



# CAESAR II® THE WORLD'S MOST RESPECTED TOOL FOR PIPE STRESS ANALYSIS

## Capabilities:

- Static Analysis
- 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
- 35 International Piping Codes
- Extensive Material Databases
- Steel Databases and Modeling
- Expansion Joint Databases
- Hanger Design and Databases
- Integrates Intergraph Smart 3D®, and CADWorx® Plant Design Suite
- Results Export to Microsoft® Excel®, Word, and MDB Files

## Reduced Modeling Time

Save time modeling, so you can focus on your stress analysis. Experience improved usability with List Input grids, and added functionality that lets you work straight from the 3D model. Right-click menus and a new functional toolbar layout with customization available lets you work quickly. Integration with CAD design packages lets you quickly import models, reducing risk for errors and costly iteration time between CAD and Stress Analysis divisions.

## Optimized Graphics

Experience large-scale improvements to the 3D model graphics, including faster response times to model actions, refreshes, and improved new real-world representations of valves with new symbols showing displacements, rotations, forces, and moments on the piping model.

## Faster Load Case Definitions/Manipulation

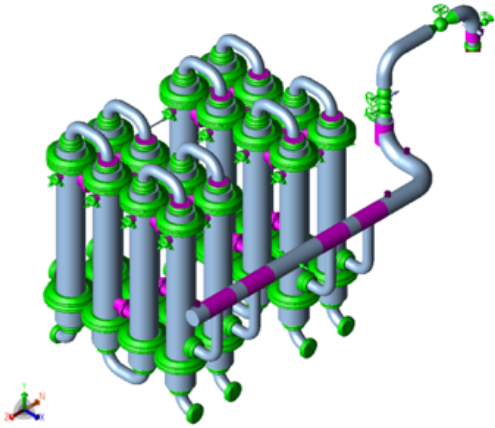
New capabilities let you import or export in your load case conditions through an easy-to-use template. Select to bypass or exclude certain cases from your analysis as needed, to speed up analysis time and focus on the conditions needed. Use the Group Edit view to make quick changes to multiple load cases as once. Use the List view for quick viewing of options, as well as filtering and sorting on columns. Automatic renumbers of load cases upon deletion of cases, with easy review of impacts of your delete to combination cases.

## Advanced Analysis and Reporting

In addition to the evaluation of a piping system's response to thermal, deadweight, and pressure loads, CAESAR II analyzes the effects of wind, support settlement, seismic,



and wave loads. Nonlinear effects such as support lift-off, gap closure, and friction are included. Select the proper springs for supporting systems with large vertical deflections. Dynamic capabilities include modal, harmonic, response spectrum, and time history analysis. Quickly send analysis and time history results to output reports or the file format of your choice (MDB, Excel, Word, etc.).



## Finite Element Analysis

Access third-party tools for finite element analysis from the main menu, including free access to the newly-published ASME B31J-2017 calculations for SIFs and K factors. Quickly send and translate through FEATools™, compare multiple file results, assess the sensitivity of model elements, and evaluate nozzle/branch connections with NozzlePRO™.

## Powerful Integration Capabilities

CAESAR II offers robust interfacing with CAD-based software, such as CADWorx Plant and Intergraph Smart® suites, using established industry formats (such as PCF and Isogen®). This lets you bring in data from other systems, carry it on to integrating solutions after analysis, and track support details. Import structural models from software such as CADWorx Structure or GT STRUDL, and account for structural stiffness in the analysis. CAESAR II combined with GT STRUDL lets you share load details post-analysis so stress analysis and civil/structural groups work together without duplicating information and efforts.

## Comprehensive Equipment Analysis

Associate multiple load conditions with your equipment all in one fully-redesigned Equipment Manager, which has connectivity to load cases used in your piping analysis. Experience a user-friendly interface and new comprehensive reports. Analyze your critical flanges and flange assemblies against the EN-1591 code standard using a similar easy-to-use manager, which automates much of the detailed flange input.

## Nuclear Industry Compliance

CAESAR II complies with ASME NQA-1 quality assurance (QA). Subscribe to the CAESAR II QA and Reporting service to stay fully informed about issues and software changes. This notification service meets U.S. federal requirements 10 CFR Part 50 App. B. and 10 CFR Part 21.

## Codes

### Process

ASME B31.3, w/ Ch. IX  
BS 806  
JPI  
HPGSL  
EN 13480-1  
CODETI

### Power

ASME B31.1, B31.9  
ASME B31.5  
TBK 5-6  
EN 13480-1  
Stoomwezen, Swed.  
Method 1 & 2

### Nuclear

ASME Section II,  
Class 2 and 3  
RCC-M C and D

### FRP

ISO 14692  
UKOOA  
BS-7159

### Equipment/Components

EN-1591, WRC 107/537/297,  
API 560, 610, 661, 617, PD  
5500, HEI, NEMA SM23,  
B31G, WRC 107/537/297,  
AISC

### Offshore/Pipelines

ASME B31.4, w/ Ch. XI  
and Ch IX  
ASME B31.8, w/ Ch. VIII  
CAN Z662, w/ Ch. 11  
DNVGL-ST-F101  
PD 8010, Part 1 and 2

### Environmental

ASCE 7, NBC, IBC, UBC  
EN 1991 GB 50009, Mexico  
NBR 6123, IS 875, BS 6399,  
As/Nzs 1170, KHK L1 and L2

## ABOUT HEXAGON

Hexagon is a global leader in digital solutions that create Autonomous Connected Ecosystems (ACE). Our industry-specific solutions create smart digital realities that improve productivity and quality across manufacturing, infrastructure, safety and mobility applications.

Hexagon's PPM division empowers its clients to transform unstructured information into a smart digital asset to visualize, build and manage structures and facilities of all complexities, ensuring safe and efficient operation throughout the entire lifecycle.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 19,000 employees in 50 countries and net sales of approximately 3.5bn EUR. Learn more at [hexagon.com](http://hexagon.com) and follow us @HexagonAB.