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More safety for plant operation

The new HART Loop Converter from Pepperl+Fuchs increases the performance of 4...20 mA field devices in many process automation applications. This device converts up to three digital HART variables into 4...20 mA current signals. The combination of this new HART loop converter and a transmitter that simultaneously evaluates general and localized corrosion (pitting) highlights the possible applications. The transfer of corrosion analysis from a laboratory environment into day-to-day process control represents a new approach in preventative maintenance.

Bi-directional, digital communication between field devices and host systems via the HART protocol is standard practice in the process industry today. The advantages of implementing digital HART communication range from safe plant operation through diagnostic options and higher flexibility. Furthermore, the conventional, analog 4...20 mA interfaces in a 2-wire system can continue to be used.

One of the latest developments from Pepperl+Fuchs relating to digital HART communication is the HART Loop Converter (HLC). It converts up to three digital HART variables and makes them available to a DCS or PLC as 4...20 mA analog signals. These three variables enable not only the actual measured value but also process-related parameters such as reaction-time and temperature to be determined and used selectively to control the process – using the same cable and incurring no extra cost. If required, this signal converter can also be programmed to enable a single digital value to be an output on three analog channels via a signal splitting feature that makes the signals available to a variety of systems.

The combination of the HLC with the CorrTran MV from Pepperl+Fuchs illustrates the opportunities that are available for operators. CorrTran MV is the first 2-wire 4...20 mA transmitter with integrated HART protocol that simultaneously evaluates general and localized corrosion (pitting). The damage caused by corrosion results in high repair costs in the case of steam generators and condensate systems in particular. The combination of these two devices brings corrosion analysis from the lab into day-to-day process control - a new approach for monitoring corrosion in real time. Operators are now in a position to

prepare the replacement of corroded devices during planned shutdowns within the scope of preventative maintenance.

The HART Loop Converters are able to translate many different process parameters, including general corrosion, which are digitally transmitted via the 4...20 mA cable. More information at no additional cost.

About Pepperl+Fuchs

Pepperl+Fuchs is a leading developer and manufacturer of electronic sensors and components for the global automation market. For more than 60 years, our continuous innovation, high quality products, and steady growth has guaranteed us continued success.

One Company – Two Divisions

Pepperl+Fuchs – PROTECTING YOUR PROCESS

The **Process Automation Division** is a market leader in intrinsically safe explosion protection. We offer comprehensive, application-oriented system solutions, including customer-specific control cabinet solutions for the process industry. A large portfolio of components is available from our various product lines: isolated barriers, fieldbus infrastructure solutions, remote I/O systems, HART interface solutions, level measurement devices, purge and pressurization systems, industrial monitors and HMI solutions, power supplies, separator alarm systems for oil and petrol separators, signaling equipment, lighting as well as emergency shutdown equipment and accessories.

Pepperl+Fuchs – SENSING YOUR NEEDS

With the invention of the inductive proximity sensor in 1958, the company set an important milestone in the development of automation technology. Under the motto “Sensing your needs”, customers benefit from tailor-made sensor solutions for **factory automation**. The main target markets of the factory automation are machine and plant construction, the automotive industry, storage and material handling, printing and paper industry, packaging technology, process equipment, door, gate and elevator construction, mobile equipment, renewable energies.

The division offers a wide product range of industrial sensors whether it's inductive, photoelectric or ultrasonic sensors, rotary encoders, identification systems, barcodes, code readers for data-matrix-codes and vision sensors.

Key words: HART Loop Converter, HART protocol, HART variable, signal converter, analog signals, corrosion monitoring

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Fig. 1: More diagnostic options with the new HART Loop Converter from Pepperl+Fuchs