METHANE FROM FLARING
TOOLKIT

Calculation: Flow Meter

Summary

Once flared gas is measured and analysed, this data must be presented in recognised reporting units as required by regulatory and operational agreements.

This can be done in recognised and approved flow computers field installed in flow meters and following the guidance given in global industry standards.

How it Works

A field mounted flow computer in a flow meter is an electronic computer which implements algorithms making use of the analog and digital signals received from flow meters, temperature, pressure, and analyser systems, to determine volume and mass flowrates at base conditions.

They are used for custody or fiscal transfer and allocation measurement, for which flare volumes are applicable.

The field mounted flow computer in the flow meter also audits changes that have been made to any of the parameters required to turn the raw flow meter and analytical data into volume and mass. It records events and alarms related to the flow meter and analyser systems and keeps a running tally of the volume and mass for each flow meter it monitors and creates a record of this volume and mass on an hourly, daily, batch or monthly basis.

Field mounted flow computer in the flow meter is nominally Ex rated and installed in the process environment.

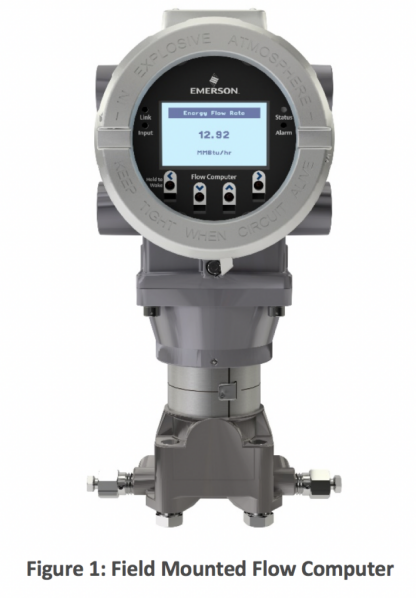

Figure 1: Field Mounted Flow Computer

Field mounted flow computers in flow meters are used widely in the Oil and Gas Industry.

Advantages

- ☑ On-line calculations at regular intervals
- ☑ High accuracy
- ☑ Low uncertainty

Limitations

- ☒ High level of expertise in maintenance required
- ☒ High equipment costs
- ☒ High maintenance costs

Go Deeper

- ABB
- Yokogawa

- Emerson

Case study

No case study available at this time.

How do I calculate flared gas?

Calculation: ICSS / DCS / SCADA

Calculation: Flow Computer

Calculation: Process Simulation (HYSYS etc)