HEURTEY PETROCHEM ENHANCES ENGINEERING, DESIGN AND ANALYSIS ACCURACY WITH INTERGRAPH® CADWORX® & ANALYSIS SOLUTIONS

A leading international engineering group engineers and designs process heaters for a gas to gasoline plant

IDENTIFYING GOALS

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

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 Intergraph CADWorx P&ID Professional together with Intergraph CADWorx Plant Professional.

OVERCOMING CHALLENGES

As a long-term AutoCAD®-user, Heurtey Petrochem was looking for a solution that would run in an AutoCAD environment, have flexible licensing options suitable for different project types, and have affordable pricing options. The company was also already familiar with the high quality of the Intergraph solutions, and recognized the value of having one solution provider for different engineering departments.

Intergraph 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, Intergraph CADWorx & Analysis Solutions helped Heurtey Petrochem to improve efficiency and accuracy of engineering design and analysis work processes and deliverables.
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, support modeling, and material procurement was also executed with Intergraph solutions.

Besides this, also the external piping for the heater and the skids were designed, analyzed, and procured using Intergraph solutions. Tie-in, line and valves list was obtained from Intergraph CADWorx P&ID, while CADWorx Plant Professional was used for 3D modelling, and CAESAR II for stress and support structure analysis.

During the project, eight project team members worked in CADWorx Plant Professional, whilst CADWorx P&ID and CAESAR II 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.

By using Intergraph CADWorx & Analysis, Heurtey Petrochem was able to secure the following benefits:

- 50% 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.

ABOUT INTERGRAPH PROCESS, POWER & MARINE

Soon to be known as Hexagon Process, Power & Marine, Intergraph Process, Power & Marine is the leading global provider of engineering software for the design, construction and operation of plants, ships and offshore facilities.

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