ENCINO ENVIRONMENTAL SERVICES

MOLE-DAS™

Combustion Intelligence System

REAL-TIME COMBUSTION ANALYTICS FOR OPTIMIZING PERFORMANCE

The MOLE (Monitoring Of Load & Efficiency)-DAS Combustion Intelligence System provides autonomous, continuous performance diagnostics for engines and other combustion sources. It measures key exhaust constituents including methane (CH_4), C_3+ hydrocarbons (a measurement for VOC's), carbon dioxide (CO_2), carbon monoxide (CO), nitrogen oxides (NO_x), and oxygen (O_2) and translates those readings into mass emission rates and real-time control intelligence.

TRANSFORM YOUR EMISSIONS DATA INTO PERFORMANCE GAINS

MOLE-DAS goes beyond post-stack monitoring by linking emissions readings to real-time engine conditions like load, fuel composition, cylinder temperature, and ignition quality. Through embedded logic and telemetry, MOLE-DAS delivers a closed-loop approach to emissions management that enhances combustion stability, extends catalyst life, and improves overall operational efficiency. Its onboard intelligence drives combustion optimization upstream of the stack, helping reduce fuel use, mitigate catalyst degradation, and minimize unplanned maintenance and downtime. MOLE-DAS communicates via MODBUS for seamless SCADA integration, giving operators clear visibility, custom thresholds, and alarm capability.

KEY BENEFITS:

- Complete combustion visibility
- Precision tuning confidence
- Lower fuel use and longer catalyst life
- Seamless integration and visibility
- Reliable field measurements
- Stronger compliance readiness

Available Configurations:

FIXED

The fixed MOLE configuration is designed for permanent installation, providing continuous performance and compliance assurance for stationary engines and combustion systems. Ideal for operators seeking to automate optimization and reduce manual calibration frequency.

PORTABLE

The portable “Mini-MOLE” configuration is a self-contained, field-deployable system that enables diagnostic-grade sampling at the stack and can be utilized for spot checking engines for performance and as a pre-check to improve emissions testing outcomes. The Mini-MOLE is also suitable for periodic emissions monitoring and follows the ASTM D6522-00 testing methodology.

Equipped with a conditioned sample path, it allows technicians and emissions specialists to evaluate combustion quality across multiple sites with laboratory-level accuracy.

THE ENCINO ADVANTAGE

As a service provider, we understand our role in helping clients meet their compliance obligations and achieve their environmental performance objectives. Whether you need one piece of the puzzle, or the entire picture, we can help design and tailor an emissions monitoring and performance program that fits your operational needs, corporate strategy, and budget.

MOLE-DAS™ System

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+1(281) 201-3544
support@encinoenviron.com
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Technical Specifications:

Standard sensor configuration shown. Additional sensor options are available upon request.

Measurements	Range	Accuracy	Resolution	Sensor Type	Sensor Life
Nitric Oxide (NO)	0-500 ppm	+/- 2%	1ppm	Electrochemicle	2+ years
Nitric Dioxide (NO2)	0-500 ppm	+/- 2%	1ppm	Electrochemicle	3+ years
Oxygen (O2)	0-25% Vol	+/- 2%	0.10%	Electrochemicle	5+ Years
Carbon Monoxide (CO)	0-1000 ppm	+/- 2%	1ppm	Electrochemicle	2+ years
Methane (CH4)	0-50,000 PPM	+/- 2%	1ppm	NDIR	10+ years
Carbon Dioxide (CO2)	0-20% Volume	+/- 2%	0.10%	Electrochemicle	2+ years
Propane (C3H8)	0-10,000 ppm	+/- 2%	1ppm	NDIR	5+ years

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