

Feed Rotor for CHP plant protected

ID: 9633

Industry: *Power*
 Application: *PDP-Positive Displacement Pumps*

Customer Location: *Newark UK*
 Application Date: *October 2024*

Substrate: *Stainless-steel*
 Products: *Belzona 1341 (Supermetalgilde)*

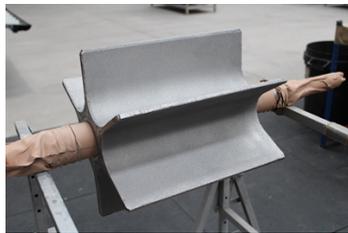
Problem

A stainless Fuel feeding rotor had suffered wear and damage, creating issues with leaks, back pressure and unwanted vacuums in the feeder process to the boiler in an industrial CHP (Combined Heat and Power plant)

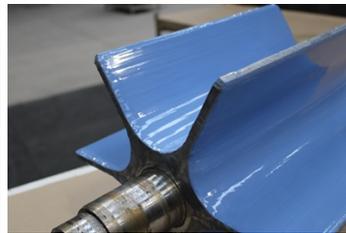
The client required the dimensions of the stainless rotor to be brought back to the originals, then coated to help prevent and slow down future wear



The rotor whilst still in it's original housing



Blasted with aluminium oxide to achieve SA2.5 and min 75 micron profile



Both coats of Belzona 1341 applied, ready to ship back to the customer



1 year on and the coating is still perfect, doing exactly as intended by avoiding build up of material and allowing the rotor to perform at full efficiency, whilst protecting against erosion

Application Situation

The worn rotor had a restricted flow of fuel to the boiler, the boiler could not achieve the peak efficiency and was running "colder" than service design, therefore Belzona was approached to offer a solution and return the Rotor to full design specs and operate to maximum efficiency

This stainless Rotor runs at around 30RPM

It operates around 35 degrees centigrade

Application Method

Grit blasted with Aluminium oxide to min 75 micron profile and SA2.5

1st coat Belzona 1341 applied at 250µm

2nd coat Belzona 1341 applied at 250µm

Rotor collected by client and returned to service

Belzona Facts

For more examples of Belzona Know - How In Action, please visit <https://khia.belzona.com>

ISO 9001:2015

FS 695214

ISO 14001:2015

EMS 695213

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The rotor was a specific piece of equipment and very difficult to source, having a lead time of 3 months minimum. The wear was allowing the back pressure to restrict the flow of the fuel which is Meat and Bonemeal (MBM).

12 months on and the coating to the rotor is still in perfect condition, allowing for performance from the rotor with NO unexpected downtime or Reactive maintenance required.

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