

## KROHNE ASSISTS PAPER MANUFACTURER TO INCREASE CO<sub>2</sub> CREDITS

New Forest Paper Mills LP, of Scarborough, Ontario, Canada has selected the KROHNE OPTISWIRL 4070C vortex flowmeter to measure methane gas emitted from its anaerobic bioreactor.

New Forest Paper Mills manufactures brown paper and liner board used to make corrugated packaging. It uses recycled materials to produce new paper and board in grades from 112 grams to over 200 grams per square metre.



OPTISWIRL 4070C at New Forest Paper Mills LP

Water used in the manufacturing process collects fibres and starches that are consumed in an anaerobic process. The mill needed a robust flowmeter with pressure and temperature capability to measure dirty methane gas being pumped from the biomass reactor.

Jeff Holt, instrumentation superintendent at New Forest Paper Mills, said: "The gas is processed, the sulphur and other toxic elements of the gas are removed and it is pumped into a buffer tank.

"Some of the gas is used to power our boilers. We use the bio gas in place of natural gas to make steam which goes to our driers. These dry the pulp as it is rolled out into sheets.

"As the gas flows into the buffer tank, surplus gas that is not burnt in the heaters is flared off to prevent a critical build up of gas in the tank. The gas produced from the bioreactor provides six per cent of the total amount of gas used to heat the paper driers. In this way we reduce our carbon footprint, gain more CO<sub>2</sub> credits and lower our operating costs by reducing the amount of natural gas we need to buy.

“We selected the OPTISWIRL 4070C vortex flowmeter to measure methane gas coming from our bioreactor because we needed a versatile flow meter to operate at rates of flow that can be as low as 50-60 cubic metres per minute (cmm) and as high as 600 cmm.”

KROHNE’s OPTISWIRL 4070C has been designed to be robust and highly versatile. It is the only vortex flowmeter with integrated pressure and temperature measurement. It incorporates the company’s ISP (intelligent signal processing) technology which eliminates unwanted signal noise to deliver precise, stable measurement.

The OPTISWIRL is designed to measure accurately the operating flow, volumetric flow and mass flow of conductive and non-conductive materials. These materials can be liquids, gases or vapours and the instrument can handle fluctuations in material pressures and temperatures.

The OPTISWIRL 4070C is designed to provide high reliability and, once installed, it does not require on-going maintenance. Its durable stainless steel case is resistant to pressure, temperature and corrosion, making it suitable for use in harsh applications such as those in the chemical, petrochemical and gas industries.

The OPTISWIRL is also suitable for use in SIP (sterilisation in place) and CIP (cleaning in place) processes in the food, beverage and pharmaceutical industries.

With a simple to use, intuitive menu and ‘plug and play’ set up, the OPTISWIRL can quickly be operational. PACTware is fitted as standard and the instrument’s modular design allows electronics to be replaced easily.

KROHNE’s ISP software uses a notch filter to identify the precise measurement value.

Initially the filter system analyses the entire measurement signal frequency spectrum and then identifies the vortex within it. Irrelevant frequencies are then filtered out to leave a precise and stable measurement value.

Information: KROHNE Messtechnik GmbH & Co. KG, Andrea Lang

E-Mail: [alang@krohne.de](mailto:alang@krohne.de)