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Cover Story – SonoDur 2

SonoDur2 – UCI-Handheld Probes for perfect Results
Vickers Testing under load! Attach, press and read-off the result – that's why modern and fast hardness testing within seconds is so easy!



Meaningful UCI Hardness Measurements
 (Ultrasonic Contact Impedance) on surfaces in virtually any direction:

- Stable measurement results without attachments, independent of orientation!
- Easy, single handed operation with stability.
- Precise positioning for selective measurement – even on small test spots
- Cost effective repair work due to indent type, modular probe design

SONO-10H, HV1 (10N): Weld seams (HAZ), soft spots, nitride & hard surface
SONO-50H, HV5 (49N): Metal working Industries in general, “Work Horse“ in heat treatment shops
SONO-100H, HV10 (98N): EN ISO 1090, construction steel, cast iron, forgings, fasteners



SonoDur2 - Motor Probe – Low Load, Hardness Testing with Accuracy
Precision probes with motor driven test load.

- **Highly accurate measurements** applying low test loads due to uniform and automatic indentation of the Vickers Diamond.
- **Curved surfaces: SONO-PM-4 probe attachments** guarantee an optimal test position by strict perpendicular and concentric material contact. Bottom side of probe shoe is designed according to requirement. Special coating for good grip or anti-friction face for easy adaptation to the shape of the work piece.

SONO-8M, HV0.9 (8.6N): general production control in metal fabrication industries, testing of gear teeth in heat treatment shops (induction hardening)
SONO-1M, HV 0.1 (1N) and SONO-3M, HV0.3 (3N): very hard surfaces (Plasma-nitride, Chrome plating >1000HV), very soft and floating materials like Copper Plating via penetration time related measurement according to specification between 1 and 99 seconds. Precious (small) parts with damageable surface for material sorting – “non-destructive” hardness measurement.

Like more Information & Pricing
02 88503755 - www.kks.com.au

Special – Dualscope FMP100/150

10% OFF

DUALSCOPE FMP100/150 Coating Thickness Gauge

The portable DUALSCOPE FMP100 & FMP150 instruments from Helmut Fischer of Germany are the perfect solution for professional quality assurance work. Unique in the market, the Dualscope FMP100 and 150 are powerful hand-held devices for measuring coating thickness which are equipped with the following outstanding features:



- Windows™ CE operating system with graphical user interface and a user-definable file and folder structure
- High-resolution touch screen with virtual keypad that can be operated using a stylus or finger
- Large memory for several thousand measuring applications with different calibrations
- Extensive evaluation and statistics functions with supporting graphical presentation options
- Different measurement methods in one instrument
Eddy Current & Magnetic Induction
- Wide selection of high-precision probes including many specialised probes for even the most sophisticated measurement applications

10% off any Dualscope FMP100 / 150 - until December
Simple reply to this email or contact us on www.kks.com.au

News – Fischerscope XAN-315 / Leptoskop 2042

Helmut Fischer launches their new Fischerscope XAN 315: The new compact X-Ray Fluorescence Measuring Instrument.

FISCHERSCOPE X-RAY XAN-315

Cost-effective entry-level X-Ray Fluorescence Measuring Instrument for fast and non-destructive Analysis and Coating Thickness Measurement of Gold and Silver Alloys

Some important Fischerscope features:

- Competitive price
- Compact design with Laptop (optional No Extra cost)
- Door opening frontwards
- Collimator Ø1.0mm
- No primary filter
- Silicon PIN Detector
- Fixed stage
- Measuring Distance 0...25mm
- Weight: ~25kg only (semi-portable)



New Karl Deutsch Leptoskop-2042 – Specially Developed Probe

An interesting inspection task was requested by Volkswagen AG in the German town of Wolfsburg:

The dashboards of different model series of the Volkswagen Group are covered with a PVC skin which has a visual appearance and texture relatively close to that of leather.



Extended Probe Tip

For optical reasons these PVC skins contain grooves in specific areas. Measurements of these grooves were performed destructively so far by cutting them out and mechanical determination of the thickness.

The Task was solved with a coating thickness gauge **LEPTOSKOP 2042** and a modified magnetic inductive probe.

This special version of the probe features an extended Tip, which sticks out of the probe housing and can thus be placed directly in the 3 mm wide groove. Due to the small pin diameter of approximately 1.5 mm an undesirable elastic deformation of the PVC skin is minimized at the positions to be measured.



Measurement in crevice

This way the PVC coating thickness can be measured non-destructively with an accuracy of ± 0.02 mm. With the supplied inspection system Volkswagen AG is now able to perform the required examinations with comparable accuracy, considerable time saving and without destruction of the PVC skins.

KK&S INSTRUMENTS feel this probe could also assist in the measurement of some other challenging coating thickness applications. Do you have one?

Have an interesting measurement application or like a price

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Application – Meas. of clad coatings

Measurement of clad coatings with the Fischer FGB2 probe

In power plants, high-alloy steel coatings are bonded onto metal components that are subject to extreme wear and/or corrosion using so-called cladding techniques. For longest service life, it is essential that the coating material is applied with uniform thickness. Continuous monitoring of the thickness is mandatory.

In power plant applications, cladding treatments are used to protect membrane walls and platen heating surfaces that are exposed to aggressive exhaust gases or severe abrasion. In the cladding process, a high-alloy protective coating is fused to a lower-alloy substrate material. For typical wall membranes of 4-5 mm thickness, the depth of the protective coating will be about 2-3 mm.



Fig.1: Measurement of a cladding coating using the FGB2 probe.
The probe was placed at an angle for better visibility only; during actual operation, it must be held perpendicular to the surface.

Because of the high stresses the coating is exposed to and the potential risks associated with coating failures, it is imperative to monitor the layer thickness continuously as part of the cladding procedure, so that corrective measures can be undertaken just as soon as deviations

are detected. The testing should be easy to do, because many repetitions are necessary.

For example, for third party inspection and final acceptance of an average size co-generation plant, the TÜV (Germany's Technical Inspection Association) will require about 10,000 measurements.

Measurement	Bead 1 [mm]	Bead 2 [mm]	Bead 3 [mm]
location 1	2.9	2.1	2.5
location 2	2.7	2.0	2.4
location 3	3.0	2.3	2.4
location 4	3.1	2.2	2.3
location 5	2.8	2.4	2.6

Tab.1: Typical readings for the thickness of high-alloy steel coatings

The challenging conditions presented by the scale and location of such an assessment task call for a high performance instrument that is both rugged and easy to use – anywhere. With an FGB2 magnetic induction probe attached to, for example, the handheld FISCHER DELTASCOPE® FMP30, testing the thickness of non steel clad coatings is easy and straightforward.

Advantages of the FGB2 probe:

- Large measurement range, up to 5 mm thickness
- Thin tip works well on structured coatings (welded)
- Heat resistant to 80°C for warm coatings
- Robust and Stable: tested by power plant crews

High-alloy steel clad coatings, used as surface protection in power plants, are easy to measure precisely and accurately with the FISCHER magnetic induction probe FGB2. Together with the handheld DELTASCOPE® FMP30 instrument, the heat-resistant probe forms a very robust and user-friendly measurement system.

Have any questions or like further details, contact us now !

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