



METKA, Greece

Key Facts

Company: METKA

Website: www.metka.com

Industry: Construction, Gas, Plant Design

Country: Greece

Products Used:

- CADWorx® Plant
- CAESAR II®

CADWorx® and CAESAR II® Aid Solo METKA Engineer in Producing Accurate Models

Headquartered in Athens, Greece, METKA provides engineering, procurement and construction (EPC) for large-scale energy projects across Europe, the Middle East and North Africa. In the energy sector, METKA undertakes turnkey power generation projects and provides operation and maintenance services for power plants of diverse technologies. METKA operates facilities with state-of-the-art machinery and equipment for manufacturing mechanical equipment and complex steel fabrications for the energy, infrastructure and defense sectors.

In late 2007, Public Power Corporation (PPC) awarded METKA a construction project for a new 427-megawatt power plant from the Greek island of Evia. The project will be the largest natural gas-powered plant in Greece, with a generator using technology provided by France's Alstom.

Addressing Issues of Piping Model Accuracy

After engaging a firm to develop the design of steam piping and reviewing the design work, METKA uncovered modeling errors that compromised the model's accuracy and made it unusable. Upon further evaluation, it found that the errors were caused by manual entry of data into the beam-based element analysis software. This caused a complete loss of the work-hours spent on the faulty design, which also delayed the project schedule and increased costs. However, METKA had no choice but to start a new design project to undo those errors and produce the required deliverables for the project.

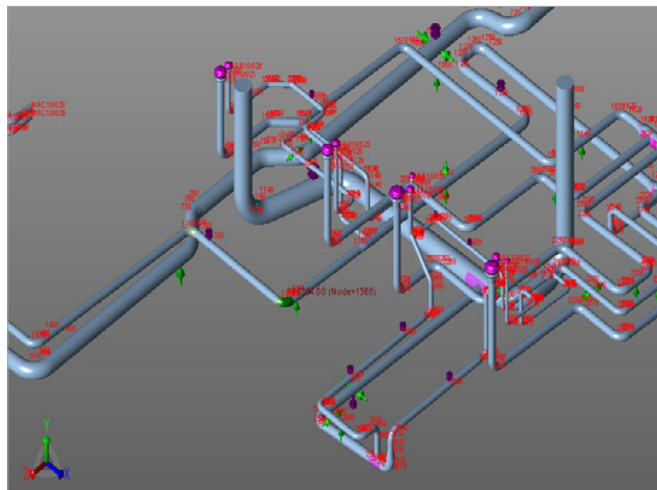
Leveraging CADWorx and CAESAR II to Help Overcome Internal Limitations

For the new project, METKA could only allocate one engineer for the redesign. Such constraints would normally cause major additional delays, but with the interface between CADWorx for the design and CAESAR II for the engineering

analysis, the single engineer had the tools to develop successful stress analysis isometric drawings and full reports in a limited time period to keep the project on schedule. With this level of collaboration, the engineer could conduct the stress analysis at each design stage to ensure an accurate model when done.

Reporting Accuracy Delivers Accurate Models

“We performed the analysis using the interface between CADWorx and CAESAR II interface,” explained Nikos Pagkratis, mechanical engineer at METKA. The full analysis reports from CAESAR II allowed for an accurate transfer of information between the piping and analysis models with easy export of the stress analysis reports to give the turbine and HRSG suppliers for verification. “We first built an accurate model in CADWorx according to the as-built isometric drawings and then entered the piping into CAESAR II to perform the stress analysis,” Pagkratis added. “The accurate steam piping analysis provided by the CADWorx and CAESAR II interface allowed us to ensure an absolutely accurate model and to confidently continue this project and move on to the hot commissioning of this combined cycle power plant.”



About Hexagon

Hexagon is a global leader in sensor, software and autonomous solutions. We are putting data to work to boost efficiency, productivity, and quality across industrial, manufacturing, infrastructure, safety, 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.

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