22	0.1964E+02	0.1863E+00	0.8450E-01
23	0.2089E+02	0.1847E+00	0.7396E-01
24	0.2217E+02	0.1848E+00	0.6263E-01
25	0.2306E+02	0.1865E+00	0.5472E-01
26	0.2349E+02	0.1875E+00	0.5058E-01
27	0.2362E+02	0.1878E+00	0.4923E-01
28	0.2418E+02	0.1885E+00	0.4788E-01
29	0.2512E+02	0.1889E+00	0.4584E-01
30	0.2624E+02	0.1884E+00	0.4410E-01
31	0.2673E+02	0.1875E+00	0.4312E-01
32	0.2689E+02	0.1874E+00	0.4283E-01
33	0.2754E+02	0.1860E+00	0.4150E-01
34	0.3252E+02	0.1835E+00	0.3426E-01

SPECTRUM PARAMETERS

CURVE NO 34 F1 = 1.92340 F2 = 23.67120 FL = 1.38110 FH = 6.09673

INPUT SPECTRUM CURVE NUMBER = 34

NUMBER OF DEFINITION POINTS = 34

DAMPING RATIO FOR THIS CURVE = 0.50000E-01

INPUT POINT	FREQUENCY (HZ)	INPUT SPECTRAL ACCELERATION	CALCULATED VELOCITY SPECTRAL ACCELERATION
1	0.1315E+01	0.2420E+00	0.2543E+00
2	0.1587E+01	0.3069E+00	0.3069E+00
3	0.2801E+01	0.4104E+00	0.4375E+00
4	0.3430E+01	0.3625E+00	0.3775E+00
5	0.3601E+01	0.3622E+00	0.3635E+00
6	0.3898E+01	0.3635E+00	0.3938E+00
7	0.4259E+01	0.4326E+00	0.4653E+00
8	0.5689E+01	0.3914E+00	0.3990E+00
9	0.7468E+01	0.2744E+00	0.2562E+00
10	0.8071E+01	0.2127E+00	0.1924E+00
11	0.8307E+01	0.2270E+00	0.1970E+00
12	0.1018E+02	0.2104E+00	0.1700E+00
13	0.1063E+02	0.1980E+00	0.1561E+00
14	0.1204E+02	0.1973E+00	0.1438E+00
15	0.1313E+02	0.1958E+00	0.1340E+00
16	0.1344E+02	0.1942E+00	0.1306E+00
17	0.1479E+02	0.1908E+00	0.1182E+00
18	0.1609E+02	0.1907E+00	0.1082E+00
19	0.1660E+02	0.1875E+00	0.1032E+00
20	0.1796E+02	0.1858E+00	0.9266E-01
21	0.1826E+02	0.1843E+00	0.9078E-01
22	0.1964E+02	0.1840E+00	0.8153E-01
23	0.2089E+02	0.1867E+00	0.7164E-01
24	0.2217E+02	0.1857E+00	0.6113E-01
25	0.2306E+02	0.1848E+00	0.5378E-01
26	0.2349E+02	0.1848E+00	0.4999E-01
27	0.2362E+02	0.1848E+00	0.4873E-01
28	0.2418E+02	0.1840E+00	0.4741E-01
29	0.2512E+02	0.1845E+00	0.4539E-01
30	0.2624E+02	0.1879E+00	0.4367E-01
31	0.2673E+02	0.1873E+00	0.4271E-01
32	0.2689E+02	0.1871E+00	0.4242E-01
33	0.2754E+02	0.1840E+00	0.4118E-01
34	0.3252E+02	0.1837E+00	0.3402E-01

INTERPOLATED SPECTRAL ACCELERATIONS FOR CORRESPONDING FREQUENCIES & DAMPING RATIOS

FREQUENCY (HZ)	DAMPING RATIO (%)	SPECTRAL ACCELERATIONS SA0	SPECTRAL ACCELERATIONS SA0.5
0.13145E+01	0.50000E-01	0.2420E+00	0.2543E+00
0.15867E+01	0.42150E-01	0.3246E+00	0.3236E+00
0.28009E+01	0.26665E-01	0.5862E+00	0.5996E+00
0.34301E+01	0.23447E-01	0.5283E+00	0.5447E+00

craft.out

COMBINED VALUES OF COUPLED MODAL DISPLACEMENTS

DISPLACEMENTS AT PRIMARY SYSTEM CONNECTING DOF

DOF #	DISPLACEMENT
3041	0.330E-02
3042	0.0000E+00
3043	0.1648E-05
3061	0.5770E-05
3063	0.6272E-05
3072	0.0003E+00
3081	0.9291E-02
3103	0.2240E-04
3121	0.1843E-01
3122	0.0000E+00
3123	0.2948E-04
3091	0.1076E-01
3082	0.0000E+00
3093	0.1400E-04

DISPLACEMENTS AT SECONDARY SYSTEM DOF

MODE	DX	DY	DZ	ROT-X	ROT-Y	ROT-Z
1	0.2170E-02	0.1501E-08	0.1668E-05	0.7443E-10	0.1899E-08	0.1272E-09
2	0.2383E-02	0.1968E-03	0.4473E-03	0.7759E-04	0.1809E-03	0.1361E-03
3	0.1143E-02	0.4589E-02	0.5755E-02	0.2574E-03	0.5339E-03	0.4141E-03
4	0.3143E-02	0.2087E-01	0.2604E-01	0.5712E-03	0.9874E-03	0.8124E-03
5	0.3143E-02	0.3287E-01	0.4021E-01	0.7294E-03	0.1201E-02	0.9965E-03
9001	0.3192E-02	0.3476E-01	0.4243E-01	0.7479E-03	0.1260E-02	0.1045E-02
9002	0.3755E-02	0.3621E-01	0.4417E-01	0.7622E-03	0.1314E-02	0.1091E-02
6	0.522E-02	0.1675E-01	0.4684E-01	0.7840E-03	0.1163E-02	0.1132E-02
7	0.7465E-02	0.1675E-01	0.4519E-01	0.7985E-03	0.1419E-02	0.1154E-02
9003	0.8844E-02	0.1676E-01	0.5574E-01	0.6676E-03	0.2492E-02	0.9007E-03
9004	0.5933E-01	0.1676E-01	0.5601E-01	0.5230E-03	0.1674E-02	0.5061E-03
9	0.676E-02	0.1676E-01	0.1322E-01	0.2031E-02	0.4887E-02	0.3043E-02
10	0.2467E-01	0.1676E-01	0.1356E-02	0.2381E-02	0.5098E-02	0.3549E-02
9005	0.1638E+00	0.1676E-01	0.9900E-01	0.3722E-02	0.6139E-02	0.5143E-02

craft.out

9006	0.3310E+00	0.1675E-01	0.2249E+00	0.4185E-02	0.7184E-02	0.5325E-02
11	0.4837E+00	0.1675E-01	0.3519E+00	0.3405E-02	0.8232E-02	0.4275E-02
12	0.5262E+00	0.1675E-01	0.3911E+00	0.3452E-02	0.8593E-02	0.3681E-02
9007	0.5328E+00	0.1675E-01	0.3999E+00	0.3377E-02	0.8653E-02	0.3466E-02
9008	0.5373E+00	0.1675E-01	0.4111E+00	0.3277E-02	0.8715E-02	0.3250E-02
13	0.5388E+00	0.2450E-01	0.4223E+00	0.3187E-02	0.8797E-02	0.3036E-02
14	0.5388E+00	0.1637E-01	0.4372E+00	0.3061E-02	0.8860E-02	0.2875E-02
15	0.5388E+00	0.1403E-02	0.4728E+00	0.2788E-02	0.8981E-02	0.2540E-02
16	0.5388E+00	0.3071E-01	0.5680E+00	0.2188E-02	0.9184E-02	0.1871E-02
17	0.5377E+00	0.3363E-01	0.5876E+00	0.2067E-02	0.9237E-02	0.1674E-02
18	0.5347E+00	0.3317E-01	0.6248E+00	0.1844E-02	0.9294E-02	0.1388E-02
19	0.5373E+00	0.1115E-01	0.6792E+00	0.1406E-02	0.9350E-02	0.1140E-02
20	0.5401E+00	0.8333E-02	0.8278E+00	0.1320E-02	0.9360E-02	0.1730E-02
21	0.5833E+00	0.3276E-02	0.8542E+00	0.1378E-02	0.9310E-02	0.2160E-02
9009	0.4623E+00	0.3279E-02	0.8793E+00	0.1355E-02	0.9115E-02	0.4000E-02
9010	0.2780E+00	0.3283E-02	0.8877E+00	0.1119E-02	0.8968E-02	0.5103E-02
22	0.5101E-01	0.3287E-02	0.8592E+00	0.1572E-02	0.8871E-02	0.6006E-02
23	0.1008E-01	0.3288E-02	0.8472E+00	0.1772E-02	0.8854E-02	0.6172E-02
24	0.1044E+00	0.3290E-02	0.8177E+00	0.2202E-02	0.8834E-02	0.6521E-02
9011	0.3290E+00	0.3294E-02	0.7323E+00	0.3095E-02	0.8822E-02	0.6947E-02
9012	0.5550E+00	0.3299E-02	0.6172E+00	0.3844E-02	0.8848E-02	0.6742E-02
25	0.7605E+00	0.3031E-02	0.4808E+00	0.4308E-02	0.8909E-02	0.5968E-02
26	0.8124E+00	0.3305E-02	0.4396E+00	0.4375E-02	0.8933E-02	0.5677E-02
9013	0.9728E+00	0.3311E-02	0.2845E+00	0.4307E-02	0.9048E-02	0.4579E-02
9014	0.1074E+01	0.3317E-02	0.1411E+00	0.3694E-02	0.9192E-02	0.3955E-02
27	0.1115E+01	0.3323E-02	0.2983E-01	0.2668E-02	0.9397E-02	0.4101E-02
28	0.1117E+01	0.3326E-02	0.8509E-03	0.1874E-02	0.9487E-02	0.4615E-02
29	0.1109E+01	0.3330E-02	0.2717E-01	0.9849E-03	0.9596E-02	0.5222E-02
9015	0.1072E+01	0.3338E-02	0.4071E-01	0.1859E-03	0.9864E-02	0.6166E-02
9016	0.1037E+01	0.3346E-02	0.2461E-01	0.6284E-03	0.1017E-01	0.6544E-02
30	0.1032E+01	0.3354E-02	0.8656E-02	0.4269E-03	0.1050E-01	0.6219E-02
31	0.1033E+01	0.3354E-02	0.8599E-02	0.4140E-03	0.1051E-01	0.4231E-02
32	0.1033E+01	0.2989E-02	0.8556E-02	0.3471E-03	0.1054E-01	0.6135E-02
35	0.9953E+00	0.2202E-02	0.8576E-02	0.2950E-03	0.1057E-01	0.6043E-02
37	0.9042E+00	0.4440E-03	0.8576E-02	0.2513E-03	0.1059E-01	0.5632E-02
9017	0.5698E+00	0.6541E-02	0.8575E-02	0.1516E-03	0.1002E-01	0.5022E-02
9018	0.2705E+00	0.9975E-02	0.8574E-02	0.7588E-04	0.8270E-02	0.4212E-02
38	0.5150E-01	0.1049E-01	0.8572E-02	0.4318E-04	0.5187E-02	0.3402E-02
39	0.1865E-01	0.1074E-01	0.8572E-02	0.4842E-04	0.3908E-02	0.3142E-02
9019	0.7044E-01	0.9009E-02	0.8571E-02	0.5471E-04	0.4011E-03	0.2290E-02
40	0.5140E-01	0.5881E-02	0.8569E-02	0.3140E-03	0.1276E-02	0.1438E-02
41	0.2260E-01	0.3396E-02	0.8558E-02	0.1287E-03	0.1209E-02	0.7024E-03
43	0.2163E-01	0.8945E-03	0.8789E-02	0.1373E-03	0.8847E-03	0.5243E-03
44	0.2163E-01	0.2766E-03	0.3558E-02	0.1115E-03	0.8362E-03	0.4966E-03
45	0.2163E-01	0.1500E-02	0.7168E-03	0.1150E-03	0.7148E-03	0.4252E-03
9020	0.2151E-01	0.7274E-02	0.8934E-02	0.3729E-03	0.4757E-04	0.2852E-04
46	0.2159E-01	0.4612E-02	0.6394E-02	0.2228E-03	0.1453E-03	0.1718E-03
47	0.2159E-01	0.4101E-02	0.6029E-02	0.2282E-03	0.1357E-03	0.1801E-03
91	0.2174E-01	0.4101E-02	0.5575E-02	0.2302E-03	0.1371E-03	0.1817E-03
92	0.2272E-01	0.4100E-02	0.4407E-02	0.2197E-03	0.8134E-04	0.2033E-03
93	0.2335E-01	0.3755E-02	0.4452E-02	0.1947E-03	0.8165E-04	0.2199E-03

94	0.2347E-01	0.3512E-02	0.4450E-02	0.1897E-03	0.8441E-04	0.2290E-03
95	0.2364E-01	0.3290E-02	0.4448E-02	0.1846E-03	0.8174E-04	0.2448E-03
96	0.2374E-01	0.3269E-02	0.4447E-02	0.1823E-03	0.7514E-04	0.2622E-03
97	0.2378E-01	0.3274E-02	0.4447E-02	0.1823E-03	0.7474E-04	0.2631E-03
98	0.2315E-01	0.3389E-02	0.4450E-02	0.1839E-03	0.7862E-04	0.2458E-03
100	0.2227E-01	0.3389E-02	0.4450E-02	0.1901E-03	0.5192E-04	0.2477E-03
101	0.2171E-01	0.3389E-02	0.4450E-02	0.1874E-03	0.5105E-04	0.2508E-03
102	0.2105E-01	0.3389E-02	0.4450E-02	0.1868E-03	0.4109E-04	0.2946E-03
113	0.2218E-01	0.3651E-02	0.4450E-02	0.1462E-03	0.1194E-03	0.7529E-03
114	0.2268E-01	0.3905E-02	0.4450E-02	0.1152E-03	0.1601E-03	0.2157E-03
115	0.2334E-01	0.4066E-02	0.4450E-02	0.8907E-04	0.1825E-03	0.1745E-03
116	0.2452E-01	0.4250E-02	0.4450E-02	0.5723E-04	0.1976E-03	0.1241E-03
118	0.2457E-01	0.4273E-02	0.4450E-02	0.3449E-04	0.1981E-03	0.8828E-04
9023	0.2189E-01	0.4270E-02	0.4450E-02	0.9819E-04	0.2051E-03	0.1553E-03
120	0.1789E-01	0.4267E-02	0.4450E-02	0.1975E-03	0.2148E-03	0.2434E-03
122	0.1789E-01	0.3793E-02	0.4450E-02	0.2187E-03	0.2202E-03	0.2268E-03
124	0.1872E-01	0.2843E-02	0.4450E-02	0.2262E-03	0.2318E-03	0.2049E-03
125	0.2102E-01	0.5041E-02	0.4450E-02	0.2257E-03	0.2422E-03	0.1551E-03
127	0.2162E-01	0.8656E-05	0.3897E-02	0.2092E-03	0.2287E-03	0.1319E-03
129	0.2285E-01	0.5194E-05	0.1504E-03	0.7434E-04	0.1342E-03	0.7350E-04
9024	0.2037E-01	0.2522E-05	0.2573E-03	0.1427E-04	0.6743E-04	0.1640E-03
130	0.1842E-01	0.5980E-10	0.2948E-04	0.4866E-11	0.3649E-11	0.2340E-10
46	0.2155E-01	0.3572E-02	0.5693E-02	0.2705E-03	0.1360E-03	0.1868E-03
49	0.2158E-01	0.2670E-02	0.5345E-02	0.2249E-03	0.1348E-03	0.1971E-03
50	0.2158E-01	0.1617E-02	0.4617E-02	0.2335E-03	0.1320E-03	0.2095E-03
51	0.2158E-01	0.1301E-02	0.4464E-02	0.2332E-03	0.1308E-03	0.2133E-03
52	0.2157E-01	0.1979E-03	0.3993E-02	0.2225E-03	0.1255E-03	0.2271E-03
53	0.2154E-01	0.6232E-02	0.2045E-02	0.2246E-03	0.8418E-04	0.2931E-03
54	0.2148E-01	0.1776E-01	0.2078E-03	0.2614E-03	0.1442E-03	0.3442E-03
55	0.2148E-01	0.1801E-01	0.2065E-03	0.2621E-03	0.1110E-03	0.3443E-03
56	0.2110E-01	0.1945E-01	0.5779E-03	0.2689E-03	0.1342E-03	0.3475E-03
57	0.2090E-01	0.1940E-01	0.5779E-03	0.2703E-03	0.1227E-03	0.3448E-03
58	0.2079E-01	0.1947E-01	0.5779E-03	0.2711E-03	0.1097E-03	0.5011E-03
59	0.2068E-01	0.1980E-01	0.5779E-03	0.2713E-03	0.9442E-04	0.3521E-03
103	0.2068E-01	0.1840E-01	0.3023E-03	0.2675E-03	0.6253E-04	0.3335E-03
104	0.2068E-01	0.1964E-01	0.2477E-03	0.2510E-03	0.2113E-04	0.3387E-03
105	0.2065E-01	0.1479E-01	0.2595E-03	0.2483E-03	0.2270E-04	0.3642E-03
106	0.2065E-01	0.1389E-01	0.3485E-03	0.2441E-03	0.1847E-04	0.3935E-03
107	0.2065E-01	0.1069E-01	0.5981E-03	0.2268E-03	0.1167E-03	0.3989E-03
109	0.2062E-01	0.1058E-01	0.7417E-03	0.2265E-03	0.7442E-03	0.3779E-03
111	0.2053E-01	0.1111E-01	0.7419E-03	0.2154E-03	0.8097E-04	0.3439E-03
112	0.2053E-01	0.1134E-01	0.7415E-03	0.2091E-03	0.1484E-04	0.3282E-03
60	0.2054E-01	0.1986E-01	0.5777E-03	0.2078E-03	0.8439E-04	0.3546E-03
61	0.2054E-01	0.1986E-01	0.5777E-03	0.2078E-03	0.7657E-04	0.3574E-03
62	0.2054E-01	0.1986E-01	0.5777E-03	0.2078E-03	0.7600E-04	0.3576E-03
63	0.2050E-01	0.1913E-01	0.4024E-03	0.2554E-03	0.5679E-04	0.3621E-03
64	0.2050E-01	0.1600E-01	0.4349E-03	0.2320E-03	0.4020E-04	0.3606E-03
65	0.2051E-01	0.1471E-01	0.5700E-03	0.2222E-03	0.2887E-04	0.3557E-03
131	0.2004E-01	0.1471E-01	0.2100E-03	0.2220E-03	0.2967E-04	0.3541E-03
132	0.1967E-01	0.1471E-01	0.8978E-03	0.2221E-03	0.2987E-04	0.3525E-03

66	0.2051E-01	0.1351E-01	0.6698E-03	0.2163E-03	0.1937E-04	0.3487E-03
67	0.2051E-01	0.1257E-01	0.7218E-03	0.2116E-03	0.1211E-04	0.3340E-03
68	0.2052E-01	0.1195E-01	0.7415E-03	0.2085E-03	0.11E-05	0.3282E-03
69	0.2052E-01	0.1138E-01	0.7451E-03	0.2055E-03	0.61E-05	0.3166E-03
70	0.2052E-01	0.1097E-01	0.7360E-03	0.2033E-03	0.6954E-05	0.3071E-03
71	0.2052E-01	0.1011E-01	0.6835E-03	0.1990E-03	0.1463E-04	0.2847E-03
133	0.2052E-01	0.1011E-01	0.6712E-04	0.1991E-03	0.1661E-04	0.2856E-03
134	0.2008E-01	0.1011E-01	0.6219E-03	0.1991E-03	0.1463E-04	0.2825E-03
72	0.2053E-01	0.8272E-02	0.5534E-03	0.1945E-03	0.2225E-04	0.2654E-03
73	0.2056E-01	0.5344E-02	0.4853E-03	0.1831E-03	0.6090E-04	0.2571E-03
74	0.2056E-01	0.4908E-02	0.6353E-03	0.1829E-03	0.6467E-04	0.2622E-03
75	0.2057E-01	0.4929E-02	0.9598E-03	0.1831E-03	0.6361E-04	0.2742E-03
76	0.2057E-01	0.3515E-02	0.1253E-02	0.1642E-03	0.5114E-04	0.2871E-03
77	0.2057E-01	0.3389E-02	0.1368E-02	0.1651E-03	0.4141E-04	0.2934E-03
78	0.2057E-01	0.3476E-02	0.1503E-02	0.1770E-03	0.3013E-04	0.2974E-03
9021	0.2058E-01	0.3965E-02	0.1742E-02	0.1867E-03	0.4497E-04	0.3194E-03
79	0.2058E-01	0.2818E-02	0.1719E-02	0.2852E-03	0.4011E-04	0.2861E-03
80	0.2058E-01	0.2092E-02	0.1477E-02	0.3319E-03	0.5619E-04	0.2545E-03
81	0.2058E-01	0.2155E-02	0.1370E-02	0.3438E-03	0.6421E-04	0.2469E-03
82	0.2058E-01	0.2102E-02	0.1370E-02	0.3772E-03	0.1055E-03	0.2198E-03
9022	0.1550E-01	0.1082E-01	0.1172E-02	0.3965E-03	0.1802E-03	0.1366E-03
83	0.2205E-01	0.1981E-02	0.1173E-02	0.2617E-03	0.1455E-03	0.5492E-04
84	0.1173E-01	0.1985E-02	0.1173E-02	0.2404E-03	0.1348E-03	0.4793E-04
85	0.1151E-01	0.1008E-02	0.1173E-02	0.2242E-03	0.1263E-03	0.4247E-04
86	0.1081E-01	0.5842E-04	0.3612E-03	0.1018E-03	0.5636E-04	0.1867E-04
87	0.1076E-01	0.1929E-09	0.1400E-04	0.7567E-10	0.4140E-10	0.1939E-10

COMBINED VALUES OF COUPLED MEMBERS FORCES

9	0.5665E-01	0.1461E-01	0.3547E-01	0.1036E+00	0.1442E+00	0.4661E+00
9	0.1042E+00	0.1513E-01	0.3530E-01	0.3026E+00	0.1442E+00	0.4661E+00
10	0.1642E+00	0.1513E-01	0.3530E-01	0.3212E+00	0.1442E+00	0.4135E+00
10	0.1008E+00	0.1548E-01	0.6172E-01	0.1212E+00	0.1442E+00	0.4135E+00
9005	0.1008E+00	0.1548E-01	0.6172E-01	0.1615E+00	0.1442E+00	0.1541E+00
9005	0.9352E-01	0.1665E-01	0.6034E-01	0.1615E+00	0.1442E+00	0.1541E+00
9006	0.1665E-01	0.1755E-01	0.5748E-01	0.2532E-01	0.1442E+00	0.1020E+00
9006	0.8074E-01	0.1755E-01	0.5748E-01	0.1442E+00	0.1442E+00	0.1020E+00
11	0.8074E-01	0.1755E-01	0.5748E-01	0.1442E+00	0.1442E+00	0.1020E+00
11	0.6902E-01	0.1822E-01	0.5467E-01	0.1442E+00	0.1442E+00	0.1020E+00
12	0.6902E-01	0.1822E-01	0.5467E-01	0.1976E+00	0.1442E+00	0.3694E+00
12	0.6530E-01	0.1843E-01	0.5395E-01	0.1976E+00	0.1442E+00	0.3694E+00
9007	0.6530E-01	0.1843E-01	0.5395E-01	0.2059E+00	0.1442E+00	0.3800E+00
9007	0.6416E-01	0.1849E-01	0.5345E-01	0.2059E+00	0.1442E+00	0.3800E+00
9008	0.6416E-01	0.1849E-01	0.5345E-01	0.2120E+00	0.1376E+00	0.3888E+00
9008	0.6102E-01	0.1855E-01	0.5361E-01	0.2120E+00	0.1376E+00	0.3888E+00
13	0.6102E-01	0.1855E-01	0.5361E-01	0.2142E+00	0.1376E+00	0.3948E+00
13	0.6166E-01	0.1860E-01	0.5332E-01	0.2142E+00	0.1312E+00	0.3948E+00
14	0.6166E-01	0.1860E-01	0.5332E-01	0.2142E+00	0.2222E+00	0.3964E+00
14	0.5753E-01	0.1872E-01	0.5241E-01	0.2142E+00	0.1222E+00	0.3964E+00
15	0.5753E-01	0.1872E-01	0.5241E-01	0.2142E+00	0.1050E+00	0.4027E+00
15	0.4392E-01	0.1938E-01	0.4890E-01	0.2142E+00	0.1050E+00	0.4027E+00
16	0.4392E-01	0.1938E-01	0.4890E-01	0.2142E+00	0.8250E-01	0.3471E+00
16	0.4108E-01	0.1958E-01	0.4764E-01	0.2142E+00	0.8250E-01	0.3471E+00
17	0.4108E-01	0.1958E-01	0.4764E-01	0.2059E+00	0.8010E-01	0.3395E+00
17	0.3976E-01	0.1959E-01	0.4666E-01	0.2059E+00	0.8010E-01	0.3395E+00
18	0.3976E-01	0.1959E-01	0.4666E-01	0.1682E+00	0.7448E-01	0.3262E+00
18	0.3818E-01	0.1920E-01	0.4543E-01	0.1682E+00	0.7248E-01	0.3262E+00
19	0.3818E-01	0.1920E-01	0.4543E-01	0.1359E+00	0.6521E-01	0.3195E+00
19	0.3776E-01	0.1940E-01	0.4439E-01	0.1359E+00	0.6521E-01	0.3195E+00
20	0.3776E-01	0.1940E-01	0.4439E-01	0.5167E-01	0.6974E-01	0.3389E+00
20	0.4059E-01	0.1940E-01	0.3794E-01	0.5167E-01	0.6974E-01	0.3389E+00
21	0.4059E-01	0.1940E-01	0.3794E-01	0.5818E-01	0.7295E-01	0.3394E+00
21	0.4876E-01	0.1840E-01	0.3216E-01	0.5818E-01	0.7295E-01	0.3394E+00
9009	0.4876E-01	0.1840E-01	0.3216E-01	0.7571E-01	0.7295E-01	0.2490E+00
9009	0.6197E-01	0.1842E-01	0.2216E-01	0.7571E-01	0.7295E-01	0.2490E+00
9010	0.6197E-01	0.1842E-01	0.2216E-01	0.1433E+00	0.7295E-01	0.2294E+00
9010	0.7048E-01	0.1845E-01	0.2139E-01	0.1433E+00	0.7295E-01	0.2294E+00
22	0.7048E-01	0.1845E-01	0.2139E-01	0.1810E+00	0.7295E-01	0.3712E+00
22	0.7368E-01	0.1846E-01	0.7047E-02	0.1810E+00	0.7295E-01	0.3712E+00
23	0.7368E-01	0.1846E-01	0.7047E-02	0.1849E+00	0.7295E-01	0.4137E+00
23	0.7377E-01	0.1849E-01	0.5219E-02	0.1849E+00	0.7295E-01	0.4137E+00
24	0.7377E-01	0.1849E-01	0.5219E-02	0.1819E+00	0.7295E-01	0.3319E+00
24	0.7048E-01	0.1820E-01	0.9583E-02	0.1819E+00	0.7295E-01	0.3319E+00
9011	0.7048E-01	0.1820E-01	0.9583E-02	0.1597E+00	0.7295E-01	0.2176E+00
9011	0.6207E-01	0.1823E-01	0.1613E-01	0.1597E+00	0.7295E-01	0.2176E+00
9012	0.6207E-01	0.1823E-01	0.1613E-01	0.1186E+00	0.7295E-01	0.2227E+00
9012	0.5043E-01	0.1842E-01	0.2199E-01	0.1186E+00	0.7295E-01	0.2227E+00
25	0.5043E-01	0.1842E-01	0.2199E-01	0.6429E-01	0.7295E-01	0.2931E+00
25	0.4222E-01	0.1842E-01	0.2504E-01	0.6429E-01	0.7295E-01	0.2931E+00
26	0.4222E-01	0.1842E-01	0.2504E-01	0.4918E-01	0.7295E-01	0.3126E+00

26	0.3590E-01	0.9429E-01	0.2807E-01	0.4918E-01	0.7295E-01	0.3126E+00
9013	0.3590E-01	0.9429E-01	0.2807E-01	0.5875E-01	0.7295E-01	0.3672E+00
9013	0.3018E-01	0.9432E-01	0.3139E-01	0.5875E-01	0.7295E-01	0.3672E+00
9014	0.3018E-01	0.9432E-01	0.3139E-01	0.1430E+00	0.7295E-01	0.3864E+00
9014	0.2959E-01	0.9435E-01	0.3310E-01	0.1430E+00	0.7295E-01	0.3864E+00
27	0.2959E-01	0.9435E-01	0.3310E-01	0.2381E+00	0.7295E-01	0.3720E+00
27	0.2978E-01	0.9437E-01	0.3336E-01	0.2381E+00	0.7295E-01	0.3720E+00
28	0.2978E-01	0.9437E-01	0.3336E-01	0.2744E+00	0.7295E-01	0.3590E+00
28	0.3518E-01	0.9441E-01	0.3241E-01	0.2744E+00	0.7295E-01	0.3590E+00
29	0.3518E-01	0.9441E-01	0.3241E-01	0.2208E+00	0.7295E-01	0.3170E+00
29	0.4140E-01	0.9444E-01	0.3263E-01	0.2208E+00	0.7295E-01	0.3170E+00
9015	0.4140E-01	0.9444E-01	0.3263E-01	0.1200E+00	0.7295E-01	0.2172E+00
9015	0.4588E-01	0.9448E-01	0.3307E-01	0.1200E+00	0.7295E-01	0.2172E+00
9016	0.4588E-01	0.9448E-01	0.3307E-01	0.2175E-01	0.7295E-01	0.1155E+00
9016	0.4695E-01	0.9451E-01	0.3339E-01	0.2175E-01	0.7295E-01	0.1155E+00
30	0.4695E-01	0.9451E-01	0.3339E-01	0.8948E-01	0.7295E-01	0.3890E-01
30	0.4765E-01	0.9453E-01	0.3342E-01	0.8948E-01	0.7295E-01	0.3890E-01
31	0.4765E-01	0.9453E-01	0.3342E-01	0.9221E-01	0.7295E-01	0.1004E+00
31	0.4797E-01	0.9454E-01	0.3342E-01	0.9221E-01	0.7295E-01	0.1004E+00
32	0.4797E-01	0.9454E-01	0.3342E-01	0.9100E-01	0.7153E-01	0.1049E+00
32	0.4851E-01	0.9454E-01	0.3343E-01	0.9100E-01	0.7153E-01	0.1049E+00
35	0.4851E-01	0.9454E-01	0.3343E-01	0.7379E-01	0.6860E-01	0.1068E+00
35	0.4978E-01	0.9455E-01	0.3343E-01	0.7379E-01	0.6860E-01	0.1068E+00
37	0.4978E-01	0.9455E-01	0.3343E-01	0.2117E-01	0.6945E-01	0.1068E+00
37	0.7123E-01	0.2057E-02	0.3353E-01	0.2117E-01	0.6945E-01	0.1068E+00
9017	0.7123E-01	0.2057E-02	0.3353E-01	0.3353E-01	0.1997E+00	0.1068E+00
9017	0.8271E-01	0.2076E-02	0.3360E-01	0.1758E-01	0.1997E+00	0.1068E+00
9018	0.8271E-01	0.2076E-02	0.3360E-01	0.1441E-01	0.4124E+00	0.1068E+00
9018	0.8866E-01	0.2140E-02	0.3369E-01	0.1441E-01	0.4124E+00	0.1068E+00
38	0.8866E-01	0.2140E-02	0.3369E-01	0.1196E-01	0.6466E+00	0.1068E+00
38	0.9024E-01	0.2061E-02	0.3375E-01	0.1196E-01	0.6466E+00	0.1068E+00
39	0.9024E-01	0.2061E-02	0.3375E-01	0.1143E-01	0.7232E+00	0.1068E+00
39	0.1065E+00	0.1994E-02	0.3394E-01	0.1143E-01	0.7232E+00	0.1068E+00
9019	0.1065E+00	0.1994E-02	0.3394E-01	0.9091E-02	0.4236E+00	0.1068E+00
9019	0.1071E+00	0.2012E-02	0.3408E-01	0.9091E-02	0.4236E+00	0.1068E+00
40	0.1071E+00	0.2012E-02	0.3408E-01	0.7910E-02	0.1214E+00	0.1068E+00
40	0.1096E+00	0.2231E-02	0.3422E-01	0.7910E-02	0.1214E+00	0.1068E+00
41	0.1096E+00	0.2231E-02	0.3422E-01	0.9151E-02	0.1464E+00	0.1068E+00
41	0.1095E+00	0.2292E-02	0.3430E-01	0.9151E-02	0.1464E+00	0.1068E+00
43	0.1095E+00	0.2292E-02	0.3430E-01	0.9529E-02	0.1798E+00	0.1073E+00
43	0.1097E+00	0.2295E-02	0.3431E-01	0.9529E-02	0.1798E+00	0.1073E+00
44	0.1097E+00	0.2295E-02	0.3431E-01	0.9529E-02	0.1798E+00	0.1075E+00
44	0.1112E+00	0.1920E-01	0.3437E-01	0.9529E-02	0.1798E+00	0.1075E+00
45	0.1112E+00	0.1920E-01	0.3437E-01	0.9529E-02	0.1802E+00	0.1015E+00
45	0.1146E+00	0.1922E-01	0.4081E-01	0.9529E-02	0.1802E+00	0.1015E+00
9020	0.1146E+00	0.1922E-01	0.4081E-01	0.9529E-02	0.1802E+00	0.1015E+00
9020	0.1181E+00	0.1935E-01	0.4100E-01	0.9529E-02	0.8330E-01	0.3799E-01
46	0.1181E+00	0.1935E-01	0.4100E-01	0.9529E-02	0.1501E-01	0.2232E-01
46	0.1204E+00	0.1943E-01	0.4104E-01	0.9529E-02	0.1501E-01	0.2232E-01
47	0.1204E+00	0.1943E-01	0.4104E-01	0.9529E-02	0.2503E-01	0.2097E-01

98	0.3146E-01	0.1132E-01	0.3687E-01	0.2997E-01	0.1667E-01	0.1597E-01
100	0.3146E-01	0.1132E-01	0.3687E-01	0.1975E-01	0.1667E-01	0.1414E-01
100	0.3228E-01	0.1130E-01	0.3688E-01	0.1975E-01	0.1667E-01	0.1414E-01
101	0.3228E-01	0.1130E-01	0.3688E-01	0.1624E-01	0.1667E-01	0.1791E-01
101	0.5157E-01	0.1311E-01	0.3626E-01	0.1640E-01	0.2995E-01	0.1947E-01
102	0.5157E-01	0.1311E-01	0.3626E-01	0.1298E-01	0.2995E-01	0.2753E-01
102	0.5258E-01	0.1310E-01	0.3626E-01	0.1298E-01	0.2995E-01	0.2753E-01
77	0.5258E-01	0.1310E-01	0.3626E-01	0.1652E-01	0.2995E-01	0.3807E-01
77	JUNCTION					
59	JUNCTION					
59	0.1061E-01	0.1306E-02	0.7230E-03	0.9400E-04	0.9143E-03	0.7660E-03
103	0.1061E-01	0.1306E-02	0.7230E-03	0.9400E-04	0.6905E-03	0.3860E-03
103	0.1019E-01	0.1029E-02	0.7215E-03	0.9400E-04	0.6905E-03	0.3860E-03
104	0.1019E-01	0.1029E-02	0.7215E-03	0.9400E-04	0.1369E-03	0.4749E-03
104	0.9355E-02	0.6337E-03	0.7169E-03	0.9400E-04	0.1369E-03	0.4749E-03
105	0.9355E-02	0.6337E-03	0.7169E-03	0.9400E-04	0.6138E-04	0.6193E-03
105	0.7409E-02	0.6748E-03	0.7049E-03	0.9400E-04	0.6138E-04	0.6193E-03
106	0.7409E-02	0.6748E-03	0.7049E-03	0.9400E-04	0.2253E-03	0.4555E-03
106	0.7326E-02	0.9466E-03	0.7037E-03	0.9400E-04	0.2253E-03	0.4555E-03
107	0.7326E-02	0.9466E-03	0.7037E-03	0.9400E-04	0.8956E-03	0.4652E-03
107	0.7373E-02	0.9206E-03	0.7048E-03	0.9400E-04	0.8956E-03	0.4652E-03
105	0.7373E-02	0.9206E-03	0.7048E-03	0.1936E-03	0.9191E-04	0.5779E-03
109	0.7409E-02	0.9010E-03	0.7056E-03	0.1936E-03	0.9191E-04	0.5779E-03
111	0.7409E-02	0.9010E-03	0.7056E-03	0.4398E-03	0.2023E-02	0.5779E-03
111	0.7443E-02	0.8806E-03	0.7062E-03	0.4398E-03	0.2023E-02	0.5779E-03
112	0.7443E-02	0.8806E-03	0.7062E-03	0.5426E-03	0.2901E-02	0.5779E-03
112	0.7529E-02	0.8395E-03	0.7076E-03	0.5426E-03	0.2901E-02	0.5779E-03
68	0.7529E-02	0.8395E-03	0.7076E-03	0.8005E-03	0.5231E-02	0.5779E-03
58	JUNCTION					
101	JUNCTION					
101	0.2342E-01	0.4387E-02	0.1273E-02	0.1176E-01	0.2680E-01	0.7716E-02
113	0.2342E-01	0.4387E-02	0.1273E-02	0.9933E-02	0.1512E-01	0.7716E-02
113	0.2065E-01	0.4376E-02	0.1254E-02	0.9933E-02	0.1512E-01	0.7716E-02
114	0.2065E-01	0.4376E-02	0.1254E-02	0.8705E-02	0.7871E-02	0.7716E-02
114	0.9305E-02	0.4503E-02	0.1199E-02	0.8705E-02	0.7871E-02	0.7716E-02
115	0.9305E-02	0.4503E-02	0.1199E-02	0.7425E-02	0.4615E-02	0.7716E-02
115	0.6371E-02	0.4576E-02	0.1192E-02	0.7425E-02	0.4615E-02	0.7716E-02
116	0.6371E-02	0.4576E-02	0.1192E-02	0.5762E-02	0.1423E-02	0.7716E-02
116	0.5267E-02	0.4606E-02	0.1189E-02	0.5762E-02	0.1423E-02	0.7716E-02
118	0.5267E-02	0.4606E-02	0.1189E-02	0.5156E-02	0.7096E-03	0.8287E-02
118	0.1808E-02	0.4723E-02	0.1187E-02	0.5156E-02	0.7096E-03	0.8287E-02
9023	0.1808E-02	0.4723E-02	0.1187E-02	0.4005E-02	0.7096E-03	0.9898E-02
9023	0.5341E-02	0.4992E-02	0.1213E-02	0.4005E-02	0.7096E-03	0.9898E-02
120	0.5341E-02	0.4992E-02	0.1213E-02	0.4770E-02	0.7096E-03	0.2845E-02
120	0.8032E-02	0.5173E-02	0.1398E-02	0.4770E-02	0.7096E-03	0.2845E-02
122	0.8032E-02	0.5173E-02	0.1398E-02	0.4124E-02	0.1744E-02	0.4320E-02
122	0.8697E-02	0.5215E-02	0.1469E-02	0.4124E-02	0.1744E-02	0.4320E-02
124	0.8697E-02	0.5215E-02	0.1469E-02	0.2795E-02	0.4725E-02	0.4320E-02
124	0.7867E-02	0.5567E-02	0.2483E-02	0.2795E-02	0.4725E-02	0.4320E-02
125	0.7867E-02	0.5567E-02	0.2483E-02	0.3699E-02	0.2003E-02	0.4320E-02
125	0.6467E-02	0.5578E-02	0.2683E-02	0.3699E-02	0.2003E-02	0.4320E-02

127	0.6467E-02	0.5578E-02	0.2683E-02	0.4617E-02	0.3190E-02	0.5468E-02
127	0.1364E-02	0.5579E-02	0.3082E-02	0.4618E-02	0.3190E-02	0.5468E-02
129	0.3364E-02	0.5579E-02	0.3082E-02	0.8598E-02	0.3190E-02	0.1253E-01
129	0.8672E-02	0.5580E-02	0.4086E-02	0.8598E-02	0.3190E-02	0.1253E-01
9024	0.8672E-02	0.5580E-02	0.4086E-02	0.2299E-02	0.3190E-02	0.8901E-03
9024	0.1232E-01	0.5580E-02	0.4121E-02	0.2299E-02	0.3190E-02	0.8901E-03
130	0.1232E-01	0.5580E-02	0.4121E-02	0.4053E-02	0.3190E-02	0.1963E-01
65	0.6651E-01	0.8281E-02	0.1542E-01	0.3962E-02	0.0000E+00	0.5614E-02
65	JUNCTION					
131	0.6651E-01	0.8281E-02	0.1542E-01	0.6193E-03	0.0000E+00	0.1450E-01
131	0.5380E-01	0.7175E-02	0.2286E-02	0.6193E-03	0.0000E+00	0.1458E-01
132	0.5380E-01	0.7175E-02	0.2286E-02	0.0000E+00	0.0000E+00	0.0000E+00
71	JUNCTION					
71	0.8178E-01	0.1887E-01	0.5822E-02	0.1629E-02	0.0000E+00	0.7965E-02
133	0.8178E-01	0.1887E-01	0.5822E-02	0.3527E-03	0.0000E+00	0.1509E-01
133	0.5567E-01	0.1635E-01	0.1302E-02	0.3527E-03	0.0000E+00	0.1509E-01
134	0.5567E-01	0.1635E-01	0.1302E-02	0.0000E+00	0.0000E+00	0.0000E+00

COMBINED VALUES OF COUPLED SUPPORT REACTIONS

TYPE	NODE	SUPPORT REACTION
FX	1	0.5931E-01
FY	1	0.1501E-01
FZ	1	0.3893E-01
MX	1	0.6200E-01
MY	1	0.1582E+00
MZ	1	0.1022E+00
FX	9	0.1643E+00
FZ	10	0.9669E-01
FY	14	0.9165E-03
FY	15	0.1380E+00
FX	23	0.1322E+00
FZ	28	0.6544E-01
FY	37	0.9430E-01
FX	39	0.1991E+00
FY	44	0.2084E-01
FZ	45	0.5497E-01
FY	52	0.3524E-01
FY	53	0.7877E-03
FZ	54	0.1532E-01
FX	57	0.2152E+00
FY	61	0.4471E-02
FZ	73	0.3711E-01
FY	78	0.1390E-03
FY	79	0.6361E-03
FX	87	0.2455E-01
FY	87	0.1929E-01
FZ	87	0.6286E-02
MX	87	0.6320E-01
MY	87	0.3615E-01
MZ	87	0.1815E-01

PK	124	0.2376E-01
PE	128	0.6934E-02
PK	130	0.1400E-01
PT	130	0.5580E-02
PE	130	0.4120E-02
PK	130	0.4053E-02
PT	130	0.3190E-02
ME	130	0.1963E-01
PK	131	0.1276E+00
PE	131	0.1654E-01
PK	133	0.1455E+00
PE	133	0.5841E-02

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/units bin
/Title Modal analysis of primary system
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r,42,243000,1.43e+10,1.1e+10,
r,43,162000,1.25e+10,1.6e+10,
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r,44,132000,1.15e+10,1.48e+10,
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r,46,98710,7.372e+09,2.603e+09,
rmore,,1.51,2.88
st,42,masa21,,2
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r,49,2650.75e3/g
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curpr,rzol,all
save
solve
finish

/solu
expand,on
msolve,2
solve

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save
finish

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| WELCOME TO THE ANSYS PROGRAM |
|-----|

```

***** ANSYS COMMAND LINE ARGUMENTS *****

NONE

*** WARNING ***

AUTHORIZATION FILE WILL SOON EXPIRE.
CONTACT YOUR LOCAL ANSYS DISTRIBUTOR FOR DETAILS.

***** ANSYS DYNAMIC MEMORY ALLOCATION *****

```

WORK SPACE REQUESTED      = 8388608      32.000 MB  DEFAULT
MINIMUM WORK SPACE REQUIRED = 2613736      9.971 MB
MINIMUM WORK SPACE RECOMMENDED = 4597640    17.539 MB
WORK SPACE OBTAINED       = 8388606      32.000 MB
BYTES PER WORD            = 4

```

***** NOTICE ***** THIS IS THE ANSYS GENERAL PURPOSE
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ERRORS ENCOUNTERED IN EITHER THE DOCUMENTATION OR THE
RESULTS SHOULD BE IMMEDIATELY BROUGHT TO OUR ATTENTION.

ENTER /SHOW,device TO SET THE GRAPHICS DISPLAY TO device(e.g. X11,4207,ETC.)
ENTER /MENU,ON TO START THE ANSYS MENU SYSTEM
ENTER HELP FOR GENERAL ANSYS HELP INFORMATION

40416-2 VERSION=SUN4SPARC REVISION= 5.0 FAX
FOR SUPPORT CALL PHONE
CURRENT JOBNAME=FILE 15:44:45 OCT 11, 1995 CP= 5.550

BEGIN:

```

1 /filename, primary
2 /units,bin           !weight: lb, Length: inch
3 /prep7
4 /title, Modal analysis of primary system
5 g=386.4
6 et,41,beam4         ! for building
7 mp,ex,41,4.5e6
8 mp,nuxy,41,0.3
9 mp,dens,41,0.0
10 r,41,157000,1.18e+10, 1.03e+10,
11 rmore,,1,71,1.67
12 r,42,243000, 1.43e+10, 1.1e+10,
13 rmore,,1,26,1.23
14 r,43,162000, 1.25e+10, 1.6e+10,
15 rmore,,1,57,2.33
16 r,44,132000,1.15e+10, 1.48e+10,
17 rmore,,2,64e10,1.59,2.26
18 r,45, 92600,5.656e+09,2.151e+09,
19 rmore,,1,42,2.57
20 r,46, 98710,7.372e+09,2.603e+09,
21 rmore,,1,51,2.88
22 et,42,masa21,,2
23 r,47,4474.0e3/g
24 r,48,4428.75e3/g
25 r,49,2650.75e3/g
26 r,50,3207.25e3/g
27 r,51,2847.75e3/g
28 n, 301,0, 6780,0,           !for building
29 n, 302,0, 6816,0,
30 n, 303,0, 6852,0,
31 n, 304,0, 6888,0,
32 n, 305,0, 6924,0,

```

```

33 n, 306,0, 7080,0,
34 n, 307,0, 7146,0,
35 n, 308,0, 7248,0,
36 n, 309,0, 7314,0,
37 n, 310,0, 7494,0,
38 n, 311,0, 7555,0,
39 n, 312,0, 7660,0,
40 n, 313,0, 7764,0,
41 type,41
42 mat,41
43 real,41
44 e,301,302
45 e,302,303
46 e,303,304
47 real,42
48 e,304,305
49 real,43
50 e,305,306
51 real,44
52 e,306,307
53 e,307,308
54 real,45
55 e,308,309
56 e,309,310
57 real,46
58 e,310,311
59 e,311,312
60 e,312,313
61 type,42
62 real,47
63 e,304
64 real,48
65 e,306
66 real,49
67 e,308
68 real,50
69 e,310
70 real,51
71 e,313
72 d,301,all
73 lump, on
74 save
75 finish
76
77 /solu
78 antype,model
79 modopt,,2
80 m,104,ux,310,2,uy,uz
81 m,113,ux,,uy,uz
82 oucpr,nsol,all
83 save
84 solve
85 finish
86
87 /solu
88 expass,on
89 expand,2
90 solve
91 save
92 finish
93

```

CURRENT JOBNAME REDEFINED AS primary

BRITISH INCH UNITS SPECIFIED
LENGTH = INCHES (IN)
MASS = POUND (F)*SEC**2/IN
TIME = SECONDS (SEC)
TEMPERATURE = FAHRENHEIT
CURRENT = AMPS

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
40416-2 VERSION=SUN4SPARC 15:45:01 OCT 11, 1995 CP= 8.010
FOR SUPPORT CALL PHONE FAX

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

***** ANSYS ANALYSIS DEFINITION (PREP7) *****

TITLE=
Modal analysis of primary system

PARAMETER G = 386.4000

ELEMENT TYPE 41 IS BEAM4 3-D ELASTIC BEAM
KEYOPT(1-12)= 0 0 0 0 0 0 0 0 0 0 0 0

CURRENT MODAL DOF SET IS UX UY UZ ROTX ROTY ROTZ
THREE-DIMENSIONAL MODEL

MATERIAL 41 EX = 4500000.
MATERIAL 41 NUXX = 0.3000000
MATERIAL 41 DENX = 0.

REAL CONSTANT SET 41 ITEMS 1 TO 6
0.15700E+06 0.11800E+11 0.10300E+11 0. 0. 0.

REAL CONSTANT SET 41 ITEMS 7 TO 12
0. 0. 1.7100 1.6700 0. 0.

REAL CONSTANT SET 42 ITEMS 1 TO 6
0.24300E+06 0.14300E+11 0.11000E+11 0. 0. 0.

REAL CONSTANT SET 42 ITEMS 7 TO 12
0. 0. 1.2600 1.2300 0. 0.

REAL CONSTANT SET 43 ITEMS 1 TO 6
0.16200E+06 0.12500E+11 0.16000E+11 0. 0. 0.

REAL CONSTANT SET 43 ITEMS 7 TO 12
0. 0. 1.5700 2.3300 0. 0.

REAL CONSTANT SET 44 ITEMS 1 TO 6
0.13200E+06 0.11500E+11 0.14800E+11 0. 0. 0.

REAL CONSTANT SET 44 ITEMS 7 TO 12
0. 0.26400E+11 1.5900 2.2600 0. 0.

REAL CONSTANT SET 45 ITEMS 1 TO 6
92660. 0.56560E+10 0.21510E+10 0. 0. 0.

REAL CONSTANT SET 45 ITEMS 7 TO 12
0. 0. 1.4200 2.5700 0. 0.

REAL CONSTANT SET 46 ITEMS 1 TO 6
98710. 0.73720E+10 0.26030E+10 0. 0. 0.

REAL CONSTANT SET 46 ITEMS 7 TO 12
0. 0. 1.5100 2.8800 0. 0.

ELEMENT TYPE 42 IS MASS21 STRUCTURAL MASS
KEYOPT(1-12)= 0 0 2 0 0 0 0 0 0 0 0 0

CURRENT MODAL DOF SET IS UX UY UZ ROTX ROTY ROTZ
THREE-DIMENSIONAL MODEL

REAL CONSTANT SET 47 ITEMS 1 TO 6
11579. 0. 0. 0. 0. 0.

REAL CONSTANT SET 48 ITEMS 1 TO 6
11462. 0. 0. 0. 0. 0.

REAL CONSTANT SET 49 ITEMS 1 TO 6
6860.1 0. 0. 0. 0. 0.

REAL CONSTANT SET 50 ITEMS 1 TO 6
8300.3 0. 0. 0. 0. 0.

REAL CONSTANT SET 51 ITEMS 1 TO 6
7370.0 0. 0. 0. 0. 0.

NODE 301 KCS= 0 X,Y,Z= 0. 6780.0 0.
NODE 302 KCS= 0 X,Y,Z= 0. 6816.0 0.
NODE 303 KCS= 0 X,Y,Z= 0. 6852.0 0.
NODE 304 KCS= 0 X,Y,Z= 0. 6888.0 0.
NODE 305 KCS= 0 X,Y,Z= 0. 6934.0 0.
NODE 306 KCS= 0 X,Y,Z= 0. 7080.0 0.
NODE 307 KCS= 0 X,Y,Z= 0. 7146.0 0.
NODE 308 KCS= 0 X,Y,Z= 0. 7248.0 0.
NODE 309 KCS= 0 X,Y,Z= 0. 7314.0 0.
NODE 310 KCS= 0 X,Y,Z= 0. 7494.0 0.
NODE 311 KCS= 0 X,Y,Z= 0. 7555.0 0.
NODE 312 KCS= 0 X,Y,Z= 0. 7660.0 0.
NODE 313 KCS= 0 X,Y,Z= 0. 7764.0 0.

ELEMENT TYPE SET TO 41
MATERIAL NUMBER SET TO 41
REAL CONSTANT NUMBER= 41
ELEMENT 1 301 302 0
ELEMENT 2 302 303 0
ELEMENT 3 303 304 0
REAL CONSTANT NUMBER= 42
ELEMENT 4 304 305 0
REAL CONSTANT NUMBER= 43
ELEMENT 5 305 306 0
REAL CONSTANT NUMBER= 44
ELEMENT 6 306 307 0
ELEMENT 7 307 308 0
REAL CONSTANT NUMBER= 45
ELEMENT 8 308 309 0
ELEMENT 9 309 310 0
REAL CONSTANT NUMBER= 46
ELEMENT 10 310 311 0
ELEMENT 11 311 312 0
ELEMENT 12 312 313 0
ELEMENT TYPE SET TO 42
REAL CONSTANT NUMBER= 47
ELEMENT 13 304
REAL CONSTANT NUMBER= 48
ELEMENT 14 306
REAL CONSTANT NUMBER= 49
ELEMENT 15 308
REAL CONSTANT NUMBER= 50
ELEMENT 16 310
REAL CONSTANT NUMBER= 51
ELEMENT 17 313
SPECIFIED CONSTRAINT UX FOR SELECTED NODES 301 TO 301 BY 1
REAL= 0 IMAG= 0
ADDITIONAL DOFS= UY UZ ROTX ROTY ROTZ
USE LUMPED MASS MATRIX APPROXIMATION
ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= primary.db
FOR POSSIBLE RESUME FROM THIS POINT
***** ROUTINE COMPLETED ***** CP = 12.260
***** ANSYS SOLUTION ROUTINE *****
PERFORM A MODAL ANALYSIS
THIS WILL BE A NEW ANALYSIS
USE HOUSEHOLDER METHOD
EXTRACT 2 MODES
PRINT 0 REDUCED MODES
NORMALIZE THE MODE SHAPES TO THE MASS MATRIX
MASTER DOF UX FOR SELECTED NODES IN RANGE 304 TO 310 IN STEPS OF 2
ADDITIONAL DOFS= UY UZ

NUMBER OF MASTER DOF= 12
 MASTER DOF UX FOR SELECTED NODES IN RANGE 313 TO 313 IN STEPS OF 1
 ADDITIONAL DOFS= UY UZ
 NUMBER OF MASTER DOF= 15

PRINT NSOL ITEMS WITH A FREQUENCY OF ALL
 FOR ALL APPLICABLE ENTITIES

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= primary.db
 FOR POSSIBLE RESUME FROM THIS POINT

***** ANSYS SOLVE COMMAND *****

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
 40416-2 VERSION=SUN4SPARC 15:45:24 OCT 11, 1995 CP= 12.620
 FOR SUPPORT CALL PHONE FAX

Modal analysis of primary system

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

SOLUTION OPTIONS

PROBLEM DIMENSIONALITY 3-D
 DEGREES OF FREEDOM UX UY UZ ROTX ROTY ROTZ
 ANALYSIS TYPE MODAL
 EXTRACTION METHOD REDUCED
 LUMPED MASS MATRICES ON
 NUMBER OF MODES TO EXTRACT 2
 NUMBER OF REDUCED MODES TO PRINT 0
 NUMBER OF MASTER DOF 15

*** WARNING *** CP= 12.760 TIME= 15:45:25
 Zero thickness element 1 may result in wrong thermal or bending stress.
 Check real constant table 41.

*** WARNING *** CP= 12.770 TIME= 15:45:25
 Zero thickness element 4 may result in wrong thermal or bending stress.
 Check real constant table 42.

*** WARNING *** CP= 12.780 TIME= 15:45:25
 Zero thickness element 5 may result in wrong thermal or bending stress.
 Check real constant table 43.

*** WARNING *** CP= 12.790 TIME= 15:45:25
 Zero thickness element 6 may result in wrong thermal or bending stress.
 Check real constant table 44.

*** WARNING *** CP= 12.790 TIME= 15:45:25
 Zero thickness element 8 may result in wrong thermal or bending stress.
 Check real constant table 45.

*** WARNING *** CP= 12.800 TIME= 15:45:25
 Zero thickness element 10 may result in wrong thermal or bending
 stress. Check real constant table 46.

*** NOTE *** CP= 12.880 TIME= 15:45:26
 The step data was checked and warning messages were found.
 Please review output or errors file (file.err) for these warning
 messages.

LOAD STEP OPTIONS

LOAD STEP NUMBER 1

***** CENTROID, MASS, AND MASS MOMENTS OF INERTIA *****

CALCULATIONS ASSUME ELEMENT MASS AT ELEMENT CENTROID

TOTAL MASS = 45571.

CENTROID	MOM. OF INERTIA ABOUT ORIGIN	MOM. OF INERTIA ABOUT CENTROID
XC = 0.	IXX = 0.2395E+13	IXX = 0.4287E+10
YC = 7242.5	IYY = 0.	IYY = 0.
ZC = 0.	IZZ = 0.2395E+13	IZZ = 0.4287E+10
	IXY = 0.	IXY = 0.
	IYZ = 0.	IYZ = 0.
	IZX = 0.	IZX = 0.

*** MASS SUMMARY BY ELEMENT TYPE ***

TYPE	MASS
42	45570.7

Range of element maximum matrix coefficients in global coordinates
 Maximum= 1.4764297E-15 at element 3.
 Minimum= 1.46422077E-14 at element 9.

*** ELEMENT MATRIX FORMULATION TIMES

TYPE	NUMBER	ENAME	TOTAL CP	AVE CP
41	12	BEAM4	0.340	0.028
42	5	MASS21	0.020	0.004

Time at end of element matrix formulation CP= 14.4000002.

Estimated number of active DOF= 72.

Maximum wavefront= 32.

Number of Master DOF= 15.

Time at end of matrix triangularization CP= 14.7400002.
 Equation solver maximum pivot= 2.9528594E-15 at node 302 ROTY.
 Equation solver minimum pivot= 913188377. at node 312 UZ.

***** EIGENVALUE (NATURAL FREQUENCY) SOLUTION *****

MODE	FREQUENCY (CYCLES/TIME)
1	10.1791843
2	12.0366917

***** REDUCED MASS DISTRIBUTION *****

ROW	NODE	DIR	VALUE
1	313	UZ	7370.0
2	306	UX	11462.
3	306	UY	11462.
4	304	UZ	11579.
5	304	UY	11579.
6	304	UX	11579.
7	306	UZ	11462.
8	313	UY	7370.0
9	310	UZ	8300.3
10	310	UX	8300.3
11	310	UY	8300.3
12	313	UX	7370.0
13	308	UX	6860.1
14	308	UY	6860.1
15	308	UZ	6860.1

MASS (X, Y, Z) = 0.4557E+05 0.4557E+05 0.4557E+05

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
 40416-2 VERSION=SUN4SPARC 15:45:46 OCT 11, 1995 CP= 14.900
 FOR SUPPORT CALL PHONE FAX

Modal analysis of primary system

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

***** PARTICIPATION FACTOR CALCULATION ***** X DIRECTION

MODE	FREQUENCY	PERIOD	PARTIC. FACTOR	RATIO	EFFECTIVE MASS	CUMULATIVE MASS FRACTION
1	10.1792	0.98240E-01	-0.36102E-11	0.000000	0.130338E-22	0.448893E-27
2	12.0367	0.83079E-01	170.40	1.000000	29035.3	1.000000
					SUM OF EFFECTIVE MASSES=	29035.3

***** PARTICIPATION FACTOR CALCULATION ***** Y DIRECTION

MODE	FREQUENCY	PERIOD	PARTIC. FACTOR	RATIO	EFFECTIVE MASS	CUMULATIVE MASS FRACTION
1	10.1792	0.98240E-01	-0.20494E-13	0.155686	0.419988E-27	0.236646E-01
2	12.0367	0.83079E-01	-0.13163E-12	1.000000	0.173275E-25	1.000000
					SUM OF EFFECTIVE MASSES=	0.177475E-25

***** PARTICIPATION FACTOR CALCULATION ***** Z DIRECTION

MODE	FREQUENCY	PERIOD	PARTIC. FACTOR	RATIO	EFFECTIVE MASS	CUMULATIVE MASS FRACTION
1	10.1792	0.98240E-01	162.13	1.000000	26287.0	1.000000
2	12.0367	0.83079E-01	0.97402E-11	0.000000	0.948707E-22	1.000000
					SUM OF EFFECTIVE MASSES=	26287.0

*** PROBLEM STATISTICS
 ACTUAL NO. OF ACTIVE DEGREES OF FREEDOM = 57
 R.M.S. WAVEFRONT SIZE = 20.0
 NUMBER OF MASTER DEGREES OF FREEDOM = 15

*** ANSYS BINARY FILE STATISTICS
 BUFFER SIZE USED= 4096
 0.016 MB WRITTEN ON ELEMENT MATRIX FILE: primary.emat
 0.016 MB WRITTEN ON ELEMENT SAVED DATA FILE: primary.esav
 0.016 MB WRITTEN ON TRIANGULARIZED MATRIX FILE: primary.tri
 0.016 MB WRITTEN ON MODAL MATRIX FILE: primary.mode

FINISH SOLUTION PROCESSING

***** ROUTINE COMPLETED ***** CP = 15.010

***** ANSYS SOLUTION ROUTINE *****

PERFORM AN EXPANSION PASS

NUMBER OF MODES TO EXPAND= 2
 DO NOT CALCULATE ELEMENT RESULTS

***** ANSYS SOLVE COMMAND *****

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
 40416-2 VERSION=SUN4SPARC 15:45:47 OCT 11, 1995 CP= 15.030
 FOR SUPPORT CALL PHONE FAX

Modal analysis of primary system

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

SOLUTION OPTIONS

PROBLEM DIMENSIONALITY 3-D
 DEGREES OF FREEDOM UX UY UZ ROTX ROTY ROTZ
 ANALYSIS TYPE MODAL
 EXTRACTION METHOD REDUCED
 EXPANSION PASS ON
 NUMBER OF MODES TO EXPAND 2
 ELEMENT RESULTS CALCULATION OFF

LOAD STEP OPTIONS

LOAD STEP NUMBER 1
 PRINT OUTPUT CONTROLS
 ITEM FREQUENCY COMPONENT
 NSOL ALL
 DATABASE OUTPUT CONTROLS ALL DATA WRITTEN

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
 40416-2 VERSION=SUN4SPARC 15:45:47 OCT 11, 1995 CP= 15.120
 FOR SUPPORT CALL PHONE FAX

Modal analysis of primary system

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

***** EIGENVECTOR (MODE SHAPE) SOLUTION ***** FREQUENCY = 10.179
 LOAD STEP= 1 MODE = 1 CUM. ITER. = 1

NOTE - ALL VECTOR DOPS ARE IN NODAL COORDINATE SYSTEMS.

NODE	UX	UY	UZ	ROTX	ROTY	ROTZ
301	0	0	0	0	0	0
302	-0.481585E-17	-0.171961E-18	0.153331E-03	0.363273E-06	0	0.946949E-
303	-0.996360E-17	-0.343922E-18	0.319405E-03	0.708001E-06	0	0.184387E-
304	-0.154252E-16	-0.515883E-18	0.497556E-03	0.103419E-05	0	0.269075E-
305	-0.196881E-16	-0.606345E-18	0.639692E-03	0.139969E-05	0	0.352355E-
306	-0.435549E-16	-0.103702E-17	0.167155E-02	0.207272E-05	0	0.603555E-
307	-0.552126E-16	-0.674107E-18	0.218373E-02	0.233700E-05	0	0.701130E-
308	-0.743766E-16	-0.113237E-18	0.300633E-02	0.267324E-05	0	0.825453E-
309	-0.883803E-16	-0.114395E-18	0.372778E-02	0.386769E-05	0	0.955991E-
310	-0.130094E-15	-0.117553E-18	0.601860E-02	0.603442E-05	0	0.119126E-
311	-0.141616E-15	-0.118030E-18	0.667779E-02	0.637438E-05	0	0.122514E-
312	-0.161843E-15	-0.118851E-18	0.785188E-02	0.675675E-05	0	0.126325E-
313	-0.182140E-15	-0.119663E-18	0.904116E-02	0.688260E-05	0	0.127580E-

MAXIMUMS	313	306	313	313	0	313
VALUE	-0.182140E-15	-0.103702E-17	0.904116E-02	0.688260E-05	0	0.127580E-

***** ANSYS - ENGINEERING ANALYSIS SYSTEM REVISION 5.0 *****
 40416-2 VERSION=SUN4SPARC 15:45:48 OCT 11, 1995 CP= 15.240
 FOR SUPPORT CALL PHONE FAX

Modal analysis of primary system

ANSYS VERSION FOR EDUCATIONAL PURPOSES ONLY

***** EIGENVECTOR (MODE SHAPE) SOLUTION ***** FREQUENCY = 12.037
 LOAD STEP= 1 MODE = 2 CUM. ITER. = 2

NOTE - ALL VECTOR DOPS ARE IN NODAL COORDINATE SYSTEMS.

NODE	UX	UY	UZ	ROTX	ROTY	ROTZ
301	0	0	0	0	0	0
302	0.228903E-03	-0.253472E-18	0.909753E-17	0.218220E-19	0	-0.446263E-
303	0.473444E-03	-0.506944E-18	0.189609E-16	0.425442E-19	0	-0.868739E-
304	0.732765E-03	-0.760415E-18	0.295504E-16	0.621669E-19	0	-0.126743E-
305	0.927839E-03	-0.968423E-18	0.380893E-16	0.841668E-19	0	-0.166003E-
306	0.201879E-02	-0.195872E-17	0.100073E-15	0.124692E-18	0	-0.285481E-
307	0.258760E-02	-0.231566E-17	0.130883E-15	0.140615E-18	0	-0.33225E-
308	0.352144E-02	-0.286219E-17	0.180372E-15	0.160880E-18	0	-0.381325E-
309	0.418378E-02	-0.336119E-17	0.223853E-15	0.232889E-18	0	-0.452970E-
310	0.615648E-02	-0.472209E-17	0.361925E-15	0.363498E-18	0	-0.564067E-
311	0.670152E-02	-0.492895E-17	0.401642E-15	0.383587E-18	0	-0.580067E-
312	0.765824E-02	-0.528502E-17	0.472382E-15	0.407032E-18	0	-0.598082E-
313	0.861827E-02	-0.563770E-17	0.544039E-15	0.414616E-18	0	-0.603985E-

MAXIMUMS	313	313	313	313	0	313
VALUE	0.861827E-02	-0.563770E-17	0.544039E-15	0.414616E-18	0	-0.603985E-

*** ANSYS BINARY FILE STATISTICS
 BUFFER SIZE USED= 4096
 0.047 MB WRITTEN ON RESULTS FILE: primary.rst

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= primary.db
 FOR POSSIBLE RESUME FROM THIS POINT

FINISH SOLUTION PROCESSING

***** ROUTINE COMPLETED ***** CP = 15.600

***** END OF INPUT ENCOUNTERED *****

PURGE ALL SOLUTION AND POST DATA
 SAVE ALL MODEL DATA

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= primary.db
 FOR POSSIBLE RESUME FROM THIS POINT

NUMBER OF WARNING MESSAGES ENCOUNTERED= 6
 NUMBER OF ERROR MESSAGES ENCOUNTERED= 0

ANSYS RUN COMPLETED

REV. 5.0	SUN4SPARC
CP TIME (sec) = 15.940	TIME = 15:45:54
ELAPSED TIME (sec) = 93.000	DATE = 10/11/95