OCTAVE

BROCHURE

Octave analysis solutions

Detailed analysis of piping, pressure vessels and structures

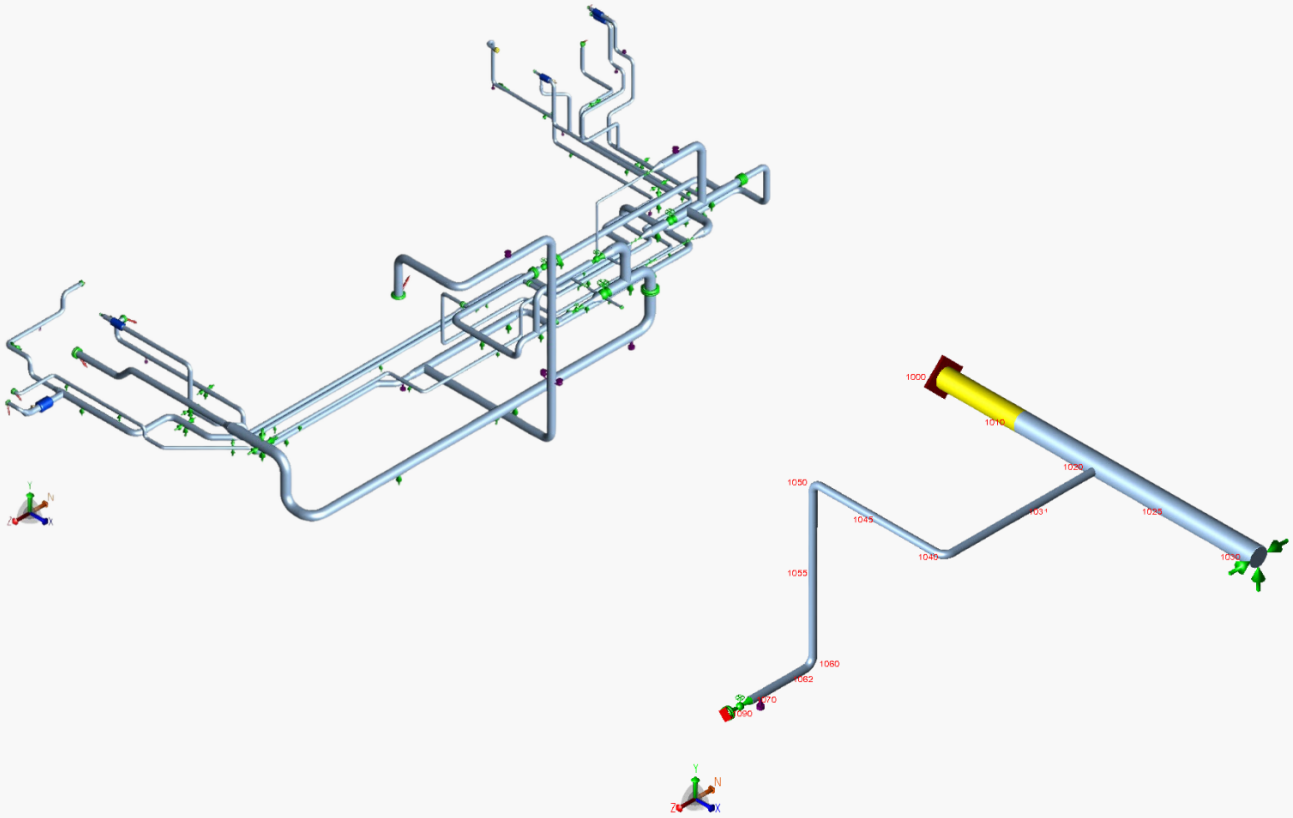
Octave's Analysis Solutions

Integrated, cutting-edge tools for design and analysis

Octave Aspect is a modern suite of tools designed to transform engineering analysis and design. This flexible and scalable platform streamlines the entire analysis process, enabling teams to easily create and evaluate models with powerful, intuitive tools. Octave's analysis solutions set a new standard for design excellence and help unlock the full potential of engineering projects.

Octave Aspect solutions include:

- Aspect Pipe Stress (formerly CAESAR II)
- Aspect Pressure Vessel (formerly (PV Elite)
- Aspect Structure (formerly GT STRUDL)
- Aspect Tank (formerly TANK)
- Aspect Nuclear Pipe Stress (formerly PIPESTRESS)



Solution 1

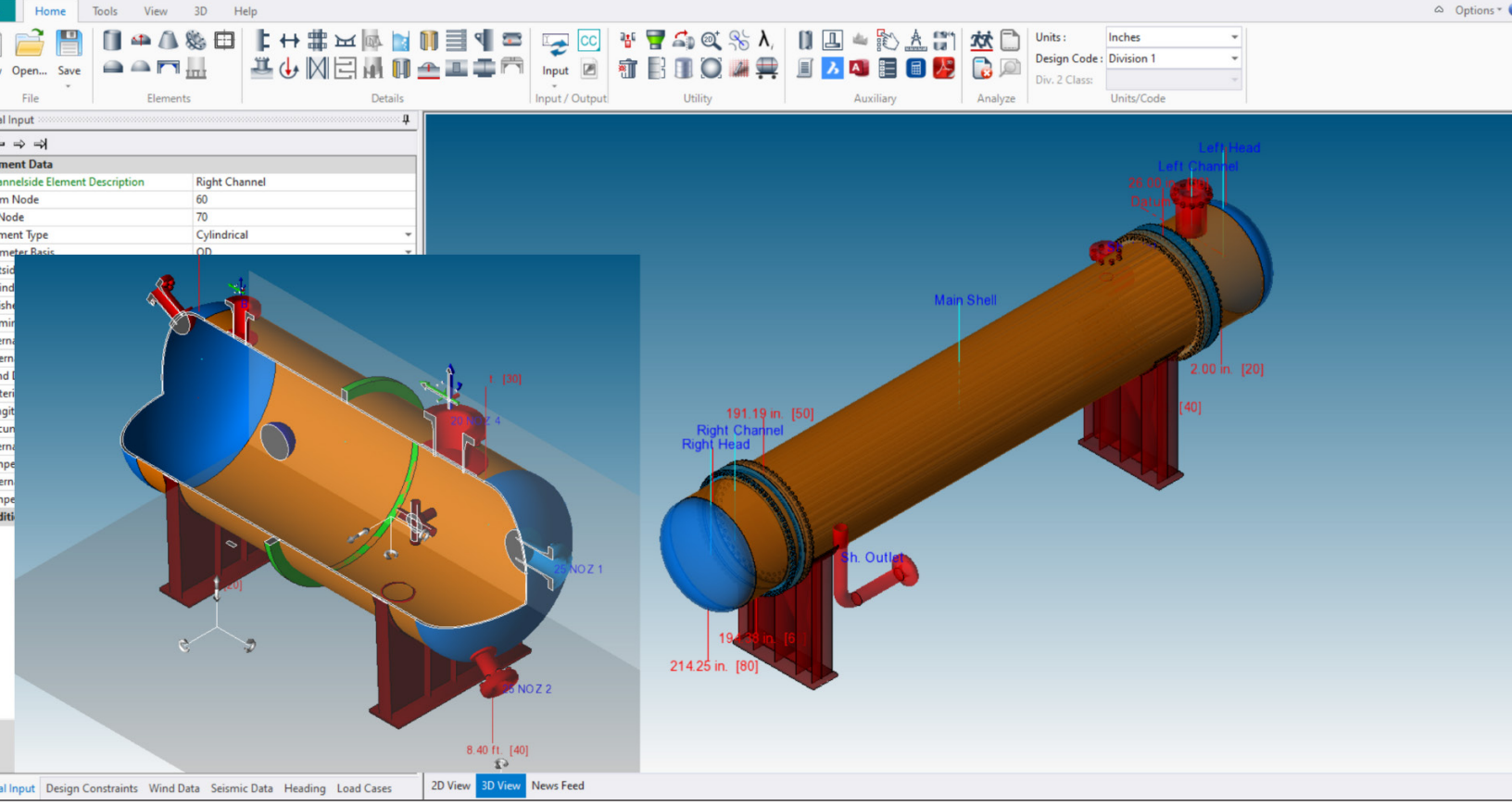
Octave Aspect Pipe Stress

The standard in pipe stress analysis

Aspect Pipe Stress is the industry-standard software for pipe stress analysis, enabling engineers to design and evaluate piping systems of any size, type and complexity. Whether you are working on in-ground, above-ground, offshore or subsea piping, Aspect Pipe Stress can help you comply with more than 40 international codes and standards.

With Aspect Pipe Stress, you can perform static, dynamic and flange analysis while accounting for wind, wave seismic, thermal and pressure loads, as well as weight and support.

As an Aspect Pipe Stress user, you'll benefit from Octave's Smart Community, where you can access webinars, training and support resources. You can also share your ideas, feedback and best practices with other Aspect Pipe Stress I users and experts. Whether you are designing a new system, modifying an existing one, or performing a fitness-for-service assessment, Aspect Pipe Stress can help you deliver your projects on time, on budget and with confidence.



Solution 2

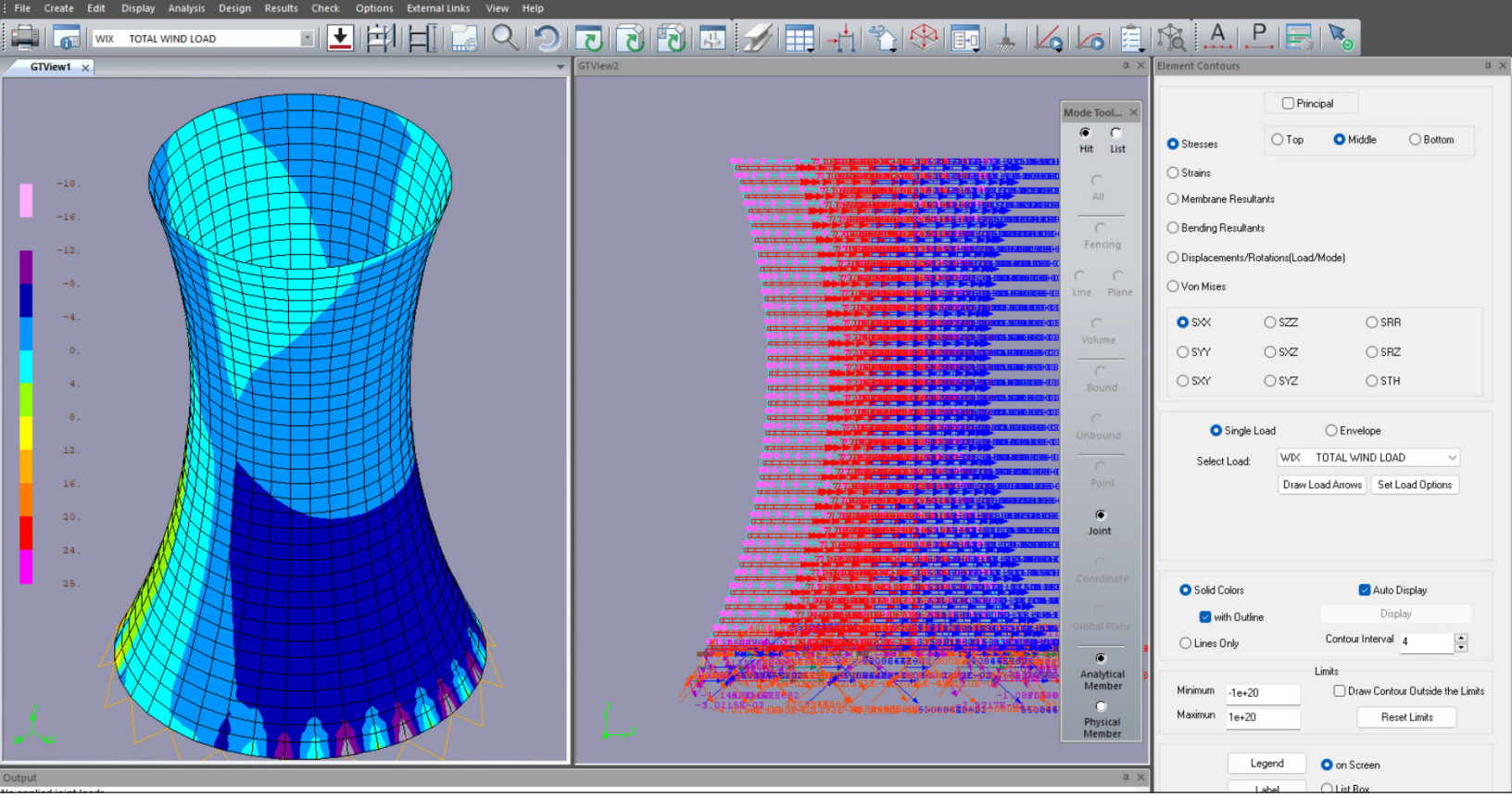
Octave Aspect Pressure Vessel

Industry-leading pressure vessel analysis

Aspect Pressure Vessel stands at the forefront of pressure vessel design and analysis solutions, containing every major code and standard needed to engineer innovative designs for both vessels and heat exchangers.

Automated 2D and 3D visualization enables easier design and analysis, in addition to improved communication between engineers and fabricators, saving valuable time and resources.

With the ability to perform fitness-for-service assessments on older equipment, you can extend the life of your assets and ensure their safety and reliability for years to come. This data can be easily verified using a variety of equations and reporting methods.



Solution 3

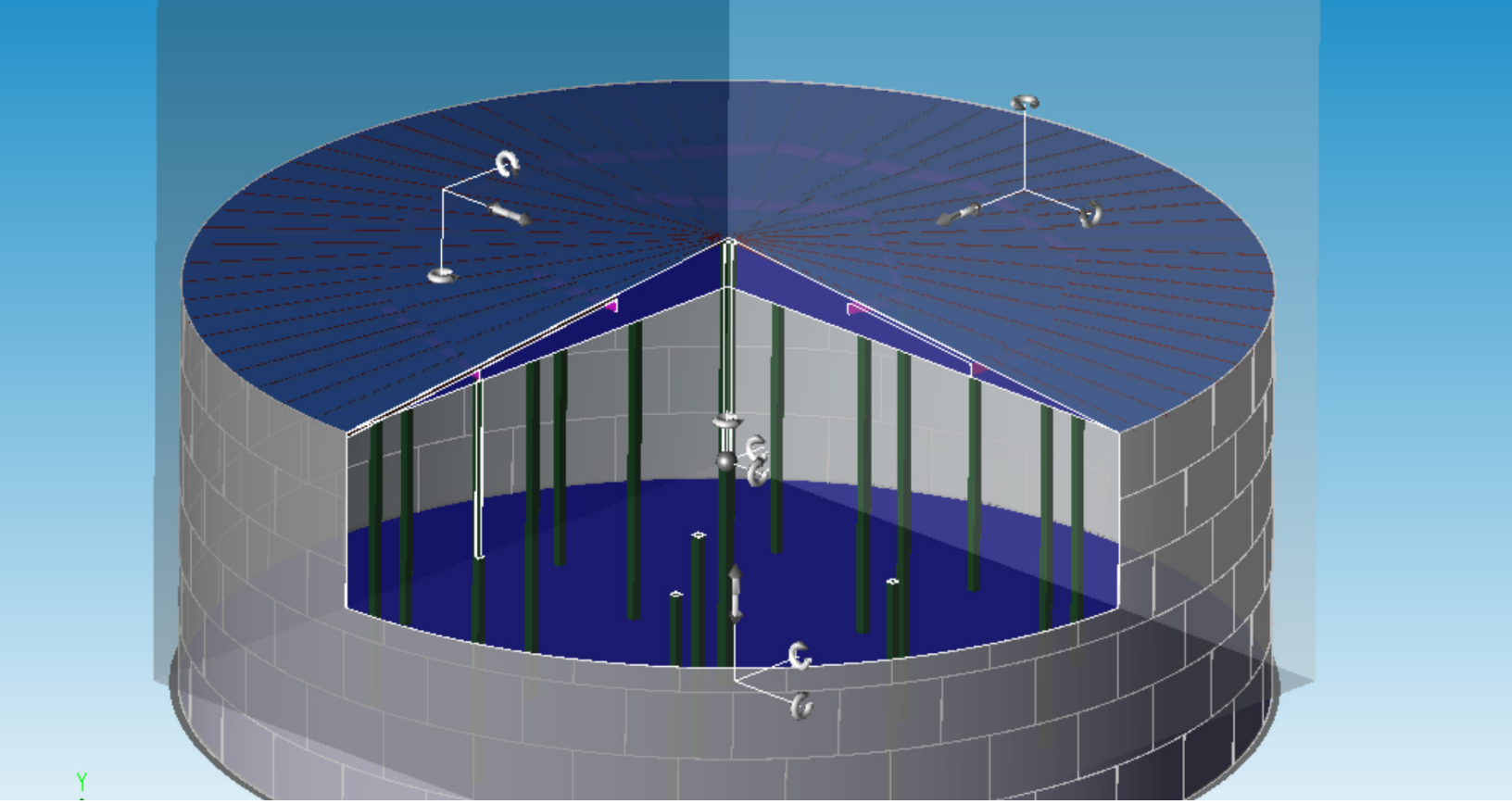
Octave Aspect Structure

Comprehensive structural analysis and design

Aspect Structure is a must for any organization seeking to ensure their structures are safe and up-to-code. It also provides engineers with the ability to analyze loads and stresses on these structures.

With Aspect Structure, engineers can take into account weight, pressure, thermal, seismic or any other static or dynamic conditions. Aspect Structure also features beam and finite element analysis (FEA), providing a complete range of design codes, including AISC, ACI, Canadian, European, Indian, Chinese and NF codes.

With Aspect Structure, you can validate the viability and integrity of your structural projects anywhere in the world. Trust Aspect Structure for your structural analysis and design needs, and achieve safety, performance and cost-effectiveness.



Solution 4

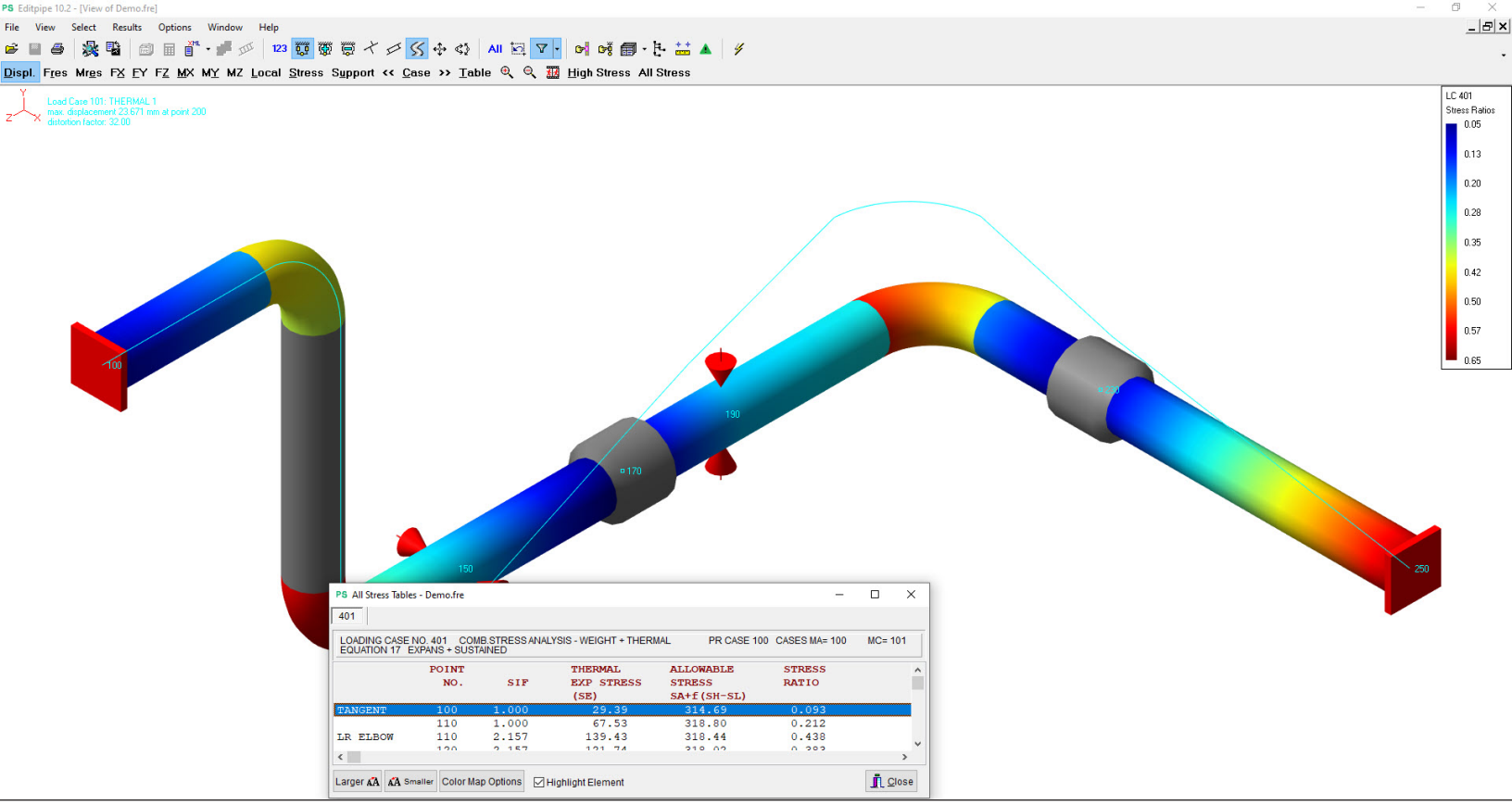
Octave Aspect Tank

Comprehensive storage tank design and analysis

Transform your oil storage tank analysis with Aspect Tank, the cutting-edge software designed to streamline and enhance your engineering experience. Aspect Tank empowers you to select any unit combination for analysis or reporting. Its user-definable unit files liberate engineers from restrictive defaults, offering the freedom to tailor settings to your unique requirements and even convert existing jobs to any unit format with ease.

Aspect Tank's intelligent user interface presents only the necessary information at each step, eliminating the hassle of out-of-sequence data entry. It asks for what's needed, when it's needed, making your workflow as efficient as possible.

Stay compliant with confidence; Aspect Tank performs calculations in strict accordance with the latest API Standards 579, 620, 650 and 653. It also accounts for environmental factors such as wind, seismic activity, and settlement conditions and calculates air venting requirements to API 2000 Section 4.3.



Solution 5

Aspect Nuclear Pipe Stress

Efficient and streamlined nuclear pipe stress calculations

Aspect Nuclear Pipe Stress is the ultimate powerhouse that revolutionize your nuclear workflow. It's optimized for Class 1 nuclear piping, a feature not available in Aspect Pipe Stress.

As an efficient, streamlined software for Nuclear Pipe Stress calculations, Aspect Nuclear Pipe Stress is Certified for use in the nuclear industry (RCC-M and ASME class 1, 2 and 3) and continuously maintained in compliance with ASME NQA-1. Aspect Nuclear Pipe Stress has a diverse range of analysis types from linear to non-linear and heat transfer and fatigue analysis.

Take advantage of an integrated suite

Powerful and intelligent design and analysis

Octave's analysis tools integrate seamlessly with design solutions across the Octave portfolio, including Octave Forte 3DWorx (previously CADWorx) and Forte 3D (formerly Intergraph Smart 3D) , while also supporting several widely used third-party file formats.

Collaboration is enhanced by linking analysis results with Octave's advanced data and document management system, which serves as a central hub for data integration and interoperability. This approach consolidates analysis data across the organization, improving alignment and collaboration among teams and departments.

For example, Aspect Pipe Stress can share pipe load data with Aspect Structure, enabling structural teams to design supporting structures using accurate, up-to-date loads. This cross-disciplinary workflow reduces rework and delivers significant cost savings. Similar bidirectional integrations exist between Aspect Pipe Stress and Aspect Pressure Vessel, as well as with Forte 3DWorx and Forte 3D, allowing design and analysis data to flow seamlessly and minimizing duplication across project phases. Aspect Pressure Vessel's two-way integration with Forte 3DWorx synchronizes design changes between applications, reducing data entry errors and saving time.

Pipeline designs and associated analysis data can be exchanged between design systems and Aspect Pipe Stress, accelerating modeling and enabling analysts to evaluate design changes within the context of the original model. Aspect Structure also integrates with Forte 3DWorx, Forte 3D and OnSite Construction (previously Intergraph Smart Construction) to support structural modeling, analysis and modular or staged construction sequencing.

Together, these integrations enable Octave customers to collaborate effectively across disciplines and projects, improving productivity, increasing accuracy and creating a unified digital engineering ecosystem.

Interested in learning more about Octave's analysis solutions or how they integrate with other products?

Get in touch with our team

About Octave

Octave is a leader in enterprise software, turning data into decisive action and intelligence into your edge. Our software solves for and simplifies complexity, from the design and build to operations and protection of people, property and assets – for any scope, at any scale. For decades, we've partnered with customers to sharpen performance, elevate efficiency and amplify results. From factory floors to entire cities, our solutions are tuned to scale up what's possible from day one onward.

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