Measuring Solutions

Moisture analyser for plastics VM-900

Easy & Safe

- *Extreme ease of use*
- *Highly reliable and repeatable measuring results deep into the ppm-range*
- *No chemicals required*
- *Possibility to connect to a pc*
- *Can be deployed in a production environment just as easily as in a laboratory*
- *Fully compliant with ISO-15512*
- *No skilled operator required*
- *Reduces measurement costs significantly*
- *Requires hardly any maintenance*

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Product info

Product Origins

Our moisture analysers were developed through close cooperation with some of the leading manufacturers in the fiber plastics industry. It was the direct result of their desire to perform accurate and repeatable moisture determinations without having to deal with the negative aspects of the widely used Karl Fischer titration method.

Although reliable, this method presents some serious disadvantages:

- chemicals are necessary, which are both expensive and potentially harmful to operators
- trained laboratory analysts are required to obtain reliable results.

Even then results obtained by different users - the so-called "cross-user repeatability" - can differ significantly, since the KF-method is highly sensitive to variations in sample pre-treatment and operator accuracy.

The above problems also make the KF-method unsuitable for use in a production environment, which is an increasing trend in Quality Control, in order to have a quick feedback from the production process.

Our goal therefore, was to engineer an analyser with none of these disadvantages, without compromising reliability and accuracy.

Measurement Procedure

Prior to the measurement the user can set the temperature at which the test should be performed. The measurement can be started when a weighed sample has been placed in the sample t ube of the analyser. After this the user operates the valves shown in fig. 1. First all valves will be opened, thereby evacuating the system and sample tube (C). Subsequently, V-2 is closed when a sufficient vacuum has been reached.

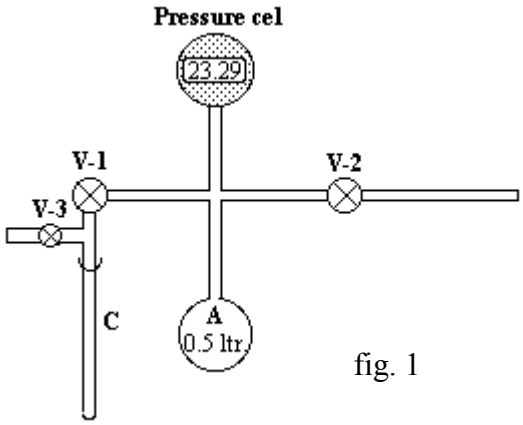

fig. 1

After this the oven can be raised by using the push button on the front of the apparatus. Now the actual determination starts: The water inside the sample will evaporate completely as a result of the heat and vacuum applied. This will create a pressure increase that is monitored by an extremely sensitive pressure cel. This pressure increase is directly related to the moisture content of the sample, which can thus be easily calculated.

The scientific method on which the analyser is based is specified as the manometric method in the International Standard ISO-15512, which allows for moisture determination far into the ppm-range.

Specifications

Standard methods	ISO-15512
Required equipment	Pressurized air (5-6 Bar) Vacuum pump Analytical scales
Measuring span	30 ppm – approx. 5%
Non-linearity	<0.1% of measuring span
Temperature control	PID
Dimensions (l x w x h)	300 x 460 x 760 mm.
Weight	23 kg

Due to our contineous effort for improvement
these specifications are subject to modification