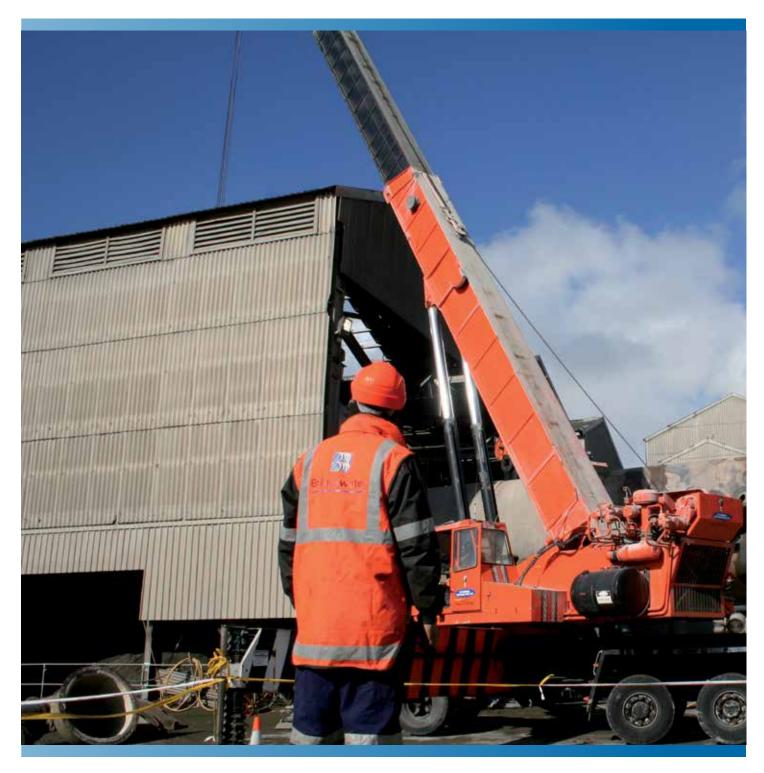


## Site Works Capability Statement

YOUR ENGINEERING PARTNER



www.brightwater.co.nz





# An Onsite Service Team Dedicated to Reducing Production Downtime

Brightwater's mission is to provide fit for purpose on site engineering solutions that reduce our client's production downtime and minimises the impact to their operations.

We achieve this by having a professional and well experienced team of project managers, engineers and supervisors who oversee a skilled and committed workforce of trade's people, dedicated to delivering high quality and efficient workmanship.

## Our Commitment to Clients

We are committed to working closely with our clients to understand key project and operational drivers. Our organisation structure allows us to be flexible and scalable to meet the exact requirements of our clients. This enables us to provide bespoke solutions that best meet our client's specifications.

Our maintenance and repair staff work nationwide in the Quarry, Mining, Wood Processing, Marine and Dairy industries, undertaking small scale work as well having the resources and capability to manage large industrial maintenance shutdown projects.

General and mechanical services include:

- Workshop Fabrication and Machining
- On site Installation and Plant Modifications
- General Plant Repairs
- Efficiency Improvement Projects
- Shutdown Planning and Commissioning Activities
- Operator Cover
- Surveys and Inspections of Plant and Equipment
- On site Electrical Maintenance & Repairs

## Our Approach to Health & Safety

Zero Harm is a core value of Brightwater's and the Health & Safety of our staff is paramount. Having significant experience in undertaking large and small scale projects has given Brightwater the internal structure, processes and support staff in order to create a strong Health & Safety culture and performance. All work carried out by Brightwater is done in accordance with our stringent Health & Safety policies and monitored by our Health & Safety Advisor. Our safety record translates into lower insurance and liability rates, therefore reduced costs and risks to our clients.

Brightwater staff who carry out site maintenance and erection work have the following accreditations:

- Riggers & Safe Slinging of Loads Tickets
- Confined Space Tickets
- EWP & Forklift Tickets
- Crane Tickets
- First Aid
- Fall Arrest/Safe Work at Heights
- Permit Receivers/Hazard Identification Tickets

## **About Brightwater**

Brightwater is proudly named after the regional Nelson town where we have been located since our inception in 1979. From the very beginning our core purpose has been to truly understand our client's requirements and through a collaborative partnership provide fit for purpose industrial engineering solutions.

Specialising in industrial bulk materials handling, our inhouse capability allows us to provide a complete range of services from engineering & design through to fabrication, installation and on site maintenance.





## **Project Examples**

## Nelson Pine Industries Thermal Oil Heater

## Overview:

Nelson Pine Industries Ltd is one of the world's largest single site producers of medium density fibreboard and laminated veneer lumber.

Brightwater provides maintenance and repair services to Nelson Pine for routine scheduled maintenance including annual plant shutdowns. Teams of fitters and fabricators are allocated tasks across the site, dismantling, inspecting and repairing a large range of specialised industrial equipment. One of the recent major repairs undertaken during the annual Christmas week shutdown was to repair damaged plate and pipe in a thermal oil heat exchanger.

## Solution:

The heat exchanger vessel was stripped down to access the damaged areas and temporary support structures and work platforms were installed. Sections of heat and corrosion damaged plate and pipe were removed and replaced as required. High grade plate was procured ahead of the shutdown so plates could be cut in rolled ready for the site work. Refractory and insulation was replaced in the repaired areas and the vessel recommissioned.

This work was performed on a very tight schedule and required running two shifts of engineers to complete the work on time.

## Fonterra Cooperative Steam Condensate Tank Overview:

Fonterra have a number of sites in the South Island where Brightwater provide maintenance support throughout the year and particularly during the off-season when significant routine maintenance and upgrade work is undertaken. Typical work undertaken is the inspection and repair of coal and ash conveying systems, pumps and fans, steam lines and valves. Other modification and replacement works are often undertaken, examples of which are the replacement of a steam condensate tank and relining of a coal hopper.

#### Solution:

The condensate vessel was fabricated in Brightwater's workshop and transported to site where it was lifted into position and connected to the various steam and water pipes. This work was conducted in the processing part of the factory following the red line procedures.

The coal hopper required new lining of the internal surfaces with stainless steel plate for corrosion protection and low friction. The top of the hopper was removed to allow access and the old linings were removed. New stainless sections were lifted into position and attached to the hopper, fully seam welded along all joints.



## **Project Examples**

## **Taudre Vessel Repairs**

## Overview:

The Taudre is 220 tonne 29 metre fishing vessel and is the largest of a privately owned company supplying fresh chilled fish to the local and export market.

Recently the vessel underwent significant repairs on the slip at Port Nelson after an incident at sea where it sustained significant damage to the propeller and intermediate shafts and bearings. Brightwater was the main contractor providing expertise in the rebuild of the shafts and bearings as well as hull repairs and general maintenance work.

#### Solution:

Damage to the vessel was accessed by Brightwater's engineers and repair methodology and budgets were determined. The damaged shafts and bearings were removed from the vessel and sent to the Brightwater workshops for repair and machining. New parts were procured from various international suppliers and freighted to Nelson. Lubrication and cooling systems were rebuilt using the latest technology and condition monitoring systems were updated to provide real time status of all the transmission system.

The reconditioned shafts and bearings were fitted in the vessel, laser aligned and adjusted prior to the vessel coming off the slip. In the water final alignments and adjustments were made and sea trials undertaken.

Damaged hull plate sections were cut out and replated by Brightwater heavy fabricators, and various pipes and valves were upgraded in the engine room.



## Nelson Pine Industries Heat Exchanger

#### Overview:

Nelson Pine Industries Ltd is one of the world's largest single site producers of medium density fibreboard and laminated veneer lumber.

In the production process of MDF the dried fibres are formed into mats and processed through presses. The heating of these presses is by oil. The oil itself is heated in a flue gas - oil heat exchanger.

The Line 1 Heat Exchanger had come to the end of its life cycle and Nelson Pine Industries approached Brightwater to replace the existing tube Heat Exchanger for a Coil Heat Exchanger.

#### Solution:

The replacement of the Heat Exchanger for Line 1 had to take place over the Christmas period to reduce the down time on the MDF production line. The new Heat Exchanger was required to provide for an additional flow to the LVL. This meant the Heat Exchanger was up sized from 8.5 MW existing to 10.5 MW new.

The operational weight of the new oil heater was significantly higher due to the increase in size as well as the additional volume of oil that is required for the 10.5 MW output.

The new heater was installed in three pieces. For these lifts the Brightwater on site team used a 250 tonne crawler crane. The bottom piece was installed on a temporary support structure followed by the two remaining pieces before the final installation into the modified support structure.

#### Nelson

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