

Monitoring Oxygen in Brine After Degassing in a Salt Plant

Replace Sensors Without Process Shutdown, Minimizing Downtime and Maintenance Costs

Industry: Chemical Industry, Salt Production

Application: Oxygen Monitoring in Salt Production

Hamilton products: VisiFerm mA with CS22 Cap, Retractable PEEK, ArcAir software, Arc View Mobile

Nobian Salt Plant – Oxygen Monitoring Application

At Nobian's salt production facility in Hengelo, the Netherlands, brine is treated in a degasser in order to reduce the oxygen content in the brine. Reducing the oxygen content will reduce corrosion speed that results from a combination of heat, water, salt and oxygen. The sensor is applied to monitor the oxygen level in the degassed brine flow.

Key Benefits

- Monitoring of effectiveness of degassing step
- Reduced process downtime through retractable installation
- Bluetooth-enabled sensor diagnostics and quality verification
- Fast sensor exchange using laboratory-calibrated Arc sensors
- Reliable operation in monitoring oxygen level in brine
- Scalable solution for deployment across multiple production sites

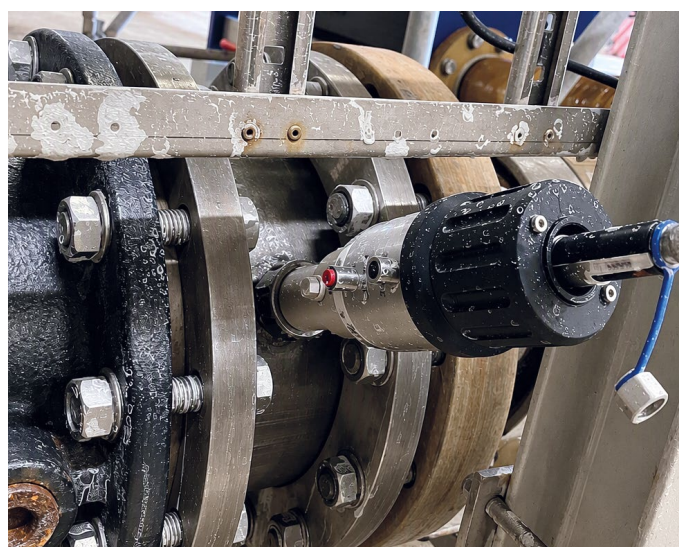


Figure 1: Installation

The installation utilizes a Hamilton VisiFerm mA oxygen sensor with a Hastelloy H4 ODO cap in combination with a Retractable PEEK featuring Hastelloy wetted parts, making the solution suitable for the chemical environment. The retractable design allows sensor maintenance, calibration, and replacement without shutting down the process, significantly reducing maintenance downtime and improving operational efficiency.

A key benefit for Nobian is the sensor's integrated Bluetooth connectivity. Operators use Bluetooth communication and ArcAir software via the tablet Arc View Mobile to perform sensor diagnostics, verify cap

condition, review sensor health, and conduct quality checks without removing the sensor from service. This capability supports a predictive maintenance cycle approach and helps maximize sensor lifetime.

The customer calibrates sensors in the laboratory before installation in the process. Thanks to Hamilton's intelligent Arc technology, calibrated sensors can be quickly exchanged in the field, minimizing installation time while ensuring measurement reliability. The combination of intelligent sensor management, low maintenance, wireless diagnostics, and a robust retractable installation provides Nobian with a reliable solution for oxygen monitoring in a demanding environment.

Point of Measurement

Online oxygen measurement in the outlet of the degasser monitoring the effect of degassing.



Figure 2:
ArcAir software,
Retractable PEEK

“Hamilton's oxygen monitoring solution provides reliable oxygen detection while minimizing maintenance effort. The retractable installation and digital Arc technology allow fast sensor exchange, easy diagnostics, and maintenance without process shutdown. This helps us improve process reliability, reduce downtime, and support corrosion prevention in our operation.”

Jorge Mejias Bompert

Functional Expert Automation and Instrumentation at Nobian

Conclusion

Hamilton's VisiFerm mA sensor and retractable housing Retractable solution helps Nobian monitor oxygen level and verify correct operation of the degasser. The housing help reduce process downtime, and simplify sensor diagnostics and maintenance through Bluetooth-enabled Arc technology. The successful installation demonstrates the value of intelligent sensor management in chemical environments and provides a strong reference for future deployments within Nobian and the wider industry.

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