Seastream LoFlo

The Inhibitor Injection Measurement Solution

Engineering Excellence

The Seastream flowmeter has been specifically developed for subsea injection metering applications, including water injection, inhibitor injection and gas lift. Seastream meters play a key role in efficient well management, helping operators to optimize recovery from marginal fields.

Subsea Experience

Since the early 90's Solartron ISA subsea meters have been deployed in hundreds of locations worldwide from the shallow diver depths of the North Sea to the deepwater depths of the Gulf of Mexico.

Seastream LoFlo Meter

The Seastream LoFlo meters are designed to offer high accuracy and reliable operation, even in the harshest of subsea environments. These meters are designed to operator over a wide turndown. Each meter is designed for the unique project application and supplied in a variety of materials to suit individual Operator Specifications.

Incorporating a high specification transmitter from the Solartron ISA SST range, the Seastream can be designed with multiple sensor configurations including High/Low and High/Low Redundancy. Compatible with all Controls systems communications, including traditional 4-20mA, or digital communications in Modbus RS485 RTU, CANOpen Hi-Speed and Fault Tolerant (SIIS II compliant).

Applications

The LoFlo meter is designed particularly for Well Management and flow assurance inhibitor injection applications. The flow meter offers a reliable and repeatable reading at extremely high flow rates at flooding during start up, while supplying an accurate and repeatable measurement at normal operating conditions.

SST Flow Calculation

The introduction of the new in-head flow calculation removes uncertainty from integration into subsea systems, while reducing client software programming time. Mass Flow, Actual Volume Flow and Standard Volume Flow rates are now available in conjunction with the standard process variable outputs of DP and P, with the option of connecting an external temperature sensor into the same transmitter.

Applications

- ✓ *Inhibitor Injection*
- ✓ *MEG*
- ✓ *Methanol*

Key Specifications

- ✓ *Depth down to 5000m*
- ✓ *Pressure up to 15000psi*
- ✓ *Accuracy*
  - *±10% at Flooding*
  - *±1% Normal Operation*
  - *Flow Turndown up to 25:1*
- ✓ *SST Flow Calculation*

Qualifications

- ✓ *ISO 5167*
- ✓ *ISO 5168*
- ✓ *API 6A – PSL3G*
- ✓ *API 17D*
- ✓ *ISO 10423*
- ✓ *ASME B31.3*
- ✓ *ASME IX*
- ✓ *ISO 13628-6*
- ✓ *IEC 61000-4*
- ✓ *ISO 9001*
- ✓ *PED – 97/23/EC*

Hackworth Industrial Park, Shildon, County Durham, DL4 1LH, UK ∘ Tel: +44 (0)1388 773065 ∘ Fax: +44 (0)1388 774888
e-mail: sales.solartronisa@ametek.com ∘ www.solartronisa.com
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Seastream LoFlo

Specifications

Functional Specifications

Line Size
1 inch through to 4 inch

Primary Device
LoFlo

Beta Ratio
0.1 to 0.8

Reynolds Number
From 80 to an unlimited maximum

Accuracy
±10% at Flooding
+/-1% Normal Conditions

Flow Turndown
Typically >25:1, depending on Transmitter configuration (Digital mode only)

Working Pressure Limits
API 5K, 10K & 15K available

Working Temperature Limits
-20° to +80°C

Water Depth
Down to 5000mts

Design Lifespan
>25 years

Physical Specifications

Body Material
UNS S31803 (Standard)
UNS S32760
Inconel 625

Process Connection
Flanged (API / ASME)
Hub
Butt Weld

Transmitter Connection
Bolted
Welded
Autoclave Fitting (Anti-vibration)

Transmitter Types
SST1500 DP Series
SST2000 DP Series
SST3000 DP Series

Size (Typical Length)
1300 mm (2”NB) length can be reduced with calibration

AMETEK®
SOLARTRON ISA
Hackworth Industrial Park, Shildon, County Durham, DL4 1LH, UK
Tel: +44 (0)1388 773065 ∘ Fax: +44 (0)1388 774888
e-mail: sales.solartronisa@ametek.com ∘ www.solartronisa.com

Houston Sales and Services
4903 W. Sam Houston Parkway, N., Suite A-400, Houston, TX 77041
Tel: +1 713-466-4900 ∘ Fax: +1 713-849-1924

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