

Improved software for analysis of optical sensor networks

MICRON OPTICS



Micron Optics has released ENLIGHT v1.0, a new version of its sensing analysis software. It is bundled with all Micron Optics' sensing interrogation systems, and provides a single suite of tools for data acquisition, computation and analysis of optical sensor networks. ENLIGHT's intuitive data display and additional graphing and data visualization features make it easy to use.

ENLIGHT provides the basic functions of interrogator configuration, wavelength data acquisition, saving and visualization. The software also introduces several advanced features, including the conversion of optical parameters to engineering units; optimization of sensor detection; real-time processing of sensor data (including averaging, referencing and normalization); comprehensive data storage and display; and the setting and management of warning and alarm conditions.

Improvements include enhanced data logging capabilities, fibre Bragg grating calculation shorthand expressions, a new remote command interface and numerous sensor creation and management tools.

www.micronoptics.com

Optical wastewater sensor is less sensitive to fouling

Emerson Process Management has introduced the Rosemount Analytical RDO optical dissolved oxygen sensor and analyser for use in wastewater aeration basins and ponds.

The sensor is more resistant to fouling than polarographic sensors — an important advantage for wastewater analysis applications, in which coating is a common problem. Less sensitivity to fouling means less need for cleaning and hence reduced operating costs.

The sensor is available with either an integrated or quick-disconnect cable. A

fitting at the rear of the sensor allows a threaded pipe to be screwed into the sensor so that it can be submerged in a basin. One advantage of the sensor's design is that it does not require a flowing sample, and so works well in a low-flow basin or pond.

Maintenance is fast and easy, and consists primarily of replacing the sensing cap once a year. The analyser accepts one or two sensors. It has a two-line display, which can be customized to show oxygen concentration, percent saturation, oxygen partial pressure or temperature, for either sensor.

www.emersonprocess.com

Cost-effective solution for hot-spot monitoring

FISO Technologies, a subsidiary of Roctest, has released a new generation of fibre-optic temperature sensors for power transformer applications. By applying this latest technology to its field-proven Nortech platform, FISO says that it has significantly improved both the functionality and cost-effectiveness of its power transformer hot-spot monitoring solution. The improvements are expected to benefit existing customers as well as broaden FISO's addressable market.

The configuration of the new Nortech Sentinel II sensor allows a reduced bending radius for easier installation, enabling temperature monitoring in areas where it was not previously possible.

By alerting operators to abnormal temperatures within their transformers, Nortech Sentinel II sensors can help power utilities reduce lifetime costs, optimize maintenance schedules and extend the lifetime of their equipment.

www.fiso.com

Fibre-based strain sensor is unaffected by temperature

FiberSensing has developed the FS6200 Athermal Strain Sensor, an optical strain gage that eliminates temperature cross-sensitivity.

In structural health monitoring, the main drawback of a fibre Bragg grating strain sensor is its thermal cross-sensitivity, which requires the use of an additional temperature reference. To overcome this, FiberSensing has developed a passive athermal fibre Bragg grating strain gauge that renders the measurement of temperature unnecessary, benefiting the design and maintenance of large-scale systems.

The sensor is designed to be bonded onto different structures or onto components of different materials. For installation in harsh environments, an

optional metallic protection cover is available that can be used in combination with 3 mm armoured cables.

Compatible with most standard fibre Bragg grating measurement units, the FS6200 combines compact size with high resistance to corrosion and long-term reliability. It is also appropriate for remote sensing as it can be located several kilometres away from the measurement unit. Its intrinsic multiplexing capability allows the concatenation of a large number of fibre Bragg grating sensors in a single optical fibre. The FS6200 is therefore particularly suitable for difficult-to-reach locations and large-scale sensing networks.

www.fibersensing.com

Fibre-optic gyro-based inertial measurement unit



KVH INDUSTRIES

KVH Industries has introduced its new CG-5100 inertial measurement unit. The device is designed for stabilization, navigation and autonomous vehicle applications, and features accurate position, velocity and altitude sensing capabilities. The CG-5100 is intended for use in unmanned ground, aerial, and underwater vehicles, and integrates two reliable KVH fibre-optic gyroscopes (FOGs), and industry-proven accelerometers based on microelectromechanical systems. The components of the CG-5100 are packaged together for flexible installation in situations where space is limited.

The CG-5100 is a low drift, solid-state FOG-based commercial off-the-shelf solution suited for critical sensing applications and GPS-integrated navigation programs. The device achieves its high level of performance by applying proprietary algorithms to a fully combined digital gyroscope and accelerometer output, enabling the system to characterize and correct for the effects of temperature and misalignment.

www.fiberopticyro.com