



Innovative Measurement Solutions

Application Notes



Dewpoint in Natural Gas Production

Instrument: Portable and In-Line

Description:

Natural gas is found in vast underground wells and is often a petroleum by product. Ethylene Glycol (anti-freeze) dehydrators are used to dry the gas. In some special applications, molecular sieve may be used. The gas industry uses a particular terminology when measuring water vapor in the gas stream. It is specified in Lbs/mmft³* (pounds of H₂O/million cubic foot of gas)@ 60°F. This is an absolute measurement such as dewpoint PPMV. The normal transfer specification is 7

Lbs/mmft³. This is equivalent to -38.5°C dewpoint, -3rF dewpoint or 150 PPM. Should the

moisture level increase, the BTU value of the gas drops (and that is what you pay for!) and the potential for corrosion increases.

Problem:

Gas lines can be high pressure. For portable and in-line applications a high pressure regulator should be used. All actual measurements are normally accomplished at atmospheric pressure (14.7 PSIA, 0 PSIG). The potential for water, SO₂, or chloride upsets exist. Also, glycol carryover is possible.

Points to Consider:

Our sensor should be protected by a coalescing element. In some in-line installations, based on the gas composition /contaminants, an activated carbon bed vapor absorber should be used.

Sensor Range: XT-65 (-85- +68°F) or XT-100 (-149- +68°F) Set readout selection to Lbs/mmft³

* m = 1000; therefore mm = 1000 x 1000 = 1 million



COSA Xentaur Corporation
84 Horseblock Road Unit H
Yaphank, NY 11980
Tel: 631-345-3434
Email: sales@cosaxentaur.com

Hygrocontrol COSA Xentaur GmbH
Mosel Str. 2B
63452 Hanau, Germany
Tel: +49 1618192790
Email: info@hygrocontrol.de

