CRITICAL TAR PUMP OVERHAUL FOLLOWING PRODUCT BUILD-UP

Pump and sealing system restored to improve reliability and protect production continuity

AVTPUMP was asked to overhaul a critical tar pump after it was removed from service following a seal failure and loss of efficiency.

The pump handles tar produced as part of the steel manufacturing process. With only its sister unit remaining in operation, returning the failed pump to service quickly was important to restore redundancy and reduce the risk of unplanned production downtime.

THE CHALLENGE

Tar is a particularly demanding product to handle. As pump performance deteriorated, product began to build up internally before hardening and eventually causing the pump to seize.

The failure affected more than the pump itself. The AESSEAL® DMSF double mechanical seal and SP2 pressurised barrier system had also failed, requiring the complete pump and sealing arrangement to be assessed and restored before the asset could safely return to service.



OUR APPROACH

The pump was collected and returned to the AVTPUMP workshop for a complete strip and inspection. Engineers assessed the condition of the pump, motor, internal components and sealing arrangement to establish the full repair scope.

Following inspection, a detailed repair quotation was prepared covering the components required to restore the asset and its seal support system.

OUR FINDINGS

Inspection identified significant wear to the impeller and cutters, which had contributed to reduced pump efficiency and allowed tar to accumulate within the pump. As the product hardened, the pump eventually seized.

The AESSEAL® DMSF double mechanical seal and SP2 pressurised barrier system had also failed and required replacement as part of the overhaul.

"The pump has run trouble-free since the overhaul. Restoring the complete pump and sealing arrangement, followed by correct commissioning of the barrier system, has given the customer a much more reliable asset for this demanding tar application."
AVTPUMP Engineer

THE RESULT

The overhaul restored the pump to service and returned redundancy to this critical application. With the pump, sealing arrangement and barrier system correctly installed and maintained, the unit has continued to operate without further reported issues.

The project brought together AVTPUMP's pump overhaul capability and AESSEAL® sealing expertise to address the complete asset rather than treating the seal failure in isolation.





OUR SOLUTION

AVTPUMP completed a full pump and motor overhaul, replacing the worn components required to restore the asset, including the impeller, cutters, bearings, shaft sleeves, lip seals and O-rings.

A new AESSEAL® DMSF double mechanical seal and SP2 pressurised barrier system were also installed to restore the complete sealing arrangement.

Once the pump was returned to site and reinstalled, an AESSEAL® technical engineer commissioned the sealing installation and correctly set up the barrier system for operation.

AT A GLANCE

Industry:	Manufacturing – Steel Production
Equipment:	Tar process pump and motor
Services:	Complete pump and motor overhaul, strip and inspection, seal support system installation and commissioning
Products:	AESSEAL® DMSF double mechanical seal and SP2 pressurised barrier system
Key findings:	Internal wear reduced pump efficiency, allowing tar to build up and harden until the pump seized
Outcome:	Pump returned to service, redundancy restored and no further issues reported following overhaul and correct maintenance

Need help?
Contact our experts
W: avtpump.com | T: +44 (0)844 561 0551 | E: sales@avtpump.com