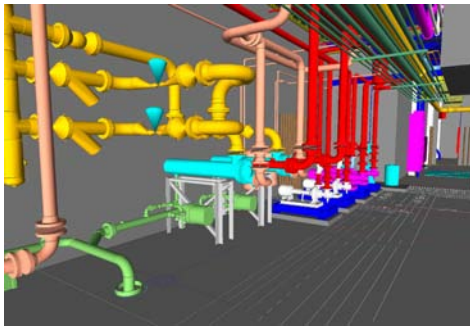
CASE STUDY

COADE Plant Focused. Industry Driven.SM



Isometric view of a reheat system

"CADWorx produces deliverables in AutoCAD file formats, allowing me to edit them to produce clean drawings ready to send to my customers."

"I have been using AutoCAD for 20 years and am very fast. But there's no way that I can come close to the speed that even my less experienced designers can achieve with CADWorx."

PRODUCT INDEX

CADWorx® Plant Professional
CADWorx® Steel Professional
CADWorx® Design Review
CADWorx® ISOGEN
CADWorx® Equipment

INDUSTRIES SERVED

- Building and Infrastructure
- Retrofits and As-builts

3D Model helps develop accurate deliverables at Piping Layout Consultants

Prospering in the highly competitive plant design market

Piping Layout Consultants, Inc. (PLC), Louisville, Kentucky, engineers, designs and installs industrial equipment and piping systems. The company has prospered through its ability to deliver quality piping plans, sections and isometrics for shop fabrication and field support projects, on time and under budget.

PLC is responsible for delivering piping isometrics (ISO's) to the shop for fabrication and plan drawings to the construction managers for putting the project together. "Our intent is 100% fit-up," said Keith McKinney, president of PLC. "We try to come as close to that as humanly possible." One of the company's larger recent projects involved designing a piping system for a Greenfield biodegradable plastics plant with 56,000 foot-length of pipe and 6,000 man-hours of design work.

Need to automate the plant design process

When PLC was founded in 1980, the company's designers worked on drafting boards. PLC began using AutoCAD in the late 1980's to produce plans, sections and ISO's. "There are no connections in vanilla AutoCAD between plans and sections, so they have to be drawn and modified simultaneously if they are to remain in step with one another. The ISO had to be produced from scratch, and each project took eight to nine hours per delivered ISO," McKinney said.

PLC decided to move to 3D software designed specifically to automate the plant design process. "CADWorx Plant Professional is ideal for engineering service firms because it is based on AutoCAD, which means our customers can open our deliverables," McKinney explained. "CADWorx is economical yet offers many features, including collision checking, automatic ISO's, bills of material, model walkthrough capabilities, links to stress analysis and stress isometrics."

Precise deliverables for complex piping systems

CADWorx has enabled PLC to move to a 3D design process in which designers enter each part of the design only once, and each deliverable is produced directly from the 3D model. Each drawing element can be checked once for all design views. Designers can adjust the design, and the software will update all views accordingly. "We use the CADWorx review capabilities to check the model for fit and to present it to our customer," McKinney said. "We use the model to create plans, sections, ISO's, steel fabrication plans, equipment arrangements, and other deliverables, all of which are highly accurate, even for the most complex piping systems, with rolls and bends."

Designers' output doubles

"CADWorx reduced the time required per delivered ISO to about 4 to 4½ hours for typical renovation and expansion projects," McKinney explained. The time includes: measurements, meetings, field work, setting up, etc. PLC completed the Indiana Colts football stadium, a Greenfield project, in 2.8 to 3.0 hours per delivered ISO. "Overall, CADWorx enables our 10 designers to produce the work of 20 using traditional methods," McKinney concluded.

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