

Belzona Provides Anti-Corrosion Protection for Sewage Discharge Outlets of EGC System

ID: 9168

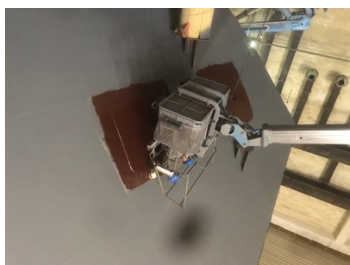
Industry: Marine
Application: SOS-Ships and Offshore Structures

Customer Location: Dalian, Liaoning
Application Date: 2023

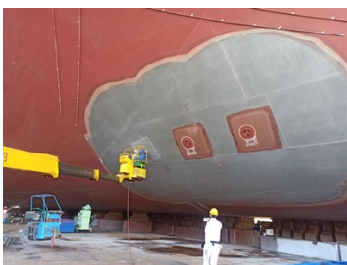
Substrate: Carbon steel
Products: Belzona 4311 (Magma CR1)

Problem

To enhance control over SOx emissions from the ship hull, a ship EGC (Exhaust Gas Cleaning) system was installed. There would be corrosion issues in the sewage discharge area of the system. Belzona's acid and alkali resistant coating was designed into the specification documents to provide effective anti-corrosion protection for the EGC system.



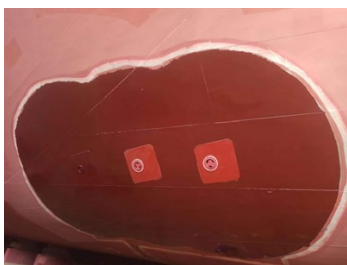
Surface preparation



Surface profile and cleanliness inspection of the target area after surface preparation



The first coat of Belzona 4311 (grey) was being applied



The second coat of Belzona 4311 (red) was completed

Application Situation

Between 2022 and 2023, a total of 9 EGC systems will be installed to provide anti-corrosion protection. Out of these, 3 ships have a single sewage outlet, while 6 ships are equipped with (3+1) sewage outlets. The cumulative area requiring anti-corrosion coating surpasses 1,200㎡. The construction phase will be segmented in the workshop and dock, aligning with the modification cycle of each ship.

Application Method

The application process strictly adhered to Belzona's standard procedures. Each ship's designated coating area underwent grit blasting and cleaning, with subsequent testing of the surface profile and cleanliness of the target area after surface preparation. Upon successfully passing the tests, the Belzona 4311 double coating application commenced. Throughout the operation, it was imperative to closely monitor temperature and humidity conditions, as well as the wet film thickness of the coating. Once the material was cured, the wet sponge testing and DFT were used to identify defects and ensure the film thickness met the design standards. This process continued until no defects were detected, and the film thickness met the specified standards, signifying the completion of the construction. The shipyard collaborated in constructing scaffolding and working platforms during the process. The heating devices were utilised to guarantee that the coating met the environmental requirements when the application was carried out during winter.

Belzona Facts

For more examples of Belzona Know - How In Action, please visit <https://khia.belzona.com>

ISO 9001:2015
FS 695214
ISO 14001:2015
EMS 695213

Belzona products are
manufactured under an ISO
9000 Registered Quality
Management System.

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Since 2018, the anti-corrosion protection application of EGC systems has been successfully completed on over 70 ships, showcasing the maturity of the technology. The pivotal role played by Belzona 4311, a strong acid and alkali-resistant coating, is evident in providing enduring protection for the EGC system. The shipowner expresses high satisfaction with both the product and the technical solution.

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