

Case Study: High Pressure Gas Installation – Cheshire

Case Study: Bio Engineering

Client: BGEN Limited

Sector: Biological Engineering

Completed: June 2023

Budget: £1111,262

Location: Stockport. Cheshire

Summary: High-pressure gas installation

Services Supplied

- ✦ Specialist Gases - installation
- ☀ Commissioning & Certification



Supply, installation, testing and commissioning.

Project Outline:

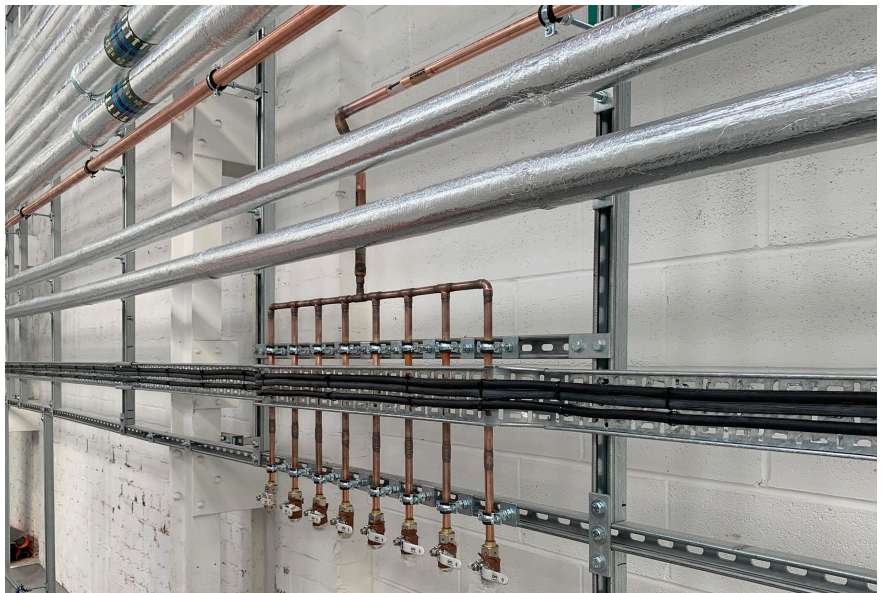
Designed as a temporary production facility for the testing of next-generation fuels. These fuels are designed to help industries worldwide transition to a more sustainable future.

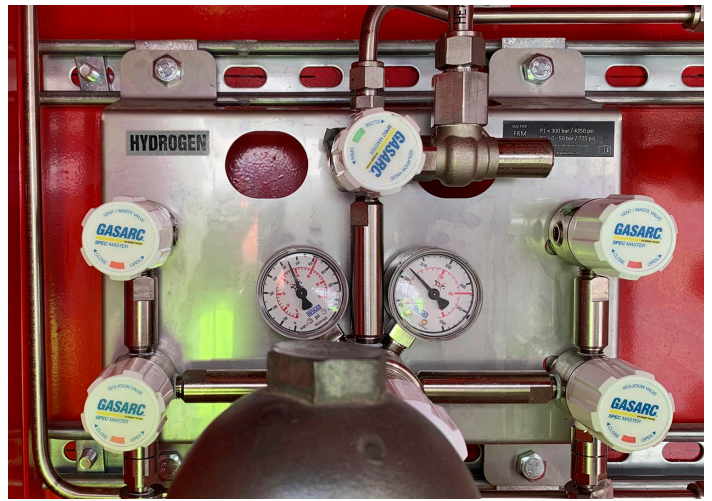
The facility's design included the installation of many specialist high-pressure gasses.

Scope of Works:

Supply, installation, testing and commissioning of:

- **Nitrogen systems:** comprising of a 15 bar, 5 bar & 2.5 bar copper pipelines supplied from a manual changeover high-pressure cylinder manifold.
- **Instrument Air system:** comprising of an 8 bar copper pipeline supplied from a manual changeover high-pressure cylinder manifold.
- **Laboratory Compressed Air system:** comprising of a 10 bar copper pipeline supplied from a manual changeover high-pressure cylinder manifold.
- **Laboratory Helium system:** comprising of a 5 bar copper pipeline supplied from a manual changeover high-pressure cylinder manifold.





- Clean Dry Air system: comprising of a 10 bar copper pipeline supplied from a manual changeover high-pressure cylinder manifold.

- Hydrogen systems: comprising of 40 bar & 10 bar stainless steel pipelines supplied from a manual changeover high-pressure cylinder manifold.

All systems required the supply of gases to ventilated workspace enclosures, fume cupboards and gas chromatography mass spectrometers.



Meel Group Lab Gas Expertise

Our installation engineers employed:

- High-purity stainless steel pipework and orbital gas tungsten arc welding.
- Degreased copper pipework installation and fluxless brazing.
- Inert gas purging to maintain the internal cleanliness of the pipelines.

Adherence to regulations:

Meeting all industry regulations, including CDM, Pressure Systems Safety Regulations 2000 (PSSR), British Compressed Gas Association (BCGA) Codes of practice, Gas Safe, and WRAS.

Project Challenges

As the client installed their bespoke manufacturing equipment, they made revisions to the design of the specialist gas services.

Our engineers needed to have a flexible approach to progressing the works of this project.

Health and Safety

To enable the safe discharge of gas, the system required stainless steel hydrogen vent pipes to be installed above the roof level at 12m. To install this safely, we utilised a powered mobile articulated boom lift.

At Meel Group – Building Services, we take health and safety very seriously. All RAMs were in place, and we had no incidents during the project.



Client comment:

“Meel Group provided an excellent service on what was a very challenging Scope for BGEN to execute. Working in partnership, with fantastic technical support, we delivered a world-class pilot plant & testing facility”.

