



# GT STRUDL®

## Structural Modeling, Analysis & Design

### Capabilities:

- Linear and nonlinear static and dynamic analysis
- Base plate modeling and analysis
- Multimaterial beam and FEA analysis
- Offshore structural analysis and design
- Calculation of transfer forces per AISC
- Management of all model data and analysis results
- Ability to leverage company engineering standards
- Comprehensive and detailed user documentation
- Specification-driven design
- Reinforced concrete design
- Model your way: Modern GUI, CAD, Wizards or Text input
- 64-Bit application that utilizes multiple processing cores

GT STRUDL® is one of the most trusted and adaptable general purpose structural analysis solutions in the world. The software has a proven track record in a variety of applications, such as nuclear and conventional power generation, onshore and offshore facilities, marine, civil engineering, and infrastructure. GT STRUDL offers engineers the accurate and complete engineering data they need for cost-effective and efficient structural engineering and design decision-making.

For over 40 years, GT STRUDL has been trusted and used globally by thousands of engineers to quickly and efficiently deliver accurate results. GT STRUDL is a market leader in its field for high-quality results, proven reliability, and depth of technical support.

### Comprehensive Solution

GT STRUDL is an easy to use and flexible interoperable and database-driven solution for beam and general finite element analysis and comprehensive structural engineering design. The solution includes 10 functional areas that operate seamlessly with one another. Combined with amazingly fast computational speed, GT STRUDL provides virtually unlimited power and flexibility for projects of any size or complexity.

### Interoperability

GT STRUDL is natively interoperable with Intergraph Smart® solutions, CAESAR II and CADWorx® Structure. This enables structural data-rich models created outside of GT STRUDL to fully leverage the power of GT STRUDL. It is also interoperable with third-party solutions through CIS/2 and GTI files. Reduce duplication of effort to save time and ensure data accuracy.

### Quality Assurance

Since 1983, the GT STRUDL QA/QC program has been in full compliance with applicable provisions of the U.S. NRC's 10CFR21 and 10CFR50 Appendix B regulations. In addition, GT STRUDL QA procedures conform to the ASME NQA 1- 2008, including the 2009 Addenda Subpart 2.7 (NQA-1a-2009). This means that every release of GT STRUDL earns the trust of structural engineers by providing accurate analysis results.

## Steel & Concrete Structure Modeling

- Physical member definitions, labels, inquiry, and display
- Nonlinear spring elements, support and member end springs, tension, and compression-only members, large sag catenary, and parabolic cables
- Nonlinear fiber element plastic hinge and plastic zone member models
- Integer and alphanumeric naming of joints, members, finite elements, and loading conditions Automated view generation
- Create and review model with powerful data sheets

## Advanced Analysis Methods

- Comprehensive FEA library including cables, plates, shells and solids
- Linear and nonlinear static and dynamic analysis
- High-performance equation solvers
- Maximum response harmonic analysis
- Steady-state time history dynamic analysis
- Nonlinear pushover analysis
- Pseudo-static loads from dynamic analysis

## Load Specifications & Generation

- Seismic and wind load generators per ASCE 7-05/7-10/7-16
- Area load generator
- Gupta and Lindley-Yow mode combination methodologies
- Broad range of user-specified damping properties
- Composite modal damping ratio calculations
- Load combination generation

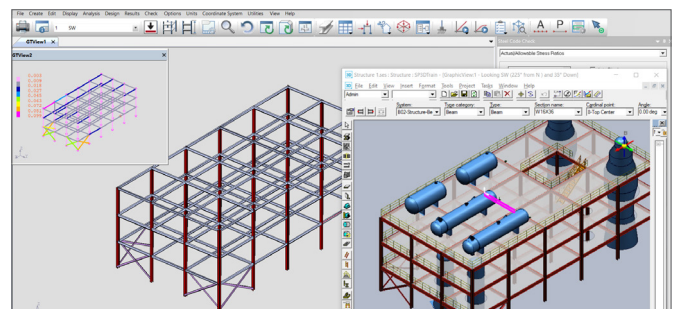
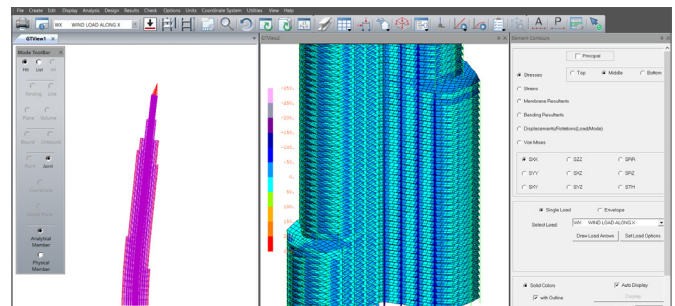
## Design Codes

- AISC: 15th, 14th, 13th, 9th, N690, 341 & Older Editions; ASD/LRFD Methods and Seismic Provisions
- British: BS5950 & BS449
- AISI: AISI89 for Unistrut Sections

- ASCE: ASCE 52 Guide for Design of Steel Transmission Towers & ASCE/SEI 48-05 Steel Pole Structures
- ASME: Boiler & Pressure Vessel Code, Section III, Rules for Construction of Nuclear Facility Components, Div. 1-Subsection NF
- Eurocode: EC3 plus National Annexes
- Canadian: CSA-S16.1-97 & CSA-S16-14
- Indian: IS800
- Chinese: GB (GuoBiao Standards)
- Offshore: ISO 19902, APIWSD (RP 2A-WSD) & Older Editions, NS 3472E.
- ACI 318: 2005, 2008, 2011, 2014, 2019

## Report Generation

- Interactively generate custom reports of model and load data, results, and figures
- Move sections within the report from hierarchical tree display using the interactive interface
- Filter by joints, members, elements, and loading
- Take advantage of customer footers, customer headers, and summary of loads
- Save/Restore options on filters, order, and checklist



## About Hexagon

Hexagon is a global leader in digital reality solutions, combining sensor, software and autonomous technologies. We are putting data to work to boost efficiency, productivity, quality and safety across industrial, manufacturing, infrastructure, public sector, 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 21,000 employees in 50 countries and net sales of approximately 3.8bn EUR. Learn more at [hexagon.com](http://hexagon.com) and follow us @HexagonAB.