



CASE STUDY

Tecnimont chooses Octave Aspect Pressure Vessel to create complex vessels for petrochemical expansion project



Key facts:

Company: Tecnimont Private Limited

Website:
www.tecnimont.it

Industry: Chemical, Petrochemical

Country: India

Octave products used:
Aspect Pressure Vessel
(PV Elite)

Headquartered in Mumbai, India, Tecnimont Private Limited (Tecnimont) is a leading global engineering, procurement and construction (EPC) company with extensive experience in large, complex turnkey projects. An integral part of the Maire Tecnimont Group, the company has provided world-class solutions, catering to clients in oil and gas, petrochemical and fertilizers, power generation and infrastructure projects. With offices in New Delhi, Abu Dhabi and Jeddah, Tecnimont has more than five decades of experience in multidiscipline engineering services. The company focuses on high-quality and planning standards while committing to timely project implementation.

Identifying goals

The Reliance Industries Limited Jamnagar Project in India is designed to increase the production capacity of ethylene and other petroleum products at the complex. The third phase of the project, known as J3, includes expanding Jamnagar's gasification plants, ethylene cracker

complex and paraxylene plant. Tecnimont was selected for the complete engineering and engineering detail.

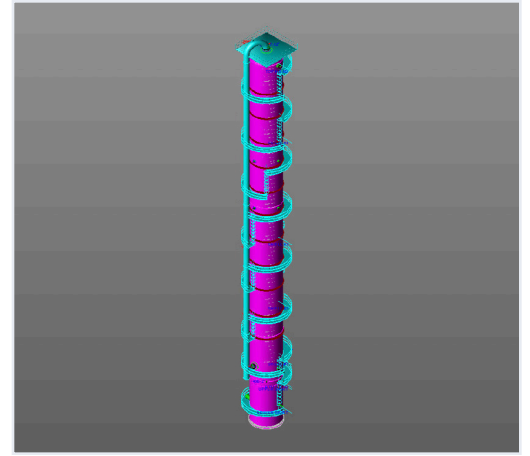
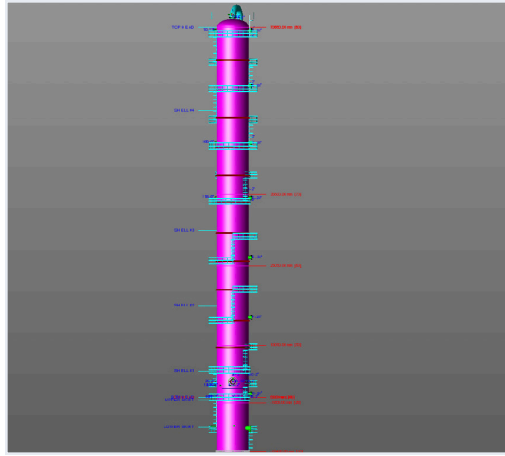
Overcoming challenges

The project's short deadlines were a major challenge, in part due to the numerous extremely large columns that had to be erected within the stipulated time frame. Assembling the column components horizontally was the only approach, given the tight schedule. This meant assembling internal components (trays, packing, etc.) and external attachments such as platforms and ladders.

Lifting a column that is dressed up can be a major challenge because the center of gravity must be calculated in three dimensions (3D) due to the non-symmetrical weight at various edges. The team had to consider each internal and external attachment's weight individually and then create a single model.

Key benefits:

- Met tight deadlines, earning client satisfaction
- Assembled large, complex vessels horizontally and then successfully lifted them to the vertical position, considering center-of-gravity calculations
- Reduced projects costs



Realizing results

Using Aspect Pressure Vessel, Tecnimont generated weights of all internal and external components individually, then calculated the 3D center of gravity for the entire model with attachments and internal components. The software's multiple tools saved significant time on larger length and diameter equipment design.

Time is the major concern for all projects, and with the help of Aspect Pressure Vessel, Tecnimont completed the project within the tight schedule and on time.

"Aspect Pressure Vessel is the only solution that can model all attachments in a single model for analysis."

Arpita Shah
Principal engineer,
Tecnimont

"It was really a very big achievement for our company because we were able to successfully determine the dressed-up column for lifting with one calculation. Aspect Pressure Vessel proved to be a fast and economical solution."

Arpita Shah

About Octave

Octave is a leader in enterprise software, turning data into decisive action and intelligence into your edge. Our software solves for and simplifies complexity, from the design and build to operations and protection of people, property and assets – for any scope, at any scale. For decades, we've partnered with customers to sharpen performance, elevate efficiency and amplify results. From factory floors to entire cities, our solutions are tuned to scale up what's possible from day one onward.

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