PCEMS SUMMARY

Cement Kiln Pre-Heater Exit CO/CH4/O2 PCEMS

AMP-Cherokee Environmental Solutions produces Process Continuous Emissions Monitoring System (PCEMS) measuring Carbon Monoxide (CO), Methane (CH4) and Oxygen (O2) emissions on the **preheater exit prior to the kiln** for the Cement industry.

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Option 1

A free-standing NEMA 4 instrument rack with attached HVAC and a heated sample line for connection to the emission source sample probe.

Option 2

A NEMA 1 instrument rack for installation into a client provided shelter with an increased heated sample line length.

For this application, AMP-Cherokee provides a new sample probe, heated sample umbilical, sample conditioning system, analyzer, instrument air clean-up assembly, flow/temperature control panel, calibration manifold, dual-bay outdoor instrument rack, power transformer and a Programmable Logic Controller (PLC) to comply with your requirements.

The analyzer complement consists of a single ABB rackmount enclosure housing a URAS26 IR Photometer for CO and CH4 measurement and an electrochemical cell for O2 measurement.

The sample probe mounted at the exhaust gas source is a M&C SP2020-H heated extractive probe designed to pull sample from a high temperature, high particulate laden source.

System control is through an Allen Bradley CompactLogix PLC coupled with an Allen Bradley PanelView 5310 Series 7" HMI panel. The PLC manages the blowback control, calibrations, alarms, analog inputs/outputs, data processing and short-term data storage. The HMI provides a view of the gas measurements, system diagnostics and manual control of the system.

The flow/temperature control panel allows adjustment of the sample gas to the analyzer and bypass vent as well as to control the temperature setpoint of the sample probe heated filter assembly and heated sample umbilical. The panel also controls the calibration gas flow and pressure to the system.

The analyzer, sample conditioning system, instrument air clean-up assembly, flow/temperature control panel, calibration manifold and PLC will be installed in a painted and insulated NEMA 4 single-bay instrument rack equipped with a NEMA 4 8,000 Btu/hr. cool, 1300W heat HVAC or a NEMA 1 instrument rack depending upon option chosen.

The NEMA 4 instrument rack will measure approx. 78"H x 28"W x 34"D and be equipped with both front and rear access doors. The instrument rack increases to an approx. overall width of 54" with the HVAC

mounted on the side panel. The is a 63A safety switch also mounted on the rack exterior side panel. The NEMA 1 instrument rack will measure approx. 76”H x 22”W x 38”D.

Addition Options

Installation/startup and hands-on training by a factory qualified service technician is available.
An Allen Bradley 5510 Series 7” HMI panel with two 10/100 Base-T Ethernet ports is available if required.

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