

Coming in from the cold—solving compressed air quality issues

The Challenge

Gasrec Ltd are the UK's leading supplier of gas for road transport use. Renewable Biomethane (Bio-LNG) is typically 30 to 40% cheaper than diesel, and produces up to 95% less CO₂ and 70% to 99% less pollution. In terms of storage, it takes up to 600 times less space as a liquid than in gaseous form. To cryogenically maintain it as a liquid, it needs to be held at very low temperatures, i.e. minus 160°C.

Dispensing the liquid into trucks via forecourt pumps and nozzles is done using compressed air as the primary power source instead of electric, due to the reduced risk of fire. The extreme localised cold temperatures and external piping were creating problems for Gasrec's regular garage-type compressed air generation plant. A lack of reliability and frequent stoppages due to ice forming in the distribution piping were having a damaging effect on reputation and revenues.

Maziak were contacted to complete a site survey and offer recommendations to resolve the reliability of the compressed air supply.

Maziaks' Solution

On the cold winter day of our survey the problems were very evident on the forecourt as the site supplied a constant stream of trucks. Although the long-term solution was clear to us, the approvals for this future-proof capital proposal would not be immediate, so we recommended a short-term fix until the approvals could be put in place.

Maziak keep a fleet of equipment for immediate hire and by installing one of our 7.5kw HPC screw compressor with desiccant air dryer, modifications could be made within a matter of hours. This was quickly approved as a short-term solution, the equipment speedily installed, and improvements were seen instantly.

Results

The short-term solution was kept until the long-term plan could be approved. Since then two new HPC SM13RM 7.5kw fixed speed compressors with Parker air treatment have been installed on a long-term fixed price hire contract that includes all maintenance, with zero variable costs for the next 5 years. The minus 40°C dewpoint achieved has proved to be so good that all issues with ice in pipework have been eradicated. The refrigerant dryer is for emergency use only.

Testimonial

Maziak have provided me with specialist consultancy services for a compressed air system project which I have been developing. I have been thoroughly impressed with their detailed theoretical & practical knowledge and experience. Their input has been extremely useful and I have been greatly impressed with their flexible and efficient approach—Maziak appear to want to develop long-lasting relationships and this shows in the way they conduct their business. For compressed air systems, Maziak come highly recommended. **Tom Spinks, Technical Manager**

