measureable
Solutions. Support. Success. A news article from ABLE Instruments

ABLE Fusion™ Knocks Out Pneumatic Level Transmitters On NGL Condensate

A major oil & gas exploration and production company asked ABLE to assist with an urgent and difficult NGL condensate level measurement application on two of their platforms in the North Sea due to failing process instruments.

Two-manned production and drilling facilities required replacement of the pneumatic level transmitters on the NGL knockout drums. The original level shutdown system was made up of float switches, which had been problematic and unable to cope with varying specific gravities of the liquids. Some of the float switches were subject to unknown failures that only become apparent when a shutdown demand was placed on the instruments.

Owing to the criticality of the measurement and the problems faced onsite, ABLE were asked to provide a reliable solution within a strict and short timeframe.

Application

The plant operators are required to monitor and control the level in the NGL condensate knock out drums to avoid overspill of water to the system, which has caused plant problems in the past. The operators must be able to gain confidence with the instruments, allowing them to concentrate on more critical systems during plant start up. It is essential that the instruments used are reliable and can cope with the demanding process conditions and accurately measure the level in the vessels. Notwithstanding this, the solution must stand up to the normal rigors of an offshore environment in the North Sea, to include extremely cold temperatures, a saliferous atmosphere, strong winds and vibration.

Nucleonic measurement was discounted as it was considered too expensive and required support steel works to install. Magnetic level gauges alone, on liquids with varying SG's, had previously failed in reliability and displacement methods were discounted due to process requirements.

Dual Chamber ABLE Fusion Gauge

The ABLE Fusion level system was offered as the most reliable and accurate solution to this measurement problem. The ABLE Fusion is a level measurement system that combines the operation of a float operated magnetic level indicator with guided wave radar to offer two independent proven level technologies in one system.

The magnetic level indicator offers a clear visual level display and can be supplied with a reed chain transmitter, magnetostrictive transmitter or switches for high and low level alarm requirements, operating in conjunction with the level indicator float.

The guided wave radar offers an independent level measurement based on high frequency microwave pulses that are transmitted along a guide rod. The pulses are reflected back by the liquid surface to a receiver, providing a level measurement accuracy of +/-3mm.

The visual indication or transmitter output from the magnetic level indicator can be compared to the guided wave radar to provide the confidence of accurate liquid level measurement, either locally or in a control room.

The combination of technologies provide the operator with a fault tolerant, reliable level system suitable for applications where critical level measurement and redundancy is required, particularly in the offshore, petrochemical, power and pharmaceutical industries.

For further product information please contact ABLE on Tel: +44 (0)118 9311188 or e-mail info@able.co.uk.

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