CASE STUDY

ICR. ias
JOINT VENTURE

Quickflange used for underground firewater system

Overview

An underground firewater system required a connection spool to be inserted. The location was within a live gas plant so required a no hot work approach. Four flanges, two at DN200, one at DN250 and one at DN300 were required to be installed, with associated onsite machining to be provided.

Scope

The repair scope had the following specifications:

Structure	Underground firewater system
Line Media	Water
Design Pressure	1,809kPag
ANSI Rating	CI#150
Design Temperature	60^0C
Design Code	ASME B16.5
Schedule / Wall thickness (WT)	7.04mm to 8.38mm
Material and Grade	A53GR B
Flange materials/specification	A105N (Quickflange material)
Geometry	Connections for new spool - underground
Orientation	3 x horizontal and 1 x vertical

System condition initially

Quickflange tool alignment and setup

Solution

- 8”, 10” and 12” flanges specified and tested through DNV approved process
- Onsite machining tooling and technicians provided in one mobilization of a crew of 2
- Flexibility to fit within larger site crew, helping out with all tasks associated with the job to optimize the job schedule

Benefits

- No hot work
- Flexibility in the methodology to address latent conditions and residual stresses in the pipework
- Short time on site, 5 days with 2 technicians to complete 4 flange installations.
- No welding preparation, inspection or habitat requirements

Completed spool