What's New in CAESAR II

The latest CAESAR II release delivers a number of significant new and extended capabilities in response to current market requirements, as well as direct feedback from the growing CAESAR II user community. The following changes have been made to CAESAR II:

CAESAR II 2014, Version 7.00

Piping Code and Material Database Updates

- Updated to support the 2012 Edition of the ASME B31.1 code. This work included material property updates.
- Updated to support the 2012 Edition of the ASME B31.3 code. This work included a new equation for calculating expansion stress cases with new SIF and index values.
- Updated to support the 2012 Edition of the ASME B31.8 code.
- Updated the ASME B31.8 code interpretation to use either of the two combined biaxial stress equations for restrained pipe, as referred to in Paragraph 833.4, instead of using the maximum of the two. You can specify this using the Yield Stress Criterion configuration setting in the SIFs and Stresses section of the Configuration Editor.
- Updated to support the 2013 Edition of the ASME B31.5 code.
- Updated to support the 2012 Edition of the EN 13480 code. This work included addressing bend pressure stiffening and changes to the longitudinal pressure stress equation, among other revisions.
- Updated the Material database, as required for piping code updates.
- Updated the flange rating for in-line flange checks per EN 1092-1:2013 and ANSI B16.5 2009.
- Added support for ANSI 16.5 2009 metric flange ratings.
- Added fatigue curves as indicated in the 2013 Edition of ASME Section VIII, Div. 2.
- Extended the content for the ASME B31.3 code update and B163 to 1400F.

Modeling and User Interface

- Enabled quick global property changes (such as for temperature and pressure) from the Legend dialog box in the 3D model.
- Enhanced the Distance command to measure between two points in the 3D model without requiring the input of node numbers.
- Added a new Global menu in piping input, which includes the Block commands. These commands are also accessible through the Block Operations toolbar and the right-click context menu from the List>Elements dialog box.
- Enhanced the Structural Steel Wizard to display units for various input fields, added more tool bar icons, and enhanced input grid usability.
- Addressed graphics issues.
- Completed minor usability enhancements based on customer feedback.
Static and Dynamic Analysis

- Revised the Static Analysis (Load Case Editor) to automatically recommend Expansion (EXP) stress range load cases for better coverage of multiple operating conditions.
- Provided an option for users to select the allowable corresponding to temperature for the specified Occasional (OCC) load case for B31.3 jobs.
- Added support for in-line flange check evaluations for MAX and ABS load case combinations.

Interoperability

- Added the ability to import multiple supports at the same location from the Import PCF or Intergraph Smart 3D PCF interfaces.
- Enhanced the hanger table for support design with LISEGA's LICAD software in the Data Export Wizard (Export to MS Access).

Post-Processing

- Added output filters for flanges so that you can identify the most overstressed flanges.
- Updated to show the actual Stress Indices (I) that are used for sustained and occasional static load cases for ASME B31.3 code.
- Updated the Generate Stress Isometrics (CAESAR II Isogen module) with I-Configure 2014 (5.0).

Documentation/Help

- Updated the Quick Reference Guide with dates and information for all piping code updates made in CAESAR II 2014.
- Updated the F1 help in the Static Output Processor.

Technical Changes

The following technical changes were made for this release, which may affect the numeric results:

- Added a new equation for calculating expansion stress cases with new SIF and index values to support the 2012 Edition of the ASME B31.3 code.
- Addressed bend pressure stiffening and changed the longitudinal pressure stress equation, among other revisions to support the 2012 Edition of the EN 13480 code.
- Updated the minimum wall thickness equation for ASME B31.8 Chapter VIII to consider the longitudinal joint efficiency (using the Eff input box).
- Updated the ASME B31.8 code interpretation to use either of the two combined biaxial stress equations for restrained pipe, as referred to in Paragraph 833.4, instead of using the maximum of the two. You can specify this using the Yield Stress Criterion configuration setting in the SIFs and Stresses section of the Configuration Editor.
- Revised the calculations for SIFs in non-corroded conditions when the CODETI piping code is selected, based on clarification from French Code Committee.
- Revised the Static Analysis (Load Case Editor) to automatically recommend Expansion (EXP) stress range load cases for better coverage of multiple operating conditions.
- Provided an option for users to select the allowable corresponding to temperature for that particular Occasional (OCC) load case for B31.3 jobs.
- Added support for in-line flange check evaluations for MAX and ABS load case combinations.
- Resolved an issue in Structural Input where the software did not process UNIF values as gravitational multipliers (G loads) after you added the GLOAD command into the input stream. The software uses the gravitational multiplier (G load) value for all UNIF values when you add the GLOAD command into the input stream.