

Wall Thinning Vessel Repair

Overview

A vessel based at an onshore production oil terminal had sustained wall thinning at its lowest section with wall thickness measurements recorded at some locations measuring only 2.7mm. Maintenance was required to restore vessel integrity.

Scope

Repair options considered included either over plating or application of a composite repair to the defected area. Utilising the over plating method would involve welding on-site and shutdown of the vessel. The plate would also need fabrication, fitting to the vessel's outer dimensions, delaying the repair further until fabrication completion. The composite repair method, using Technowrap 2K™, was viewed as a superior repair option due to the fact that it is a cold repair method implying that, it can be applied to live systems with no shutdown implications or associated loss of production costs. In addition to this Technowrap 2K™ is a flexible repair product enabling its application to the most complicated of pipework and vessel geometries.

Challenges

The vessel to be repaired was viewed as a complicated geometry and required an advanced wrapping method to ensure successful implementation against vessel design requirements.

Our Approach

As with all repairs supplied by Walker Technical, a design engineered assessment was conducted on the vessel prior to installation ensuring appropriate consideration was given to all the design variables involved. This enabled a technical solution to be provided with one of the key elements of the solution being an extension to the design life of the vessel for a further 4 years, as per the Client's requirement.

