

Case Study

Client: FCC Environment
Location: Millerhill, Edinburgh
Duration: 5 Days
Contract Type: Fixed Price

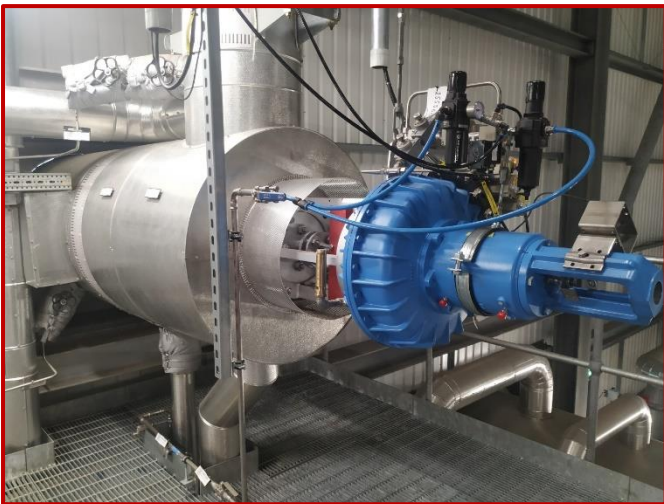
Project: FCC Environment Millerhill Valve Replacement

Scope of Work: Replacement of the 24" ARCA Actuator Valve and associated pipework.

Disciplines/Trades: Scaffolding, Insulation, Rigging, Machining, Fitting, Welding, Heat Treatment and NDT.

Description: Due to the original actuator valve 'passing'* our client elected to replace the defective valve. The client order was placed on 21st October 2019 with works scheduled to commence on 28th October.

Existing Defective Actuator Valve



Work consisted of:

- Erection of access scaffolding
- Removal of insulation
- Gagging of Pipework to prevent movement
- Removal and replacement of valve under OEM supervision
- Welding of valve
- Pre and post weld heat treatment
- NDT

Specific Welding Activities:

- 1 x 24" (609.6mm OD x 12.5mm wt.) Butt weld of 16Mo3 Valve weldment material to P11 existing Pipework material which required Pre & Post weld heat treatment to the main 24" joint together with 100% Volumetric UT + MPI testing carried out to the completed weld
- 1 x 6" (168.3mm OD x 8mm wt.) Butt weld 16Mo3 Valve weldment to existing 16Mo3 pipework. 100% Volumetric RT + MPI testing carried out to the completed weld
- 1½" – 1" (48.3mm-33.4mm x 3.2mm wt.) concentric reducer Butt welds 16Mo3 Valve to existing 1" 16Mo3 pipework. 100% Volumetric RT + DPI testing to the completed welds
- 4 x 1½ (48.3mm x 3.2mm wt.) Butt welds to modified associated 16Mo3 pipework. 100% Volumetric RT + DPI testing to completed welds

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The critical welding operations needed to be closely co-ordinated with IRIS Heat Treatment / NDT and Rainham's own scaffolding and lagging operations to deliver the project on time.

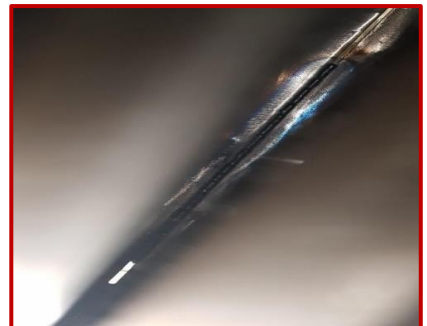
Fit-up of 24" Weldment



24" Root Run



Visual Inspection of Cap



Inspection of 24" Root Run & Cap



6" Welding & Fit-up of associated pipework



Project Highlights:

- All welds achieved 100% pass for both Visual and Volumetric testing
- Full scope achieved within the specified timeframes including emergent works modifying existing pipework

(* From **Project Description**: Passing – allowing the through passage of fluid)