Ensuring Boiler Safety Every Step of the Way

BGS

High-Temperature Corrosive Atmosphere Monitoring System of Boiler Water Wall Tubes

Real-time measurement of gas concentrations such as CO, O_2, H_2S, etc., near the water wall tubes.

Features

NO1 Uncompromising Measurement Accuracy

Laser technology, suitable for high-temperature conditions, capable of achieving precise measurements.

NO2 Immediate and Timely Data Capture

In-situ measurement, with fast response time.

NO3 Maintenance-Free by Design

Patented gas pathway and dust-proof design, effectively preventing dust blockage.

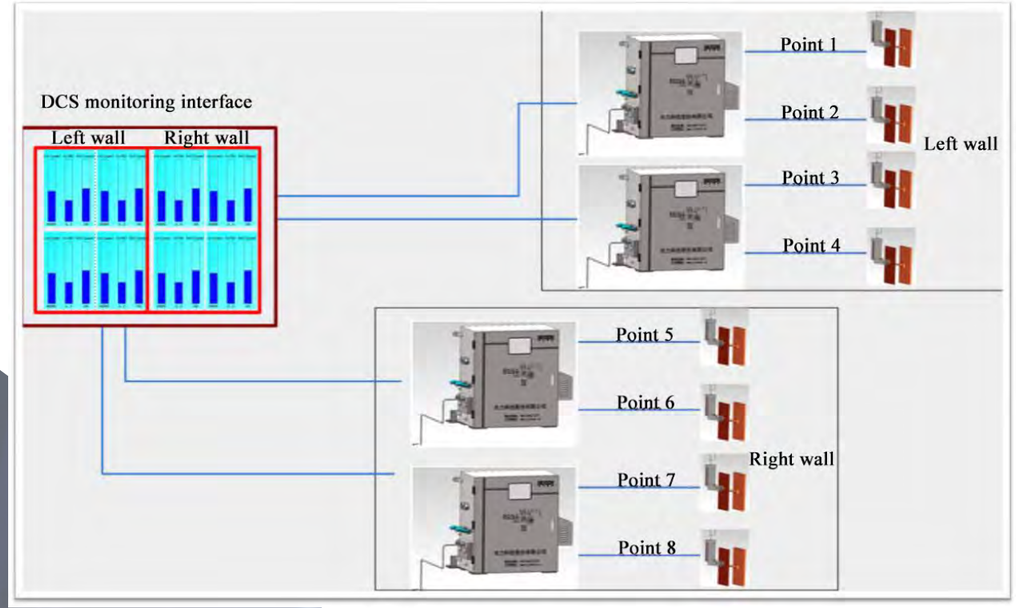
Technical Specification

Gas Name	CO	O_2	H_2S
Measuring Range	0~10000ppm	0~25 %	0~500ppm
Accuracy (Deviation)	±4 @ 0~100 ppm	±3 % FS	±3 @ 0~50 ppm
			±5 @ 50~100 ppm
	±6 % (of actual value) @ 100~10000 ppm		±10 % (of actual value) @ 100~250 ppm
			±5 % FS @ 250~500 ppm
Data signal	(4~20) mA		
Alarm Signal	SPST mode		
Display	4.3-inch true color display		
Power rating	(220±10%) V AC/50 HZ		

High-Temperature Corrosive Atmosphere Monitoring System of Boiler Water Wall Tubes and Early Warning System

As the upgrades of boiler units continue, high-temperature corrosion of boiler water wall tubes has become a common phenomenon in the combustion adjustment process, especially for units burning lean coal or poor-quality coal with practices like deep peak shaving and co-firing. This corrosion directly affects the safety and efficiency of power plant operations.
The main cause of high-temperature corrosion in the boiler water-wall tubes is the presence of certain gas components (such as H_2S, CO, and O_2). Monitoring of these gas components helps to take countermeasures to slow down or eliminate high-temperature sulfur corrosion.

System Configuration



Example Application

Numerical simulation modeling and on-site inspection for confirmation of vulnerable areas prone to corrosion.

Real-time online monitoring and over-limit alarm.

Added measurement points in vulnerable areas prone to corrosion.

Real-time data analysis and reports.

The simultaneous presence of CO and H_2S is the most direct cause of high-temperature sulfur corrosion of the water-cooled wall.

Features

NO1 Implementing the corrosive atmosphere monitoring system to monitor the gas atmosphere (including H_2S, 0_2, CO) near the water wall of the boiler under complex working conditions such as high temperature, dust, and easy-to-coke.

NO2 By using numerical-model analysis, the system provides monitoring and early warning of the corrosive atmosphere near the water-wall tubes.

Technical Specification

Gas Name	H_2S	CO	O_2
Measuring Range	0~1000 ppm	0~100000 ppm	0~25%
Monitoring the corrosive atmosphere near the boiler water wall.			