

received 9/21/92

Log # : 92-145

P21 92 145  
Publicly Available

September 10, 1992  
G-1151-RSO-92-378

NRC Operations Center  
United States Nuclear Regulatory Commission  
Washington, D.C. 20555

**BOEING**

- Reference:
- a) Boeing Letter G-1551-RSO-365 dated August 31, 1992; R. S. Orr to the NRC Operations Center
  - b) NRC Letter Docket No. 99901227 dated August 12, 1992; L. J. Norrholm to R. S. Orr;  
Subject: Response to 10 CFR 21 Inquiry

Dear Sir or Madam:

In accordance with the reference correspondence and 10 CFR 21, Boeing is sending the NRC the attached error notice(s) received from our former software suppliers. Because of unknown current addresses, the following former customers were not notified:

Reactor Controls, Inc.

Echo Energy Consultants, Inc.

Nuclear Applications and Systems Analysis Company (Japan)

Error notices have been sent to our other former customers.

Very truly yours,

R. S. Orr  
Nuclear Administrator  
G-1151 M/S 7M-16  
(206) 865-6243

/sl

Attachment(s): ANSYS Class3 Error Reports 92-23, 92-24, 92-25,  
92-26 and 92-27

# ANSYS® CLASS3 ERROR REPORT

ERROR NO: 92-23

KEYWORDS:

STIF61

MXZ

IS

SEP 10 1992

DESCRIPTION OF ERROR:

CONTRACT

STIF61 (the axisymmetric conical shell element with non-axisymmetric loading) has the following errors for the MXZ output quantity:

1. The sign is incorrect.
2. If the element has tapered thickness ( $TK(I) \neq TK(J)$ ), the magnitude is incorrect at all locations except at node J.

FIRST INCORRECT VERSION(S):\*

CORRECTED IN:\*

Rev. 4.4

Rev. 4.4B

SUGGESTED USER ACTION FOR RUNNING ON UNCORRECTED VERSION:

MXZ may be computed from  $(SXZ(TOP) - SXZ(BOT)) * T/12.0$  where SXZ is the shear stress and T is the thickness at the point of interest.

COMMENTS:

AUTHOR/CORRECTOR:

Peter C. Kohnke  
Peter C. Kohnke

DATE: July 16, 1992

REVIEWED BY QA:

Mark C. Imgrund  
Mark C. Imgrund

DATE: July 16, 1992

APPROVAL:

John A. Swanson  
John A. Swanson

DATE: July 16, 1992

\*If a product name is not included in the "first incorrect version", the full ANSYS program is implied. For products not listed, this error does not apply. Unless noted otherwise, this error report also applies to all revisions after the first incorrect one and prior to the corrected revision. All revisions after "corrected in" are corrected. Manual corrections are included in on-line documentation as appropriate. Please see the reverse side of this sheet for additional information on ANSYS revision identifiers.

FORM SASI-QA25  
DEC 19, 1988

# ANSYS® CLASS3 ERROR REPORT

ERROR NO: 92-24

KEYWORDS: SURFACE STRESSES STIF2,42,45 STIF82,92,95 I S  
PRESTRESSED MODAL LARGE DEFLECTION

SEP 10 1992

## DESCRIPTION OF ERROR:

CONTRACTS

Surface stresses (KEYOPT(6)=1, 2 or 4) are incorrect in a prestressed modal restart (/FREQ) if the restart file (File3) was generated in a large deflection (KAY(6)=1) analysis. Surface stresses are only available with the spectrum option (SVTYPE, SV and FREQ commands). The elements with surface stress and large deflection capabilities include STIF2, 42, 45, 82, 92 and 95.

## FIRST INCORRECT VERSION(S):\*

Rev. 4.4

## CORRECTED IN:\*

Rev. 5.0

## SUGGESTED USER ACTION FOR RUNNING ON UNCORRECTED VERSION:

## COMMENTS:

All other results are correct.

AUTHOR/CORRECTOR: Gabriel J. DeSalvo DATE: July 16, 1992

REVIEWED BY QA: Mark C. Imgrund DATE: July 16, 1992

APPROVAL: John A. Swanson DATE: July 16, 1992

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# ANSYS® CLASS3 ERROR REPORT

SEP 10 1992

ERROR NO: 92-25

CONTRACTS

KEYWORDS: STIF18 STIF29 STIF60 PRESSURE FLEXIBILITY

### DESCRIPTION OF ERROR:

Results using STIF18 (the elastic curved pipe element) or STIF60 (the plastic curved pipe element) are incorrect if the pressure contribution to the flexibility factor is included (KEYOPT(3)=1) and:

- 1. the pressure (P, EP, PSF or PPRES commands) is changed between iterations;
- and 2. the element matrix is reused.

The element matrix is reused unless;

- 1. material properties for the element are a function of temperature (MP, MPDATA commands);
- or 2. the full Newton-Raphson option (KAY,9,1) has been used;
- or 3. KUSE,-1 has been used to force reformulation.

### FIRST INCORRECT VERSION(S):\*

### CORRECTED IN:\*

Rev. 2.0  
PC Products Rev. 4.3

Rev. 5.0  
PC Products Rev. 5.0

### SUGGESTED USER ACTION FOR RUNNING ON UNCORRECTED VERSION:

Use KUSE,-1 to force the reformulation of the element matrices.

### COMMENTS:

STIF18 was known as STIF29 prior to Rev. 4.3.

AUTHOR/CORRECTOR: Gabriel J. DeSalvo DATE: July 16, 1992

REVIEWED BY QA: Mark C. Imgrund DATE: July 16, 1992

APPROVAL: John A. Swanson DATE: July 16, 1992

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# ANSYS® CLASS3 ERROR REPORT

SEP 10 1992

ERROR NO: 92-26

CONTRACTS

KEYWORDS: ORTHOTROPIC MATERIAL PROPERTIES

SHEAR MODULUS

## DESCRIPTION OF ERROR:

For orthotropic materials, when all of the shear moduli are not input, GYZ and GXZ default as described in Section 2.0.1 of the Theoretical Manual instead of defaulting to the computed value of GXY (as described in Section 3.4.3 of the Rev. 4.4 User's Manual).

## FIRST INCORRECT VERSION(S):\*

## CORRECTED IN:\*

Rev. 2.0

Rev. 4.4B

PC Products Rev. 4.2

Theoretical Manual Rev. 4.4, Printing 3  
PC Products Rev. 5.0

## SUGGESTED USER ACTION FOR RUNNING ON UNCORRECTED VERSION:

When using orthotropic materials, input all shear moduli.

## COMMENTS:

When only the shear modulus GXY is input, GYZ and GXZ default to GXY, as described in Section 3.4.3 of the Rev. 4.4 User's Manual.

The Theoretical Manual will be changed.

AUTHOR/CORRECTOR:

Peter C. Kohnke  
Peter C. Kohnke

DATE: July 16, 1992

REVIEWED BY QA:

Mark C. Imgrund  
Mark C. Imgrund

DATE: July 16, 1992

APPROVAL:

John A. Swanson  
John A. Swanson

DATE: July 16, 1992

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ANSYS® CLASS3 ERROR REPORT

SEP 10 1992

ERROR NO: 92-27

CONTRACTS

KEYWORDS: MESH KD KT KNT SBCTRA

DESCRIPTION OF ERROR:

Keypoint boundary conditions are not interpolated properly to nodes on lines meshed with non-uniform spacing. The affected commands are KT, KD, and KNT. Interpolation is always done as though the nodes are uniformly spaced.

FIRST INCORRECT VERSION(S):\*

CORRECTED IN:\*

Rev. 4.3
PC Products Rev. 4.3

Rev. 5.0
PC Products Rev. 5.0

SUGGESTED USER ACTION FOR RUNNING ON UNCORRECTED VERSION:

Do the boundary condition transfer manually (SBCTRA). Then, before issuing LWRITE, AFWRITE, or SFWRITE change the erroneously interpolated nodal boundary conditions (D, NT, T). Unselect the keypoints attached to lines with non-uniform spacing (KPUSEL) to prevent another erroneous transfer.

COMMENTS:

AUTHOR/CORRECTOR: [Signature] DATE: July 16, 1992
REVIEWED BY QA: [Signature] DATE: July 16, 1992
APPROVAL: [Signature] DATE: July 16, 1992

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