



BRIMSTONE™ Sulfur-Recovery Analyzers

One-of-a-Kind Tail and Pit Gas Analyzer, with H₂S, SO₂, CS₂ and COS monitoring capabilities. The Brimstone is a unique tail & pit gas analyzer that monitors H₂S, SO₂, CS₂ and COS and is capable of direct coupling to

the process. Direct coupling provides the Brimstone with the ability to control sulfur vapor removal more efficiently. Galvanic's proprietary probe design eliminates plugging problems associated with heated transfer lines. In addition, the Brimstone uses Chemometrics to measure all four key components, H₂S, SO₂, CS₂ and COS simultaneously. This is a superior method because it measures absorption at 256 points versus the standard single point analysis.

As the only tail & pit gas analyzer with these combined capabilities and features, the

Brimstone is a truly exceptional and innovative product that provides unique process analysis in sulfur-recovery.



FEATURES

- Simple modular and rugged design with no optical filters and no moving parts delivers reliable, low-maintenance operation with minimal downtime
- Intuitive graphic display and automatic performance with auto calibration interval timing enables completely hands-off operation
- Advanced internal startup and operational diagnostics
- Web-based password-protected user interface allows full operational & diagnostic control from remote locations
- Near-instantaneous analysis-response times with total system response of < 10 seconds enables fast process control
- UV absorption method with enhanced 2048 pixel CCD delivers the utmost in accurate determinations

SELECTED INDUSTRIES & APPLICATIONS

- Natural Gas Processing

Claus process

NG sweetening

Stack emission

Sulfur recovery – H₂S in acid gas feed

Sulfur Recovery – H₂S/SO₂ /COS/CS₂ ratio – air demand

Sulfur Recovery – H₂S/SO₂ in sulfur pit headspace

Sulfur Recovery – SO₂ in stack

- Oil & Refining / Petrochemical

Sulfur recovery – H₂S in acid gas feed

Sulfur Recovery – H₂S/SO₂ /COS/CS₂ ratio – air demand

Sulfur Recovery – H₂S/SO₂ in sulfur pit headspace

Sulfur Recovery – SO₂ in stack

AVAILABLE MODELS

Choose the Brimstone analyzer that's right for your specific application needs – or cover the analysis requirements for the entire process from feed gas through emissions monitoring

Models	Benefits
Acid Gas Analyzer	<ul style="list-style-type: none"> • Monitors the concentration of H₂S in the acid gas feed to the sulfur-recovery unit
	<ul style="list-style-type: none"> • Provides information for feed-forward control of main air valve
Tail Gas Analyzer	<ul style="list-style-type: none"> • Monitors the H₂S, SO₂, COS and CS₂ concentration in the sulfur-recovery unit's tail gas
	<ul style="list-style-type: none"> • Provides information for feed-back control of the trim air valve
Sulfur Pit Analyzer	<ul style="list-style-type: none"> • Monitors the H₂S and SO₂ concentration in the vapor head space of the sulfur pit
	<ul style="list-style-type: none"> • Assures that H₂S concentration does not exceed the lower explosive limit for H₂S
	<ul style="list-style-type: none"> • Provides early warning of potential smoldering fires
CEM (Continuous Emissions Monitor)	<ul style="list-style-type: none"> • Monitors the SO₂ concentration in the incinerator stack
	<ul style="list-style-type: none"> • Ensures compliance with SO₂ emission

LOOK CLOSER



CLOSED-COUPLED PROCESS CONNECTION

Eliminates the need for heated sample lines.



PROPRIETARY SAMPLE PROBE

Galvanic's proprietary probe design offers superior sulfur vapor control, eliminating plugging problems associated with heated transfer lines.



EXTERNAL-KEYPAD-DRIVEN DISPLAY

An intrinsically safe external keypad – a feature unique to Galvanic systems – provides full menu access for the high-resolution display, enabling at-a-glance status and results. View analysis results, previous calibration information, and alarms on the spot, without opening the enclosure. The analyzer can also be controlled remotely via Ethernet and a Web-based graphical user interface



FIBER OPTICS COUPLING

The Brimstone's precision fiber optics coupling links the measurement cell and detector, eliminating alignment issues.



ENHANCED 2048 PIXEL CCD ARRAY & STABLE, BROADBAND DEUTERIUM LIGHT SOURCE

The Brimstone's 2048 pixel CCD array measures absorbance over a wide range of wavelengths, eliminating the inaccuracies associated with

bandpass filters. The broadband deuterium light source provides unparalleled stability.