INSERT PLATE REPAIRS





Afloat repairs to hull plating

UMC have developed a fully class approved process that allows permanent repair and replacement of damaged areas of hull plating using a single sided welding procedure. This process can be used for repair of cracks, deformed plate, or even retro-fit of hull mounted equipment, on ships, offshore platforms, or any sub surface structures. This process therefore offers a realistic alternative to docking and provides a permanent repair solution.

The technology

In order to replace a section of hull plating, the initial action is to carry out a full dive survey to verify the extent of the damage. A cofferdam is then secured in place to provide a water-tight enclosure, the area of hull plating is cut out from inside and a piece of new plate produced to exactly fit the resultant opening.

A Class Approved single side weld procedure is then employed to weld the new plate in place, once welded the requisite NDT is carried out and finally the cofferdam removed from outboard and the hull plating re-coated with UW paint to preserve the area.

This permanent repair process has successfully been used on numerous occasions in ships and offshore platforms both alongside and on station. Inserts as large as 2.5m x 1m have been carried out on an FPSO offshore, and multiple inserts carried out on a vessel suffering collision damage.





Above: Trial fit of external cofferdam for large insert repair of offshore vessel (main picture). Typical flat insert repair showing single sided weld (top smaller picture) and Insert held in place with 'dogs' (bottom smaller picture).

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