In August 2013, we have achieved another historical milestone in production of medium voltage sensors. It applies to one hundred thousandth medium voltage sensor produced in our Instrument Transformers and Sensors factory in Brno. The honoree was the combined sensor KEVCY 24 RE1 designed for a secondary gas-insulated switchgear SafePlus.

Development of ABB sensors started at the beginning of 90s in the Finnish production unit in Vaasa, and it is closely connected to development of digital protection relays. First group of sensors were produced and put into operation in 1993.

Sensors operate under different principles than classical instrument transformers with magnetic cores. They were developed as the alternative solution for voltage and current measuring, with the objective to significantly decrease dimensions, improve operation safety, increase a level of parameter standardization, and overall improve functional characteristics.

A transfer of production technologies into our Brno production begun in 2003, and it was successfully completed and production commenced in 2004.

The transfer of production technologies brought along expansion of the Technology Centre in Brno and the local laboratory with a group of employees who work on research, development, and testing of new sensors. They are responsible for development of such products and technologies worldwide.

During the recent years, sensors managed to successfully achieve important technical milestones as well. “Since 2011, we have been offering the majority of sensors in class 0.5, which enables their utilization even in applications that require more precise measuring”, said Vaclav Prokop, Product manager IT & Sensors and added: “During the current year we have released the new sensor KEVCY 40.5 RE1 into the market. For the first time we have achieved a voltage level of 40.5 kV.”

Sensors have been utilized in various applications for voltage and current measuring. It applies especially to air-insulated and gas-insulated medium voltage switchgears.

Within ABB, we supply our colleagues in the Brno factory (UniGear switchgear), Italian Dalmine (UniSec switchgear), or Norwegian Skien (SafeRing and SafePlus switchgear). Thanks to their small dimensions, sensors are also installed on breakers (VD4-R or eVD4 breaker produced in Italy) or outdoor apparatus (SECTOS load-break switch produced in China).

The current trends, such as Smart Grids activities related to the need for easily integrated voltage and current measuring in already installed switchgears or optimized sensors for
installation into new switchgears represent a unique opportu-
nity for further development and utilization of sensors in the
medium voltage systems.

Currently, there are ongoing several development projects and
we plan to expand our portfolio within this year. Therefore,
medium voltage sensors represent the future direction in the
field of voltage and current measuring instruments, which has
had a long-term tradition in ABB.

Innovation, new trends and introduction of new products and
technologies are always very demanding and require time,
effort, and involvement of all departments. We would like to
thank to everybody who contributed to achievement of this
significant success.

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