

AIREDALE BY MODINE

LEEDS



G&H

A man with grey hair and safety glasses, wearing a dark blue long-sleeved shirt and a bright yellow high-visibility safety vest, is working on a complex industrial machine. The machine has many pipes, valves, and a large cylindrical component. The background is filled with more industrial equipment.

PROJECT TITLE

End of Line Test
(EOLT) Chamber

SERVICES

Mechanical, electrical
and civil engineering

CLIENT

Airedale by Modine

DURATION

Six months



HEADLINES

- Turnkey civils, mechanical and electrical package delivered in six months by a 10-strong G&H team, including apprentices.

PROJECT OVERVIEW

Global critical cooling specialist Airedale by Modine appointed G&H to design and deliver a full civils and mechanical and electrical (M&E) package for a new EOLT chamber.

Additional testing capacity was required at Airedale's Centre of Excellence in Leeds, UK, to meet growing customer demand from the data centre industry, and ensure continued operational resilience.

THE CHALLENGE

One of the project's biggest challenges was installing the main busbar feed within a live factory environment, six metres above ground level.



Initial designs had not fully accounted for structural and spatial constraints within the existing facility, requiring G&H to develop solutions to integrate new systems seamlessly.



SOLUTION

G&H delivered a complete civils and M&E scope, including:

Civils

- Removal and replacement of the existing concrete slab with new drainage.
- Construction of a new substation extension and new test chamber structure, including 150mm Hemsec LPCB-approved PIR walls.

Mechanical

- Installation of Evaporator Feed Circuit (EFC) and Heat Recovery Pipework (HRP) loops, complete with all drainage, venting, commissioning and isolation valves.
- Offsite prefabrication of bespoke pipework at G&H's 18,500 sq. ft workshop.
- Plant deck with a pumped circuit connecting the new EOLT facility to existing flow pipework.
- Heat Recovery Circuit (HRC) designed to deliver a total chamber cooling load of 3,146kW with a flow rate of 149.8kg/s and a 5°C differential.

- Low Pressure Hot Water (LPHW) heating circuit for preheating and trim heating.
- Application of CFC and HFC insulation.

Electrical

- Switchgear and busbar installation, providing power to the new switchboard, routed across the factory floor at high level
- General lighting and small power distribution.
- Emergency lighting, fire alarms and data outlets.
- Installation of the required Building Management System (BMS) controls
- Interlocking of the test chamber electrical installation to allow "Shunt" tripping (circuit breaker) in the event of ATEX approved gas detection.
- Lighting, small power and fire alarm installed within the new substation extension unit.



THE RESULTS

The new EOLT chamber was delivered on time and is now providing Airedale by Modine additional testing capacity to meet rising global demand. The project futureproofs the facility, enhances operational efficiency, and ensures robust safety and compliance standards across both mechanical and electrical systems.

The scheme also demonstrated G&H's commitment to skills development, with apprentices working alongside experienced engineers to gain practical experience on a complex, live project.

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