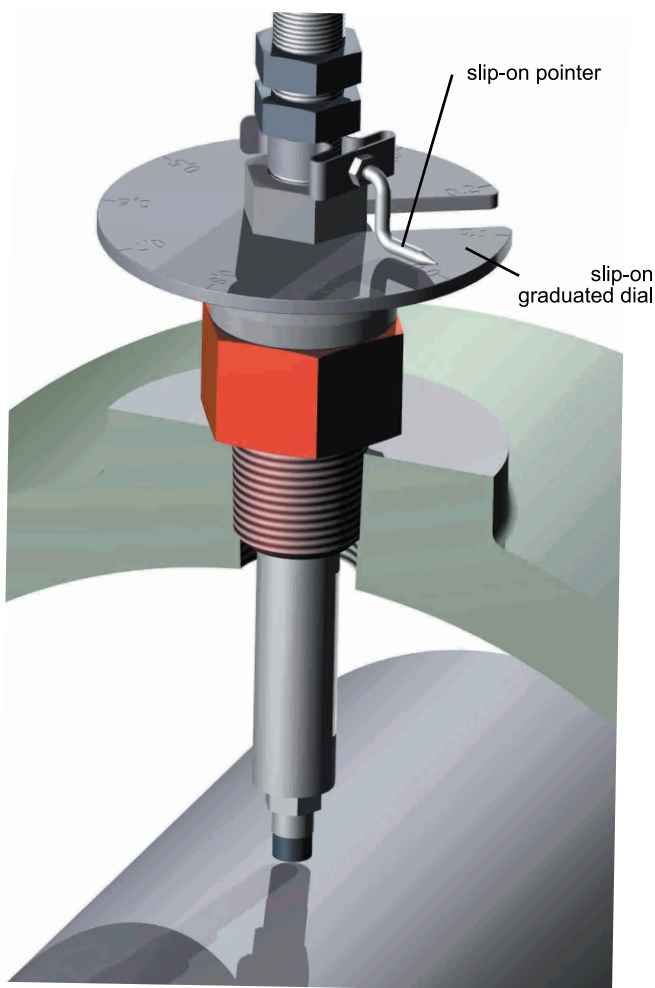
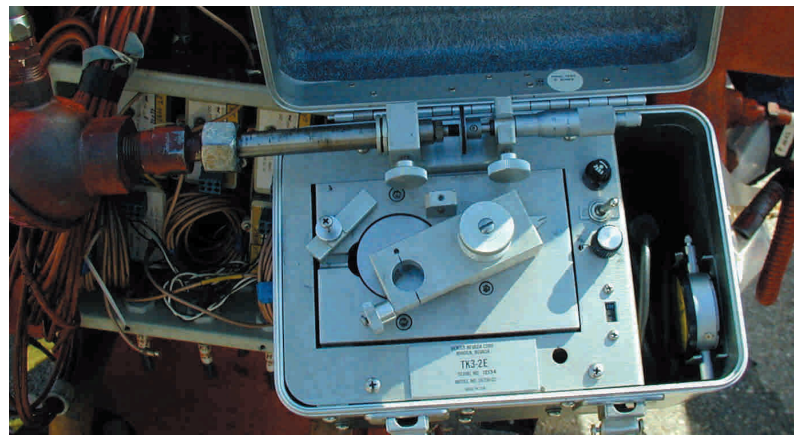


Innovative Measuring Unit for Testing the Loop Sensitivity of Eddy Current Measuring Systems



kmo turbo is not satisfied with the poor measuring accuracy of Eddy Current measuring systems. Manufacturers tolerate a possible measuring inaccuracy of up to $\pm 12\%$ for their systems! This value applies, if the components (probe, extension cable, transmitter) are combined without further adjustments. A leading manufacturer declares a fault tolerance of still $\pm 6,5\%$ even after collective adjusting of the components!

This kind of measuring inaccuracy is based on the technical design. On the one hand the involved components have different impedance caused by production; on the other hand there is a measuring fault, which comes from using a material for calibration, which is not the same material as the shaft of the monitored machine.



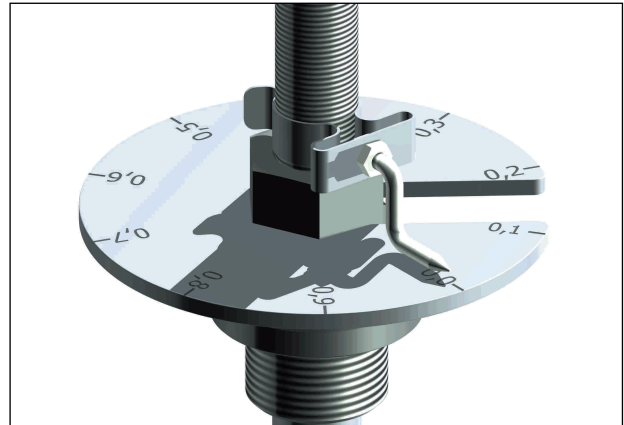
The above picture shows the commonly used TK3 system of Bently Nevada (GE Energy). Those kinds of system are comparatively heavy, unhandy, expensive and don't take the measuring fault due to the use of a different material into account. The probe has to be disassembled first and then installed on the test unit. We know by experience that the improper de- and reinstallation of the probes is the most frequent cause for damaged probes.

Determination of the Sensitivity of the Measuring Loop without Disassembling the Sensor

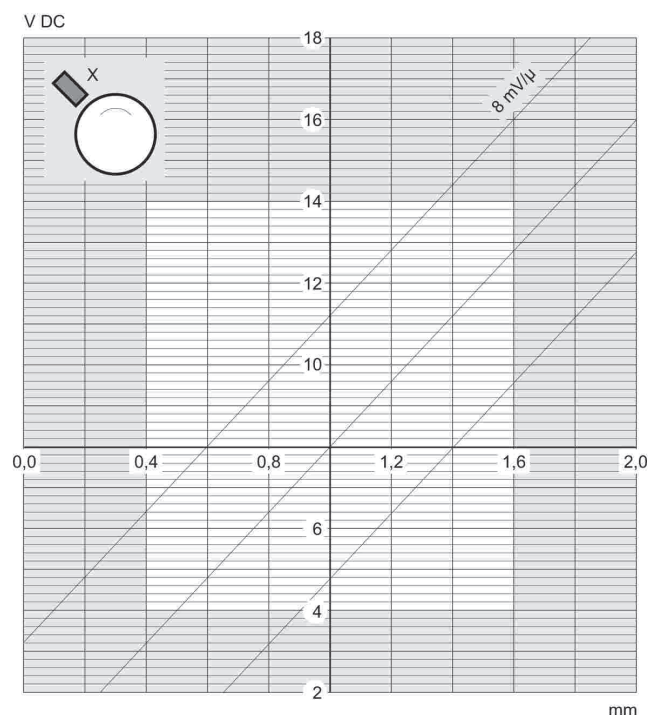
Using the **kmo** probe mounting system in combination with the **kmo** measuring unit you are able to determine the exact sensitivity of the measuring loop. Knowing the correct sensitivity you can calculate a correction factor for the vibration signal to be indicated. **We measure while the probe is still installed in the machine; thus we measure against the original shaft material!**

kmo turbo uses the thread pitch (1 mm) of the adjusting sleeve of the **kmo** probe mounting system in order to determine the system sensitivity: the probe is turned carefully until its tip reaches the surface of the shaft; this is the zero position. The **kmo** measuring unit consists of a graduated dial slipped on the adapter screw of the **kmo** probe mounting system and a turnable pointer slipped on the adjusting sleeve.

Starting from the zero position the adjusting sleeve is turned out from mark to mark. The reading of the dial and the corresponding gap voltage are entered into a table and a diagram. The slope of the connecting line shows the actual sensitivity of the measuring loop (V/mm or mV/ μ).



top view on graduated dial with turnable pointer



Universal Vibration Transmitter

A correction factor results from the determined sensitivity of the measuring loop. With the vibration transmitter **kmo** VibroUniT we take this correction factor into account and provide an accurate signal for the vibration indication. Further **kmo** VibroUniT offers a variety of other special functions. Existing installations of any manufacturer can be retrofitted.



kmo turbo GmbH

Friedrichstr. 59
88045 Friedrichshafen
Germany

Phone: +49 7541 95289-0
Fax: +49 7541 95289-20
Mobile: +49 171 7432832

Internet: www.kmo-turbo.de