Sulfur Recovery

Application Overview

In a petrochemical refinery or natural gas processing plant, sulfur is extracted from the crude oil or natural gas product stream as amine gas, sour water stripper, sulfuric acid and hydrochloric acid. The sulfur is then recovered in the sulfur plant using a thermal reactor called a Sulfur Recovery Unit (SRU), also known as a Claus reactor. Sulfur is recovered more efficiently at high temperatures that approach the operational limit of the refractory material, and variations in process and oxygen injection flow rates introduce variable process control demands. As a result, temperature control is critically important for operational effectiveness, reactor longevity and for human safety.

Williamson Wavelength Advantage

The Williamson SRU class pyrometers are designed specifically for this demanding application and the fiber-optic configuration eliminates many of the common problems associated with other types of temperature measurement devices.

Pyrometer Benefits

- Infrared Technology avoids contact with corrosive gases
- Compact fiber-optic configuration eliminates bulk and active cooling
- Warm flange mounting reduces or eliminates sulfur deposition within the optical path
- Allows the process to be run efficiently at high temperatures

Wavelength Technology

Thoughtful Wavelength Selection assures temperature measurement of:

- Only refractory wall temperature
- Only gas temperature

Suggested Models

SRU2W (400-3000°F / 200-1650°C) - Wall Temperature

SRU2WHT (600-3625°F / 300-2000°C) - Wall Temperature (High Temp)

SRU3G (700-3200°F / 375-1750°C) - Gas Temperature