Field Communication Insider

Control reader, *Field Communication Insider* is an e-newsletter featuring the latest news and developments in the application of HART, FOUNDATION Fieldbus and FDI technology around the world. To ensure that you continue to receive *Field Communication Insider,* please add control_enews@putman.net to your address book and subscribe here.

The new Logix™ 3800 digital positioner:

Step up to faster performance and unstoppable durability.

Learn more.

NEWS

FieldComm Group to Display Digital Transformation at ACHEMA 2018

FieldComm Group to Display Digital Transformation at ACHEMA 2018. The organization will demonstrate how it is connecting the world of process automation through a full portfolio of solutions. **Read more.**

Nominations for 2018 Plant of the Year Award Now Accepted
FieldComm Group is seeking qualified nominees for its 17th annual Plant of the Year Award. The FieldComm Group Plant of the Year Award recognizes end user companies in the process industries for their application of FOUNDATION Fieldbus, Field Device Integration (FDI) and/or HART Communication technologies. **Read more.**

TECHNOLOGY

Updated HART Technical Overview Now Available

FieldComm Group, in collaboration with author Romilly Bowden, has released an updated version of its HART Technical Overview – a technical manual intended to help readers understand the features and benefits of HART technology. **Read more.**

Product Registration: Providing Confidence and Peace of Mind

Plant owners and operators require a "plug-and-play" solution ensuring features are consistent between different manufacturers' devices. FieldComm Group's interoperability test and registration procedures examine and verify all aspects of an intelligent field device. **Read more.**

Latest Registered FOUNDATION Fieldbus and HART Products
The number of FOUNDATION Fieldbus and HART products registered by the FieldComm Group continues to grow. **Read more.**

WIRELESSHART CORNER

*Wireless*HART: Proven and Growing Technology with a Promising Future

The global implementation of *Wireless*HART is mainly attributed to the simplicity, reliability and security of wireless technology, and the growing trend of smart factories, low cost of industrial wireless sensor networks and faster deployment all favor its growth. **Read more.**

Optimizing Corrosion Monitoring with Wireless Technology

Strategies against corrosion should include online corrosion monitoring at critical locations to verify the state of the metallurgy upgrade or the inhibitor distribution and effectiveness. Alternatively, online corrosion monitoring can validate that the existing mitigation strategy is performing adequately. **Read more.**

PRODUCTS

New product news you might be interested in:

- Microcyber Offers NCS-TT106x Temperature Module

- Moore Industries Provides STZ Functional Safety Dual Input Smart HART Temperature Transmitter

- ProComSol Delivers Mobile HART Communicator iOS App

Smart *Wireless*HART Gateway For Harsh Industrial Fields

Microcyber's G1100 Smart Mesh *Wireless*HART Gateway provides related security assurance. Obtain real-time process data, wireless communication reliability as high as 99.9%. Connect with the existing host system by industry-standard protocol, including OPC, Modbus TCP/IP, Modbus RTU, TCP/IP and HART-IP. Easily configure wireless networks and integrate data by embedded Web interface. And, support up to 500 *Wireless*HART device nodes.

Learn more.

CALENDAR

Upcoming Events

North America

Honeywell User Group

San Antonio, Texas, USA
June 18-22, 2018
» More Information

Smart Industry

Chicago, Illinois, USA
September 24-26, 2018
» More Information

Emerson Exchange

San Antonio, Texas, USA
October 1-5, 2018
» More Information

Rockwell Automation Fair

Philadelphia, Pennsylvania, USA
November 12-13, 2018
» More Information

Europe, Middle East, Africa (EMEA)

Hannover Messe

Hanover, Germany
April 23-27, 2018
» More Information

ACHEMA

Frankfurt, Germany
June 11-15, 2017
» More Information

FieldComm Group Working Group Meeting

Barcelona, Spain
July 16-20, 2018
» More Information

SPS Drives

Nuremberg, Germany
November 27-29, 2018
» More Information

India

Mumbai Automation Expo

Mumbai, India
August 29-September 1, 2018
» More Information

Asia Pacific

M&C Show

Osaka, Japan
November 7-9, 2018
» More Information

CONTROL
PROMOTING EXCELLENCE IN PROCESS AUTOMATION

FieldComm Group to Display Digital Transformation at ACHEMA 2018

FieldComm Group will present its digital transformation technologies at the 2018 ACHEMA Fair in Frankfurt, Germany, June 11-15.

By FieldComm Group

Mar 29, 2018

FieldComm Group will present a display of its digital transformation technologies at the 2018 ACHEMA Fair in Frankfurt, Germany, June 11-15. The organization will demonstrate how it is connecting the world of process automation through a full portfolio of solutions designed to connect and integrate valuable digital data available from intelligent field devices.

ACHEMA is a globally renowned trade fair and congress dedicated to chemical engineering, biotechnology and environmental protection. The event is held every three years and attracts more than 3,800 exhibitors and nearly 167,000 visitors from around the world.

FieldComm Group's exhibit (Hall 11, Stand E44) will show ACHEMA attendees how its technologies help establish a smart connected device ecosystem and support Industrial Internet of Things (IIoT) initiatives, which make it possible to address performance, reliability, safety, and environmental problems that have yet to be solved by traditional approaches. The Field Device Integration (FDI) standard, in particular, simplifies device integration and takes account of various tasks over the entire lifecycle for both simple and the most complex devices, including configuration, commissioning, diagnostics, and calibration.

FieldComm Group's multi-vendor FDI interoperability display will feature FOUNDATION Fieldbus, HART, HART-IP, *Wireless*HART and Profibus equipment. Field communication experts will be on hand to answer questions and demonstrate how connecting and integrating device information delivers value to the enterprise.

A key highlight of the exhibit will be a presentation on the future technology and standards for an advanced physical layer for Industrial Ethernet – commonly referred to as "APL" – that will be suitable for use in demanding applications in process instrumentation.

The booth area will also include individual company kiosks sponsored by leading automation suppliers supporting FieldComm Group's open and interoperable standards. ABB, CodeWright, Emerson, PactWare and Siemens will provide FDI host systems. The kiosks will demonstrate key functionality such as FOUNDATION Fieldbus usability, including simplified PV integration, automated like-device replacement and template-based device commissioning; smart device diagnostics for valve positioners and complex field instruments; and the IIoT, including host application access to cloud-based information.

FieldComm Group members are invited to participate in the ACHEMA 2018 exhibits. To learn more about product/solution display opportunities and related activities, please call (512) 792-2300 or email marketing@fieldcommgroup.org.

For more information, please visit the Events page on the FieldComm Group website.

Nominations for 2018 Plant of the Year Award Now Accepted

FieldComm Group is seeking nominees for its 17th annual Plant of the Year Award.

By FieldComm Group

Mar 29, 2018

FieldComm Group is seeking qualified nominees for its 17th annual Plant of the Year Award. End users and manufacturers from around the world are encouraged to nominate their plant or customer's plant for this prestigious award.

The FieldComm Group Plant of the Year Award is the only international distinction recognizing end user companies in the process industries for their exceptional and valuable application of FOUNDATION Fieldbus, Field Device Integration (FDI) and/or HART Communication technologies.

For example, the award can be given to a plant that is using real-time device diagnostics and process information integrated with control, information, asset management, safety systems or any other system to lower operating costs, reduce unplanned downtime and improve operations.

The 2018 Plant of the Year nominating process includes additional valuable incentives:

- Submitter of the award recipient will receive a Surface Pro
- $1,000 credit towards annual FieldComm Group membership fee
- Google Home will be awarded at random to another entrant
- All approved user entrants will receive a free one-year membership with FieldComm Group

- Award plaque to display at the winning plant

- Official award presentation by FieldComm Group management at an on-site event at the facility

- Opportunity to receive the award at a major industry event at no cost to the recipient

- Global industry exposure via press releases, articles and other publicity

FieldComm Group's Plant of the Year award has been presented to plants that have demonstrated significant savings and benefits by making a digital transformation utilizing the information available in smart measuring devices. Previous recipients include: MOL (Hungry), Nucor Steel (USA), Dow Chemical (USA), Monsanto (USA), Shell (Canada), BP Canada Energy (Canada), BP Cooper River (USA), Mitsubishi Chemical (Japan), PDVSA (Venezuela), Statoil (Norway), Sasol (South Africa), Detroit Water & Sewerage (USA), Clariant (Germany), DuPont (USA) and Shell Prelude (Australia).

For more information, including nomination forms, program details and company success stories, please visit the Plant of the Year Award page on the FieldComm Group website.

Updated HART Technical Overview Now Available

Technical manual helps readers understand the features and benefits of HART technology

By FieldComm Group

Mar 29, 2018

FieldComm Group, in collaboration with author Romilly Bowden, has released an updated version of its HART Technical Overview – a technical manual intended to help readers understand the features and benefits of HART technology – how it works and what it can do.

HART is by far the largest digital communications technology deployed in the process industries with over 40 million compliant field instruments installed worldwide. It is the global standard for sending and receiving digital information across the 4-20 mA analog current loops that connect the vast majority of field instruments with distributed control systems. HART offers a reliable, long-term solution for plant operators who seek the benefits of intelligent devices with digital communication, while preserving existing investments in analog instrumentation and plant wiring.

FieldComm Group Director of HART Technology, Wally Pratt, said, "The majority of smart field devices installed worldwide are HART-enabled. But some new in the automation industry may need a refresher on this powerful technology. We have updated our HART Technical Overview to cover the full spectrum of HART-based solutions. This valuable document explains how HART technology can be easy to use and reliable for tasks ranging from calibration and commissioning of smart devices, to continuous online diagnostics and remote process monitoring."

The HART Technical Overview has been extensively revised and now includes an overview of *Wireless*HART and HART-IP. The book is available for purchase on Amazon.

For more information, please visit the Blog page on the FieldComm Group website.

Product Registration: Providing Confidence and Peace of Mind

FieldComm Group's interoperability test and registration procedures examine and verify all aspects of intelligent field devices

By FieldComm Group

Mar 29, 2018

Consistent behavior between device and host implementations is essential with today's sophisticated process control systems. Plant owners and operators require a "plug-and-play" solution ensuring features are consistent between different manufacturers' devices without reengineering the host configuration or changing any other element of the device network other than the new instrument.

FieldComm Group's rigorous interoperability test and registration procedures thoroughly examine and verify all aspects of the intelligent field device. The registration process is not a simple exercise in paperwork, but a detailed and methodical set of procedures that test all specified functions of the device.

Importance of Device Testing

FieldComm Group is one of the only automation industry organizations with a registration program requiring mandatory testing of critical elements of its technology. This effort encompasses FDI, FOUNDATION Fieldbus, and

HART host systems and field devices, as well as physical layer components such as power supplies, cables, and device couplers.

One of the founding principles of FieldComm Group is the support of interoperability – the ability to operate multiple devices from multiple manufacturers, in the same system, without loss of functionality.

There are two levels of testing and registration within FieldComm Group:

- Field Level (includes testing for EDD and FDI-based H1 FOUNDATION Fieldbus devices as well as EDD and FDI-based HART and *Wireless*HART devices)
- Integration Level (includes testing for EDD and FDI-based FOUNDATION Fieldbus and HART Protocol hosts as well as FOUNDATION Fieldbus linking devices)

FieldComm Group has test kits available for each level of testing so that manufacturers can ensure robust product offerings and strong pre-testing before submission for official registration.

How Registration Works

Within the FOUNDATION Fieldbus automation infrastructure, interoperability is made possible by the fact that devices and software must conform to the same standard. A rigorous product testing and registration process is the key to interoperability. Registration also ensures performance and compatibility with the demands of the automation market in the era of the Industrial Internet of Things (IIoT).

Registered FOUNDATION Fieldbus products are required to undergo a series of common tests ensuring end users can select the best devices for a specific measurement or control task, regardless of the manufacturer. Only when a sample of the product has successfully completed all formal test procedures can it be officially registered. The same is true for HART Protocol products.

The Device Registration Process defines a series of test protocols for a particular device profile. The test protocols may include one or more test campaigns that are performed by the manufacturer, an approved third-party testing facility, or the FieldComm Group laboratory in Austin, Texas.

FieldComm Group audits each manufacturer's product as it completes the formal testing procedures, and issues a certificate identifying registered features for equipment meeting all requirements of the registration process. Only those products that conform to the device registration policy are authorized to carry the Registration Mark, and registration is only valid for the product identified on the certificate. If the manufacturer modifies a registered device, system or component, it must fulfill all the registration requirements in order to maintain the product's registration status.

History of the Program

The FOUNDATION Fieldbus product registration program, the oldest of the registration programs, began in 1998 with H1 (31.25 kbit/s) stack and field device testing. Host Interoperability Support Testing (HIST) started in 2000, and was subsequently upgraded to the current Host Registration Program. Power supply and conditioner testing and registration began in 2004, and cable and couplers followed thereafter.

The introduction of host registration testing in 2008 enhanced the overall product registration solution by supporting a new level of consistency in a multi-vendor FOUNDATION Fieldbus environment. It also highlighted the significance of enhanced Electronic Device Description Language (EDDL), because Device Description (DD) visualizations, methods and persistent data features became mandatory in this testing.

Hosts may include configuration tools, recording devices, alarm display panels, Human-Machines Interfaces (HMIs), or systems with a combination of functionality.

Host registration provides an extra measure of confidence that fieldbus systems incorporate the robust functionality of FOUNDATION technology and are able to function as part of an open, interoperable control system. The Host Profile Registration Process is another example of FieldComm Group's commitment to full interoperability, and seamless integration, within a fieldbus environment.

Selecting Registered Products

Products registered by FieldComm Group are listed in online catalogues accessible at www.fieldcommgroup.org/services/product-testing-registration. These catalogues provide a detailed profile for each registered device, including information such as standard blocks tested for interoperability, the presence of untested Function Blocks (if any), and additional useful information.

For more information, please visit the Product Testing & Registration page on the FieldComm Group website.

Latest Registered FOUNDATION Fieldbus and HART Products

The number of FOUNDATION Fieldbus and HART products registered by the FieldComm Group continues to grow.

By FieldComm Group

Mar 29, 2018

New Registered Devices			
Protocol	Manufacturer	Type	Model/Device Name
FOUNDATION Fieldbus	Noah Actuation Co., Ltd.	Electrical Actuator	MA_ACTUATOR
FOUNDATION Fieldbus	Schneider Electric	Level Transmitter	LR01
FOUNDATION Fieldbus	Schneider Electric	Level Transmitter	LG01
HART	Thermo Fisher Scientific	Multivariable Transmitter	AutoXP
Updated Registered Devices			
Protocol	Manufacturer	Type	Model/Device Name
HART			

Protocol	Manufacturer	Type	Model/Device Name
	Honeywell International	Multivariable Transmitter	SMV800
HART	Honeywell International	Level Transmitter	SLG700
HART	PR Electronics A/S	Temperature Transmitter	PR5437
HART	Yokogawa Electric Corporation	Mass Flowmeter	ROTAMASS TI
Updated Electronic Device Description (EDD)			

Protocol	Manufacturer	Type	Model/Device Name
FOUNDATION Fieldbus	Flowserve Corporation	Positioner	Logix 3400MD
New Physical Layer Components			

Protocol	Manufacturer	Type	Model/Device Name
FOUNDATION Fieldbus	The Okonite Company	Okobus 16AWG P-OS and SP-OS 300V Foundation Fieldbus Type-A Cable	261-92-35xx and 264-92-35xx
FOUNDATION Fieldbus	The Okonite Company	Okobus 18AWG P-OS and SP-OS 300V Foundation Fieldbus Type-A Cable	261-92-49xx and 264-92-49xx

*Wireless*HART: Proven and Growing Technology with a Promising Future

*Wireless*HART is among the most prominent wireless standards in today's industrial market

By FieldComm Group

Mar 29, 2018

Industrial wireless networking is a hot spot in the field of process automation. It is one is one of the key technologies with the most rapid development, the most extensive application and the most obvious benefit.

Wireless sensor networks monitor physical or environmental conditions, such as pressure, level and temperature. They pass data to a central location where it can be analyzed and observed. Wireless enables industrial organizations to monitor processes in places where wired connections are impractical or where humans shouldn't go.

Administered by FieldComm Group, a leading global automation standards organization, *Wireless*HART is among the most prominent wireless standards in today's industrial market. It is a self-organizing mesh technology in which field devices form robust wireless networks to dynamically mitigate obstacles in the process environment.

The global implementation of solutions like *Wireless*HART is mainly attributed to the simplicity, reliability and security of wireless technology compared to wired technology. Furthermore, the growing trend of smart factories, low cost of industrial wireless sensor networks, and faster deployment all favor industrial wireless growth.

Origins of the Technology

An evolutionary extension to the proven Highway Addressable Remote Transducer Protocol (HART) Communication Protocol, *Wireless*HART was introduced to the market in September 2007, becoming the first officially released

industrial wireless communication standard. The technology protects customer investments by using the same tools, instruments, and know-how as wired HART, and ensures interoperability between vendors' devices.

*Wireless*HART is built on international standards (IEC61158, 61804-3, 61591e-1 and IEEE802.15.4) and designed specifically for low-power operation (IEEE 802.15.4). Compliant mesh networks with self-organizing and self-healing characteristics can be seamlessly integrated into the control strategy in the same way as wired HART devices by using HART-IP to communicate with a gateway device. This standardizes communication to HART components and devices using Ethernet. It is an important benefit for users because, in addition to wired connections, they can use Industrial Wireless LAN (IWLAN), which may save time and costs through reduced cabling and communication components.

The *Wireless*HART network uses IEEE 802.15.4-compatible radios operating in the 2.4-GHz radio band. Each device in the mesh network can serve as a router for messages from other devices. This extends the range and geographic coverage of the network and provides redundant communication routes to increase reliability to 99.99% (4 Sigma) even in a difficult radio environment found in some process facilities. The *Wireless*HART transmitter does not have an analog mA signal; it only has the digital signal, which is available wirelessly or through a screw terminal.

For flexibility to meet different application requirements, the *Wireless*HART standard supports multiple messaging modes including one-way publishing of process and control values, spontaneous notification by exception, ad-hoc request/response, and auto-segmented block transfers of large data sets. These capabilities allow communications to be tailored to application requirements, thereby reducing power usage and overhead.

Why *Wireless*HART?

*Wireless*HART meets the critical wireless requirements of modern industrial plant environments, including reliability, noise immunity and latency, while still using the same maintenance and diagnostic tools as traditional wired HART devices. The technical advantages and cost benefits of *Wireless*HART provide many new opportunities for process automation in various situations.

The time to engineer and develop the expansion or construction of a process unit can be drastically reduced by installing *Wireless*HART systems to replace both infrastructure and signal cabling. The up-front cost of a wireless network is often immediately lower than cabling and conduit costs, and the savings in labor and permits are enormous. A signal that previously took days to bring online using traditional wiring can now be commissioned within hours. This time savings and flexibility allows maintenance crews to deploy wireless nodes for temporary troubleshooting or add "stranded" measurement points for safety or improved efficiency.

*Wireless*HART's robustness is an important advantage in demanding industrial applications. It enables pervasive connectivity among sensors and actuators, with a field-proven reliability and a secure self-organizing network. As a highly engineered solution, *Wireless*HART supports the full range of control and monitoring solutions. Plant owners and operators can start with a modest implementation and then scale up as a facility-wide range of traditional and advanced functions are developed and offered by the process instrumentation community.

*Wireless*HART also addresses growing concerns about security at industrial facilities. It employs multi-tiered, "always-on" security with device authentication and passwords, as well as standard AES128-bit data encryption.

Continued Market Growth

There is no question that industrial wireless is here, it works and works well. Engineered properly, wireless technology will provide a huge technology leap when deployed in the right applications.

The worldwide industrial wireless network market size is anticipated to reach USD 116.75 billion by 2025, according to a report by Grand View Research, Inc., exhibiting a 5.7% CAGR during the forecast period. North America is a leading regional market for industrial wireless technology. Asia-Pacific ranks as the fastest emerging market and is expected to grow with CAGR of approximately 13% over the analysis period largely due to increased industrialization in countries such as India, Taiwan, and South Korea.

The key benefits offered by wireless over wired networks, such as mobility, self-discovery capabilities, compact size, cost-effectiveness and reduced complexity, are anticipated to play a significant role in increasing global demand.

One trend that has major implications for the adoption of wireless technology is the Industrial Internet of Things (IIoT) and Industry 4.0. Because wireless is a crucial enabling technology for connectivity, it will allow the proliferation of sensors at the device level necessary to funnel data to the industrial Internet. For IIoT applications, wireless offers the promise of no-wires communication. Indeed, mesh-network standards such as *Wireless*HART will be valuable building blocks to help manufacturers transform their businesses and services in the IIoT era. FieldComm Group has a major role in this regard since it is literally the foundation upon which smart products have communicated to systems and networks for well over 20 years. FieldComm Group IS the IIoT.

Outlook for the Future

There are now more than 50 *Wireless*HART products or services listed on the FieldComm Group product registration site manufactured by a "who's who" of major automation suppliers. Data from studies predicts exponential growth for *Wireless*HART over the next 10 years. Oil & gas, chemical, power generation and food & beverage are among the industries expected to become attractive for the technology.

Many initial applications for *Wireless*HART devices in the process industries are focused on adding incremental points to improve control strategies, meeting safety and environmental regulations, streamlining maintenance activities, and improving worker safety. These installations are primarily driven by the ability to take measurements that were previously unattainable, often because the target is in a difficult-to-reach location or mobile. As wireless device adoption accelerates, the market emphasis will move from these incremental point additions to more comprehensive wireless installations.

Future developments will extend *Wireless*HART's capabilities from monitoring to control functions, enabling users to not only gather critical information but also act on it remotely. This will help make the technology feasible for new applications that historically have relied only on manual observation and periodic reporting, giving industrial organizations real-time, constant visibility to new and better data for improved control systems, safety systems, asset management, machinery health and overall plant performance.

Conclusion

The process industries are not known as early adopters of new, innovative technology. But given the impressive progress of *Wireless*HART in the market, and the tremendous interest in the IIoT in North America and Industrie 4.0 in Europe, there are new possibilities on the horizon.

For more information, please visit the HART Technology page on the FieldComm Group website.

CONTROL

PROMOTING EXCELLENCE IN PROCESS AUTOMATION

Optimizing Corrosion Monitoring with Wireless Technology

Strategies should include online corrosion monitoring at critical locations to verify the state of the metallurgy upgrade or the inhibitor distribution and effectiveness

By FieldComm Group

Mar 30, 2018

Many refineries rely on equipment well past its original design life. These assets, some of which now have been in operation for double that time, face an ever-increasing risk of failure due to internal corrosion attack.

Corrosion in refineries often is caused by contaminants in produced hydrocarbons that, over time, lead to deterioration of pipe and vessel walls. Loss of equipment integrity can result in unplanned downtime and costly repairs or, in the worst case, a catastrophic event posing major risk to personnel, the environment and stakeholder value.

Exacerbating the problem, many refineries no longer process the specific type of oil, such as sweet crude, they originally were designed to handle. The changing nature of oil feedstock magnifies corrosion problems in aging refineries.

Refiners have two principal mitigation strategies against corrosion: upgrading the metallurgy of many or all the susceptible areas, often to expensive high-nickel alloys or titanium; or using chemical corrosion inhibition treatment.

Both strategies should include online corrosion monitoring at critical locations to verify the state of the metallurgy upgrade or the inhibitor distribution and effectiveness. Alternatively, online corrosion monitoring can validate that the existing mitigation strategy is performing adequately.

Refineries can turn to two methods to measure corrosion: probes and ultrasonic sensors.

Corrosion probes, which have been in use since the 1960s, rely on an intrusive element with a sacrificial tip that sits in the process fluid. As the sacrificial tip corrodes, its electrical resistivity changes. The corrosion of the sacrificial tip is used to infer the level of corrosion being experienced by the surrounding equipment.

While simple to use, corrosion probes suffer from two disadvantages:

1. The center line measured corrosion at the tip may not match the corrosion rate at the pipe wall.
2. The tip often corrodes away after two to three years while many refineries now operate five or more years between major turnarounds.

Traditional ultrasonic manual inspection techniques only provide a snapshot of equipment integrity. Typically, personnel take measurements every six months to five years. Such long intervals between measurements pose a significant safety risk because a serious event can happen in a matter of hours or days. These traditional methods can't provide the accuracy, quality and frequency of data necessary to find problems, so mitigation can't be optimized without interrupting operations.

Today, refiners instead can opt for permanently installed, wireless ultrasonic wall-thickness-monitoring sensors for corrosion monitoring. The units generate on a continuous basis the data required to make proper decisions and provide this information directly to plant personnel. These ultrasonic sensors, part of a *Wireless*HART network, are non-intrusive, so their installation cost is low, and can be mounted almost anywhere. Wireless data retrieval eliminates the need for cables, further decreasing installation and ongoing operating costs. Moreover, power packs should last until the next plant turnaround (typically, nine years' service is achievable). The simplicity of installation and long power-pack life make ultrasonic sensors well suited for use in remote locations only accessible during turnarounds.

Giving plant personnel access to this kind of corrosion information enables them to make the right decisions at the right time about when and where to carry out critical maintenance to support safer and more-economic operations.

Installing non-intrusive corrosion sensors, a wireless network and PC-based software to process the data doesn't require a multi-day project mandating asset shutdown. Actually, deploying a real-time wireless corrosion monitoring system at strategic locations on the outside of equipment only takes a matter of hours without any interruption to refinery operations.

For more information, please visit the HART Technology page on the FieldComm Group website.

Microcyber Offers NCS-TT106x Temperature Module

Fieldbus temperature transmitter features an independent R&D communication controller

By FieldComm Group

Mar 30, 2018

Microcyber's NCS-TT106x temperature module is a high-performance fieldbus temperature transmitter with an independent R&D communication controller. It supports multiple thermal resistances and thermocouples. Thermal resistance supports 2/3/4-wire connection mode, and thermocouples can use cold-end compensation functions.

Multiple protocols:

- NCS-TT106H: HART Protocol

- NCS-TT106P: Profibus PA Protocol

- NCS-TT106F: FOUNDATION Fieldbus H1 Protocol

High Accuracy (for common thermal resistance and thermocouple):

- ±0.09Ω for 0~500Ω

- ±0.7Ω for 0~4000Ω

- ±0.2℃ for PT100 (-200℃~850℃)

- ±0.2℃ for PT1000 (-200℃~850℃)

- 0.02mV for -100mV~+100mV

- 0.4℃ for K-Thermocouple (-200℃~1372℃)

- 0.9℃ for S-Thermocouple (0℃~1768℃)

Easy Integration:

- Provide multiple electrical integration files, such as DD, EDD, CFF, GSD.

For more information, please visit the Microcyber Corporation website.

Moore Industries Provides STZ Functional Safety Dual Input Smart HART Temperature Transmitter

SIL 3 capable STZ temperature transmitter offers dual sensor input that reduces process interruptions

By FieldComm Group

Mar 30, 2018

Designed and built in compliance with IEC 61508 for use in Safey Instrumented Systems (SIS), the SIL 3 capable STZ temperature transmitter offers dual sensor input that reduces process interruptions. Backup and Fail-Over Protection allows either of the sensors or inputs to be designated as the primary measurement, with the secondary input acting as backup sensor in case of primary sensor failure. The dual sensor input also allows for Average and Differential measurements and High-Select and Low-Select options. It has features designed for smarter control and monitoring including Sensor Drift and Corrosion detection, which increases overall process availability.

The STZ is HART 7-compliant with exception-based reporting and dynamic variable mapping. It is HART and DTM programmable and can be configured and interrogated using the HART DD on the 4-20mA loop via any HART handheld communicator or HART-compatible host.

For more information, please visit the Moore Industries website.

ProComSol Delivers Mobile HART Communicator iOS App

App is now available for iPhone or iPad

Mar 30, 2018

A full-featured HART Communicator App is now available for your iPhone or iPad. Because the App uses the Device Descriptors (DD) for the connected HART instrument, all instrument parameters including Methods are available to the user. The full DD library is also included.

For more information, please visit the ProComSol, Ltd. website.