



Ensuring Aviator Breathing Gas (ABG)

Quality with Advanced Oxygen and Moisture Analysis for Airlines

Panametrics designed systems maximize uptime:

Panametrics' solution for airlines highlights the importance of designing systems that maximize uptime and reliability. By integrating oxygen and moisture analysis into a single system that monitors critical points in the gas supply system, Panametrics enables airlines to maintain the highest standards of safety and efficiency, ultimately safeguarding both passengers and operational integrity.

Summary

Airlines prioritize the safety and comfort of passengers by ensuring Aviator Breathing Gas (ABG) provided for each flight meets the highest purity and quality standards.

Application

Airlines require a robust system to monitor and ensure the purity of Aviator Breathing Gas at multiple critical points. The application involves:

- Continuous monitoring of oxygen purity and moisture content at the outlet of multiple charging stations.
- Quality control of the ABG filling cylinder rack.
- Assurance of the final product purity in the Aviator Breathing Gas cylinders used on each flight.

Benefits:

- **Comprehensive Quality Control:** Integrated measurement at multiple critical points ensures the purity of Aviator Breathing Gas.
- **Enhanced Safety:** Reliable moisture and oxygen analysis at each stage prevents risks associated with equipment corrosion and operational failures.
- **Increased Efficiency:** A single, streamlined system reduces operational complexity and minimizes downtime.



Challenge

The key challenge for airlines is maintaining consistent quality in the Aviator Breathing Gas across entire fleets. Undetected moisture could lead to equipment corrosion and operational failures, potentially compromising passenger safety.

Moreover, the need to measure at multiple points—specifically at the outlet of the charging stations from the filling cylinder rack, and the final ABG cylinders—adds to the complexity.

Solution

The core of this solution is the use of a Thermoparamagnetic Analyzer for oxygen measurement and proven Aluminum Oxide technology, to accurately measure moisture content at critical points: the outlet of the three charging stations; the filling cylinder rack; and the final product in the ABG cylinders.

This approach ensures thorough quality control across the entire gas supply chain. Panametrics provides an integrated analyzer system with sampling capabilities and isolation valves for each stream, simplifying the process and ensuring seamless integration. This integrated system not only improves accuracy and reliability but also streamlines operations, reducing complexity, and minimizing potential points of failure.

The Panametrics XMO2pro oxygen analyzer has the ability to measure the purity of the bottled gas up to 100%. The ability to field-calibrate the unit ensures the product remains accurate for the long term.

The dew.IQ and IQ.probe can accurately measure moisture concentrations to levels below 1 part per million. Annual calibration maintains the accuracy over the lifetime of the sensor.



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