Trial Application for Belzona 7311 Solves Cold Bonding Issues

ID: 10372

Industry:	*Oil & Gas*	Customer Location:	*Malaysia*
Application:	*VPF-Valves, Pipes and Fittings*	Application Date:	*November 2025*
Substrate:	*Carbon steel*		
Products:	*Belzona 7311,Belzona 9111 (Cleaner Degreaser),Belzona 9111F,Monti® MBX® Bristle Blaster®*		

Problem

The client has major problem on old offshore platform that has multiple areas with corrosion. Majority of the areas are high-traffic and requires strong structural integrity as well as fatigue resistance. They cannot allow welding due to risk and rigorous arrangements that will take time.
The client initially thought of Belzona 1111 as an alternative for welding as cold bonding repair but they needed higher structural performance and fatigue resistance.



Examples of areas requiring repair



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Mock-Up application of Belzona 7311



Load Test on the mock-up after 24 hours of curing

Application Situation

The client wanted to do welding; however, this approach would have resulted in significant costs, extended downtime, and considerable challenges due to the site conditions and welding requirements. The client, therefore, preferred cold bonding technique without compromising on adhesion and performance. Therefore, using Belzona solutions on cold bonding repair with high structural performance with Belzona 7311 has saved the clients thousands of dollars and faster turnaround with very minimal interruption.

Application Method

The trial was designed to replicate the actual offshore repair conditions with high humidity and other environmental factors. The trial was carried out in accordance with the specified criteria using I-beams and steel plates as the test substrates.
The only allowed surface prep is power tooling to achieve SSPC-SP 11 profile with 25 microns, using MBX bristle blaster.
Following surface preparation, Belzona 9111 was applied as cleaner/degreaser. Once the surface was completely dry, Belzona 7311 was applied.

To test the adhesion and structural capacity of the newly bonded plates after 24 hours of curing, the panels has been loaded of weights from 1 ton up to 12 tons with no signs of crack.

Belzona Facts

By using Belzona 7311, the client has avoided complicated arrangement in offshore for welding, has saved overcall cost on time due to quick turn around and much more higher structural integrity.

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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