Future Trends in Field Instrumentation for the Process Industry
--Stephan Neuburger, CEO, KROHNE Group

Fast moving developments such as industrial IoT present new challenges for the process industry. Basic requirements for safe and reliable plant operations must be fulfilled while new requirements emerge for a more flexible way to utilize and optimize production. In-depth information about processes and devices will be key and must be delivered via a fast and flexible communication network that is the backbone for monitoring and optimization tasks. On April 24, 2017, Stephan Neuburger, CEO of KROHNE, presented his thoughts about the current capabilities of instrumentation and a look into the future technologies that will address divergent requirements of customers.

During the MCAA Industry Forum, Mr. Neuburger expressed the idea that the application needs of the customer is what has to drive innovation—just selling instrumentation with technical features is not useful to our customer. Companies need to offer services and data beyond just the measurement of the process parameter. He also noted that KROHNE believes that it is critical to be an international company with one face to customers but with plants located around the world so that they are really a local business doing business locally.

Business in our industry has changed from the day when customers designed their own solutions—for example, one customer had 1,000 engineers; now they have 42. The customer is pushing that function to the suppliers. So a company in our industry cannot be a pure instrument supplier, it has to be a solutions supplier. According to Neuburger, the keys for field instrumentation are safety, availability, flexibility and efficiency. Increasingly, instrumentation has to have both diagnostics and predictive maintenance built in.

Looking into the future, Mr. Neuburger said “The sensors of tomorrow will provide diagnoses: they will recognize information and network with each other intelligently and draw the right conclusions.” He noted that point-to-point communication is the first channel and it is safe, but slow. The second channel will be wireless and it is fast, decentralized and provides access for value-added services. Companies are already demonstrating such products which is a whole new world for process control.

He believes strongly that process instrumentation needs a standard open communication channel and companies in the industry need to give up some competitive advantage by linking instruments to give the customer access to additional data and product properties above and beyond the measured value. He mentioned that NAMUR is an association of 200 big European chemical plants who are working to create an open architecture of existing structure plus a new structure for IoT, without compromising the core principles of safety, availability, flexibility and efficiency. He said it is imperative to have open channel for the core processes of control systems to create a central monitoring system for customers. Neuburger foresees an intelligent combination of sensors, actuators and process analytics integrated into smart sensors. The DCS won’t go away but will have the additional task of intelligent measurement through the network, giving additional information to the customer.

The future will have a variety of enabling technologies which include multiple substance-specific measurements, embedding mathematical models within instruments and moving the chemical lab into the field through microsystem technology.
Stephan Neuburger is Chief Executive Officer of the KROHNE Group. He has more than 30 years of experience in the field of industrial measuring devices and process automation, having started with the company in 1985. After heading the International Service and Maintenance Department for two years, he was promoted to Area Sales Manager in 1988. In 1991, he took responsibility for the Export Department. He was appointed as Member of Management in 1995 and became Managing Director for the KROHNE Group in 1999. His responsibilities include worldwide sales and marketing activities as well as technology. Founded in 1921 in Duisburg, Germany, KROHNE is one of the leaders in the technology of industrial process measurement instrumentation, employing more than 3,500 people in over 100 countries. Neuburger is a member of the Board of Directors of the German Electrical and Electronic Manufacturers’ Association (ZVEI). He completed studies of Journalism and History at the University of Mainz in 1984. He undertook other studies of management topics at the Chamber of Commerce in Niederrhein, Germany in 1990 and the Institute for Economy, St. Gallen in 1995 and 1996.