

OPTIFLUX delivers solid performance



Colcrete Eurodrill Ltd has standardised on installing KROHNE's OPTIFLUX 5300 electromagnetic flowmeter in specialist pumping stations it manufactures and sells throughout the world because of the reliable and accurate performance of the instrument.

Colcrete Eurodrill fits OPTIFLUX 5300 flowmeters in equipment used to inject grout (or cement) underground to fill the annulus between tunnel ring segments and the ground around them or to construct grout curtains. The flowmeters help to ensure and validate that a precise ratio of grout and additive are combined together so that the mixture will gel correctly.

The mixing station produced by Colcrete Eurodrill typically consists of an automated mixing system which is fed by big bag discharge stations or Silos. The mixed product then passes to agitated storage tanks which feed high-pressure injection pumps.

The pumps inject the grout mixture to its final destination via the OPTIFLUX flowmeters at rates between 0.2 and 600 litres per minute and pressures ranging between 40 and 100 bar, depending on the application.

Additives can simultaneously be added to 'gel' the grout mixture as it enters the ground and these are fed through separate OPTIFLUX flowmeters. Precise application of the additives is essential to ensure that the grout recipe meets the correct specifications for its applications.

As well as monitoring the flow rate of grout and additives, the OPTIFLUX flowmeters provide an output feed to a datalogger which records detailed information for future use.

Colcrete Eurodrill chose to standardise on the OPTIFLUX 5300 because its ceramic lining provides high level of resistance to wear, particularly in high solid applications. The reliable performance of the instrument has been such that the company now has over 100 OPTIFLUX flowmeters operating in equipment around the world.

“Our equipment is exported throughout the world for specialist grouting contracts and their reliable operation is essential, not just in meeting our customers’ needs but also to ensure we keep after sales support costs to a minimum,” said Mark Rex, general manager at Colcrete Eurodrill. “We have tried several makes of flowmeter over the years and we have chosen to standardise on KROHNE’s OPTIFLUX because it gives the reliability and accuracy we need.”

KROHNE’s OPTIFLUX is a pioneering ‘all-in-one’ electromagnetic flowmeter. The instrument uniquely incorporates three levels of diagnostics and sets new industry standards of metrological performance and accuracy.

Drift or deterioration in flow measurement is not uncommon in industry, often caused by changes to the consistency or throughput of measured materials or contamination or corrosion of components. This can go undetected, resulting in sub-standard products and excessive material costs.

Traditionally, diagnostic analyses within electromagnetic flowmeters have been limited to checking the device’s microcontroller or memory. KROHNE’s OPTIFLUX incorporates revolutionary 3x100% diagnostics. These provide engineers with comprehensive data that makes it possible to anticipate and rectify potential problems before they affect production. This unique feature gives companies greater control of product quality and material costs.

The OPTIFLUX magmeter provides precise measurement across a wide and demanding range of applications. It can achieve an industry-leading accuracy of 0.15 per cent and reproducibility of 0.06 per cent, even when measuring materials with high solid content or that have turbulent flow.