

## FACTS AT A GLANCE

**Company:** Rishabh Engineering

**Website:** [www.rishabheng.com](http://www.rishabheng.com)

**Description:** Rishabh Engineering (Rishabh), a division of Rishabh Software, provides multi-disciplinary engineering services to the oil and gas, chemical, petrochemical, power, water and wastewater, and utility industries. Clients include global engineering, procurement, and construction (EPC) companies, detailed engineering contractors, original equipment manufacturers, fabricators, and surveying companies.

**Industry:** Power

**Country:** India

## PRODUCTS USED

- CADWorx® Plant Professional
- CADWorx P&ID
- CAESAR II®

## KEY BENEFITS

- Overcame inefficiencies in engineering and modeling.
- Reduced modeling work hours by 30 percent.
- Increased overall productivity by 20 percent.
- Recorded more than 95 percent accuracy.

## RISHABH ENGINEERING DELIVERS MODERN POWER TO AFGHANISTAN USING CADWORX®

**EPC creates fast turnaround 3D model for power plant facility on tight schedule**

### IDENTIFYING GOALS

The United States Agency for International Development (USAID) contracted with the Louis Berger Group/Black & Veatch Joint Venture to build the modern 105 MW Tarakhil Power Plant in Kabul, Afghanistan. It appointed Oilfield Supply Centre as the EPC with Rishabh to provide field engineering and an intelligent 3D model for the entire plant, including piping, equipment, civil, and structural.

Covering almost one square mile, the project consists of 18 diesel engine generators of 5.8 MW each housed in three power blocks containing six generators. Each is capable of collectively producing 105 MW of electricity.

### OVERCOMING CHALLENGES

“Prior to using Intergraph® integrated solutions, we often experienced project delays with missed deadlines,” explained Arpit Gupta, assistant manager of Business Development at Rishabh.

These added engineering work hours were due to the inherent inefficiencies from the systems being used and caused lost opportunities for the firm and its clients.

The Tarakhil project was also on a very tight schedule, and there were severe environmental problems at that site that had to be addressed.

Using Intergraph CADWorx® Plant and CADWorx P&ID, Rishabh first completed a site survey of the power plant facility to collect the data required for the piping routing and 3D modeling. Equipment modeling included the diesel engine, generator, thermal boiler, storage tanks, and numerous other installations.

Structural modeling covered the engine, radiator, pipe rack, pipe trench, unloading station, and loading bay. Rishabh also modeled the complete piping arrangement and physical supports.

## REALIZING RESULTS

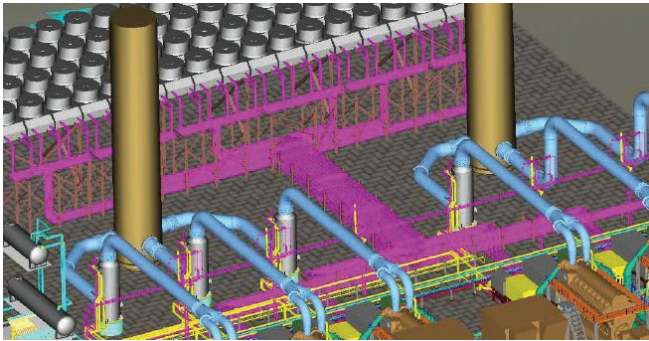
With these Intergraph solutions, Rishabh was able to overcome these issues while addressing the project's challenges, greatly reducing schedules while increasing accuracy. The CADWorx integration with CAESAR II® for piping analysis enabled interdisciplinary model reviews with the client and made clash detection easy. Rishabh used CADWorx to automatically extract layouts and piping isometrics, saving considerable time.

"CADWorx reduced the modeling labor hours by 30 percent, increasing overall productivity by 20 percent," Gupta said.

"We also achieved over 95 percent accuracy, extracting bills of material automatically from the model."

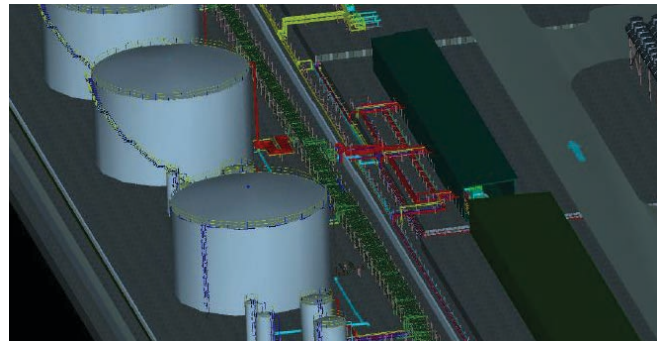
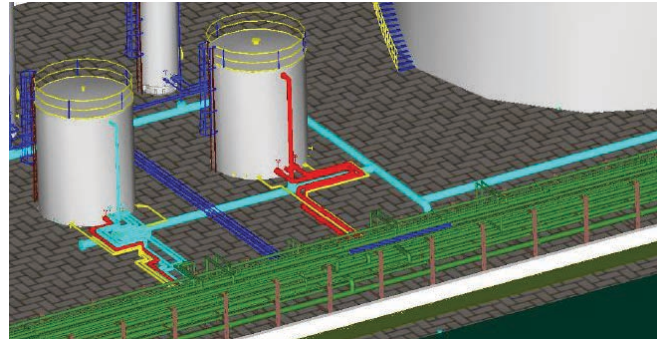
CADWorx helped Rishabh to meet the project's tight deadline and delivered a fully satisfied client.

"Intergraph has very reliable software. We can trust CADWorx to complete our project in the given timeline," said Gupta.



## AWARD-WINNING PROJECT

Rishabh received the 2016 CADWorx Drivers of Success Award for its use of the software. The annual Drivers of Success competition recognizes innovative applications of Intergraph products, impressive project results, and significant benefits from collaboration among disciplines and the integration of the products.



## ABOUT INTERGRAPH PROCESS, POWER AND 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.

Hexagon Process, Power & Marine is part of Hexagon (Nasdaq Stockholm: HEXA B; hexagon.com), a leading global provider of information technologies that drive quality and productivity improvements across geospatial and industrial enterprise applications.

