New DMT242 dewpoint transmitter for

Low Dewpoint OEM Measurements

Vaisala has launched a transmitter for low dewpoint OEM measurements with unparalleled long term stability! One of the main assets of DRYCAP® technology is its excellent long term stability, and the new DMT242 incorporates DRYCAP® polymer technology.

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The Vaisala DMT242 dewpoint transmitter is an ideal choice for industrial applications where it is necessary to control the dryer performance in low dewpoints.

The latest addition to our dewpoint product range is the DMT242 transmitter, which is based on DRYCAP® low dewpoint, thin film polymer technology. The new product is geared towards OEM manufacturers, who are looking for a dewpoint transmitter with low maintenance needs, that is simple to install and use, but who also expect the high reliability that is synonymous with the Vaisala brand.

The Vaisala DMT242 dewpoint transmitter is an ideal choice for industrial applications where it is necessary to control the dryer performance in low dewpoints. The transmitter provides wide dewpoint temperature measurements ranging from –60 °C to +60 °C, with an accuracy of ±2 °C.

DMT242 – a product with excellent long term stability

The DMT242 dewpoint transmitter was developed with the needs of OEM type manufacturers firmly in mind, because they require a very basic measurement instrument that uses the kind of technology that would not require the end user of the equipment to carry out much maintenance. Until now, the need for high maintenance has mainly been due to the long-term drift, which has forced the end user to carry out maintenance on their drying systems, e.g. on a compressed air dryer, as often as twice a year, in order for the drying system to maintain its high performance specifications.

In 1997, Vaisala launched a patented technology for low dewpoint measurements, incorporating the DRYCAP® sensor in a DMP248 dewpoint transmitter that had a wide range of features. The main advantage of the DRYCAP® technology is its excellent long term stability. The improvement is largely due to the fact that a polymer-based sensing material was chosen, rather than the sensing technology that was already on the market.

Polymer itself is a very stable material. A polymer sensor also makes it possible for so-called autocalibration to be performed at certain intervals. This

basically means that, during autocalibration, the polymer is warmed so that it is slightly above the surrounding temperature and, based on widely recognized physical changes, the dry end (i.e. offset) error in the sensor response can be detected and eliminated. The capacity to correct the offset error makes the polymer technology a highly competitive technology for low dewpoint measurements.

Dew resistance

Another advantage is that polymer technology is dew resistant, should condensation be a possibility. Also, exposing a sensor to normal ambient air for longer periods – even to laboratory air – can be as fatal as a high humidity exposure for some low dewpoint sensors. When installed inside in a drying system, high humidity levels are not usually a problem, but they can still be a potential threat during startup of the drying system or during a drying system malfunction.

If dew forms on the sensor element, the DRYCAP® sensor fully recovers after it has dried out, and no recalibration is needed. Full recovery means not only that process downtime that would be caused by maintenance is avoided, but also means direct savings in recalibration and sensor replacement costs. Also, storage in normal ambient air does not pose a problem because polymer technology is one of the most common technologies used for controlling indoor air humidity in offices, cleanrooms and production areas.

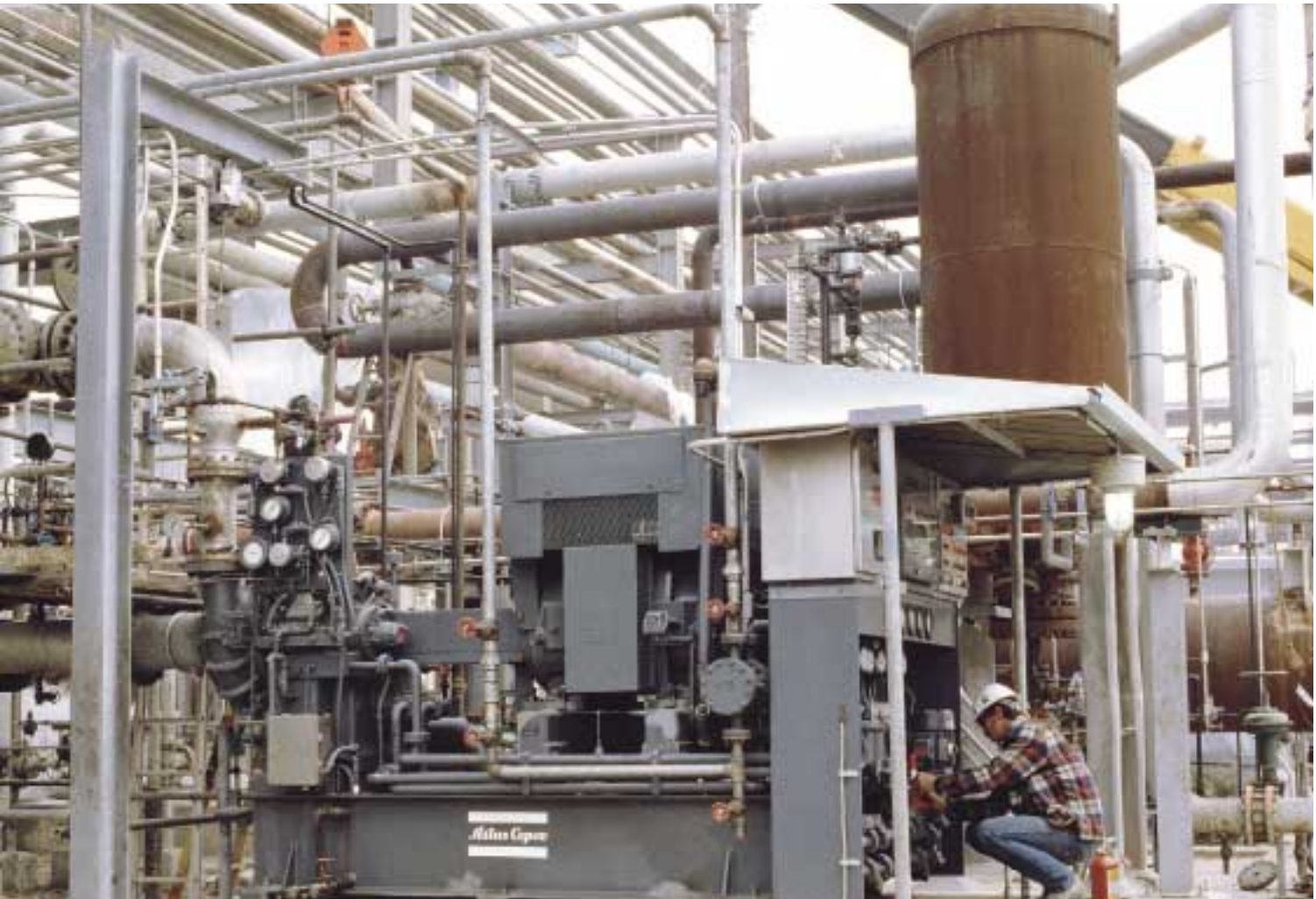
The DMT242 dewpoint transmitter incorporates the DRYCAP polymer sensor.

The new DMT242 dewpoint transmitter has all of these assets thanks to the DRYCAP® polymer technology that it incorporates. The number of transmitter options has been minimized to allow for a very cost effective product, but which nevertheless provides high measurement performance. It is, however, easy and quick to install or replace the DMT242 as it comes with the IP65/NEMA4 protected connector with screw terminals, as standard. For maintenance purposes, the unit also comes equipped the RS232 serial line, making it possible for the user to rescale the analog output with a standard PC.

The DMT242 product fulfils low dewpoint measurement requirements in a wide variety of OEM applications including compressed air, electronics, plastics, metal, as well as in other industries. The experience gathered in a wide variety of applications in these industries has shown the DRYCAP® measurement technology to be a superior in performance. ■

Electrical connection of the DMT242 dewpoint transmitter is fast and easy thanks to its connector.

Dryers and other OEM applications are the typical environment for DMT242 dewpoint transmitter.



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