

ANSYS Class3 Error Report**ERROR NO:**

2012-25

Keywords:

PIPE288 PIPE289 KEYOPT(3)=3 PRESSURES TEMPERATURES

Description of Error:

When using pipe elements PIPE288 and PIPE289 with cubic shape functions and three integration points along the length (KEYOPT(3) = 3) and using pressure and/or temperature loads that vary along the length, the loads at the second and third integration points are reversed. This typically causes:

1. Small errors in the displacements and forces
2. Large errors in the hoop stresses and strains

Typical GUI Path(s):

Main Menu>Preprocessor>Element Type>Add/Edit/Delete

Other Comments:

In the element output, the internal and external pressures at the integration points are reported correctly.

First Incorrect Version:

Release 12.0

Corrected In:

Release 15.0

Suggested User Action For Running on Uncorrected Version:

Use quadratic shape functions (KEYOPT(3) = 2) or use a finer mesh of elements.

Author Signature:

Peter Kohnke 10/10/2012

Reviewed By QA:

Bill Bryan 10/10/2012

Approval:

Dave Conover 10/10/2012