Integrated measuring solutions

WIKA at 75 years of business

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Founded in January 1946, the WIKA Group – headquartered in Klingenberg, Germany – celebrates its 75th anniversary this year. Over the course of its history, WIKA has evolved from a pressure gauge factory to a global player for measurement technology – not only mechanical but also electronic. Most lately, WIKA has been increasingly involved in IIoT (Industrial Internet of Things) developments.

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WIKA's activities here are in line with global market trends in the industrial and medical gases business. The worldwide industrial and medical gases industry has been struggling to optimise the operational costs and supply chain efficiency of its technical gas assets for decades. Initially, the aim was to enhance gas container efficiency by increasing the volume and pressure and by reducing the weight of the containers transported.

This was followed by a growing desire to step up the volumes of transported (stored) gas by moving from pressurised to liquefied storage containers. More recently, a trend has been observed where gas operators try to improve the industrial gas supply chain and the fleet logistics of high-pressure cylinders and cryogenic vessels by maximising utilisation (deployment) of the available assets.

Historically, WIKA has played a part in all three trends. For several decades now, WIKA has been a reliable supplier of low and high pressure mechanical Bourdon tube and direct-drive gauges for companies operating with pressurised industrial gas cylinders (with mounted pressure regulators) and gas distribution infrastructure – like gas cabinets, gas supply systems or cylinder manifolds. The diversification of WIKA's presence in the North American markets, where cryogenic gas supply is a widespread reality, required the adoption and launch of differential pressure gauges.

When the market was seeking an automatic alarm (control) or switch function to simplify control of gas operations, WIKA expanded its portfolio with a Bourdon tube pressure gauge with switch contacts, a Bourdon tube pressure gauge with an output signal, mechanical pressure switches, and electronic sensors and transmitters. The necessary commands and information for all of these products pass via a wired connection. If the measuring instrument has a standard industry output signal, it is

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Potential for WIKA Integrated Solutions for Different Industrial Gas Storage Modes				
	HIGH PRESSURE CYLINDERS	HIGH PRESSURE CYLINDER BUNDLES	CRYOGENIC GAS STATIONARY TANKS	CRYOGENIC GAS MOBILE TANKS
WIKA products	TTF-1 PME-01 PMM01 111.11.040 PGT-10	TTF-1 PME-01 A-10 MH-3 Netris PGW23 PGT11 PGS23	732.15 700.06 700.05 MG-1 PGW23	732.15
Industrial gases applications	 © WIKA	 © iStockphoto	 © belleepok	 © WIKA

possible to make the device 'smart' and communicate wirelessly.

In many cases, however, exposure to wireless and/or electrical connections requires ATEX approvals for the electronic measuring devices because the gases handled are often explosive.

Today, WIKA has the expertise to develop IMG solutions that are IIoT capable. IIoT capability is achieved either by integrating the Bluetooth module into an existing WIKA product, or by combining an existing product with an output signal with Netris®, the battery-powered GSM telemetry unit produced by Sensile, WIKA's Swiss subsidiary.

At the customer's request, the above-mentioned solutions can interact with Sensile's cloud based 'Oil Link™' system for remote monitoring. In the long run, WIKA is hoping to adopt the higher-capacity cloud platform of the third-party partner company to meet the growing needs of its clients.

WIKA's wireless solutions for industrial and medical gas applications are designed using WIKA products such as PGT-10, PME-01 and PGW23 (LoRa capable, so far available in EMEA). The table above provides a quick overview of existing WIKA products that can be integrated to obtain customised, IIoT capable solutions for various industrial gas supply modes.

Among WIKA's newer product developments related to industrial and medical gases are a sensor with an output signal for VIPR solutions (valves with an integrated pressure regulator) and a battery-powered Bluetooth transducer for working pressures up to 1,000 bar, which monitors high pressure gas in cylinder bundles (called cradles in the US or quads in the UK). WIKA also has ongoing evaluations of a few cellular gateways for cryogenic gas logistics.

Today, this family-run company has 43 subsidiaries worldwide with production sites in all key industrial gas markets. In addition to a comprehensive product portfolio and dedicated customer-engineered solutions, WIKA also offers complete IIoT solutions to round off its range of services. For WIKA, the challenge in driving the IIoT forward in the technical gases market is finding the right-sized business case. WIKA believes this can be accomplished through existing partnerships with leading industry OEMs and end-users. gw

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