



LARSEN & TOUBRO HEAVY ENGINEERING, OMAN

Key Facts

Company: Larsen & Toubro Heavy Engineering

Website: www.larsentoubro.com/heavyengineering

Industry: Oil & Gas

Country: Oman

Products Used:
PV Elite®

Key Benefits:

- Expedited design reviews with 3D model to save time
- Handled many nozzles, platforms, internals, and pipe loading, along with many code design conditions
- Performed fast calculations and better controlled revisions
- Checked for any clashes with 3D capabilities to finalize locations of nozzles to accommodate piping requirements
- Impressed clients using 3D PDF feature that helped them understand the complete design package

LARSEN & TOUBRO HEAVY ENGINEERING DESIGNS COMPLEX REFINERY WITH PV ELITE®

EPC completes large diameter, high pressure columns under tight deadline for Oman project

Larsen & Toubro Heavy Engineering (L&T) manufactures and supplies custom-designed equipment and critical piping to process industries such as fertilizer, chemical, refinery, petrochemical, and oil and gas, as well as to sectors such as thermal and nuclear power, aerospace, and defense.

IDENTIFYING GOALS

L&T was assigned the design and manufacture of five large diameter, high pressure columns for a refinery facility in Liwa, Oman. The project required complete mechanical design and fabrication per ASME Sec VIII Division 1 and 2 codes and included the nozzles, platforms, internal components, pipe loading, and other elements. The columns had diameters ranging from 2.9 m to 4.5 m and lengths of 26 m and 30 m.

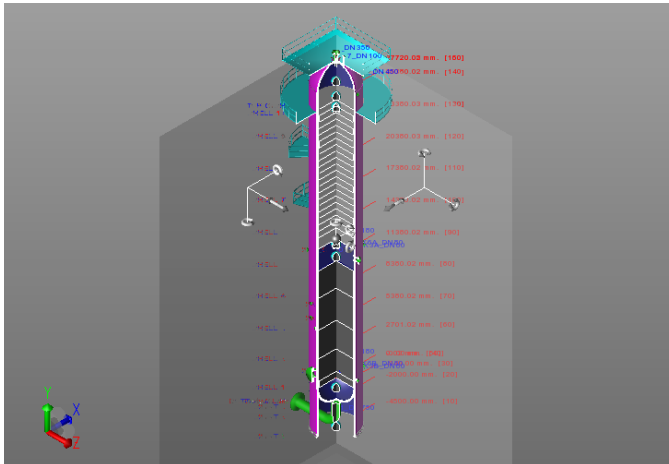
The company has extensive experience in the design and manufacturing of critical process equipment, including pressure vessels. It is challenging to design such large-sized columns – the heart of the entire refinery – while addressing the many design conditions of the client and following the international code requirements to ensure safe operation. In addition, the contract delivery date was very stringent.

OVERCOMING CHALLENGES

“With a project of such large size and complexity in design, PV Elite® helped us to efficiently resolve various calculations and double-check possible conditions for our client,” said Apurva Patel, assistant manager of Engineering at L&T.

Meeting deadlines is very important for manufacturers if they are to satisfy the client’s requirements and build trust for future business opportunities.





“Without PV Elite software, we would have experienced delays at the start of the project that would impact the whole subsequent manufacturing cycle time due,” explained Patel.

This would cause a loss of money and lower the level of trust of the client in the firm’s capabilities. The large complex design benefited from the PV Elite 3D model, which allowed for checking for clashes and other issues before preparing the drawings. L&T could then finalize the locations of nozzles to accommodate piping requirements.

REALIZING RESULTS

L&T designed complete equipment with all related design conditions and represented supporting calculations for review by the client and any third-party inspectors assigned to that task. With PV Elite, L&T was able to deliver client requirements within the planned timeline and receive the milestone payments from the client as scheduled.

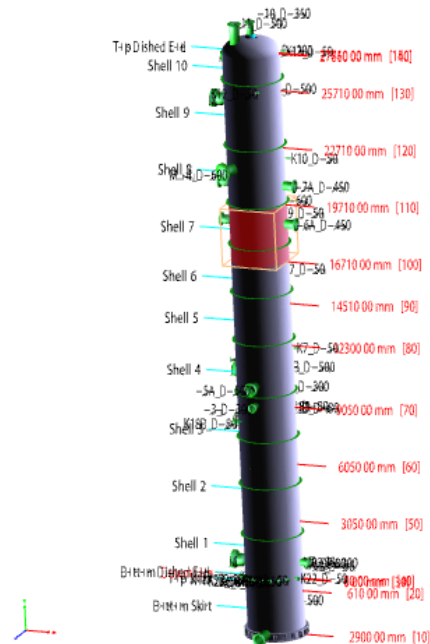
PV Elite provided fast and convenient calculations and control of the various revisions required by the client, saving time and expense. The company was able to reduce design time with PV Elite’s user-friendly interface and accurate output.

“The software’s 3D PDF feature impressed the client. This enabled our client to feel and understand the complete design package,” Patel said.

“PV Elite helps to enhance the firm’s reputation with clients across the globe.”

AWARD-WINNING PROJECT

L&T received the 2016 PV Elite Drivers of Success Award for its use of the software. The annual Drivers of Success competition recognizes innovative applications of Hexagon PPM products, impressive project results, and significant benefits from collaboration among disciplines and the integration of the products.



ABOUT HEXAGON PPM

Hexagon PPM is the world’s leading provider of asset life cycle solutions for design, construction, and operation of industrial facilities. By transforming unstructured information into a smart digital asset, our clients are empowered to visualize, build, and manage structures and facilities of all complexities, ensuring safe and efficient operation throughout the entire life cycle.

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