

# Jerome in Geothermal Emissions

The geothermal industry harnesses the earth's energy to produce clean, renewable power. However, hydrogen sulfide ( $H_2S$ ), a naturally occurring gas in geothermal emissions, presents challenges for odor control, regulatory compliance, and equipment maintenance. AMETEK Brookfield's Jerome Hydrogen Sulfide Analyzers, including the Jerome J605 and Jerome J631-X, provide precise, reliable solutions to monitor and manage  $H_2S$  levels, ensuring safe operations and protecting critical infrastructure.

## The Dangers of Hydrogen Sulfide in Geothermal Emissions

Hydrogen sulfide is a byproduct of geothermal energy production, released during drilling, venting, and power generation processes. Its impact on geothermal facilities includes:

- **Odor Issues:** The distinct "rotten egg" smell of  $H_2S$  can travel long distances, leading to complaints from nearby communities and regulatory scrutiny.
- **Corrosion Damage:**  $H_2S$  reacts with metal surfaces, causing corrosion in control rooms, pipelines, and critical equipment, leading to costly repairs and downtime.
- **Health and Safety Risks:** At higher concentrations,  $H_2S$  poses serious risks to workers, including respiratory distress and long-term health issues.

Effective  $H_2S$  monitoring is critical to managing these risks, ensuring operational efficiency, and maintaining compliance with strict air quality standards.

## How Jerome $H_2S$ Analyzers Assist Geothermal Operations

The Jerome J605 and Jerome J631-X Hydrogen Sulfide Analyzers are designed to meet the unique needs of geothermal facilities by providing high-sensitivity monitoring and versatile features for odor and corrosion control.

### Jerome J605 Hydrogen Sulfide Analyzer:

- **Ultra-Low Sensitivity:** Detects  $H_2S$  concentrations as low as 0.003 ppm, making it ideal for odor monitoring and early corrosion detection.
- **Portable Design:** Lightweight and easy to transport, enabling spot checks and emissions monitoring throughout geothermal facilities.
- **Data Logging:** Captures emission trends for compliance reporting and maintenance planning.

### Jerome J631-X Hydrogen Sulfide Analyzer:

- **Wide Detection Range:** Measures H<sub>2</sub>S levels from 0.003 ppm to 50 ppm, suitable for monitoring emissions across diverse operational areas.
- **Continuous Sampling Mode:** Allows operators to track real-time H<sub>2</sub>S levels and pinpoint emission hotspots or corrosion risks.
- **Durable Construction:** Built to withstand harsh geothermal environments, including high humidity and temperature fluctuations.

### Applications in Geothermal Emissions Monitoring

AMETEK Brookfield's Jerome Analyzers address key challenges in geothermal operations:

- **Odor Monitoring and Mitigation:** Measure and control H<sub>2</sub>S emissions to prevent odor complaints and maintain good community relations.
- **Control Room Corrosion Monitoring:** Detect H<sub>2</sub>S levels that can corrode sensitive equipment, extending the life of control systems and minimizing maintenance costs.
- **Regulatory Compliance:** Provide accurate data to meet local, state, and federal air quality requirements for H<sub>2</sub>S emissions.
- **Worker Safety:** Ensure safe air quality levels for personnel during maintenance, drilling, and power generation activities.

### Key Features of Jerome H<sub>2</sub>S Analyzers for Geothermal Facilities

- **High Sensitivity:** Detects even trace levels of H<sub>2</sub>S to address odor and corrosion issues proactively.
- **Rugged Portability:** Designed for ease of use in demanding geothermal environments, from field operations to control rooms.
- **Accurate Data:** Reliable readings ensure compliance with environmental regulations and support maintenance planning.
- **User-Friendly Interface:** Simplifies training and deployment, making it accessible for all staff levels.

### Why Choose Jerome for H<sub>2</sub>S Monitoring in Geothermal Operations?

AMETEK Brookfield's Jerome Analyzers are trusted worldwide for their precision and dependability. For the geothermal industry, they provide:

- **Proactive Odor Management:** Minimize odor impacts and maintain positive community relations.
- **Corrosion Prevention:** Protect control room equipment and pipelines from costly H<sub>2</sub>S-related damage.
- **Regulatory Assurance:** Ensure compliance with stringent air quality and safety standards.
- **Operational Efficiency:** Enable early detection of H<sub>2</sub>S emissions, reducing downtime and repair costs.