

## SUPSALV completes repairs to USS KEARSARGE (LHD 3) fuel oil tanks.

23 April 2014

SUPSALV recently completed a significant number of weld repairs in the fuel oil tank of USS KEARSARGE (LHD 3) in the port of Norfolk, VA. SUPSALV deployed equipment, three underwater ship husbandry specialists and a team of Phoenix International contract welder-divers to assist NSSA with repairs to holes in the ship's fuel oil tank.

The team arrived and started repairs on 18 Feb 2014 when they began prepping the ship and worksite. This included bringing a dive barge alongside the ship to support the extensive repairs needed. After the tank cover was removed and tank was cleaned, a marine chemist certified the tank for hot work. The team began mapping out the various holes and pits.

To repair a deficiency, the team would place an external patch over of the section which needed repair. Then they would cut out the damaged steel and weld a plate in place from the inside. Then an open cofferdam would be installed on the outside of the ship which allows diver access and the plate would be prepped, welded and painted from within the cofferdam.



*Example of corrosion found in a tank which needed to be cut out and patched.*

The cofferdam would need to be templated for each section of the hull that it was to be used to ensure a good seal was present when placed against the hull. This was done on the dive barge and it involved fabricating a "top hat"



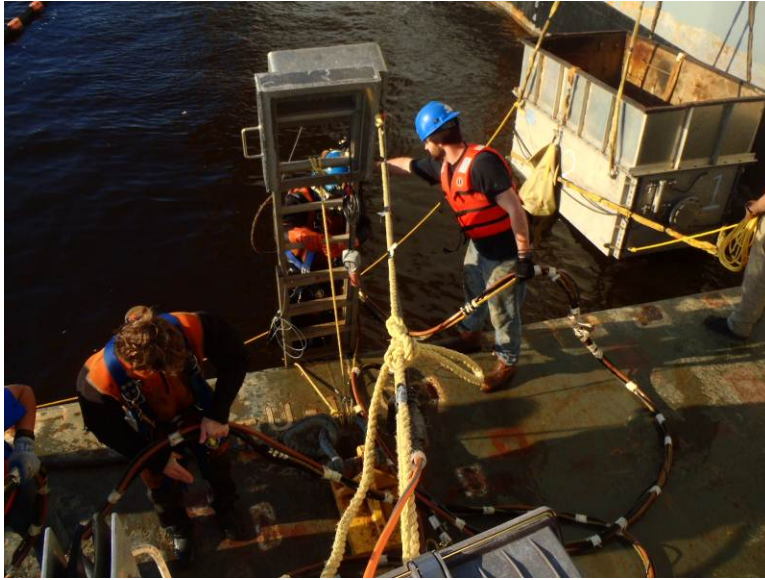
*A team of divers, working under a cover on the dive barge, are welding the top hat of the open cofferdam. This configuration ensured the seal was effective and would allow in-water welding on the outside of the hull.*



*This picture shows a welder working inside the ship, beginning the weld repair with a root weld.*

As the job progressed, the close inspection of the tank and adjacent fuel tank revealed more deficiencies than were originally expected and after a couple of weeks on the job, additional funds and an extension to the end date were requested to perform the newly discovered repairs. The new requirements resulted in the addition of the second shift of welder-divers to help complete the job as

rapidly as possible.



*A diver exiting the water (on the ladder) and the cofferdam on the right is suspended by a crane above the water's surface after completing a weld repair.*

The job finished on 7 April after 41 days of effort. In the end, the two shifts of welder – divers completed 19 hull inserts which involved 100 linear feet of welding and 20 linear feet of wet welds (to install padeyes for positioning the cofferdam). The divers used 440 pounds of welding electrodes. The can-do attitude of the whole team included the NSSA support activity and Ship's Force resulted in completion of extensive repairs in a timely manner. Well Done!