

POWER PLANTS

Coal-fired electric power plants in Poland

CASE STUDY

1.0 | About the system

The system is operated at one of the largest coal-fired electric power plants in Poland and is designed for monitoring of CO concentration in a building with silos for coal storage.

2.0 | Problems of the customer to be remedied

The Customer required to have a system with the following features:

- early detection of coal self-ignition or incipient fires of coal stored in silos,
- protection of personnel against hazardous concentration of CO,
- immunity of the system to contamination by abundant amounts of coal dust,
- transmission of information about hazardous conditions to supervising systems,
- adequate layout of field detectors and warning devices to enable immediate localization of the alarm source by personnel staying inside the building as well as supervising operators in the central control room.

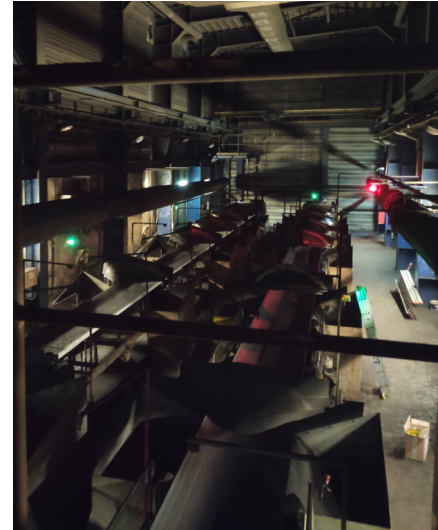
3.0 | Our solutions

The system deployed at the electric power plant included the following components:

- SOLED3 messaging board with the GasOK function – customizable and innovative messaging system GASOK enables swift verification of the system operability and the level of gas safety, consistently on all messaging devices. Any warning message or a warning light, beside the green light, obliges personnel of the plant to a specific behavior.
- SmArtGas4 gas detectors with the IP67 class of enclosure tightness (with the FL.M measuring head) are suitable for operation in potentially explosive atmospheres with high concentrations of coal dust (certificates ATEX and IECEx).
- SmArtGas4 gas detectors furnished with four-colour FLED beacons. The warning stacklight enables immediate indication of the location where a potentially hazardous situation has occurred. In addition, such detectors improve the safety feeling of personnel working in the building since at every moment of time they can assess the level of risk at the locations where gas detectors are installed.

Other advantages:

- The control unit is assembled on the basis of modules that can be mounted on the TH35 rail (Sigma MOD DRV, Sigma MOD LCD).
- All warning devices and detectors are connected to a common RS485 bus to enable troubleshooting and easy detection of defective components.
- Gas detectors incorporate reliable electrochemical sensors of carbon oxide with improved selectivity against hydrogen, which enables steady operation of the system without false alarms.
- Flexible configuration of warning /alarm thresholds and the measuring range of detectors (all settings can be made from the menu of the central control unit).



FLED Four-color, built-in optical siren

