

Project Title: Reducing GHG emissions –Emission Measuring and Monitoring (CEMS / PEMS)

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Summary:

Proposed Project:

The proposed project is to implement Continuous Emission Monitoring System (CEMS), Predictive Emission Measurement System (PEMS).

This technology enables monitoring and measuring emission parameters and the feedback signal in optimizing the air to fuel ratio and there by maximizing efficiency of the combustion process within process heaters. This ultimately leads to increased energy efficiency and reduced GHG emission.

Technology:

Continuous Emission Monitoring System (CEMS) is the total equipment necessary for the determination of gas, particulate or emission rate using Analyzer measurement and a conversion equation or computer program to produce results in units of the applicable emission limitations or standards. CEMS includes continuous measurement analyzer. A test port (sample port) is installed in the emission source stack. A probe is installed in the sample port and a sample is extracted for measurements.

Predictive Emission Measurement System (PEMS) is an economically favorable alternative to CEMS for environmental monitoring of process and power plant. While CEMS relies on direct measurement of the emissions from the source (after the process), PEMS relies on indirect measurements (before or in the process) and a mathematical model / algorithm to estimate the process emissions.

Opportunity:

CEMS/PEMS will allow optimizing combustion/furnace operations, measuring and controlling emission parameters.

Environmental Benefits:

Reduction in emission of GHG, Enhanced combustion efficiency.

Area of application:

- Boilers, Power Plants
- Process Heaters
- Sulfur Recovery Unit
- Reformers