3D Modeling for VPSA Oxygen Package for Sulphur Recovery Unit

Key Features

Technology:

Intergraph PDS

Navisworks Manage

Auto CAD

Duration:

The project was completed in a period of 7 months

Deliverables:

1. Final 3D Model in PDS
2. Isometric Drawings
3. Piping BOMs
4. Special support drawings with BOM
5. Submission of Clash report with resolution before 60% & 90% model review

The Client

A global supplier of industrial gas plants with associated technical solutions and engineering services. Our client provides engineering 360 solutions right from conceptual design to EPC (Engineering, Procurement & Construction) services, commissioning & after sales services which meet international quality and safety standards. Their product range includes Cryogenic Nitrogen Generators, Cryogenic Air Separation Units, Adsorption (Non-cryogenic) Plants, Cryogenic Storage Tanks, Cryogenic Vaporizers and Cryogenic Storage & Distribution System.

The Business Need

Rishabh Engineering was appointed to develop a 3D model of a VPSA Oxygen Package for Sulphur Recovery Unit in Intergraph PDS.

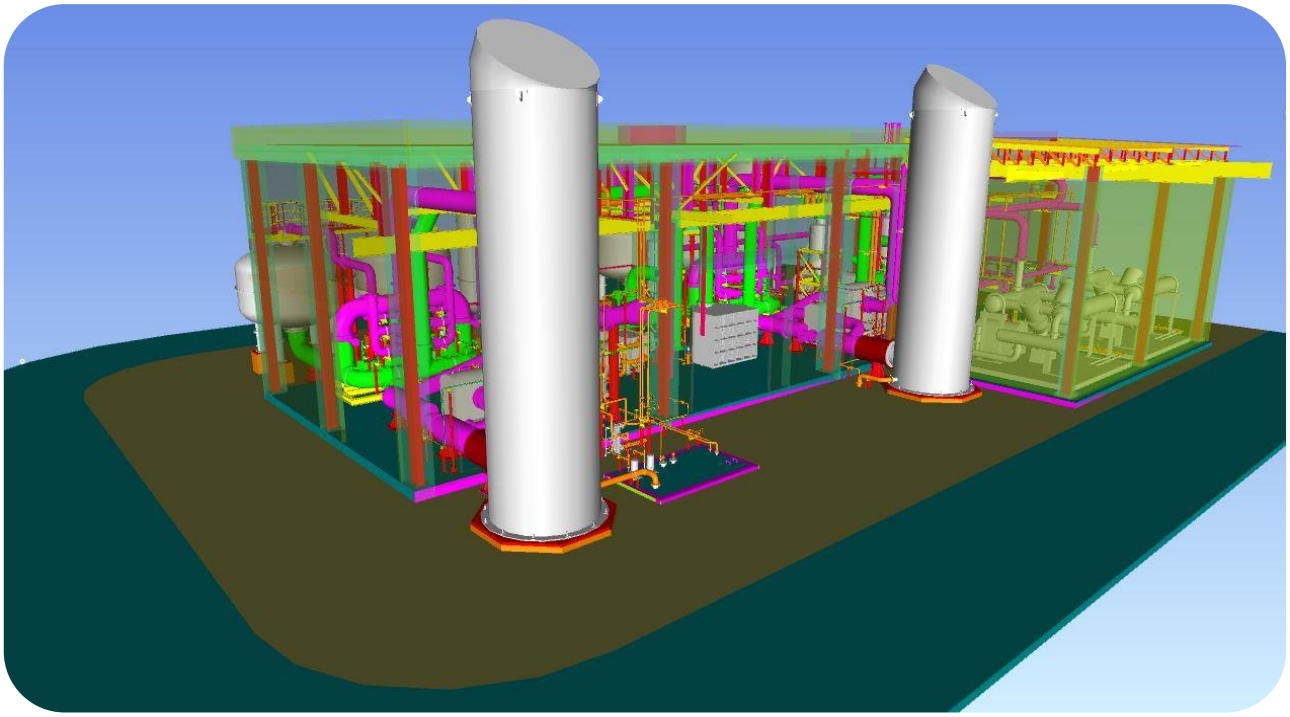
VPSA stands for Vacuum Pressure Swing Adsorption System. Oxygen gas plants following VPSA principle are highly efficient, low automation, user-friendly and have designed to meet the specific requirements. This process acquires for the production and regeneration of oxygen and extensively used for the industrial applications.

Rishabh's Solution

We developed the 3D model for the VPSA oxygen package which includes:

- Modelling of Equipment / Structural Skid / Manholes / Envelope
- Piping Modeling (**90 nos**. of lines as per updated P&ID's received)
- Skid Structural Modelling & Physical Support Modeling

- All In Line Instruments like Control Valves (With Actuator removal space), PT, TG, Orifice with tapping as per HMEL/ EIL specs
- All vessel trims with Level Bridle, the Level gauge on Vessel
- Maintenance & walkway envelopes for Clash detection



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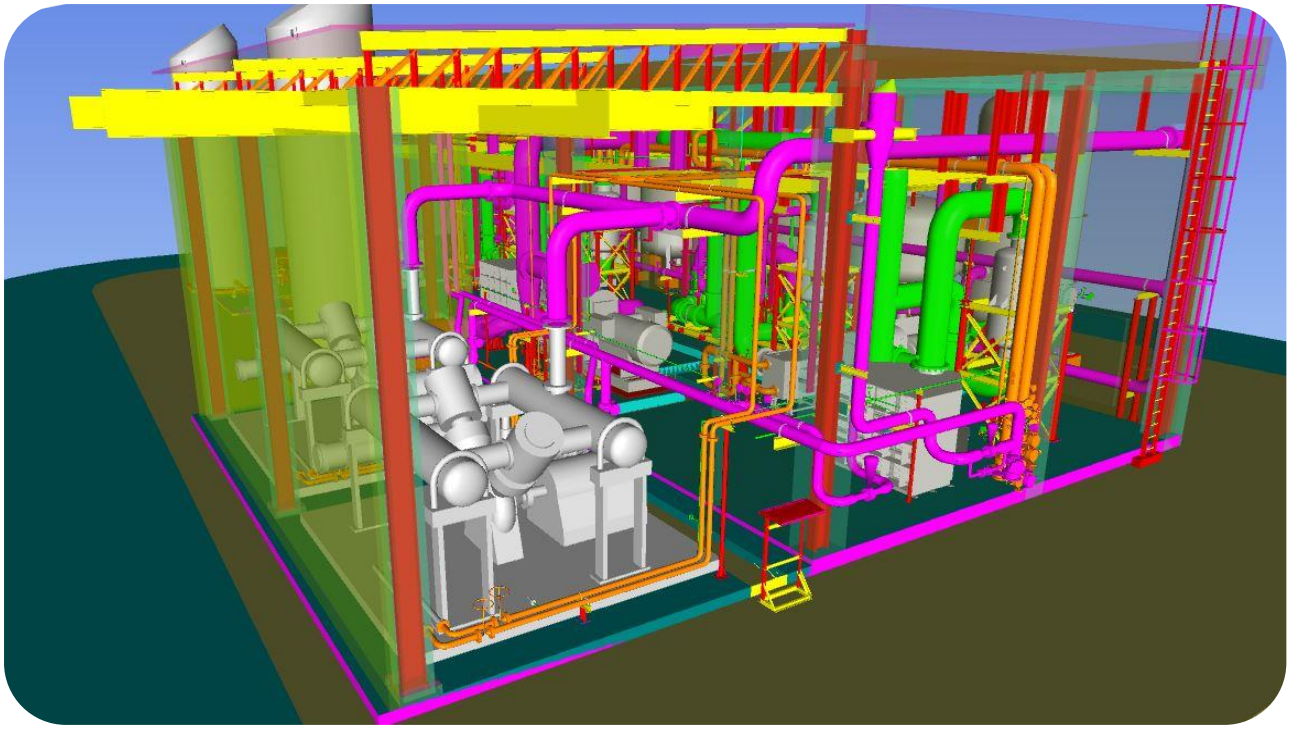
We had completed the entire project in 7 months with a team of 04 members (including one project coordinator) with below considerations

Description	Nos.
Total Number of Small Mechanical Equipment	20
Total Number of Lines as per updated P&IDs	90



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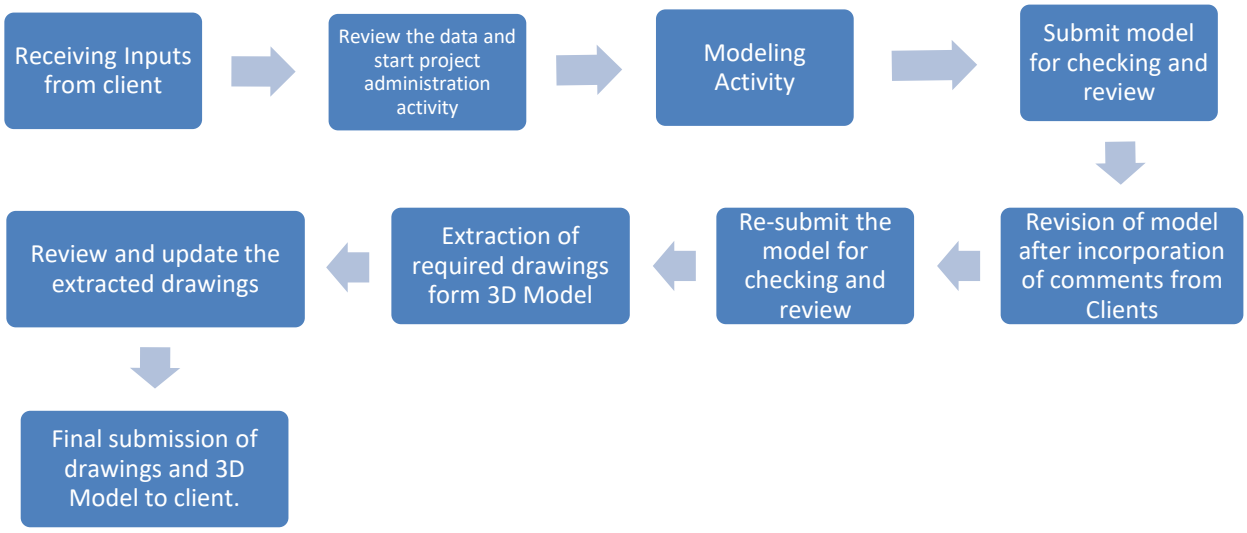
Project Execution Methodology



Technology Used

- Intergraph PDS Version 8
- Navisworks Manage 2016
- Auto CAD - 2015

Key Deliverables

- Final 3D Model in PDS
- Isometric Drawings
- Piping BOMs
- Special support drawings with BOM
- Submission of Clash report with a resolution before 60% & 90% model review. (Each line will contain a clash-free report with itself before IFC isometric extraction)

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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.