PR 172 15th December 2014

Press Release

New, fast responding, moisture analyzer ensures quality of stored natural gas

Michell's new OptiPEAK TDL600 moisture analyzer's fast response and non-contact spectroscopic measurement principle ensures that gas storage companies are able to not only meet demand quickly but also satisfy the contractual standards for moisture content when stored natural gas is withdrawn and injected to the pipeline network.

Storing gas is an integral part of the natural gas industry because the timescales for consumption and delivery do not match the time needed to extract, process and transport the gas. In order to ensure an uninterrupted supply to consumers, quantities of gas are usually stored underground, either in depleted gas reservoirs, aquifers or salt caverns.

The water dew-point temperature or moisture content of the stored gas is measured during the filling (pressurisation) and usage (de-pressurisation) cycles. Storage pressures of up to 30 MPa require the gas to be very dry in order to prevent condensation occurring. However, the underground storage facilities are used to meet demand in peak periods and are usually non-active during the summer, so there is the potential for the moisture content to rise above acceptable levels during the inactive

period. As the gas is needed quickly to meet consumer demands, a fast-responding, reliable hygrometer is vital to be on-hand when gas needs to be taken from storage.

Another complication is the tendency of instrumentation to fail when exposed to aggressive compounds and harmful contamination when there is no flow through the analyzer. During the inactive periods in gas storage a corrosive, stale sample may sit in the analyzer for many weeks. Decommissioning is not an option as little notice will be given for the withdrawal of the stored gas.

Michell's OptiPEAK TDL600 is designed to overcome these pitfalls. Firstly, the tuneable diode laser technology is non-contact. This means that none of the sensing components are subjected to the gas stream and are protected from the aggressive compounds and harmful contamination that would cause failure in other analysers.

While this benefit is true for all TDLAS analyzers, the OptiPEAK TDL600 also offers a class-leading measurement accuracy of 1ppm$_V$ to support the rapid ramp-up in gas supply from the storage facility into the network. This means that it can respond to changes in moisture content in 2 to 3 seconds, allowing fast action to be taken to ensure the continued supply.

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About Michell Instruments

Michell Instruments Group is a worldwide leader in the field of moisture and humidity measurement solutions. With four decades' experience, Michell designs and manufactures a wide range of sensors, instruments and customized systems capable of measuring dew-point, humidity and oxygen in applications and industries as diverse as compressed air, power generation, petrochemical, oil and gas, food processing and pharmaceutical. Michell's innovative products make processes cheaper, cleaner, more energy efficient and safe.

The Group has multiple manufacturing locations across Europe with their international headquarters located in Ely, UK and a North America sales and service headquarters located in Rowley (MA). It has its own facilities in 10 countries with an extensive network of factory trained application and service engineers, subsidiaries and distributors stretching across 56 countries.

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