



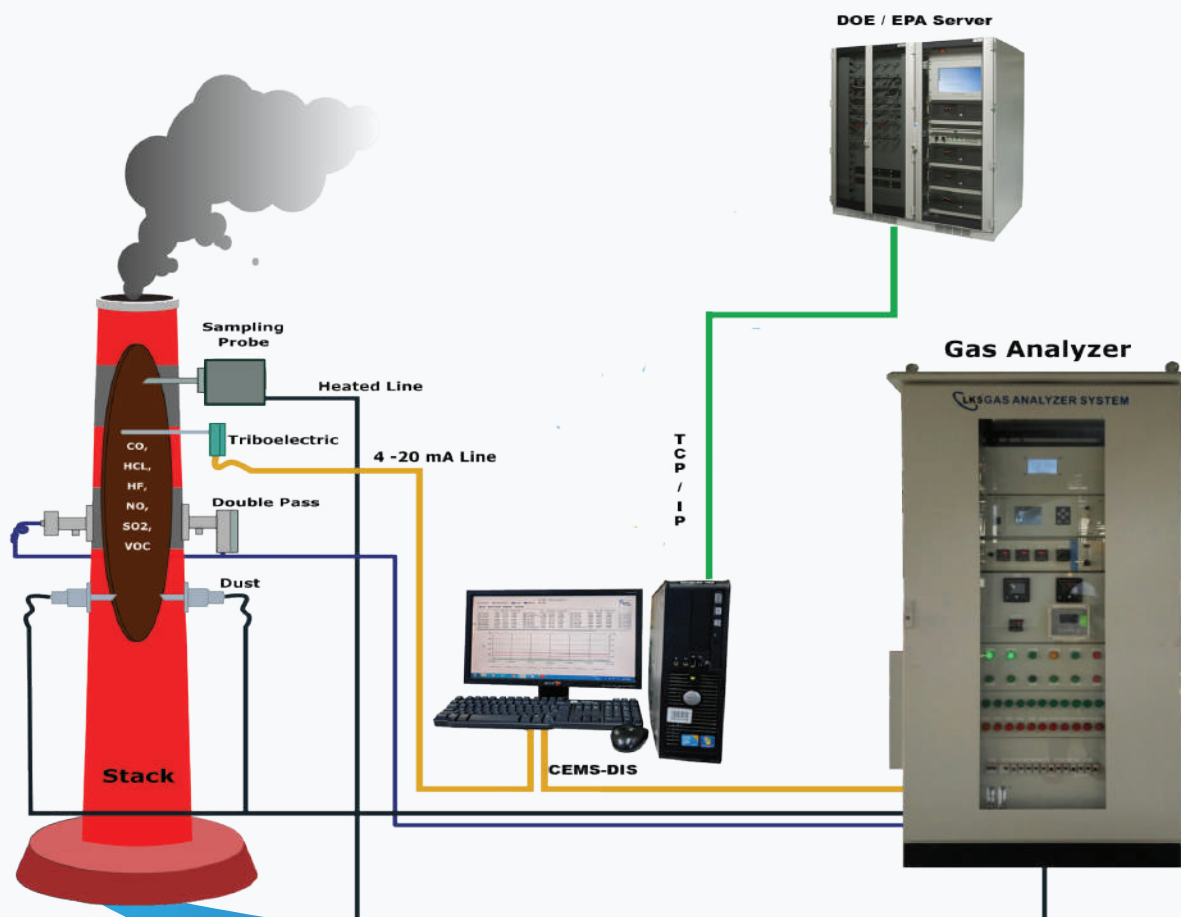
# CEMS - Power Plant

## Source Capacity

- Boilers > 10MWe (Liquid and Solid Fuel)
- Boilers > 10MWe (Gas Fuel)
- Combustion Turbines >10MWe (Gas Fuel)
- Combustion Turbines >10MWe (Liquid Fuel)

## 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 <sub>3</sub> )
Heat and Power Generation	Boilers > 10MWe (Liquid and Solid Fuel)	SO <sub>2</sub>	500
		NO <sub>2</sub>	500
		CO	200
		Total PM	50
Heat and Power Generation	Boilers > 10MWe (Gas Fuel)	NO <sub>2</sub>	350
		CO	50
		NO <sub>2</sub>	150
		CO	100
Heat and Power Generation	Combustion Turbines > 10MWe (Gas Fuel)	NO <sub>2</sub>	150
		CO	100
		NO <sub>2</sub>	200
		CO	100
Heat and Power Generation	Combustion Turbines >10MWe (Liquid Fuel)	NO <sub>2</sub>	200
		CO	100
		NO <sub>2</sub>	200
		CO	100

### 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 <sub>2</sub> )	NDIR, NDUV, GFC, FTIR, PAS, Fluorescence	Extractive
	DOAS, GFC, FTIR	Insitu
Nitrogen Dioxide (NO <sub>2</sub> )	NDUV, PAS, Fluorescence	Extractive
	DOAS	Insitu
Carbon Monoxide (CO)	NDIR, GFC, FTIR, PAS	Extractive
	DOAS, GFC, FTIR, TDL	Insitu
Total PM / Dust	Light Scatter Beta Absorption	Extractive
	Transmissionmetry / Triboelectric Double Pass, Single Pass	Insitu