



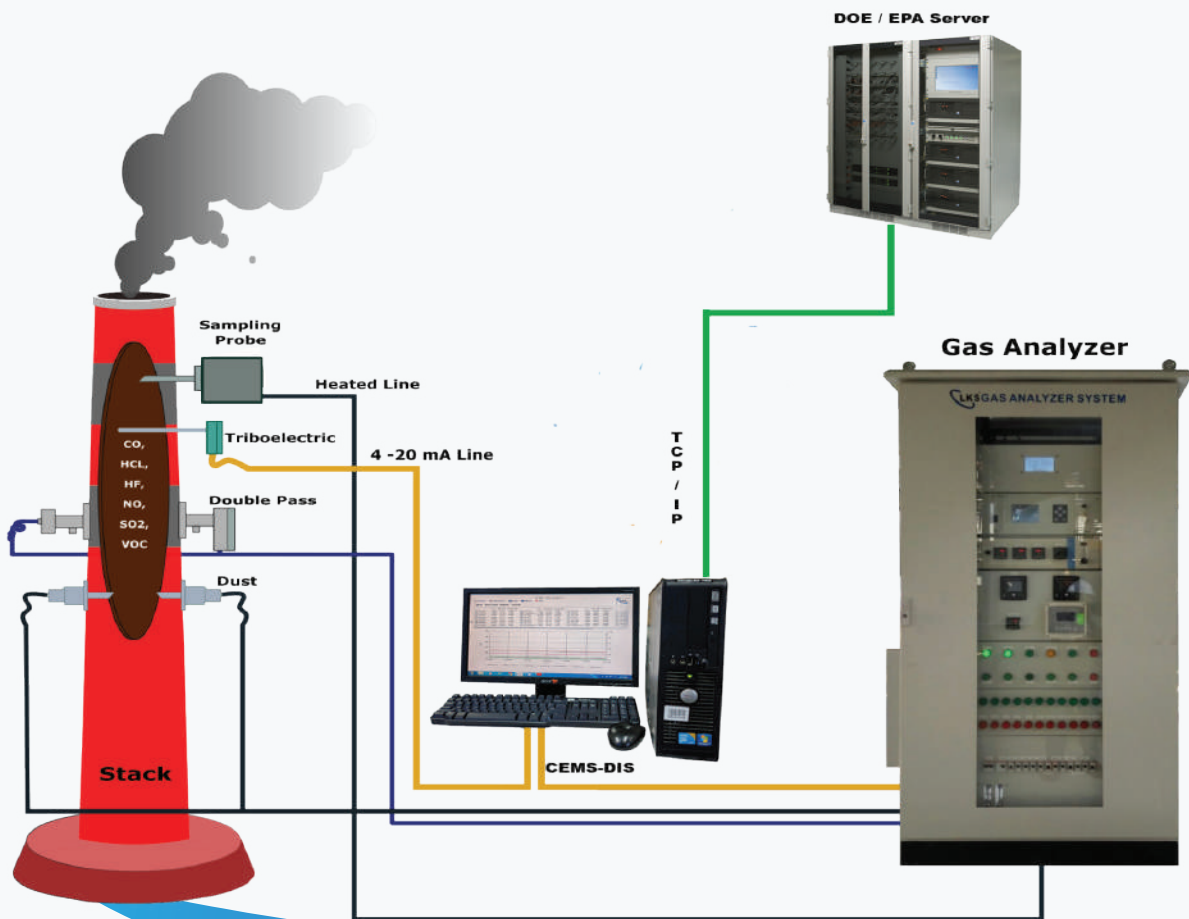
CEMS - Cement Plant

Source Capacity

- Cement Kilns (all sizes)
- Glass Furnaces (≥1 ton/day)
- Rotary Furnaces (≥1 ton/day)
- Ceramic Furnaces (>10 ton/day)

Type of CEMS Analyzer

- Extractive Gas Analyzers
- Insitu Gas Analyzer
- Particulate In-Situ Analyzer



Emission Limit Value for some of the source sector required CEMS

Source Activity	Source / Capacity / Fuel Type	Pollutants	Limit Value (mg/m ₃)
Non-metallic Cement Production (All Sizes) Manufacture of glass including glassfibre with a melting capacity ≥ 1 ton of product per day Manufacture of ceramic products by firing, roofing tiles, bricks, refractory bricks, tiles ceramic glass, stoneware or porcelain, with a production capacity ≥ 10 tons of product per day	Cement Kiln	NO ₂	800
		Total PM	50
	Glass Furnaces	SO ₂	800
		NO ₂ Total PM	800 50
Rotary furnaces for the manufacture of hard quicklime or sintering dolomite	NO ₂	1500	
	Total PM	50	
Ceramic Furnaces	Total PM; where dust load emitted ≥ 2.0kg/hour	50	

DOE / EPA Requirements

- Listed appointed and approve company in DOE / EPA website
- TUV / MCERT Certificate
- Data Acquisition System (DAS)
- Data Interface System (DIS)

Gas & Dust Analyzer Working Principle

Parameter	Principle	Sampling Type
Sulphur Dioxide (SO ₂)	NDIR, NDUV, GFC, FTIR, PAS, Fluorescence	Extractive
	DOAS, GFC, FTIR	Insitu
Nitrogen Dioxide (NO ₂)	NDUV, PAS, Fluorescence	Extractive
	DOAS	Insitu
Total PM / Dust	Light Scatter Beta Absorption	Extractive
	Transmissionmetry / Triboelectric Double Pass, Single Pass	Insitu