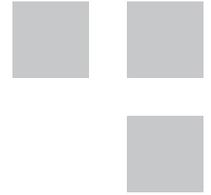




FCI GF90 at remote natural gas well site



Remote Site Collection System for Natural Gas Production

Application Note Case Study ANCS 007

At remote natural gas well sites, such as can be commonly found in shale plays, UGAS, and fracking operations, operators utilize gas flow meters to verify continuous operation of the gas extraction and collection process and equipment. A major operator in Marcellus Shale Gas Fields required a gas flow meter for this application.

Problem

The remote well site lacked electrical power. The flow meter must be extremely rugged and capable of reliable operation in extreme weather conditions. It must carry agency approvals for installation in explosive, Class 1, Div.1 [Zone 1] environment. It must be extremely reliable as site visits for maintenance or service are expensive. Flow rates can vary widely.

Flow Conditions

- Pipe diameter: 3" schedule 40 [DN80]
- Range: 1,185 SCFD to 118,500 SCFD (33 NCMD to 3356 NCMD)
- Temperature: Ambient
- Pressure: 1 psig [0.07 bar(g)]
- Gas composition: Methane 73%, ethane 17%, propane 7%, N-butane 1%, misc. hydrocarbons 2%.
- Straight-run: 10 d

Solution

Install an FCI constant-power thermal dispersion technology flow meter powered by a solar panel array. FCI thermal dispersion flow meters have a proven history of reliability and there are no moving parts so no routine maintenance is required. Constant-power thermal technology requires the lowest power and can be successfully powered with a solar array at the lowest cost. FCI thermal flow meters, with standard 100:1 turndown will meet the wide flow range requirement. FCI thermal flow meters carry full-instrument global agency approvals for Class 1/Div1 [Zone 1] installations. Enclosures are rated up to NEMA4X and IP66/67. (The ST100 Series also has on-board data logger capable of storing more than 20M readings)

FCI Models GF90, ST100 or ST98

Benefits

- Significant cost and time savings with fewer site visits because no routine maintenance is required.
- Cost savings on solar panel due to low power requirement by constant thermal technology.
- Cost savings in equipment and installation with single flow meter providing full (wide) flow range.