



Innovative Measurement Solutions

Application Notes



Dewpoint in Cryogenic Gases

Instrument: In-Line/Portable Dewpoint

Description:

Cryogenic gases are normal atmospheric components which have been liquefied, separated and purified. Although they may be supplied as a high pressure gas, most are shipped to the customer in a liquid state and vaporized on site. The primary cryogenics are O₂, N₂, Ar. H₂ and He are supplied in much smaller quantities.

Problems:

Cryogenic gases are purchased for their particular properties. They may be used as an inert blanket, in a chemical reaction or as a catalyst. Due to this usage, they are sold in various degrees of purity. Moisture (H₂O) is obviously an impurity, although on a very small scale. Moisture levels will, typically, be in the 0-5 PPM range.



Points to Consider:

Due to the purity of the gas and cleanliness of the application, there are few problems with this application. The sensor should be in a bypass after the vaporizer and not directly in the flow. This will warm the sample and insure that the flow past the sensor is not excessive.

Sensor Range:

All measurements are made with the XT-100 (-149- +68°F).



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