

Rebuilding of Screw Pump

Application:	Rebuilding of Screw Pump
Place:	ASMAR, Valparaiso, Chile
Date:	April 2011
Job and report done by:	ASMAR and Danish Business Ltda, Chile
Wencon products used:	Rapid, Coating white & blue, Cleaner, appl. tools



Introduction:

Due to heavy corrosion the screw pump had lost pressure, and therefore not able to pump waste oil, from ship to the pier.

Job was to rebuild the pump using Wencon products.



2. Pump after

- sandblasting to SA 2,5
- sweating out water and salt
- sandblasting



3. Close up photo showing heavy corrosion, reducing performance of the pump.

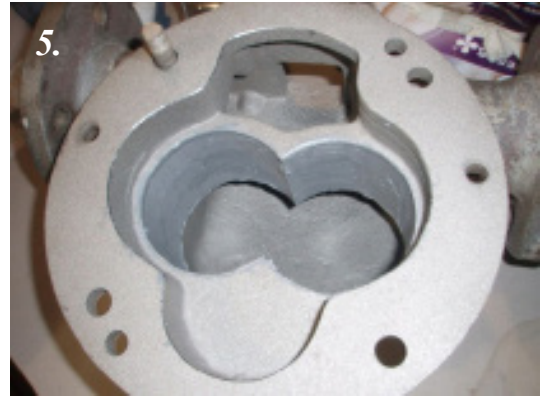
Before pump is cleaned twice with Wencon Cleaner, all sharp edges are rounded with a Dremel grinder, in order to increase the surface areas of the edges.



4. Surface is rebuild using Wencon Rapid. Only surfaces in the two cylinders are heavily corroded - rest of the pump only coated with Wencon Coating.



5. Pump after applying Wencon Rapid. The pump now needs to cure for approximately 30 minutes before applying Wencon Coating.



6. Wencon Coating, white is applied to all surfaces, that will be in contact with the medie. Layer thickness of minimum 0,3mm applied.



7. Second layer of coating applied. Layer thickness 0,3mm. Leave the application to cure, until next day, where the machining will take place.



8. Like the pump housing, the end cover was sandblasted twice, sweating out water and salt in between, degreased twice with Wencon Cleaner and applied two layers of Wencon Coating.



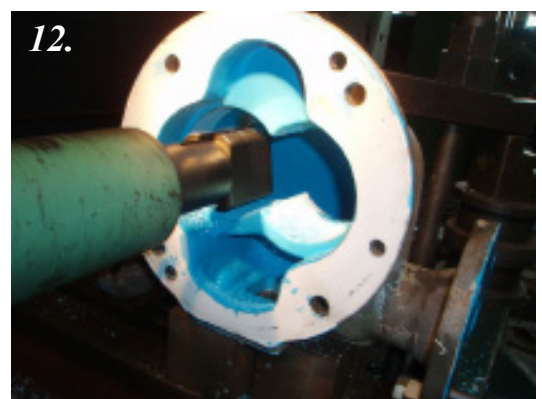
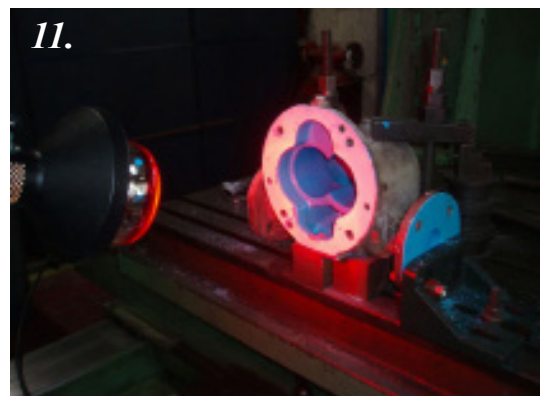
9. Next day, pump is placed in a lathe and the precise center of the two cylinders, are determined using the end cover of the pump. Afterwards, the excess Wencon Coating is machined away. Machining was done with low speed and a sharp steel tool in order to keep temperature down.

Also the coated flanges were machined to make a 100% even surface.

10. During machining, the full layer of blue Coating was removed in certain areas, and another layer of Wencon Coating, blue - thickness 0,4mm - was applied in the two cylinders.

11. During the night, heat was applied in order to speed up the curing process.

12. Next day 0,1 mm was machined away leaving a layer of 0,3 mm of both Wencon Coating white and blue.



13. Final result

After final layer of Coating, the two cylinders had to be machined and centered according to the two new screws. The two screws machined to a diameter of 0,1mm, less than the diameter of the cylinders.

