



MANUFACTURING FACILITY FEED STUDY

Key Capabilities:

- Front End Engineering
- Cost Estimation and Analysis

Overview

Our Client is a large international company with over 150 manufacturing operations worldwide, including facilities in New South Wales and Victoria.

In 2020, the Client engaged Vecta to conduct a FEED study for a new manufacturing facility in Victoria. Part of this FEED study would comprise a 10% cost estimate for the detailed design, procurement, construction and commissioning phases of project delivery.

Scope

The scope of work included:

- Front end engineering design. This included:
 - Development of drawings and documents in the Process, Mechanical, Civil, Electrical, Instrumentation & Controls disciplines;
 - Development of a detailed 3D model for the facility
- Scope preparation for detailed design and construction
- Project management including schedule, budget and technical queries;
- +/- 10% cost estimate for detailed

design, procurement, construction and commissioning. This included performing a Monte Carlo analysis to quantitatively analyse project risks.

Challenges

- The Client’s request was for multiple design aspects of this facility to follow the design used in an existing manufacturing facility in Australia. This proved to be a challenge as such information was not easily attainable. For example, there was no confirmation of the exact raw materials to be used in the facility, which varied greatly in fluid viscosity. This made it challenging to determine fluid contamination in some areas of the system.
- Lack of information of proprietary systems in the design.
- Variations in the Client’s expectations throughout the project.

Solutions

Vecta’s design team consisted of engineers who possessed specialised experience in the design of similar manufacturing facilities. The combined knowledge of the team

proved useful in solving any issues and addressing any gaps that were caused by a lack of design information.

In order to ensure the Client’s expectation of the design was kept current, consistent communication was maintained with the Client. Design drawings, models and documents were also continuously reviewed by the team to ensure the most accurate information was used in the design.

Outcomes

The FEED phase of the project was completed on time and within budget.

The Client was pleased with the design proposed as well as the +/- 10% Cost Estimate produced.

Want to Know More?

For more information please contact our office on +61 (03) 9326 9384, email info@vectagroup.com.au, or visit our website vectagroup.com.au