

CAPABILITY PROFILE

PROCESS / UTILITIES ENGINEERING SERVICES



CAPABILITY

Transfield Worley NZ and the Worley Parsons group of companies have extensive experience in the design and build of power and petrochemical plants including their water treatment systems from raw water to wastewater. We recognise the importance of cost effective Utilities operation on overall plant production. Transfield Worley NZ has over 25 years of specialist Utilities engineering experience in the design, build and operation of water treatment equipment and systems for a range of enterprises. We establish relationships with our clients to best match their needs, including:

- Alliance partnerships
- Turnkey contracts
- Performance based contracts
- Reimbursable contracts
- Staff secondment

RANGE OF SERVICES

Process / Utilities Engineering Services include:

- Process plant design, commissioning and operation support.
- Process optimisation studies and implementation.
- HAZID and HAZOP Studies.
- Shutdown planning and coordination.
- Process and Utilities system modelling (eg. HYSYS).
- Reticulation / hydraulic modelling.
- The design and build of water treatment systems from raw water through to wastewater.
- Optimisation of Utility systems operations.
- The development of key performance indicators and best practice guidelines.
- Chemical budgets, forecasts and monitoring.
- Demineralisation systems' modelling and improvements.
- Design, build and commission automatic chemical dosing systems.
- Chemical cleaning of process equipment including boilers and heat exchangers.
- Corrosion prevention of cooling water, boiler feedwater, boiler water and steam condensate systems.
- Operations and Maintenance Process Training.

Experience

- Process design of the Pohokura Production Station for Shell Todd Oil Services Ltd.
- Pre-commission chemical cleaning of the Pohokura Production Station.
- Engineering, procurement, construction management and commissioning of the Delegat's Wine Estate Marlborough Winery.
- Ongoing process engineering support to the Vector gas treatment facilities, including installation of a two train Reverse Osmosis Demineralisation Plant.
- Ongoing process engineering support to Shell Todd Oil Services gas / condensate facilities.

- Production support for Methanex NZ Limited.
- Dairy factory water treatment upgrades to meet New Zealand drinking-water standards.
- Design, specification and cost estimating of stage 2 modifications to Fonterra potable water systems.
- Equipment and operations audit of the Utilities systems of 26 Fonterra dairy factories identifying optimisation and cost reduction opportunities.

Features

The key consideration in the design and operation of Utilities equipment is to minimise downtime that could affect the process and thus production. This is achieved by developing and executing an improvement plan with the ultimate aim of optimising Utilities operations. Transfield Worley will coordinate the resources of the client and the suppliers of chemicals and services to ensure that internationally accepted standards and best practice guidelines are applied.

KEY BENEFITS

Often unrecognised or accepted as "the cost of doing business", less than optimal Utilities operations are a burden that can be reduced. The benefits of optimising Utilities operations can be considerable. Benefits range from increased plant reliability to reduced chemical consumption. Reliable Utilities operations mean that routine maintenance, including procurement of long lead time items, can be planned to coincide with process plant downtime. As an example of successful application of the Utilities optimisation process, Methanex Corporation eliminated lost production due to boiler and water cooling failures and realised global annual savings of approximately NZ\$9.0M

For further information please email:

twnz@transfieldworley.co.nz