

# Tugboat Rear Rebuild, Reinforcement and Protection using Belzona

ID: 8236

Industry: Marine  
Application: SOS-Ships and Offshore Structures

Customer Location: Casablanca, Morocco  
Application Date: March 2020

Substrate: Steel  
Products: \* Belzona 1111 (Super Metal) ,  
\* Belzona 5811 (immersion Grade) ,

## Problem

The Tugboat had sustained major damage during a dock manoeuvre. This resulted in a dock bumper perforating the external wall at the rear of the boat. This subsequently damaged the supports of an internal vessel storing a fire-retardant substance.



## Photograph Descriptions

- \* Rebuild of the perforated wall ,
- \* Damage sustained to the internal vessel supports ,
- \* Rebuild & reinforcement to the supports ,
- \* Protective coating applied to protect the repair from future corrosion ,

## Application Situation

A tugboat used at the port in Casablanca to tow ships into the port and dock.

## Application Method

The rear necessitated an external rebuilt of the perforated wall using Belzona 1111, it was then protected against corrosion using Belzona 5811. The internal vessel required internal reinforcing of its supports using Belzona 1111 to give strength and prevent potential leaks, the repair area was then coated with Belzona 5811 to protect against corrosion. The application was carried out in accordance with Belzona System Leaflet SOS-01 and SOS-02

## Belzona Facts

The tugboat had been placed in a dry dock and therefore needed to be repaired quickly so as to minimise cost. The alternative

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FS 695214  
ISO 14001:2015  
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would have been to weld the rear wall as well as add supports to the internal vessel. The confined area inside would have made the hot working extremely difficult as well as distort and leave the potential for micro-fractures to form. Due to the Belzona solution the repair was done in 4 hours and back in service 2 days later.

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