

CASE STUDY

Innovation for Innovators

The Challenge

GE Power & Water is a world leader in power generation and water technologies for utilities, independent power producers and industrial applications.

Their Product Development activities identified a project to create a mobile water deoxygenation system using Gas Transfer Membranes and high purity Nitrogen within an articulated trailer. With this new system, GE Water & Process technologies can quickly deliver a single trailer solution to the customer's site or remote location and treat the water at source instead of relying on other expensive and complicated methods to remove the dissolved oxygen within water.

This deoxygenated water is used by various industries. Examples include the semiconductor industry where this water assists in the cleaning of the computer chips during the manufacturing process. Within refineries, paper mills and power plants this water reduces corrosion within boilers.

The project initially planned to use nitrogen in cylinders but during the design phase it was identified that the nitrogen consumption would be in the region of one cylinder per hour. This large requirement meant that cylinder

supply would require significant logistical support and cost as well as having major EHS challenges.

Maziaks' Solution

GE's Peterborough branch was already a Maziak customer and when we were made aware of these plans, we offered an alternative solution to nitrogen bottles.

We delivered a nitrogen generation system within the trailer, giving GE a number of key benefits:

- A far safer option to nitrogen bottles.
- A more efficient option with the ability to generate nitrogen on demand. No need for planning ahead to ensure bottles are delivered to the right place at the right time.
- A much more cost effective solution. Consistently high quality nitrogen whilst no longer being at the mercy of liquid nitrogen suppliers and fluctuating costs.

The equipment installed included:

- HPC SM12RM (7.5kW) Compressor
- Parker MAXIGAS104 N₂ Generator
- Parker Dessicant dryer DME012
- Parker CO₂ removal dryer K-MT-Lab6

This industry leading technology is covered by warranty of up to 5 years and in addition the customer has signed up to Maziak's Gold Service Agreement which facilitates predictable maintenance budgeting.

Results

Maziaks' solution has enabled GE Power & Water to offer a one-stop-shop, easily mobile trailer solution, eliminating the need to coordinate multiple elements at each site. Now all that is required is a power supply to the trailer. If the GE trial is successful, there is scope to kit out another 5 to 6 trailers. This will place GE at the forefront of mobile water treatment in the UK.

Client Testimonial

"Maziak Compressor Services Ltd was instrumental in providing a mobile single container solution. The Nitrogen requirements of the process would have meant that the system would require constant operator presence to change cylinders or manage liquid Nitrogen supplies. Maziak designed and installed a turnkey system that was fully mobile, eliminated all materials handling issues and need for operator presence. Additionally gas quality actually exceeds that of commercial cylinders."

John Cameron, Production Manager



Fully Installed System within Trailer

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