

**Cost-effective
Pump Repairs,
with Innovative
Solutions!**

Case Study Rotary Lobe, Mechanical Seal System



Duty & Fluid	OEM & Designation	Materials
Low Pressure Produced Water Pump Produced Water	Waukesha Cherry-Burrell (SPX) U320	316SS Casing, Waukesha 88 Lobes & 17/4 PH Shafting

Challenge

UK Offshore Asset was having issues on their Low Pressure Produced Water Pump with the Mechanical Seals externally passing. Upon inspection, excessive wear was found in the Pump Head at the Lobe Running locations and excessive wear at the bearing locations which were found to be out of round. In addition to the above the second unit also suffered a sheared Drive Shaft. All signs pointed toward pipe misalignment issues



Solution

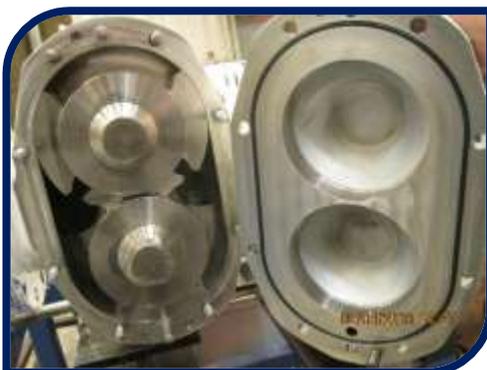
Pinnacle Re-Tec reverse engineered and manufactured in-house the required replacement Lobes and Timing Gears. The new Lobes were manufactured on one of our CNC machines, in WN88 anti-galling material given the tight clearance required for this type of pump. The bearing location was repaired with a "top-hat" sleeve in a harder material. To overcome the issues with shaft fatigue the abutment face was properly machined with an appropriate radii introduced at the geometrical diameter change to ensure proper stress relief during operation. To ensure the pump was performing to duty including the Mechanical Seal System, the pump was fully performance tested.

Benefit

A 'one-stop-shop' for pump repair and performance test, incorporating reverse engineering new parts, design improvements to shaft and pump rebuild and duty performance test.

Result

Pinnacle Re-Tec has now replaced the OEM as the go to pump company for these units having repaired multiple pumps over the past 5 years and in 2020 we reverse engineered and manufactured a complete new pump including performance test for this oil & gas client.



To see how Pinnacle Re-Tec can help you with cost effective pump repairs and innovative solutions to increase MTBF please call us on 01207 588 731 or email info@pinnacle-re-tec.co.uk