



INDUSTRIAL

VECTA

FORWARD THINKING

Our people have expertise that includes the following competencies for industrial facilities:

- ✓ **Terminals and Distribution**
- ✓ **Raw material Storage and Handling**
- ✓ **Pulp and Paper**
- ✓ **3D Laser Scanning**
- ✓ **Chemical Plants**

TERMINALS AND DISTRIBUTION

- FEED and implementation of a brownfield bulk liquid storage facility and utilities upgrade including:
 - A new 80,000 L Styrene Liquid storage tank,
 - A new cooling tower including pumps and piping,
 - A new boiler and associated civil, structural, electrical and mechanical works
 - Commissioning.
- Bulk Storage Upgrade for a resin plant for the Paint industry
- Jet Fuel piping modifications and debottlenecking
- Underground Diesel storage facility

RAW MATERIAL STORAGE AND HANDLING

- Material conveying and transfer
- Silo and Bin design
- Dust extraction
- Underground Diesel storage facility

PULP AND PAPER

- Hazardous goods storage
- Chemical recovery
- Plant and piping layout design

3D LASER SCANNING

- On site survey of piping and equipment
- Generation of point cloud models for export to CAD

CHEMICAL PLANTS

- Design and construction of Castrol's lubricants plant at Brooklyn, Melbourne
 - Detail Design including layout drawings, specifications, equipment sizing
 - Construction supervision on site
- Expansion of a Singapore chemical plant representing its largest single investment outside the USA.
- Development of a 65 hectare site to be used to store polymer pellets.
- Conversion from gas oil to a mixed LPG/ethane feed which included:
 - Project Design Specification (FEED) and detail design phases of the project.
 - Modifications to the main processing plant, offsites and utilities
 - New and replacement equipment in greenfield and brownfield areas
- Firewater Upgrade for a chemical plant
- Caustic Reticulation Upgrade for a chemical plant
- Effluent Treatment Plant and 1km Pipeline for an Explosives Plant
- Bulk Storage Upgrade for a resin plant for the Paint industry
- FEED and cost estimate of a new Greenfield Pilot Plant facility for Latex and Solvent based resins which included:
 - Preliminary equipment sizing and pricing (pumps, vessels, heat exchangers, fractionation columns, scrubbers, agitators),
 - Preliminary pipe sizing
 - Layout design
 - Class 3 cost estimate ready for sanction.
- New 20T resin reactor including associated overhead system, hot oil upgrade and cooling water system modification.
- WMCF Phosphate Hill Ammonia Plant;
- Alkatuff (ICI) Polyethylene Plant.
 - Prepare and control detailed design P&IDs;
 - prepare functional descriptions and participate in HAZOP studies.
- Kalgoorlie Nickel Smelter sulphuric acid plant;
- Farmers Fertiliser acid plant upgrade, New Zealand;
- Western Mining acid plant upgrade, Roxby Downs.
 - Prepare process designs, manhour estimates, technical bid evaluations, and operating manuals.
- Ammonium Nitrate Fertiliser plant for a Dutch client;
- Sulphur burning acid plant for a Belgian client;
- Spent acid regeneration plant for a Japanese client, built in Singapore.
 - Prepare process designs, technical content of proposal documents.