

ELCOM d.o.o. is specialized in Totally Integrated Automation (TIA), containing electrical engineering and software development for the automation of production processes and machines, production of MCC and control cabinets as well as onsite installation, commissioning and acceptance testing (FAT, SAT, SIT)



Gas analyzing systems at wet section and lime kiln

Customer: Soda Sisecam Lukavac, Lukavac, BIH



Certificates

We have proven our competence as Siemens Solution Partner Automation in the following areas:

- Automation System SIMATIC
- Human Machine Interface SIMATIC HMI
- Process Control System PCS7

Process description

The standard gas analyzing system consists of a sample probe, filter, sample line (umbilical), gas conditioning system, calibration gas system, and a series of gas analyzers which reflect the parameters being monitored. Typical monitored emissions include: sulfur dioxide, nitrogen oxides, carbon monoxide, carbon dioxide, hydrogen chloride, particulate matter, mercury, volatile organic compounds, and oxygen. Gas analyzing systems can also measure air flow, flue gas opacity and moisture.

A small sample of flue gas is extracted, by means of a pump, into the gas analyzing system via a sample probe.

The sample is transported through a sample line (typically referred to as an umbilical) to a manifold from which individual analyzers may extract a sample.

Gas analyzers employ various techniques to accurately measure concentrations.

Some commonly used techniques include: infrared and ultraviolet adsorption, chemiluminescence, fluorescence, and beta ray absorption. After analysis, the gas exits the analyzer to a common manifold to all analyzers where it is vented out of doors.

Challenge

Implementation of two cost efficient and user friendly gas analyzing systems at wet section and lime kiln.

Each gas analyzing system is to have five sampling points. Results of analysis and status signals are to be sent to existing DCS system for monitoring and archiving.

Very detailed diagnostics and intuitive representation of current step for fast fault analysis and low deadlock times.

Robust solution to endure harsh environmental conditions and 24h 7 days a week work.

Solution

The solution is a gas analyzing system from ENOTEC Germany with Siemens ULTRAMAT 23 infrared gas analyzer. Five sampling probes from Buhler are connected to the analyzing cabinet via sampling hose with heating coat. Sampling points are circulated by controller LOGO from Siemens.

Sampling results are sent to local Honeywell DCS system.

Project overview

- 2 analyzing systems
- 5 sampling points each
- ULTRAMAT 23 gas analyzer
- Control system with LOGO



Information about the Siemens Solution Partner Program

Under the Siemens Solution Partner Automation and Power Distribution Program, we join forces with our Solution Partner. By merging our product and systems expertise with the application and industry knowledge of our partners, we have created a common basis for the fast, smooth and highly efficient implementation of your requirement – customized solutions for your competitive advantage.

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