

Expro Excellence

Clamp-on metering improves operational efficiency on HPHT sour gas wells

Well Flow Management | Flow Surveillance



Objectives and background

- An operator of an offshore high rate gas field with HPHT sour gas wells was performing a ramp-up operation to test well and reservoir deliverability
- The wellhead was configured with dual 12-inch production lines to achieve a maximum flow rate of 200mmscf per day
- Each production line was equipped with an inline Venturi meter
- Given the turndown on these wells, the customer needed to evaluate the performance of the Venturi meters during the ramp-up operation
- The customer required a non-intrusive solution, which could handle the harsh environment of high H₂S and anticipated solids content, and achieve the turndown required
- A conventional ultrasonic clamp-on meter would not be applicable given the CRA inlay in the production line, anticipated solids, minimum and maximum velocity. Expro's SONAR meter met and exceeded these requirements

Expro Excellence

- The customer performed well testing after clean up, during which the wells were flowing up to 30-50mmscf
- The customer wanted to ramp-up production to a maximum capacity up to 200mmscf
- Expro installed two SONAR clamp on flow meters on each production line to measure the volumetric gas flow rate
- The Venturi flow rate data was compared to Expro's flow rates

Value to the client

- Successful verification of the installation and commissioning of the Venturi meters when compared to the reference SONAR meter
- Real time configuration of Venturi differential pressure transmitter onsite during production ramp-up
- The customer avoided production shutdown and the requirement to rig up any intrusive metering
- SONAR meter indicated choke washouts due to solids content at higher velocities
- Reduced overall time on well start-ups across the field
- Improved operational efficiency
- Reduced operational risk on HPHT high rate gas wells with high H₂S

Reduction of rig time



Cost saving

