BRM 961-AG

SULPHUR PLANT INLET H_2S ACID GAS ANALYZER

- FULL SPECTRUM ANALYSIS
- INCREASED ACCURACY
- REDUCED MAINTENANCE

MODEL BRM 961-AG

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GALVANIC APPLIED SCIENCES INC.

The Galvanic Applied Sciences Leadership continues

The Brimstone Sulphur UV Spectrophotometer product line is specially designed to measure sulphur species gas for sulphur recovery and other related process. Using a state-of-the-art holographic grating spectrometer coupled with a 2048 pixel UV enhanced CCD array, Galvanic's Brimstone online analyzers provide accurate, real-time analysis of the desired sulphur species.

Experienced

Over 25 years of experience.

Established

Galvanic is a reliable and trusted name.

Customer Service

Our experienced field support team is always there to meet your requirements.

GALVANIC BRM 961-AG

Galvanic's BRM 961-AG analyzer provides fast, accurate measurement of H_2S in the sulphur inlet of acid gas stream in the Claus sulphur recovery plant. Using the state-of-the-art ultraviolet (UV) spectrometer, BRM 961-AG measures the exact concentration of H_2S instantly. With this accurate real-time data, an operator can immediately optimize the sulphur balance in the process for the most cost-effective outcome. In addition, Galvanic's BRM 961-AG advanced UV spectrometer technology maintains accuracy across a broad dynamic range, which allows the operator to more accurately measure a varying H_2S concentration in the acid gas stream. Complete with an on-board computer system, the BRM 961-AG also has an easy to use graphical user interface on the analyzer and is capable of remote access via the plant network. Galvanic's BRM 961-AG is the industry's leading fast, accurate and easy to use acid gas analyzer.

BRM 961-AG SYSTEM

The analyzer system consists of two major functional blocks, sample handling and analytical, which are interconnected by fibre optic cables and electrical conduits. The sample handling components are mounted on a panel and the analytical components are mounted in an enclosure. The panel and enclosure are mounted on a common tubular steel frame in a side-by-side configuration. This physical separation of the sample handling and analytical components greatly reduces the potential for corrosion of the electronic and electrical components from the H_2S.

ANALYTICAL METHODOLOGY

The 961-AG analyzer system measures the broadband absorption of H_2S in the ultraviolet (UV) region of the electromagnetic spectrum. The UV radiation is supplied from a highly stable deuterium broadband source and is transmitted to and from the measurement cell via UV fibre optic cables. The measurement cell is a specific optical path length through which a sample of the acid gas flows. Light from the source is transmitted to the measurement cell via a fibre optic cable. After passing through the gas space in the measurement cell, it is transmitted to the spectrometer by a second fibre optic cable. The CCD array coverts the light into electrical signals. These signals represent the intensity of the spectral distribution within the band of interest. The spectral data is acquired from the spectrometer by the system computer which calculates the concentration of the H_2S.

Galvanic Applied Sciences, Inc. uses a spectrometer with a grating efficiency optimized in the spectral region where the species of interest absorb 200-400nm. Coupled to the grating is a detection system best suited for the desired analysis in terms of sensitivity and resolution while minimizing dark current and stray light noise. To achieve this, a 2048 element CCD detector is employed.

OUTPUT SIGNALS

The H_2S concentration is output as a 4 to 20 mA analog signal. The analog signal is isolated and may be self powered or loop powered. Remote indication of an alarm condition is provided for by dry (potential free) form C (normally open, common, normally closed) relay contacts.

SYSTEM COMPUTER

The system computer controls the operation of the analyzer, performs the data processing and calculation and provides the graphical user interface for the analyzer system. The computer is mounted to the door of the analyzer enclosure. All pertinent analyzer information and user controlled functions are presented on this display. This allows the user to monitor the analyzer functions without opening the cabinet door.

SAMPLE HANDLING

Mounted to the sample handling panel are a heated oven, pressure transmitter and all of the necessary plumbing, fittings and valving associated with transporting the sample and calibration (zeroing) of the analyzer. The sample cell is located in the heated oven, which is typically controlled at 50°C. The system does not use an eductor or pump to draw sample, it depends on the pressure differential between the sample point on the acid gas line and a safe, low-pressure sample return point.

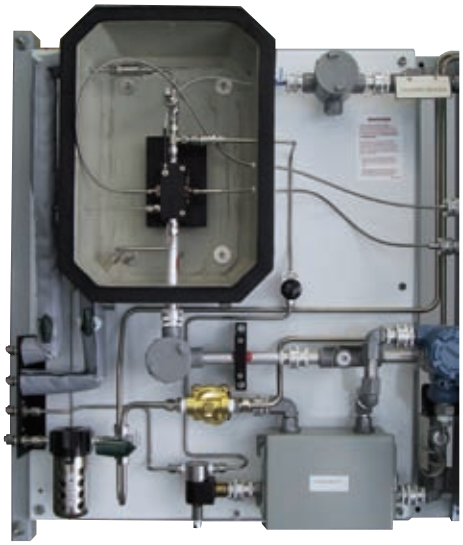
Materials in direct contact with the sample or calibration (zero) gases are type 316 stainless steel, anodized aluminium or, Teflon®.

ANALYZER ENCLOSURE

The analyzer enclosure contains the system computer, data acquisition and control system, source lamp and source lamp power supply, spectrophotometer, temperature sensor interface module, the power control module for the electric oven heater and, the input power and output signal termination points. This enclosure is provided with a protective purge system and a vortex cooler both of which are connected to the plant instrument air system.

ANALYZER SYSTEM LOCATION AND MOUNTING

The preferred location for the analyzer is as near as practical to the sample point on the acid gas line. A support structure to which the framework supplied with the analyzer system is mounted must be provided by the user. The analyzer system should be protected from direct exposure to the weather.



BRM 961-AGX Acid Gas Analyzer System
Oven Back Panel - Oven Open Rev 0

BRM 961-AGX Acid Gas Analyzer System
Oven Back Panel - Oven Closed Rev 0

Features:

- Field proven reliability and low maintenance cost
- UV H_2S analyzer with fibre optic light path
- Complete system from one supplier
- No Instrumentation house required in most weather conditions
- Suitable for hazardous area installation
- Large dynamic range capability
- Intuitive graphical user interface

MODEL BRM 961-AG

PERFORMANCE SPECIFICATIONS:

Auto Calibration:	User Selectable Frequency
Zero Drift:	< 0.25% of Full Scale Per Day (based on Auto Zero once per hour)
Sensitivity:	± 2.0% of Full Scale
Repeatability:	± 2% of Full Scale
Response Time:	Analyzer - near instantaneous Total system – Sample Line Dependant

PHYSICAL SPECIFICATIONS:

Size:	Mounted on frame the outside dimensions are 57"L x 41 ?"H x 16"D
Weight:	Total system on frame – approx 250 pounds (varies with options)
Control Cabinet:	30"H x 24"W x 12"D

SERVICES REQUIRED:

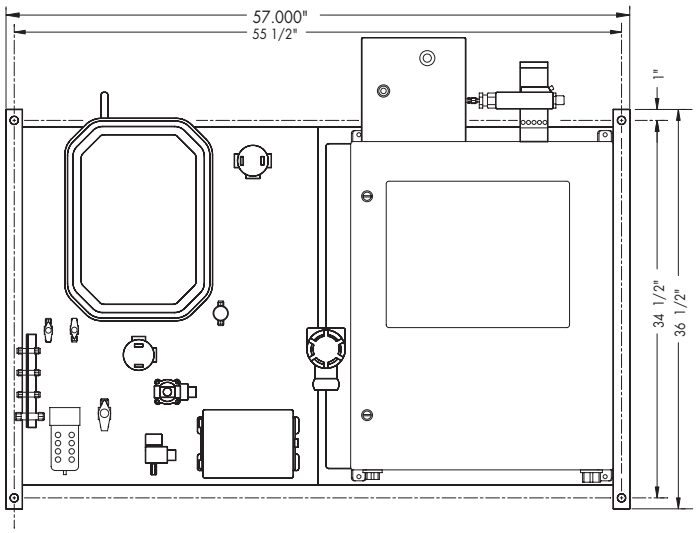
Electrical:	110/220V - 1Ø – 50/60 Hz – 15A
Instrument Air:	<15 SCFM at 80 psi
Nitrogen (Zero Gas):	Bottled, Regulated

AREA CLASSIFICATION:

Class I Division 2 (Type Z Pressurized)

SPECIFICATIONS SUBJECT TO CHANGE

PLEASE NOTE:
This document and any drawings accompanying it are provided for information only.
They are not to be used for construction and are subject to change without notice.



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