



CAPABILITIES:

- Static and Dynamic Analysis
- Intuitive Analysis Model Creation
- Design Tools and Wizards
- Load and View Plant Model
- Comprehensive Error Checking
- User-definable Reports
- Wind and Wave Analysis
- Seismic and Support Settlement Analysis
- International Piping Codes
- Extensive Material Databases
- Steel Databases and Modeling
- Expansion Joint Databases
- Hanger Databases
- Hanger Design
- Automated Stress Isometric Creation
- Bi-directional Links to Intergraph Smart™ 3D and CADWorx® Plant

CAESAR II®

Intergraph® CAESAR II® is the world's most respected tool for pipe stress analysis. It evaluates the structural responses and stresses of piping systems to international codes and standards.

CAESAR II offers more than 34 international piping codes and is known for its technical superiority, flexibility, ease of use, innovation, and reliability.

CODE SUPPORT UPDATES

The latest version of CAESAR II offers support for recent code standards and updates that make your piping faster and easier:

Piping Codes

- ASME B31.1, 2014 Edition
- ASME B31.3, 2014 Edition
- ASME B31.8, 2014 Edition
- ASME B31.9, 2014 Edition

Equipment Codes

- API 560, 4th Edition
- API 610, 11th Edition
- API 617, 8th Edition
- API 661, 7th Edition

Wind and Seismic Codes

- National Building Code of Canada (NBC) Seismic and Wind Codes, 2010 Edition
- ASCE 7 2010 Edition and IBC 2012 Edition Wind Codes

For ASME B31.3 2014 Edition, a new support condition for static load cases called an alternate load case will support Appendix P being moved to the body of the code. This condition addresses systems where supports are active in some conditions and inactive in others. The alternate support condition is specified with new checkbox on the Static Analysis - Load Case Editor called Alternate SUS/OCC and is associated with Operating load cases.

STREAMLINED LOAD CASE EDITOR

The Static Analysis Load Case Editor was redesigned to improve user experience and add more robust functionality when creating and revising load cases for analysis. In the Group Edit view, users can select and change values on multiple load cases all at once. The enhanced List view offers easier scrolling and viewing options, as well as filtering on columns, drag-and-drop capabilities, and easier manipulation of load cases. Two new load case templates can be used for recommended load cases, which include support for expansion and alternate SUS/OCC load cases.

FINITE ELEMENT ANALYSIS AT YOUR FINGERTIPS

You can now access third-party tools for finite element analysis (FEA) from the CAESAR II main menu. Send your CAESAR II job to be translated through FEATools™ to generate more accurate SIFs and K factors. Compare multiple file results, assess the sensitivity of your model elements, and evaluate nozzle/branch connections with NozzlePRO™.

IMPROVED DISTANCE MEASUREMENT

The Minimize mode for measuring enables you to perform multiple distance measurements without the dialog box blocking any of the model. Use CTRL + click to measure multiple distances and see all of your measurements at once. There is a larger default font size setting on distance measurements for ease of reading. Better snapping is available in the Line Drawing (single line) mode and gives users the ability to snap from piping elements to imported DWG piping elements.

FASTER PIPING DATA INPUT

CAESAR II makes it easy to input and display all the data needed to accurately define a piping system analysis model. You can access or modify input on an element-by-element basis, or select datasets to make global changes. New single and multiple element-level right-click menus have been added, which enable you to perform many frequently-used element commands and block (group) operations right from the model.

The latest version of the software enables three sets of temperatures and pressure inputs without having to open a separate dialog box. Improved the Classic Piping Input has been improved to display a Pressure 3 value on the interface.

NUCLEAR INDUSTRY COMPLIANCE

CAESAR II complies with ASME NQA-1 quality assurance (QA). U.S. customers in the nuclear industry can access QA reporting to keep them fully informed about issues and software changes to help them comply with U.S. federal requirements 10 CFR Part 50 App. B. and 10 CFR Part 21.

The Commercial Grade Dedication (CGD) acceptance process as outlined in ASME NQA-1-2012 Subpart 3.2-214, includes detailed verification of results using alternate calculation tools and verification tests such as the NRC benchmarks. These results and comparisons are published in a CGD Guide to document the software's accuracy.

ANALYSIS OPTIONS

Besides the evaluation of a piping system's response to thermal, deadweight, and pressure loads, CAESAR II analyzes the effects of wind, support settlement, seismic loads, and wave loads. Non-linear effects, such as support lift-off, gap closure, and friction, are also included. CAESAR II also selects the proper springs for supporting systems with large vertical deflections. Dynamic analysis capabilities include modal, harmonic, response spectrum, and time history analysis.

MATERIAL AND ASSEMBLIES DATABASES

CAESAR II incorporates table look-ups for piping materials and components, plus expansion joints, structural steel sections, spring hangers, and material properties, including allowable stress. This ensures correct datasets are used for each analysis. The latest version includes hanger data for the following hanger manufacturers: Hesterberg, Unison, Spring Supports Mfg. Co., Senior, and Wookwang.

BI-DIRECTIONAL INTERFACE WITH DESIGN

CAESAR II incorporates seamless, bi-directional links between plant design and engineering analysis. This allows the passing of design and analysis between these workgroups without data loss.

ERROR CHECKING AND REPORTS

The CAESAR II program includes an integrated error checker. This error checker analyzes the user input and checks for consistency from both a "finite element" and "piping" point of view. Reports are clear, accurate, concise, and fully user-definable.

DESIGN TOOLS AND WIZARDS

Tools and wizards for tasks (such as creating expansion loops or viewing plant models in the analysis space) help bridge the gap between knowledge and experience. Such tools take the guesswork out of producing accurate analysis and recommending practical design changes.

ABOUT INTERGRAPH

Intergraph helps the world work smarter. The company's software and solutions improve the lives of millions of people through better facilities, safer communities, and more reliable operations.

Intergraph Process, Power & Marine (PP&M) is the world's leading provider of enterprise engineering software enabling smarter design and operation of plants, ships, and offshore facilities.

For more information, visit www.intergraph.com.

Intergraph is part of Hexagon (Nordic exchange: HEXA B; www.hexagon.com), a leading global provider of design, measurement, and visualization technologies that enable customers to design, measure, and position objects, and process and present data.