FOR RELEASE OCTOBER 2014

Danish sewage plant uses Ion Science TVOC® fixed VOC detector to track hydrocarbons

Continuous VOC monitoring of sewage lines helps avoid costly and time consuming clean-up of sludge

In a bid to avoid costly and time consuming clean-up of sludge, Danish sewage treatment plant, Frederikshavn Renseanlaeg, recently installed a fixed ATEX certified Total Volatile Organic Compound (TVOC®) detector from Ion Science (www.ionscience.com) to help detect potentially dangerous hydrocarbons in its sewage lines.

Technical Manager, Rasmus Bendsen, from Duotex A/S, Ion Science distributor in Denmark comments: “Hydrocarbons in sewage lines pose a threat to maintenance personnel and could potentially contaminate the sludge in a sewage treatment plant.”

He continues: “Most people believe that sewage is already a highly contaminated product. However, there is a big difference in the risk to human health from sludge that contains just waste and sludge that also contains hydrocarbons.”

There are many reasons why sewage sludge might become contaminated with hydrocarbons, including as a result of defective oil separators, unintentional spills or even dumping. Once sludge contains hydrocarbons it has to be treated as chemical waste rather than fertiliser. This can significantly increase the price of disposal.

Frederikshavn Renseanlaeg chose the Ion Science TVOC model for a number of reasons including its robust design which meant the unit could withstand the harsh conditions typically found in a sewage line. The transmission of a wireless alarm when hydrocarbons were detected was also a factor.

Another major advantage was the 12VDC operation which made the system very easy to set up as only one lead-acid battery was required to power both the detector and wireless module. Plus, it was capable of running continuously on battery power for at least two weeks.

Cont…/2

Duotec A/S supplied the TVOC hydrocarbon detector, battery and wireless communication module in a waterproof IP68 pelicase. The TVOC was mounted through the side of the case to allow air to be sampled while protecting the display and electronics inside.

Rasmus concludes: “Supplying a spare battery with the TVOC helped the sewage treatment plant to achieve 100% uptime with only an occasional battery replacement. The spare battery was charged and ready to be fitted by maintenance personnel as required.”

TVOC’s photoionisation detection (PID) capabilities utilise advanced patented Fence Electrode technology, a three-electrode format with increased resistance to humidity and contamination.

The robust TVOC has a selectable detection range of 0 – 10 ppm, 0 – 100 ppm or 0 – 1000 ppm and is ideal for use in manufacturing and process industries where VOCs are typically present.

With a 4-20 mA analogue output, the TVOC detector can be simply integrated into a DCS control system to provide warnings and enable control of high VOC levels in the working environment.

ATEX approvals enable a three wire TVOC system to be used in Zone two hazardous areas, without safety barriers. ATEX and IECEx approvals allow TVOC to be used in Zone one hazardous areas, with safety barriers.

The TVOC utilises a diffusive sample technique resulting in less contamination issues compared to pumped systems, reducing lamp cleaning and servicing requirements. Simple to install service and calibrate, TVOC requires no hot work permit and the PID sensor is accessible and changeable in a matter of seconds. It is also available for use with a pumped system for applications where sample conditioning is required.

ENDS

For product information please contact: Sam Holson, Ion Science, The Way, Fowlmere, SG8 7UJ, UK tel: + 44 (0) 1763 208503 email: marketing@ionscience.com

For press information or images please contact: Emma Hulse, ELH Communications, tel: 01628 665593 mob: 07801 869938 email: emmahulse@elhcomms.com web: www.elhcommunications.com twitter: @elhcomms