VEGABAR 38 reliably measures the pressure in emulsion lines and prevents pump failure

Spoonable cappuccino foam, fluffy cream cakes and creamy soups – when the taste buds explode with delight, it's not just because of the aroma, but often because of the consistency of the product. The Dutch company Kievit, which belongs to the FrieslandCampina Group, is a specialist in such taste experiences. Whether in food or drink, it's the quality of ingredients that ensure a delicious taste, texture and sensory perfection. "Together with our customers, we develop ingredients for the **food and beverage industry**, such as foaming cream agents, coffee and cocoa blends, fat powders, whipping agents, functional blends, micro-encapsulation and cake emulsifiers," explains Ger van den Berg, the man responsible for work preparation and planning at Kievit's Meppel site. Technologies such as emulsification, spray drying, microencapsulation and agglomeration are used to convert liquids into powders or to give products certain properties.

Long-term partnership

When it comes to pressure and level measurement, FrieslandCampina Kievit relies on sensors from Schiltach, and has done so for around 15 years. Over this time, a wide variety of sensors from VEGA have been installed across the plant. "I appreciate the reliability of the instruments and know that there's no need to worry about them," says van den Berg, explaining his choice. "Over the years, you simply get a feeling for whether an instrument works well or not."
For example, a radar sensor from VEGA has been measuring in our raw material silo since 2006. At that time, only the 26-GHz VEGAPULS 68 was available. But because the Dk value of this particular raw material is very low, accurate measurement was always a challenge. So when VEGAPULS 69 with 80-GHz technology was launched on the market, the engineering team didn't hesitate and switched quickly to the instrument with the higher frequency. The previous measurement uncertainties were thus eliminated all at once.
And since 2011, many more instruments from VEGA have been in use: a VEGAPULS 61 non-contact radar level sensor in wastewater treatment, as well as point level switches VEGACAP, VEGASWING and VEGAVIB in various applications. Numerous pressure measuring instruments from VEGA are also in use, monitoring various production processes, for example, storage of fats and filter monitoring.

VEGA Instruments, Canada Ltd. Suite 501
2235 Sheppard Ave East
M2J 5B5 NORTH YORK, ON Canada
Tel.: +1 833 538 8342
Fax: +1 647 349 8340
canadaquotes@vega.com
www.vega.com

Prompt intervention

One measuring point, however, has been under constant observation for many years: the place where emulsification is monitored. The prevailing process conditions there are typical for food production. It is warm, the temperature of the process water is 85 °C and strong vibration and pressure surges are commonplace. The pressures in the pipes are generally between -1 and +8 bar. As soon as the emulsion reaches a certain temperature, it is pumped on with a high-pressure pump. To feed the high-pressure pump, there has to be constant pressure in this circulating system. A pressure measurement was therefore installed downstream from the pump to detect filter contamination at an early stage.
“In the past, pressure gauges from another manufacturer were used here, but due to their short lifespan they always caused problems,” explains van den Berg. Other measuring principles, such as flow measurement, did not work properly either. On the one hand, the penetration of moisture caused problems, and on the other, the diaphragms of the sensors would often fail. “However, this measurement is absolutely necessary for the overall process, as it is the only way to monitor the contamination of the filter, which in turn is crucial for the proper functioning of the pump,” explains van den Berg further.

The new VEGABAR 38 was installed at this measuring point even before its official market launch in August 2019. It is a universally applicable pressure transmitter with ceramic measuring cell for measurement of gases, vapours and liquids up to 130 °C. This very compact sensor enables simple and, at the same time, highly efficient automation. Above all, there are no compromises in terms of safety, hygiene or accuracy, i.e. exactly the requirements that are crucial in food production.

VEGA Instruments, Canada Ltd. Suite 501
2235 Sheppard Ave East
M2J 5B5 NORTH YORK, ON Canada
Tel.: +1 833 538 8342
Fax: +1 647 349 8340
canadaquotes@vega.com
www.vega.com

A plus in operational safety

The universal connection for hygienic adapters on the new sensor series reduces installation work. Process fittings can be selected as required and adapted to the on-site requirements. The sensor also has a display with on-site adjustment options and, as a special highlight, a full-colour 360° status display. This is not only for optical reasons: since the colour of the illuminated ring can be freely selected, it can also be adapted to unfavourable lighting conditions. At a glance, the user can see if the measuring process is running, if the sensor is switching, or if there is a possible malfunction in the process.

The IO-Link standard protocol ensures universal and simultaneously simple communication. The instruments thus have a standardised communication platform that enables seamless data transfer and simple integration into the system.

The new VEGABAR measuring instrument series can also be conveniently read out and configured with a smartphone or tablet. Especially in environments with many pipelines and interconnected production processes, where access is difficult and time-consuming, this option considerably simplifies sensor adjustment and operation. This is an aspect that van den Berg appreciates very much in his daily work routine.

VEGA Instruments, Canada Ltd. Suite 501
2235 Sheppard Ave East
M2J 5B5 NORTH YORK, ON Canada
Tel.: +1 833 538 8342
Fax: +1 647 349 8340
canadaquotes@vega.com
www.vega.com

Simple, reliable setup and commissioning

Since this first deployment was more or less a pilot run, the VEGA team stayed on hand during the installation. “In the future, however, we’ll handle everything ourselves. Thanks to Bluetooth being compatible with the app or PACTware software, the setup and monitoring of the VEGA instruments is very easy,” says van den Berg, who has appreciated the quality and reliability of VEGA instruments as well as VEGA service for many years. Also: “I like the colour. After all, it’s also nice to have equipment that looks great,” adds van den Berg, laughing and pointing out that the pressure sensors have been working perfectly since they were installed.

Related industries

Related products

VEGABAR 38

VEGA Instruments, Canada Ltd. Suite 501
2235 Sheppard Ave East
M2J 5B5 NORTH YORK, ON Canada
Tel.: +1 833 538 8342
Fax: +1 647 349 8340
canadaquotes@vega.com
www.vega.com