

Yokogawa and GasSecure Provide SIL2-certified Wireless Gas Detection System for LNG Facility

Johannesburg, South Africa – 27 July 2015 - Yokogawa and GasSecure AS, a Dräger owned company, announce the delivery of the world's first SIL2*1-certified wireless gas detection system for use at an LNG facility in Northern Europe.

Yokogawa has been developing a wide variety of ISA100 Wireless*2 technologies and field wireless devices such as adapters that enable conventional wired devices to access wireless networks. Yokogawa supplies these technologies and devices to plants and other facilities primarily in the upstream oil and gas sector. GasSecure has developed ISA100 Wireless gas detectors that can detect leaks of explosive hydrocarbon*3 gases and are certified for compliance with the ATEX directive and the IECEx Certified Equipment Scheme. These gas detectors are installed on offshore oil and gas drilling platforms and at tank farms, industrial plants, and the like. GasSecure has already supplied a number of these products to leading oil and gas companies around the world.

In 2014, GasSecure and Yokogawa concluded an agreement under which the two companies jointly developed a wireless gas detection system that would meet their customers' requirements.

This system uses GasSecure's GS01 wireless gas detectors to measure hydrocarbon gas concentrations. Using the ISA100 Wireless communications protocol, the GS01 establishes a link with a Yokogawa YFGW510 access point and sends data to a host system via a Yokogawa YFGW410 field wireless management station. Although the GS01 uses a low-power infrared sensor and is very energy efficient, it has a very fast response time. This capability of the GS01 and the utilization of dual redundant communications by Yokogawa's field wireless products make them essential components for the construction of a fast and highly reliable monitoring solution.

To meet its customers' safety requirements, GasSecure has made enhancements to the GS01 to obtain SIL2 certification for this device. For its part, Yokogawa has modified the YFGW410 so that it now supports the PROFIsafe safety communication standard, and has verified that both companies' products perform and operate as specified.

Future Direction

In the oil & gas, chemical, and other industries, safety is a paramount concern at production, storage, and processing sites. Field wireless systems can be installed in difficult-to-wire locations and have lower cabling costs than wired systems. For these reasons, field wireless solutions are ideal for systems that collect production information such as flow rate, pressure, and temperature. And unlike other wireless technology platforms, they can be used to construct systems that perform gas detection and other safety functions, and are well suited to this purpose. With the release of SIL2-certified wireless gas detection systems, Yokogawa will actively promote its field wireless equipment and systems, and will expand this business.

*1 One of the four safety integrity levels defined in IEC61508, a standard for the functional safety of electrical and electronic equipment that was developed by the International Electrotechnical Commission (IEC). SIL2 certification is generally required for most field safety devices.

*2 A network protocol based on the ISA100.11a wireless communication standard for industrial automation that was developed by the International Society of Automation (ISA), and the applications necessary for its implementation. This was approved as the IEC62734 international standard by IEC in October 2014.

*3 A general term for compounds consisting of carbon and hydrogen, including methane, ethane, benzene, and toluene. It is the main component of oil and natural gas.

About Yokogawa

Yokogawa's global network of 86 companies spans 56 countries. Founded in 1915, the US\$4 billion company conducts cutting-edge research and development. Yokogawa is engaged in the Industrial Automation and Control (IA), Test and Measurement, and other businesses segments. The IA segment plays a vital role in a wide range of industries including Oil & Gas, Chemical, Food & Beverage, Iron & Steel, LNG Supply Chain, Petrochemical, Pharmaceutical, Power, Pulp & Paper, Renewable Energy and Water & Wastewater.

Yokogawa Angola is a wholly owned subsidiary of Yokogawa Europe BV, a company incorporated in the Netherlands which is owned by Yokogawa Electric Corporation, a Japanese company listed on the Tokyo Stock Exchange. Since 2000, Yokogawa has been operating in Angola to supply the Oil

and Gas Industry with world-class solutions enhancing safety, ensuring accurate and reliable operation, and increasing plant efficiency. In October 2007, Yokogawa officially opened an office in Luanda and today has a dedicated local workforce of 18 employees.

Yokogawa Angola's comprehensive products range from sensors for pressure, temperature, flow, level, liquid and gas analysers as well as networked solution products, including control and safety systems. This extends to software for advanced control that optimises productivity and services that minimise plant lifecycle costs. Our strong investment in the local workforce means Yokogawa Angola is committed to developing and equipping local talent to better serve and deliver high quality industrial automation solutions to the Angolan market.

For more information about Yokogawa, please visit the company's website www.yokogawa.com/za or contact Christie Cronje in Corporate Communications.

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