ENERCON SERVICES, INC.

Appendix RPadNC-TH to Calculation PGE-009-CALC-006

Originator: S. C. Tumminelli
Date: March 3, 2003

Appendix RPadNC-TH

This Appendix presents the ANSYS output file documenting the execution of the unconstrained model thermal stress analysis and the output temperatures for checking.

ANSYS Output File:

```
ANSYS/Mechanical U

*------------------------------------------------------------*
|                                                            |
|   W E L C O M E   T O   T H E   A N S Y S   P R O G R A M  |
|                                                            |
*------------------------------------------------------------*


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*****************************************************************
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```

```
*****************************************************************

                    Completing ANSYS Load Process.


         *****  ANSYS COMMAND LINE ARGUMENTS  *****
 INITIAL JOBNAME                = PADNC-TH
 BATCH MODE REQUESTED           = LIST
 MEMORY REQUESTED (MB)          = 700
 DATABASE SIZE REQUESTED (MB)   = 75

*** WARNING ***                          CP=      0.210   TIME= 13:35:44
Use of the -M switch is no longer recommended for normal ANSYS use.
ANSYS now dynamically allocates memory as needed.  Only use the -M
 switch if you are certain that you need to do so.

PARAMETER STATUS-           (   1 PARAMETERS DEFINED)
                 (INCLUDING     1 INTERNAL PARAMETERS)

00245050          VERSION=INTEL NT        RELEASE= 6.1     UP20020321
CURRENT JOBNAME=PADNC-TH  13:35:44  JAN 03, 2003 CP=      0.210

    1  resume
    2  nall
    3  eall
    4  mpli
    5  /com start, change the material properties for each time step, initial
    6  /com property is no. 2. Change back to no. 2 at end and save.
    7  /solu
    8  /HEADER,ON,OFF,OFF,OFF,ON,OFF
    9  elist,530
   10  lssolve,1
   11  esel,type,2
   12  mpchg,3,all
   13  eall
   14  elist,530
   15  lssolve,2
   16  esel,type,2
   17  mpchg,4,all
   18  eall
   19  elist,530
   20  lssolve,3
   21  esel,type,2
   22  mpchg,5,all
   23  eall
   24  elist,530
   25  lssolve,4
   26  esel,type,2
   27  mpchg,6,all
   28  eall
   29  elist,530
   30  lssolve,5
   31  esel,type,2
   32  mpchg,7,all
   33  eall
   34  elist,530
```

```
35  lssolve,6
36  esel,type,2
37  mpchg,8,all
38  eall
39  elist,530
40  lssolve,7
41  esel,type,2
42  mpchg,9,all
43  eall
44  elist,530
45  lssolve,8
46  esel,type,2
47  mpchg,10,all
48  eall
49  elist,530
50  lssolve,9
51  esel,type,2
52  mpchg,11,all
53  eall
54  elist,530
55  lssolve,10
56  esel,type,2
57  mpchg,12,all
58  eall
59  elist,530
60  lssolve,11
61  esel,type,2
62  mpchg,2,all
63  eall
64  elist,530
65  finish
66  save
67  /POST1
68  /HEADER,ON,OFF,OFF,OFF,ON,OFF
69  /COM
70  /COM SUM RESULTS, SET TITLES AND WRITE LOAD CASE FILES FOR FURTHER
PROCESSING
71  /COM
72  LCSUM,ALL
73  LCDEF,1,1
74  LCDEF,2,2
75  LCDEF,3,3
76  LCDEF,4,4
77  LCDEF,5,5
78  LCDEF,6,6
79  LCDEF,7,7
80  LCDEF,8,8
81  LCDEF,9,9
82  LCDEF,10,10
83  LCDEF,11,11
84  LCASE,1
85  /TITLE,PAD RESPONSE AT END OF 0.25 DAYS - NO PAD/ROCK CONSTRAINT
86  LCWRITE,1
87  LCOPER,ADD,2
88  /TITLE,PAD RESPONSE AT END OF 0.50 DAYS - NO PAD/ROCK CONSTRAINT
89  LCWRITE,2
90  LCOPER,ADD,3
```

```
/TITLE,PAD RESPONSE AT END OF 0.625 DAYS - NO PAD/ROCK CONSTRAINT
LCWRITE,3
LCOPER,ADD,4
/TITLE,PAD RESPONSE AT END OF 1.125 DAYS - NO PAD/ROCK CONSTRAINT
LCWRITE,4
LCOPER,ADD,5
/TITLE,PAD RESPONSE AT END OF 1.625 DAYS - NO PAD/ROCK CONSTRAINT
LCWRITE,5
LCOPER,ADD,6
/TITLE,PAD RESPONSE AT END OF 2.125 DAYS - NO PAD/ROCK CONSTRAINT
LCWRITE,6
LCOPER,ADD,7
/TITLE,PAD RESPONSE AT END OF 2.375 DAYS - NO PAD/ROCK CONSTRAINT
LCWRITE,7
LCOPER,ADD,8
/TITLE,PAD RESPONSE AT END OF 3.125 DAYS - NO PAD/ROCK CONSTRAINT
LCWRITE,8
LCOPER,ADD,9
/TITLE,PAD RESPONSE AT END OF 4.125 DAYS - NO PAD/ROCK CONSTRAINT
LCWRITE,9
LCOPER,ADD,10
/TITLE,PAD RESPONSE AT END OF 6.125 DAYS - NO PAD/ROCK CONSTRAINT
LCWRITE,10
LCOPER,ADD,11
/TITLE,PAD RESPONSE AT END OF 7.875 DAYS - NO PAD/ROCK CONSTRAINT
LCWRITE,11
FINISH
/com print the temperatures for checking
EALL
NALL
/POST1
/HEADER,ON,OFF,OFF,OFF,ON,OFF
NSEL,S,LOC,X,0.0
NSEL,R,LOC,Z,0.0
NSEL,R,LOC,Y,0.0,-145.0
NLIS
SET,1
NSORT,LOC,Y
PRNSOL,BFE
SET,2
NSORT,LOC,Y
PRNSOL,BFE
SET,3
NSORT,LOC,Y
PRNSOL,BFE
SET,4
NSORT,LOC,Y
PRNSOL,BFE
SET,5
NSORT,LOC,Y
PRNSOL,BFE
SET,6
NSORT,LOC,Y
PRNSOL,BFE
SET,7
NSORT,LOC,Y
PRNSOL,BFE
```

```
148  SET,8
149  NSORT,LOC,Y
150  PRNSOL,BFE
151  SET,9
152  NSORT,LOC,Y
153  PRNSOL,BFE
154  SET,10
155  NSORT,LOC,Y
156  PRNSOL,BFE
157  SET,11
158  NSORT,LOC,Y
159  PRNSOL,BFE
160  LCASE,1
161  NSORT,LOC,Y
162  PRNSOL,BFE
163  LCASE,2
164  NSORT,LOC,Y
165  PRNSOL,BFE
166  LCASE,3
167  NSORT,LOC,Y
168  PRNSOL,BFE
169  LCASE,4
170  NSORT,LOC,Y
171  PRNSOL,BFE
172  LCASE,5
173  NSORT,LOC,Y
174  PRNSOL,BFE
175  LCASE,6
176  NSORT,LOC,Y
177  PRNSOL,BFE
178  LCASE,7
179  NSORT,LOC,Y
180  PRNSOL,BFE
181  LCASE,8
182  NSORT,LOC,Y
183  PRNSOL,BFE
184  LCASE,9
185  NSORT,LOC,Y
186  PRNSOL,BFE
187  LCASE,10
188  NSORT,LOC,Y
189  PRNSOL,BFE
190  LCASE,11
191  NSORT,LOC,Y
192  PRNSOL,BFE
193  NUSORT
194  FINISH
195  eall
196  nall
197  /EXIT,NOSAVE

 RUN SETUP PROCEDURE FROM FILE= C:\Program Files\Ansys
Inc\ANSYS61\docu\start61.ans

 /INPUT FILE= C:\Program Files\Ansys Inc\ANSYS61\docu\start61.ans  LINE=       0

 RESUME ANSYS DATA FROM FILE NAME=PADNC-TH.db
```

```
*** ANSYS GLOBAL STATUS ***

TITLE = Pad thermal analysis model, no pad/rock constraint
ANALYSIS TYPE =  STATIC (STEADY-STATE)
NUMBER OF ELEMENT TYPES =      5
   8812 ELEMENTS CURRENTLY SELECTED.  MAX ELEMENT NUMBER =     9341
  10212 NODES CURRENTLY SELECTED.     MAX NODE NUMBER =       10212
    166 KEYPOINTS CURRENTLY SELECTED. MAX KEYPOINT NUMBER =     166
    339 LINES CURRENTLY SELECTED.     MAX LINE NUMBER =         339
      2 AREAS CURRENTLY SELECTED.     MAX AREA NUMBER =         224
     48 VOLUMES CURRENTLY SELECTED.   MAX VOL. NUMBER =          48
    22 COMPONENTS CURRENTLY DEFINED
MAXIMUM LINEAR PROPERTY NUMBER        =      12
MAXIMUM REAL CONSTANT SET NUMBER      =       1
ACTIVE COORDINATE SYSTEM              =       0  (CARTESIAN)

INITIAL JOBNAME = PADNC-TH
CURRENT JOBNAME = PADNC-TH

   10212  NODES (OF    10212  DEFINED) SELECTED BY NALL  COMMAND.

    8812  ELEMENTS (OF     8812  DEFINED) SELECTED BY  EALL  COMMAND.

LIST MATERIALS       1 TO      12 BY       1
 PROPERTY= ALL

PROPERTY TABLE EX    MAT=       1  NUM. POINTS=  1
  TEMPERATURE     DATA    TEMPERATURE     DATA    TEMPERATURE     DATA
    0.0000     0.20000E+07

PROPERTY TABLE NUXY  MAT=       1  NUM. POINTS=  1
  TEMPERATURE     DATA    TEMPERATURE     DATA    TEMPERATURE     DATA
    0.0000     0.24000

PROPERTY TABLE ALPX  MAT=       1  NUM. POINTS=  1
  TEMPERATURE     DATA    TEMPERATURE     DATA    TEMPERATURE     DATA
    0.0000     0.50000E-05

PROPERTY TABLE DENS  MAT=       1  NUM. POINTS=  1
  TEMPERATURE     DATA    TEMPERATURE     DATA    TEMPERATURE     DATA
    0.0000      0.0000

PROPERTY TABLE EX    MAT=       2  NUM. POINTS=  1
  TEMPERATURE     DATA    TEMPERATURE     DATA    TEMPERATURE     DATA
    0.0000     0.92400E+06

PROPERTY TABLE NUXY  MAT=       2  NUM. POINTS=  1
  TEMPERATURE     DATA    TEMPERATURE     DATA    TEMPERATURE     DATA
    0.0000     0.15000

PROPERTY TABLE ALPX  MAT=       2  NUM. POINTS=  1
  TEMPERATURE     DATA    TEMPERATURE     DATA    TEMPERATURE     DATA
    0.0000     0.51800E-05

PROPERTY TABLE DENS  MAT=       2  NUM. POINTS=  1
  TEMPERATURE     DATA    TEMPERATURE     DATA    TEMPERATURE     DATA
```

```
    0.0000      0.78100E-01

PROPERTY TABLE EX    MAT=        3  NUM. POINTS=  1
  TEMPERATURE      DATA    TEMPERATURE      DATA    TEMPERATURE      DATA
    0.0000      0.13060E+07

PROPERTY TABLE NUXY  MAT=        3  NUM. POINTS=  1
  TEMPERATURE      DATA    TEMPERATURE      DATA    TEMPERATURE      DATA
    0.0000      0.15000

PROPERTY TABLE ALPX  MAT=        3  NUM. POINTS=  1
  TEMPERATURE      DATA    TEMPERATURE      DATA    TEMPERATURE      DATA
    0.0000      0.51800E-05

PROPERTY TABLE DENS  MAT=        3  NUM. POINTS=  1
  TEMPERATURE      DATA    TEMPERATURE      DATA    TEMPERATURE      DATA
    0.0000      0.78100E-01

PROPERTY TABLE EX    MAT=        4  NUM. POINTS=  1
  TEMPERATURE      DATA    TEMPERATURE      DATA    TEMPERATURE      DATA
    0.0000      0.14600E+07

PROPERTY TABLE NUXY  MAT=        4  NUM. POINTS=  1
  TEMPERATURE      DATA    TEMPERATURE      DATA    TEMPERATURE      DATA
    0.0000      0.15000

PROPERTY TABLE ALPX  MAT=        4  NUM. POINTS=  1
  TEMPERATURE      DATA    TEMPERATURE      DATA    TEMPERATURE      DATA
    0.0000      0.51800E-05

PROPERTY TABLE DENS  MAT=        4  NUM. POINTS=  1
  TEMPERATURE      DATA    TEMPERATURE      DATA    TEMPERATURE      DATA
    0.0000      0.78100E-01

PROPERTY TABLE EX    MAT=        5  NUM. POINTS=  1
  TEMPERATURE      DATA    TEMPERATURE      DATA    TEMPERATURE      DATA
    0.0000      0.19640E+07

PROPERTY TABLE NUXY  MAT=        5  NUM. POINTS=  1
  TEMPERATURE      DATA    TEMPERATURE      DATA    TEMPERATURE      DATA
    0.0000      0.15000

PROPERTY TABLE ALPX  MAT=        5  NUM. POINTS=  1
  TEMPERATURE      DATA    TEMPERATURE      DATA    TEMPERATURE      DATA
    0.0000      0.51800E-05

PROPERTY TABLE DENS  MAT=        5  NUM. POINTS=  1
  TEMPERATURE      DATA    TEMPERATURE      DATA    TEMPERATURE      DATA
    0.0000      0.78100E-01

PROPERTY TABLE EX    MAT=        6  NUM. POINTS=  1
  TEMPERATURE      DATA    TEMPERATURE      DATA    TEMPERATURE      DATA
    0.0000      0.23580E+07

PROPERTY TABLE NUXY  MAT=        6  NUM. POINTS=  1
  TEMPERATURE      DATA    TEMPERATURE      DATA    TEMPERATURE      DATA
    0.0000      0.15000
```

```
PROPERTY TABLE ALPX  MAT=        6  NUM. POINTS=  1
  TEMPERATURE      DATA    TEMPERATURE      DATA    TEMPERATURE      DATA
    0.0000      0.51800E-05

PROPERTY TABLE DENS  MAT=        6  NUM. POINTS=  1
  TEMPERATURE      DATA    TEMPERATURE      DATA    TEMPERATURE      DATA
    0.0000      0.78100E-01

PROPERTY TABLE EX    MAT=        7  NUM. POINTS=  1
  TEMPERATURE      DATA    TEMPERATURE      DATA    TEMPERATURE      DATA
    0.0000      0.26740E+07

PROPERTY TABLE NUXY  MAT=        7  NUM. POINTS=  1
  TEMPERATURE      DATA    TEMPERATURE      DATA    TEMPERATURE      DATA
    0.0000      0.15000

PROPERTY TABLE ALPX  MAT=        7  NUM. POINTS=  1
  TEMPERATURE      DATA    TEMPERATURE      DATA    TEMPERATURE      DATA
    0.0000      0.51800E-05

PROPERTY TABLE DENS  MAT=        7  NUM. POINTS=  1
  TEMPERATURE      DATA    TEMPERATURE      DATA    TEMPERATURE      DATA
    0.0000      0.78100E-01

PROPERTY TABLE EX    MAT=        8  NUM. POINTS=  1
  TEMPERATURE      DATA    TEMPERATURE      DATA    TEMPERATURE      DATA
    0.0000      0.27880E+07

PROPERTY TABLE NUXY  MAT=        8  NUM. POINTS=  1
  TEMPERATURE      DATA    TEMPERATURE      DATA    TEMPERATURE      DATA
    0.0000      0.15000

PROPERTY TABLE ALPX  MAT=        8  NUM. POINTS=  1
  TEMPERATURE      DATA    TEMPERATURE      DATA    TEMPERATURE      DATA
    0.0000      0.51800E-05

PROPERTY TABLE DENS  MAT=        8  NUM. POINTS=  1
  TEMPERATURE      DATA    TEMPERATURE      DATA    TEMPERATURE      DATA
    0.0000      0.78100E-01

PROPERTY TABLE EX    MAT=        9  NUM. POINTS=  1
  TEMPERATURE      DATA    TEMPERATURE      DATA    TEMPERATURE      DATA
    0.0000      0.30800E+07

PROPERTY TABLE NUXY  MAT=        9  NUM. POINTS=  1
  TEMPERATURE      DATA    TEMPERATURE      DATA    TEMPERATURE      DATA
    0.0000      0.15000

PROPERTY TABLE ALPX  MAT=        9  NUM. POINTS=  1
  TEMPERATURE      DATA    TEMPERATURE      DATA    TEMPERATURE      DATA
    0.0000      0.51800E-05

PROPERTY TABLE DENS  MAT=        9  NUM. POINTS=  1
  TEMPERATURE      DATA    TEMPERATURE      DATA    TEMPERATURE      DATA
    0.0000      0.78100E-01
```

```
PROPERTY TABLE EX    MAT=      10  NUM. POINTS=  1
  TEMPERATURE     DATA    TEMPERATURE     DATA    TEMPERATURE     DATA
    0.0000     0.32710E+07

PROPERTY TABLE NUXY  MAT=      10  NUM. POINTS=  1
  TEMPERATURE     DATA    TEMPERATURE     DATA    TEMPERATURE     DATA
    0.0000     0.15000

PROPERTY TABLE ALPX  MAT=      10  NUM. POINTS=  1
  TEMPERATURE     DATA    TEMPERATURE     DATA    TEMPERATURE     DATA
    0.0000     0.51800E-05

PROPERTY TABLE DENS  MAT=      10  NUM. POINTS=  1
  TEMPERATURE     DATA    TEMPERATURE     DATA    TEMPERATURE     DATA
    0.0000     0.78100E-01

PROPERTY TABLE EX    MAT=      11  NUM. POINTS=  1
  TEMPERATURE     DATA    TEMPERATURE     DATA    TEMPERATURE     DATA
    0.0000     0.35430E+07

PROPERTY TABLE NUXY  MAT=      11  NUM. POINTS=  1
  TEMPERATURE     DATA    TEMPERATURE     DATA    TEMPERATURE     DATA
    0.0000     0.15000

PROPERTY TABLE ALPX  MAT=      11  NUM. POINTS=  1
  TEMPERATURE     DATA    TEMPERATURE     DATA    TEMPERATURE     DATA
    0.0000     0.51800E-05

PROPERTY TABLE DENS  MAT=      11  NUM. POINTS=  1
  TEMPERATURE     DATA    TEMPERATURE     DATA    TEMPERATURE     DATA
    0.0000     0.78100E-01

PROPERTY TABLE EX    MAT=      12  NUM. POINTS=  1
  TEMPERATURE     DATA    TEMPERATURE     DATA    TEMPERATURE     DATA
    0.0000     0.36690E+07

PROPERTY TABLE NUXY  MAT=      12  NUM. POINTS=  1
  TEMPERATURE     DATA    TEMPERATURE     DATA    TEMPERATURE     DATA
    0.0000     0.15000

PROPERTY TABLE ALPX  MAT=      12  NUM. POINTS=  1
  TEMPERATURE     DATA    TEMPERATURE     DATA    TEMPERATURE     DATA
    0.0000     0.51800E-05

PROPERTY TABLE DENS  MAT=      12  NUM. POINTS=  1
  TEMPERATURE     DATA    TEMPERATURE     DATA    TEMPERATURE     DATA
    0.0000     0.78100E-01
start, change the material properties for each time step, initial
property is no. 2. Change back to no. 2 at end and save.

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


PRINT HEADER
DO NOT PRINT SUBTITLE(S)
DO NOT PRINT LOAD STEP ID
DO NOT PRINT NOTE LINE(S)
```

```
PRINT COLUMN HEADER LABELS
DO NOT PRINT REPORT TOTALS

LIST ALL SELECTED ELEMENTS IN RANGE     530  TO     530  STEP       1
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      13:35:44  JAN 03, 2003 CP=      0.421

Pad thermal analysis model, no pad/rock constraint


   ELEM MAT TYP REL ESY SEC TSHA       NODES

    530   2   2   1   0   1          1    28    29     3   672  1050  1064   728
ANSYS RELEASE  6.1    UP20020321       13:34:25    01/03/2003

PRINTOUT RESUMED BY /GOP

 Load step file number 1.  Begin solution ...

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

*** NOTE ***                            CP=      1.612   TIME= 13:35:45
Real constant 1 has been referenced by element types 4 and 5.
  We assume it identifies a contact pair.
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      13:35:46  JAN 03, 2003 CP=      1.833

DELTA T 0.0 TO 0.25 DAYS - NO PAD/ROCK CONSTRAINT


                    S O L U T I O N   O P T I O N S

   PROBLEM DIMENSIONALITY. . . . . . . . . . . . . .3-D
   DEGREES OF FREEDOM. . . . . . UX   UY   UZ
   ANALYSIS TYPE . . . . . . . . . . . . . . . . . .STATIC (STEADY-STATE)
   EQUATION SOLVER OPTION. . . . . . . . . . . . . .PCG
      TOLERANCE. . . . . . . . . . . . . . . . . . . 1.00000E-06
   NEWTON-RAPHSON OPTION . . . . . . . . . . . . . .PROGRAM CHOSEN

*** NOTE ***                            CP=      1.863   TIME= 13:35:46
Present time 0 is less than or equal to the previous time.
  Time will default to 1.

*** NOTE ***                            CP=      1.863   TIME= 13:35:46
Nonlinear analysis, NROPT set to the FULL Newton-Raphson solution
 procedure for ALL DOFs.

*** NOTE ***                            CP=      1.863   TIME= 13:35:46
The conditions for direct assembly have been met.  No .emat or .erot
 files will be produced.
```

```
                    L O A D   S T E P   O P T I O N S

  LOAD STEP NUMBER. . . . . . . . . . . . . . . . . .     1
  TIME AT END OF THE LOAD STEP. . . . . . . . . . .  1.0000
  AUTOMATIC TIME STEPPING . . . . . . . . . . . . .    ON
     INITIAL NUMBER OF SUBSTEPS . . . . . . . . . .    10
     MAXIMUM NUMBER OF SUBSTEPS . . . . . . . . . .    10
     MINIMUM NUMBER OF SUBSTEPS . . . . . . . . . .     2
  MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. . . .    15
  STEP CHANGE BOUNDARY CONDITIONS . . . . . . . .    NO
  TERMINATE ANALYSIS IF NOT CONVERGED . . . . . .YES (EXIT)
  CONVERGENCE CONTROLS. . . . . . . . . . . . . .USE DEFAULTS
  INERTIA LOADS                          X          Y          Z
     ACEL . . . . . . . . . . . . . .  0.0000    0.80000     0.0000
  PRINT OUTPUT CONTROLS . . . . . . . . . . . . .NO PRINTOUT
  DATABASE OUTPUT CONTROLS. . . . . . . . . . . .ALL DATA WRITTEN
                                                  FOR THE LAST SUBSTEP


NONLINEAR MONITORING INFO IS WRITTEN TO FILE= PADNC-TH.mntr
MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS HAS BEEN MODIFIED
  TO BE, NEQIT = 26, BY SOLUTION CONTROL LOGIC.

*** NOTE ***                            CP=      2.674   TIME= 13:35:47
Deformable-deformable contact pair identified by real constant set 1
 and contact element type 5 has been set up.
Contact algorithm: Augmented Lagrange method
Contact detection at: Gauss integration point
Default contact stiffness factor FKN          1.0000
The resulting contact stiffness              0.15725E+07
Default penetration tolerance factor FTOLN   0.10000
The resulting penetration tolerance           1.1752
User define tangent contact stiffness FKT    0.10000E-08
Max. friction stress TAUMAX                  0.10000
Average contact surface length                39.172
Average contact pair depth                    11.752
Default pinball region factor PINB            1.0000
The resulting pinball region                  11.752
User define initial closure ICONT            0.10000E-05
Initial penetration is excluded.

*** NOTE ***                            CP=      2.674   TIME= 13:35:47
Max.  Initial penetration 1.421085472E-14 was detected between contact
 element 9172 and target element 9002.
****************************************


          **** CENTER OF MASS, MASS, AND MASS MOMENTS OF INERTIA ****

 CALCULATIONS ASSUME ELEMENT MASS AT ELEMENT CENTROID

 TOTAL MASS =  0.19272E+07

                          MOM. OF INERTIA         MOM. OF INERTIA
```

```
 CENTER OF MASS            ABOUT ORIGIN        ABOUT CENTER OF MASS

 XC =   204.00          IXX =   0.2606E+12      IXX =   0.6494E+11
 YC =  -48.000          IYY =   0.3614E+12      IYY =   0.8995E+11
 ZC =   315.00          IZZ =   0.1126E+12      IZZ =   0.2793E+11
                        IXY =   0.1887E+11      IXY =  -0.2327E-03
                        IYZ =   0.2914E+11      IYZ =  -0.3052E-04
                        IZX =  -0.1238E+12      IZX =   0.2487E-02


 *** MASS SUMMARY BY ELEMENT TYPE ***

 TYPE      MASS
    2  0.192718E+07

Range of element maximum matrix coefficients in global coordinates
Maximum= 549511638 at element 7329.
Minimum= 4772865.79 at element 5330.

  *** ELEMENT MATRIX FORMULATION TIMES
 TYPE  NUMBER   ENAME      TOTAL CP  AVE CP

    1    6602  SOLID45       2.684   0.000407
    2    1870  SOLID45       0.951   0.000509
    4     170  TARGE170      0.050   0.000295
    5     170  CONTA174      0.200   0.001178
Time at end of element matrix formulation CP= 6.91995049.

ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= PADNC-TH.rdb
 FOR POSSIBLE RESUME FROM THIS POINT
    FORCE CONVERGENCE VALUE  = 0.4318E+06  CRITERION=  2203.

PRECONDITIONED SOLVER CP TIME =     5.328
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.6684E-02
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.6684E-02
    FORCE CONVERGENCE VALUE  =  52.11      CRITERION=  70.77     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1

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

    1    6602  SOLID45       1.552   0.000235
    2    1870  SOLID45       0.461   0.000246
    4     170  TARGE170      0.010   0.000059
    5     170  CONTA174      0.010   0.000059

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

    1    6602  SOLID45       0.050   0.000008
    2    1870  SOLID45       0.030   0.000016
    4     170  TARGE170      0.000   0.000000
    5     170  CONTA174      0.000   0.000000
*** LOAD STEP     1   SUBSTEP     1  COMPLETED.    CUM ITER =      1
*** TIME =  0.100000         TIME INC =  0.100000
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000      UNCHANGED
```

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    FORCE CONVERGENCE VALUE  =  208.4      CRITERION=  2244.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= -0.2318E-07
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC = -0.2318E-07
    FORCE CONVERGENCE VALUE  = 0.5057E-03  CRITERION=  141.5     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1
*** LOAD STEP     1   SUBSTEP     2  COMPLETED.    CUM ITER =      2
*** TIME =  0.200000         TIME INC =  0.100000
*** AUTO TIME STEP:  NEXT TIME INC = 0.15000      INCREASED (FACTOR = 1.5000)

    FORCE CONVERGENCE VALUE  =  117.2      CRITERION=  3367.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= -0.1160E-07
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC = -0.1160E-07
    FORCE CONVERGENCE VALUE  = 0.4110E-03  CRITERION=  247.7     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1
*** LOAD STEP     1   SUBSTEP     3  COMPLETED.    CUM ITER =      3
*** TIME =  0.350000         TIME INC =  0.150000
*** AUTO TIME STEP:  NEXT TIME INC = 0.22500      INCREASED (FACTOR = 1.5000)

    FORCE CONVERGENCE VALUE  =  439.4      CRITERION=  5052.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= -0.4661E-07
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC = -0.4661E-07
    FORCE CONVERGENCE VALUE  = 0.5355E-03  CRITERION=  406.9     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1
*** LOAD STEP     1   SUBSTEP     4  COMPLETED.    CUM ITER =      4
*** TIME =  0.575000         TIME INC =  0.225000
*** AUTO TIME STEP:  NEXT TIME INC = 0.21250      DECREASED (FACTOR = 0.9444)

    FORCE CONVERGENCE VALUE  =  484.0      CRITERION=  4781.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= -0.5138E-07
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC = -0.5138E-07
    FORCE CONVERGENCE VALUE  = 0.6700E-03  CRITERION=  557.3     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1
*** LOAD STEP     1   SUBSTEP     5  COMPLETED.    CUM ITER =      5
*** TIME =  0.787500         TIME INC =  0.212500
*** AUTO STEP TIME:  NEXT TIME INC = 0.21250      UNCHANGED

    FORCE CONVERGENCE VALUE  =  469.9      CRITERION=  4795.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= -0.4994E-07
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC = -0.4994E-07
    FORCE CONVERGENCE VALUE  = 0.7436E-03  CRITERION=  707.7     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1
*** LOAD STEP     1   SUBSTEP     6  COMPLETED.    CUM ITER =      6
*** TIME =   1.00000         TIME INC =  0.212500


*** ANSYS BINARY FILE STATISTICS
 BUFFER SIZE USED= 16384
      45.062 MB WRITTEN ON ELEMENT SAVED DATA FILE: PADNC-TH.esav
      19.875 MB WRITTEN ON RESULTS FILE: PADNC-TH.rst

ESEL  FOR LABEL= TYPE  FROM       2 TO       2 BY       1

    1870  ELEMENTS (OF     8812  DEFINED) SELECTED BY  ESEL  COMMAND.

SET MATERIAL OF SELECTED ELEMENTS TO     3

    8812  ELEMENTS (OF     8812  DEFINED) SELECTED BY  EALL  COMMAND.
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 LIST ALL SELECTED ELEMENTS IN RANGE     530  TO     530  STEP       1
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
 ANSYS/Mechanical U
 00245050          VERSION=INTEL NT      13:40:23  JAN 03, 2003 CP=    114.585

 DELTA T 0.0 TO 0.25 DAYS - NO PAD/ROCK CONSTRAINT


    ELEM MAT TYP REL ESY SEC TSHA       NODES

     530   3   2   1   0   1          1    28    29     3   672  1050  1064   728
 ANSYS RELEASE  6.1    UP20020321       13:34:25    01/03/2003

 PRINTOUT RESUMED BY /GOP

  Load step file number 2.  Begin solution ...

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

 *** NOTE ***                            CP=    115.776   TIME= 13:40:24
 Present time 0 is less than or equal to the previous time.
   Time will default to 2.

 *** NOTE ***                            CP=    115.786   TIME= 13:40:24
 Nonlinear analysis, NROPT set to the FULL Newton-Raphson solution
  procedure for ALL DOFs.
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
 ANSYS/Mechanical U
 00245050          VERSION=INTEL NT      13:40:24  JAN 03, 2003 CP=    115.927

 DELTA T 0.25 TO 0.50 DAYS - NO PAD/ROCK CONSTRAINT


                    L O A D   S T E P   O P T I O N S

   LOAD STEP NUMBER. . . . . . . . . . . . . . . . . .     2
   TIME AT END OF THE LOAD STEP. . . . . . . . . . .  2.0000
   AUTOMATIC TIME STEPPING . . . . . . . . . . . . .    ON
      INITIAL NUMBER OF SUBSTEPS . . . . . . . . . .    10
      MAXIMUM NUMBER OF SUBSTEPS . . . . . . . . . .    10
      MINIMUM NUMBER OF SUBSTEPS . . . . . . . . . .     2
   MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. . . .    15
   STEP CHANGE BOUNDARY CONDITIONS . . . . . . . .    NO
   TERMINATE ANALYSIS IF NOT CONVERGED . . . . . .YES (EXIT)
   CONVERGENCE CONTROLS. . . . . . . . . . . . . .USE DEFAULTS
   INERTIA LOADS                          X           Y           Z
      ACEL . . . . . . . . . . . . .  0.0000     0.20000      0.0000
   PRINT OUTPUT CONTROLS . . . . . . . . . . . . .NO PRINTOUT
   DATABASE OUTPUT CONTROLS. . . . . . . . . . . .ALL DATA WRITTEN
                                                   FOR THE LAST SUBSTEP
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NONLINEAR MONITORING INFO IS WRITTEN TO FILE= PADNC-TH.mntr
MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS HAS BEEN MODIFIED
  TO BE, NEQIT = 26, BY SOLUTION CONTROL LOGIC.

    FORCE CONVERGENCE VALUE   = 0.3731E+06  CRITERION=  1992.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= -0.8173E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC = -0.8173E-03
    FORCE CONVERGENCE VALUE   =  30.27      CRITERION=  781.6     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1
*** LOAD STEP     2   SUBSTEP     1  COMPLETED.    CUM ITER =      7
*** TIME =   1.10000          TIME INC =  0.100000
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000      UNCHANGED

    FORCE CONVERGENCE VALUE   = 0.4804E+05  CRITERION=  1993.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1179E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.1179E-03
    FORCE CONVERGENCE VALUE   =  1296.      CRITERION=  841.4
   EQUIL ITER   2 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1132E-04
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.1132E-04
    FORCE CONVERGENCE VALUE   = 0.3743E-01  CRITERION=  858.6     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   2
*** LOAD STEP     2   SUBSTEP     2  COMPLETED.    CUM ITER =      9
*** TIME =   1.20000          TIME INC =  0.100000
*** AUTO TIME STEP:  NEXT TIME INC = 0.15000      INCREASED (FACTOR = 1.5000)

    FORCE CONVERGENCE VALUE   = 0.1510E+05  CRITERION=  2899.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1011E-02
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.1011E-02
    FORCE CONVERGENCE VALUE   = 0.1738E+05  CRITERION=  964.3
   EQUIL ITER   2 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.2671E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.2671E-03
    FORCE CONVERGENCE VALUE   = 0.2148E+05  CRITERION=  983.9
   EQUIL ITER   3 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.3632E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.3632E-03
    FORCE CONVERGENCE VALUE   =  8178.      CRITERION=  1004.
   EQUIL ITER   4 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.4921E-04
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.4921E-04
    FORCE CONVERGENCE VALUE   =  3834.      CRITERION=  1024.
   EQUIL ITER   5 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.6391E-04
    LINE SEARCH PARAMETER =  0.9998     SCALED MAX DOF INC =  0.6390E-04
    FORCE CONVERGENCE VALUE   =  78.15      CRITERION=  1045.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   5
*** LOAD STEP     2   SUBSTEP     3  COMPLETED.    CUM ITER =     14
*** TIME =   1.35000          TIME INC =  0.150000
*** AUTO STEP TIME:  NEXT TIME INC = 0.15000      UNCHANGED

    FORCE CONVERGENCE VALUE   = 0.3409E+05  CRITERION=  2937.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1317E-02
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.1317E-02
    FORCE CONVERGENCE VALUE   = 0.4240E+05  CRITERION=  1114.
   EQUIL ITER   2 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.3709E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.3709E-03
    FORCE CONVERGENCE VALUE   = 0.3237E+05  CRITERION=  1137.
   EQUIL ITER   3 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.3361E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.3361E-03
    FORCE CONVERGENCE VALUE   = 0.2330E+05  CRITERION=  1160.
   EQUIL ITER   4 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.2500E-03
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    LINE SEARCH PARAMETER =  0.9604     SCALED MAX DOF INC =  0.2401E-03
    FORCE CONVERGENCE VALUE  = 0.1158E+05  CRITERION=  1184.
   EQUIL ITER   5 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.2217E-04
    LINE SEARCH PARAMETER =  0.6216     SCALED MAX DOF INC =  0.1378E-04
    FORCE CONVERGENCE VALUE  =  7584.      CRITERION=  1208.
   EQUIL ITER   6 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1688E-04
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.1688E-04
    FORCE CONVERGENCE VALUE  = 0.1078      CRITERION=  1233.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   6
*** LOAD STEP     2   SUBSTEP     4  COMPLETED.    CUM ITER =     20
*** TIME =   1.50000         TIME INC =  0.150000
*** AUTO TIME STEP:  NEXT TIME INC = 0.22500      INCREASED (FACTOR = 1.5000)

    FORCE CONVERGENCE VALUE  = 0.6908E+05  CRITERION=  4331.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1848E-02
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.1848E-02
    FORCE CONVERGENCE VALUE  = 0.1555E+06  CRITERION=  1374.
   EQUIL ITER   2 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1838E-02
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.1838E-02
    FORCE CONVERGENCE VALUE  = 0.8063E+05  CRITERION=  1399.
   EQUIL ITER   3 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.9756E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.9756E-03
    FORCE CONVERGENCE VALUE  = 0.6383E+05  CRITERION=  1427.
   EQUIL ITER   4 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.7197E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.7197E-03
    FORCE CONVERGENCE VALUE  = 0.4351E+05  CRITERION=  1456.
   EQUIL ITER   5 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.3812E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.3812E-03
    FORCE CONVERGENCE VALUE  = 0.2032E+05  CRITERION=  1485.
   EQUIL ITER   6 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1836E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.1836E-03
    FORCE CONVERGENCE VALUE  = 0.1218E+05  CRITERION=  1516.
   EQUIL ITER   7 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1528E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.1528E-03
    FORCE CONVERGENCE VALUE  =  5006.      CRITERION=  1546.
   EQUIL ITER   8 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1436E-04
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.1436E-04
    FORCE CONVERGENCE VALUE  =  460.3      CRITERION=  1578.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   8
*** LOAD STEP     2   SUBSTEP     5  COMPLETED.    CUM ITER =     28
*** TIME =   1.72500         TIME INC =  0.225000
*** AUTO TIME STEP:  NEXT TIME INC = 0.13750      DECREASED (FACTOR = 0.6111)

    FORCE CONVERGENCE VALUE  = 0.4049E+05  CRITERION=  2881.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.3067E-02
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.3067E-02
    FORCE CONVERGENCE VALUE  = 0.9006E+05  CRITERION=  1537.
   EQUIL ITER   2 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.9012E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.9012E-03
    FORCE CONVERGENCE VALUE  = 0.6440E+05  CRITERION=  1568.
   EQUIL ITER   3 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1780E-02
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.1780E-02
    FORCE CONVERGENCE VALUE  = 0.2276E+05  CRITERION=  1598.
   EQUIL ITER   4 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.4194E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.4194E-03
    FORCE CONVERGENCE VALUE  = 0.2843E+05  CRITERION=  1630.
   EQUIL ITER   5 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.3437E-03
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    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.3437E-03
    FORCE CONVERGENCE VALUE  =  8170.      CRITERION=  1663.
   EQUIL ITER   6 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.8265E-04
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.8265E-04
    FORCE CONVERGENCE VALUE  =  2244.      CRITERION=  1697.
   EQUIL ITER   7 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.5491E-05
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.5491E-05
    FORCE CONVERGENCE VALUE  = 0.2719E-01  CRITERION=  1731.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   7
*** LOAD STEP     2   SUBSTEP     6  COMPLETED.    CUM ITER =     35
*** TIME =   1.86250         TIME INC =  0.137500
*** AUTO STEP TIME:  NEXT TIME INC = 0.13750      UNCHANGED

    FORCE CONVERGENCE VALUE  = 0.5578E+05  CRITERION=  2959.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.4532E-02
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.4532E-02
    FORCE CONVERGENCE VALUE  = 0.1543E+06  CRITERION=  1698.
   EQUIL ITER   2 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.2760E-02
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.2760E-02
    FORCE CONVERGENCE VALUE  = 0.7344E+05  CRITERION=  1729.
   EQUIL ITER   3 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1086E-02
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.1086E-02
    FORCE CONVERGENCE VALUE  = 0.9026E+05  CRITERION=  1763.
   EQUIL ITER   4 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1853E-02
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.1853E-02
    FORCE CONVERGENCE VALUE  = 0.4200E+05  CRITERION=  1794.
   EQUIL ITER   5 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.4741E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.4741E-03
    FORCE CONVERGENCE VALUE  = 0.2867E+05  CRITERION=  1830.
   EQUIL ITER   6 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.3608E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.3608E-03
    FORCE CONVERGENCE VALUE  = 0.1357E+05  CRITERION=  1866.
   EQUIL ITER   7 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1397E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.1397E-03
    FORCE CONVERGENCE VALUE  =  821.6      CRITERION=  1904.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   7
*** LOAD STEP     2   SUBSTEP     7  COMPLETED.    CUM ITER =     42
*** TIME =   2.00000         TIME INC =  0.137500

ESEL  FOR LABEL= TYPE  FROM       2 TO       2 BY       1

    1870  ELEMENTS (OF     8812  DEFINED) SELECTED BY  ESEL  COMMAND.

SET MATERIAL OF SELECTED ELEMENTS TO     4

    8812  ELEMENTS (OF     8812  DEFINED) SELECTED BY  EALL  COMMAND.

LIST ALL SELECTED ELEMENTS IN RANGE     530  TO     530  STEP       1
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      13:56:47  JAN 03, 2003 CP=    634.532

DELTA T 0.25 TO 0.50 DAYS - NO PAD/ROCK CONSTRAINT
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   ELEM MAT TYP REL ESY SEC TSHA       NODES

    530   4   2   1   0   1          1    28    29     3   672  1050  1064   728
ANSYS RELEASE  6.1    UP20020321       13:34:25    01/03/2003

PRINTOUT RESUMED BY /GOP

 Load step file number 3.  Begin solution ...

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

*** NOTE ***                            CP=    635.714   TIME= 13:56:48
Present time 0 is less than or equal to the previous time.
  Time will default to 3.

*** NOTE ***                            CP=    635.714   TIME= 13:56:48
Nonlinear analysis, NROPT set to the FULL Newton-Raphson solution
 procedure for ALL DOFs.
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      13:56:48  JAN 03, 2003 CP=    635.874

DELTA T 0.50 TO 0.625 DAYS - NO PAD/ROCK CONSTRAINT


                    L O A D   S T E P   O P T I O N S

  LOAD STEP NUMBER. . . . . . . . . . . . . . . . .     3
  TIME AT END OF THE LOAD STEP. . . . . . . . . . .  3.0000
  AUTOMATIC TIME STEPPING . . . . . . . . . . . . .    ON
     INITIAL NUMBER OF SUBSTEPS . . . . . . . . . .    10
     MAXIMUM NUMBER OF SUBSTEPS . . . . . . . . . .    10
     MINIMUM NUMBER OF SUBSTEPS . . . . . . . . . .     2
  MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. . . .    15
  STEP CHANGE BOUNDARY CONDITIONS . . . . . . . .    NO
  TERMINATE ANALYSIS IF NOT CONVERGED . . . . . .YES (EXIT)
  CONVERGENCE CONTROLS. . . . . . . . . . . . . .USE DEFAULTS
  INERTIA LOADS                          X           Y           Z
     ACEL . . . . . . . . . . . . . .  0.0000     0.10000E-01  0.0000
  PRINT OUTPUT CONTROLS . . . . . . . . . . . . .NO PRINTOUT
  DATABASE OUTPUT CONTROLS. . . . . . . . . . . .ALL DATA WRITTEN
                                                  FOR THE LAST SUBSTEP


NONLINEAR MONITORING INFO IS WRITTEN TO FILE= PADNC-TH.mntr
MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS HAS BEEN MODIFIED
  TO BE, NEQIT = 26, BY SOLUTION CONTROL LOGIC.

    FORCE CONVERGENCE VALUE  = 0.4646E+06  CRITERION=  2981.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= -0.4120E-02
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC = -0.4120E-02
    FORCE CONVERGENCE VALUE  = 0.2043E+05  CRITERION=  1700.
   EQUIL ITER   2 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.2140E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.2140E-03
    FORCE CONVERGENCE VALUE  =  7043.      CRITERION=  1734.
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   EQUIL ITER   3 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.6592E-04
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.6592E-04
    FORCE CONVERGENCE VALUE  =  1194.      CRITERION=  1769.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   3
*** LOAD STEP     3   SUBSTEP     1  COMPLETED.    CUM ITER =     45
*** TIME =   2.10000         TIME INC =  0.100000
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000      UNCHANGED

    FORCE CONVERGENCE VALUE  = 0.2245E+05  CRITERION=  3005.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= -0.5312E-02
    LINE SEARCH PARAMETER =  0.9108     SCALED MAX DOF INC = -0.4839E-02
    FORCE CONVERGENCE VALUE  = 0.7829E+05  CRITERION=  1580.
   EQUIL ITER   2 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= -0.4441E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC = -0.4441E-03
    FORCE CONVERGENCE VALUE  =  342.5      CRITERION=  1613.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   2
*** LOAD STEP     3   SUBSTEP     2  COMPLETED.    CUM ITER =     47
*** TIME =   2.20000         TIME INC =  0.100000
*** AUTO TIME STEP:  NEXT TIME INC = 0.15000      INCREASED (FACTOR = 1.5000)

    FORCE CONVERGENCE VALUE  =  2022.      CRITERION=  4016.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1150E-04
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.1150E-04
    FORCE CONVERGENCE VALUE  =  608.9      CRITERION=  1410.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1
*** LOAD STEP     3   SUBSTEP     3  COMPLETED.    CUM ITER =     48
*** TIME =   2.35000         TIME INC =  0.150000
*** AUTO TIME STEP:  NEXT TIME INC = 0.22500      INCREASED (FACTOR = 1.5000)

    FORCE CONVERGENCE VALUE  =  3469.      CRITERION=  5672.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.2432E-04
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.2432E-04
    FORCE CONVERGENCE VALUE  =  1008.      CRITERION=  1177.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1
*** LOAD STEP     3   SUBSTEP     4  COMPLETED.    CUM ITER =     49
*** TIME =   2.57500         TIME INC =  0.225000
*** AUTO TIME STEP:  NEXT TIME INC = 0.21250      DECREASED (FACTOR = 0.9444)

    FORCE CONVERGENCE VALUE  =  7183.      CRITERION=  5310.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1127E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.1127E-03
    FORCE CONVERGENCE VALUE  =  5362.      CRITERION=  997.7
   EQUIL ITER   2 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.6234E-04
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.6234E-04
    FORCE CONVERGENCE VALUE  =  3189.      CRITERION=  1018.
   EQUIL ITER   3 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.2718E-04
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.2718E-04
    FORCE CONVERGENCE VALUE  = 0.2659E-01  CRITERION=  1039.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   3
*** LOAD STEP     3   SUBSTEP     5  COMPLETED.    CUM ITER =     52
*** TIME =   2.78750         TIME INC =  0.212500
*** AUTO STEP TIME:  NEXT TIME INC = 0.21250      UNCHANGED

    FORCE CONVERGENCE VALUE  =  8875.      CRITERION=  5259.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.2460E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.2460E-03
    FORCE CONVERGENCE VALUE  = 0.1099E+05  CRITERION=  883.7
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   EQUIL ITER   2 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.2148E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.2148E-03
    FORCE CONVERGENCE VALUE  = 0.1279E+05  CRITERION=  901.6
   EQUIL ITER   3 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.2540E-03
    LINE SEARCH PARAMETER =  0.4813     SCALED MAX DOF INC =  0.1222E-03
    FORCE CONVERGENCE VALUE  = 0.2202E+05  CRITERION=  919.9
   EQUIL ITER   4 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.2295E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.2295E-03
    FORCE CONVERGENCE VALUE  =  5359.      CRITERION=  938.5
   EQUIL ITER   5 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1636E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.1636E-03
    FORCE CONVERGENCE VALUE  =  6626.      CRITERION=  957.6
   EQUIL ITER   6 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1540E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.1540E-03
    FORCE CONVERGENCE VALUE  =  2895.      CRITERION=  977.1
   EQUIL ITER   7 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.5269E-04
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.5269E-04
    FORCE CONVERGENCE VALUE  =  2383.      CRITERION=  997.0
   EQUIL ITER   8 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.6485E-04
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.6485E-04
    FORCE CONVERGENCE VALUE  =  272.5      CRITERION=  1017.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   8
*** LOAD STEP     3   SUBSTEP     6  COMPLETED.    CUM ITER =     60
*** TIME =   3.00000         TIME INC =  0.212500

ESEL  FOR LABEL= TYPE  FROM       2 TO       2 BY       1

    1870  ELEMENTS (OF     8812  DEFINED) SELECTED BY  ESEL  COMMAND.

SET MATERIAL OF SELECTED ELEMENTS TO     5

    8812  ELEMENTS (OF     8812  DEFINED) SELECTED BY  EALL  COMMAND.

LIST ALL SELECTED ELEMENTS IN RANGE     530  TO     530  STEP       1
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      14:06:18  JAN 03, 2003 CP=    922.727

DELTA T 0.50 TO 0.625 DAYS - NO PAD/ROCK CONSTRAINT


   ELEM MAT TYP REL ESY SEC TSHA       NODES

    530   5   2   1   0   1          1    28    29     3   672  1050  1064   728
ANSYS RELEASE  6.1    UP20020321       13:34:25    01/03/2003

PRINTOUT RESUMED BY /GOP

 Load step file number 4.  Begin solution ...

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

*** NOTE ***                            CP=    923.878   TIME= 14:06:19
Present time 0 is less than or equal to the previous time.
  Time will default to 4.
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*** NOTE ***                            CP=    923.878   TIME= 14:06:19
Nonlinear analysis, NROPT set to the FULL Newton-Raphson solution
 procedure for ALL DOFs.
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      14:06:19  JAN 03, 2003 CP=    924.069

DELTA T 0.625 TO 1.125 DAYS - NO PAD/ROCK CONSTRAINT


                    L O A D   S T E P   O P T I O N S

  LOAD STEP NUMBER. . . . . . . . . . . . . . . . . .     4
  TIME AT END OF THE LOAD STEP. . . . . . . . . . .  4.0000
  AUTOMATIC TIME STEPPING . . . . . . . . . . . . .    ON
     INITIAL NUMBER OF SUBSTEPS . . . . . . . . . .    10
     MAXIMUM NUMBER OF SUBSTEPS . . . . . . . . . .    10
     MINIMUM NUMBER OF SUBSTEPS . . . . . . . . . .     2
  MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. . . .    15
  STEP CHANGE BOUNDARY CONDITIONS . . . . . . . .    NO
  TERMINATE ANALYSIS IF NOT CONVERGED . . . . . .YES (EXIT)
  CONVERGENCE CONTROLS. . . . . . . . . . . . . .USE DEFAULTS
  INERTIA LOADS                          X           Y           Z
     ACEL . . . . . . . . . . . . .  0.0000     0.10000E-01  0.0000
  PRINT OUTPUT CONTROLS . . . . . . . . . . . . .NO PRINTOUT
  DATABASE OUTPUT CONTROLS. . . . . . . . . . . .ALL DATA WRITTEN
                                                  FOR THE LAST SUBSTEP


NONLINEAR MONITORING INFO IS WRITTEN TO FILE= PADNC-TH.mntr
MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS HAS BEEN MODIFIED
  TO BE, NEQIT = 26, BY SOLUTION CONTROL LOGIC.

    FORCE CONVERGENCE VALUE  = 0.6213E+06  CRITERION=  3342.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.2765E-01
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.2765E-01
    FORCE CONVERGENCE VALUE  = 0.3958E+05  CRITERION=  1170.
   EQUIL ITER   2 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1181E-02
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.1181E-02
    FORCE CONVERGENCE VALUE  = 0.4961E+05  CRITERION=  1193.
   EQUIL ITER   3 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1298E-02
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.1298E-02
    FORCE CONVERGENCE VALUE  = 0.3071E+05  CRITERION=  1216.
   EQUIL ITER   4 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1402E-02
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.1402E-02
    FORCE CONVERGENCE VALUE  = 0.3983E+05  CRITERION=  1239.
   EQUIL ITER   5 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1342E-02
    LINE SEARCH PARAMETER =  0.7264     SCALED MAX DOF INC =  0.9745E-03
    FORCE CONVERGENCE VALUE  = 0.5643E+05  CRITERION=  1264.
   EQUIL ITER   6 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.9254E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.9254E-03
    FORCE CONVERGENCE VALUE  = 0.3241E+05  CRITERION=  1288.
   EQUIL ITER   7 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.8728E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.8728E-03
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    FORCE CONVERGENCE VALUE  = 0.1358E+05  CRITERION=  1314.
   EQUIL ITER   8 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.3576E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.3576E-03
    FORCE CONVERGENCE VALUE  = 0.2152E+05  CRITERION=  1340.
   EQUIL ITER   9 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.5284E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.5284E-03
    FORCE CONVERGENCE VALUE  =  7742.      CRITERION=  1367.
   EQUIL ITER  10 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1498E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.1498E-03
    FORCE CONVERGENCE VALUE  =  9601.      CRITERION=  1394.
   EQUIL ITER  11 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1790E-03
    LINE SEARCH PARAMETER =  0.9929     SCALED MAX DOF INC =  0.1777E-03
    FORCE CONVERGENCE VALUE  =  4456.      CRITERION=  1422.
   EQUIL ITER  12 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.2672E-04
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.2672E-04
    FORCE CONVERGENCE VALUE  =  18.52      CRITERION=  1451.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION  12
*** LOAD STEP     4   SUBSTEP     1  COMPLETED.    CUM ITER =     72
*** TIME =   3.10000         TIME INC =  0.100000
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000      UNCHANGED

    FORCE CONVERGENCE VALUE  =  6693.      CRITERION=  3361.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= -0.9103E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC = -0.9103E-03
    FORCE CONVERGENCE VALUE  =  4650.      CRITERION=  1276.
   EQUIL ITER   2 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.6610E-04
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.6610E-04
    FORCE CONVERGENCE VALUE  = 0.1706E-01  CRITERION=  1302.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   2
*** LOAD STEP     4   SUBSTEP     2  COMPLETED.    CUM ITER =     74
*** TIME =   3.20000         TIME INC =  0.100000
*** AUTO TIME STEP:  NEXT TIME INC = 0.15000      INCREASED (FACTOR = 1.5000)

    FORCE CONVERGENCE VALUE  =  6926.      CRITERION=  4908.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1656E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.1656E-03
    FORCE CONVERGENCE VALUE  =  2157.      CRITERION=  1499.
   EQUIL ITER   2 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.2942E-04
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.2942E-04
    FORCE CONVERGENCE VALUE  = 0.4400E-02  CRITERION=  1530.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   2
*** LOAD STEP     4   SUBSTEP     3  COMPLETED.    CUM ITER =     76
*** TIME =   3.35000         TIME INC =  0.150000
*** AUTO TIME STEP:  NEXT TIME INC = 0.22500      INCREASED (FACTOR = 1.5000)

    FORCE CONVERGENCE VALUE  =  4829.      CRITERION=  7274.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1485E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.1485E-03
    FORCE CONVERGENCE VALUE  =  421.7      CRITERION=  1905.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1
*** LOAD STEP     4   SUBSTEP     4  COMPLETED.    CUM ITER =     77
*** TIME =   3.57500         TIME INC =  0.225000
*** AUTO TIME STEP:  NEXT TIME INC = 0.21250      DECREASED (FACTOR = 0.9444)

    FORCE CONVERGENCE VALUE  =  4868.      CRITERION=  6969.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1236E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.1236E-03
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    FORCE CONVERGENCE VALUE   = 0.2624E-01  CRITERION=  2331.      <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1
*** LOAD STEP     4   SUBSTEP     5  COMPLETED.    CUM ITER =     78
*** TIME =   3.78750          TIME INC =  0.212500
*** AUTO STEP TIME:  NEXT TIME INC = 0.21250      UNCHANGED

    FORCE CONVERGENCE VALUE   =  419.8      CRITERION=  7082.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= -0.1070E-04
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC = -0.1070E-04
    FORCE CONVERGENCE VALUE   = 0.3022E-02  CRITERION=  2779.      <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1
*** LOAD STEP     4   SUBSTEP     6  COMPLETED.    CUM ITER =     79
*** TIME =   4.00000          TIME INC =  0.212500

ESEL  FOR LABEL= TYPE  FROM       2 TO       2 BY       1

    1870  ELEMENTS (OF     8812  DEFINED) SELECTED BY  ESEL  COMMAND.

SET MATERIAL OF SELECTED ELEMENTS TO     6

    8812  ELEMENTS (OF     8812  DEFINED) SELECTED BY  EALL  COMMAND.

LIST ALL SELECTED ELEMENTS IN RANGE     530  TO     530  STEP       1
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      14:16:02  JAN 03, 2003 CP=   1222.067

DELTA T 0.625 TO 1.125 DAYS - NO PAD/ROCK CONSTRAINT


   ELEM MAT TYP REL ESY SEC TSHA       NODES

    530   6   2   1   0   1          1    28    29     3   672  1050  1064   728
ANSYS RELEASE  6.1    UP20020321       13:34:26    01/03/2003

PRINTOUT RESUMED BY /GOP

 Load step file number 5.  Begin solution ...

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

*** NOTE ***                            CP=   1223.259   TIME= 14:16:03
Present time 0 is less than or equal to the previous time.
  Time will default to 5.

*** NOTE ***                            CP=   1223.259   TIME= 14:16:03
Nonlinear analysis, NROPT set to the FULL Newton-Raphson solution
 procedure for ALL DOFs.
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      14:16:03  JAN 03, 2003 CP=   1223.459

DELTA T 1.125 TO 1.625 DAYS - NO PAD/ROCK CONSTRAINT
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                    L O A D   S T E P   O P T I O N S

  LOAD STEP NUMBER. . . . . . . . . . . . . . . . .     5
  TIME AT END OF THE LOAD STEP. . . . . . . . . . .  5.0000
  AUTOMATIC TIME STEPPING . . . . . . . . . . . . .    ON
     INITIAL NUMBER OF SUBSTEPS . . . . . . . . . .    10
     MAXIMUM NUMBER OF SUBSTEPS . . . . . . . . . .    10
     MINIMUM NUMBER OF SUBSTEPS . . . . . . . . . .     2
  MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. . . .    15
  STEP CHANGE BOUNDARY CONDITIONS . . . . . . . .    NO
  TERMINATE ANALYSIS IF NOT CONVERGED . . . . . .YES (EXIT)
  CONVERGENCE CONTROLS. . . . . . . . . . . . . .USE DEFAULTS
  INERTIA LOADS                          X          Y          Z
     ACEL . . . . . . . . . . . . . .  0.0000     0.10000E-01  0.0000
  PRINT OUTPUT CONTROLS . . . . . . . . . . . . .NO PRINTOUT
  DATABASE OUTPUT CONTROLS. . . . . . . . . . . .ALL DATA WRITTEN
                                                  FOR THE LAST SUBSTEP


NONLINEAR MONITORING INFO IS WRITTEN TO FILE= PADNC-TH.mntr
MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS HAS BEEN MODIFIED
  TO BE, NEQIT = 26, BY SOLUTION CONTROL LOGIC.

    FORCE CONVERGENCE VALUE  = 0.4292E+06  CRITERION=  3822.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= -0.1462E-01
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC = -0.1462E-01
    FORCE CONVERGENCE VALUE  =  2.580      CRITERION=  3034.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1
*** LOAD STEP     5   SUBSTEP     1  COMPLETED.    CUM ITER =     80
*** TIME =   4.10000         TIME INC =  0.100000
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000      UNCHANGED

    FORCE CONVERGENCE VALUE  =  2120.      CRITERION=  3835.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= -0.1935E-02
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC = -0.1935E-02
    FORCE CONVERGENCE VALUE  = 0.4969      CRITERION=  2874.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1
*** LOAD STEP     5   SUBSTEP     2  COMPLETED.    CUM ITER =     81
*** TIME =   4.20000         TIME INC =  0.100000
*** AUTO TIME STEP:  NEXT TIME INC = 0.15000      INCREASED (FACTOR = 1.5000)

    FORCE CONVERGENCE VALUE  =  3.246      CRITERION=  4518.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= -0.1452E-07
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC = -0.1452E-07
    FORCE CONVERGENCE VALUE  = 0.8580E-05  CRITERION=  2638.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1
*** LOAD STEP     5   SUBSTEP     3  COMPLETED.    CUM ITER =     82
*** TIME =   4.35000         TIME INC =  0.150000
*** AUTO TIME STEP:  NEXT TIME INC = 0.22500      INCREASED (FACTOR = 1.5000)

    FORCE CONVERGENCE VALUE  =  2.172      CRITERION=  5802.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.2709E-08
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.2709E-08
    FORCE CONVERGENCE VALUE  = 0.7065E-05  CRITERION=  2296.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1
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*** LOAD STEP     5   SUBSTEP     4  COMPLETED.    CUM ITER =     83
*** TIME =   4.57500         TIME INC =  0.225000
*** AUTO TIME STEP:  NEXT TIME INC = 0.21250      DECREASED (FACTOR = 0.9444)

    FORCE CONVERGENCE VALUE  =  1.543      CRITERION=  5381.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.2121E-08
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.2121E-08
    FORCE CONVERGENCE VALUE  = 0.1272E-04  CRITERION=  1992.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1
*** LOAD STEP     5   SUBSTEP     5  COMPLETED.    CUM ITER =     84
*** TIME =   4.78750         TIME INC =  0.212500
*** AUTO STEP TIME:  NEXT TIME INC = 0.21250      UNCHANGED

    FORCE CONVERGENCE VALUE  =  1.499      CRITERION=  5241.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.2060E-08
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.2060E-08
    FORCE CONVERGENCE VALUE  = 0.8331E-05  CRITERION=  1719.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1
*** LOAD STEP     5   SUBSTEP     6  COMPLETED.    CUM ITER =     85
*** TIME =   5.00000         TIME INC =  0.212500

ESEL  FOR LABEL= TYPE  FROM       2 TO       2 BY       1

    1870  ELEMENTS (OF     8812  DEFINED) SELECTED BY  ESEL  COMMAND.

SET MATERIAL OF SELECTED ELEMENTS TO     7

    8812  ELEMENTS (OF     8812  DEFINED) SELECTED BY  EALL  COMMAND.

LIST ALL SELECTED ELEMENTS IN RANGE     530  TO     530  STEP       1
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      14:20:38  JAN 03, 2003 CP=   1342.330

DELTA T 1.125 TO 1.625 DAYS - NO PAD/ROCK CONSTRAINT


   ELEM MAT TYP REL ESY SEC TSHA       NODES

    530   7   2   1   0   1          1    28    29     3   672  1050  1064   728
ANSYS RELEASE  6.1    UP20020321       13:34:26    01/03/2003

PRINTOUT RESUMED BY /GOP

 Load step file number 6.  Begin solution ...

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

*** NOTE ***                            CP=   1343.512   TIME= 14:20:39
Present time 0 is less than or equal to the previous time.
  Time will default to 6.

*** NOTE ***                            CP=   1343.512   TIME= 14:20:39
Nonlinear analysis, NROPT set to the FULL Newton-Raphson solution
 procedure for ALL DOFs.
```

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1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1      *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      14:20:39  JAN 03, 2003 CP=   1343.742

DELTA T 1.625 TO 2.125 DAYS - NO PAD/ROCK CONSTRAINT


                    L O A D   S T E P   O P T I O N S

  LOAD STEP NUMBER. . . . . . . . . . . . . . . . . .     6
  TIME AT END OF THE LOAD STEP. . . . . . . . . . .  6.0000
  AUTOMATIC TIME STEPPING . . . . . . . . . . . . .    ON
     INITIAL NUMBER OF SUBSTEPS . . . . . . . . . .    10
     MAXIMUM NUMBER OF SUBSTEPS . . . . . . . . . .    10
     MINIMUM NUMBER OF SUBSTEPS . . . . . . . . . .     2
  MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. . . .    15
  STEP CHANGE BOUNDARY CONDITIONS . . . . . . . .    NO
  TERMINATE ANALYSIS IF NOT CONVERGED . . . . . .YES (EXIT)
  CONVERGENCE CONTROLS. . . . . . . . . . . . . .USE DEFAULTS
  INERTIA LOADS                          X           Y           Z
     ACEL . . . . . . . . . . . . . .  0.0000     0.10000E-01  0.0000
  PRINT OUTPUT CONTROLS . . . . . . . . . . . . .NO PRINTOUT
  DATABASE OUTPUT CONTROLS. . . . . . . . . . . .ALL DATA WRITTEN
                                                  FOR THE LAST SUBSTEP


NONLINEAR MONITORING INFO IS WRITTEN TO FILE= PADNC-TH.mntr
MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS HAS BEEN MODIFIED
  TO BE, NEQIT = 26, BY SOLUTION CONTROL LOGIC.

    FORCE CONVERGENCE VALUE  = 0.2461E+06  CRITERION=  2202.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= -0.8446E-02
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC = -0.8446E-02
    FORCE CONVERGENCE VALUE  = 0.6207      CRITERION=  1754.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1
*** LOAD STEP     6   SUBSTEP     1  COMPLETED.    CUM ITER =     86
*** TIME =   5.10000         TIME INC =  0.100000
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000      UNCHANGED

    FORCE CONVERGENCE VALUE  =  1348.      CRITERION=  2187.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= -0.1139E-02
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC = -0.1139E-02
    FORCE CONVERGENCE VALUE  = 0.1469      CRITERION=  1665.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1
*** LOAD STEP     6   SUBSTEP     2  COMPLETED.    CUM ITER =     87
*** TIME =   5.20000         TIME INC =  0.100000
*** AUTO TIME STEP:  NEXT TIME INC = 0.15000      INCREASED (FACTOR = 1.5000)

    FORCE CONVERGENCE VALUE  =  7944.      CRITERION=  2570.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1628E-04
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.1628E-04
    FORCE CONVERGENCE VALUE  = 0.7646E-02  CRITERION=  1536.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1
*** LOAD STEP     6   SUBSTEP     3  COMPLETED.    CUM ITER =     88
*** TIME =   5.35000         TIME INC =  0.150000
```

```
*** AUTO TIME STEP:  NEXT TIME INC = 0.22500      INCREASED (FACTOR = 1.5000)

    FORCE CONVERGENCE VALUE  =  2905.      CRITERION=  3296.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.5952E-05
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.5952E-05
    FORCE CONVERGENCE VALUE  = 0.2894E-02  CRITERION=  1359.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1
*** LOAD STEP     6   SUBSTEP     4  COMPLETED.    CUM ITER =     89
*** TIME =   5.57500         TIME INC =  0.225000
*** AUTO TIME STEP:  NEXT TIME INC = 0.21250      DECREASED (FACTOR = 0.9444)

    FORCE CONVERGENCE VALUE  = 0.6420      CRITERION=  3065.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.9504E-09
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.9504E-09
    FORCE CONVERGENCE VALUE  = 0.1335E-04  CRITERION=  1216.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1
*** LOAD STEP     6   SUBSTEP     5  COMPLETED.    CUM ITER =     90
*** TIME =   5.78750         TIME INC =  0.212500
*** AUTO STEP TIME:  NEXT TIME INC = 0.21250      UNCHANGED

    FORCE CONVERGENCE VALUE  = 0.6238      CRITERION=  2994.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.9156E-09
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.9156E-09
    FORCE CONVERGENCE VALUE  = 0.1947E-04  CRITERION=  1104.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1
*** LOAD STEP     6   SUBSTEP     6  COMPLETED.    CUM ITER =     91
*** TIME =   6.00000         TIME INC =  0.212500

ESEL  FOR LABEL= TYPE  FROM       2 TO       2 BY       1

    1870  ELEMENTS (OF     8812  DEFINED) SELECTED BY  ESEL  COMMAND.

SET MATERIAL OF SELECTED ELEMENTS TO     8

    8812  ELEMENTS (OF     8812  DEFINED) SELECTED BY  EALL  COMMAND.

LIST ALL SELECTED ELEMENTS IN RANGE     530  TO     530  STEP       1
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      14:25:13  JAN 03, 2003 CP=   1462.403

DELTA T 1.625 TO 2.125 DAYS - NO PAD/ROCK CONSTRAINT


   ELEM MAT TYP REL ESY SEC TSHA       NODES

    530   8   2   1   0   1          1    28    29     3   672  1050  1064   728
ANSYS RELEASE  6.1    UP20020321       13:34:26    01/03/2003

PRINTOUT RESUMED BY /GOP

 Load step file number 7.  Begin solution ...

*****  ANSYS SOLVE    COMMAND  *****
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*** NOTE ***                            CP=   1463.615   TIME= 14:25:15
Present time 0 is less than or equal to the previous time.
  Time will default to 7.

*** NOTE ***                            CP=   1463.615   TIME= 14:25:15
Nonlinear analysis, NROPT set to the FULL Newton-Raphson solution
 procedure for ALL DOFs.
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      14:25:15  JAN 03, 2003 CP=   1463.865

DELTA T 2.125 TO 2.375 DAYS - NO PAD/ROCK CONSTRAINT


                    L O A D   S T E P   O P T I O N S

  LOAD STEP NUMBER. . . . . . . . . . . . . . . . .     7
  TIME AT END OF THE LOAD STEP. . . . . . . . . . .  7.0000
  AUTOMATIC TIME STEPPING . . . . . . . . . . . . .    ON
     INITIAL NUMBER OF SUBSTEPS . . . . . . . . . .    10
     MAXIMUM NUMBER OF SUBSTEPS . . . . . . . . . .    10
     MINIMUM NUMBER OF SUBSTEPS . . . . . . . . . .     2
  MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. . . . .    15
  STEP CHANGE BOUNDARY CONDITIONS . . . . . . . . .    NO
  TERMINATE ANALYSIS IF NOT CONVERGED . . . . . . .YES (EXIT)
  CONVERGENCE CONTROLS. . . . . . . . . . . . . . .USE DEFAULTS
  INERTIA LOADS                          X           Y           Z
     ACEL . . . . . . . . . . . . . .  0.0000     0.10000E-01  0.0000
  PRINT OUTPUT CONTROLS . . . . . . . . . . . . . .NO PRINTOUT
  DATABASE OUTPUT CONTROLS. . . . . . . . . . . . .ALL DATA WRITTEN
                                                    FOR THE LAST SUBSTEP


NONLINEAR MONITORING INFO IS WRITTEN TO FILE= PADNC-TH.mntr
MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS HAS BEEN MODIFIED
  TO BE, NEQIT = 26, BY SOLUTION CONTROL LOGIC.

    FORCE CONVERGENCE VALUE  = 0.1711E+06  CRITERION=  1399.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= -0.7109E-02
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC = -0.7109E-02
    FORCE CONVERGENCE VALUE  =  1389.      CRITERION=  1048.
   EQUIL ITER   2 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.3765E-05
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.3765E-05
    FORCE CONVERGENCE VALUE  = 0.1351E-02  CRITERION=  1069.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   2
*** LOAD STEP     7   SUBSTEP     1  COMPLETED.    CUM ITER =     93
*** TIME =   6.10000         TIME INC =  0.100000
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000      UNCHANGED

    FORCE CONVERGENCE VALUE  =  1667.      CRITERION=  1372.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= -0.3381E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC = -0.3381E-03
    FORCE CONVERGENCE VALUE  = 0.5729E-01  CRITERION=  980.4     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1
*** LOAD STEP     7   SUBSTEP     2  COMPLETED.    CUM ITER =     94
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*** TIME =   6.20000          TIME INC =  0.100000
*** AUTO TIME STEP:  NEXT TIME INC = 0.15000      INCREASED (FACTOR = 1.5000)

    FORCE CONVERGENCE VALUE  =  5727.      CRITERION=  1656.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.8935E-05
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.8935E-05
    FORCE CONVERGENCE VALUE  = 0.5787E-02  CRITERION=  880.6     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1
*** LOAD STEP     7   SUBSTEP     3  COMPLETED.    CUM ITER =     95
*** TIME =   6.35000          TIME INC =  0.150000
*** AUTO TIME STEP:  NEXT TIME INC = 0.22500      INCREASED (FACTOR = 1.5000)

    FORCE CONVERGENCE VALUE  = 0.1937E+05  CRITERION=  2182.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1890E-04
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.1890E-04
    FORCE CONVERGENCE VALUE  =  709.0      CRITERION=  734.2     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1
*** LOAD STEP     7   SUBSTEP     4  COMPLETED.    CUM ITER =     96
*** TIME =   6.57500          TIME INC =  0.225000
*** AUTO TIME STEP:  NEXT TIME INC = 0.21250      DECREASED (FACTOR = 0.9444)

    FORCE CONVERGENCE VALUE  = 0.5490E+05  CRITERION=  2022.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= -0.3676E-04
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC = -0.3676E-04
    FORCE CONVERGENCE VALUE  =  7200.      CRITERION=  602.1
   EQUIL ITER   2 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.5997E-04
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.5997E-04
    FORCE CONVERGENCE VALUE  =  865.0      CRITERION=  613.8
   EQUIL ITER   3 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.4426E-05
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.4426E-05
    FORCE CONVERGENCE VALUE  = 0.9521E-03  CRITERION=  626.3     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   3
*** LOAD STEP     7   SUBSTEP     5  COMPLETED.    CUM ITER =     99
*** TIME =   6.78750          TIME INC =  0.212500
*** AUTO STEP TIME:  NEXT TIME INC = 0.21250      UNCHANGED

    FORCE CONVERGENCE VALUE  = 0.1377E+06  CRITERION=  1976.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= -0.6734E-04
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC = -0.6734E-04
    FORCE CONVERGENCE VALUE  = 0.1313E+05  CRITERION=  479.5
   EQUIL ITER   2 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1167E-03
    LINE SEARCH PARAMETER =  0.9923     SCALED MAX DOF INC =  0.1158E-03
    FORCE CONVERGENCE VALUE  =  2959.      CRITERION=  488.4
   EQUIL ITER   3 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.5754E-05
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.5754E-05
    FORCE CONVERGENCE VALUE  = 0.3291E-02  CRITERION=  498.3     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   3
*** LOAD STEP     7   SUBSTEP     6  COMPLETED.    CUM ITER =    102
*** TIME =   7.00000          TIME INC =  0.212500

ESEL  FOR LABEL= TYPE  FROM       2 TO       2 BY       1

    1870  ELEMENTS (OF     8812  DEFINED) SELECTED BY  ESEL  COMMAND.

SET MATERIAL OF SELECTED ELEMENTS TO     9

    8812  ELEMENTS (OF     8812  DEFINED) SELECTED BY  EALL  COMMAND.
```

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 LIST ALL SELECTED ELEMENTS IN RANGE     530  TO     530  STEP       1
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
 ANSYS/Mechanical U
 00245050          VERSION=INTEL NT      14:31:37  JAN 03, 2003 CP=   1646.738

 DELTA T 2.125 TO 2.375 DAYS - NO PAD/ROCK CONSTRAINT


    ELEM MAT TYP REL ESY SEC TSHA       NODES

     530   9   2   1   0   1          1    28    29     3   672  1050  1064   728
 ANSYS RELEASE  6.1    UP20020321       13:34:26    01/03/2003

 PRINTOUT RESUMED BY /GOP

  Load step file number 8.  Begin solution ...

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

 *** NOTE ***                            CP=   1647.910   TIME= 14:31:39
 Present time 0 is less than or equal to the previous time.
   Time will default to 8.

 *** NOTE ***                            CP=   1647.910   TIME= 14:31:39
 Nonlinear analysis, NROPT set to the FULL Newton-Raphson solution
  procedure for ALL DOFs.
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
 ANSYS/Mechanical U
 00245050          VERSION=INTEL NT      14:31:39  JAN 03, 2003 CP=   1648.180

 DELTA T 2.375 TO 3.125 DAYS - NO PAD/ROCK CONSTRAINT


                    L O A D   S T E P   O P T I O N S

   LOAD STEP NUMBER. . . . . . . . . . . . . . . . . .     8
   TIME AT END OF THE LOAD STEP. . . . . . . . . . .  8.0000
   AUTOMATIC TIME STEPPING . . . . . . . . . . . . .    ON
      INITIAL NUMBER OF SUBSTEPS . . . . . . . . . .    10
      MAXIMUM NUMBER OF SUBSTEPS . . . . . . . . . .    10
      MINIMUM NUMBER OF SUBSTEPS . . . . . . . . . .     2
   MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. . . .    15
   STEP CHANGE BOUNDARY CONDITIONS . . . . . . . .    NO
   TERMINATE ANALYSIS IF NOT CONVERGED . . . . . .YES (EXIT)
   CONVERGENCE CONTROLS. . . . . . . . . . . . . .USE DEFAULTS
   INERTIA LOADS                          X           Y           Z
      ACEL . . . . . . . . . . . . . .  0.0000     0.10000E-01  0.0000
   PRINT OUTPUT CONTROLS . . . . . . . . . . . . .NO PRINTOUT
   DATABASE OUTPUT CONTROLS. . . . . . . . . . . .ALL DATA WRITTEN
                                                   FOR THE LAST SUBSTEP
```

```
NONLINEAR MONITORING INFO IS WRITTEN TO FILE= PADNC-TH.mntr
MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS HAS BEEN MODIFIED
  TO BE, NEQIT = 26, BY SOLUTION CONTROL LOGIC.

    FORCE CONVERGENCE VALUE  = 0.1434E+06  CRITERION=  874.4
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.3282E-02
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.3282E-02
    FORCE CONVERGENCE VALUE  =  1432.      CRITERION=  561.7
   EQUIL ITER   2 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1720E-04
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.1720E-04
    FORCE CONVERGENCE VALUE  =  33.40      CRITERION=  573.0     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   2
*** LOAD STEP     8   SUBSTEP     1  COMPLETED.    CUM ITER =    104
*** TIME =   7.10000         TIME INC =  0.100000
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000      UNCHANGED

    FORCE CONVERGENCE VALUE  =  2587.      CRITERION=  905.5
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= -0.6956E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC = -0.6956E-03
    FORCE CONVERGENCE VALUE  = 0.1320      CRITERION=  639.7     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1
*** LOAD STEP     8   SUBSTEP     2  COMPLETED.    CUM ITER =    105
*** TIME =   7.20000         TIME INC =  0.100000
*** AUTO TIME STEP:  NEXT TIME INC = 0.15000      INCREASED (FACTOR = 1.5000)

    FORCE CONVERGENCE VALUE  =  587.4      CRITERION=  1256.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1270E-04
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.1270E-04
    FORCE CONVERGENCE VALUE  = 0.2012E-02  CRITERION=  761.3     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1
*** LOAD STEP     8   SUBSTEP     3  COMPLETED.    CUM ITER =    106
*** TIME =   7.35000         TIME INC =  0.150000
*** AUTO TIME STEP:  NEXT TIME INC = 0.22500      INCREASED (FACTOR = 1.5000)

    FORCE CONVERGENCE VALUE  =  1165.      CRITERION=  1803.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.8370E-05
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.8370E-05
    FORCE CONVERGENCE VALUE  = 0.1652E-02  CRITERION=  949.6     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1
*** LOAD STEP     8   SUBSTEP     4  COMPLETED.    CUM ITER =    107
*** TIME =   7.57500         TIME INC =  0.225000
*** AUTO TIME STEP:  NEXT TIME INC = 0.21250      DECREASED (FACTOR = 0.9444)

    FORCE CONVERGENCE VALUE  =  678.2      CRITERION=  1792.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.5891E-05
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.5891E-05
    FORCE CONVERGENCE VALUE  = 0.6588E-03  CRITERION=  1131.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1
*** LOAD STEP     8   SUBSTEP     5  COMPLETED.    CUM ITER =    108
*** TIME =   7.78750         TIME INC =  0.212500
*** AUTO STEP TIME:  NEXT TIME INC = 0.21250      UNCHANGED

    FORCE CONVERGENCE VALUE  =  384.3      CRITERION=  1879.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.3927E-05
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.3927E-05
    FORCE CONVERGENCE VALUE  = 0.4297E-03  CRITERION=  1315.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1
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```
*** LOAD STEP     8   SUBSTEP     6  COMPLETED.    CUM ITER =    109
*** TIME =   8.00000         TIME INC =  0.212500

ESEL  FOR LABEL= TYPE  FROM       2 TO       2 BY       1

    1870  ELEMENTS (OF     8812  DEFINED) SELECTED BY  ESEL  COMMAND.

SET MATERIAL OF SELECTED ELEMENTS TO    10

    8812  ELEMENTS (OF     8812  DEFINED) SELECTED BY  EALL  COMMAND.

LIST ALL SELECTED ELEMENTS IN RANGE     530  TO     530  STEP       1
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      14:36:39  JAN 03, 2003 CP=   1785.247

DELTA T 2.375 TO 3.125 DAYS - NO PAD/ROCK CONSTRAINT


   ELEM MAT TYP REL ESY SEC TSHA       NODES

    530  10   2   1   0   1          1    28    29     3   672  1050  1064   728
ANSYS RELEASE  6.1    UP20020321       13:34:26    01/03/2003

PRINTOUT RESUMED BY /GOP

 Load step file number 9.  Begin solution ...

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

*** NOTE ***                            CP=   1786.439   TIME= 14:36:40
Present time 0 is less than or equal to the previous time.
  Time will default to 9.

*** NOTE ***                            CP=   1786.439   TIME= 14:36:40
Nonlinear analysis, NROPT set to the FULL Newton-Raphson solution
 procedure for ALL DOFs.
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      14:36:40  JAN 03, 2003 CP=   1786.729

DELTA T 3.125 TO 4.125 DAYS - NO PAD/ROCK CONSTRAINT


                    L O A D   S T E P   O P T I O N S

   LOAD STEP NUMBER. . . . . . . . . . . . . . . . .     9
   TIME AT END OF THE LOAD STEP. . . . . . . . . . .  9.0000
   AUTOMATIC TIME STEPPING . . . . . . . . . . . . .    ON
      INITIAL NUMBER OF SUBSTEPS . . . . . . . . . .    10
      MAXIMUM NUMBER OF SUBSTEPS . . . . . . . . . .    10
      MINIMUM NUMBER OF SUBSTEPS . . . . . . . . . .     2
   MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. . . .    15
```

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  STEP CHANGE BOUNDARY CONDITIONS . . . . . . . .    NO
  TERMINATE ANALYSIS IF NOT CONVERGED . . . . . .YES (EXIT)
  CONVERGENCE CONTROLS. . . . . . . . . . . . . .USE DEFAULTS
  INERTIA LOADS                          X           Y           Z
     ACEL . . . . . . . . . . . . . .  0.0000     0.10000E-01  0.0000
  PRINT OUTPUT CONTROLS . . . . . . . . . . . . .NO PRINTOUT
  DATABASE OUTPUT CONTROLS. . . . . . . . . . . .ALL DATA WRITTEN
                                                  FOR THE LAST SUBSTEP


NONLINEAR MONITORING INFO IS WRITTEN TO FILE= PADNC-TH.mntr
MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS HAS BEEN MODIFIED
  TO BE, NEQIT = 26, BY SOLUTION CONTROL LOGIC.

    FORCE CONVERGENCE VALUE  = 0.1579E+06  CRITERION=  1544.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= -0.4250E-02
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC = -0.4250E-02
    FORCE CONVERGENCE VALUE  =  1388.      CRITERION=  1369.
   EQUIL ITER   2 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.2245E-05
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.2245E-05
    FORCE CONVERGENCE VALUE  = 0.1330E-02  CRITERION=  1397.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   2
*** LOAD STEP     9   SUBSTEP     1  COMPLETED.    CUM ITER =    111
*** TIME =   8.10000         TIME INC =  0.100000
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000      UNCHANGED

    FORCE CONVERGENCE VALUE  =  2169.      CRITERION=  1550.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= -0.4096E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC = -0.4096E-03
    FORCE CONVERGENCE VALUE  = 0.7776E-01  CRITERION=  1399.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1
*** LOAD STEP     9   SUBSTEP     2  COMPLETED.    CUM ITER =    112
*** TIME =   8.20000         TIME INC =  0.100000
*** AUTO TIME STEP:  NEXT TIME INC = 0.15000      INCREASED (FACTOR = 1.5000)

    FORCE CONVERGENCE VALUE  =  4811.      CRITERION=  1812.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.2673E-05
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.2673E-05
    FORCE CONVERGENCE VALUE  =  337.0      CRITERION=  1448.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1
*** LOAD STEP     9   SUBSTEP     3  COMPLETED.    CUM ITER =    113
*** TIME =   8.35000         TIME INC =  0.150000
*** AUTO TIME STEP:  NEXT TIME INC = 0.22500      INCREASED (FACTOR = 1.5000)

    FORCE CONVERGENCE VALUE  = 0.6516E+05  CRITERION=  2291.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.3814E-04
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.3814E-04
    FORCE CONVERGENCE VALUE  =  5800.      CRITERION=  1533.
   EQUIL ITER   2 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.6145E-04
    LINE SEARCH PARAMETER =  0.7865     SCALED MAX DOF INC =  0.4833E-04
    FORCE CONVERGENCE VALUE  =  3896.      CRITERION=  1565.
   EQUIL ITER   3 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1264E-04
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.1264E-04
    FORCE CONVERGENCE VALUE  = 0.5462E-02  CRITERION=  1597.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   3
*** LOAD STEP     9   SUBSTEP     4  COMPLETED.    CUM ITER =    116
*** TIME =   8.57500         TIME INC =  0.225000
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*** AUTO STEP TIME:  NEXT TIME INC = 0.22500      UNCHANGED

    FORCE CONVERGENCE VALUE  = 0.2643E+06  CRITERION=  2333.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= -0.5424E-04
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC = -0.5424E-04
    FORCE CONVERGENCE VALUE  = 0.1165E+05  CRITERION=  1630.
   EQUIL ITER   2 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1006E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.1006E-03
    FORCE CONVERGENCE VALUE  =  2812.      CRITERION=  1662.
   EQUIL ITER   3 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.9901E-05
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.9901E-05
    FORCE CONVERGENCE VALUE  =  1140.      CRITERION=  1696.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   3
*** LOAD STEP     9   SUBSTEP     5  COMPLETED.    CUM ITER =    119
*** TIME =   8.80000         TIME INC =  0.225000
*** AUTO TIME STEP:  NEXT TIME INC = 0.20000      DECREASED (FACTOR = 0.8889)

    FORCE CONVERGENCE VALUE  = 0.1648E+07  CRITERION=  2235.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1566E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.1566E-03
    FORCE CONVERGENCE VALUE  = 0.1823E+05  CRITERION=  1722.
   EQUIL ITER   2 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.2158E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.2158E-03
    FORCE CONVERGENCE VALUE  =  9137.      CRITERION=  1757.
   EQUIL ITER   3 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1434E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.1434E-03
    FORCE CONVERGENCE VALUE  =  8202.      CRITERION=  1792.
   EQUIL ITER   4 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.9303E-04
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.9303E-04
    FORCE CONVERGENCE VALUE  =  5427.      CRITERION=  1829.
   EQUIL ITER   5 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.9349E-04
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.9349E-04
    FORCE CONVERGENCE VALUE  =  2773.      CRITERION=  1866.
   EQUIL ITER   6 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.2899E-04
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.2899E-04
    FORCE CONVERGENCE VALUE  =  1679.      CRITERION=  1904.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   6
*** LOAD STEP     9   SUBSTEP     6  COMPLETED.    CUM ITER =    125
*** TIME =   9.00000         TIME INC =  0.200000

ESEL  FOR LABEL= TYPE  FROM       2 TO       2 BY       1

    1870  ELEMENTS (OF     8812  DEFINED) SELECTED BY  ESEL  COMMAND.

SET MATERIAL OF SELECTED ELEMENTS TO    11

    8812  ELEMENTS (OF     8812  DEFINED) SELECTED BY  EALL  COMMAND.

LIST ALL SELECTED ELEMENTS IN RANGE     530  TO     530  STEP       1
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      14:45:39  JAN 03, 2003 CP=   2036.839

DELTA T 3.125 TO 4.125 DAYS - NO PAD/ROCK CONSTRAINT
```

```
   ELEM MAT TYP REL ESY SEC TSHA       NODES

    530  11   2   1   0   1          1    28    29     3   672  1050  1064   728
ANSYS RELEASE  6.1    UP20020321       13:34:26    01/03/2003

PRINTOUT RESUMED BY /GOP

 Load step file number 10.  Begin solution ...

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

*** NOTE ***                            CP=   2038.031   TIME= 14:45:40
Present time 0 is less than or equal to the previous time.
  Time will default to 10.

*** NOTE ***                            CP=   2038.031   TIME= 14:45:40
Nonlinear analysis, NROPT set to the FULL Newton-Raphson solution
 procedure for ALL DOFs.
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      14:45:41  JAN 03, 2003 CP=   2038.351

DELTA T 4.125 TO 6.125 DAYS - NO PAD/ROCK CONSTRAINT


                    L O A D   S T E P   O P T I O N S

  LOAD STEP NUMBER. . . . . . . . . . . . . . . . . .    10
  TIME AT END OF THE LOAD STEP. . . . . . . . . . .  10.000
  AUTOMATIC TIME STEPPING . . . . . . . . . . . . .    ON
     INITIAL NUMBER OF SUBSTEPS . . . . . . . . . .    10
     MAXIMUM NUMBER OF SUBSTEPS . . . . . . . . . .    10
     MINIMUM NUMBER OF SUBSTEPS . . . . . . . . . .     2
  MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. . . .    15
  STEP CHANGE BOUNDARY CONDITIONS . . . . . . . .    NO
  TERMINATE ANALYSIS IF NOT CONVERGED . . . . . .YES (EXIT)
  CONVERGENCE CONTROLS. . . . . . . . . . . . . .USE DEFAULTS
  INERTIA LOADS                          X           Y           Z
     ACEL . . . . . . . . . . . . . .  0.0000     0.10000E-01  0.0000
  PRINT OUTPUT CONTROLS . . . . . . . . . . . . .NO PRINTOUT
  DATABASE OUTPUT CONTROLS. . . . . . . . . . . .ALL DATA WRITTEN
                                                  FOR THE LAST SUBSTEP


NONLINEAR MONITORING INFO IS WRITTEN TO FILE= PADNC-TH.mntr
MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS HAS BEEN MODIFIED
  TO BE, NEQIT = 26, BY SOLUTION CONTROL LOGIC.

    FORCE CONVERGENCE VALUE  = 0.2253E+06  CRITERION=  2120.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= -0.5465E-02
    LINE SEARCH PARAMETER =  0.4122     SCALED MAX DOF INC = -0.2253E-02
    FORCE CONVERGENCE VALUE  = 0.2073E+06  CRITERION=  1943.
   EQUIL ITER   2 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= -0.2774E-02
    LINE SEARCH PARAMETER =  0.9728     SCALED MAX DOF INC = -0.2699E-02
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    FORCE CONVERGENCE VALUE  = 0.5378E+05  CRITERION=  1934.
   EQUIL ITER   3 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= -0.7450E-04
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC = -0.7450E-04
    FORCE CONVERGENCE VALUE  =  2300.      CRITERION=  1972.
   EQUIL ITER   4 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.2536E-04
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.2536E-04
    FORCE CONVERGENCE VALUE  =  787.7      CRITERION=  2012.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   4
*** LOAD STEP    10   SUBSTEP     1  COMPLETED.    CUM ITER =    129
*** TIME =   9.10000         TIME INC =  0.100000
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000      UNCHANGED

    FORCE CONVERGENCE VALUE  = 0.3166E+08  CRITERION=  2134.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1173E-02
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.1173E-02
    FORCE CONVERGENCE VALUE  = 0.1385E+06  CRITERION=  1973.
   EQUIL ITER   2 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.7425E-03
    LINE SEARCH PARAMETER =  0.9298     SCALED MAX DOF INC =  0.6903E-03
    FORCE CONVERGENCE VALUE  = 0.2783E+06  CRITERION=  2013.
   EQUIL ITER   3 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.6375E-03
    LINE SEARCH PARAMETER =  0.5333     SCALED MAX DOF INC =  0.3400E-03
    FORCE CONVERGENCE VALUE  = 0.1771E+06  CRITERION=  2054.
   EQUIL ITER   4 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.6465E-03
    LINE SEARCH PARAMETER =  0.9954     SCALED MAX DOF INC =  0.6436E-03
    FORCE CONVERGENCE VALUE  = 0.2250E+05  CRITERION=  2095.
   EQUIL ITER   5 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= -0.4733E-04
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC = -0.4733E-04
    FORCE CONVERGENCE VALUE  =  2999.      CRITERION=  2138.
   EQUIL ITER   6 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.2311E-04
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.2311E-04
    FORCE CONVERGENCE VALUE  =  1436.      CRITERION=  2182.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   6
*** LOAD STEP    10   SUBSTEP     2  COMPLETED.    CUM ITER =    135
*** TIME =   9.20000         TIME INC =  0.100000
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000      UNCHANGED

    FORCE CONVERGENCE VALUE  = 0.3472E+08  CRITERION=  2194.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1883E-02
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.1883E-02
    FORCE CONVERGENCE VALUE  = 0.7523E+05  CRITERION=  2056.
   EQUIL ITER   2 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.3608E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.3608E-03
    FORCE CONVERGENCE VALUE  = 0.1614E+06  CRITERION=  2097.
   EQUIL ITER   3 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.5888E-03
    LINE SEARCH PARAMETER =  0.9757     SCALED MAX DOF INC =  0.5744E-03
    FORCE CONVERGENCE VALUE  = 0.7101E+05  CRITERION=  2140.
   EQUIL ITER   4 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.2474E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.2474E-03
    FORCE CONVERGENCE VALUE  = 0.2848E+05  CRITERION=  2183.
   EQUIL ITER   5 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.2555E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.2555E-03
    FORCE CONVERGENCE VALUE  =  3286.      CRITERION=  2228.
   EQUIL ITER   6 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.2899E-04
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.2899E-04
    FORCE CONVERGENCE VALUE  =  4628.      CRITERION=  2273.
   EQUIL ITER   7 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.2636E-04
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.2636E-04
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    FORCE CONVERGENCE VALUE  =  2624.      CRITERION=  2320.
   EQUIL ITER   8 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.4192E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.4192E-03
    FORCE CONVERGENCE VALUE  =  760.8      CRITERION=  2367.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   8
*** LOAD STEP    10   SUBSTEP     3  COMPLETED.    CUM ITER =    143
*** TIME =   9.30000         TIME INC =  0.100000
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000      UNCHANGED

    FORCE CONVERGENCE VALUE  = 0.3647E+05  CRITERION=  2261.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.9697E-03
    LINE SEARCH PARAMETER =  0.5317     SCALED MAX DOF INC =  0.5156E-03
    FORCE CONVERGENCE VALUE  = 0.5889E+05  CRITERION=  2142.
   EQUIL ITER   2 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.4404E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.4404E-03
    FORCE CONVERGENCE VALUE  = 0.1321E+05  CRITERION=  2185.
   EQUIL ITER   3 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1018E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.1018E-03
    FORCE CONVERGENCE VALUE  =  5524.      CRITERION=  2230.
   EQUIL ITER   4 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.9431E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.9431E-03
    FORCE CONVERGENCE VALUE  =  6326.      CRITERION=  2275.
   EQUIL ITER   5 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1373E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.1373E-03
    FORCE CONVERGENCE VALUE  =  775.5      CRITERION=  2322.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   5
*** LOAD STEP    10   SUBSTEP     4  COMPLETED.    CUM ITER =    148
*** TIME =   9.40000         TIME INC =  0.100000
*** AUTO TIME STEP:  NEXT TIME INC = 0.15000      INCREASED (FACTOR = 1.5000)

    FORCE CONVERGENCE VALUE  = 0.1762E+07  CRITERION=  2645.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.3878E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.3878E-03
    FORCE CONVERGENCE VALUE  = 0.4627E+05  CRITERION=  2276.
   EQUIL ITER   2 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.2048E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.2048E-03
    FORCE CONVERGENCE VALUE  = 0.1563E+05  CRITERION=  2322.
   EQUIL ITER   3 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.2138E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.2138E-03
    FORCE CONVERGENCE VALUE  =  9545.      CRITERION=  2370.
   EQUIL ITER   4 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.2450E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.2450E-03
    FORCE CONVERGENCE VALUE  =  5850.      CRITERION=  2418.
   EQUIL ITER   5 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.4238E-02
    LINE SEARCH PARAMETER =  0.8500     SCALED MAX DOF INC =  0.3602E-02
    FORCE CONVERGENCE VALUE  = 0.3980E+05  CRITERION=  2466.
   EQUIL ITER   6 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.6087E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.6087E-03
    FORCE CONVERGENCE VALUE  = 0.8449      CRITERION=  2516.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   6
*** LOAD STEP    10   SUBSTEP     5  COMPLETED.    CUM ITER =    154
*** TIME =   9.55000         TIME INC =  0.150000
*** AUTO TIME STEP:  NEXT TIME INC = 0.22500      INCREASED (FACTOR = 1.5000)

    FORCE CONVERGENCE VALUE  = 0.9352E+06  CRITERION=  3335.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.8597E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.8597E-03
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    FORCE CONVERGENCE VALUE  = 0.5184E+05  CRITERION=  2479.
   EQUIL ITER   2 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.2880E-02
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.2880E-02
    FORCE CONVERGENCE VALUE  =  32.89      CRITERION=  2528.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   2
*** LOAD STEP    10   SUBSTEP     6  COMPLETED.    CUM ITER =    156
*** TIME =   9.77500         TIME INC =  0.225000
*** AUTO STEP TIME:  NEXT TIME INC = 0.22500      UNCHANGED

    FORCE CONVERGENCE VALUE  = 0.1088E+05  CRITERION=  3458.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.7359E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.7359E-03
    FORCE CONVERGENCE VALUE  =  9.771      CRITERION=  2687.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1
*** LOAD STEP    10   SUBSTEP     7  COMPLETED.    CUM ITER =    157
*** TIME =   10.0000         TIME INC =  0.225000

ESEL  FOR LABEL= TYPE  FROM       2 TO       2 BY       1

    1870  ELEMENTS (OF     8812  DEFINED) SELECTED BY  ESEL  COMMAND.

SET MATERIAL OF SELECTED ELEMENTS TO    12

    8812  ELEMENTS (OF     8812  DEFINED) SELECTED BY  EALL  COMMAND.

LIST ALL SELECTED ELEMENTS IN RANGE     530  TO     530  STEP       1
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      15:02:51  JAN 03, 2003 CP=   2522.627

DELTA T 4.125 TO 6.125 DAYS - NO PAD/ROCK CONSTRAINT


   ELEM MAT TYP REL ESY SEC TSHA       NODES

    530  12   2   1   0   1          1    28    29     3   672  1050  1064   728
ANSYS RELEASE  6.1    UP20020321       13:34:26    01/03/2003

PRINTOUT RESUMED BY /GOP

 Load step file number 11.  Begin solution ...

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

*** NOTE ***                            CP=   2523.809   TIME= 15:02:52
Present time 0 is less than or equal to the previous time.
  Time will default to 11.

*** NOTE ***                            CP=   2523.819   TIME= 15:02:52
Nonlinear analysis, NROPT set to the FULL Newton-Raphson solution
 procedure for ALL DOFs.
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
```

```
00245050          VERSION=INTEL NT      15:02:53  JAN 03, 2003 CP=   2524.160

DELTA T 6.125 TO 7.875 DAYS - NO PAD/ROCK CONSTRAINT


                    L O A D   S T E P   O P T I O N S

  LOAD STEP NUMBER. . . . . . . . . . . . . . . . . .    11
  TIME AT END OF THE LOAD STEP. . . . . . . . . . .  11.000
  AUTOMATIC TIME STEPPING . . . . . . . . . . . . .    ON
     INITIAL NUMBER OF SUBSTEPS . . . . . . . . . .    10
     MAXIMUM NUMBER OF SUBSTEPS . . . . . . . . . .    10
     MINIMUM NUMBER OF SUBSTEPS . . . . . . . . . .     2
  MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS. . . .     15
  STEP CHANGE BOUNDARY CONDITIONS . . . . . . . .     NO
  TERMINATE ANALYSIS IF NOT CONVERGED . . . . . .YES (EXIT)
  CONVERGENCE CONTROLS. . . . . . . . . . . . . .USE DEFAULTS
  INERTIA LOADS                          X           Y           Z
     ACEL . . . . . . . . . . . . . .  0.0000     0.10000E-01  0.0000
  PRINT OUTPUT CONTROLS . . . . . . . . . . . . .NO PRINTOUT
  DATABASE OUTPUT CONTROLS. . . . . . . . . . . .ALL DATA WRITTEN
                                                  FOR THE LAST SUBSTEP


NONLINEAR MONITORING INFO IS WRITTEN TO FILE= PADNC-TH.mntr
MAXIMUM NUMBER OF EQUILIBRIUM ITERATIONS HAS BEEN MODIFIED
  TO BE, NEQIT = 26, BY SOLUTION CONTROL LOGIC.

    FORCE CONVERGENCE VALUE  = 0.2269E+06  CRITERION=  2952.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.1480E-02
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.1480E-02
    FORCE CONVERGENCE VALUE  =  65.01      CRITERION=  2632.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1
*** LOAD STEP    11   SUBSTEP     1  COMPLETED.    CUM ITER =    158
*** TIME =   10.1000         TIME INC =  0.100000
*** AUTO STEP TIME:  NEXT TIME INC = 0.10000      UNCHANGED

    FORCE CONVERGENCE VALUE  =  367.4      CRITERION=  2931.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= -0.3646E-03
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC = -0.3646E-03
    FORCE CONVERGENCE VALUE  =  3.477      CRITERION=  2495.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1
*** LOAD STEP    11   SUBSTEP     2  COMPLETED.    CUM ITER =    159
*** TIME =   10.2000         TIME INC =  0.100000
*** AUTO TIME STEP:  NEXT TIME INC = 0.15000      INCREASED (FACTOR = 1.5000)

    FORCE CONVERGENCE VALUE  =  76.33      CRITERION=  3146.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC=  0.9980E-07
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC =  0.9980E-07
    FORCE CONVERGENCE VALUE  = 0.7697E-04  CRITERION=  2290.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1
*** LOAD STEP    11   SUBSTEP     3  COMPLETED.    CUM ITER =    160
*** TIME =   10.3500         TIME INC =  0.150000
*** AUTO TIME STEP:  NEXT TIME INC = 0.22500      INCREASED (FACTOR = 1.5000)

    FORCE CONVERGENCE VALUE  =  22.86      CRITERION=  3633.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= -0.2672E-07
```

```
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC = -0.2672E-07
    FORCE CONVERGENCE VALUE  = 0.8341E-04  CRITERION=  1987.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1
*** LOAD STEP    11   SUBSTEP     4  COMPLETED.    CUM ITER =    161
*** TIME =   10.5750         TIME INC =  0.225000
*** AUTO TIME STEP:  NEXT TIME INC = 0.21250      DECREASED (FACTOR = 0.9444)

    FORCE CONVERGENCE VALUE  =  30.93      CRITERION=  3316.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= -0.3408E-07
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC = -0.3408E-07
    FORCE CONVERGENCE VALUE  = 0.3075E-04  CRITERION=  1706.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1
*** LOAD STEP    11   SUBSTEP     5  COMPLETED.    CUM ITER =    162
*** TIME =   10.7875         TIME INC =  0.212500
*** AUTO STEP TIME:  NEXT TIME INC = 0.21250      UNCHANGED

    FORCE CONVERGENCE VALUE  =  30.05      CRITERION=  3143.
   EQUIL ITER   1 COMPLETED.  NEW TRIANG MATRIX.  MAX DOF INC= -0.3311E-07
    LINE SEARCH PARAMETER =   1.000     SCALED MAX DOF INC = -0.3311E-07
    FORCE CONVERGENCE VALUE  = 0.2932E-04  CRITERION=  1435.     <<< CONVERGED
   >>> SOLUTION CONVERGED AFTER EQUILIBRIUM ITERATION   1
*** LOAD STEP    11   SUBSTEP     6  COMPLETED.    CUM ITER =    163
*** TIME =   11.0000         TIME INC =  0.212500

ESEL  FOR LABEL= TYPE  FROM       2 TO       2 BY       1

    1870  ELEMENTS (OF     8812  DEFINED) SELECTED BY  ESEL  COMMAND.

SET MATERIAL OF SELECTED ELEMENTS TO     2

    8812  ELEMENTS (OF     8812  DEFINED) SELECTED BY  EALL  COMMAND.

LIST ALL SELECTED ELEMENTS IN RANGE     530  TO     530  STEP       1
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      15:07:44  JAN 03, 2003 CP=   2642.089

DELTA T 6.125 TO 7.875 DAYS - NO PAD/ROCK CONSTRAINT


   ELEM MAT TYP REL ESY SEC TSHA       NODES

    530   2   2   1   0   1          1    28    29     3   672  1050  1064   728

FINISH SOLUTION PROCESSING


***** ROUTINE COMPLETED *****  CP =      2642.089


ALL CURRENT ANSYS DATA WRITTEN TO FILE NAME= PADNC-TH.db
  FOR POSSIBLE RESUME FROM THIS POINT
1
```

```
***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1      *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      15:07:50  JAN 03, 2003 CP=   2642.650

DELTA T 6.125 TO 7.875 DAYS - NO PAD/ROCK CONSTRAINT


         ***** ANSYS RESULTS INTERPRETATION (POST1) *****

*** WARNING ***                          CP=   2642.650   TIME= 15:07:50
The current solution may have been produced using different model or
boundary condition data than is currently stored.  POST1 results may
 be erroneous unless you perform a new solution using the stored data.

*** NOTE ***                             CP=   2642.650   TIME= 15:07:51
Reading results into the database (SET command) will update the current
displacement and force boundary conditions in the database with the
values from the results file for that load set.  Note that any
subsequent solutions will use these values unless action is taken to
 either SAVE the current values or not overwrite them (/EXIT,NOSAVE).


PRINT HEADER
DO NOT PRINT SUBTITLE(S)
DO NOT PRINT LOAD STEP ID
DO NOT PRINT NOTE LINE(S)
PRINT COLUMN HEADER LABELS
DO NOT PRINT REPORT TOTALS

SUM RESULTS, SET TITLES AND WRITE LOAD CASE FILES FOR FURTHER PROCESSING


COMBINE ALL RECORDS INCLUDING NON-SUMMABLE

LOAD CASE   1 IS LOAD STEP     1  SUBSTEP     6  COMPLEX=  0
FILE= PADNC-TH.rst
DELTA T 0.0 TO 0.25 DAYS - NO PAD/ROCK CONSTRAINT


LOAD CASE   2 IS LOAD STEP     2  SUBSTEP     7  COMPLEX=  0
FILE= PADNC-TH.rst
DELTA T 0.25 TO 0.50 DAYS - NO PAD/ROCK CONSTRAINT


LOAD CASE   3 IS LOAD STEP     3  SUBSTEP     6  COMPLEX=  0
FILE= PADNC-TH.rst
DELTA T 0.50 TO 0.625 DAYS - NO PAD/ROCK CONSTRAINT


LOAD CASE   4 IS LOAD STEP     4  SUBSTEP     6  COMPLEX=  0
FILE= PADNC-TH.rst
DELTA T 0.625 TO 1.125 DAYS - NO PAD/ROCK CONSTRAINT


LOAD CASE   5 IS LOAD STEP     5  SUBSTEP     6  COMPLEX=  0
FILE= PADNC-TH.rst
DELTA T 1.125 TO 1.625 DAYS - NO PAD/ROCK CONSTRAINT
```

```
LOAD CASE   6 IS LOAD STEP     6  SUBSTEP     6  COMPLEX=  0
FILE= PADNC-TH.rst
DELTA T 1.625 TO 2.125 DAYS - NO PAD/ROCK CONSTRAINT


LOAD CASE   7 IS LOAD STEP     7  SUBSTEP     6  COMPLEX=  0
FILE= PADNC-TH.rst
DELTA T 2.125 TO 2.375 DAYS - NO PAD/ROCK CONSTRAINT


LOAD CASE   8 IS LOAD STEP     8  SUBSTEP     6  COMPLEX=  0
FILE= PADNC-TH.rst
DELTA T 2.375 TO 3.125 DAYS - NO PAD/ROCK CONSTRAINT


LOAD CASE   9 IS LOAD STEP     9  SUBSTEP     6  COMPLEX=  0
FILE= PADNC-TH.rst
DELTA T 3.125 TO 4.125 DAYS - NO PAD/ROCK CONSTRAINT


LOAD CASE  10 IS LOAD STEP    10  SUBSTEP     7  COMPLEX=  0
FILE= PADNC-TH.rst
DELTA T 4.125 TO 6.125 DAYS - NO PAD/ROCK CONSTRAINT


LOAD CASE  11 IS LOAD STEP    11  SUBSTEP     6  COMPLEX=  0
FILE= PADNC-TH.rst
DELTA T 6.125 TO 7.875 DAYS - NO PAD/ROCK CONSTRAINT


COPY LOAD CASE   1 FROM FILE TO DATABASE

*** WARNING ***                          CP=   2642.680   TIME= 15:07:52
Cumulative iteration 6 may have been solved using different model or
boundary condition data than currently stored.  POST1 results may be
 erroneous unless you RESUME from a Jobname.DB file for this substep.

TITLE=
PAD RESPONSE AT END OF 0.25 DAYS - NO PAD/ROCK CONSTRAINT


WRITE LOAD CASE    1 TO FILE PADNC-TH.101

*** WARNING ***                          CP=   2643.621   TIME= 15:08:00
Cumulative iteration 42 may have been solved using different model or
boundary condition data than currently stored.  POST1 results may be
 erroneous unless you RESUME from a Jobname.DB file for this substep.

LCOPER OPERATION ADD  USING LOAD CASE=   2 FACTOR=  1.0000     ABS=   0

*** NOTE ***                             CP=   2644.202   TIME= 15:08:05
Load case combination data may not be correct unless viewed in the
 solution phase coordinate system (RSYS=SOLU).

TITLE=
```

```
PAD RESPONSE AT END OF 0.50 DAYS - NO PAD/ROCK CONSTRAINT


WRITE LOAD CASE    2 TO FILE PADNC-TH.102

*** WARNING ***                          CP=   2644.513   TIME= 15:08:06
Cumulative iteration 60 may have been solved using different model or
boundary condition data than currently stored.  POST1 results may be
 erroneous unless you RESUME from a Jobname.DB file for this substep.

LCOPER OPERATION ADD  USING LOAD CASE=   3 FACTOR=  1.0000     ABS=   0

TITLE=
PAD RESPONSE AT END OF 0.625 DAYS - NO PAD/ROCK CONSTRAINT


WRITE LOAD CASE    3 TO FILE PADNC-TH.103

*** WARNING ***                          CP=   2645.364   TIME= 15:08:09
Cumulative iteration 79 may have been solved using different model or
boundary condition data than currently stored.  POST1 results may be
 erroneous unless you RESUME from a Jobname.DB file for this substep.

LCOPER OPERATION ADD  USING LOAD CASE=   4 FACTOR=  1.0000     ABS=   0

TITLE=
PAD RESPONSE AT END OF 1.125 DAYS - NO PAD/ROCK CONSTRAINT


WRITE LOAD CASE    4 TO FILE PADNC-TH.104

*** WARNING ***                          CP=   2646.285   TIME= 15:08:14
Cumulative iteration 85 may have been solved using different model or
boundary condition data than currently stored.  POST1 results may be
 erroneous unless you RESUME from a Jobname.DB file for this substep.

LCOPER OPERATION ADD  USING LOAD CASE=   5 FACTOR=  1.0000     ABS=   0

TITLE=
PAD RESPONSE AT END OF 1.625 DAYS - NO PAD/ROCK CONSTRAINT


WRITE LOAD CASE    5 TO FILE PADNC-TH.105

*** WARNING ***                          CP=   2647.227   TIME= 15:08:20
Cumulative iteration 91 may have been solved using different model or
boundary condition data than currently stored.  POST1 results may be
 erroneous unless you RESUME from a Jobname.DB file for this substep.

LCOPER OPERATION ADD  USING LOAD CASE=   6 FACTOR=  1.0000     ABS=   0

TITLE=
PAD RESPONSE AT END OF 2.125 DAYS - NO PAD/ROCK CONSTRAINT


WRITE LOAD CASE    6 TO FILE PADNC-TH.106
```

```
*** WARNING ***                         CP=   2648.008   TIME= 15:08:22
Cumulative iteration 102 may have been solved using different model or
boundary condition data than currently stored.  POST1 results may be
 erroneous unless you RESUME from a Jobname.DB file for this substep.

LCOPER OPERATION ADD  USING LOAD CASE=   7 FACTOR=  1.0000     ABS=   0

TITLE=
PAD RESPONSE AT END OF 2.375 DAYS - NO PAD/ROCK CONSTRAINT


WRITE LOAD CASE    7 TO FILE PADNC-TH.107

*** WARNING ***                         CP=   2648.709   TIME= 15:08:25
Cumulative iteration 109 may have been solved using different model or
boundary condition data than currently stored.  POST1 results may be
 erroneous unless you RESUME from a Jobname.DB file for this substep.

LCOPER OPERATION ADD  USING LOAD CASE=   8 FACTOR=  1.0000     ABS=   0

TITLE=
PAD RESPONSE AT END OF 3.125 DAYS - NO PAD/ROCK CONSTRAINT


WRITE LOAD CASE    8 TO FILE PADNC-TH.108

*** WARNING ***                         CP=   2649.470   TIME= 15:08:28
Cumulative iteration 125 may have been solved using different model or
boundary condition data than currently stored.  POST1 results may be
 erroneous unless you RESUME from a Jobname.DB file for this substep.

LCOPER OPERATION ADD  USING LOAD CASE=   9 FACTOR=  1.0000     ABS=   0

TITLE=
PAD RESPONSE AT END OF 4.125 DAYS - NO PAD/ROCK CONSTRAINT


WRITE LOAD CASE    9 TO FILE PADNC-TH.109

*** WARNING ***                         CP=   2650.221   TIME= 15:08:31
Cumulative iteration 157 may have been solved using different model or
boundary condition data than currently stored.  POST1 results may be
 erroneous unless you RESUME from a Jobname.DB file for this substep.

LCOPER OPERATION ADD  USING LOAD CASE=  10 FACTOR=  1.0000     ABS=   0

TITLE=
PAD RESPONSE AT END OF 6.125 DAYS - NO PAD/ROCK CONSTRAINT


WRITE LOAD CASE   10 TO FILE PADNC-TH.110

*** WARNING ***                         CP=   2650.962   TIME= 15:08:34
Cumulative iteration 163 may have been solved using different model or
boundary condition data than currently stored.  POST1 results may be
 erroneous unless you RESUME from a Jobname.DB file for this substep.
```

```
LCOPER OPERATION ADD  USING LOAD CASE=  11 FACTOR=  1.0000     ABS=   0

TITLE=
PAD RESPONSE AT END OF 7.875 DAYS - NO PAD/ROCK CONSTRAINT


WRITE LOAD CASE   11 TO FILE PADNC-TH.111

EXIT THE ANSYS POST1 DATABASE PROCESSOR


***** ROUTINE COMPLETED *****  CP =      2651.783


print the temperatures for checking

    8812  ELEMENTS (OF     8812  DEFINED) SELECTED BY  EALL  COMMAND.

   10212  NODES (OF    10212  DEFINED) SELECTED BY NALL  COMMAND.
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      15:08:37  JAN 03, 2003 CP=   2651.783

PAD RESPONSE AT END OF 7.875 DAYS - NO PAD/ROCK CONSTRAINT


         ***** ANSYS RESULTS INTERPRETATION (POST1) *****

*** WARNING ***                         CP=   2651.783   TIME= 15:08:38
The current solution may have been produced using different model or
boundary condition data than is currently stored.  POST1 results may
 be erroneous unless you perform a new solution using the stored data.


PRINT HEADER
DO NOT PRINT SUBTITLE(S)
DO NOT PRINT LOAD STEP ID
DO NOT PRINT NOTE LINE(S)
PRINT COLUMN HEADER LABELS
DO NOT PRINT REPORT TOTALS

SELECT       FOR ITEM=LOC  COMPONENT=X     BETWEEN  0.0000     AND   0.0000
  KABS=  0.  TOLERANCE= 0.100000E-05

     626  NODES (OF    10212  DEFINED) SELECTED BY  NSEL  COMMAND.

RESELECT     FOR ITEM=LOC  COMPONENT=Z     BETWEEN  0.0000     AND   0.0000
  KABS=  0.  TOLERANCE= 0.100000E-05

      26  NODES (OF    10212  DEFINED) SELECTED BY  NSEL  COMMAND.

RESELECT     FOR ITEM=LOC  COMPONENT=Y     BETWEEN -145.00     AND   0.0000
  KABS=  0.  TOLERANCE= 0.145000E-05

      18  NODES (OF    10212  DEFINED) SELECTED BY  NSEL  COMMAND.
```

```
 LIST ALL SELECTED NODES.   DSYS=  0
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
 ANSYS/Mechanical U
 00245050          VERSION=INTEL NT      15:08:38  JAN 03, 2003 CP=   2651.793

 PAD RESPONSE AT END OF 7.875 DAYS - NO PAD/ROCK CONSTRAINT
```

NODE	X	Y	Z	THXY	THYZ	THZX
1	0.0000	0.0000	0.0000	0.00	0.00	0.00
16	0.0000	-24.000	0.0000	0.00	0.00	0.00
26	0.0000	-18.000	0.0000	0.00	0.00	0.00
27	0.0000	-12.000	0.0000	0.00	0.00	0.00
28	0.0000	-6.0000	0.0000	0.00	0.00	0.00
61	0.0000	-84.000	0.0000	0.00	0.00	0.00
71	0.0000	-72.000	0.0000	0.00	0.00	0.00
72	0.0000	-60.000	0.0000	0.00	0.00	0.00
73	0.0000	-48.000	0.0000	0.00	0.00	0.00
74	0.0000	-36.000	0.0000	0.00	0.00	0.00
113	0.0000	-96.000	0.0000	0.00	0.00	0.00
123	0.0000	-90.000	0.0000	0.00	0.00	0.00
133	0.0000	-96.000	0.0000	0.00	0.00	0.00
146	0.0000	-108.00	0.0000	0.00	0.00	0.00
156	0.0000	-102.00	0.0000	0.00	0.00	0.00
169	0.0000	-144.00	0.0000	0.00	0.00	0.00
179	0.0000	-132.00	0.0000	0.00	0.00	0.00
180	0.0000	-120.00	0.0000	0.00	0.00	0.00

```
 USE LOAD STEP     1  SUBSTEP     0  FOR LOAD CASE 0

 *** WARNING ***                          CP=   2651.793   TIME= 15:08:39
 Cumulative iteration 6 may have been solved using different model or
 boundary condition data than currently stored.  POST1 results may be
  erroneous unless you RESUME from a Jobname.DB file for this substep.

 SET COMMAND GOT LOAD STEP=     1  SUBSTEP=     6  CUMULATIVE ITERATION=     6
   TIME/FREQUENCY=  1.0000
 TITLE= DELTA T 0.0 TO 0.25 DAYS - NO PAD/ROCK CONSTRAINT

 SORT ON ITEM=LOC   COMPONENT=Y     ORDER= 0  KABS= 0  NMAX=   10212

 SORT COMPLETED FOR      18 VALUES.

 PRINT BFE  NODAL SOLUTION PER NODE
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
 ANSYS/Mechanical U
 00245050          VERSION=INTEL NT      15:08:40  JAN 03, 2003 CP=   2652.394

 DELTA T 0.0 TO 0.25 DAYS - NO PAD/ROCK CONSTRAINT
```

NODE	BFETEMP
1	15.000
28	18.000
27	19.670
26	21.330
16	21.330
74	21.330
73	21.330
72	21.330
71	21.330
61	20.500
123	19.660
113	10.670
133	10.670
156	1.6700
146	0.84000
180	0.0000
179	0.0000
169	0.0000

```
USE LOAD STEP     2  SUBSTEP     0  FOR LOAD CASE 0

*** WARNING ***                          CP=   2652.404   TIME= 15:08:40
Cumulative iteration 42 may have been solved using different model or
boundary condition data than currently stored.  POST1 results may be
 erroneous unless you RESUME from a Jobname.DB file for this substep.

SET COMMAND GOT LOAD STEP=     2  SUBSTEP=     7  CUMULATIVE ITERATION=    42
  TIME/FREQUENCY=  2.0000
TITLE= DELTA T 0.25 TO 0.50 DAYS - NO PAD/ROCK CONSTRAINT

SORT ON ITEM=LOC   COMPONENT=Y     ORDER= 0  KABS= 0  NMAX=   10212

SORT COMPLETED FOR      18 VALUES.

PRINT BFE  NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      15:08:41  JAN 03, 2003 CP=   2652.935

DELTA T 0.25 TO 0.50 DAYS - NO PAD/ROCK CONSTRAINT
```

NODE	BFETEMP
1	-2.5000
28	10.500
27	9.2500
26	8.0000
16	16.670
74	25.330
73	25.330
72	25.330
71	25.120
61	21.410

```
    123   17.920
    113   12.660
    133   12.660
    156   7.4100
    146   3.9100
    180  0.21000
    179   0.0000
    169   0.0000


USE LOAD STEP     3  SUBSTEP     0  FOR LOAD CASE 0

*** WARNING ***                          CP=   2652.935   TIME= 15:08:41
Cumulative iteration 60 may have been solved using different model or
boundary condition data than currently stored.  POST1 results may be
 erroneous unless you RESUME from a Jobname.DB file for this substep.

SET COMMAND GOT LOAD STEP=     3  SUBSTEP=     6  CUMULATIVE ITERATION=    60
  TIME/FREQUENCY=  3.0000
TITLE= DELTA T 0.50 TO 0.625 DAYS - NO PAD/ROCK CONSTRAINT

SORT ON ITEM=LOC   COMPONENT=Y     ORDER= 0  KABS= 0  NMAX=   10212

SORT COMPLETED FOR      18 VALUES.

PRINT BFE  NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      15:08:42  JAN 03, 2003 CP=   2653.526

DELTA T 0.50 TO 0.625 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    BFETEMP
      1  -3.0000
     28  -1.3500
     27   9.3200
     26   13.460
     16   9.3300
     74   9.3300
     73   9.3300
     72   9.3300
     71   9.3300
     61   9.3300
    123   2.0400
    113   4.6700
    133   4.6700
    156   7.3000
    146   0.0000
    180   0.0000
    179   0.0000
    169   0.0000


USE LOAD STEP     4  SUBSTEP     0  FOR LOAD CASE 0
```

```
*** WARNING ***                          CP=   2653.526   TIME= 15:08:42
Cumulative iteration 79 may have been solved using different model or
boundary condition data than currently stored.  POST1 results may be
 erroneous unless you RESUME from a Jobname.DB file for this substep.

SET COMMAND GOT LOAD STEP=     4  SUBSTEP=     6  CUMULATIVE ITERATION=    79
  TIME/FREQUENCY=  4.0000
TITLE= DELTA T 0.625 TO 1.125 DAYS - NO PAD/ROCK CONSTRAINT

SORT ON ITEM=LOC   COMPONENT=Y     ORDER= 0  KABS= 0  NMAX=   10212

SORT COMPLETED FOR      18 VALUES.

PRINT BFE  NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      15:08:42  JAN 03, 2003 CP=   2654.056

DELTA T 0.625 TO 1.125 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    BFETEMP
      1  -5.4000
     28  -7.4400
     27  -8.8100
     26  -3.1000
     16   2.6200
     74   15.000
     73   20.110
     72   20.320
     71   17.860
     61   11.880
    123   11.110
    113   10.330
    133   10.330
    156   9.5500
    146   8.7800
    180   2.8100
    179  0.35000
    169  0.10000E-01


USE LOAD STEP     5  SUBSTEP     0  FOR LOAD CASE 0

*** WARNING ***                          CP=   2654.056   TIME= 15:08:42
Cumulative iteration 85 may have been solved using different model or
boundary condition data than currently stored.  POST1 results may be
 erroneous unless you RESUME from a Jobname.DB file for this substep.

SET COMMAND GOT LOAD STEP=     5  SUBSTEP=     6  CUMULATIVE ITERATION=    85
  TIME/FREQUENCY=  5.0000
TITLE= DELTA T 1.125 TO 1.625 DAYS - NO PAD/ROCK CONSTRAINT

SORT ON ITEM=LOC   COMPONENT=Y     ORDER= 0  KABS= 0  NMAX=   10212
```

```
SORT COMPLETED FOR      18 VALUES.

PRINT BFE  NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      15:08:43  JAN 03, 2003 CP=   2654.587

DELTA T 1.125 TO 1.625 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    BFETEMP
      1  -2.1000
     28  -5.5000
     27  -6.4600
     26  -4.7300
     16  -3.0000
     74   2.2500
     73   7.3200
     72   8.4500
     71   6.3200
     61   3.7400
    123   4.4500
    113   5.1600
    133   5.1600
    156   5.8800
    146   6.6000
    180   3.9800
    179   1.3800
    169  0.25000


USE LOAD STEP     6  SUBSTEP     0  FOR LOAD CASE 0

*** WARNING ***                          CP=   2654.597   TIME= 15:08:43
Cumulative iteration 91 may have been solved using different model or
boundary condition data than currently stored.  POST1 results may be
 erroneous unless you RESUME from a Jobname.DB file for this substep.

SET COMMAND GOT LOAD STEP=     6  SUBSTEP=     6  CUMULATIVE ITERATION=    91
  TIME/FREQUENCY=  6.0000
TITLE= DELTA T 1.625 TO 2.125 DAYS - NO PAD/ROCK CONSTRAINT

SORT ON ITEM=LOC   COMPONENT=Y     ORDER= 0  KABS= 0  NMAX=   10212

SORT COMPLETED FOR      18 VALUES.

PRINT BFE  NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      15:08:43  JAN 03, 2003 CP=   2655.138

DELTA T 1.625 TO 2.125 DAYS - NO PAD/ROCK CONSTRAINT
```

```
   NODE    BFETEMP
      1 -0.80000
     28  -3.0600
     27  -4.0600
     26  -3.9600
     16  -3.8700
     74  -2.2200
     73  0.96000
     72   2.2900
     71   1.5300
     61  0.91000
    123   1.8700
    113   2.8300
    133   2.8300
    156   3.7800
    146   4.7200
    180   3.8200
    179   1.9800
    169  0.53000


 USE LOAD STEP     7  SUBSTEP     0  FOR LOAD CASE 0

 *** WARNING ***                         CP=   2655.138   TIME= 15:08:43
 Cumulative iteration 102 may have been solved using different model or
 boundary condition data than currently stored.  POST1 results may be
  erroneous unless you RESUME from a Jobname.DB file for this substep.

 SET COMMAND GOT LOAD STEP=     7  SUBSTEP=     6  CUMULATIVE ITERATION=   102
   TIME/FREQUENCY=  7.0000
 TITLE= DELTA T 2.125 TO 2.375 DAYS - NO PAD/ROCK CONSTRAINT

 SORT ON ITEM=LOC   COMPONENT=Y     ORDER= 0  KABS= 0  NMAX=   10212

 SORT COMPLETED FOR      18 VALUES.

 PRINT BFE  NODAL SOLUTION PER NODE
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
 ANSYS/Mechanical U
 00245050          VERSION=INTEL NT      15:08:44  JAN 03, 2003 CP=   2655.658

 DELTA T 2.125 TO 2.375 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    BFETEMP
      1 -0.20000
     28 -0.94000
     27  -1.2800
     26  -1.4700
     16  -1.6500
     74  -1.5100
     73 -0.54000
     72  0.80000E-01
```

```
     71  0.90000E-01
     61  0.20000
    123  0.63000
    113   1.0600
    133   1.0600
    156   1.4600
    146   1.8600
    180   1.7300
    179   1.0500
    169  0.33000


 USE LOAD STEP     8  SUBSTEP     0  FOR LOAD CASE 0

 *** WARNING ***                         CP=   2655.668   TIME= 15:08:44
 Cumulative iteration 109 may have been solved using different model or
 boundary condition data than currently stored.  POST1 results may be
  erroneous unless you RESUME from a Jobname.DB file for this substep.

 SET COMMAND GOT LOAD STEP=     8  SUBSTEP=     6  CUMULATIVE ITERATION=   109
   TIME/FREQUENCY=  8.0000
 TITLE= DELTA T 2.375 TO 3.125 DAYS - NO PAD/ROCK CONSTRAINT

 SORT ON ITEM=LOC   COMPONENT=Y     ORDER= 0  KABS= 0  NMAX=   10212

 SORT COMPLETED FOR      18 VALUES.

 PRINT BFE  NODAL SOLUTION PER NODE
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
 ANSYS/Mechanical U
 00245050          VERSION=INTEL NT      15:08:45  JAN 03, 2003 CP=   2656.209

 DELTA T 2.375 TO 3.125 DAYS - NO PAD/ROCK CONSTRAINT


    NODE    BFETEMP
       1 -0.50000
      28  -2.1300
      27  -3.0700
      26  -3.9000
      16  -4.7400
      74  -5.6000
      73  -4.2000
      72  -2.7200
      71  -1.8500
      61 -0.66000
     123  0.64000
     113   1.9400
     133   1.9400
     156   3.1000
     146   4.2600
     180   4.3900
     179   3.0000
     169   1.0300
```

```
USE LOAD STEP     9  SUBSTEP     0  FOR LOAD CASE 0

*** WARNING ***                          CP=   2656.209   TIME= 15:08:45
Cumulative iteration 125 may have been solved using different model or
boundary condition data than currently stored.  POST1 results may be
 erroneous unless you RESUME from a Jobname.DB file for this substep.

SET COMMAND GOT LOAD STEP=     9  SUBSTEP=     6  CUMULATIVE ITERATION=   125
  TIME/FREQUENCY=  9.0000
TITLE= DELTA T 3.125 TO 4.125 DAYS - NO PAD/ROCK CONSTRAINT

SORT ON ITEM=LOC   COMPONENT=Y     ORDER= 0  KABS= 0  NMAX=   10212

SORT COMPLETED FOR      18 VALUES.

PRINT BFE  NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1      *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      15:08:45  JAN 03, 2003 CP=   2656.750

DELTA T 3.125 TO 4.125 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    BFETEMP
      1 -0.30000
     28  -2.0300
     27  -3.1400
     26  -4.4900
     16  -5.8400
     74  -8.3400
     73  -8.3500
     72  -7.1100
     71  -5.3300
     61  -2.9100
    123  -1.1900
    113  0.54000
    133  0.54000
    156   1.9800
    146   3.4300
    180   4.1800
    179   3.1900
    169   1.1800


USE LOAD STEP    10  SUBSTEP     0  FOR LOAD CASE 0

*** WARNING ***                          CP=   2656.750   TIME= 15:08:45
Cumulative iteration 157 may have been solved using different model or
boundary condition data than currently stored.  POST1 results may be
 erroneous unless you RESUME from a Jobname.DB file for this substep.

SET COMMAND GOT LOAD STEP=    10  SUBSTEP=     7  CUMULATIVE ITERATION=   157
  TIME/FREQUENCY=  10.000
TITLE= DELTA T 4.125 TO 6.125 DAYS - NO PAD/ROCK CONSTRAINT
```

```
SORT ON ITEM=LOC   COMPONENT=Y     ORDER= 0  KABS= 0  NMAX=   10212

SORT COMPLETED FOR      18 VALUES.

PRINT BFE  NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      15:08:46  JAN 03, 2003 CP=   2657.281

DELTA T 4.125 TO 6.125 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    BFETEMP
      1   0.0000
     28  -1.3800
     27  -2.6100
     26  -4.7600
     16  -6.9100
     74  -11.780
     73  -13.650
     72  -12.770
     71  -9.8200
     61  -5.6000
    123  -3.3600
    113  -1.1200
    133  -1.1200
    156  0.66000
    146   2.4300
    180   4.0600
    179   3.5200
    169   1.3700


USE LOAD STEP    11  SUBSTEP     0  FOR LOAD CASE 0

*** WARNING ***                          CP=   2657.291   TIME= 15:08:46
Cumulative iteration 163 may have been solved using different model or
boundary condition data than currently stored.  POST1 results may be
 erroneous unless you RESUME from a Jobname.DB file for this substep.

SET COMMAND GOT LOAD STEP=    11  SUBSTEP=     6  CUMULATIVE ITERATION=   163
  TIME/FREQUENCY=  11.000
TITLE= DELTA T 6.125 TO 7.875 DAYS - NO PAD/ROCK CONSTRAINT

SORT ON ITEM=LOC   COMPONENT=Y     ORDER= 0  KABS= 0  NMAX=   10212

SORT COMPLETED FOR      18 VALUES.

PRINT BFE  NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      15:08:47  JAN 03, 2003 CP=   2657.822
```

DELTA T 6.125 TO 7.875 DAYS - NO PAD/ROCK CONSTRAINT

NODE	BFETEMP
1	0.0000
28	-0.69000
27	-1.3300
26	-2.5100
16	-3.6900
74	-6.5800
73	-8.1200
72	-8.1000
71	-6.7500
61	-4.5600
123	-3.3800
113	-2.2000
133	-2.2000
156	-1.2300
146	-0.25000
180	0.85000
179	1.0100
169	0.43000

COPY LOAD CASE 1 FROM FILE TO DATABASE

SORT ON ITEM=LOC COMPONENT=Y ORDER= 0 KABS= 0 NMAX= 10212

SORT COMPLETED FOR 18 VALUES.

PRINT BFE NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM RELEASE 6.1 *****
ANSYS/Mechanical U
00245050 VERSION=INTEL NT 15:08:47 JAN 03, 2003 CP= 2658.473

PAD RESPONSE AT END OF 0.25 DAYS - NO PAD/ROCK CONSTRAINT

NODE	BFETEMP
1	15.000
28	18.000
27	19.670
26	21.330
16	21.330
74	21.330
73	21.330
72	21.330
71	21.330
61	20.500
123	19.660
113	10.670
133	10.670
156	1.6700
146	0.84000
180	0.0000

```
    179   0.0000
    169   0.0000

 COPY LOAD CASE   2 FROM FILE TO DATABASE

 SORT ON ITEM=LOC   COMPONENT=Y     ORDER= 0  KABS= 0  NMAX=   10212

 SORT COMPLETED FOR      18 VALUES.

 PRINT BFE  NODAL SOLUTION PER NODE
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
 ANSYS/Mechanical U
 00245050          VERSION=INTEL NT      15:08:48  JAN 03, 2003 CP=   2659.144

 PAD RESPONSE AT END OF 0.50 DAYS - NO PAD/ROCK CONSTRAINT


    NODE    BFETEMP
       1   12.500
      28   28.500
      27   28.920
      26   29.330
      16   38.000
      74   46.660
      73   46.660
      72   46.660
      71   46.450
      61   41.910
     123   37.580
     113   23.330
     133   23.330
     156   9.0800
     146   4.7500
     180  0.21000
     179   0.0000
     169   0.0000

 COPY LOAD CASE   3 FROM FILE TO DATABASE

 SORT ON ITEM=LOC   COMPONENT=Y     ORDER= 0  KABS= 0  NMAX=   10212

 SORT COMPLETED FOR      18 VALUES.

 PRINT BFE  NODAL SOLUTION PER NODE
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
 ANSYS/Mechanical U
 00245050          VERSION=INTEL NT      15:08:49  JAN 03, 2003 CP=   2659.794

 PAD RESPONSE AT END OF 0.625 DAYS - NO PAD/ROCK CONSTRAINT


    NODE    BFETEMP
       1   9.5000
```

```
     28   27.150
     27   38.240
     26   42.790
     16   47.330
     74   55.990
     73   55.990
     72   55.990
     71   55.780
     61   51.240
    123   39.620
    113   28.000
    133   28.000
    156   16.380
    146   4.7500
    180  0.21000
    179   0.0000
    169   0.0000

 COPY LOAD CASE   4 FROM FILE TO DATABASE

 SORT ON ITEM=LOC   COMPONENT=Y     ORDER= 0  KABS= 0  NMAX=   10212

 SORT COMPLETED FOR      18 VALUES.

 PRINT BFE  NODAL SOLUTION PER NODE
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
 ANSYS/Mechanical U
 00245050          VERSION=INTEL NT      15:08:49  JAN 03, 2003 CP=   2660.456

 PAD RESPONSE AT END OF 1.125 DAYS - NO PAD/ROCK CONSTRAINT


    NODE    BFETEMP
       1   4.1000
      28   19.710
      27   29.430
      26   39.690
      16   49.950
      74   70.990
      73   76.100
      72   76.310
      71   73.640
      61   63.120
     123   50.730
     113   38.330
     133   38.330
     156   25.930
     146   13.530
     180   3.0200
     179  0.35000
     169  0.10000E-01

 COPY LOAD CASE   5 FROM FILE TO DATABASE

 SORT ON ITEM=LOC   COMPONENT=Y     ORDER= 0  KABS= 0  NMAX=   10212
```

```
 SORT COMPLETED FOR      18 VALUES.

 PRINT BFE  NODAL SOLUTION PER NODE
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
 ANSYS/Mechanical U
 00245050          VERSION=INTEL NT      15:08:50  JAN 03, 2003 CP=   2661.107

 PAD RESPONSE AT END OF 1.625 DAYS - NO PAD/ROCK CONSTRAINT


    NODE    BFETEMP
       1   2.0000
      28   14.210
      27   22.970
      26   34.960
      16   46.950
      74   73.240
      73   83.420
      72   84.760
      71   79.960
      61   66.860
     123   55.180
     113   43.490
     133   43.490
     156   31.810
     146   20.130
     180   7.0000
     179   1.7300
     169  0.26000

 COPY LOAD CASE   6 FROM FILE TO DATABASE

 SORT ON ITEM=LOC   COMPONENT=Y     ORDER= 0  KABS= 0  NMAX=   10212

 SORT COMPLETED FOR      18 VALUES.

 PRINT BFE  NODAL SOLUTION PER NODE
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
 ANSYS/Mechanical U
 00245050          VERSION=INTEL NT      15:08:51  JAN 03, 2003 CP=   2661.758

 PAD RESPONSE AT END OF 2.125 DAYS - NO PAD/ROCK CONSTRAINT


    NODE    BFETEMP
       1   1.2000
      28   11.150
      27   18.910
      26   31.000
      16   43.080
      74   71.020
      73   84.380
```

```
     72   87.050
     71   81.490
     61   67.770
    123   57.050
    113   46.320
    133   46.320
    156   35.590
    146   24.850
    180   10.820
    179   3.7100
    169  0.79000

 COPY LOAD CASE   7 FROM FILE TO DATABASE

 SORT ON ITEM=LOC   COMPONENT=Y     ORDER= 0  KABS= 0  NMAX=   10212

 SORT COMPLETED FOR      18 VALUES.

 PRINT BFE  NODAL SOLUTION PER NODE
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
 ANSYS/Mechanical U
 00245050          VERSION=INTEL NT      15:08:51  JAN 03, 2003 CP=   2662.408

 PAD RESPONSE AT END OF 2.375 DAYS - NO PAD/ROCK CONSTRAINT


    NODE    BFETEMP
       1   1.0000
      28   10.210
      27   17.630
      26   29.530
      16   41.430
      74   69.510
      73   83.840
      72   87.130
      71   81.580
      61   67.970
     123   57.680
     113   47.380
     133   47.380
     156   37.050
     146   26.710
     180   12.550
     179   4.7600
     169   1.1200

 COPY LOAD CASE   8 FROM FILE TO DATABASE

 SORT ON ITEM=LOC   COMPONENT=Y     ORDER= 0  KABS= 0  NMAX=   10212

 SORT COMPLETED FOR      18 VALUES.

 PRINT BFE  NODAL SOLUTION PER NODE
1
```

```
***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1      *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      15:08:52  JAN 03, 2003 CP=   2663.059

PAD RESPONSE AT END OF 3.125 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    BFETEMP
      1  0.50000
     28   8.0800
     27   14.560
     26   25.630
     16   36.690
     74   63.910
     73   79.640
     72   84.410
     71   79.730
     61   67.310
    123   58.320
    113   49.320
    133   49.320
    156   40.150
    146   30.970
    180   16.940
    179   7.7600
    169   2.1500

COPY LOAD CASE   9 FROM FILE TO DATABASE

SORT ON ITEM=LOC   COMPONENT=Y     ORDER= 0  KABS= 0  NMAX=   10212

SORT COMPLETED FOR      18 VALUES.

PRINT BFE  NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1      *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      15:08:53  JAN 03, 2003 CP=   2663.720

PAD RESPONSE AT END OF 4.125 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    BFETEMP
      1  0.20000
     28   6.0500
     27   11.420
     26   21.140
     16   30.850
     74   55.570
     73   71.290
     72   77.300
     71   74.400
     61   64.400
    123   57.130
    113   49.860
    133   49.860
```

```
    156   42.130
    146   34.400
    180   21.120
    179   10.950
    169   3.3300

 COPY LOAD CASE  10 FROM FILE TO DATABASE

 SORT ON ITEM=LOC   COMPONENT=Y     ORDER= 0  KABS= 0  NMAX=   10212

 SORT COMPLETED FOR      18 VALUES.

 PRINT BFE  NODAL SOLUTION PER NODE
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
 ANSYS/Mechanical U
 00245050          VERSION=INTEL NT      15:08:53  JAN 03, 2003 CP=   2664.371

 PAD RESPONSE AT END OF 6.125 DAYS - NO PAD/ROCK CONSTRAINT


    NODE    BFETEMP
       1  0.20000
      28   4.6700
      27   8.8100
      26   16.380
      16   23.940
      74   43.790
      73   57.640
      72   64.530
      71   64.580
      61   58.800
     123   53.770
     113   48.740
     133   48.740
     156   42.790
     146   36.830
     180   25.180
     179   14.470
     169   4.7000

 COPY LOAD CASE  11 FROM FILE TO DATABASE

 SORT ON ITEM=LOC   COMPONENT=Y     ORDER= 0  KABS= 0  NMAX=   10212

 SORT COMPLETED FOR      18 VALUES.

 PRINT BFE  NODAL SOLUTION PER NODE
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
 ANSYS/Mechanical U
 00245050          VERSION=INTEL NT      15:08:54  JAN 03, 2003 CP=   2665.022

 PAD RESPONSE AT END OF 7.875 DAYS - NO PAD/ROCK CONSTRAINT
```

NODE	BFETEMP
1	0.20000
28	3.9800
27	7.4800
26	13.870
16	20.250
74	37.210
73	49.520
72	56.430
71	57.830
61	54.240
123	50.390
113	46.540
133	46.540
156	41.560
146	36.580
180	26.030
179	15.480
169	5.1300

```
NODE SORT REMOVED

EXIT THE ANSYS POST1 DATABASE PROCESSOR

***** ROUTINE COMPLETED *****  CP =      2665.022


    8812  ELEMENTS (OF     8812  DEFINED) SELECTED BY  EALL  COMMAND.

   10212  NODES (OF    10212  DEFINED) SELECTED BY NALL  COMMAND.

EXIT ANSYS WITHOUT SAVING DATABASE

NUMBER OF WARNING MESSAGES ENCOUNTERED=         25
NUMBER OF ERROR   MESSAGES ENCOUNTERED=          0

*------------------------------------------------------------------------*
|                                                                        |
|                          ANSYS RUN COMPLETED                           |
|                                                                        |
|------------------------------------------------------------------------|
|                                                                        |
|           Release 6.1            UP20020321         INTEL NT           |
|                                                                        |
|------------------------------------------------------------------------|
|                                                                        |
|   Maximum Scratch Memory Used       =     5713800 Words       21.796 MB |
|                                                                        |
|------------------------------------------------------------------------|
|                                                                        |
|        CP Time      (sec) =       2665.022       Time  =  15:08:54    |
|        Elapsed Time (sec) =       5591.000       Date  =  01/03/2003  |
```

Originator: S. C. Tumminelli
Date: March 3, 2003

Appendix EPadNC-TH

This Appendix presents the ANSYS output file documenting the equilibrium check for the unconstrained thermal stress analysis. Contains the ANSYS Input file, followed by manual calculations for expected forces, followed by the ANSYS Output File.

ANSYS Input File:

```
/com,
/com, This routine processes load results data for the
/com,   evaluation of equilibrium.
/com
/com,   Load Case Results
/com
/com
/com ***********************
/com ***********************
/com
/com ****** Reactions ******
/com
/file,PadNC-Th
resume
/header,on,on,on
/post1
spoint,,0,0,0
/com
/com ************************
/com *****  LOAD CASE 1 *****
lcfile,1
lcase,1
eall
cmsel,s,bot
cmsel,a,symxy
cmsel,a,symyz
cmsel,a,xedge
cmsel,a,zedge
fsum
/com
/com ************************
/com *****  LOAD CASE 2 *****
lcfile,2
lcase,2
eall
cmsel,s,bot
cmsel,a,symxy
cmsel,a,symyz
cmsel,a,xedge
cmsel,a,zedge
fsum
/com
/com ************************
/com *****  LOAD CASE 3 *****
lcfile,3
lcase,3
eall
cmsel,s,bot
cmsel,a,symxy
cmsel,a,symyz
cmsel,a,xedge
cmsel,a,zedge
fsum
/com
/com ************************
```

```
/com *****  LOAD CASE 4 *****
lcfile,4
lcase,4
eall
cmsel,s,bot
cmsel,a,symxy
cmsel,a,symyz
cmsel,a,xedge
cmsel,a,zedge
fsum
/com
/com ************************
/com *****  LOAD CASE 5 *****
lcfile,5
lcase,5
eall
cmsel,s,bot
cmsel,a,symxy
cmsel,a,symyz
cmsel,a,xedge
cmsel,a,zedge
fsum
/com
/com ************************
/com *****  LOAD CASE 6 *****
lcfile,6
lcase,6
eall
cmsel,s,bot
cmsel,a,symxy
cmsel,a,symyz
cmsel,a,xedge
cmsel,a,zedge
fsum
/com
/com ************************
/com *****  LOAD CASE 7 *****
lcfile,7
lcase,7
eall
cmsel,s,bot
cmsel,a,symxy
cmsel,a,symyz
cmsel,a,xedge
cmsel,a,zedge
fsum
/com
/com ************************
/com *****  LOAD CASE 8 *****
lcfile,8
lcase,8
eall
cmsel,s,bot
cmsel,a,symxy
cmsel,a,symyz
cmsel,a,xedge
cmsel,a,zedge
```

```
fsum
/com
/com ************************
/com *****  LOAD CASE 9 *****
lcfile,9
lcase,9
eall
cmsel,s,bot
cmsel,a,symxy
cmsel,a,symyz
cmsel,a,xedge
cmsel,a,zedge
fsum
/com
/com *************************
/com *****  LOAD CASE 10 *****
lcfile,10
lcase,10
eall
cmsel,s,bot
cmsel,a,symxy
cmsel,a,symyz
cmsel,a,xedge
cmsel,a,zedge
fsum
/com
/com *************************
/com *****  LOAD CASE 11 *****
lcfile,11
lcase,11
eall
cmsel,s,bot
cmsel,a,symxy
cmsel,a,symyz
cmsel,a,xedge
cmsel,a,zedge
fsum
/com
/com ************************
/com ************************
/com
fini
/output
/exit,nosave
```

Manual Calculation for Dead Weight:

Pad weight model for load step 1 is 72% (0.8*0.9) of ¼ of the pad weight at 150 pcf:

W model (LS1)= 0.72 x 0.25 x 105 x 68 x 8 x 150 = 1,542,240 lbs
W model (LS2)= 0.90 x 0.25 x 105 x 68 x 8 x 150 = 1,927,800 lbs

And the incremental weight for each subsequent load step is 19,278 lbs.

		Target		ANSYS
Thus for LS 1	W = 1,542,240	= 1,542,240	Vs	1,541,759
And for LS 2	W = 1,927,800	= 1,927,800	Vs	1,927,201
And for LS 3	W = 1,927,800 + 19278	= 1,947,078	Vs	1,946,473
And for LS 4	W = 1,947,078 + 19278	= 1,966,356	Vs	1,965,745
And for LS 5	W = 1,966,356 + 19278	= 1,985,634	Vs	1,985,017
And for LS 6	W = 1,985,634 + 19278	= 2,004,912	Vs	2,004,289
And for LS 7	W = 2,004,912 + 19278	= 2,024,190	Vs	2,023,561
And for LS 8	W = 2,024,190 + 19278	= 2,043,468	Vs	2,042,833
And for LS 9	W = 2,043,468 + 19278	= 2,062,746	Vs	2,062,104
And for LS 10	W = 2,062,746 + 19278	= 2,082,024	Vs	2,081,376
And for LS 11	W = 2,082,024 + 19278	= 2,101,302	Vs	2,100,648

ANSYS Output File:

```
ANSYS/Mechanical U

*------------------------------------------------------------*
|                                                            |
|   W E L C O M E   T O   T H E   A N S Y S   P R O G R A M  |
|                                                            |
*------------------------------------------------------------*


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```

```
* USEFULNESS OF THE RESULTS.                                          *
***********************************************************************

                    Completing ANSYS Load Process.


        *****  ANSYS COMMAND LINE ARGUMENTS  *****
 INITIAL JOBNAME               = PADNC-TH
 BATCH MODE REQUESTED          = LIST
 MEMORY REQUESTED (MB)         = 700
 DATABASE SIZE REQUESTED (MB)  = 75

*** WARNING ***                          CP=      0.200   TIME= 10:19:03
Use of the -M switch is no longer recommended for normal ANSYS use.
ANSYS now dynamically allocates memory as needed.  Only use the -M
 switch if you are certain that you need to do so.

PARAMETER STATUS-            (   1 PARAMETERS DEFINED)
                 (INCLUDING     1 INTERNAL PARAMETERS)

00245050          VERSION=INTEL NT        RELEASE= 6.1     UP20020321
CURRENT JOBNAME=PADNC-TH  10:19:03  FEB 11, 2003 CP=      0.210

    1  /com,
    2  /com,      This routine processes load results data for the
    3  /com,    evaluation of equilibrium.
    4  /com
    5  /com,    Load Case Results
    6  /com
    7  /com
    8  /com **********************
    9  /com **********************
   10  /com
   11  /com ****** Reactions ******
   12  /com
   13  /file,PadNC-Th
   14  resume
   15  /header,on,on,on
   16  /post1
   17  spoint,,0,0,0
   18  /com
   19  /com ************************
   20  /com *****  LOAD CASE 1 *****
   21  lcfile,1
   22  lcase,1
   23  eall
   24  cmsel,s,bot
   25  cmsel,a,symxy
   26  cmsel,a,symyz
   27  cmsel,a,xedge
   28  cmsel,a,zedge
   29  fsum
   30  /com
   31  /com ************************
   32  /com *****  LOAD CASE 2 *****
   33  lcfile,2
```

```
lcase,2
eall
cmsel,s,bot
cmsel,a,symxy
cmsel,a,symyz
cmsel,a,xedge
cmsel,a,zedge
fsum
/com
/com ************************
/com *****  LOAD CASE 3 *****
lcfile,3
lcase,3
eall
cmsel,s,bot
cmsel,a,symxy
cmsel,a,symyz
cmsel,a,xedge
cmsel,a,zedge
fsum
/com
/com ************************
/com *****  LOAD CASE 4 *****
lcfile,4
lcase,4
eall
cmsel,s,bot
cmsel,a,symxy
cmsel,a,symyz
cmsel,a,xedge
cmsel,a,zedge
fsum
/com
/com ************************
/com *****  LOAD CASE 5 *****
lcfile,5
lcase,5
eall
cmsel,s,bot
cmsel,a,symxy
cmsel,a,symyz
cmsel,a,xedge
cmsel,a,zedge
fsum
/com
/com ************************
/com *****  LOAD CASE 6 *****
lcfile,6
lcase,6
eall
cmsel,s,bot
cmsel,a,symxy
cmsel,a,symyz
cmsel,a,xedge
cmsel,a,zedge
fsum
/com
```

```
/com ************************
/com *****  LOAD CASE 7 *****
lcfile,7
lcase,7
eall
cmsel,s,bot
cmsel,a,symxy
cmsel,a,symyz
cmsel,a,xedge
cmsel,a,zedge
fsum
/com
/com ************************
/com *****  LOAD CASE 8 *****
lcfile,8
lcase,8
eall
cmsel,s,bot
cmsel,a,symxy
cmsel,a,symyz
cmsel,a,xedge
cmsel,a,zedge
fsum
/com
/com ************************
/com *****  LOAD CASE 9 *****
lcfile,9
lcase,9
eall
cmsel,s,bot
cmsel,a,symxy
cmsel,a,symyz
cmsel,a,xedge
cmsel,a,zedge
fsum
/com
/com *************************
/com *****  LOAD CASE 10 *****
lcfile,10
lcase,10
eall
cmsel,s,bot
cmsel,a,symxy
cmsel,a,symyz
cmsel,a,xedge
cmsel,a,zedge
fsum
/com
/com *************************
/com *****  LOAD CASE 11 *****
lcfile,11
lcase,11
eall
cmsel,s,bot
cmsel,a,symxy
cmsel,a,symyz
cmsel,a,xedge
```

```
 148  cmsel,a,zedge
 149  fsum
 150  /com
 151  /com ************************
 152  /com ************************
 153  /com
 154  fini
 155  /output
 156  /exit,nosave
 157
 158
 159
 160

 RUN SETUP PROCEDURE FROM FILE= C:\Program Files\Ansys
Inc\ANSYS61\docu\start61.ans

 /INPUT FILE= C:\Program Files\Ansys Inc\ANSYS61\docu\start61.ans  LINE=       0

  This routine processes load results data for the
    evaluation of equilibrium.

    Load Case Results


 ************************
 ************************

 ****** Reactions ******


 CURRENT JOBNAME REDEFINED AS PadNC-Th

 RESUME ANSYS DATA FROM FILE NAME=PadNC-Th.db

 *** ANSYS GLOBAL STATUS ***

 TITLE = END OF 2.375 DAYS SZ ON Z SIDE
 ANALYSIS TYPE =  STATIC (STEADY-STATE)
 NUMBER OF ELEMENT TYPES =      5
    1870 ELEMENTS CURRENTLY SELECTED.  MAX ELEMENT NUMBER =     9341
   10212 NODES CURRENTLY SELECTED.     MAX NODE NUMBER =       10212
     166 KEYPOINTS CURRENTLY SELECTED. MAX KEYPOINT NUMBER =     166
     339 LINES CURRENTLY SELECTED.     MAX LINE NUMBER =         339
       2 AREAS CURRENTLY SELECTED.     MAX AREA NUMBER =         224
      48 VOLUMES CURRENTLY SELECTED.   MAX VOL. NUMBER =          48
      22 COMPONENTS CURRENTLY DEFINED
 MAXIMUM LINEAR PROPERTY NUMBER        =      12
 MAXIMUM REAL CONSTANT SET NUMBER      =       1
 ACTIVE COORDINATE SYSTEM              =       0  (CARTESIAN)

 INITIAL JOBNAME = PADNC-TH
 CURRENT JOBNAME = PadNC-Th


 PRINT HEADER
 PRINT SUBTITLE(S)
```

```
PRINT LOAD STEP ID
DO NOT PRINT NOTE LINE(S)
PRINT COLUMN HEADER LABELS
DO NOT PRINT REPORT TOTALS
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1      *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      10:19:05  FEB 11, 2003 CP=      0.551

END OF 2.375 DAYS SZ ON Z SIDE


         ***** ANSYS RESULTS INTERPRETATION (POST1) *****

*** WARNING ***                          CP=      0.551   TIME= 10:19:05
The current solution may have been produced using different model or
boundary condition data than is currently stored.  POST1 results may
 be erroneous unless you perform a new solution using the stored data.

*** NOTE ***                             CP=      0.551   TIME= 10:19:05
Reading results into the database (SET command) will update the current
displacement and force boundary conditions in the database with the
values from the results file for that load set.  Note that any
subsequent solutions will use these values unless action is taken to
 either SAVE the current values or not overwrite them (/EXIT,NOSAVE).

*** NOTE ***                             CP=      0.551   TIME= 10:19:05
The force summations will be in global cartesian when the summation
 point is at the origin.

NODE FOR MOMENT SUMMATION=       0
MOMENT SUMMATION LOCATION=   0.00000       0.00000       0.00000

************************
*****  LOAD CASE 1 *****

LOAD CASE   1 IS LOAD STEP     1  SUBSTEP     1  COMPLEX=  0
FILE= PadNC-Th.101
PAD RESPONSE AT END OF 0.25 DAYS - NO PAD/ROCK CONSTRAINT


COPY LOAD CASE   1 FROM FILE TO DATABASE

    8812  ELEMENTS (OF     8812  DEFINED) SELECTED BY  EALL  COMMAND.

SELECT      COMPONENT BOT

ALSO SELECT COMPONENT SYMXY

ALSO SELECT COMPONENT SYMYZ

ALSO SELECT COMPONENT XEDGE

ALSO SELECT COMPONENT ZEDGE

***** SUMMATION OF TOTAL    FORCES AND MOMENTS IN GLOBAL COORDINATES *****
```

```
 FX  = -0.1051892E-04
 FY  =  -1541759.
 FZ  = -0.7701914E-04
 MX  =  0.4857015E+09
 MY  =  0.4467307E-01
 MZ  = -0.3145495E+09

SUMMATION POINT=  0.0000      0.0000      0.0000

************************
*****  LOAD CASE 2 *****

LOAD CASE   2 IS LOAD STEP     2  SUBSTEP     1  COMPLEX=  0
FILE= PadNC-Th.102
PAD RESPONSE AT END OF 0.50 DAYS - NO PAD/ROCK CONSTRAINT


COPY LOAD CASE   2 FROM FILE TO DATABASE

    8812  ELEMENTS (OF     8812  DEFINED) SELECTED BY  EALL  COMMAND.

SELECT      COMPONENT BOT

ALSO SELECT COMPONENT SYMXY

ALSO SELECT COMPONENT SYMYZ

ALSO SELECT COMPONENT XEDGE

ALSO SELECT COMPONENT ZEDGE

***** SUMMATION OF TOTAL    FORCES AND MOMENTS IN GLOBAL COORDINATES *****
 FX  = -0.1711750E-02
 FY  =  -1927201.
 FZ  = -0.4494740E-03
 MX  =  0.6071229E+09
 MY  =  -1.379594
 MZ  = -0.3931819E+09

SUMMATION POINT=  0.0000      0.0000      0.0000

************************
*****  LOAD CASE 3 *****

LOAD CASE   3 IS LOAD STEP     3  SUBSTEP     1  COMPLEX=  0
FILE= PadNC-Th.103
PAD RESPONSE AT END OF 0.625 DAYS - NO PAD/ROCK CONSTRAINT


COPY LOAD CASE   3 FROM FILE TO DATABASE

    8812  ELEMENTS (OF     8812  DEFINED) SELECTED BY  EALL  COMMAND.

SELECT      COMPONENT BOT

ALSO SELECT COMPONENT SYMXY
```

```
ALSO SELECT COMPONENT SYMYZ

ALSO SELECT COMPONENT XEDGE

ALSO SELECT COMPONENT ZEDGE

***** SUMMATION OF TOTAL    FORCES AND MOMENTS IN GLOBAL COORDINATES *****
 FX  = -0.1662139E-02
 FY  =  -1946473.
 FZ  = -0.6303782E-03
 MX  =  0.6131936E+09
 MY  =  -1.413520
 MZ  = -0.3971134E+09

SUMMATION POINT=  0.0000      0.0000      0.0000

************************
*****  LOAD CASE 4 *****

LOAD CASE   4 IS LOAD STEP     4  SUBSTEP     1  COMPLEX=  0
FILE= PadNC-Th.104
PAD RESPONSE AT END OF 1.125 DAYS - NO PAD/ROCK CONSTRAINT


COPY LOAD CASE   4 FROM FILE TO DATABASE

    8812  ELEMENTS (OF     8812  DEFINED) SELECTED BY  EALL  COMMAND.

SELECT      COMPONENT BOT

ALSO SELECT COMPONENT SYMXY

ALSO SELECT COMPONENT SYMYZ

ALSO SELECT COMPONENT XEDGE

ALSO SELECT COMPONENT ZEDGE

***** SUMMATION OF TOTAL    FORCES AND MOMENTS IN GLOBAL COORDINATES *****
 FX  = -0.1628839E-02
 FY  =  -1965745.
 FZ  = -0.6716764E-03
 MX  =  0.6192643E+09
 MY  =  -1.404136
 MZ  = -0.4010449E+09

SUMMATION POINT=  0.0000      0.0000      0.0000

************************
*****  LOAD CASE 5 *****

LOAD CASE   5 IS LOAD STEP     5  SUBSTEP     1  COMPLEX=  0
FILE= PadNC-Th.105
PAD RESPONSE AT END OF 1.625 DAYS - NO PAD/ROCK CONSTRAINT


COPY LOAD CASE   5 FROM FILE TO DATABASE
```

```
    8812  ELEMENTS (OF     8812  DEFINED) SELECTED BY  EALL  COMMAND.

SELECT      COMPONENT BOT

ALSO SELECT COMPONENT SYMXY

ALSO SELECT COMPONENT SYMYZ

ALSO SELECT COMPONENT XEDGE

ALSO SELECT COMPONENT ZEDGE

***** SUMMATION OF TOTAL    FORCES AND MOMENTS IN GLOBAL COORDINATES *****
 FX  = -0.1628884E-02
 FY  =  -1985017.
 FZ  = -0.6719177E-03
 MX  =  0.6253349E+09
 MY  =  -1.404028
 MZ  = -0.4049763E+09

SUMMATION POINT=  0.0000      0.0000      0.0000

************************
*****  LOAD CASE 6 *****

LOAD CASE   6 IS LOAD STEP     6  SUBSTEP     1  COMPLEX=  0
FILE= PadNC-Th.106
PAD RESPONSE AT END OF 2.125 DAYS - NO PAD/ROCK CONSTRAINT


COPY LOAD CASE   6 FROM FILE TO DATABASE

    8812  ELEMENTS (OF     8812  DEFINED) SELECTED BY  EALL  COMMAND.

SELECT      COMPONENT BOT

ALSO SELECT COMPONENT SYMXY

ALSO SELECT COMPONENT SYMYZ

ALSO SELECT COMPONENT XEDGE

ALSO SELECT COMPONENT ZEDGE

***** SUMMATION OF TOTAL    FORCES AND MOMENTS IN GLOBAL COORDINATES *****
 FX  = -0.1628904E-02
 FY  =  -2004289.
 FZ  = -0.6718816E-03
 MX  =  0.6314055E+09
 MY  =  -1.404046
 MZ  = -0.4089078E+09

SUMMATION POINT=  0.0000      0.0000      0.0000

************************
*****  LOAD CASE 7 *****
```

```
LOAD CASE   7 IS LOAD STEP     7  SUBSTEP     1  COMPLEX=  0
FILE= PadNC-Th.107
PAD RESPONSE AT END OF 2.375 DAYS - NO PAD/ROCK CONSTRAINT


COPY LOAD CASE   7 FROM FILE TO DATABASE

    8812  ELEMENTS (OF     8812  DEFINED) SELECTED BY  EALL  COMMAND.

SELECT      COMPONENT BOT

ALSO SELECT COMPONENT SYMXY

ALSO SELECT COMPONENT SYMYZ

ALSO SELECT COMPONENT XEDGE

ALSO SELECT COMPONENT ZEDGE

***** SUMMATION OF TOTAL    FORCES AND MOMENTS IN GLOBAL COORDINATES *****
 FX  = -0.1707448E-02
 FY  =  -2023561.
 FZ  = -0.6852017E-03
 MX  =  0.6374762E+09
 MY  =  -1.324389
 MZ  = -0.4128392E+09

SUMMATION POINT=  0.0000      0.0000      0.0000

************************
*****  LOAD CASE 8 *****

LOAD CASE   8 IS LOAD STEP     8  SUBSTEP     1  COMPLEX=  0
FILE= PadNC-Th.108
PAD RESPONSE AT END OF 3.125 DAYS - NO PAD/ROCK CONSTRAINT


COPY LOAD CASE   8 FROM FILE TO DATABASE

    8812  ELEMENTS (OF     8812  DEFINED) SELECTED BY  EALL  COMMAND.

SELECT      COMPONENT BOT

ALSO SELECT COMPONENT SYMXY

ALSO SELECT COMPONENT SYMYZ

ALSO SELECT COMPONENT XEDGE

ALSO SELECT COMPONENT ZEDGE

***** SUMMATION OF TOTAL    FORCES AND MOMENTS IN GLOBAL COORDINATES *****
 FX  = -0.1697010E-02
 FY  =  -2042833.
 FZ  = -0.7519997E-03
 MX  =  0.6435468E+09
```

```
 MY  =  -1.294351
 MZ  = -0.4167707E+09

SUMMATION POINT=  0.0000      0.0000      0.0000

************************
*****  LOAD CASE 9 *****

LOAD CASE   9 IS LOAD STEP     9  SUBSTEP     1  COMPLEX=  0
FILE= PadNC-Th.109
PAD RESPONSE AT END OF 4.125 DAYS - NO PAD/ROCK CONSTRAINT


COPY LOAD CASE   9 FROM FILE TO DATABASE

    8812  ELEMENTS (OF     8812  DEFINED) SELECTED BY  EALL  COMMAND.

SELECT      COMPONENT BOT

ALSO SELECT COMPONENT SYMXY

ALSO SELECT COMPONENT SYMYZ

ALSO SELECT COMPONENT XEDGE

ALSO SELECT COMPONENT ZEDGE

***** SUMMATION OF TOTAL    FORCES AND MOMENTS IN GLOBAL COORDINATES *****
 FX  = -0.1657006E-02
 FY  =  -2062104.
 FZ  = -0.6929606E-03
 MX  =  0.6496174E+09
 MY  =  -1.181507
 MZ  = -0.4207021E+09

SUMMATION POINT=  0.0000      0.0000      0.0000

************************
*****  LOAD CASE 10 *****

LOAD CASE  10 IS LOAD STEP    10  SUBSTEP     1  COMPLEX=  0
FILE= PadNC-Th.110
PAD RESPONSE AT END OF 6.125 DAYS - NO PAD/ROCK CONSTRAINT


COPY LOAD CASE  10 FROM FILE TO DATABASE

    8812  ELEMENTS (OF     8812  DEFINED) SELECTED BY  EALL  COMMAND.

SELECT      COMPONENT BOT

ALSO SELECT COMPONENT SYMXY

ALSO SELECT COMPONENT SYMYZ

ALSO SELECT COMPONENT XEDGE
```

```
ALSO SELECT COMPONENT ZEDGE

***** SUMMATION OF TOTAL    FORCES AND MOMENTS IN GLOBAL COORDINATES *****
 FX  = -0.2281821E-02
 FY  =  -2081376.
 FZ  = -0.5014647E-03
 MX  =  0.6556874E+09
 MY  =  -2.134902
 MZ  = -0.4246332E+09

SUMMATION POINT=  0.0000      0.0000      0.0000

*************************
*****  LOAD CASE 11 *****

LOAD CASE  11 IS LOAD STEP    11  SUBSTEP     1  COMPLEX=  0
FILE= PadNC-Th.111
PAD RESPONSE AT END OF 7.875 DAYS - NO PAD/ROCK CONSTRAINT


COPY LOAD CASE  11 FROM FILE TO DATABASE

    8812  ELEMENTS (OF     8812  DEFINED) SELECTED BY  EALL  COMMAND.

SELECT      COMPONENT BOT

ALSO SELECT COMPONENT SYMXY

ALSO SELECT COMPONENT SYMYZ

ALSO SELECT COMPONENT XEDGE

ALSO SELECT COMPONENT ZEDGE

***** SUMMATION OF TOTAL    FORCES AND MOMENTS IN GLOBAL COORDINATES *****
 FX  = -0.2280719E-02
 FY  =  -2100648.
 FZ  = -0.5055810E-03
 MX  =  0.6617577E+09
 MY  =  -2.132106
 MZ  = -0.4285644E+09

SUMMATION POINT=  0.0000      0.0000      0.0000

*************************
*************************


EXIT THE ANSYS POST1 DATABASE PROCESSOR


***** ROUTINE COMPLETED *****  CP =         8.222


EXIT ANSYS WITHOUT SAVING DATABASE
```

```
NUMBER OF WARNING MESSAGES ENCOUNTERED=          2
NUMBER OF ERROR   MESSAGES ENCOUNTERED=          0

*-----------------------------------------------------------------------*
|                                                                       |
|                          ANSYS RUN COMPLETED                          |
|-----------------------------------------------------------------------|
|                                                                       |
|          Release 6.1            UP20020321         INTEL NT           |
|-----------------------------------------------------------------------|
|                                                                       |
|  Maximum Scratch Memory Used       =     1025420 Words        3.912 MB |
|-----------------------------------------------------------------------|
|                                                                       |
|       CP Time      (sec) =          8.222       Time  =  10:19:25     |
|       Elapsed Time (sec) =         23.000       Date  =  02/11/2003   |
|                                                                       |
*-----------------------------------------------------------------------*
```

ENERCON SERVICES, INC.

Appendix SPadNC-TH to Calculation PGE-009-CALC-006

Originator: S. C. Tumminelli
Date: March 3, 2003

Appendix SPadNC-TH

This Appendix presents the ANSYS output file documenting the pad stress response for the unconstrained thermal stress analysis.

ANSYS/Mechanical U

```
*-----------------------------------------------------------*
|                                                           |
|   W E L C O M E   T O   T H E   A N S Y S   P R O G R A M |
|                                                           |
*-----------------------------------------------------------*
```

```
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*****************************************************************
```

```
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* USEFULNESS OF THE RESULTS.                                    *
*****************************************************************
```

```
                    Completing ANSYS Load Process.


        *****  ANSYS COMMAND LINE ARGUMENTS  *****
 INITIAL JOBNAME                = PADNC-TH
 BATCH MODE REQUESTED           = LIST
 MEMORY REQUESTED (MB)          = 700
 DATABASE SIZE REQUESTED (MB)   = 75

*** WARNING ***                          CP=      0.260   TIME= 20:02:45
Use of the -M switch is no longer recommended for normal ANSYS use.
ANSYS now dynamically allocates memory as needed.  Only use the -M
 switch if you are certain that you need to do so.

PARAMETER STATUS-            (   1 PARAMETERS DEFINED)
                 (INCLUDING     1 INTERNAL PARAMETERS)

00245050          VERSION=INTEL NT        RELEASE= 6.1     UP20020321
CURRENT JOBNAME=PADNC-TH  20:02:45  FEB 10, 2003 CP=      0.260

    1  /COM
    2  /COM
    3  /COM     STRESS DATA SORTED AND PRINTED BY LOAD CASE
    4  /COM
    5  /COM
    6  /COM
    7  /COM     THIS ROUTINE SORTS AND PRINTS STRESS DATA BY LOAD CASE
    8  /COM     FIRST SX, SZ, S1 (MAX) AND S3 (MIN)
    9  /COM
   10  /COM
   11  /file,PadNC-Th
   12  resume
   13  /header,on,off,off,off,on,off
   14  /post1
   15  /COM
   16  EALL
   17  NALL
   18  /COM
   19  /COM ==============================================================
   20  /COM ==============================================================
   21  /COM ==============================================================
   22  /COM ======================  LCASE 1  ============================
   23  /COM
   24  LCFILE,1
   25  LCASE,1
   26  ESEL,TYPE,2
   27  NELEM
   28  /COM
   29  /COM ==============================================================
   30  /COM ============    MAXIMUM VALUES OF SX    =====================
   31  /COM
   32  NSORT,S,X,0,0,2,SEL
   33  PRNSOL,S
   34  NUSORT
   35  /COM
```

```
/COM ==============================================================
/COM ============    MINIMUM VALUES OF SX    =====================
/COM
NSORT,S,X,1,0,2,SEL
PRNSOL,S
NUSORT
/COM
/COM ==============================================================
/COM ============    MAXIMUM VALUES OF SZ    =====================
/COM
NSORT,S,Z,0,0,2,SEL
PRNSOL,S
NUSORT
/COM
/COM ==============================================================
/COM ============    MINIMUM VALUES OF SZ    =====================
/COM
NSORT,S,Z,1,0,2,SEL
PRNSOL,S
/COM
/COM
/COM ==============================================================
/COM ============    MAXIMUM VALUES OF S1    =====================
/COM
NSORT,S,1,0,0,2,SEL
PRNSOL,S,PRIN
NUSORT
/COM
/COM ==============================================================
/COM ============    MINIMUM VALUES OF S3    =====================
/COM
NSORT,S,3,1,0,2,SEL
PRNSOL,S,PRIN
NUSORT
/COM
/COM ==============================================================
/COM ==============================================================
/COM ==============================================================
/COM ======================  LCASE 2  ============================
/COM
LCFILE,2
LCASE,2
ESEL,TYPE,2
NELEM
/COM
/COM ==============================================================
/COM ============    MAXIMUM VALUES OF SX    =====================
/COM
NSORT,S,X,0,0,2,SEL
PRNSOL,S
NUSORT
/COM
/COM ==============================================================
/COM ============    MINIMUM VALUES OF SX    =====================
/COM
NSORT,S,X,1,0,2,SEL
PRNSOL,S
```

```
NUSORT
/COM
/COM ==================================================================
/COM ============    MAXIMUM VALUES OF SZ    =======================
/COM
NSORT,S,Z,0,0,2,SEL
PRNSOL,S
NUSORT
/COM
/COM ==================================================================
/COM ============    MINIMUM VALUES OF SZ    =======================
/COM
NSORT,S,Z,1,0,2,SEL
PRNSOL,S
/COM
/COM
/COM ==================================================================
/COM ============    MAXIMUM VALUES OF S1    =======================
/COM
NSORT,S,1,0,0,2,SEL
PRNSOL,S,PRIN
NUSORT
/COM
/COM ==================================================================
/COM ============    MINIMUM VALUES OF S3    =======================
/COM
NSORT,S,3,1,0,2,SEL
PRNSOL,S,PRIN
NUSORT
/COM
/COM ==================================================================
/COM ==================================================================
/COM ==================================================================
/COM ======================  LCASE 3  ==============================
/COM
LCFILE,3
LCASE,3
ESEL,TYPE,2
NELEM
/COM
/COM ==================================================================
/COM ============    MAXIMUM VALUES OF SX    =======================
/COM
NSORT,S,X,0,0,2,SEL
PRNSOL,S
NUSORT
/COM
/COM ==================================================================
/COM ============    MINIMUM VALUES OF SX    =======================
/COM
NSORT,S,X,1,0,2,SEL
PRNSOL,S
NUSORT
/COM
/COM ==================================================================
/COM ============    MAXIMUM VALUES OF SZ    =======================
/COM
```

```
NSORT,S,Z,0,0,2,SEL
PRNSOL,S
NUSORT
/COM
/COM ================================================================
/COM ============    MINIMUM VALUES OF SZ    =======================
/COM
NSORT,S,Z,1,0,2,SEL
PRNSOL,S
/COM
/COM
/COM ================================================================
/COM ============    MAXIMUM VALUES OF S1    =======================
/COM
NSORT,S,1,0,0,2,SEL
PRNSOL,S,PRIN
NUSORT
/COM
/COM ================================================================
/COM ============    MINIMUM VALUES OF S3    =======================
/COM
NSORT,S,3,1,0,2,SEL
PRNSOL,S,PRIN
NUSORT
/COM
/COM ================================================================
/COM ================================================================
/COM ================================================================
/COM ======================  LCASE 4  ==============================
/COM
LCFILE,4
LCASE,4
ESEL,TYPE,2
NELEM
/COM
/COM ================================================================
/COM ============    MAXIMUM VALUES OF SX    =======================
/COM
NSORT,S,X,0,0,2,SEL
PRNSOL,S
NUSORT
/COM
/COM ================================================================
/COM ============    MINIMUM VALUES OF SX    =======================
/COM
NSORT,S,X,1,0,2,SEL
PRNSOL,S
NUSORT
/COM
/COM ================================================================
/COM ============    MAXIMUM VALUES OF SZ    =======================
/COM
NSORT,S,Z,0,0,2,SEL
PRNSOL,S
NUSORT
/COM
/COM ================================================================
```

```
/COM ============    MINIMUM VALUES OF SZ    =====================
/COM
NSORT,S,Z,1,0,2,SEL
PRNSOL,S
/COM
/COM ==============================================================
/COM ============    MAXIMUM VALUES OF S1    =====================
/COM
NSORT,S,1,0,0,2,SEL
PRNSOL,S,PRIN
NUSORT
/COM
/COM ==============================================================
/COM ============    MINIMUM VALUES OF S3    =====================
/COM
NSORT,S,3,1,0,2,SEL
PRNSOL,S,PRIN
NUSORT
/COM
/COM ==============================================================
/COM ==============================================================
/COM ==============================================================
/COM ====================  LCASE 5  ============================
/COM
LCFILE,5
LCASE,5
ESEL,TYPE,2
NELEM
/COM
/COM ==============================================================
/COM ============    MAXIMUM VALUES OF SX    =====================
/COM
NSORT,S,X,0,0,2,SEL
PRNSOL,S
NUSORT
/COM
/COM ==============================================================
/COM ============    MINIMUM VALUES OF SX    =====================
/COM
NSORT,S,X,1,0,2,SEL
PRNSOL,S
NUSORT
/COM
/COM ==============================================================
/COM ============    MAXIMUM VALUES OF SZ    =====================
/COM
NSORT,S,Z,0,0,2,SEL
PRNSOL,S
NUSORT
/COM
/COM ==============================================================
/COM ============    MINIMUM VALUES OF SZ    =====================
/COM
NSORT,S,Z,1,0,2,SEL
PRNSOL,S
/COM
```

```
/COM
/COM ==============================================================
/COM ============    MAXIMUM VALUES OF S1    =====================
/COM
NSORT,S,1,0,0,2,SEL
PRNSOL,S,PRIN
NUSORT
/COM
/COM ==============================================================
/COM ============    MINIMUM VALUES OF S3    =====================
/COM
NSORT,S,3,1,0,2,SEL
PRNSOL,S,PRIN
NUSORT
/COM
/COM ==============================================================
/COM ==============================================================
/COM ==============================================================
/COM ======================  LCASE 6  ============================
/COM
LCFILE,6
LCASE,6
ESEL,TYPE,2
NELEM
/COM
/COM ==============================================================
/COM ============    MAXIMUM VALUES OF SX    =====================
/COM
NSORT,S,X,0,0,2,SEL
PRNSOL,S
NUSORT
/COM
/COM ==============================================================
/COM ============    MINIMUM VALUES OF SX    =====================
/COM
NSORT,S,X,1,0,2,SEL
PRNSOL,S
NUSORT
/COM
/COM ==============================================================
/COM ============    MAXIMUM VALUES OF SZ    =====================
/COM
NSORT,S,Z,0,0,2,SEL
PRNSOL,S
NUSORT
/COM
/COM ==============================================================
/COM ============    MINIMUM VALUES OF SZ    =====================
/COM
NSORT,S,Z,1,0,2,SEL
PRNSOL,S
/COM
/COM
/COM ==============================================================
/COM ============    MAXIMUM VALUES OF S1    =====================
NSORT,S,1,0,0,2,SEL
PRNSOL,S,PRIN
```

```
NUSORT
/COM
/COM ==============================================================
/COM ============    MINIMUM VALUES OF S3    =====================
/COM
NSORT,S,3,1,0,2,SEL
PRNSOL,S,PRIN
NUSORT
/COM
/COM ==============================================================
/COM ==============================================================
/COM ==============================================================
/COM ====================  LCASE 7  ============================
/COM
LCFILE,7
LCASE,7
ESEL,TYPE,2
NELEM
/COM
/COM ==============================================================
/COM ============    MAXIMUM VALUES OF SX    =====================
/COM
NSORT,S,X,0,0,2,SEL
PRNSOL,S
NUSORT
/COM
/COM ==============================================================
/COM ============    MINIMUM VALUES OF SX    =====================
/COM
NSORT,S,X,1,0,2,SEL
PRNSOL,S
NUSORT
/COM
/COM ==============================================================
/COM ============    MAXIMUM VALUES OF SZ    =====================
/COM
NSORT,S,Z,0,0,2,SEL
PRNSOL,S
NUSORT
/COM
/COM ==============================================================
/COM ============    MINIMUM VALUES OF SZ    =====================
/COM
NSORT,S,Z,1,0,2,SEL
PRNSOL,S
/COM
/COM
/COM ==============================================================
/COM ============    MAXIMUM VALUES OF S1    =====================
/COM
NSORT,S,1,0,0,2,SEL
PRNSOL,S,PRIN
NUSORT
/COM
/COM ==============================================================
/COM ============    MINIMUM VALUES OF S3    =====================
/COM
```

```
NSORT,S,3,1,0,2,SEL
PRNSOL,S,PRIN
NUSORT
/COM
/COM ==============================================================
/COM ==============================================================
/COM ==============================================================
/COM ======================  LCASE 8  ============================
/COM
LCFILE,8
LCASE,8
ESEL,TYPE,2
NELEM
/COM
/COM ==============================================================
/COM ============    MAXIMUM VALUES OF SX    =====================
/COM
NSORT,S,X,0,0,2,SEL
PRNSOL,S
NUSORT
/COM
/COM ==============================================================
/COM ============    MINIMUM VALUES OF SX    =====================
/COM
NSORT,S,X,1,0,2,SEL
PRNSOL,S
NUSORT
/COM
/COM ==============================================================
/COM ============    MAXIMUM VALUES OF SZ    =====================
/COM
NSORT,S,Z,0,0,2,SEL
PRNSOL,S
NUSORT
/COM
/COM ==============================================================
/COM ============    MINIMUM VALUES OF SZ    =====================
/COM
NSORT,S,Z,1,0,2,SEL
PRNSOL,S
/COM
/COM
/COM ==============================================================
/COM ============    MAXIMUM VALUES OF S1    =====================
/COM
NSORT,S,1,0,0,2,SEL
PRNSOL,S,PRIN
NUSORT
/COM
/COM ==============================================================
/COM ============    MINIMUM VALUES OF S3    =====================
/COM
NSORT,S,3,1,0,2,SEL
PRNSOL,S,PRIN
NUSORT
/COM
/COM ==============================================================
```

```
/COM ==============================================================
/COM ==============================================================
/COM ======================  LCASE 9  ============================
/COM
LCFILE,9
LCASE,9
ESEL,TYPE,2
NELEM
/COM
/COM ==============================================================
/COM ============    MAXIMUM VALUES OF SX    =====================
/COM
NSORT,S,X,0,0,2,SEL
PRNSOL,S
NUSORT
/COM
/COM ==============================================================
/COM ============    MINIMUM VALUES OF SX    =====================
/COM
NSORT,S,X,1,0,2,SEL
PRNSOL,S
NUSORT
/COM
/COM ==============================================================
/COM ============    MAXIMUM VALUES OF SZ    =====================
/COM
NSORT,S,Z,0,0,2,SEL
PRNSOL,S
NUSORT
/COM
/COM ==============================================================
/COM ============    MINIMUM VALUES OF SZ    =====================
/COM
NSORT,S,Z,1,0,2,SEL
PRNSOL,S
/COM
/COM
/COM ==============================================================
/COM ============    MAXIMUM VALUES OF S1    =====================
/COM
NSORT,S,1,0,0,2,SEL
PRNSOL,S,PRIN
NUSORT
/COM
/COM ==============================================================
/COM ============    MINIMUM VALUES OF S3    =====================
/COM
NSORT,S,3,1,0,2,SEL
PRNSOL,S,PRIN
NUSORT
/COM
/COM ==============================================================
/COM ==============================================================
/COM ==============================================================
/COM ======================  LCASE 10  ===========================
/COM
LCFILE,10
```

```
LCASE,10
ESEL,TYPE,2
NELEM
/COM
/COM ==============================================================
/COM ============    MAXIMUM VALUES OF SX    =====================
/COM
NSORT,S,X,0,0,2,SEL
PRNSOL,S
NUSORT
/COM
/COM ==============================================================
/COM ============    MINIMUM VALUES OF SX    =====================
/COM
NSORT,S,X,1,0,2,SEL
PRNSOL,S
NUSORT
/COM
/COM ==============================================================
/COM ============    MAXIMUM VALUES OF SZ    =====================
/COM
NSORT,S,Z,0,0,2,SEL
PRNSOL,S
NUSORT
/COM
/COM ==============================================================
/COM ============    MINIMUM VALUES OF SZ    =====================
/COM
NSORT,S,Z,1,0,2,SEL
PRNSOL,S
/COM
/COM
/COM ==============================================================
/COM ============    MAXIMUM VALUES OF S1    =====================
/COM
NSORT,S,1,0,0,2,SEL
PRNSOL,S,PRIN
NUSORT
/COM
/COM ==============================================================
/COM ============    MINIMUM VALUES OF S3    =====================
/COM
NSORT,S,3,1,0,2,SEL
PRNSOL,S,PRIN
NUSORT
/COM
/COM ==============================================================
/COM ==============================================================
/COM ==============================================================
/COM ====================  LCASE 11  ==========================
/COM
LCFILE,11
LCASE,11
ESEL,TYPE,2
NELEM
/COM
/COM ==============================================================
```

```
549  /COM ============    MAXIMUM VALUES OF SX    ======================
550  /COM
551  NSORT,S,X,0,0,2,SEL
552  PRNSOL,S
553  NUSORT
554  /COM
555  /COM ==============================================================
556  /COM ============    MINIMUM VALUES OF SX    ======================
557  /COM
558  NSORT,S,X,1,0,2,SEL
559  PRNSOL,S
560  NUSORT
561  /COM
562  /COM ==============================================================
563  /COM ============    MAXIMUM VALUES OF SZ    ======================
564  /COM
565  NSORT,S,Z,0,0,2,SEL
566  PRNSOL,S
567  NUSORT
568  /COM
569  /COM ==============================================================
570  /COM ============    MINIMUM VALUES OF SZ    ======================
571  /COM
572  NSORT,S,Z,1,0,2,SEL
573  PRNSOL,S
574  /COM
575  /COM
576  /COM ==============================================================
577  /COM ============    MAXIMUM VALUES OF S1    ======================
578  /COM
579  NSORT,S,1,0,0,2,SEL
580  PRNSOL,S,PRIN
581  NUSORT
582  /COM
583  /COM ==============================================================
584  /COM ============    MINIMUM VALUES OF S3    ======================
585  /COM
586  NSORT,S,3,1,0,2,SEL
587  PRNSOL,S,PRIN
588  NUSORT
589  /COM
590  /COM ==============================================================
591  /COM ==============================================================
592  /COM ==============================================================
593  /COM ==============================================================
594  /COM
595  EALL
596  NALL
597  FINI
598  /OUTPUT
599  /EXIT,NOSAVE
```

RUN SETUP PROCEDURE FROM FILE= C:\Program Files\Ansys Inc\ANSYS61\docu\start61.ans

/INPUT FILE= C:\Program Files\Ansys Inc\ANSYS61\docu\start61.ans LINE= 0

```
    STRESS DATA SORTED AND PRINTED BY LOAD CASE


    THIS ROUTINE SORTS AND PRINTS STRESS DATA BY LOAD CASE
    FIRST SX, SZ, S1 (MAX) AND S3 (MIN)


CURRENT JOBNAME REDEFINED AS PadNC-Th

RESUME ANSYS DATA FROM FILE NAME=PadNC-Th.db

*** ANSYS GLOBAL STATUS ***

TITLE = END OF 2.375 DAYS SZ ON Z SIDE
ANALYSIS TYPE =  STATIC (STEADY-STATE)
NUMBER OF ELEMENT TYPES =      5
   1870 ELEMENTS CURRENTLY SELECTED.  MAX ELEMENT NUMBER =     9341
  10212 NODES CURRENTLY SELECTED.     MAX NODE NUMBER =       10212
    166 KEYPOINTS CURRENTLY SELECTED. MAX KEYPOINT NUMBER =     166
    339 LINES CURRENTLY SELECTED.     MAX LINE NUMBER =         339
      2 AREAS CURRENTLY SELECTED.     MAX AREA NUMBER =         224
     48 VOLUMES CURRENTLY SELECTED.   MAX VOL. NUMBER =          48
    22 COMPONENTS CURRENTLY DEFINED
MAXIMUM LINEAR PROPERTY NUMBER        =      12
MAXIMUM REAL CONSTANT SET NUMBER      =       1
ACTIVE COORDINATE SYSTEM              =       0  (CARTESIAN)

INITIAL JOBNAME = PADNC-TH
CURRENT JOBNAME = PadNC-Th


PRINT HEADER
DO NOT PRINT SUBTITLE(S)
DO NOT PRINT LOAD STEP ID
DO NOT PRINT NOTE LINE(S)
PRINT COLUMN HEADER LABELS
DO NOT PRINT REPORT TOTALS
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:46  FEB 10, 2003 CP=      0.611

END OF 2.375 DAYS SZ ON Z SIDE


         ***** ANSYS RESULTS INTERPRETATION (POST1) *****

*** WARNING ***                         CP=      0.611   TIME= 20:02:46
The current solution may have been produced using different model or
boundary condition data than is currently stored.  POST1 results may
 be erroneous unless you perform a new solution using the stored data.

*** NOTE ***                            CP=      0.611   TIME= 20:02:46
```

```
Reading results into the database (SET command) will update the current
displacement and force boundary conditions in the database with the
values from the results file for that load set.  Note that any
subsequent solutions will use these values unless action is taken to
 either SAVE the current values or not overwrite them (/EXIT,NOSAVE).


    8812  ELEMENTS (OF     8812  DEFINED) SELECTED BY  EALL  COMMAND.

   10212  NODES (OF    10212  DEFINED) SELECTED BY NALL  COMMAND.

===============================================================
===============================================================
===============================================================
======================  LCASE 1  ============================


LOAD CASE   1 IS LOAD STEP     1  SUBSTEP     1  COMPLEX=  0
FILE= PadNC-Th.101
PAD RESPONSE AT END OF 0.25 DAYS - NO PAD/ROCK CONSTRAINT


COPY LOAD CASE   1 FROM FILE TO DATABASE

ESEL  FOR LABEL= TYPE  FROM       2 TO       2 BY       1

    1870  ELEMENTS (OF     8812  DEFINED) SELECTED BY  ESEL  COMMAND.

SELECT      ALL NODES HAVING ANY ELEMENT IN ELEMENT SET.

    2376 NODES (OF    10212  DEFINED) SELECTED FROM
    1870 SELECTED ELEMENTS BY NELE COMMAND.

===============================================================
============    MAXIMUM VALUES OF SX    =======================


SORT ON ITEM=S     COMPONENT=X     ORDER= 0  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:47  FEB 10, 2003 CP=      1.262

PAD RESPONSE AT END OF 0.25 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    SX          SY          SZ          SXY         SYZ         SXZ
   2357   55.557     -6.5627      54.667    -0.21157    -0.14933    -0.11882
   2355   55.524     -6.4748      54.239    -0.21328    -0.47766E-01-0.75912E-01

NODE SORT REMOVED
```

```
=============================================================
============    MINIMUM VALUES OF SX    =====================

SORT ON ITEM=S     COMPONENT=X     ORDER= 1  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:47  FEB 10, 2003 CP=      1.282

PAD RESPONSE AT END OF 0.25 DAYS - NO PAD/ROCK CONSTRAINT

   NODE    SX          SY          SZ          SXY         SYZ         SXZ
   2703  -6.9609     -2.9178     -6.2015    -0.60510     -1.4155     0.91587E-01
     52  -6.6497    -0.76182     -5.6077    -0.64664    -0.41871E-03 0.10156E-02

NODE SORT REMOVED

=============================================================
============    MAXIMUM VALUES OF SZ    =====================

SORT ON ITEM=S     COMPONENT=Z     ORDER= 0  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:47  FEB 10, 2003 CP=      1.302

PAD RESPONSE AT END OF 0.25 DAYS - NO PAD/ROCK CONSTRAINT

   NODE    SX          SY          SZ          SXY         SYZ         SXZ
   2273   54.546     -6.9690      55.042    -0.95016E-01-0.18425E-01-0.12883
   2275   54.162     -6.8950      55.028    -0.34288E-01-0.20324E-01-0.71414E-01

NODE SORT REMOVED

=============================================================
============    MINIMUM VALUES OF SZ    =====================

SORT ON ITEM=S     COMPONENT=Z     ORDER= 1  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
```

```
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1      *****
 ANSYS/Mechanical U
 00245050          VERSION=INTEL NT      20:02:47  FEB 10, 2003 CP=      1.322

 PAD RESPONSE AT END OF 0.25 DAYS - NO PAD/ROCK CONSTRAINT


    NODE    SX          SY          SZ          SXY         SYZ         SXZ
    2706  -6.3930     -5.7859     -6.5363     -1.9099     -1.3308     0.44730E-01
     671  -6.0346     -2.8234     -6.4821     -2.0368    -0.17288E-01 0.89020E-01


 ==============================================================
 ============    MAXIMUM VALUES OF S1    =====================


 SORT ON ITEM=S     COMPONENT=1     ORDER= 0  KABS= 0  NMAX=       2

 SORT COMPLETED FOR       2 VALUES.

 PRINT S    NODAL SOLUTION PER NODE
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1      *****
 ANSYS/Mechanical U
 00245050          VERSION=INTEL NT      20:02:47  FEB 10, 2003 CP=      1.342

 PAD RESPONSE AT END OF 0.25 DAYS - NO PAD/ROCK CONSTRAINT


    NODE    S1          S2          S3          SINT        SEQV
    2357   55.573      54.652     -6.5638      62.137      61.681
    2355   55.530      54.235     -6.4756      62.005      61.368

 NODE SORT REMOVED

 ==============================================================
 ============    MINIMUM VALUES OF S3    =====================


 SORT ON ITEM=S     COMPONENT=3     ORDER= 1  KABS= 0  NMAX=       2

 SORT COMPLETED FOR       2 VALUES.

 PRINT S    NODAL SOLUTION PER NODE
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1      *****
 ANSYS/Mechanical U
 00245050          VERSION=INTEL NT      20:02:47  FEB 10, 2003 CP=      1.372

 PAD RESPONSE AT END OF 0.25 DAYS - NO PAD/ROCK CONSTRAINT


    NODE    S1          S2          S3          SINT        SEQV
```

```
   2268   2.9838     -1.1806     -10.869      13.853      12.311
   2267   51.694      37.450     -10.706      62.400      56.638

NODE SORT REMOVED

=============================================================
=============================================================
=============================================================
======================  LCASE 2  ============================


LOAD CASE   2 IS LOAD STEP     2  SUBSTEP     1  COMPLEX=  0
FILE= PadNC-Th.102
PAD RESPONSE AT END OF 0.50 DAYS - NO PAD/ROCK CONSTRAINT


COPY LOAD CASE   2 FROM FILE TO DATABASE

ESEL  FOR LABEL= TYPE  FROM       2 TO       2 BY       1

    1870  ELEMENTS (OF     8812  DEFINED) SELECTED BY  ESEL  COMMAND.

SELECT      ALL NODES HAVING ANY ELEMENT IN ELEMENT SET.

    2376 NODES (OF    10212  DEFINED) SELECTED FROM
    1870 SELECTED ELEMENTS BY NELE COMMAND.

=============================================================
============    MAXIMUM VALUES OF SX    =====================


SORT ON ITEM=S     COMPONENT=X     ORDER= 0  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:48  FEB 10, 2003 CP=      2.003

PAD RESPONSE AT END OF 0.50 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    SX          SY          SZ          SXY         SYZ         SXZ
    675   203.89    -0.23631      204.77     0.10852    -0.51902E-02-0.50266E-02
    674   203.89    -0.21134      204.77     0.11000     0.65581E-02 0.51627E-02

NODE SORT REMOVED

=============================================================
============    MINIMUM VALUES OF SX    =====================


SORT ON ITEM=S     COMPONENT=X     ORDER= 1  KABS= 0  NMAX=       2
```

```
 SORT COMPLETED FOR        2 VALUES.

 PRINT S    NODAL SOLUTION PER NODE
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1      *****
 ANSYS/Mechanical U
 00245050          VERSION=INTEL NT      20:02:48  FEB 10, 2003 CP=      2.023

 PAD RESPONSE AT END OF 0.50 DAYS - NO PAD/ROCK CONSTRAINT


    NODE    SX          SY          SZ          SXY         SYZ         SXZ
    2805  -66.820     -20.730     -53.285     -1.4875     -6.6828    -0.76031
    2108  -66.216     -1.8499     -59.501     -2.8964     -2.5938     -1.2980

 NODE SORT REMOVED

 ==============================================================
 ============    MAXIMUM VALUES OF SZ    =====================


 SORT ON ITEM=S     COMPONENT=Z     ORDER= 0  KABS= 0  NMAX=       2

 SORT COMPLETED FOR        2 VALUES.

 PRINT S    NODAL SOLUTION PER NODE
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1      *****
 ANSYS/Mechanical U
 00245050          VERSION=INTEL NT      20:02:48  FEB 10, 2003 CP=      2.043

 PAD RESPONSE AT END OF 0.50 DAYS - NO PAD/ROCK CONSTRAINT


    NODE    SX          SY          SZ          SXY         SYZ         SXZ
     675   203.89    -0.23631      204.77     0.10852    -0.51902E-02-0.50266E-02
     674   203.89    -0.21134      204.77     0.11000     0.65581E-02 0.51627E-02

 NODE SORT REMOVED

 ==============================================================
 ============    MINIMUM VALUES OF SZ    =====================


 SORT ON ITEM=S     COMPONENT=Z     ORDER= 1  KABS= 0  NMAX=       2

 SORT COMPLETED FOR        2 VALUES.

 PRINT S    NODAL SOLUTION PER NODE
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1      *****
 ANSYS/Mechanical U
 00245050          VERSION=INTEL NT      20:02:48  FEB 10, 2003 CP=      2.053
```

PAD RESPONSE AT END OF 0.50 DAYS - NO PAD/ROCK CONSTRAINT

NODE	SX	SY	SZ	SXY	SYZ	SXZ
1460	-58.101	1.7662	-67.465	-0.49279	-4.0126	-0.26920
1461	-58.358	1.7189	-67.453	-0.84714	-3.9042	-0.51787

==========
========== MAXIMUM VALUES OF S1 ==========

SORT ON ITEM=S COMPONENT=1 ORDER= 0 KABS= 0 NMAX= 2

SORT COMPLETED FOR 2 VALUES.

PRINT S NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM RELEASE 6.1 *****
ANSYS/Mechanical U
00245050 VERSION=INTEL NT 20:02:48 FEB 10, 2003 CP= 2.073

PAD RESPONSE AT END OF 0.50 DAYS - NO PAD/ROCK CONSTRAINT

NODE	S1	S2	S3	SINT	SEQV
675	204.77	203.89	-0.23637	205.00	204.57
674	204.77	203.89	-0.21140	204.98	204.54

NODE SORT REMOVED

==========
========== MINIMUM VALUES OF S3 ==========

SORT ON ITEM=S COMPONENT=3 ORDER= 1 KABS= 0 NMAX= 2

SORT COMPLETED FOR 2 VALUES.

PRINT S NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM RELEASE 6.1 *****
ANSYS/Mechanical U
00245050 VERSION=INTEL NT 20:02:48 FEB 10, 2003 CP= 2.093

PAD RESPONSE AT END OF 0.50 DAYS - NO PAD/ROCK CONSTRAINT

NODE	S1	S2	S3	SINT	SEQV
1485	2.3224	-65.038	-67.827	70.149	68.797
1481	2.2139	-63.832	-67.763	69.977	68.097

NODE SORT REMOVED

==========

```
=============================================================
=============================================================
=====================  LCASE 3  ============================

LOAD CASE   3 IS LOAD STEP     3  SUBSTEP     1  COMPLEX=  0
FILE= PadNC-Th.103
PAD RESPONSE AT END OF 0.625 DAYS - NO PAD/ROCK CONSTRAINT


COPY LOAD CASE   3 FROM FILE TO DATABASE

ESEL  FOR LABEL= TYPE  FROM       2 TO       2 BY       1

    1870  ELEMENTS (OF     8812  DEFINED) SELECTED BY  ESEL  COMMAND.

SELECT      ALL NODES HAVING ANY ELEMENT IN ELEMENT SET.

    2376 NODES (OF    10212  DEFINED) SELECTED FROM
    1870 SELECTED ELEMENTS BY NELE COMMAND.

=============================================================
============    MAXIMUM VALUES OF SX    =====================


SORT ON ITEM=S     COMPONENT=X     ORDER= 0  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:49  FEB 10, 2003 CP=      2.674

PAD RESPONSE AT END OF 0.625 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    SX          SY          SZ          SXY         SYZ         SXZ
      1   299.76    -0.30122      301.75    -0.30600E-01-0.49331E-02-0.36448E-02
    672   299.76    -0.29726      301.75    -0.30989E-01-0.22666E-02-0.84480E-02

NODE SORT REMOVED

=============================================================
============    MINIMUM VALUES OF SX    =====================


SORT ON ITEM=S     COMPONENT=X     ORDER= 1  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
```

```
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:49  FEB 10, 2003 CP=      2.694

PAD RESPONSE AT END OF 0.625 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    SX          SY          SZ          SXY         SYZ         SXZ
   2805  -82.092     -29.545     -62.260     -1.4638     -7.7521    -0.80283
   2108  -80.850     -1.2557     -73.077     -2.9251     -2.8302     -1.4399

NODE SORT REMOVED

=================================================================
============    MAXIMUM VALUES OF SZ    =======================


SORT ON ITEM=S     COMPONENT=Z     ORDER= 0  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:49  FEB 10, 2003 CP=      2.714

PAD RESPONSE AT END OF 0.625 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    SX          SY          SZ          SXY         SYZ         SXZ
      1   299.76    -0.30122      301.75    -0.30600E-01-0.49331E-02-0.36448E-02
    672   299.76    -0.29726      301.75    -0.30989E-01-0.22666E-02-0.84480E-02

NODE SORT REMOVED

=================================================================
============    MINIMUM VALUES OF SZ    =======================


SORT ON ITEM=S     COMPONENT=Z     ORDER= 1  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:49  FEB 10, 2003 CP=      2.724

PAD RESPONSE AT END OF 0.625 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    SX          SY          SZ          SXY         SYZ         SXZ
   1460  -71.615      3.9185     -82.074    -0.49898     -4.5789    -0.28288
   1461  -71.862      3.8995     -82.053    -0.87152     -4.4690    -0.54443
```

```
==============================================================
============    MAXIMUM VALUES OF S1    =====================

SORT ON ITEM=S     COMPONENT=1     ORDER= 0  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:49  FEB 10, 2003 CP=      2.744

PAD RESPONSE AT END OF 0.625 DAYS - NO PAD/ROCK CONSTRAINT

   NODE    S1          S2          S3          SINT        SEQV
      1   301.75      299.76    -0.30123      302.05      301.06
    672   301.75      299.76    -0.29726      302.05      301.06

NODE SORT REMOVED

==============================================================
============    MINIMUM VALUES OF S3    =====================

SORT ON ITEM=S     COMPONENT=3     ORDER= 1  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:49  FEB 10, 2003 CP=      2.764

PAD RESPONSE AT END OF 0.625 DAYS - NO PAD/ROCK CONSTRAINT

   NODE    S1          S2          S3          SINT        SEQV
   1485   5.0822     -79.403     -82.404      87.486      86.025
   1460   4.1647     -71.609     -82.326      86.490      81.661

NODE SORT REMOVED

==============================================================
==============================================================
==============================================================
=====================  LCASE 4  ==============================

LOAD CASE   4 IS LOAD STEP     4  SUBSTEP     1  COMPLEX=  0
```

```
FILE= PadNC-Th.104
PAD RESPONSE AT END OF 1.125 DAYS - NO PAD/ROCK CONSTRAINT


COPY LOAD CASE   4 FROM FILE TO DATABASE

ESEL  FOR LABEL= TYPE  FROM       2 TO       2 BY       1

    1870  ELEMENTS (OF     8812  DEFINED) SELECTED BY  ESEL  COMMAND.

SELECT      ALL NODES HAVING ANY ELEMENT IN ELEMENT SET.

    2376 NODES (OF    10212  DEFINED) SELECTED FROM
    1870 SELECTED ELEMENTS BY NELE COMMAND.

=============================================================
============    MAXIMUM VALUES OF SX    =====================


SORT ON ITEM=S     COMPONENT=X     ORDER= 0  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:49  FEB 10, 2003 CP=      3.355

PAD RESPONSE AT END OF 1.125 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    SX          SY          SZ          SXY         SYZ         SXZ
      1   353.61    -0.60843     359.69    -0.41014    -0.31084    -0.23498
    672   352.93    -0.50990     358.32    -0.32125    -0.26291    -0.42168

NODE SORT REMOVED

=============================================================
============    MINIMUM VALUES OF SX    =====================


SORT ON ITEM=S     COMPONENT=X     ORDER= 1  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:49  FEB 10, 2003 CP=      3.375

PAD RESPONSE AT END OF 1.125 DAYS - NO PAD/ROCK CONSTRAINT
```

NODE	SX	SY	SZ	SXY	SYZ	SXZ
2806	-189.76	-63.241	-135.53	-1.7794	-1.5128	0.98109E-02
2120	-187.80	-0.31959	-184.55	-3.8514	-2.8126	-0.48908E-01

NODE SORT REMOVED

==========
========== MAXIMUM VALUES OF SZ ==========

SORT ON ITEM=S COMPONENT=Z ORDER= 0 KABS= 0 NMAX= 2

SORT COMPLETED FOR 2 VALUES.

PRINT S NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM RELEASE 6.1 *****
ANSYS/Mechanical U
00245050 VERSION=INTEL NT 20:02:49 FEB 10, 2003 CP= 3.385

PAD RESPONSE AT END OF 1.125 DAYS - NO PAD/ROCK CONSTRAINT

NODE	SX	SY	SZ	SXY	SYZ	SXZ
1	353.61	-0.60843	359.69	-0.41014	-0.31084	-0.23498
3	350.40	-0.49481	358.49	-0.47728	-0.19144	-0.39094

NODE SORT REMOVED

==========
========== MINIMUM VALUES OF SZ ==========

SORT ON ITEM=S COMPONENT=Z ORDER= 1 KABS= 0 NMAX= 2

SORT COMPLETED FOR 2 VALUES.

PRINT S NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM RELEASE 6.1 *****
ANSYS/Mechanical U
00245050 VERSION=INTEL NT 20:02:49 FEB 10, 2003 CP= 3.405

PAD RESPONSE AT END OF 1.125 DAYS - NO PAD/ROCK CONSTRAINT

NODE	SX	SY	SZ	SXY	SYZ	SXZ
1459	-183.40	8.8250	-189.58	-0.53611	-4.5059	-0.23094E-01
1462	-183.42	8.8236	-189.57	-0.94638	-4.3920	-0.44428E-01

==========
========== MAXIMUM VALUES OF S1 ==========

```
SORT ON ITEM=S     COMPONENT=1     ORDER= 0  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:49  FEB 10, 2003 CP=      3.415

PAD RESPONSE AT END OF 1.125 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    S1          S2          S3          SINT        SEQV
      1   359.70      353.60    -0.60917      360.31      357.30
      3   358.51      350.39    -0.49556      359.01      355.01

NODE SORT REMOVED

=============================================================
============    MINIMUM VALUES OF S3    =====================


SORT ON ITEM=S     COMPONENT=3     ORDER= 1  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:49  FEB 10, 2003 CP=      3.435

PAD RESPONSE AT END OF 1.125 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    S1          S2          S3          SINT        SEQV
   2806  -63.184     -135.56     -189.78      126.60      110.01
   1459   8.9288     -183.40     -189.68      198.61      195.54

NODE SORT REMOVED

=============================================================
=============================================================
=============================================================
=====================  LCASE 5  ============================


LOAD CASE   5 IS LOAD STEP     5  SUBSTEP     1  COMPLEX=  0
FILE= PadNC-Th.105
PAD RESPONSE AT END OF 1.625 DAYS - NO PAD/ROCK CONSTRAINT


COPY LOAD CASE   5 FROM FILE TO DATABASE
```

```
ESEL  FOR LABEL= TYPE  FROM       2 TO       2 BY       1

    1870  ELEMENTS (OF     8812  DEFINED) SELECTED BY  ESEL  COMMAND.

SELECT      ALL NODES HAVING ANY ELEMENT IN ELEMENT SET.

    2376 NODES (OF    10212  DEFINED) SELECTED FROM
    1870 SELECTED ELEMENTS BY NELE COMMAND.

===============================================================
============    MAXIMUM VALUES OF SX    =======================


SORT ON ITEM=S     COMPONENT=X     ORDER= 0  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:50  FEB 10, 2003 CP=      4.026

PAD RESPONSE AT END OF 1.625 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    SX          SY          SZ          SXY         SYZ         SXZ
   2272   398.88     -11.335      404.90     -0.91894    -0.96606     5.4365
   2372   398.72     -3.4558      389.53      -1.0083     -1.1788     6.3827

NODE SORT REMOVED

===============================================================
============    MINIMUM VALUES OF SX    =======================


SORT ON ITEM=S     COMPONENT=X     ORDER= 1  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:50  FEB 10, 2003 CP=      4.036

PAD RESPONSE AT END OF 1.625 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    SX          SY          SZ          SXY         SYZ         SXZ
   2806  -260.59     -78.386     -191.61     -1.7137     -3.5846     0.17264E-01
   2120  -258.42     0.10735E-01 -254.67     -3.8520     -3.1475    -0.54963E-01

NODE SORT REMOVED
```

```
==============================================================
============    MAXIMUM VALUES OF SZ    =====================


SORT ON ITEM=S     COMPONENT=Z     ORDER= 0  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:50  FEB 10, 2003 CP=      4.056

PAD RESPONSE AT END OF 1.625 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    SX          SY          SZ          SXY         SYZ         SXZ
   2269   359.81     -11.708      406.00    -0.69325E-01 -1.2247      1.1593
   2278   360.94     -11.620      405.93    -0.12123     -1.2066      2.3232

NODE SORT REMOVED

==============================================================
============    MINIMUM VALUES OF SZ    =====================


SORT ON ITEM=S     COMPONENT=Z     ORDER= 1  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:50  FEB 10, 2003 CP=      4.076

PAD RESPONSE AT END OF 1.625 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    SX          SY          SZ          SXY         SYZ         SXZ
   1459  -253.25      12.212     -261.46    -0.54561     -4.1101    -0.23474E-01
   1462  -253.26      12.219     -261.44    -0.96296     -3.9958    -0.45191E-01


==============================================================
============    MAXIMUM VALUES OF S1    =====================


SORT ON ITEM=S     COMPONENT=1     ORDER= 0  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1
```

```
***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1      *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:50  FEB 10, 2003 CP=      4.076

PAD RESPONSE AT END OF 1.625 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    S1          S2          S3          SINT        SEQV
   2272   408.11      395.68     -11.340      419.45      413.37
   2276   406.19      367.84     -11.702      417.89      400.10

NODE SORT REMOVED

=============================================================
============    MINIMUM VALUES OF S3    =====================


SORT ON ITEM=S     COMPONENT=3     ORDER= 1  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1      *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:50  FEB 10, 2003 CP=      4.096

PAD RESPONSE AT END OF 1.625 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    S1          S2          S3          SINT        SEQV
   1459   12.275     -253.25     -261.52      273.79      269.75
   1462   12.281     -253.26     -261.50      273.78      269.76

NODE SORT REMOVED

=============================================================
=============================================================
=============================================================
=====================  LCASE 6  ============================


LOAD CASE   6 IS LOAD STEP     6  SUBSTEP     1  COMPLEX=  0
FILE= PadNC-Th.106
PAD RESPONSE AT END OF 2.125 DAYS - NO PAD/ROCK CONSTRAINT


COPY LOAD CASE   6 FROM FILE TO DATABASE

ESEL  FOR LABEL= TYPE  FROM       2 TO       2 BY       1

    1870  ELEMENTS (OF     8812  DEFINED) SELECTED BY  ESEL  COMMAND.

SELECT      ALL NODES HAVING ANY ELEMENT IN ELEMENT SET.
```

```
    2376 NODES (OF    10212  DEFINED) SELECTED FROM
    1870 SELECTED ELEMENTS BY NELE COMMAND.

 ==============================================================
 ============    MAXIMUM VALUES OF SX    =====================


 SORT ON ITEM=S     COMPONENT=X     ORDER= 0  KABS= 0  NMAX=       2

 SORT COMPLETED FOR       2 VALUES.

 PRINT S    NODAL SOLUTION PER NODE
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
 ANSYS/Mechanical U
 00245050          VERSION=INTEL NT      20:02:51  FEB 10, 2003 CP=      4.677

 PAD RESPONSE AT END OF 2.125 DAYS - NO PAD/ROCK CONSTRAINT


    NODE    SX          SY          SZ          SXY         SYZ         SXZ
    2272   403.47     -11.610      409.62     -1.0490     -1.0118      5.7236
    2372   403.36     -3.1764      393.90     -1.1438     -1.4198      6.7425

 NODE SORT REMOVED

 ==============================================================
 ============    MINIMUM VALUES OF SX    =====================


 SORT ON ITEM=S     COMPONENT=X     ORDER= 1  KABS= 0  NMAX=       2

 SORT COMPLETED FOR       2 VALUES.

 PRINT S    NODAL SOLUTION PER NODE
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
 ANSYS/Mechanical U
 00245050          VERSION=INTEL NT      20:02:51  FEB 10, 2003 CP=      4.687

 PAD RESPONSE AT END OF 2.125 DAYS - NO PAD/ROCK CONSTRAINT


    NODE    SX          SY          SZ          SXY         SYZ         SXZ
    2806  -283.75     -80.992     -211.73     -1.6811     -5.4488     0.17635E-01
    2120  -281.67    -0.10820     -277.97     -3.8867     -3.4825    -0.60352E-01

 NODE SORT REMOVED

 ==============================================================
 ============    MAXIMUM VALUES OF SZ    =====================


 SORT ON ITEM=S     COMPONENT=Z     ORDER= 0  KABS= 0  NMAX=       2
```

```
SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:51  FEB 10, 2003 CP=      4.707

PAD RESPONSE AT END OF 2.125 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    SX          SY          SZ          SXY         SYZ         SXZ
   2269   362.89     -12.071      410.85    -0.67207E-01 -1.2718      1.2012
   2278   364.05     -11.979      410.78    -0.12373     -1.2536      2.4079

NODE SORT REMOVED

=================================================================
============    MINIMUM VALUES OF SZ    =======================


SORT ON ITEM=S     COMPONENT=Z     ORDER= 1  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:51  FEB 10, 2003 CP=      4.727

PAD RESPONSE AT END OF 2.125 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    SX          SY          SZ          SXY         SYZ         SXZ
   1459  -276.51      13.008     -285.33    -0.55512     -3.7740    -0.23697E-01
   1462  -276.52      13.020     -285.31    -0.97942     -3.6593    -0.45631E-01


=================================================================
============    MAXIMUM VALUES OF S1    =======================

SORT ON ITEM=S     COMPONENT=1     ORDER= 0  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:51  FEB 10, 2003 CP=      4.737

PAD RESPONSE AT END OF 2.125 DAYS - NO PAD/ROCK CONSTRAINT
```

NODE	S1	S2	S3	SINT	SEQV
2272	413.05	400.05	-11.615	424.67	418.32
2276	411.02	371.10	-12.061	423.08	404.60

NODE SORT REMOVED

```
==============================================================
============    MINIMUM VALUES OF S3    =====================

SORT ON ITEM=S     COMPONENT=3     ORDER= 1  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:51  FEB 10, 2003 CP=      4.757

PAD RESPONSE AT END OF 2.125 DAYS - NO PAD/ROCK CONSTRAINT
```

NODE	S1	S2	S3	SINT	SEQV
1459	13.057	-276.51	-285.38	298.43	294.10
1462	13.068	-276.52	-285.36	298.43	294.11

NODE SORT REMOVED

```
==============================================================
==============================================================
==============================================================
=====================  LCASE 7  ==============================

LOAD CASE   7 IS LOAD STEP     7  SUBSTEP     1  COMPLEX=  0
FILE= PadNC-Th.107
PAD RESPONSE AT END OF 2.375 DAYS - NO PAD/ROCK CONSTRAINT

COPY LOAD CASE   7 FROM FILE TO DATABASE

ESEL  FOR LABEL= TYPE  FROM       2 TO       2 BY       1

    1870  ELEMENTS (OF     8812  DEFINED) SELECTED BY  ESEL  COMMAND.

SELECT      ALL NODES HAVING ANY ELEMENT IN ELEMENT SET.

    2376 NODES (OF    10212  DEFINED) SELECTED FROM
    1870 SELECTED ELEMENTS BY NELE COMMAND.

==============================================================
============    MAXIMUM VALUES OF SX    =====================
```

```
SORT ON ITEM=S     COMPONENT=X     ORDER= 0  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:51  FEB 10, 2003 CP=      5.348

PAD RESPONSE AT END OF 2.375 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    SX          SY          SZ          SXY         SYZ         SXZ
   2272   395.37     -11.579      401.43     -1.0775     -1.0327      6.0139
   2372   395.26     -3.1176      385.54     -1.1730     -1.4790      7.1015

NODE SORT REMOVED

==============================================================
============    MINIMUM VALUES OF SX    =====================


SORT ON ITEM=S     COMPONENT=X     ORDER= 1  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:51  FEB 10, 2003 CP=      5.358

PAD RESPONSE AT END OF 2.375 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    SX          SY          SZ          SXY         SYZ         SXZ
   2806  -283.45     -79.648     -212.47     -1.7071     -6.1725     0.16274E-01
   2120  -281.48    -0.23265     -277.89     -3.9865     -3.8116    -0.65530E-01

NODE SORT REMOVED

==============================================================
============    MAXIMUM VALUES OF SZ    =====================


SORT ON ITEM=S     COMPONENT=Z     ORDER= 0  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
```

```
00245050          VERSION=INTEL NT      20:02:51  FEB 10, 2003 CP=      5.378

PAD RESPONSE AT END OF 2.375 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    SX          SY          SZ          SXY         SYZ         SXZ
   2269   353.94     -12.068      402.91    -0.69059E-01 -1.2941      1.2434
   2278   355.13     -11.976      402.83    -0.12581     -1.2759      2.4932

NODE SORT REMOVED

=================================================================
============    MINIMUM VALUES OF SZ    =======================


SORT ON ITEM=S     COMPONENT=Z     ORDER= 1  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:51  FEB 10, 2003 CP=      5.398

PAD RESPONSE AT END OF 2.375 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    SX          SY          SZ          SXY         SYZ         SXZ
   1459  -276.45      12.822     -285.24    -0.56491     -3.7470    -0.23887E-01
   1462  -276.46      12.835     -285.22    -0.99619     -3.6319    -0.46000E-01


=================================================================
============    MAXIMUM VALUES OF S1    =======================


SORT ON ITEM=S     COMPONENT=1     ORDER= 0  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:51  FEB 10, 2003 CP=      5.398

PAD RESPONSE AT END OF 2.375 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    S1          S2          S3          SINT        SEQV
   2272   405.14      391.67     -11.584      416.73      410.16
   2276   403.07      362.31     -12.058      415.13      396.32

NODE SORT REMOVED
```

```
==============================================================
============    MINIMUM VALUES OF S3    =====================

SORT ON ITEM=S     COMPONENT=3     ORDER= 1  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:51  FEB 10, 2003 CP=      5.418

PAD RESPONSE AT END OF 2.375 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    S1          S2          S3          SINT        SEQV
   1459   12.870     -276.45     -285.29      298.16      293.84
   1462   12.883     -276.47     -285.27      298.15      293.85

NODE SORT REMOVED

==============================================================
==============================================================
==============================================================
=====================  LCASE 8  ============================


LOAD CASE   8 IS LOAD STEP     8  SUBSTEP     1  COMPLEX=  0
FILE= PadNC-Th.108
PAD RESPONSE AT END OF 3.125 DAYS - NO PAD/ROCK CONSTRAINT


COPY LOAD CASE   8 FROM FILE TO DATABASE

ESEL  FOR LABEL= TYPE  FROM       2 TO       2 BY       1

    1870  ELEMENTS (OF     8812  DEFINED) SELECTED BY  ESEL  COMMAND.

SELECT      ALL NODES HAVING ANY ELEMENT IN ELEMENT SET.

    2376 NODES (OF    10212  DEFINED) SELECTED FROM
    1870 SELECTED ELEMENTS BY NELE COMMAND.

==============================================================
============    MAXIMUM VALUES OF SX    =====================


SORT ON ITEM=S     COMPONENT=X     ORDER= 0  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1
```

```
***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:52  FEB 10, 2003 CP=      6.009

PAD RESPONSE AT END OF 3.125 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    SX          SY          SZ          SXY         SYZ         SXZ
   2272   342.19     -11.076      347.67     -1.0610     -1.0171      6.3125
   2372   342.11     -3.1392      332.46     -1.1518     -1.4763      7.4643

NODE SORT REMOVED

=============================================================
============    MINIMUM VALUES OF SX    =====================


SORT ON ITEM=S     COMPONENT=X     ORDER= 1  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:52  FEB 10, 2003 CP=      6.029

PAD RESPONSE AT END OF 3.125 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    SX          SY          SZ          SXY         SYZ         SXZ
   2806  -255.91     -69.317     -193.96     -1.7156     -7.4772     0.94392E-02
   2120  -254.35    -0.77977     -251.34     -4.0655     -4.1444    -0.70234E-01

NODE SORT REMOVED

=============================================================
============    MAXIMUM VALUES OF SZ    =====================


SORT ON ITEM=S     COMPONENT=Z     ORDER= 0  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:52  FEB 10, 2003 CP=      6.039

PAD RESPONSE AT END OF 3.125 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    SX          SY          SZ          SXY         SYZ         SXZ
```

```
   2269   300.75     -11.614      349.54    -0.72289E-01 -1.2803      1.2856
   2278   301.97     -11.522      349.45    -0.12781     -1.2621      2.5786

 NODE SORT REMOVED

 ==============================================================
 ============    MINIMUM VALUES OF SZ    =====================


 SORT ON ITEM=S     COMPONENT=Z     ORDER= 1  KABS= 0  NMAX=       2

 SORT COMPLETED FOR       2 VALUES.

 PRINT S    NODAL SOLUTION PER NODE
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
 ANSYS/Mechanical U
 00245050          VERSION=INTEL NT      20:02:52  FEB 10, 2003 CP=      6.059

 PAD RESPONSE AT END OF 3.125 DAYS - NO PAD/ROCK CONSTRAINT


    NODE    SX          SY          SZ          SXY         SYZ         SXZ
    1459  -250.10      10.891     -258.01    -0.57442     -3.5651    -0.23954E-01
    1462  -250.11      10.906     -257.99     -1.0128     -3.4495    -0.46122E-01


 ==============================================================
 ============    MAXIMUM VALUES OF S1    =====================


 SORT ON ITEM=S     COMPONENT=1     ORDER= 0  KABS= 0  NMAX=       2

 SORT COMPLETED FOR       2 VALUES.

 PRINT S    NODAL SOLUTION PER NODE
1

 ***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
 ANSYS/Mechanical U
 00245050          VERSION=INTEL NT      20:02:52  FEB 10, 2003 CP=      6.069

 PAD RESPONSE AT END OF 3.125 DAYS - NO PAD/ROCK CONSTRAINT


    NODE    S1          S2          S3          SINT        SEQV
    2272   351.82      338.05     -11.082      362.90      356.22
    2276   349.71      309.24     -11.605      361.32      342.88

 NODE SORT REMOVED

 ==============================================================
 ============    MINIMUM VALUES OF S3    =====================


 SORT ON ITEM=S     COMPONENT=3     ORDER= 1  KABS= 0  NMAX=       2
```

```
SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:52  FEB 10, 2003 CP=      6.089

PAD RESPONSE AT END OF 3.125 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    S1          S2          S3          SINT        SEQV
   1721  -32.225     -250.67     -258.72      226.49      222.58
   1459   10.940     -250.10     -258.05      268.99      265.11

NODE SORT REMOVED

=============================================================
=============================================================
=============================================================
======================  LCASE 9  ============================


LOAD CASE   9 IS LOAD STEP     9  SUBSTEP     1  COMPLEX=  0
FILE= PadNC-Th.109
PAD RESPONSE AT END OF 4.125 DAYS - NO PAD/ROCK CONSTRAINT


COPY LOAD CASE   9 FROM FILE TO DATABASE

ESEL  FOR LABEL= TYPE  FROM       2 TO       2 BY       1

    1870  ELEMENTS (OF     8812  DEFINED) SELECTED BY  ESEL  COMMAND.

SELECT      ALL NODES HAVING ANY ELEMENT IN ELEMENT SET.

    2376 NODES (OF    10212  DEFINED) SELECTED FROM
    1870 SELECTED ELEMENTS BY NELE COMMAND.

=============================================================
============    MAXIMUM VALUES OF SX    =====================


SORT ON ITEM=S     COMPONENT=X     ORDER= 0  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:53  FEB 10, 2003 CP=      6.670

PAD RESPONSE AT END OF 4.125 DAYS - NO PAD/ROCK CONSTRAINT
```

NODE	SX	SY	SZ	SXY	SYZ	SXZ
2372	235.81	-3.4244	226.65	-1.0100	-1.3203	7.8295
2272	235.81	-9.9488	239.91	-0.93263	-0.91506	6.6227

NODE SORT REMOVED

==========
========== MINIMUM VALUES OF SX ==========

SORT ON ITEM=S COMPONENT=X ORDER= 1 KABS= 0 NMAX= 2

SORT COMPLETED FOR 2 VALUES.

PRINT S NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM RELEASE 6.1 *****
ANSYS/Mechanical U
00245050 VERSION=INTEL NT 20:02:53 FEB 10, 2003 CP= 6.690

PAD RESPONSE AT END OF 4.125 DAYS - NO PAD/ROCK CONSTRAINT

NODE	SX	SY	SZ	SXY	SYZ	SXZ
72	-211.18	-49.944	-217.91	-10.719	-8.1540	-0.54385
77	-211.00	-26.764	-216.44	-13.892	-5.4226	-0.56553

NODE SORT REMOVED

==========
========== MAXIMUM VALUES OF SZ ==========

SORT ON ITEM=S COMPONENT=Z ORDER= 0 KABS= 0 NMAX= 2

SORT COMPLETED FOR 2 VALUES.

PRINT S NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM RELEASE 6.1 *****
ANSYS/Mechanical U
00245050 VERSION=INTEL NT 20:02:53 FEB 10, 2003 CP= 6.710

PAD RESPONSE AT END OF 4.125 DAYS - NO PAD/ROCK CONSTRAINT

NODE	SX	SY	SZ	SXY	SYZ	SXZ
27	229.27	-4.4456	247.54	-3.4903	-2.6630	-0.65711
30	223.53	-2.9182	245.09	-5.1647	-2.0503	-1.0563

NODE SORT REMOVED

==========

```
============    MINIMUM VALUES OF SZ    =====================

SORT ON ITEM=S     COMPONENT=Z     ORDER= 1  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:53  FEB 10, 2003 CP=      6.720

PAD RESPONSE AT END OF 4.125 DAYS - NO PAD/ROCK CONSTRAINT

   NODE    SX          SY          SZ          SXY         SYZ         SXZ
   1721  -210.24     -34.037     -218.37     -8.4071     -11.644    -0.70701
     72  -211.18     -49.944     -217.91     -10.719     -8.1540    -0.54385

==============================================================
============    MAXIMUM VALUES OF S1    =====================

SORT ON ITEM=S     COMPONENT=1     ORDER= 0  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:53  FEB 10, 2003 CP=      6.740

PAD RESPONSE AT END OF 4.125 DAYS - NO PAD/ROCK CONSTRAINT

   NODE    S1          S2          S3          SINT        SEQV
     27   247.59      229.30     -4.5260      252.11      243.48
     30   245.16      223.61     -3.0532      248.21      238.17

NODE SORT REMOVED

==============================================================
============    MINIMUM VALUES OF S3    =====================

SORT ON ITEM=S     COMPONENT=3     ORDER= 1  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1
```

```
***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1      *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:53  FEB 10, 2003 CP=      6.750

PAD RESPONSE AT END OF 4.125 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    S1          S2          S3          SINT        SEQV
   1721  -32.912     -210.46     -219.28      186.36      182.12
     72  -48.846     -211.72     -218.48      169.63      166.35

NODE SORT REMOVED

=============================================================
=============================================================
=============================================================
======================  LCASE 10  ============================


LOAD CASE  10 IS LOAD STEP    10  SUBSTEP     1  COMPLEX=  0
FILE= PadNC-Th.110
PAD RESPONSE AT END OF 6.125 DAYS - NO PAD/ROCK CONSTRAINT


COPY LOAD CASE  10 FROM FILE TO DATABASE

ESEL  FOR LABEL= TYPE  FROM       2 TO       2 BY       1

    1870  ELEMENTS (OF     8812  DEFINED) SELECTED BY  ESEL  COMMAND.

SELECT      ALL NODES HAVING ANY ELEMENT IN ELEMENT SET.

    2376 NODES (OF    10212  DEFINED) SELECTED FROM
    1870 SELECTED ELEMENTS BY NELE COMMAND.

=============================================================
============    MAXIMUM VALUES OF SX    =====================


SORT ON ITEM=S     COMPONENT=X     ORDER= 0  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1      *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:54  FEB 10, 2003 CP=      7.351

PAD RESPONSE AT END OF 6.125 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    SX          SY          SZ          SXY         SYZ         SXZ
     27   138.48     -4.4393      152.12     -3.4992     -2.6595    -0.66283
   1036   136.91     -3.5174      148.78     -3.0012     -3.9136     -1.1360
```

```
NODE SORT REMOVED

==============================================================
============    MINIMUM VALUES OF SX    =====================


SORT ON ITEM=S     COMPONENT=X     ORDER= 1  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:54  FEB 10, 2003 CP=      7.361

PAD RESPONSE AT END OF 6.125 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    SX          SY          SZ          SXY         SYZ         SXZ
    626  -154.35     -1.2115     -145.31     -1.5803    -0.80210     -9.5406
     10  -154.14    -0.91699     -66.530     -1.8844    -0.17290E-01-0.72947

NODE SORT REMOVED

==============================================================
============    MAXIMUM VALUES OF SZ    =====================


SORT ON ITEM=S     COMPONENT=Z     ORDER= 0  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:54  FEB 10, 2003 CP=      7.371

PAD RESPONSE AT END OF 6.125 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    SX          SY          SZ          SXY         SYZ         SXZ
     27   138.48     -4.4393      152.12     -3.4992     -2.6595    -0.66283
     30   132.79     -2.9314      149.67     -5.1556     -2.0468     -1.0677

NODE SORT REMOVED

==============================================================
============    MINIMUM VALUES OF SZ    =====================


SORT ON ITEM=S     COMPONENT=Z     ORDER= 1  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.
```

```
PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:54  FEB 10, 2003 CP=      7.391

PAD RESPONSE AT END OF 6.125 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    SX          SY          SZ          SXY         SYZ         SXZ
    617  -109.75    -0.57142    -147.28    -0.25007     -1.2211     -1.5963
    619  -110.78    -0.46729    -147.11    -0.10968     -1.2071     -3.2170


=============================================================
============    MAXIMUM VALUES OF S1    =====================


SORT ON ITEM=S     COMPONENT=1     ORDER= 0  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:54  FEB 10, 2003 CP=      7.411

PAD RESPONSE AT END OF 6.125 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    S1          S2          S3          SINT        SEQV
     27   152.19      138.54     -4.5706      156.76      150.40
     30   149.75      132.93     -3.1554      152.91      145.23

NODE SORT REMOVED

=============================================================
============    MINIMUM VALUES OF S3    =====================


SORT ON ITEM=S     COMPONENT=3     ORDER= 1  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:54  FEB 10, 2003 CP=      7.431

PAD RESPONSE AT END OF 6.125 DAYS - NO PAD/ROCK CONSTRAINT
```

NODE	S1	S2	S3	SINT	SEQV
626	-1.1917	-139.28	-160.41	159.22	149.77
838	-0.99112	-128.57	-158.22	157.23	144.70

NODE SORT REMOVED

```
=============================================================
=============================================================
=============================================================
====================== LCASE 11 ============================

LOAD CASE  11 IS LOAD STEP    11  SUBSTEP     1  COMPLEX=  0
FILE= PadNC-Th.111
PAD RESPONSE AT END OF 7.875 DAYS - NO PAD/ROCK CONSTRAINT


COPY LOAD CASE  11 FROM FILE TO DATABASE

ESEL  FOR LABEL= TYPE  FROM       2 TO       2 BY       1

    1870  ELEMENTS (OF     8812  DEFINED) SELECTED BY  ESEL  COMMAND.

SELECT      ALL NODES HAVING ANY ELEMENT IN ELEMENT SET.

    2376 NODES (OF    10212  DEFINED) SELECTED FROM
    1870 SELECTED ELEMENTS BY NELE COMMAND.

=============================================================
============    MAXIMUM VALUES OF SX    =====================


SORT ON ITEM=S     COMPONENT=X     ORDER= 0  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:54  FEB 10, 2003 CP=      7.991

PAD RESPONSE AT END OF 7.875 DAYS - NO PAD/ROCK CONSTRAINT
```

NODE	SX	SY	SZ	SXY	SYZ	SXZ
16	124.36	-12.632	130.47	-5.9337	-4.3237	-0.52056
686	123.49	-9.6027	128.27	-5.1316	-6.8596	-0.85729

NODE SORT REMOVED

```
=============================================================
============    MINIMUM VALUES OF SX    =====================
```

```
SORT ON ITEM=S     COMPONENT=X     ORDER= 1  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:54  FEB 10, 2003 CP=      8.002

PAD RESPONSE AT END OF 7.875 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    SX          SY          SZ          SXY         SYZ         SXZ
    626  -219.67      1.0790     -218.16    -0.39386    -0.71404     -13.423
    838  -218.41     0.13874     -204.64    -0.50244    -0.58385     -13.497

NODE SORT REMOVED

=============================================================
============    MAXIMUM VALUES OF SZ    =====================


SORT ON ITEM=S     COMPONENT=Z     ORDER= 0  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:54  FEB 10, 2003 CP=      8.022

PAD RESPONSE AT END OF 7.875 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    SX          SY          SZ          SXY         SYZ         SXZ
     16   124.36     -12.632      130.47     -5.9337     -4.3237    -0.52056
     25   120.66     -8.1530      129.08     -9.0045     -3.3686    -0.79402

NODE SORT REMOVED

=============================================================
============    MINIMUM VALUES OF SZ    =====================


SORT ON ITEM=S     COMPONENT=Z     ORDER= 1  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
```

```
00245050          VERSION=INTEL NT      20:02:54  FEB 10, 2003 CP=      8.042

PAD RESPONSE AT END OF 7.875 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    SX          SY          SZ          SXY         SYZ         SXZ
    617  -182.90     0.52607     -219.88    -0.25679     -1.1713     -1.8290
    619  -183.90     0.62185     -219.73    -0.10547     -1.1572     -3.6986


=================================================================
============    MAXIMUM VALUES OF S1    =======================


SORT ON ITEM=S     COMPONENT=1     ORDER= 0  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:54  FEB 10, 2003 CP=      8.062

PAD RESPONSE AT END OF 7.875 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    S1          S2          S3          SINT        SEQV
     16   130.62      124.60     -13.020      143.64      140.73
     25   129.21      121.25     -8.8639      138.07      134.27

NODE SORT REMOVED

=================================================================
============    MINIMUM VALUES OF S3    =======================


SORT ON ITEM=S     COMPONENT=3     ORDER= 1  KABS= 0  NMAX=       2

SORT COMPLETED FOR       2 VALUES.

PRINT S    NODAL SOLUTION PER NODE
1

***** ANSYS - ENGINEERING ANALYSIS SYSTEM  RELEASE 6.1     *****
ANSYS/Mechanical U
00245050          VERSION=INTEL NT      20:02:54  FEB 10, 2003 CP=      8.082

PAD RESPONSE AT END OF 7.875 DAYS - NO PAD/ROCK CONSTRAINT


   NODE    S1          S2          S3          SINT        SEQV
    626   1.0819     -205.47     -232.36      233.45      221.23
    625  0.69327     -201.40     -229.56      230.26      217.55

NODE SORT REMOVED
```

```
=============================================================
=============================================================
=============================================================
=============================================================

    8812  ELEMENTS (OF     8812  DEFINED) SELECTED BY  EALL  COMMAND.

   10212  NODES (OF    10212  DEFINED) SELECTED BY NALL  COMMAND.

EXIT THE ANSYS POST1 DATABASE PROCESSOR

***** ROUTINE COMPLETED *****  CP =         8.082


EXIT ANSYS WITHOUT SAVING DATABASE

NUMBER OF WARNING MESSAGES ENCOUNTERED=          2
NUMBER OF ERROR   MESSAGES ENCOUNTERED=          0

*-----------------------------------------------------------------------*
|                          ANSYS RUN COMPLETED                          |
|-----------------------------------------------------------------------|
|           Release 6.1            UP20020321         INTEL NT          |
|-----------------------------------------------------------------------|
|  Maximum Scratch Memory Used       =     1035636 Words        3.951 MB |
|-----------------------------------------------------------------------|
|       CP Time      (sec) =          8.092       Time  =  20:02:55      |
|       Elapsed Time (sec) =         11.000       Date  =  02/10/2003    |
|                                                                       |
*-----------------------------------------------------------------------*
```

ENERCON SERVICES, INC.

Originator: S. C. Tumminelli
Date: March 3, 2003

Appendix LSPadNC-TH

This Appendix presents the ANSYS plots of the pad vertical displacements for the unconstrained thermal stress analysis for the individual load steps.

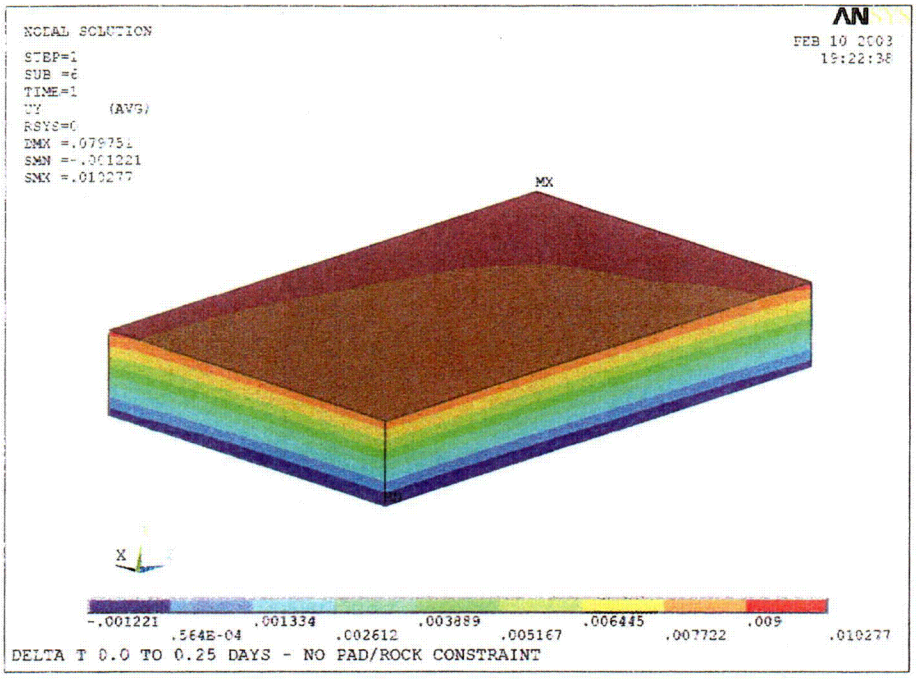

Figure LSNC-1 – Time 0.00 to 0.25 days

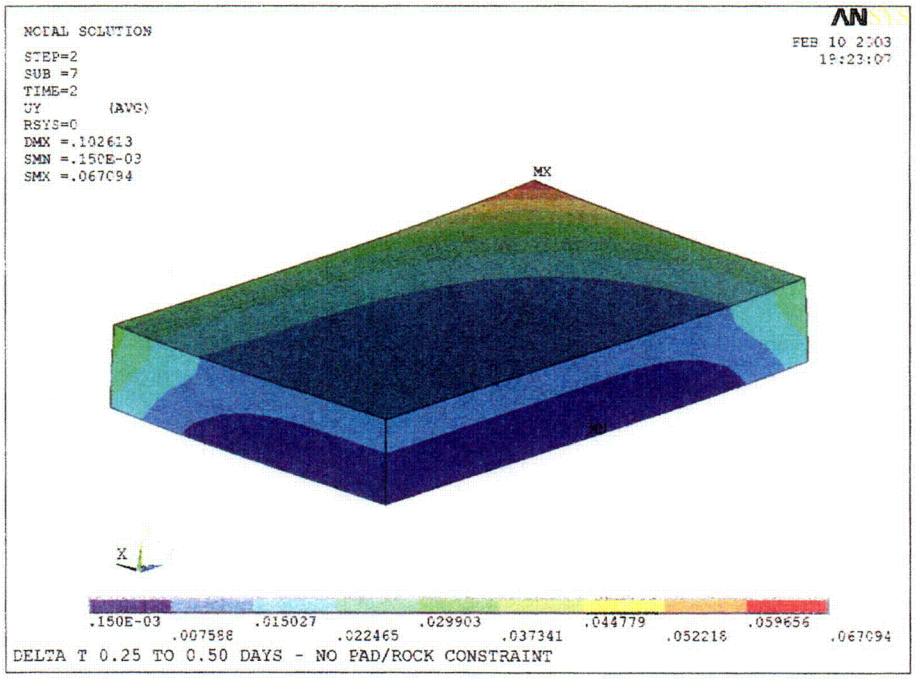

Figure LSNC-2 – Time 0.25 to 0.50 days

C01

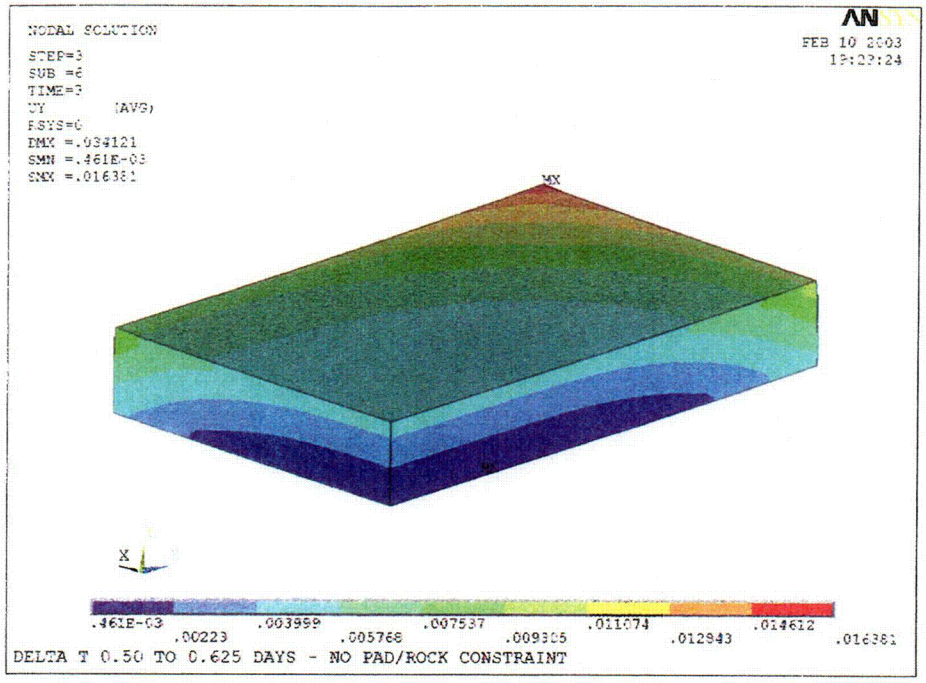

Figure LSNC-3 – Time 0.50 to 0.625 days

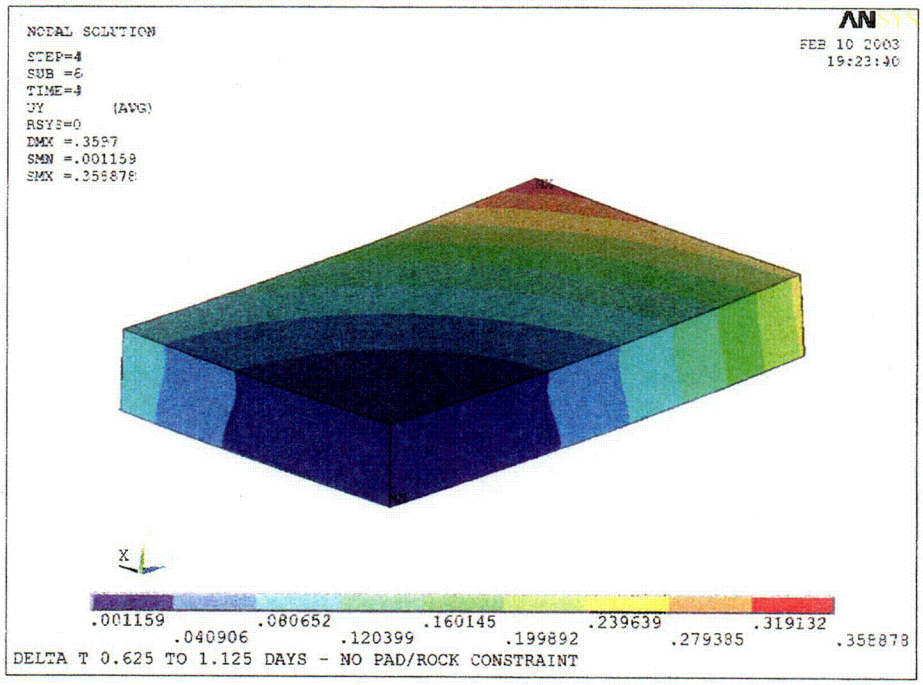

Figure LSNC-4 – Time 0.625 to 1.125 days

C02

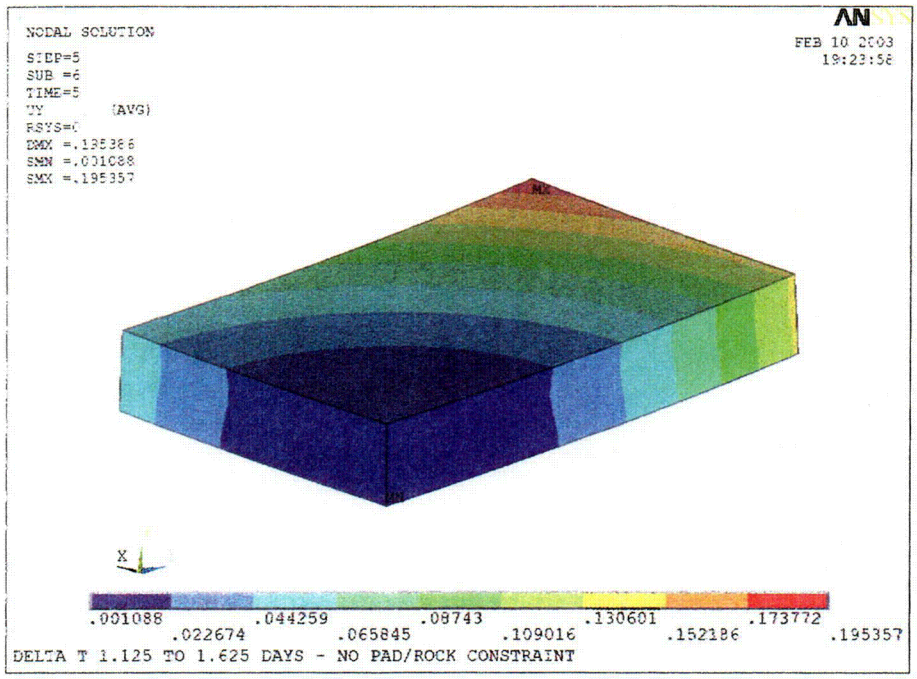

Figure LSNC-5 – Time 1.125 to 1.625 days

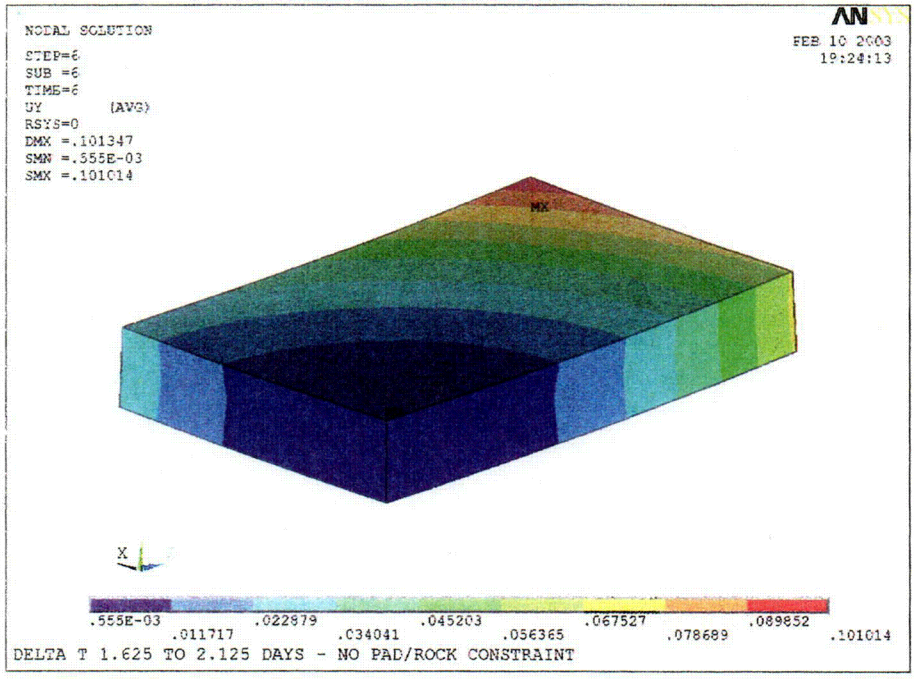

Figure LSNC-6 – Time 1.625 to 2.125 days

C03

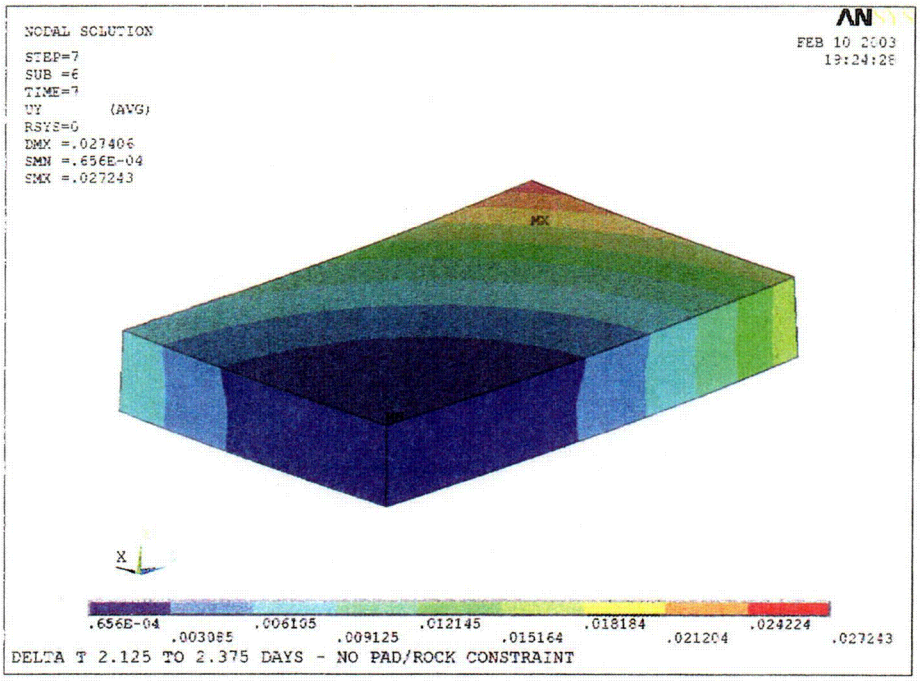

Figure LSNC-7 – Time 2.125 to 2.375 days

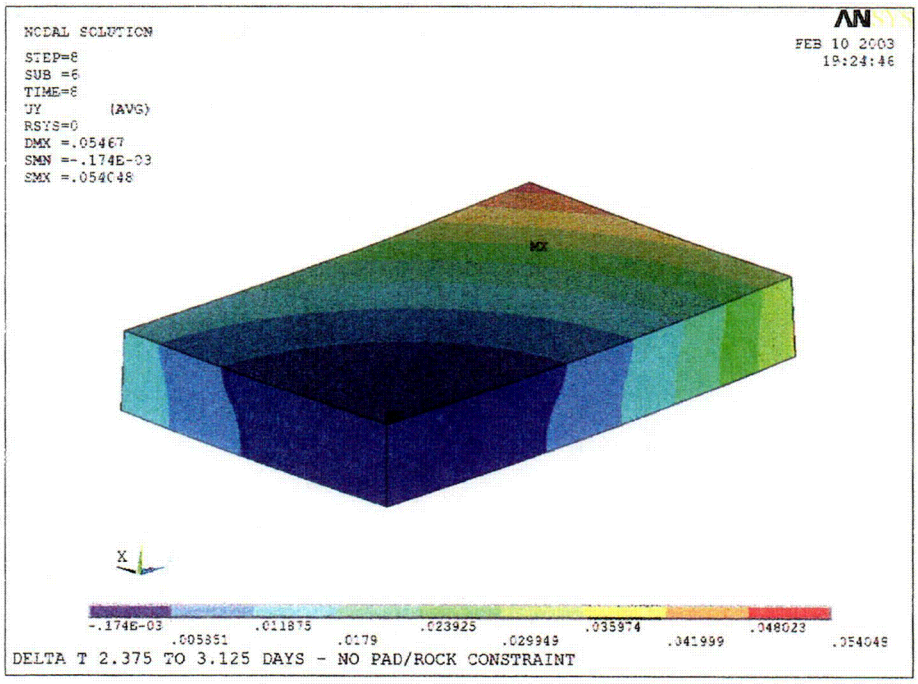

Figure LSNC-8 – Time 2.375 to 3.125 days

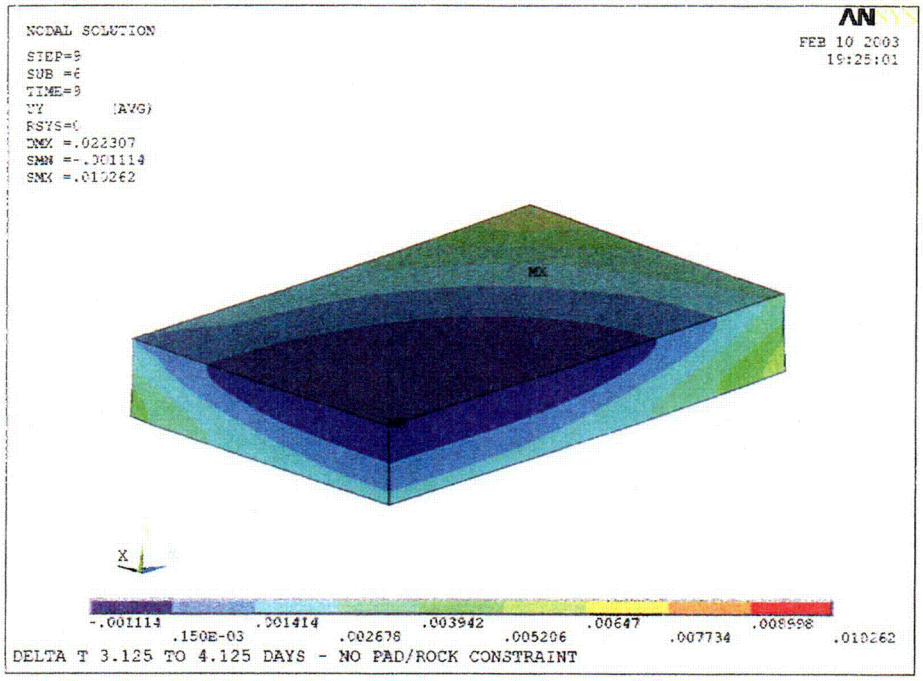

Figure LSNC-9 – Time 3.125 to 4.125 days

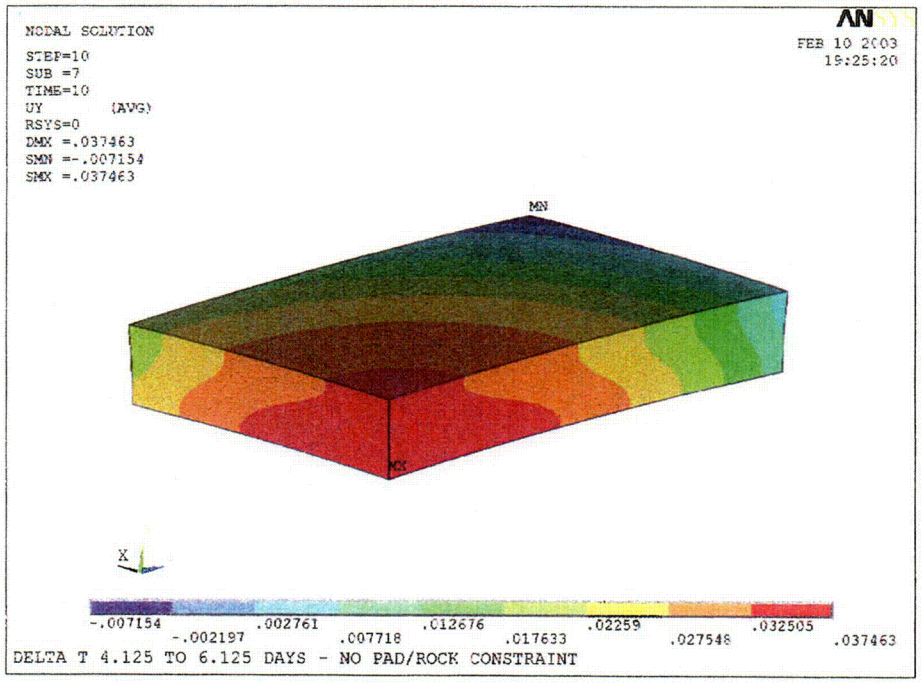

Figure LSNC-10 – Time 4.125 to 6.125 days

C05

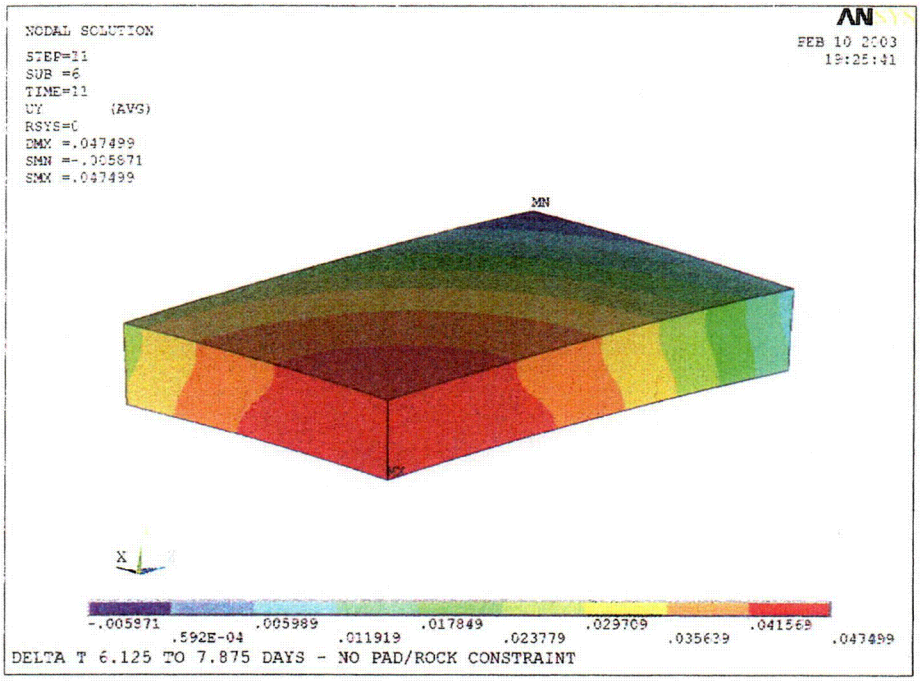

Figure LSNC-11 – Time 6.125 to 7.875 days

C06