



Moisture in Inert Blanket Gas for Polymers

Summary

Moisture is measured in inert blanketing gases in the production of polymers.

Application

The presence of moisture in an inert blanket gas used for the protection of polymeric material causes oxidative degradation. This results in an unusable end product.

Challenge

In the past, a chilled mirror hygrometer was typically used to make this measurement. Due to the presence of condensing hydrocarbons, the measurement system required an elaborate sample system. Despite best efforts, the chilled mirror hygrometers required frequent cleaning maintenance.

Solution

The Panametrics aluminum oxide moisture sensor can monitor the moisture content of the dry gas at the out let of the dryer system feeding the reactor and can monitor the moisture on the vent or vapor recovery line. Simple standard sample system designs are available for both applications.

Benefits:

The advantages of using the Panametrics aluminum oxide moisture sensor are

- the sample system design is fairly straightforward and the technology is far more forgiving of liquid condensation than a chilled mirror hygrometer;
- the sensor can be installed as a transmitter; or
- a single multi-channel analyzer can accept inputs from multiple sensors.



Application specifications

Moisture Content Range	0.001 to 10 ppmv
Dew Point Range	-110° to -60°C (-166° to -76°F)
Operating Pressure	4.7 psia (101.3 kPa)

