

INSTRUMEX

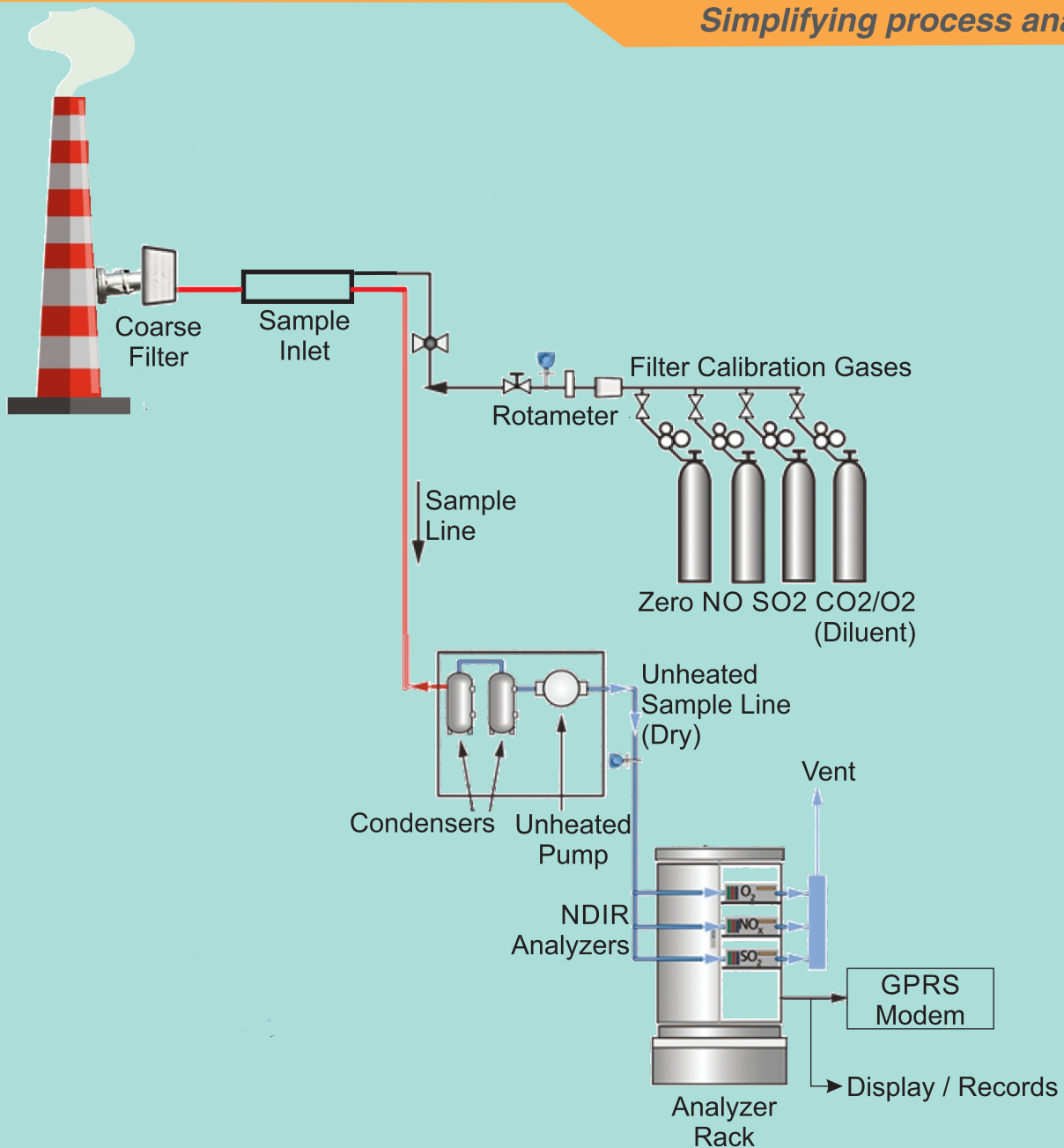
An ISO 9001-2015 Certified Company



ICEMS-788A Continuous Emission Monitoring Station

Schematic Process Diagram

Simplifying process analysis



Overview:

INSTRUMEX ICEMS-788A Continuous Emission Monitoring Station implements the most advanced laser based analyzers along with robust sample handling system that ensures accurate sampling of stack gases. It employs a conditioning system that condenses and filters coarse particles out of the stack gas and delivers uncontaminated gases to the analyzers.

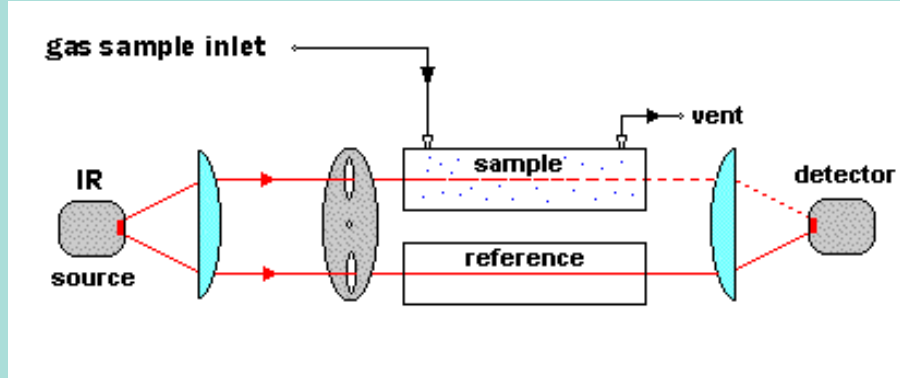
A set of NDIR based analyzers provide highly accurate gas concentration data which is transferred to online servers using the GPRS Modem or field mounted dataloggers for data recording.



Working Principle :

The Non Dispersive Infrared (NDIR) detection method is based upon the absorption of infrared radiation at specific wavelengths as it passes through a volume of sample.

Non-Dispersive Infrared (NDIR) techniques for the measurement of various gases rely on the energy absorption characteristics of a particular gas in the infrared region.



In a simple NDIR instrument, Infrared energy passes through two identical tubes and falls on a detector. The first tube is the reference cell and is filled with a non-absorbing gas such as nitrogen. The second tube is the measurement cell and contains the gas sample to be analysed.

Scope of Measurement:

Parameter	Technology	Measuring range	Operating temperature	Resolution
SPM	NDIR	0-800 $\mu\text{g}/\text{m}^3$	10 -40°C	1 $\mu\text{g}/\text{m}^3$
SO _x	NDIR	0-5000 PPM	0 -45°C	1 PPM
NO _x	NDIR	0-5000 PPM	0 -45°C	1 PPM
CO	NDIR	0-5000 PPM	10 -45°C	1 PPM
CO ₂	NDIR	0-25 %	10 -45°C	0.01 %
O ₂	NDIR	0-25 %	0 -45°C	0.01 %

Specifications:

Accuracy	+/- 1% F.S.
Repeatability	+/- 1%
Zero / Span Drift	< 2% F.S.
Output	GPRS / RS232 / RS485 MODBUS (as per order)
Power Supply	230V AC, 50Hz
Dimensions	Analyzer Rack: (60 x 30 x 27)"
Weight	Approx. 250 Kgs.

Key Features:

- ⇒ On site extractive measurement
- ⇒ Measurement accuracy is not affected by water and dust.
- ⇒ Strong gas chamber, low operation and maintenance cost.
- ⇒ Gas chamber made of Stainless Steel.
- ⇒ Detector is connected to gas chamber via optical fibre which is convenient for replacement and achieves low maintenance cost
- ⇒ Detector is connected to gas chamber via optical fibre which is convenient for replacement and achieves low maintenance cost.
- ⇒ This product adopts the most advanced Electrochemical technology and has high accuracy, low lowering limit and small temperature drift.
- ⇒ Achieves simultaneous measurements of SO_x and NO_x.
- ⇒ No optical moving parts, strong vibration resistance and measurement reliability.
- ⇒ Modular design, good expansibility and convenient maintenance.
- ⇒ Remote Calibration with calibration cylinder
- ⇒ Data Uploading Time 1 Min to 30 Min
- ⇒ Online Remote Calibration (Optional)
- ⇒ Online System Failure Alarms (Optional)



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1000s

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