

BELZONA SUPERWRAP II STRENGTHENS CORRODED GAS PIPE

ID: 5962



PROBLEM

The asset owner assigned a shutdown period, totalling 7 days. Welding was not an option; the application required a cold applied solution. Due to the total number of irregular pipe geometries, including Tee junctions and sharp bends, a well-engineered design was essential.

APPLICATION SITUATION

A series of pipes on board the North Sea FPSO were displaying signs of corrosion between the pipe and support. In some areas, registering thin wall defects, with 35% wall loss.

APPLICATION METHOD

Corrosion resistant Belzona 1111 was used to rebuild the metal substrate before application of the Belzona Superwrap II system. The reinforcement sheets were accurately cut to match the unique pipe dimensions in the form of a reinforcement jackets for the Tees, whilst utilising specifically measured strips for the bends. The applicators used seven spirals of Belzona SuperWrap II around each defect. Following completion of the SuperWrap II installation, Belzona 1311 was used to create irregular loading bearing shims between the pipeline and support in accordance with Belzona System Leaflet VPF-15.

BELZONA FACTS

Notably, not all areas were accessible thus requiring rope access techniques to be utilised by a team of five operators, including riggers, inspectors and product specialists. Having previously worked with Belzona, the asset owner has now commissioned, in total, 48 Belzona SuperWrap and SuperWrap II applications between 2010 and 2015. The repairs were compliant with ISO/TS 24817 and ASME PCC-2 Article 4.1.

INDUSTRY

Oil & Gas

LOCATION

FPSO, North Sea, Norway

APPLICATION DATE

April 2015

PRODUCTS

Belzona Superwrap II
Belzona 1111 (Super Metal)
Belzona 1311 (Ceramic R-Metal)

SUBSTRATE

Carbon Steel

PHOTOS

1. Thin-wall corrosion up to 35%
2. Belzona SuperWrap II tackles complex geometries
3. Belzona shim plates at pipe supports
4. Complete Belzona SuperWrap II application

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