

Techin Process Technologies Pvt Ltd, India

Key Facts:

Company: Techin Process Technologies Pvt Ltd

Description: Techin offer process plant design and engineering services to clients based in India and overseas

Employees: 50+

Industry: Fine Chemical, Specialty Chemical, Petrochemical, Tank Farms, Garment, Civil Engineering

Country: India, the Middle East

Products Used:

- CADWorx Plant Professional
- CAESAR II
- BricsCAD

Key Goals:

- Short learning curve and fast adoption of CADWorx when changing from other CAD solutions
- User friendliness and excellent training and support
- Competitive pricing of solutions
- Solutions interface easily together, increasing efficiency and ensuring accuracy of designs and compliance with design codes

Techin Process Technologies Changes to Hexagon's CADWorx Solutions to Gain Accuracy and Ease Of Use

Identifying Goals

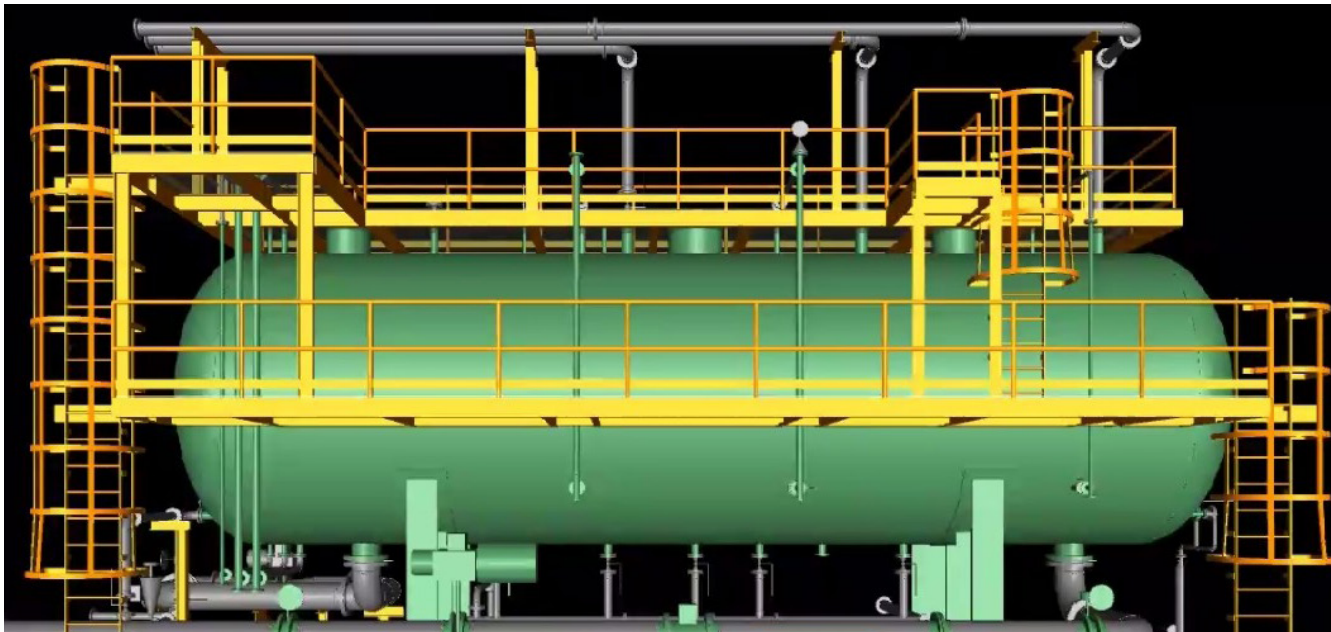
Techin Process Technologies Pvt Ltd, based in Mumbai, India, is a design and engineering services company supporting the delivery of varied types of process plant design projects for their clients. The company was selected for a brownfield project to design a distillation complex for a chemical plant in India.

Techin required solutions that would enable them to produce highly detailed designs whilst supporting collaboration between civil, piping, and mechanical design teams working on the project. The client emphasized the need for safety to be engineered into the design and a wish to avoid construction errors that would impact on the cost and delivery time frame of the project.

The project's goal was to create the detailed 3D design of the distillation complex, including distillation columns, cooling plant, heater exchangers and reactors in a 9-month time frame. This upgrade would allow Techin's client to increase chemical production at the plant.

Overcoming Challenges

The key challenge for the project was ensuring the safety standards of the design were maintained, and the project would be completed with minimal errors. With this in mind, Techin needed software solutions that would enable them to produce accurate high-quality designs. Because of the tight time frame, Techin needed solutions that would easily interface and work together thereby increasing productivity and enabling on-time project delivery. User-friendliness and cost were also other key considerations that affected their selection process. After evaluation of different solutions, Techin felt it was time to make the switch from other CAD solutions to CADWorx Plant Professional from Hexagon.



An example of chemical equipment and structure platform designed in CADWorx Plant Professional.

Already being familiar with other CAD software, switching to CADWorx was a smooth and swift transition. Techin's designers and engineers attended short, tailored training courses to gain initial familiarization. The team found that they were able to quickly adopt CADWorx as a replacement solution and begin their work in a matter of days. The ease of use, broad capabilities offered and flexibility of the CADWorx software also helped save both time and resources during the project.

Realizing Results

The project began with the conceptual design. This involved utilizing CADWorx Plant Professional and BricsCAD to develop the initial 3D design. Techin's client had emphasized a design with minimal construction errors and that safety and industry standards must be met.

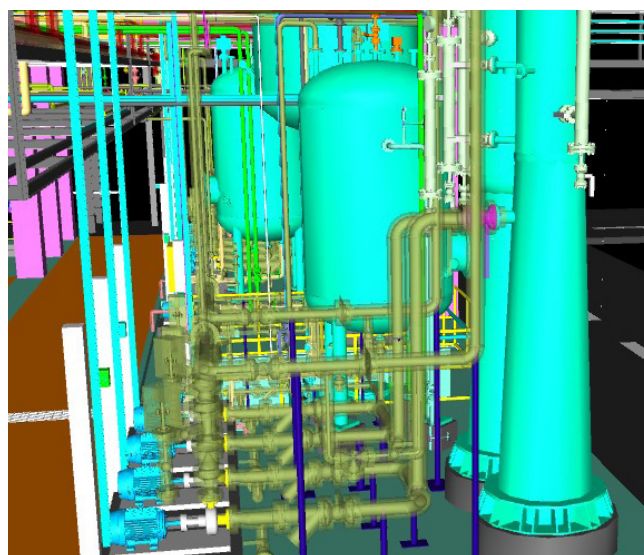
These factors were taken into consideration for the distillation complex design. Techin had regular meetings with the client to talk through the process, requirements, and to review the conceptual design, to gain feedback and refine details.

Detail design of equipment and piping was created in CADWorx Plant. The client provided the process design and piping specifications to Techin's design team. The design detail included modelling of small-bore piping down to 1" in size. Civil graphical design electrical cable trays and instruments were also included in the 3D design.

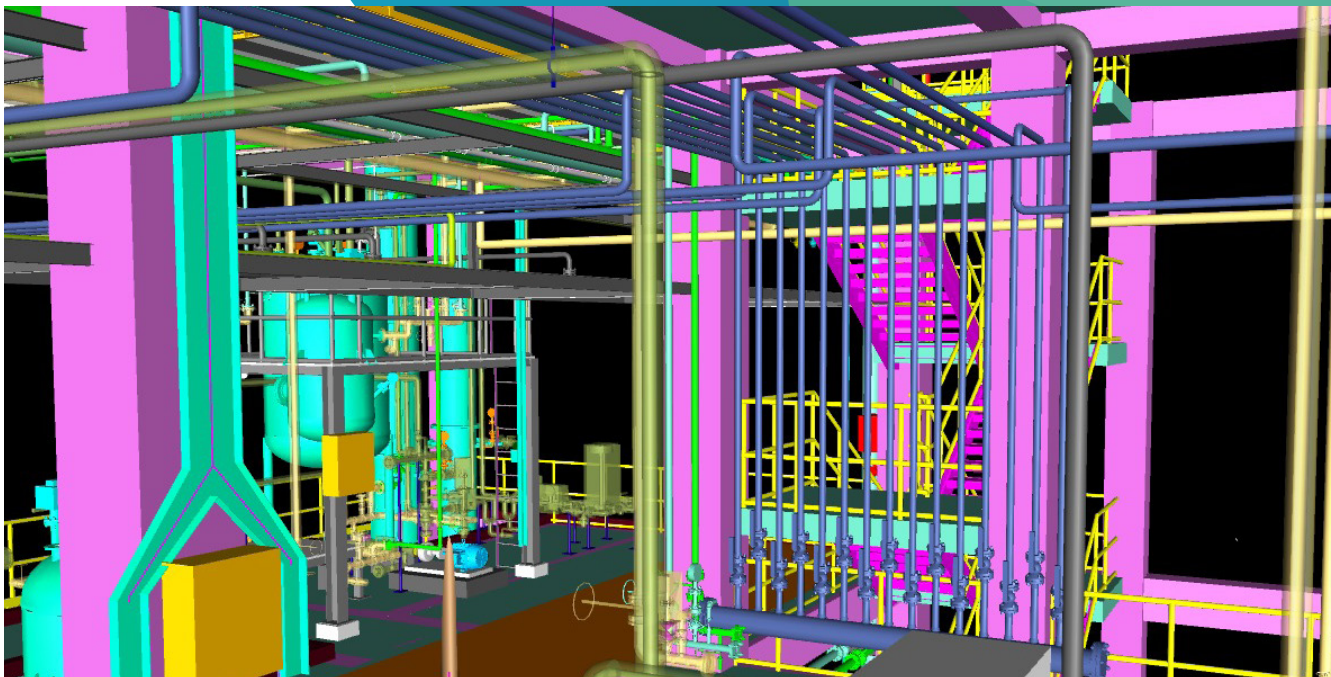
Stress analysis was the next stage of the project. The detailed analysis was carried out in CAESAR II, with files seamlessly transferred from CADWorx for analysis.

The ability to produce highly detailed designs combined with a short learning curve enabled our team to hit the ground running and start working immediately. Efficiency and accuracy are key to our clients and utilizing Hexagon solutions enables us to fulfill this requirement."

Johnson George
Director
Techin Process Technologies Pvt Ltd



An example of the chemical process 3D piping designed in CADWorx Plant Professional.



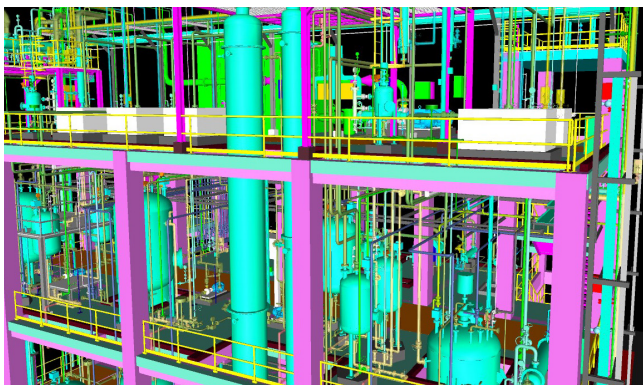
An example of a 3D model with multiple disciplines designed in CADWorx Plant Professional.

By utilizing CAESAR II, Techin could run the tests in accordance with more than 35 international piping coding standards and equipment guidelines. After the stress analysis, some route changes were required, and re-modeling was performed in CADWorx Plant. The finalized piping design met safety and code stress requirements.

Post-construction, based on site mark-ups, Techin raised the 3D design model to as-built status for the client. The distillation complex's design was completed on schedule, meeting the deadline and the client's demand for an accurate and safe design to be produced for their plant

Moving Forward

Techin chose Hexagon solutions because of their user-friendliness, ability to create detailed, accurate designs, and integration capabilities of CADWorx Plant Professional and CAESAR II. They were able to carry out the detailed design of the client's chemical distillation complex quickly and accurately, minimizing errors and ensuring safety compliance.



An example of a 3D model with multiple disciplines designed in CADWorx Plant Professional.



Switching from other CAD solutions to Hexagon's CADWorx and Analysis Solutions was an easy decision. Integration, productivity, and user-friendliness are three key benefits we gained by making the change to Hexagon solutions."

Johnson George

Director

Techin Process Technologies Pvt Ltd

By creating error-free designs, Techin reduced re-work required in the design and construction phases of the chemical distillation complex project. This ensured the clients' satisfaction by meeting deadlines and providing an economical design.

The most significant benefit has been time savings achieved through the optimization of work processes during the project. The integration and flexibility between Hexagon solutions ensured the accuracy and productivity of processes for the team and Techin's client. During the project, Techin found that when they did require additional support, the Hexagon Support answered quickly.

Moving forward, Techin will continue using Hexagon's CADWorx Plant Professional, CAESAR II and BricsCAD solutions in its upcoming projects to produce cost conscience projects with accuracy and ease.



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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.

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