

ANSYS Workbench Class3

Error Report

ERROR NO:WB2010-04

Keywords:

USER_DEFINED_RESULT EPTT EPTO ANSYS_ANALYSIS_SYSTEM

Description of Error:

User defined results for total mechanical and thermal strains (EPTT) and total mechanical strains (EPTO) are reporting incorrect results if a display time is chosen that lies between result sets.

There is an error in the linear interpolating of the results from the previous set with the results from next set.

Recall that EPTT is the sum of elastic, plastic, creep, and thermal

strain: $EPTT = EPEL + EPPL + EPCR + EPTH$ Recall that EPTO is the sum of elastic, plastic, and creep strain:

$EPTO = EPEL + EPPL + EPCR$

Results specified by a time that is listed in the time history

(that is, a time associated with an actual result set) are correct.

Results specified by Result Set are correct.

Typical GUI Path(s):

Worksheet->Create User Defined Result

Solution->Insert->User Defined Result

Other Comments:

Only analyses that use the Mechanical APDL solver (ANSYS ANALYSIS SYSTEM in the Toolbox) are affected.

First Incorrect Version:

Release 12.0

Corrected In:

Release 13.0

Suggested User Action For Running on Uncorrected Version:

If you want to evaluate component (X, Y, Z, XY, YZ, XZ) total strains at a time between result sets, you can create user defined results for each of EPEL, EPPL, EPCR and EPTH. Then, create a new

user-defined result that is an arithmetic sum containing EPEL, EPPL, EPCR (and EPTH for EPTT).

To create a derived total strain (like EPTTEQV), create an expression within the user-defined result that represents the required calculation on EPEL, EPPL, EPCR, and EPTH.

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