

Pipeline Cold Bonding Application with Belzona 1111

ID: 9523

Industry: Oil & Gas

Customer Location: Kamphaeng Phet-Phitsanulok, Thailand

Application: VPF-Valves, Pipes and Fittings

Application Date: December 2022

Substrate: Carbon steel

Products: Belzona 1111 (Super Metal), Belzona 9111 (Cleaner Degreaser)

Problem

The client runs high pressure water through different diameter pipelines to inject into oil wells, these pipelines were welded together. Upon inspection, the joints showed evidence of thin wall defects where the weld material was corroding from the inside of the pipeline - a form of galvanic corrosion resulting from the weld joint filler being less noble than the pipe material.



Various Pipeline Diameters and Geometries



Wetting out substrate with Belzona 1111 after Surface Prep and Solvent Cleaning



Plate Bonding with Belzona 1111



Completed Repair

Application Situation

The customer has a long-standing history of using Belzona products. They have previously repaired pipe joints using this solution and were satisfied with Belzona's performance. Therefore, they want to continue with this solution on the remaining sites. In total, these cold bonding application are estimated to consume 5000 - 7000kg of Belzona 1111 product.

Application Method

1. The repair area and two plates were blasted using garnet to be achieve ISO SA2.5 cleanliness and a minimum surface profile of 75 microns.
2. All prepared surfaces were cleaned with a suitable degreaser before inspection and measurement of the climatic conditions.
3. Welding rod was cut to small pieces and used as shims to provide a uniform bond thickness.
4. Belzona 1111 was mixed thoroughly and used to wet out the repair area and plates using a short bristled brush.
5. Belzona 1111 was applied to the plates which were then adjusted to the correct position and clamped using a hoist and chain to remove air.
6. The Belzona product was left to cure as per the IFU.

Belzona Facts

Belzona offered a long-term cold works solution in circumstances where hot work was not permitted. The Belzona solution allowed the customer to prevent leaks at the pipe joints, reduce maintenance cost & minimized downtime. Great cost savings.

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ISO 9001:2015

Belzona products are

FS 695214

manufactured under an ISO

ISO 14001:2015

9000 Registered Quality

EMS 695213

Management System.

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