

## **Leaking Subsea Valves; Identification, Quantification and Monitoring by Using Ultrasonic Systems**

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This paper will discuss the challenges in the oil and gas industry regarding leak identification, quantification and monitoring of critical subsea valves. In today's subsea installations, there is not a lot of monitoring systems in place - we will elaborate on the ongoing subsea leak project where a subsea crossover link were needed to be closed and a verification of the leakage in the subsea valves was critical and essential to the success of the project.

By using ultrasonic systems, the operators are able to not only comply with governmental regulations, but also keep the level of security very high.

Losses through passing valves are a general problem and significant cost savings can be achieved by being able to identify passing valves non-intrusively and thus enable operators to take early action to reduce the loss by repairing the faulty valve.

Part of the presentation will discuss the ongoing field example at the Tampen project in the North Sea, where ultrasonic non-intrusive acoustic leak monitors are used to verify/disprove gas leakage at the two closed 20" subsea valves on the gas pipeline.