

Refining & Petrochemical

industry monitoring solutions

Faced with unprecedented demands to meet increasing customer process expectations, as well as clean air regulations while optimizing plant performance...you need a partner that understands the challenges you face and offers instrument and service solutions that work.



Refining

- Density & Level Measurement
- Interface Level / Detection
- Fuel Products Analysis
- Stack Gas / Emissions Monitoring
- Process Gas Analysis
- Particulate Measurement
- Liquid Flow Measurement
- Leak Detection
- Field Service & Application Expertise



Petrochemical Manufacturing

- Liquid & Gas Flow Measurement
- Density & Level Measurement
- Field Service & Application Expertise

Common Applications

- Coking
- Opacity Monitoring
- Gas Analysis for Reaction Kinetics / Catalytic Cracking
- Sulfur Recovery Units
- Total Sulfur Analysis
- Fence Line Ambient Air Quality Monitoring
- Fugitive Emissions Detection (EPA Method 21)
- Mercury, SO², NO_x, CO & Acid Measurement
- Olefins (Ethylene) & Poly Olefins (PE, PP)
- Ethylene Oxide (EO/EG)
- Fuel Gas Processing
- Ammonia & Methanol Measurement
- Fischer Tropsch (gas-to-liquid)
- Coal Gasification/Coal Chemical
- Catalyst Cracking & Research
- Process Development & Catalyst Research
- Distillation Units
- Chemical Rearrangement Units
- Liquid & Gas Density Measurement
- Alkylation
- Continuous Platformers
- Purification Units
- Asphalt (Blowing) Oxidizer column
- Knock Out Drum Pump Out Vessels
- High Density Polyethylene Loop Reactor

And many more!

Additional Thermo Scientific Solutions

- Sulfur Analyzers
- X-Ray Fluorescence
- Electron & Infrared Microscopes
- FT-IR Spectrometers
- Gas Chromatographs for Hydrocarbons
- Laboratory Equipment & Consumables
- Lab Information Management System (LIMS)
- Unity Lab Services™
- Furniture and Fume Hoods
- Water Analyser, Monitors & Sensors
- Handheld X-Ray Fluorescence

visit **thermoscientific.com**
for more information on these
and other solutions

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Thermo Scientific™ Product Solutions

Process Monitoring



Interface Level

KRILPRO Level Interface Device
Nitus Gamma Backscatter Level

Density & Level Measurement

DensityPRO Series of Gamma Gauges
LevelPRO Series of Gamma Gauges
KRILPRO Neutron Backscatter Level
Nitus Gamma Backscatter Gauge
Sarasota Series of Gas Density Gauges

Mass Spectrometry

Sentinel PRO Environmental Analyzer
Prima PRO Process Analyzer

Flow Measurement and Control

AutoPILOT PRO
AutoEXEC

Service & Support

On-Site

Preventative Maintenance
Emergency Repair
Nuclear Source Disposal
Startup and Recommissioning

Technical Training Courses

On-Site
In the Factory
Web-Based

Systems



Total Sulfur

SOLA II Sulfur On-line Analyzer
SOLA II Trace Sulfur On-line Analyzer
SOLA II Flare Sulfur On-line Analyzer

Multi-Gas Measurement

iMEGA Multi-Gas CEMS
Omni FTIR Multi-Gas CEMS
Continuous Emissions Monitoring

Sulfur Trioxide

Arke SO₃ System



In the Factory

Depot Repair Service
Factory Acceptance Testing (FAT)
Extended Warranty
Calibration and Certification

Included Services

The Online Library
Dedicated Support Teams

Gas & Particulate Analyzers



Nitrogen Oxide (NO_x)

Model 42i Series Analyzers

Sulfur Dioxide (SO₂)

Model 43i Series Analyzers

Carbon Dioxide (CO₂)

Model 410i Series Analyzers

Carbon Monoxide (CO)

Model 48i Series Analyzers

Hydrogen Sulfide/ Sulfur Dioxide Analyzer

Model 450i (H₂S/ SO₂)

Total Hydrocarbon

Model 51i Analyzer

Methane (NMHC)

Model 55i Analyzer

Toxic Vapor Leak Detection

TVA2020 Toxic Vapor Analyzer

Continuous Ambient Particulate

Model 5014i Beta Monitor

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