



## **Project Review** Nelson Pine Industries

20MW<sub>th</sub> Biomass Boiler

## (Incorporating Veneer Dryer Exhaust Air Incineration)

Client: Nelson Pine Industries Location: Richmond, Nelson, New Zealand

## Background

Nelson Pine Industries Limited produces NelsonPine LVL (Laminated Veneer Lumber) from radiata pine grown in the plantation forests of Nelson, New Zealand.

The Nelson-Marlborough region is one of New Zealand's major forestry areas, with 16% of the productive land area planted in production forests. Nelson Pine Industries has capacity to process one million cubic metres per annum, or 40% of the region's annual harvest.

As part of a new veneer processing facility in Richmond, Nelson Pine Industries contracted Windsor (then RCR Energy) to provide the steam raising plant required for the veneer drying plant and log conditioners.

## The Solution

To burn the range of wood biomass by products from LVL production (bark, log offcuts, chips, veneer rejects) RCR Energy designed, manufactured, installed and commissioned a new steam boiler system including:

- Complete project management, erection, installation and commissioning;
- Steam distribution system to veneer dryer and log conditioning chambers;
- High pressure condensate heat recovery system;
- Incineration of exhaust air from veneer dryer (laden with Volatile Organic Compounds); and
- Unattended operation.

RCR Energy proposed a B&W Towerpak® boiler (designed and manufactured by RCR Energy under license from Babcock & Wilcox Power Generation Group Inc, USA).

# Windsor Energy



### Why Windsor Energy?

As a proven supplier of plant and services worldwide, Windsor Energy offered the following advantages:

- The ability to work locally and internationally and integrate smoothly with local project partners.
- Proven supplier record with large industrial clients.
- Innovative plant design for high efficiency and simple operation.
- Modular plant design optimised for safe and simple shipping and erection.
- Clean burning biomass combustion technology with novel incineration of dryer plant exhaust air, resulting in low total emissions of contaminants from veneer plant.

Project Name	Nelson Pine Industries, NZ
Project Number	P01445
Date Installed	2001
Boiler Type	B & W Towerpak® Boiler
Combustion System	Water Cooled Vibrating Grate
Thermal Capacity	20 MW
Fuel Source	Wood Biomass
Boiler Design Code	AS 1228
Steam Output	30,800 kg/h
Steam Temperature	216°C (Saturated)
Design Pressure	28 Bar G
Operating Pressure	22 Bar G
Feedwater Temperature	100°C
Turn Down	3:1



## Contact Us

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