

MONASH INDUSTRY TEAM INITIATIVE (MITI)

Stanhope CIP Optimisation, Salted Whey Utilisation and WPI Integration

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FONTERRA STANHOPE

Fonterra is one of the largest dairy manufacturing companies in Australia with one of their factories located at Stanhope 190km north of Melbourne. Fonterra Stanhope recently underwent a significant rebuild and expansion of cheese manufacturing following a fire in 2014. The site produces many products including different types of hard cheese, ricotta, ghee and whey powder.

KEY FINDINGS

- Caustic used in Clean in Place (CIP) was mostly single use and needed a recovery system to minimise chemical usage.
- Batch Changeover process at Powder Packing was not standardised and hence inconsistent across all shifts.
- Salted whey produced each day was directed to the wastewater system due to lack of treatment facilities and technology.
- A detailed Process Flow Diagram of the salted whey treatment section didn't exist.

KEY RECOMMENDATIONS

- Set up a fully reticulated caustic recovery plant to improve site efficiencies.
- P&ID tuning of CIP (Cleaning in Place) parameters in Cheese plant to reduce chemical usage.
- Proposed a standardised procedure for Batch code changeover at Powder Packing to ensure consistencies and a reduction in down time on some shifts.
- Research on possible technologies to treat salted whey and produce profitable goods.

KEY LEARNINGS

- How to work with team members from different educational backgrounds.
- Integrated Work System style of management and its associated pillars.
- Professionalism and Work Ethic.
- Adapting to various circumstances ie: living regional, working in the dairy industry.
- Effective communication with operators, managers, vendors to receive quotes and advice.

PROJECT OUTLINE

Worked on various Projects to enhance efficiency and reduce waste.

- Treatment of Salted Whey Stream to produce profitable goods and reduce sewage disposal.
- Caustic Recovery Plant to reuse caustic for CIP.
- Standardise batch code changeover procedure at powder packing to ensure consistencies using Work Process Improvement tools.

