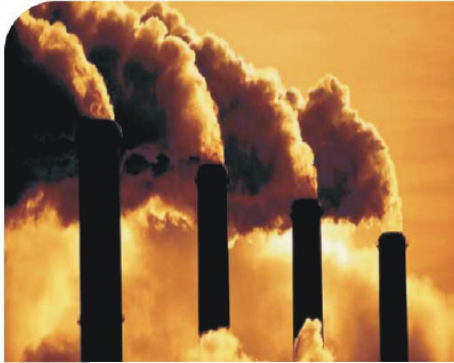


DETECTION, INSPECTION & MAINTENANCE SERVICE

DI&M

**CLEAN DEVELOPMENT MECHANISM
(CDM) PROJECT**



Environmental Protection



Energy efficiency



Fugitive natural gas emission management

- **LDAR (LEAK DETECTION AND REPAIR)**
- **CARBON CREDITS**
- **ASSET MANAGEMENT**
- **SUSTAINABLE GROWTH**



CDM Projects

Detection, Inspection & Maintenance – DI&M

We perform in Clean Development Mechanism (CDM) projects detecting, pinpointing and quantifying methane leaks and fugitive emissions to the environment.

We issue a full report containing all of the customer's information, and rating the leaks per component: compressors, turbines, manual valves, control valves, gauges, Instruments, connections, flanges, piping, heaters, burners, vents, drains, and process equipment in general.

We pinpoint the exact locations that require maintenance to eliminate such fugitive emissions and leaks. This information can be used both for energy efficiency improvements and in CDM projects. We perform in industries, refineries, platforms, pipelines, compression stations, natural gas distribution networks, and landfills, among others.

We monitor Methane emissions using high-tech equipment and contribute to successfully reaching the reduction goals set for these emissions aiming at recovering Carbon Credits.



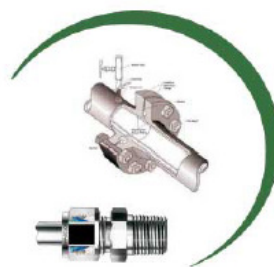
EXAMPLES OF SOURCES OF FUGITIVE EMISSIONS



Compressors



Control valves / safety valves
relief valves



flanges and connections



manual valves

Asel-Tech's Detection, Inspection & Maintenance (DI&M) services consist of a careful analysis of the plant or pipeline, detecting, locating and measuring fugitive emissions and natural gas leaks (Methane – CH_4).

We check all components in a Natural Gas system, with emphasis on:

- Compressors
- Manual valves
- Control valves
- Turbines
- Flanges

- Connectors
- Drains
- Vents
- Safety valve
- Flow gauges
- Field Instruments
- Process Equipment
- Turbomachines

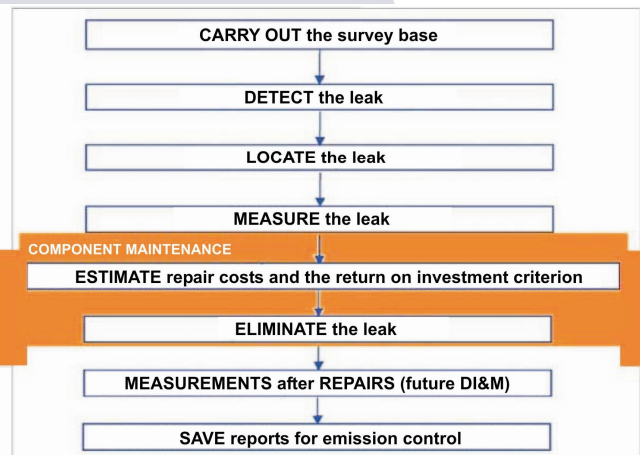
DI&M SERVICE IMPLEMENTATION METHODOLOGY



Detection & Pinpointing:
RMLD, Gasurveyor



Fugitive emission tagging on the components



Quantification:
High-Flow Sampler
Anemometers



Quantification: Vent-Bags

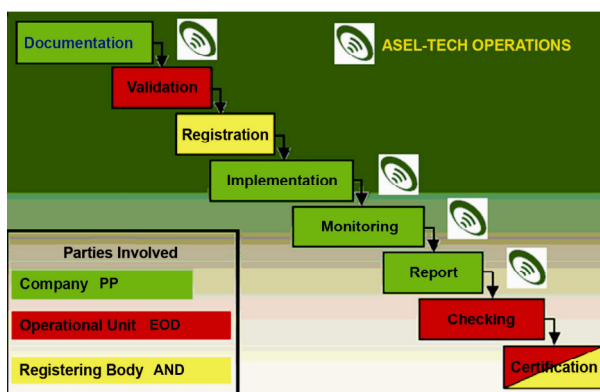
We offer a wide-ranging database on natural gas (methane) fugitive emissions, submitting complete reports on the leaks detected at your plant or pipeline (MEMR - Methane Emission Management Report).

We present the cost of the leak per component and the return on the investment that may be achieved both in energy efficiency improvements and in Carbon Credit recovery via Clean Development Mechanism (CDM) projects).

We detect and locate the leaks, quantify the fugitive methane emissions and deliver a complete final report, showing all information regarding the leaks in order for the maintenance team to eliminate them.

We will contribute to keeping fugitive emission from worsening the greenhouse effect, protecting the environment and increasing your plant's energy efficiency. You may even use the emission reduction information to secure Carbon Credits in a Clean Development Mechanism (CDM) project).

CDM PROJECT CYCLE



Presentation of the MEMR
(Methane Emission Management Report)



SAVINGS POTENTIAL GENERATED BY REPAIRING LEAKING COMPONENTS AT A GAS PROCESSING PLANT, PINPOINTED BY DI&M SERVICES				
LEAKING COMPONENT	Gas savings (m3/year)	Value of the gas saved at \$0.25 m3 (\$/year)	Cost of the repair (\$)	Time to the Return on the Investment (CR + labor)
Control valve	119,327	\$ 29.831	\$200	5-6 days
Gas line coupling	114,772	\$ 28.693	\$100	3-4 days
Threaded connections	98,599	\$ 24.649	\$10	Immediate
Flare line valves	85,800	\$ 21.450	\$200	8 days
Regulators	72,830	\$ 18.207	\$200	10 days
Compressor cylinders	72,208	\$ 18.052	\$2,000	3 months
Open lines	65,629	\$ 16.407	\$60	3-4 days
Gas line joints	62,410	\$ 15,602	\$100	5-6 days
Compressor seals	54,594	\$ 13,648	\$2,000	4 months
Block valves	44,627	\$ 11,156	\$60	4-5 days
Total	790.833	\$ 197,695	\$4,930	21 days

Source: EPA – Natural Gas STAR – USA - \$ = US Dollar – Approximate values

Asel-Tech Products:

- Pipeline Leak Detection Systems
- **Gases in General**
- **Liquids in general**
- **Multiphase Fluids**
- PIG location and tracking systems
- Distance natural gas leak detector
- Consultancy in corrosion assessment and corrosive process mitigation
- Pipeline anchoring equipment
- Cold pipe bending equipment
- Subsea pipeline leak detector
- **Services:** Installation / Commissioning / Start-up / Maintenance / Projects / Equipment Rental



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PROTECTING THE ENVIRONMENT IS EVERYONE'S RESPONSIBILITY!

Implementing the DI&M service is a great opportunity to reduce the emissions of methane - one of the main gases that are responsible for the greenhouse effect - to the atmosphere.

Together, we can protect the environment, improve energy efficiency, and generate foreign currency via carbon credits.

SUSTAINABLE GROWTH WITH SOCIOENVIRONMENTAL RESPONSIBILITY: GOOD FOR YOUR COMPANY, GOOD FOR THE ENVIRONMENT, GOOD FOR ALL OF US!



*CDM Projects
 Clean Development
 Mechanisms*

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