

CASE STUDY : CORROGLASS 600-SERIES IN PUMP

SEAWATER PUMP LINING STILL PERFECT AFTER 25 YEARS

CLIENT

Nuclear Power Station, South Africa.

APPLICATION DATE

First application – 1988

Maintenance review – 2013

SCOPE OF WORK

Repair minor mechanical damage on the volute where the back plate was removed. Recoat back plate 100%.

PRODUCTS

- Corroglass 632 at 1.5mm plus 652 blue topcoat for original coating work
- Corroglass 632, 602 screed plus 652 blue topcoat for casting wear rings in place during repair

SUBSTRATE

Cast Iron

COATING SYSTEM

- Grit blast damaged areas to SA 2½
- Apply Corroglass 600-Series to a minimum DFT of 1.2mm, spark test to 10Kv DC

CORROCOAT CREDENTIALS

These seawater cooling pumps form an integral part of the cooling system of the nuclear plant. The client removes the back plate annually for statutory inspection of the wear rings, after which Corrocoat rebuild the coating at the interface between the back plate and volute. The stuffing box is also built up internally with Corroglass to a thickness of +5mm, after which it is machined down to tolerance.

During the service life of continual internal seawater exposure with a low hydrochlorite dosing and high flow, the coating has shown no deterioration, and zero under-cutting, even at the exposed coating edge at the flanges and threaded sockets.

Based on the performance of Corrocoat products over many years the plant obtained engineering approval to replace the OEM rubber lining in the large heat exchanger water boxes with Polyglass, and a long term contract was placed on Corrocoat to maintain the linings in the entire seawater cooling system.

PHOTOGRAPHS :

Top: The pump as received after 25 years service

2nd: The lining is dirty, but otherwise 100% intact

3rd: Zero under-cutting at exposed coating edges

Bottom: Repair area where wear ring was replaced



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