

# Continuous dew point monitoring system

Enabling manufacturers to comply with CQI-9 and NADCAP requirements with continuous monitoring of sintering atmosphere



## Benefits of the system

- Continuous online monitoring
- Reliable and low maintenance
- Remote online data
- CQI-9/NADCAP enabler

## Expertise beyond gas production and delivery.

Dew point (DP) is a measure of the moisture level in a furnace atmosphere. In the various zones of a sintering furnace, the atmosphere can vary widely from a relatively wet, oxidizing atmosphere in the pre-heat zone to a dry, reducing atmosphere in the hot and cooling zones. Maintaining the appropriate atmosphere composition in each zone is critical to achieving the desired delubrication and consistency of the sintered product.

Dew points of  $-35$  to  $-45^{\circ}\text{C}$  ( $-31$  to  $-49^{\circ}\text{F}$ ) are typically desired in the hot zone to ensure carbon control and a good sinter. Continuous monitoring of the dew point in the hot zone can be challenging. Particulate and vapor-phase contaminants in the sample gas stream can potentially accumulate in

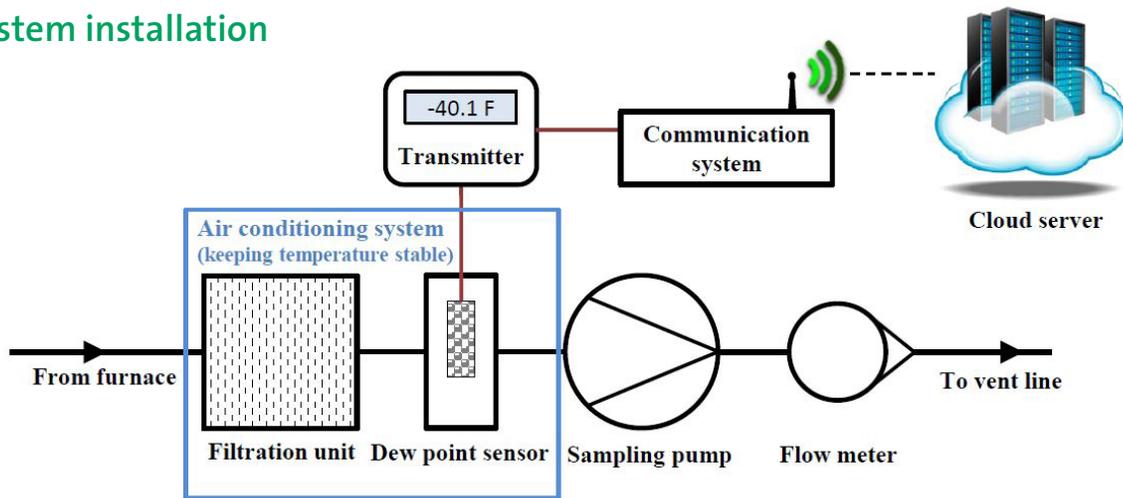
filtering systems and on sensors. As a result, dew point readings can drift significantly, causing erroneous measurement and necessitating frequent cleaning, recalibration, and sensor replacement. Temperature variations within the sampling unit can also impact the accuracy of the sensors.

These issues can be mitigated by incorporating design features, such as an automated self-cleaning and sensor calibration process, along with temperature control of the sensor and the sampling system, to maintain accurate consistency of the measured dew point level. Drifts and changes in dew point that are reported through local monitoring/alerts or remotely through cloud server access can also help to address furnace operational issues quickly and efficiently.

Continuous dew point monitoring helps manufacturers comply with CQI-9 and NADCAP requirements, and enables operators to plan ahead for shutdowns and preventive maintenance of their furnaces.



## System installation



## Optimizing your production efficiency for today and tomorrow

We can help you achieve more cost-effective operations, improve safety and environmental compliance, and give you added flexibility to compete in the global marketplace. Audits are available to help our customers realize all the benefits of industrial gases in their operations. Our Air Products team has the experience to conduct process reviews and gas supply system sizing evaluations, as well as provide safety recommendations.

## Depend on a worldwide leader

For 75 years, customers around the world have come to rely on Air Products' industrial gases, gas atmospheres, equipment, and technical support to help improve product quality, reduce operating costs, and increase productivity. To learn more about how Air Products can help heat treaters optimize their manufacturing processes, visit: [airproducts.com/dewpoint](http://airproducts.com/dewpoint)

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