

Marine

News

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Inland Waterways

*New Insights into
marine highways*



Special Mission Workboats

Innovative propulsion
for rugged conditions

Propulsion

No emissions, plenty of performance

Workboat Design

The Multi-mission Fireboat

HydraWrap: *not Just a Temporary Repair Anymore*

Many vessel operators that experience leaks to piping, pipe fittings, and bulkheads have, in recent years, turned to the HydraWrap system. Used to repair leaking pipe systems and prevent downtime, the HydraWrap system, manufactured by HydraTech Engineered Products, LLC in Cincinnati, OH, utilizes high strength carbon fiber fabric and high strength epoxy resins to restore the structural and/or pressure boundary capacity of shipboard piping, bulkheads and equipment. In a nutshell, HydraWrap is a low cost alternative to traditional weld repairs.

Ashore and in the industrial sectors, the practice was for many considered a long term repair. That said; global classification society American Bureau of Shipping (ABS) viewed HydraWrap as a temporary fix and recommended that the repaired area be replaced with a like for like repair at the earliest convenience. Until now.

Thomas Harvey, Chief Engineer on the MODU Q4000 – Helix ESG, recently said of the product, “We have made a successful repair using your ABS design approved HydraWrap repair kit. We experienced a leak at a 5” to 3” reducer elbow. The pipe was carbon steel SCH40 with

150# ANSI welded flanges, and part of a HVAC condenser using sea water as the cooling medium at approximately 40 PSIG. This was an easy-to-apply and very effective product.”

Another application for the same vessel produced similarly satisfactory results. In this case, the Hydratec CFRP repair kit was used on the number 3 Main Saltwater Pump suction. Chief Engineer Harvey explains, “The product has once again performed as advertised and is working flawlessly. The system medium is as before mentioned (salt water) and was placed on a 12” SCH80 hot dipped galvanized pipe with operating pressure at approximately 40 PSIG. We used the 6” fabric with four continuous wraps.”

Armed with positive feedback from maintenance crews that the product is a viable solution to certain challenges of leaking pipes aboard maritime vessels, HydraTech recently obtained ABS renewal of the design assessment of the HydraWrap product line. The renewed design assessment permits HydraWrap repairs to be evaluated by the attending surveyor to determine the allowable service life





of the repair, providing maintenance and operators more flexibility and options. This is good news for operators who, in the past, were restricted to replacing the repair in sixty days.

Every HydraWrap Kit is furnished with the necessary application tools and installation instructions. Surface preparation for the HydraWrap applications requires, as a minimum, a clean surface; one that is free of debris, scale and foreign substance. Once the surface is prepared, the epoxies are mixed for the product to be applied. Most applications take less than an hour and the system can be back in service in less than 24 hours. The HydraWrap system is designed per the American Society of Mechanical Engineers (ASME) recommendations, and repairs can be designed to accommodate high pressure applications.

The HydraWrap System is available in various pipe repair kits to address defects and/or leaks of various pipe sizes. The pipe repair kits are available in four different HydraWrap Systems; Standard, Acid, High Temperature, and SubSea. The Standard Kit is suitable for many common chemicals and applications including seawater.

The Acid Kit is formulated for more aggressive reagents and acids. The High Temperature Kit is utilized on elevated temperature applications, and the SubSea Kit is designed to cure underwater or on damp surfaces.

Several operators have used the HydraWrap system for various applications from repairing pin-hole leaks and corrosion defects on main cooling water systems to rehabilitating oil lube piping. Applications on various piping materials, including copper nickel, have enabled maintenance to extend the service life of piping systems and avoid emergency repairs. Still other operators report using the HydraWrap system on portions of critical operations, where preventing system failure is a priority to reinforce the piping system to prevent bursting.

HydraWrap, now recertified, is no longer just a temporary fix. Instead, it can constitute a cost-effective solution that extends service life, reduces maintenance and eliminates downtime.

www.hydratechllc.com/marinehydrwrap.html

