GLOBALIZING THE EXCELLENCE

CEMS
Continuous Emission Monitoring System

Technical Presentation
CEMS - PRESENTATION CONTENTS -

♦ CEMS Definition
♦ Typical Customer Inquiry
♦ Configuration Data Sheet
♦ Typical System Configuration and Certificates
♦ Typical Tecnova HT Proposal
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♦ Major Reference List of Gas Analysis
- CEMS DEFINITIONS -

♦ «Continuous Emission Monitoring System» is related to the monitoring of flue gas for Oxygen, Carbon Monodioxide, Sulphur Dioxide, Hydrogen Chlorine, Nitrogen Oxide etc. according to typical industrial plants/ power station/ incinerators/ Refinery/ Petrochem etc.

In the industrial installations the level of emissions has to comply with standard values according to major «Environmental Protection Agency» like EPA/USA ; EN/ Europe ; JQA/Japan etc.

Above standards are strictly indicated and suggested by the International agreement as per KYOTO Protocol
- TYPICAL CUSTOMER INQUIRY-

♦ Customer inquiry is related to specific emission regulation according to Local Authorities

♦ Local Authorities dictate the number of components to be analysed and related emission limited values

♦ Customer specifications will include all process data for required plant applications useful for analysis system development
- CONFIGURATION DATA SHEET -

- This document defines respectively:
  - General characteristics for system description
  - Installations characteristics for environmental conditions
  - Process data like elements, concentration, measuring units, (temp / flow/ density/ dust ect…)
  - Auxiliary measurements for flow; pressure; temperature; dust with specific elements.
  - Data acquisition
The CEMS configuration system consists of a sample probe, filter, sampling heated line, conditioning system, calibrations gas system, a series of gas analyzers which reflect the parameters being monitored and data acquisition systems.

All components will be selected according to the specific application and process conditions as per customer inquiry plus configuration data sheets filled-in.
Certificates are according to local authorities
- TYPICAL TECNOVA HT PROPOSAL -

♦ Introduction describing the technology and analyzers selected with components under measurement.
♦ Description of selected shelter and/or cabinet suitable for environmental condition available also with ATEX approval
♦ Description of all sampling system components
♦ Description of all analyzers required to cover all data under process, strictly certified TUV and QAL1
♦ Description of calibration system
♦ Description of field instruments ( if required )
♦ Description of software and hardware for data acquisition and management
♦ Description of all services and documents included ( start up/ FAT/ Training/ Manuals etc )
♦ Complete definition of scope of supply and its limits
- PROJECT IMPLEMENTATION -

♦ Assignement of Project Manager responsible for overall implementation and Project Engineer for technical development.
♦ Kick-off meeting to define final technical specifications and system configuration.
♦ System assembly procedure and realization
♦ Factory acceptance test by Tecnova HT and, if required, by customer
♦ Inspection and approval by third party company if required
♦ Standard or special packaging and delivery terms as per customer instructions
♦ Service on site
MAJOR INSTALLATION PICTURES

Eni Taranto Refinery

IBP Biohetanol plant
- MAJOR INSTALLATION PICTURES-

SNET
Gardanne
Coal Power station

GDF Suez 400MW Power station
MAJOR REFERENCE LIST OF CEMS INSTALLATIONS

♦ Alstom Power- AES- Coal power station- Bulgaria.
♦ Alstom Power-SNET- Coal power station- France
♦ Idreco-ENDESA- Coal power station- Spain
♦ Foridus- steel mill plant- Singapore
♦ ENI- refinery/thermal power station- Italy
♦ IBP- Bioethanol plant (largest in Europe)- Italy
♦ EDF-Fenice- Power Station- Italy
♦ O-I- Glass factory- Italy
♦ GDF Suez- 400 MW power station- Italy
♦ CPCU- power station- France
♦ Techint- Furnace emission- Qatar
♦ Europower- Incinerator – Italy
♦ Hellenic Petroleum- Refinery- Greece
♦ ITAS- Chemical plant- Iran
♦ Donau Carbon- Cement plant- Belgium