CUSTOMER REFERENCE

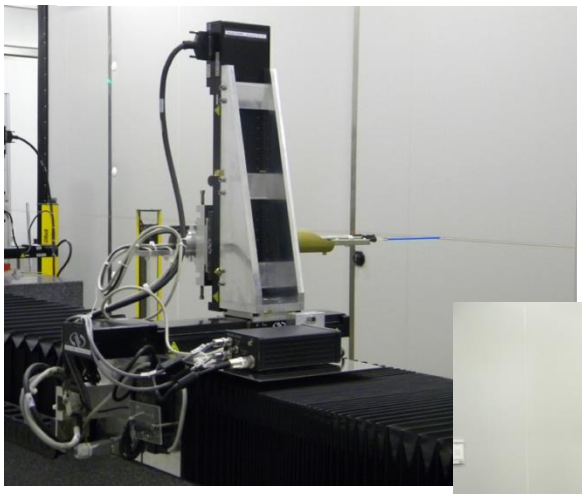
SENIS
magnetic & current measurement

SENIS AG, Switzerland develops, manufactures and supplies advanced sensors and instruments for magnetic field and electric current measurement as well as the corresponding development and engineering services.
Our solutions and services help our clients in the automotive, consumer electronics, test and measurement industries, as well as to research institutes to create powerful, robust and effective products.

SENIS® H3A Transducer used at Kyma is a SENIS 3-axis ultra-low-noise and high-resolution magnetic flux density-to-analog voltage transducer with a hybrid 3-axis Hall probe of type S.
The hybrid Hall probe integrates three high resolution Hall sensors, and a temperature sensor. The probe provides a good angular accuracy of the three measurement axes. The Hall probe is connected with an electronic box providing biasing for the Hall probe and the application of the improved **spinning-current technique**, which very effectively cancels offset, low frequency noise and the planar Hall effect. The additional conditioning of the Hall probe output signals in the electronic box includes Hall signal amplification, high linearization, compensation of the temperature variations, and limitation of the f-bandwidth.

www.senis.ch

KYMA



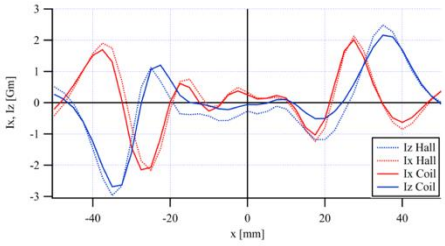


Figure : Comparison of the first field integral measurements with flip coil and Senis A.G. Ultra low Noise Transducer. This hall probe has an excellent stability due to low noise and minimal drift. It can be seen from the graph that corrections of hall probe scan with the measured flip-coil field integrals is no longer necessary. This is unique property of the Senis hall probe transducer.

Kyma S.r.L. (www.kyma-undulators.eu), established by **Sincrotrone Trieste** and two industrial partners, is devoted to the design, manufacturing and characterization of insertion devices (undulators and wigglers). Its manufacturing laboratory Kyma Tehnologija has been fully equipped for carrying out all processes relevant to magnet assembling, measurement and characterization. One of the equipment is the Senis Ultra Low Noise Transducer. Mr. Kokole of Kyma explains: "**The SENIS hall probe** has an excellent stability due to low noise and minimal drift… Corrections of hall probe scan with the measured flip-coil field integrals is no longer necessary. **This is unique property of the Senis hall probe transducer.** This transducers have a compensation for the planar hall effect, very low noise comparable to the old ESRF probes, and excellent low signal drift. This enables good measurement of magnetic field profiles of the insertion devices.