

# **LineVu Discovery Detecting Liquid Carryover**

With liquid carryover being the No. 1 cause of process failures, knowing and addressing liquid carryover is essential for operational safety, ensuring process efficiency and meeting regulatory requirements. The LineVu process camera and Discovery system allows operators to take a look inside a high-pressure gas pipeline or vessel to understand if and when liquid carryover occurs and its severity.

The knowledge gained during a survey can provide:

- Evidence of contract compliance
- Improve process control
- Determine filter performance
- Monitor performance of the phase separation systems



### Filter/Phase Separator Performance Check

Ensure no liquids have passed through filtration



### **Improved Compressor Safety**

Ensure no liquids are present in the incoming gas to compressors



### **Custody Transfer Compliance**

Ensure no liquid carryover is present at custody transfer points

### **Cost-Effective Studies**

Using a LineVu process camera system to provide live video stream from inside your natural gas pipeline on a temporary installation for a four, eight or twelve weeks study period is a valuable tool to determine real process conditions. Studies are performed to determine if there is a continuous or intermittent liquid carryover problem. During the study, remote access to a real-time dashboard provides minute-by-minute data. The written study report together with review meetings provides evidence for better decisions which can lead to significant improvement in financial, safety and compliance performance.



### **Fast Setup**

Experience plug-and-play convenience that reduces setup time and effort, enabling quick studies.



### **Data Analysis**

Real time reporting, daily analysis, written reports and data review meetings are included in the study package.



### **Flexible**

Mobile system can be easily moved between different tapping points, or different sites.

### **Impact of Wet Gas**

The cost of wet gas can be \$millions and in many cases only discovered with a LineVu process camera. This short study provides a low-risk/low-cost method to establish if a problem exists. Relating changes in video data with process changes can show how plant and process can be operated to minimize liquid carryover and improve plant efficiency. This new technology shows that filter and phase separator problems can be highlighted and appropriate action can be taken. From just simply changing the filter when it starts to pass liquids to justifying a project to improve the filter performance.



Real-time insight in your pipelines





### Remote access to videos and analysis during the study

Remotely access and real-time video feeds allows flow ramp testing and debottlenecking studies to be performed with live feedback. Remote engineering resources can review and provide input on test results.

### Online meetings during the study to review data

Participate in virtual meetings to review collected data and discuss insights with experts. Collaborate in real-time to analyze findings and strategize solutions for addressing liquid carryover issues effectively.





### **End of study written report**

Receive a comprehensive written report summarizing key findings and recommendations regarding liquid carryover in your process. This valuable resource provides evidence-based justifications for improvement initiatives, enabling optimized process performance.

## STUDY OPTIONS







### STUDIES TAILORED FOR YOUR NEEDS

### **Short-Term Study**

#### Up to a 3-month study

- No Capex
- Low financial commitment
- 24/7 access to data portal
- Multiple data review meetings when necessary
- End of study report
- Discover if there is a liquid carryover problem
- · Understand the problem
- Dual verification of Btu
- Flow ramping tests possible to discover the break-through limit of filters
- Remote technical support
- Software updates

### **Long-Term Study**

#### 6 months or more study

- Everything in short-term study +
- Lower Monthly Cost
- Multiple locations possible during the study
- Validate different vendors filters
- Discover true filter life before liquid breakthrough
- Find out which process changes are most effective
- Monthly reports

### 2 or 3 Year Agreement

#### 2 or 3 year agreement

- Everything in Long Term Study+
- Lowest monthly cost
- Apply alarm thresholds
- Test multiple filter vendors in real-world conditions
- Use data to validate fiscal BTU and Flow measurements
- Report on effectiveness of reduction of liquid carryover projects
- Proof of gas quality for gas suppliers and gas receivers

### Game changing technology

LineVu is a patented camera system that detects contamination in high-pressure gas systems.



### Live video stream from inside your natural gas pipeline



#### LIQUID ENTERING COMPRESSOR

When installed at a compressor inlet, LineVu provides real-time video of liquid carryover, helping engineers manage startup safely and reduce the risk of trips and costly servicing.



**SOLID MATERIAL IN PIPE** 

Detection of liquid carryover and solids, black powder, or hydrate formation, more efficient pigging schedules helps maintain flow assurance and pipeline integrity.

