

Get a Grip on Moisture in Oil at Different Industrial Locations

The latest generation of Vaisala's hand-held measurement instruments has been enhanced with moisture-in-oil probe option. Vaisala has offered fixed instruments to monitor moisture in various oils on-line since 1998. The new portable member of moisture-in-oil meters, The Vaisala HUMICAP® Hand-held Moisture Meter for Oil MM70, provides numerous advantages over the fixed transmitters.



Industrial plants like power generation and paper mills have various oil filled systems such as transformers and huge bearings, where oil acts as insulating material, lubricant

and/or cooling agent. As water contamination reduces the performance of oil, moisture is an important factor determining the condition of different types of oils. With on-line informa-

tion on the quality of the oil, preventive actions can be taken and the maintenance costs cut substantially.

The Vaisala HUMICAP® Hand-held Moisture Meter for



Oil MM70 enables reliable detection of moisture in oil. The probe can be inserted directly into the process pipe through a ball valve without draining the oil in the system. As a portable

instrument the MM70 can be installed into and detached from process to locate problem areas and possible leaks in the system.

Measurement parameters

The Vaisala HUMICAP® Hand-held Moisture Meter for Oil MM70 measures moisture in oil in terms of the water activity (aw) and temperature (T). Water activity directly indicates whether there is a risk of free water formation. The measurement is independent of oil type, age and temperature.

The MM70 has an embedded model for expressing moisture as ppm in mineral transformer oil. The user can enter up to three other oil models into the meter's memory.

Versatile user interface

The Vaisala HUMICAP® Hand-held Moisture Meter for Oil MM70 features a multilingual, menu-based user interface and a backlit LCD display. The measurement parameters can be numerically and graphically displayed and logged into the meter's memory at the same time. An analog output option is also available.

The optional MI70 Link Windows® software is used to transfer logged data and real time measurement data from the MM70 to a PC.

Field reference

To ensure reliable long term performance all measurement instruments have to be calibrated on frequent basis. The Vaisala HUMICAP® Hand-held Moisture Meter for Oil MM70 hand-held meter can be used as field reference for fixed transmitters, HMP228 and MMT318. By connecting MM70 and the transmitter, the user can perform field calibration and automatic adjustment of the transmitter

without disconnecting it from the system. This minimizes measurement downtime and helps maintain its performance at a high level.

The MM70 can be re-calibrated by sending the probe to Vaisala Service, or users can calibrate the instrument themselves against widely used relative humidity standards. No reference oils are needed for calibration.

Proven Vaisala HUMICAP® sensor technology

The MM70 incorporates the latest generation of the Vaisala HUMICAP® Sensor, developed for demanding moisture measurements in liquid hydrocarbons. The sensor's excellent chemical tolerance provides accurate and reliable measurement

over the measurement range. The chemical durability of the sensor makes MM70 suitable for different applications and fluids such as mineral and synthetic oils and hydraulic fluids.

Multi-probe operation

One or two probes can be connected to the indicator simultaneously. Maintenance teams can use additional Vaisala dewpoint or relative humidity probes for other tasks. The unique combination of moisture in oil and dewpoint probes, is ideal tool for maintenance personnel at power industry. For example, a dewpoint probe is ideal for checking the moisture inside dried transformer tanks whereas the moisture in oil probe can monitor the drying process of insulation oil. ●



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