



Valve Boxes

Client: United Kingdom Atomic Energy Authority (UKAEA)

Aims and objectives

Aquila won the contract for the design, manufacture, assembly and function testing of four WDS Valve Boxes for the United Kingdom Atomic Energy Authority (UKAEA).



Containment

Cyclife EDF Group - Subsidiaries



01 Project overview

PHOTO
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The valve boxes were designed as a flanged carcasses with control closure panels on each end, to aid manufacture and maintenance

access, to which the primary pipework is mounted. Process control connections are located on the control closure panel, which the secondary pipework interfaces are located on the flanged carcass. Four mounting feet on the base of the flanged carcass support the complete assembly.

All primary process pipework and cabling was designed to be mounted onto a single closure panel - the control closure panel. A supplementary valve mounting plate, mounted to the control closure panel, increases the surface area available for component mounting, maximising utilisation of the box volume, minimising the box footprint and the process line length, while delivering a lighter box construction.

Valve Box Interfaces:

- Primary pipework - terminated in Swagelok Female VRC connections within the valve box
- Secondary pipework - terminated on CF flanged stubs (enabling secondary pipework to be designed to suit, without halting progress of the valve boxes)
- Instrument control interfaces (compressed helium) - Swagelok twin ferrule compression fittings
- Instrument control interfaces (electrical) - Lemo SWH hermetically sealed bulkhead connectors

02



Summary

Aquila took the outline proposal detailed in the UKAEA specification and developed a solution that was simple, practical and cost effective. created a design that enabled the control closure panel manufacture to be 'fast-tracked' through production, enabling early initiation of the primary pipework fabrication and associated components. The design also aided fabrication and installation through improved access around the components, creating cost savings through simplification.



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