

3D Modeling – Early production and Central Tank Battery (CTB) facilities

Key Features

Technology:

Intergraph CADWorx

AutoCAD

Navisworks Manage

Duration:

The project was completed in 2 months

Deliverables:

1. Final 3D Model
2. Key Plan Layout
3. Site Layout
4. General Arrangement Drawings
5. Isometrics
6. Bulk of Material (BOM)

The Client

A US based privately held Engineering, Procurement, Construction & Project Management company specializing in construction of heavy industrial facilities and pipelines. The company has extensive experience with oil terminals.

The Business Need

The client required 3D modeling and piping engineering of an Early Production Facility and the associated Central Tank Battery (CTB) facility. The client was working on a brownfield project involving the expansion of the processing capacity and handle the production from additional wellheads. The wellsite will have addition of 9 more wells to the existing 4 wells in production.

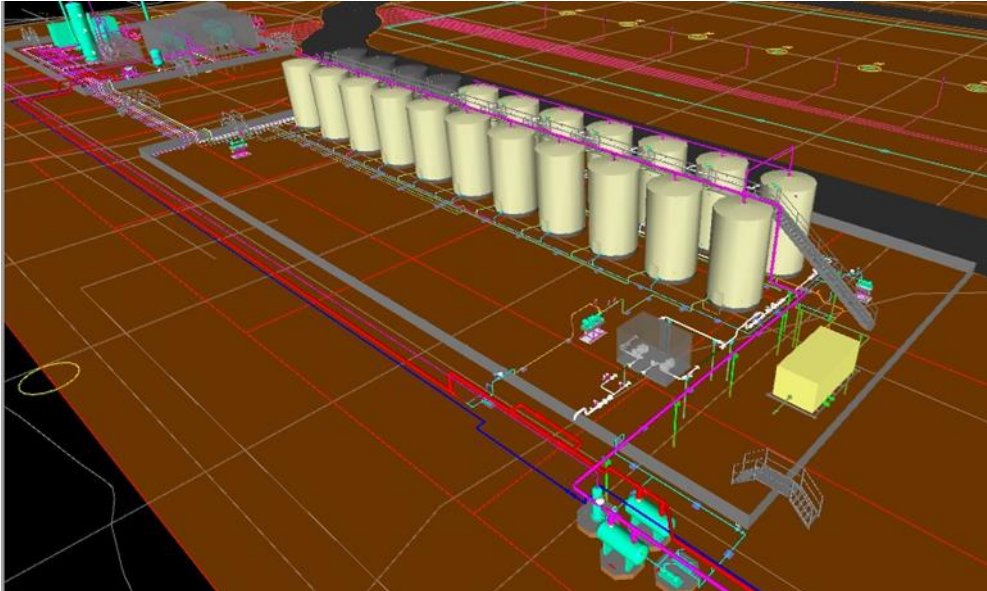
Rishabh's Solution

Rishabh Engineering was appointed to deliver the 3D modeling for the Early Production Facility and the associated Central Tank Battery (CTB) in a span of 2 months by a team of 5 (4 Designers + 1 Team Leader). The following equipment were modeled as a part of the project:

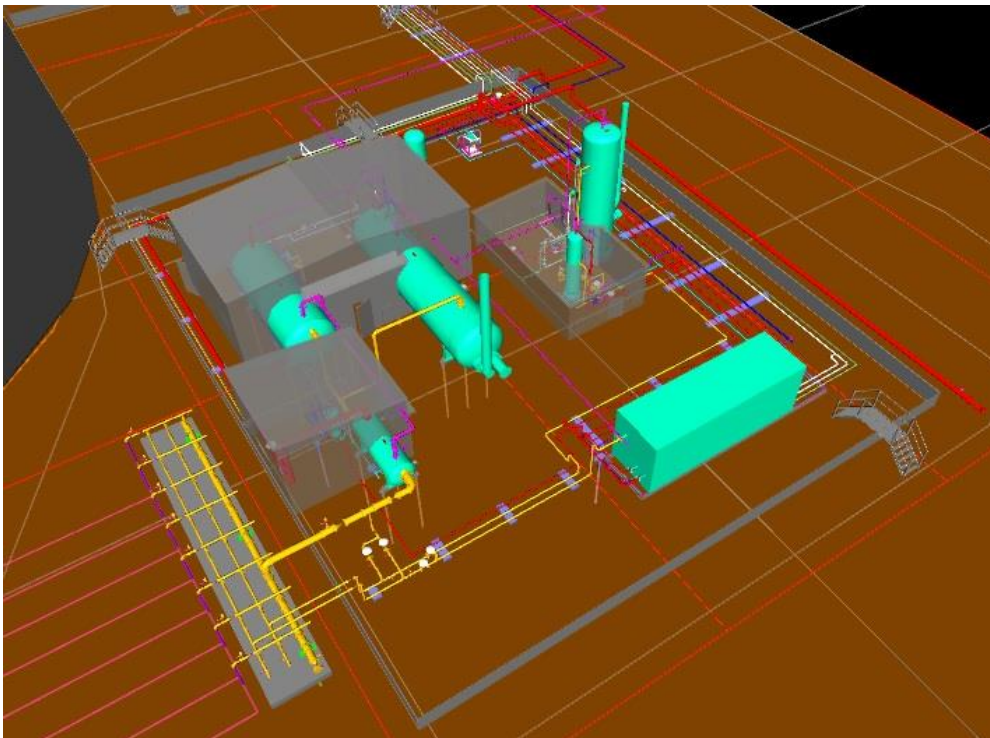
- 22 Storage Tanks – Test oil, Water and Oil
- Three Phase Separators (1 Vertical + 1 Horizontal)
- 1 vertical Two Phase Separator
- 1 Heater Treater
- 3 Fuel Gas Scrubbers
- 2 Knock Out Drums
- 1 Flare Stack

One major challenge we faced while developing 3D models was that the P & ID's were not frozen. Our team utilized pictures and videos of the existing facility to develop an understanding of how to accommodate the new equipment and route the piping around them. Since it was a brownfield project, the team was provided with updates in form of comments on P & ID's of the existing facility, which were incorporated in the model throughout the span of the project. The client required continuous communication and seamless interaction with the team for this purpose.

ASME B31.3 codes and standards were followed to deliver high quality in 3D modeling.



3D Modeling – Tank Containments



3D Modeling – Vessel Containment

Technology Used

- 3D Modeling Software – Intergraph CADWorx 2015
- Review Software- Navisworks Manage 2015
- 2D Software- AutoCAD 2015

Key Deliverables

- Final 3D Model
- Key Plan Layout
- Site Layout
- General Arrangement Drawings
- Isometrics Views
- Bill of Material (BOM)

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About Rishabh Engineering

Rishabh Engineering provides multidisciplinary engineering support services to EPC companies in industries like Oil and Gas, Petrochemical, Power and Water treatment. Our parent company, Rishabh Software is a CMMI level-3, ISO9001 and ISO27001 company that provides services in Software Development, Business Process Outsourcing (BPO) and Engineering Services Outsourcing (ESO) to clients globally. Rishabh has offices in USA, UK and India with their main delivery center in Vadodara, India.