Non-contact measurement of milk products

Operators of dairies can benefit from process optimisation and quality improvement thanks to the new OPTIQUAD-M analysis system from Krohne.

This is designed for the continuous non-contact measurement of protein, fat and lactose in milk products using optical spectroscopy. With this, light of different wavelengths is coupled into the product through an optical window. The system simultaneously measures the values of up to four optical effects which, depending on the substances in the product, manifest in different ways. It then uses these to calculate the amounts of protein, fat and lactose. As soon as the values change, the operator can intervene. The result is high product quality. The system, which measures directly in the pipeline, is connected to the process via a standard VARINLINE connection. The measuring section complies with the FDA and can be cleaned using SIP/CIP; and there is no need for daily recalibration.

Applications include the increase of protein content in the cheesemaking milk/vat milk, standardisation of fat content in drinking milk or setting a constant ratio of fat to protein in cheese production.

Krohne
www.krohne.com **Enter 651**

Monitoring applications benefit from new wireless Modbus gateway

New from Deeter is the Wireless Modbus Gateway, a simple solution for the connection of its Wireless Sensor network to a Modbus system to monitor physical or environmental conditions, such as liquid levels, temperature, humidity, vibration, pressure and proximity.

Communicating with the Modbus network via an RS485 port in slave mode, the gateway coordinates the wireless sensor network and manages data acquisition from the sensors using the IEEE 802.15.4 wireless protocol in the 2.4GHz ISM frequency band. The gateway can be installed as a component of a new control or measurement system or as an extension to an existing wired sensor system in order to add wireless connected sensors.

According to the company, the Modbus Gateway will allow customers to integrate Deeter Wireless Sensor products into existing or new control systems in locations where wireless has cost, safety and convenience advantages over conventional cable connected systems.

Suitable for use indoors or out, the wireless products are rated to IP64, have an operating temperature range of -20˚C to +70˚C and are compliant to FCC part 15.

The Deeter Group T: 01494 566046 www.deeter.co.uk Enter 652

Sensing the need for aircraft generator testing

Every modern aircraft has at least one on-board generator to produce electrical power, although most have two or more in a redundancy configuration for utmost reliability. These need to be ground tested regularly, typically every 500 to 1000 flying hours.

However, when a civil aircraft isn't flying, it isn't making money. When a military aircraft is on the ground, defences are weakened. But an unsafe aircraft in the air is a liability to everyone, so they are constantly rotating through ground servicing schedules to ensure their ongoing air and battle worthiness.

As a solution, MEL Aviation has designed the new GTR test station. A key element in the design of this test station is Sensor Technology's TorqSense non-contact torque sensor which can be deployed instantly for high performance acceleration and deceleration tests of the generators.

According to the company, the GTR station is, in essence, very simple. It uses a big electric motor to turn the generator, rapidly accelerating and decelerating it up to 10,000rpm or more to simulate extreme flight conditions, such as in ground hugging for radar evasion or an emergency descent of an airliner. Various sets of instruments measure the electrical output, bearing performance etc.

The machine, however, is fully automatic, with the test steps controlled and monitored by a PLC system requiring the very minimum of human intervention. The software language is a propriety SCADA package using Proficy iFix with dynamic communication links to a Telemecanique PL7 ladder logic embedded in a TSX premium programmable logic controller. All necessary functions are embedded in the Proficy iFix core construction architecture. The dynamic link is written in visual basic.

TorqSense plays the pivotal role of measuring the rotational speed – as a torque value – of the input shaft, which defines the simulated speed profile. It is the primary parameter of the test; if it is not monitored with 100% accuracy throughout the whole test all data is invalid and precious time is wasted.

The new test station means aircraft servicing times are being reduced, enabling more flying hours. MEL expects each test station to have a working life of at least 30 years and for the TorqSense transducers to perform for all this time. In both military and commercial flight operations, this is a typical expectation, with all investments being planned with long term amortisation and reliability never compromised.

Sensor Technology **Enter 653**
T: 01869 238400 **www.sensors.co.uk**

Measuring workplace noise levels

With millions of workers at risk of hearing loss from repeat exposure to high noise levels, Bruel & Kjaer has introduced the Noise Dose Meter Type 4448.

This shoulder-mounted cable-free instrument is designed to accompany employees throughout their working day, measuring and registering all relevant data about their noise exposure. As a result, it can assess the risk of hearing damage to workers in noisy environments such as machinery workshops, forestry sites and music venues.

Special versions are available for use in hazardous areas, such as mining and petrochemical facilities, where only certified equipment can be legally used.

Once hearing is damaged, social and psychological handicaps can lead to potentially massive expenses from the loss of skilled labour, early retirement and worker compensation.

Bruel & Kjaer
T: 01763 255780 **Enter 654**
www.bksv.com