

THE MEG ARTS® SYSTEM PROVIDES HIGHLY ACCURATE AND RELIABLE ANALYSIS OF MONO-ETHYLENE GLYCOL OR OTHER FLUID RECEIVED SUBSEA FROM A PIPELINE CONDITIONING TRAIN. THE SYSTEM CAN OPERATE AUTONOMOUSLY WHILST THE SUPPORT VESSEL REMAINS AT THE LAUNCH END OF THE PIPELINE. WHEN AN ROV IS AVAILABLE AT THE PIG RECEIVER THE REAL-TIME DATA CAN BE MONITORED AND SAMPLING CONTROLLED IN REAL TIME.

### Key Benefits:

- Pipeline conditioning assured through real time data, logged data, and physical sampling.
- Graphical summary of pipeline conditioning operation from downloaded data.
- Automatic sampling eliminates need for vessel at, or transit to, receipt location resulting in significant savings in vessel time and costs.
- Optional ROV sampling allows for multiple samples from a single switch meaning ROV does not need to relocate to different valves.
- Samples can be captured from specified train positions with ROV sampling.

The flowing MEG is analysed for conformity with project purity, dryness or hydrate suppression requirements. Values of density, pressure and temperature are logged and displayed on a high visibility OLED display. Up to 7 samples are captured for recovery to surface to confirm composition.



Online Electronics
T: +44 (0) 1224 714714
E: oel-sales@ik-worldwide.com

online-electronics.com

## **PRODUCT**

# MEG ARTS®//



#### **ANALYSIS DISPLAY AND SAMPLING SKID**///

Equipment is packed in a mini-skid suitable for offshore lifting. The skid is self-contained carrying the Controller with logging and battery power, analysis sensors, sample cylinders and solenoid operated valves. The skid can be pre-deployed before an operation and activated when required by ROV switch. When placed on the seabed, mattresses may be needed. After recovery to the vessel, hand valves are provided for discharging samples without skid disassembly. Logged data can be downloaded to a PC.

## PIPELINE INTERFACE//

MEG ARTS® is connected to the header or discharge line from the pig receiver or other available connection according to pipeline configuration. A proportion of the flow is diverted through the analyser and sample loop for analysis. The sample flow may be returned closed loop to the discharge.

#### RECEIVER INTERFACES//

The sample loop typically uses 19 mm ( $\frac{3}{4}$ ") diameter hose which can be combined with a hot stab for ROV handling. Several metres of hose can be stowed as a single turn round the skid. ROV switches and the analyser display are accessible on the top face of the skid. A covers across the top of the skid protects valves and prevents snagging of the lifting set.

#### **SPECIFICATION**//

Maximum Operating Depth 3000m (9800ft)

Minimum Operating Depth 50m for sample from 25m length MEG batch at 0.35m/s

160ft for sample from 80ft length MEG batch at 1.1 fps

Maximum Pig Receiving Speed 0.5m/s (1.6 fps) in 20" pipeline with 4" discharge

0.75m/s (2.5 fps) in 8" pipeline with 2" discharge

Density sensor accuracy ±0.5 kg/m3 (0.6% span seawater to pure MEG). Range 500 kg/m3 to 1500 kg/m3

Display 63 mm x 33 mm (2.5" x 1.3")

Logging Capacity 258,000 entries at 1 s to 10 s interval, memory wrap option. Each entry contains

Date, Time, Density, Pressure, Temperature and Sample Status

Battery Life >10 days

Volume of each sample 0.35 L (13 US fl oz)

Operating Temperature Controller -5°C to +30°C (23°F to 86°F)

Storage -20°C to +50°C (-4°F to 122°F)

Maximum gross weight in air 500kg (1100 lbs)

Overall dimensions 1250 mm x 900 mm x 410 mm

MATERIALS //

Skid Stainless Steel

Controller and sensor housings Alloy Bronze CA104

Valves, tubing and ROV Switches Stainless Steel

Sample Cylinders Duplex Stainless Steel



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