CASE STUDY

Leading international engineering group enhances design and engineering process for a gas plant

Key facts:

Company: Heurtey Petrochem

Website: www.heurtey.net

Industry: Oil & Gas

Country: Romania

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

Founded in 1953, Heurtey Petrochem is an international oil & gas engineering group operating within two market segments: process furnaces for refining, petrochemicals and hydrogen production, and natural gas treatment.

Identifying goals

Heurtey Petrochem was contracted to do the engineering, fabrication, inspection, testing, packaging and shipment of seven process heaters for a new gas to gasoline plant in Akhat Velayat, Turkmenistan. The main goal of the project was to efficiently create up-to-date and factual P&IDs, design the heater coils and the external piping located on the heater, as well as the design of piping skids. Another key focus of the project was to showcase the benefits of using Facets P&IDWorx together with Forte 3DWorx.

Overcoming challenges

For this project, Heurtey Petrochem was looking for a solution that would provide flexible licensing options suitable for different project types with affordable pricing options. The company was also already familiar with Octave's high-quality solutions, and recognized the value of having one solution provider for different engineering departments.

Octave solutions were used throughout the project by the Heurtey Petrochem's piping department. From creating P&IDs, 3D modeling, stress analysis, coils and piping layouts to producing isometrics and extracting materials information, Octave's design and analysis solutions helped Heurtey to improve efficiency and accuracy of engineering design and analysis work processes and deliverables.

Key benefits:

- 50 percent cost savings (traditional 2D vs. 3D) for medium-sized projects
- Increased quality of work processes and documentation
- Improved efficiency by decreasing the time spent on non-engineering activities
- Ability to better track deadlines and budgets throughout the project

Realizing results

Heurtey Petrochem was able to start using the solutions almost immediately, as the easy and intuitive interfaces enabled engineers to learn while working.

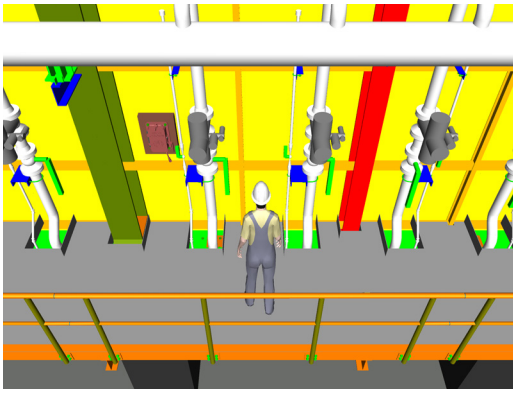
In addition to creating P&IDs, the overall project scheme included 3D modeling, stress analysis and fabrication for the heater coils. Isometric diagrams and support modeling and material procurement was also executed with Hexagon solutions.

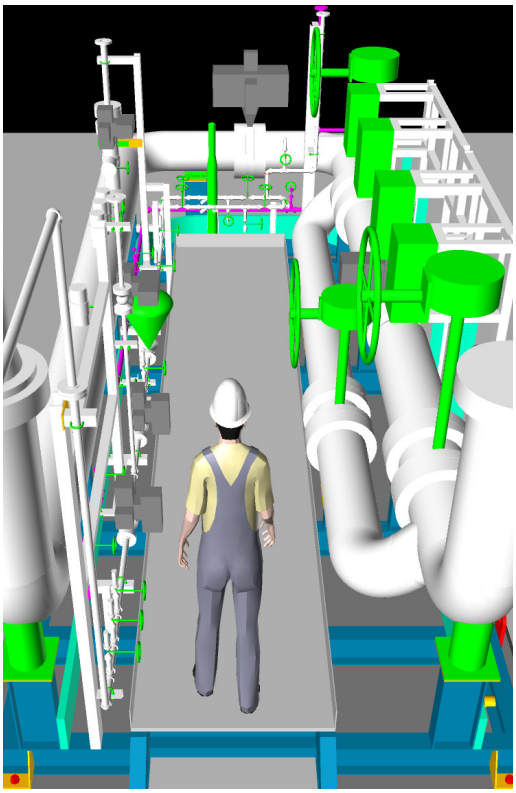
Additionally, the external piping for the heater and the skids were designed, analyzed and procured using Hexagon solutions. Tie-in, line and valves list was obtained from Facets P&IDWorx, while Forte 3DWorx was used for 3D modeling and Aspect Pipe Stress for stress and support structure analysis.

During the project, eight project team members worked in Forte 3DWorx, while Facets P&IDWorx and Aspect Pipe Stress were used by one engineer each. The new system manages .DWG and .C2 files for tens of megabytes of data as well as tens of thousands of records in .mdb file format.

Moving forward

Currently, Heurtey Petrochem is using Octave solutions in three different engineering projects and is considering expanding the use of the solutions in the future.





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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