CASE STUDY

PipeServ Engineering achieves success on Greek power project with advanced design and analysis

Key facts:

Company:
PipeServ Engineering

Website:
www.pipeserv.gr

Industry: Power (non-nuclear)

Country: Greece

Octave products used:
Forte 3DWorx *(CADWorx Plant Professional)*, Facets P&IDWorx *(CADWorx P&ID Professional)*, Aspect Pipe Stress *(CAESAR II)*, Aspect Pressure Vessel *(PV Elite)*

Headquartered in Athens, Greece, PipeServ Engineering provides engineering services to the oil and gas industries, including petroleum refining, and to power generation and other heavy industries.

Identifying goals

TUV Austria Hellas chose PipeServ for the design of a series of combined cycle power plants in Greece that involved engineering and design for piping and supports within the plant facility and for auxiliary systems, large-bore hot and cold pipelines involving 2,500 supports, 300 spring hangers, a pipe rack and steel structures. PipeServ performed stress analysis for small-bore hot pipelines and finite element analysis for buried circulating water pipelines of 2.5 meters in diameter. They also provided mechanical design and construction drawings for three tanks and seven pressure vessels, including construction drawings.

Overcoming challenges

PipeServ achieved success on the project with Forte 3DWorx and Facets P&IDWorx for plant design and process and instrumentation diagrams integrated with Intergraph Aspect Pipe Stress and Aspect Pressure Vessel for analyzing and designing piping and vessels. "The advanced capabilities of this easy-to-use and proven solution provided fast project setup and a quick learning curve with almost immediate productivity," explained Antonis Markogiannakis, CEO of PipeServ, "and we also benefited from the easy customization of databases and efficient coordination among specialties."

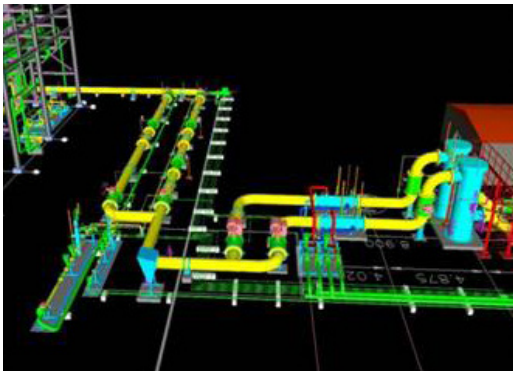
Key benefits:

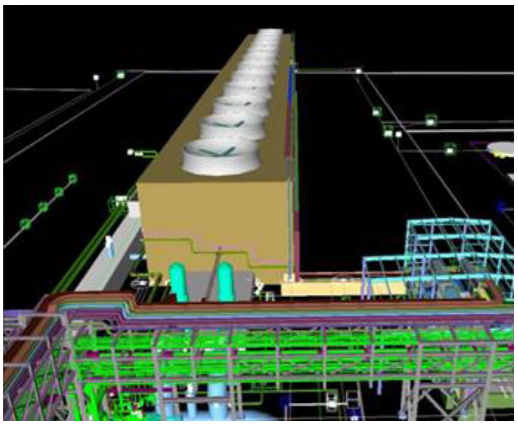
- Attained instant productivity via swift project setup and easy-to-learn solutions
- Promptly generated pipe stress models and performed pressure vessel analyses seamlessly
- Accelerated workflows by integrating 2D drawings with 3D models
- Enhanced the design drawing

Realizing results

The seamless integration between engineering and design improved productivity. They were able to provide Aspect Pipe Stress models instantly and reliably from the same model, and with the integration of Aspect Pressure Vessel, they could analyze and complete the design of the pressure vessels with ease. The integration between 2D drawings and the 3D model expedited the workflow for all involved, and the 3D modeling capabilities improved the design quality by allowing better concept generation and easier reviews and checking between collaborators and the client. "We could easily share information that was always up-to-date by simply sharing the model, and we produced the greatest amount and quality of piping drawings and calculations in the company's history," Markogiannakis said.

Leveraging the capabilities and intelligence built into Forte 3DWorx for design combined with Aspect Pipe Stress and Aspect Pressure Vessel for analysis, PipeServ was able to automate the production of deliverables with speed and accuracy. They generated isometric drawings automatically with minimum postprocessing required, and the software's batch generation capabilities improved the quality of the drawings and reduced the amount of time required. They also produced instant bills of material that were accurate and complete, all from one model.





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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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