



## L&T CHIYODA LIMITED, INDIA

### Key Facts

**Company:** L&T Chiyoda Limited

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

**Industry:** Chemical, Petrochemical, Refineries, Fertilizers

**Country:** India

**Products Used:**

- PV Elite®

### L&T CHIYODA ADDRESSES MEGA PROJECT CHALLENGES WITH PV ELITE®

L&T Chiyoda Limited (LTC) is an engineering consultancy company formed by Larsen & Toubro Limited of India and Chiyoda Corporation of Japan, world leaders in engineering, construction and related fields. LTC specializes in design and detailed engineering for projects such as petroleum refining, petrochemicals, chemicals, fertilizers, oil and gas and LNG and LPG facilities.

To meet project requirements, LTC uses various software packages for the automation of engineering and design processes, ranging from drafting software to high-end intelligent software that makes engineering easier, faster and more accurate. These programs include PV Elite®, CodeCalc (now part of PV Elite) and other engineering and design.

### ADDRESSING THE CHALLENGES OF A COMPLEX PETROCHEMICAL MEGA PROJECT

For this complex and ongoing petrochemical mega project, LTC provided engineering and design for static equipment such as pressure vessels, shell and tube heat exchangers, columns, reactors, and filters. The scope of work includes the design and detailed engineering, including process, piping, civil, equipment, electrical and instrumentation engineering through 3D Modeling.

### DEVELOPING ACCURATE, ON-TIME DELIVERABLES WITH PV ELITE

LTC developed very complex ASME code calculations for this project such as minimum design metal temperature, maximum allowable working temperature, maximum allowable pressure, external pressure, center-of-gravity and wind and seismic design for a wide variety of design codes using PV Elite. The CodeCalc module provides fast component analysis when not designing a complete vessel or heat exchanger.



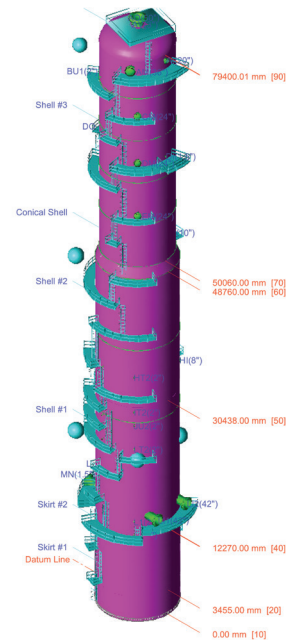
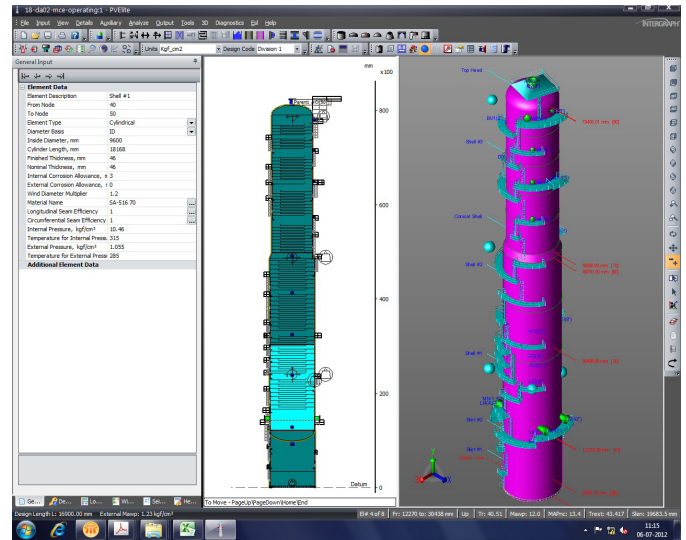
One of the larger pieces of equipment was a column with dimensions of 9,600 X 8,700 mm and a length of 82,000 mm. The fabricated weight was 1,007 tons, with an operating weight 2,575 tons and a hydro-test weight of 5,834 tons. Due to the column's size, it was fabricated in one piece, cut into two pieces, shipped to the site and welded back together on site.

## BENEFITING FROM DESIGN AUTOMATION

"We found PV Elite very user-friendly with its detailed reports and help compared to other similar software available in the market," said Mitul Patel of LTC. PV Elite does design calculations per ASME, PD-5500, EN-13445 and WRC standards and provides a wide variety of wind and seismic design codes for international project requirements. "The software is up-to-date with the latest codes, addenda and interpretations so we can avoid manual and spreadsheet-based calculations," Patel added. The software's NozzlePro finite element analysis (FEA) run directly from PV Elite makes analysis easy. "These levels of automation help us meet dates in fast track engineering projects. Also, various suppliers and clients use PV Elite which allows us easy comparison and approval of design calculations," Patel said.

## AVOIDING DELAYS IN ISSUING ENGINEERING DELIVERABLES

In the highly competitive engineering sector business scenario, using the latest tools and software such as PV Elite helps LTC maintain schedules. "We can minimize chances of errors that can occur with manual and spreadsheet calculations and avoid delay in issuing engineering deliverables. In short, we cannot imagine the design of static equipment without PV Elite," concluded Patel.



## ABOUT HEXAGON

Hexagon is a global leader in sensor, software and autonomous solutions. We are putting data to work to boost efficiency, productivity, and quality across industrial, manufacturing, infrastructure, safety, and mobility applications.

Our technologies are shaping urban and production ecosystems to become increasingly connected and autonomous — ensuring a scalable, sustainable future.

Hexagon's PPM division empowers its clients to transform unstructured information into a smart digital asset to visualize, build and manage structures and facilities of all complexities, ensuring safe and efficient operation throughout the entire lifecycle.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 20,000 employees in 50 countries and net sales of approximately 3.8bn EUR. Learn more at [hexagon.com](https://www.hexagon.com) and follow us @HexagonAB.