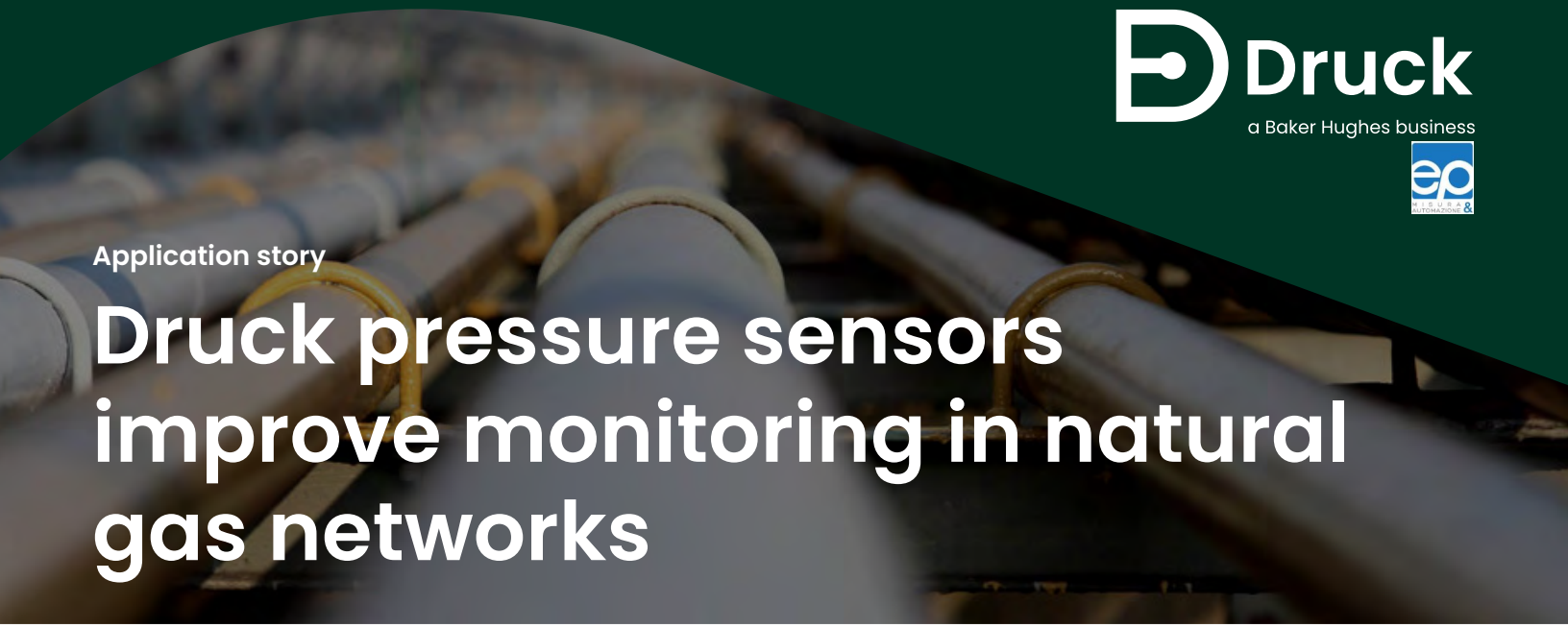

Application story

Druck pressure sensors improve monitoring in natural gas networks

Druck business
Digital communication pressure sensors

Application
Oil and gas - MidStream

Customer type
Original Equipment Manufacturer (OEM)

Product/service
Druck's DPS5000 I²C digital pressure sensor

Benefits
High level of accuracy over a wide operating temperature

Excellent long-term stability

Hazardous area certifications

Druck's customer

Based in Brazil, Druck's customer is a provider of telemetry and Supervisory Control and Data Acquisition (SCADA) systems for companies that distribute or use gas in their operations.

Druck's customer's challenge

In natural gas networks, dataloggers are used for measuring gas pressure and temperature. These instruments incorporate a pressure measuring device and provide remote communications via GPRS which sends acquired data to a control room.

Operationally, pressure is the most significant parameter in gas distribution.

Gas distribution network operators are required to carry out regular pressure checks along the distribution network in order to monitor optimal pressures and detect or confirm the presence of a leak.

As a result of this, Druck were approached to determine if a product could be offered to measure gas pressure at several stations in natural gas networks with sufficient accuracy and stability to ensure safety and process conditions met the required standards..

The sensors required also needed to be backed by an international standard rating of IP68 to withstand the hazardous conditions in underground monitoring stations.

In the gas distribution network, some remote stations are powered by batteries and solar panels, therefore a sensor that consumes low levels of power during operation was essential.

Druck's solution

Having analyzed the application in conjunction with the customer, the Druck team selected the DPS5000 I²C digital communication pressure sensor.

Part of the UNIK5000 family, the DPS5000 sensor features a low power operating system to maximize battery life, ideal for remote environments that are dependent on battery or solar power.

Druck's DPS5000 offers a total accuracy of ±0.1% across its full scale and is designed to ensure excellent long-term stability, reducing the need for frequent calibration of sensors.

Druck's DPS5000 digital communication pressure sensor uses the SDI-12 protocol required for GPRS modem integration, over which fully compensated readings of pressure and temperature are sent.

Picture 1: Gas distribution network

Druck's added value

The introduction of the DPS 5000 I²C provided the following benefits:

Long term pressure sensor stability reduces the need for expensive calibration visits, helping gas operators to save time and reduce operational costs.

Robust construction of the pressure sensor reduces the number of sensor failures in the field and resultant downtime related to unscheduled maintenance.

High accuracy pressure sensors mean that leaks in the gas distribution network can be detected promptly before a catastrophic event occurs, ensuring the safety of those working in the gas distribution industry.

Druck's DPS5000 digital communication pressure sensors are FM and ATEX approved, as well as fully certified according to a wide variety of international, national and regional standards meaning that they can be used by system integrators as a 'plug and play' product for a wide range of applications, including in gas distribution network monitoring in this case.

For more information

To learn more about this product and Druck, please visit:

Datasheet: https://bit.ly/3hJc7xV

Online: https://bit.ly/3fX5tTT

Linkedin: linkedin.com/company/druckcompany

Per avere più informazioni
CONTATTACI

EP srl
41124 Modena
Via S. Faustino, 155/P

Tel. +39 059 35 76 00
www.epsas.it
ep.ma@epsas.it

Baker Hughes

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