

SAND MONITOR

Non-intrusive acoustic detector

Roxar's subsea sand monitor provides a CANopen interface compliant with the CiA 443 profile. There are two models: ROV (remotely operated vehicle) retrievable and non-retrievable, both mounted in fixed pre-installed clamps assemblies.



EMERSON'S DAUGHTER COMPANY, ROXAR, has launched a subsea sand monitor. The product utilizes the acoustic noise produced by sand particles to calculate in real-time sand production in oil, gas, or multiple pipeline flows. The acoustic sensor measures with an uncertainty of 5 % to 10 % (depending on flow regime and calibration level) sand in gas ($\geq 15 \mu\text{m}$) or liquid ($\geq 15 \mu\text{m}$ to $25 \mu\text{m}$). The product is designed for subsea usage of up to 3000 m. The lifetime is specified for 30 years. The units are for the outside use of subsea production pipe-work.

The electronics is redundant including the CANopen interface, which is based on an ISO 11898-3 compliant transceiver. The communication interface complies with the CiA 443 profile for SIIIS level-2 devices (ISO 13628-6). The supported bit-rates are 50 kbit/s and 125 kbit/s.

The company also provides other subsea equipment such as wet gas meters and multi-phase meters. These products support also the CiA 443 profile, which is joint developed by CiA and the SIIIS association.

Subsea sand monitor with a fault-tolerant CAN interface (Photo: Roxar)