CASE STUDY

Extended Warranty Repair

Overview

A 2” drain nozzle situated within a vertical gas pressure vessel skirt on a UKCS platform had sustained internal erosion and required ‘live online’ maintenance to reinstate its integrity.

Scope

X-ray inspection was undertaken to quantify the extent and size of internal erosion defects. The survey findings would be used to design an engineered composite repair capable of reinstating the integrity of the nozzle. The defect dimensions were identified as a remaining wall thickness of 1.4mm.

Challenges

The location of the nozzle was situated in a very limited access area within a skirt. Due to this access limited location, practical problem solving and application preparation was a key element in enabling repair installation. The skirt underwent an engineered cut in two areas to allow safe access to the nozzle to allow repair installation and also to comply with local health and safety requirements. In this maintenance scenario, Technowrap 2K™ as compared to alternative repair methods offers an ideal solution as it can be installed within very restricted access areas.

Our Approach

The Technowrap 2K™ repair was installed by encapsulation of the nozzle by access through the two design engineered cuts to the skirt.

Repair of the nozzle reinstated integrity for a further 12 months, as per client requirements to provide time until the next scheduled shutdown when nozzle change out was planned. It was found however, as is common in such circumstances that the original 12 months repair design life required a further ‘warranted life extension’ for a subsequent 24 months, as the shutdown schedules had been delayed . This ‘Extended Warranty’ was facilitated and managed by Walker Technical, by further request of X-ray inspections, at yearly intervals, to verify if the original loss of wall thickness as first indicated by the client had increased. It transpired the growth had stopped and remained stable enabling the lifetime of the repair to be extended for the required extra 24 months..

Design

Pressure - 83Barg
Temperature - 80°C