Effective Online Sulfur Analysis in Petroleum Process Streams

Sindie® Online is an industrial grade process sulfur analyzer with breakthrough detection capability to monitor ultra low sulfur in petroleum or aqueous process streams. This process analyzer presents the ultimate solution for refineries and pipeline terminals where measurement speed and reliability are essential. Powered by MWDXRF, Sindie Online uses ASTM D7039 technology and delivers real-time, continuous analysis of total sulfur from 0.5 ppmw up to 3000 ppmw. This process analyzer is certified to UL and NFPA standards, and is NEC rated for Class I Division 2 Group B, C, and D T4A hazardous locations.

APPLICATIONS

- Refinery: hydrotreating, hydrofiner, and blending processes
- Pipeline terminals: interface cuts, custody transfer acceptance, and tank contamination prevention

FEATURES AND BENEFITS

- Uses ASTM D7039 technology
- NEC Class I Division 2 rated
- LOD: 0.5 ppmw in hydrocarbon matrices @ 300 s
- LOD: 1.5 ppmw in aqueous streams @ 300 s
- Dynamic range: 0.5 ppmw - 3000 ppmw
- For most application purposes, one calibration curve over full dynamic range
- Robust industrial design: wall mounted or standalone
- Continuous, real-time analysis
- Rapid response to sample change
- Easy to use with intuitive touch screen interface
- Direct measurement in ppm wt
- Low maintenance: no consumable liquids, gasses, combustion, or sample conversion
- Not sensitive to sample temperature changes
- On-screen calibration and diagnostics
- Bigger 15”/38cm touchscreen

OPTIONS

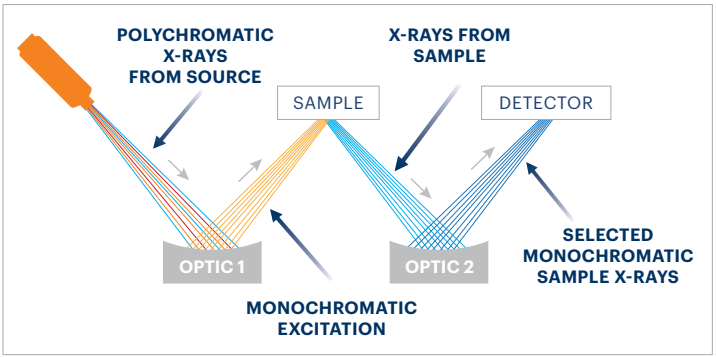
- Multi-stream analysis capability
- Extended Range (XR) available for measurements above 3000 ppmw up to weight percent levels
- Auto-validation capability

16 32.06 Sindie ONLINE
Sulfur Analyzer

NEC Certified

ADVANCED ANALYSIS WITH MWDXRF

Monochromatic Wavelength Dispersive X-ray Fluorescence (MWDXRF) utilizes state-of-the-art focusing and monochromating optics to increase excitation intensity and dramatically improve signal-to-background ratio compared to traditional WDXRF instruments. This technology enables significantly improved detection limits, precision, and reduced sensitivity to matrix effects. A monochromatic and focused primary beam excites the sample and secondary characteristic fluorescence X-rays are emitted from the sample. A second monochromating optic selects the sulfur characteristic X-rays and directs these X-rays to the detector. MWDXRF is a direct measurement technique and does not require consumable gasses or sample conversion, delivering robust and low maintenance analyzers with significantly lower detection limits and faster response times.



DWM 2XL: THE LATEST DYNAMIC WINDOW MODULE DESIGN

The latest DWM 2XL design for XOS Sindie Online instruments nearly eliminates the risk of environmental contamination and regular maintenance, saving time and money. It delivers continuous measurement for up to a year without maintenance. When the film requires replenishment, it is as simple as loosening four bolts and replacing with a refurbished DWM.

PRODUCT SPECIFICATIONS

Analytical Platform	MWDXRF
Dynamic Range	Hydrocarbon: 0.5 ppmw - 3000 ppmw / Aqueous: 1.5 ppmw - 5000 ppmw
Response Time	300 s for precise measurement, 15 s for rapid update
Calibration	3-5 point linear calibration curve
Data Communication	2x 4-20 mA analog outputs, multiple discrete alarm outputs
Digital Communication	Modbus TCP, Optional – Modbus RS-232 or Modbus RS-485 (half or full duplex)
Local HMI	15”/38 cm touchscreen display
Power	110-240 VAC, 50-60 Hz, 790 W max.
Instrument Air - Purge and Valve	40-115 psig, (276-793 kPa) 4 scfm max; -40 F (-40 C) dewppoint, oil free, N2 optional
Ambient Temperature	32-95 F (0-35 C) Standard; -4 to 113 F (-20 to 45 C) Optional - Consult Factory
Dimensions	62 in (h) x 34 in (w) x 18 in (d) / 158 cm (h) x 86 cm (w) x 46 cm (d)
Weight	280 lb (127 kg)
Certifications	NEC Class I Division 2 Groups B, C, D T4A; ATEX Zone 1 model also available with different screen and features

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