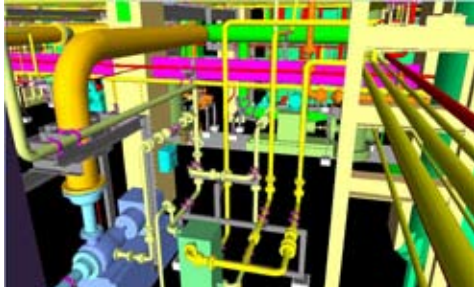


CASE STUDY



CADWorx & Analysis Solutions



CADWorx Plant Professional helps Mech-Tech cut design costs by 25%

Providing design and engineering services worldwide

Mech-Tech Projects (Mech-Tech) provides design and engineering services to diverse sectors such as pulp and paper, water treatment, power, petrochemical, and oil and gas. The firm's engineering disciplines encompass piping, civil and structural, electrical, and instrumentation. From its office in Houston, Texas, and other locations worldwide, the firm's 100+ engineers serve such well known clients as Metso, Babcock, Acciona, Isolux, and Sener.

Engineering fiber line project for wood pulp

Mech-Tech was awarded a fiber line project for an elemental chlorine-free bleached 450 tons-per-day wood pulp mill. The firm provided detailed engineering for mechanical, piping, pipe supports, pipe flexibility analysis, cable trays routing, pipe racks, and operating platforms and walkways, plus engineer 1,450 pieces of controls and instrumentation equipment.

Challenging scope and complexities

Project challenges included, a short project time frame of only seven months, and the fitting in of 14,082m (46,200 ft) of pipe within an area of only 101m by 66m (330 ft by 215 ft). Also because equipment was located inside and outside of the building, which was of reinforced concrete and steel construction, this made it more complicated to tie processes together. Intergraph® CAESAR II® was used for pipe flexibility analysis for 1,200 pipelines with diameters ranging from 15mm to 600mm.

Choosing collaborative CADWorx Plant solutions

Mech-Tech selected Intergraph CADWorx® Plant Professional for the project. The firm's engineers learned the software quickly and became productive using CADWorx within two weeks time, outputting in the popular.dwg format.

"The links between the Intergraph plant design and analysis solutions saved us time and money, and the CADWorx Plant and CADWorx Steel integration allowed us to easily model pipe supports without an independent support module," explained A.R. Thiagarajan, CEO and the driving force at Mech-Tech. "And the ability to import and export models between CAESAR II and CADWorx without having an additional interface reduced engineering man hours by 50%."

Achieving 25% cost savings in plant design

CADWorx allowed Mech-Tech to successfully develop project deliverables, including piping layout plans and sections, piping isometrics with support, material take off (MTO) and bills of quantity for pipes and pipe fittings, nozzle orientation drawings for tank and vessels, drawings for other equipment and locations, cable tray layouts, stress analysis and specification MTO.

It is often assumed that such projects cannot be designed and engineered using AutoCAD®-based solutions such as CADWorx. "We convinced our client in using CADWorx for this challenging task, successfully completing and delivering to the total satisfaction of our client without compromising on final deliverables," added Thiagarajan. This project delivered time and cost savings for Mech-Tech Projects, thereby making the company more cost competitive in the market. "We produced a 25% cost savings in the plant design," concluded Thiagarajan.

"The links between plant design and analysis solutions saved us time and money, and the CADWorx Plant and CADWorx Steel integration allowed us easily model pipe supports without the independent support module"

A.R. Thiagarajan, CEO at Mech-Tech

PRODUCT INDEX

Intergraph® CADWorx® Plant
Intergraph CADWorx Steel
Intergraph CADWorx Equipment
Intergraph CADWorx Design Review
Intergraph CAESAR II®

INDUSTRIES SERVED

• Pulp and Paper

FEATURED RESELLER

KLG

India

CADWorx and Analysis Solutions, Intergraph Process, Power & Marine

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