ANSYS Workbench Class3

Error Report

ERROR NO:

WB2010-12R1

Keywords:

IMPORTED LOAD THERMAL-STRESS TEMPERATURE JOULE-HEAT ICEPAK

Description of Error:

Calculated results may be wrong if an **Imported Load** is present in an environment where the **Step End Time** is represented by 7 or more significant digits. The error occurs because the necessary commands to apply or deactivate the load may not be sent to the solver. In addition, the imported data could erroneously be applied at another step. This error can occur when an **Imported Load** is used for the following cases:

- Temperature transfer from a thermal analysis to a structural/electric analysis
- Temperature transfer from an Icepak analysis to a structural/thermal/thermal-electric analysis
- Joule heat transfer from an electric analysis to a thermal analysis

Typical GUI Path(s):

1. Environment -> Analysis Settings -> Step End Time
2. Environment -> Imported Load -> Imported Body Temperature / Imported Heat Generation / Imported Temperature

Other Comments:

For Imported Loads, data gets stored at step end time values represented in scientific notation with 6 significant digits (e.g., 1.23456E+05 for a time value of 123456). If an Imported Load is present in an environment where a step end time is represented by 7 or more significant digits, a loss in precision could occur while storing the time value, resulting in:

1. Commands not being sent to the solver if the stored time value for the imported data does not match the Step End Time
2. The imported data being applied at another step if the stored time value for the imported data matches the end time of another step

Example: Imported data for a step end time value of 200000 s will be saved at 2.00000E+05 s and treated correctly. However, imported data for a step end time value of 200000.1 s will be saved at 2.00000E+05 s, potentially resulting in an error.

First Incorrect Version:

Release 12.0

Corrected In:

Release 13.0

Suggested User Action For Running on Uncorrected Version:

Use step end times that have less than 7 significant digits of precision.

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