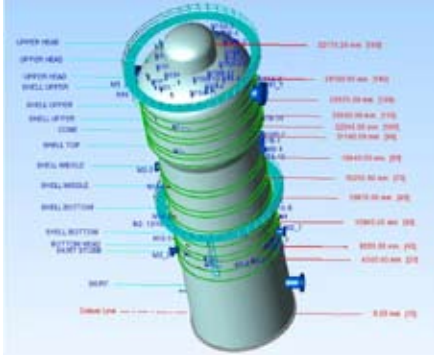


CASE STUDY

CADWorx & Analysis Solutions



"We found that PV Elite calculates actual weight and center of gravity more accurately, which allows us to eliminate the time-consuming practice of manual calculations."

Dhanaji Jadhav, Manager of Design and Analytical cell at L&T HE

PRODUCT INDEX

Intergraph PV Elite®

INDUSTRIES SERVED

- Chemical & Petrochemical
- Refineries & Fertilizers



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L&T's Heavy Engineering IC succeeds with PV Elite in their Multi-Project Environment

Headquartered in Mumbai, India and serving clients in 40 countries, Larsen & Toubro's Heavy Engineering IC (L&T) designs, engineers and manufactures equipment and systems for clients in the oil and gas, refinery, cracker, coal gasification, petrochemical, fertilizer, and related sectors. This includes thermal and mechanical design, engineering and stress analysis, procurement, project management, logistics and specialized services. Leveraging Intergraph PV Elite, L&T has successfully designed pressure vessels and heat exchangers for refineries and fertilizer and petrochemical plants plus of related equipment and facilities.

Providing versatility for a wide range of projects

L&T has found PV Elite to be versatile on a wide range of projects, including designing the largest ACN Reactor for a petrochemical project in Thailand, an ammonia converter vessel with 250 mm shell thickness for a fertilizer plant in Thal, India, and a 460 mm thick tubesheet for the synthesis loop waste heat boiler for a fertilizer plant at Sohar, Oman.

Addressing custom code requirements

To ensure an efficiently designed project, L&T customers often specify non-code requirements. "With PV Elite, we can complete full vessel designs, even those including custom codes, eliminating the need of other supporting software or custom spreadsheets for the calculations," explained Dhanaji Jadhav, manager of the Design and Analytical cell at L&T HE. "PV Elite provides everything, including the design of non-pressure parts such as trunnions and base rings."

Calculating accurate weight and center-of-gravity

Estimating weight and center of gravity accurately are critical for transportation and handling. "We found that PV Elite calculates actual weight and center of gravity more accurately, which allows us to eliminate the time-consuming practice of manual calculations," said Jadhav.

Automating bills of material

In order to complete projects on time, bills of material must be placed as early as possible. This requires preliminary design approval from the client and third-party inspecting agencies. Because PV Elite is accepted across wide industry sectors, L&T can share the same files with both customers and inspecting agencies, expediting these approvals and speeding up the orders.

Speeding up design and proposals with PV Elite

PV Elite's user-friendly interface allows new engineers to learn and become productive within one week, with the department working at peak capacity. This allows L&T to evaluate 400 or more designs annually, and accurate calculations and quick iterations during design has helped them reduce the design cycle time substantially. When developing proposals for a competitive bidding, timing is also critical. "Our engineers are able to carry out iterations quickly and submit the bids on time," added Jadhav. "Faster design helps us submit more bids and increase our client orders."