

Ammonia Tank Dual Nozzle Repair

Overview

An instrumentation spool located on an Ammonia Storage Tank had severe wall thinning on both outlets of a flange.

A unique layup method had to be devised to ensure that both defects could fall under an engineered design.

Scope

The line had the following specifications:

Structure	Dual Nozzle
Surface Preparation	Sa 2.5
Class Approval	N/A
Design Pressure	19.6 bar
Design Temperature	-5 - 90°C
Application Temperature	30°C
Design Life	20 years
Wrap / Repair Length	470 mm
Pipe Diameter	2" and 4"
Geometry	Wrap over flange
Corrosion Type	External
Defect Details	50mm axial, full circumferential (wall thinning)



Profiling and initial layer application

Solution

- Technowrap 2K™ HA system with temperature resistance up to 90°C
- Flexible and rapid response providing an engineered composite solution
- Innovative layup procedure to account for the separated landing zones

Benefits

- No hot work and avoided the need for shutdown
- Long term solution
- Repair completed in a difficult area with minimal additional safety requirements



Defect locations



Completed repair