Coating thickness measurement with flexible control

The DUALSCOPE® FMP100 by Helmut Fischer sets new standards in coating thickness measurement. It harmonizes the flexibility and capabilities of PC-based lab instruments with the manageability and clear arrangement of compact portable units – it leaves nothing to be desired when it comes to measuring and processing quality-relevant coating thicknesses.

Highlights
• Bright color LC display
• Touchscreen
• Revolutionary probe technology
• Drag-and-drop printform configuration
• USB communication and printer port
• Printforms in PDF format
• Password protection
• Automatic data backup

A vital step ahead due to modern technology
Equipped with a new generation of trendsetting measurement probes and the precise evaluation and statistical elements of Helmut Fischer, the DUALSCOPE® FMP100 is the latest innovative measurement technology in a compact design. The operation is straightforward, easy to use, and the same for the various measuring methods. Whether on the production floor or in the lab, the compact DUALSCOPE® FMP100 is optimally equipped and capable of meeting your measurement requirements.

Easy handling
The combination of a bright color LC display with a touchscreen significantly simplifies settings, measurements and data evaluations. The user gains confidence in the results and convenience during the process.

Modern control elements such as softkeys, menu bars and screen keyboard provide context-related support. Depending on the situation, the instrument can be operated with a stylus or by simply using fingers.

As an option, an external keyboard, a printer or a personal computer can be connected via the USB port for data or parameter input or output. New data export in PDF format is also available.

The DUALSCOPE® FMP100 is very versatile – both as a portable unit and as a bench top system. Configurable dialogs can assist the operator, improve understanding, and protect against errors.

Clear organization
The application software based on Windows™ CE enables intuitive operation due to its familiar look and feel. In addition, the practice-oriented software concept ensures that the user has the ability to both manage measurement applications and configure the instrument.

The DUALSCOPE® FMP100 offers numerous configuration options for a clear presentation of the results. Very quickly the user will be able to create application-specific interfaces and printform templates using the drag-and-drop feature.

All relevant data and the configuration of a measurement application are centrally organized and stored in an associated file. Among them are material properties and the shape of the specimen – taken into account through the normalization and the calibration – as well as the settings for measurement, display and evaluation.
The DUALSCOPE® FMP100 and the F-probes form an integral measurement system, harmonized for best-possible trueness and optimum repeatability precision. The high precision of the probes ensures a significantly increased measurement range – exceeding the typical range. Both very thin and thick coatings can be measured precisely. A sturdy plug-type connector ensures a reliable connection between instrument and probe.

The DUALSCOPE® FMP100 combines two physical measurement methods and conforms to many standards and practices:

- Non-magnetic coatings on ferromagnetic substrate materials (using the magnetic induction method according to DIN EN ISO 2178, ASTM B499), e.g., zinc, chromium, copper, tin or paint, varnish, plastics, enamel on iron or steel.
- Electrically non-conducting coatings on NF-metals (using the eddy current method according to DIN EN ISO 2360, ASTM B244), e.g., paint, varnish or plastics on aluminum, brass or zinc as well as anodized coatings on aluminum.
- ASTM D7091-05 – standard practice for nondestructive measurement of dry film thickness of non-magnetic coatings applied to ferrous metals and non-magnetic, non-conductive coatings applied to non-ferrous metals.

Reliable evaluation
Measurement data statistics are available at the push of a button, optionally as an individually configurable list – with characteristic statistical values such as mean value, standard deviation, confidence interval and others.

In addition, various graphical display formats provide a clear overview. Sum frequency diagram and histogram provide easily seen indications of potential systematic influences in measurement series. It is understood that there is targeted comparisons of measurement blocks.

Production processes can be evaluated at one glance, and differences between various shipments can be pinpointed quickly during the incoming inspection. In no time, coating thickness measurement with the DUALSCOPE® FMP100 becomes a routine.