



Project Review

Waikato Innovation Park, Dryer 2 - Waikato New Zealand

6MW_{th} Gas Fired Boiler & 26tph Gas Fired Air Heater

Client: Tetra Pak for Melody Dairies
 Location: Waikato Innovation Park, Waikato, New Zealand
 Duration: 9 months Design and Build

Background

Waikato Innovation Park (WIP) hosts more than 60 businesses and counting. It is also home to New Zealand's first independent industrial spray dryer managed by Food Waikato, one of Melody Dairies investment partners. This facility allows independent goat and sheep milk suppliers to develop their product from the concept stage to commercialisation.

In the first five years of operation clients have exported more than \$186 million of product and invested \$143 million of capital. Sheep milk products are experiencing escalating growth with the demand for alternative dairy, increasingly used in products such as cheese, yoghurts, liquid milks, butter, ice cream/gelato, nutritional foods and beverages.

Due to this success of the first spray dryer, and the estimate that the sheep milk industry will double in size by 2021, the decision was made to build

a new facility to do more than twice the capacity. The new turn key spray dryer complex installed by Tetra Pak is estimated to produce \$129 million in dairy exports each year.

Solution

After evaluation of the facilities heat and energy requirements, Tetra Pak awarded the contract for a 6MW gas fired boiler, and a 26 tph gas fired indirect air heater.

The scope for Windsor consisted of the design and build of the boiler and air heater, along with the installation and commissioning on site.

- Gas fired wet-back boiler
- Finned tube economiser
- Gas Fired concentric indirect air heater
- Integral ancillaries including feed tank, blowdown tank and shared stack

- Process air fan
- Feedwater pumping and piping system
- Electrical instrumentation and control (EI&C) systems.
- Water treatment and sampling
- Steam and condensate piping systems including distribution header





Why Windsor Energy?

As a trusted provider of energy plant and services in New Zealand and Australia, Windsor Energy offered the following advantages:

- Extensive installed base of heat plants for a number of large industrial clients.
- Modular plant package, optimised for long-distance transport of components, and efficient, safe assembly at destination.
- Innovative component and plant designs for high efficiency, simple operation, high availability and low overall cost of ownership.

Project Name	Innovation Waikato, Dryer 2
Date Installed	2019
Fuel Source (both units)	Natural Gas
Boiler Type	Windsor Wet-Back, WB6000
Boiler Thermal Capacity	6 MW
Boiler Design Code	BS2790: 1992 Class 1
Steam Output	8,500 kg/h
Steam Temperature	185°C
Boiler Design Pressure	1,100 kPa
Boiler Operating Pressure	1,050 kPa
Boiler Turndown	8 : 1
Air Heater Type	Windsor Concentric Indirect CT26-205
Air Heater Thermal Capacity	1480 kW
Process Air Temperature	205°C

Contact Us

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