

ANSYS Class3 Error Report

ERROR NO:

2014-18

Keywords:

HARMONIC VISCOELASTIC ENHANCED STRAIN PLANE182 SOLID185
SHELL208 SHELL209

Description of Error:

Harmonic analyses with viscoelastic materials (TB,PRONY) produce incorrect results for the following cases:

- A) PLANE182 and SOLID185 with enhanced strain and simplified enhanced strain formulations (for PLANE182: KEYOPT(1) = 2 or 3, for SOLID185: KEYOPT(2) = 2 or 3)
- B) SHELL208 and SHELL209 with significant bending deformations.

Typical GUI Path(s):

Main Menu>Preprocessor>Loads>Load Step
Opts>Other>Change Mat Props>Material Models

Main Menu>Preprocessor>Material Props>Material Models

Main Menu>Solution>Load Step Opts>Other>Change Mat
Props>Material Models

Other Comments:

First Incorrect Version:

Release 14.0

Corrected In:

Release 16.0

Suggested User Action For Running on Uncorrected Version:

Case A:

For PLANE182 and SOLID185, use either full integration with B-bar or uniform reduced integration with hourglass control (for PLANE182: KEYOPT(1) = 0 or 1, for SOLID185: KEYOPT(2) = 0 or 1).

Case B:

For SHELL208 and SHELL209, replace with another element type such as axisymmetric PLANE182 or PLANE183.

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