IN-PLACE MACHINING OF PROPELLER SHAFT SEAL LINER IN DRYDOCK

USNS SODERMAN (T-AKR-317) PROPELLER SHAFT SEAL LINER MACHINING IN BOSTON

Goltens was contracted by Boston Ship Repair to inspect and conduct in-situ machining of two propeller shafts on the USNS Soderman. Having completed similar repairs on the shaft seal liners on the USNS Sisler (T-AKR 311), the USNS Watson (T-AKR-310) as well many other times on various other types of ships around the globe, Goltens was very familiar with the repair and immediately mobilized tools and in-situ machining specialists to the drydock.

As with the repairs on the other Watson Class vessels, inspection revealed that the shaft seals had worn channels in the ~850mm diameter shaft seal liner surfaces and the journal surface needed to be machined and polished in-place within maker tolerances for the seals or the shafts would need to be removed for the repair.

Goltens inspected the shaft seal liners, completed measurements and mounted the tools to complete the reconditioning of the journal surfaces with the least amount of material removal possible.

PROPELLER SHAFT REPAIRS CONSISTED OF:

- Machining starboard shaft seal liner from an average pre-machining dia. of 850.50mm to a final dia. of 849.77mm.
- Machining port shaft seal liner from an average pre-machining dia. of 850.53mm to a final dia. of 850.05mm.
- Finish polishing of Port & Starboard shaft seal liners.

IN-SITU MACHINING RESULTS:

Final results were inspected and accepted by Wartsila and Shipyard within the scheduled time for the repair.

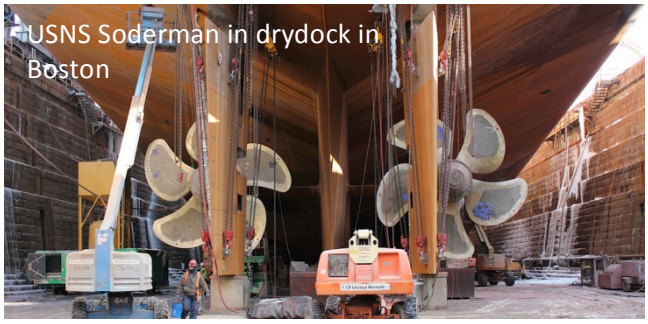
CUSTOMER TESTIMONIAL:

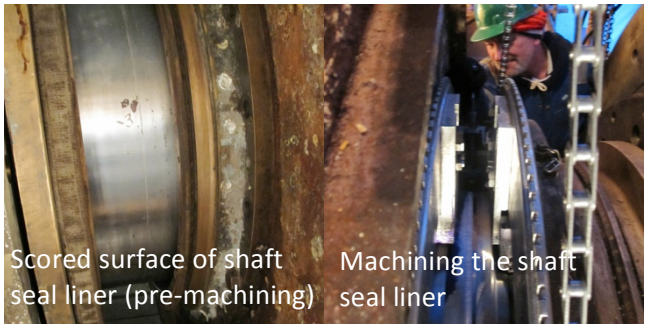
"Without Goltens' in-situ machining capabilities, the vessel owners would have been forced to pull both propeller shafts to change out the seal liners. Goltens' Machinists were able to bring the seal liners back into specification saving weeks of additional downtime and hundreds of thousands of dollars in additional repair costs."

-Boston Ship Repair Project Manager

PROJECT FACTS: USNS Soderman (T-AKR-317)

Ship Type:	Large, Medium-Speed Ro-Ro
Port Avg. Dia. Pre-Machining:	850.53mm
Port Dia. Post-Machining:	850.05mm
Starboard Avg. Dia. Pre-Machining:	850.50mm
Starboard Dia. Post-Machining:	849.77mm
Port and Stbd Journal Length:	110mm


USNS Soderman in drydock in Boston


Scored surface of shaft seal liner (pre-machining)

Machining the shaft seal liner


Final polishing of the shaft seal surface