

Expro Excellence

Existing inline metering correction and insight into process conditions

Well Flow Management | Flow Surveillance



Objectives and background

- An operator of an offshore field was measuring flow rates on production separator oil and water outlets across three platforms
- The existing inline metering systems were providing unreliable measurements and prevented the operator from managing their process efficiently
- The customer required a non-intrusive but robust solution, which could handle the highly dynamic flowing conditions
- The customer's preference was to continue production, avoid shutdown and resolve the metering issue

Expro Excellence

- Expro proposed to use a mobile self contained surveillance package with 3" – 12" meter sizes to monitor the separator liquid flow outlets, determine a volumetric rate and establish a gas volume fraction
- Expro's clamp on non-intrusive metering was retrofitted to existing lines without any modifications
- Expro performed 24-hour surveillance with different wells flowing into the separator based on the customer's testing program
- Results were compared to the existing inline metering system

Value to the client

- Expro's diagnostic identified two key issues:
 - Slugging was due to a faulty level control valve
 - Free gas (GVF) was measured in the single phase liquids, oil and water outlets
- Expro applied GVF correction, which allowed the existing inline Coriolis meters to be corrected and provide a viable measurement
- Expro surveillance provided an accurate reference flow rate measurement to identify the error in the existing inline metering
- The customer received insight into the dynamic nature of their process conditions to facilitate a change and bring the process conditions within the working envelope of the existing inline metering

Insight

