DISCOVER®

Advanced Mobile Leak Detection

For years, reduction of gas leaks on aging infrastructure has been an issue for the natural gas industry, particularly the down-stream (distribution) marketplace.

Tectrac's Discover AMLD® will address this issue by reducing methane emissions through the identification of gas leaks with minimum false positives and negatives compared to competing technologies.

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DETECTION TECHNOLOGY

Discover AMLD® is an open path system utilizing Tunable Diode Laser Absorption Spectroscopy (TDLAS). Resolution is in the part per billion (ppb) range for both methane and ethane. Ethane detection aids in determining whether a detection is pipeline gas or naturally occurring biogas. Sensitivity levels, along with a proven detection algorithm, can detect and distinguish between a pipeline gas leak verses a non-pipeline gas leak, such as sewer, landfill and soil/biogas indications.

SYSTEM COMPONENTS

Discover AMLD consists of a vehicle equipped with the detector, GPS, anemometer and proprietary software loaded onto the vehicle's computer/tablet. All components were designed to require minimal modifications to the vehicle and utilize the latest in wireless technology.

ANALYTICS & INTERFACE

The Discover AMLD analytic method improves the reduction of false positives and increases the accuracy of detection. Field testing has shown a greater than 95% probability of gas leak detection. The Discover AMLD's Graphical User Interface (GUI) streams your data directly to the secured cloud which can analyze and process the data in real-time to produce actionable reports.

INSTRUMENTS SPECIFICATIONS

Gases Detected
Simultaneous detection of methane and ethane

Sensor Technology
Open-air fixed path Mid-IR TDLAS

Sensitivity & Resolution
Methane: < 100 PPB at 10 Hz, < 30 PPB at 1 Hz
Ethane: < 15 PPB at 10 Hz, < 5 PPB at 1 Hz

Selectivity
No cross-sensitivity to humidity, other hydrocarbons or industrial gases

Response Time
Sample frequency of 100 Hz, data update rate of 10 Hz

Accuracy
±10% of reading for methane/ethane in natural gas, ±50% for quantification

Calibration
Field calibration using self-test with a natural gas calibration cell

GPS
GNSS-INS system at 10 Hz, < 1 m accuracy, inertial navigation

Battery & Display
All sensors powered with re-chargeable batteries (8-10 hr life)
Rugged Windows-10 vehicle mounted tablet with HD display

Data & Connections
Wireless connectivity
Full suite cloud based Leak Survey Analytics (LSA)

User Interface & Reports
In-vehicle computer is not provided, refer to ***Discover AMLD Computer Specifications*** document (provided upon request)
Real-time leak detection
Post-processed leak detection and leak localization
Leak survey coverage area
Emission quantification

Operation While Driving
Hands off voice alerts, instructions and commands