GUIDE

CEMS1900

Wayeal

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CEMS1900 Flue Gas Emission Monitoring System (FTIR)



System Introduction

This system adopts Fourier infrared absorption technology to realize the measurement of gaseous pollutants in the flue gas of domestic waste incineration, hazardous waste and solid waste incineration. The system consists of a pre-treatment unit, an analysis unit and a data acquisition and processing unit, which can continuously monitor the wet-base, dry-base and converted values of parameters such as SO_2, NO, NO_2, HF, HCI, CO, CO_2, H_2O, NH_3, etc., and count the emission rate and the total amount of emissions according to a number of relevant parameters such as flue gas temperature, pressure and flow rate.

Gases	Parameter
Range (SO_2)	(0~75)mg/m3,(0~2000)mg/m^3, accept customized
Range (NO)	(0~100)mg/m3,(0~2000)mg/m^3, accept customized
Range (NO_2)	(0~100)mg/m3,(0~1000)mg/m^3, accept customized
Range (NH_3)	(0~5)mg/m3,(0~50)mg/m^3, accept customized
Range (HCL)	(0~100)mg/m3,(0-150)mg/m^3, accept customized
Range (HF)	(0~3)mg/m3,(0~50)mg/m^3, accept customized
Range (CO)	(0~100)mg/m3,(0~1000)mg/m^3, accept customized
Range (H_2O)	(0~40)%
Range (CO_2)	(0~25)%
Range (O_2)	(0~25)%
Zero Drift	≤+2%F.S.
Range Drift	≤+2%F.S.
Linearity Error	≤+2%F.S.
Response Time	≤200s, HCL, HF≤400s（50m heat tracing pipeline)

Features of the System

Multiple Measurement Substances

Simultaneous measurement of SO_2, NO_x, ($NO+NO_2$), NH_3, HCI, HF, CO, CO_2, H_2O and other components is possible, and other components can be added as required.

Anti-interference

Algorithm optimization, which can effectively eliminate the interference of components such as H_2O when choose a suitable wavelength range.

With CO_2 scrubber and dryer, the instrument air can be converted into purge gas and zero gas suitable for Fourier infrared spectrometer conditions, with automatic zero calibration function.

High Suitability

The internal chamber surface of the gas chamber is gold-plated with extremely high reflectivity, which prevents corrosion of HCI, SO_2, HF and other gases; it can be thermostated up to 200°C and is suitable for industrial sites.

The interferometer effectively prevents shear movement, vibration interference and friction heat generation caused by tilting of mirrors, and can operate stably in industrial sites.

Non-condensing

High-temperature heat tracing (180°C) throughout the system ensures that the sample line does not condense. That is there is no change of the sample components and concentrations.

The sampling probe is made of SS316L with a working temperature of 180°C, ensuring no corrosion caused by acid condensation and long-term continuous and stable operation.

Jet pump Sampling for Reliable Measurements

Sampling system adopts no moving parts of the jet pump sampling, completely maintenance-free system by automatically adjusting the pressure of the jet pump power instrument wind to achieve constant flow sampling, to ensure the reliability of the measurement.

Application Industry

Domestic waste incineration, hazardous waste incineration, solid waste incineration, sludge incineration, cement kiln co-processing of hazardous waste, and biomass incineration.