

National Grid Improves Detection of Contamination in Gas Supplies

National Grid has published the report on a 32-month project assessing the LineVu system from Process Vision.

Contamination in gas networks is a global problem, causing corrosion and damage to plant and equipment with high clean-up costs. The project has validated improvements in the detection of contamination entering gas networks and demonstrated that LineVu is ready to move from research to business-as-usual equipment with plans to install systems at entry points to the UK transmission system.

LineVu brings a new approach to monitoring. It is a permanently installed camera-based system, using image processing to provide an alarm when contamination is detected, and enables access to a live video stream of pipeline activity. Implementing this technology will allow operators to make proactive, evidence-based decisions. More effective maintenance will be possible, and the threats posed by contamination will be greatly decreased.

It is known that liquid events can significantly increase the uncertainty of fiscal measurements, such as flow and calorific value. Limiting these events, and the knowledge gained from monitoring, can reduce these errors.

Capable of detecting all types of solid and liquid contamination, LineVu provides pipeline operators certainty on gas pipeline contamination levels. During the National Grid project, the LineVu technology provided good validation levels using a variety of flow regimes.

Gas Safety (Management) Regulations (GS(M)R) require that gas transported in the National Transmission System should not contain liquids or solids. The project raises awareness of contamination in gas flows received into the network and the industry's reliance on separator efficiency. The LineVu technology draws attention to separators and compressors that require maintenance.

A live video stream directly to control rooms allows operators to react immediately to alarms in the same way they would if the gas was outside of specification for water vapour or H₂S.



LineVu will:

- lead to better compliance with GS(M)R;
- improve flow assurance;
- decrease operational risk;
- lead to better maintenance of asset integrity;
- act as an early warning to prevent damage to plant and instrumentation.

The National Grid report and further information on LineVu can be found at: www.processvision.com/reports

For more information on LineVu visit www.processvision.com

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About Process Vision Ltd

Process Vision takes pride in developing the latest technology and is currently promoting LineVu – a continuous live video stream of pipeline activity which alarms upon a process failure, with analysis systems that detects contamination. With zero intrusion to pipe diameter, the optical system is recessed from the pipeline to avoid contamination of optics and has a secondary containment system to enable long-term, safe, monitoring.

Effective monitoring of gas/liquid separators can improve safety and profitability of an asset.

If process failures are not quickly detected, contaminants can enter the export line leading to unsafe practices, compensation claims or the supply valve being closed to the pipeline network.

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