

**ROSEMOUNT**  
Analytical

News of UK and Ireland analytical products and applications.

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## New Clarity II On-line Turbidity Measurement

Clarity II, a new turbidity measurement system, further extends the Rosemount Analytical instrumentation capability for water quality monitoring. The Clarity II Turbidimeter is a dual channel on-line device complete with a unique sensor chamber that helps eliminate the erroneous readings from bubbles, and provides a suitable sample flow. Operating over a wide measurement range, Clarity II is used to measure low level turbidity in drinking water treatment systems, and also for monitoring the higher turbidity levels normally associated with wastewater discharges, clarifier control and condensate return applications.

The Clarity II sensor is designed to conform to the turbidity measurement requirements specified in ISO 7027, using a long life LED source operating in the near infrared region, and monitoring the light scattered at 90 degrees by particles suspended in the liquid. This technique is preferred for low-level turbidity measurements, as it is less sensitive

to the effects of coloured samples. The Clarity II Turbidimeter measures turbidity with an accuracy of +/-1% of reading, or +/-0.015 NTU for measurements below 1 NTU.



## Improving Efficiency in Steam Boilers

ScottishPower Generation Limited (Generation UK) has ordered further Rosemount Analytical Oxymitter 4000 oxygen analysers after installing 16 units in a previous refurbishment of the 2400MW power station at Longannet.

The Longannet Power Station on the Firth of Forth is the second largest coal fired power station in the UK, having four 600MW units. Generation UK relies on continuous oxygen monitoring using the Oxymitter transmitters to maintain the optimal efficiency and good operation of their steam boilers. It is also important for their Continuous Emission Monitoring system.

The original sixteen transmitters were installed to measure the flue gas oxygen levels in two of their four coal-fired boilers. The Rosemount Analytical Oxymitter 4000 was chosen because of the fast response of the zirconia sensor, together with excellent accuracy and repeatability. The ease of installation of the Oxymitter 4000 transmitter design and minimum maintenance requirement provide additional benefits. Two lengths of probe - 6 feet and 9 feet - were used to position the sensors across the large ducts, allowing any stratification of the flue gas composition to be detected.

Experience over the year since these sixteen units were installed has shown the reliability of these Oxymitter units.