

Expro Excellence

Non-Intrusive SONAR Commissioning Delivers Optimal Throughput with Zero Downtime

Well Flow Management | Flow Surveillance



Objectives and background

- Expro had been contacted to quantify throughput and check performance of a secondary oil transfer pump from the treatment column to desalter
- The customer's primary challenge with deployment of traditional in-line meters were Non-Productive Time (NPT) due to the necessity of system shutdowns and disruption of daily standard facility operations
- Expro has collaborated with this client for over a decade, with an established track record of efficient measurement services provided
- Expro was contacted by the client to deliver non-intrusive SONAR metering technology from the equipment fleet in country

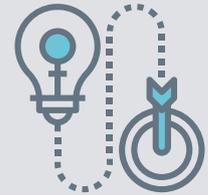
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- The scope of the work comprised the following activities: Installation of a SONAR meter on the outlet of the operational (Primary) pump to establish the baseline performance. Installation of a SONAR meter on the nonoperational (Secondary) pump. Gradual commissioning of the second pump by progressive valve opening, thereby ensuring a smooth transition to online status and enabling comparative performance measurement
- Expro's Flow Surveillance team were able to ensure rapid deployment of equipment to the client site, provide extended and continuous data monitoring, and work closely with the customer onsite to ensure precise control of the second pump
- Expro enabled the client to accurately assess the performance of the second pump and minimize potential for sudden production surges or declines that could trigger system alarms. Such instability may further manifest in adverse phenomena such as cavitation pressure fluctuations, thereby causing equipment damage and compromising system reliability and operational integrity

Value to the client

- The job delivered several key benefits to the client:
 - The second centrifugal pump was successfully and brought to its desired operating point without any downtime or disruption to the ongoing process
 - Continuous monitoring mitigated the risk of hydraulic shock and motor overload, thereby ensuring operational stability and equipment protection
 - The deployment of nonintrusive, standalone SONAR meters provided ease of installation and rapid implementation, significantly reducing startup time while maintaining safety and efficiency
- Expro's non-intrusive SONAR meters demonstrate advanced process diagnostics and precise throughput quantification in complex industrial environments. This technology is distinguished by its accuracy, reliability, and ease of use, particularly in high-value and high-risk commissioning operations

Innovative solution



Insight

