

## PROCESS DESIGN EXPERTISE



Rimmer Engineering understands problems at the molecular level.

Balancing global expertise with specialist local knowledge, our team of expert consultants provide operators of complex process plants with commercially pragmatic engineering solutions to enable you to achieve safe, reliable, and productive plants.

Our high caliber, technical professionals have worked on the most complex range of technologies, including hydrotreating, steam methane reforming, amine treating, LNG production and gasification, NGL recovery, produced water treating, glycol systems, refrigeration, and milk processing.

Rimmer Engineering has capability in the following areas:

- Concept Studies
- Feasibility Studies
- Front End Engineering Design (FEED)
- Detailed Design
- Project Basis of Design
- Process Simulation Modelling – HYSYS / Symmetry
- Process Flow Diagrams (PFDs)
- Piping & Instrumentation Diagrams (P&IDs)
- Detailed Calculations
- Line Sizing Hydraulics
- Equipment Specifications
  - Pumps
  - Heat exchangers
  - Vessels, Tanks
  - Separation columns
  - Control valves
  - Relief valves
- Cost Estimation
- Constructability / Safety Reviews
- Drafting of Engineering Drawings

We are committed to providing engineering services which showcase the highest standards of specialist expertise, commerciality, and professionalism to build and strengthen relationships with our clients, as illustrated by the following selection of recent projects:

### Project Illustrations

**Client 1 – FEED for Milk Expansion:** Working collaboratively with our client's site team and utilising our extensive experience in brownfields revamps, Rimmer Engineering optimized the best addition of new raw milk and product silos and identified the utility constraints in the pasteurisation process.

We completed the Front-End Engineering Design (FEED) for the project and produced equipment datasheets, P&IDs, piping hydraulics and utility energy balances. Rimmer Engineering created the project basis of design, allowing EPC contractors to cost against a firm basis with no variations, giving our client confidence on the overall cost for construction.

**Client 2 – Pump Selection, Procurement and Design:** Rimmer Engineering completed the option assess and select of an emergency pump and skid-mounted power pack. Multiple concepts were developed, comparatively assessed, and costed to form our class 5 estimate of NZ\$500k.

We subsequently completed the process design from conception, through to detailed design, including the technical specification and procurement. Our experience of engaging and working with vendors to define the requirements at an early stage was key to ensuring no surprises when the time came to place the order.

**Client 3 – Problem Identification for Firemain Control Upgrade:** Our client's firemain was experiencing problems with the control of the seawater fire pumps. Rimmer Engineering was engaged to review the entire system prior to a decision on a NZ\$1M control upgrade.

By working alongside the client, Rimmer Engineering was able to immediately identify the core functionality required and solve the problem with <NZ\$50,000 of minor modifications. These included a small jockey and optimization of anti-surge control valves which allowed the existing system to be confirmed fit-for-purpose.

For further information on our Process Engineering capabilities please contact:



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