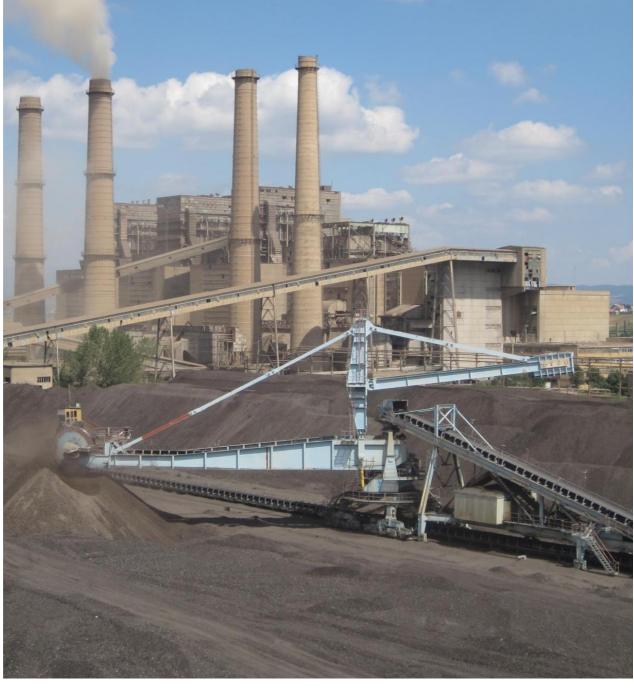# ELCOM

reference

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)

Automation of stacker-reclaimer

Customer: Kosovo Energy Corporation, Thermal Power Plant Kosovo A

Solution Partner

Automation **SIEMENS**

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Process description

Bucket-wheel Stacker/Reclaimers travel on a rail track alongside the piles of material, offering the potential to selectively stack and reclaim materials in different stockpile sections. This is carried out in two quadrants (directions) on both sides of the track. Four-quadrant reclaiming is possible with units featuring tripper-trailers that can be uncoupled. Active stockpiles may be stacked and reclaimed within the traveling limits and operating radius - up to the boundary zone of the storage area on the boom side of the machine. On the trailer side, a clear space, or box cut, is provided, which permits the bucket-wheel to cut into a free end face of the pile.

Challenge

Implementation of a cost efficient and user friendly process control system with as less as possible classical cabling which have to result in a very fast and easier cabling, engineering and commissioning of a very high level.

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 totally integrated automation architecture with PROFIBUS based topology. Distributed ET200M stations with PROFIBUS interface are connected to the central 317-2PN/DP processor. Two PC stations are connected via industrial Ethernet to the controller.
Robust monitoring of machine position is achieved trough redundant BERO limit switches and SIMODRIVE absolute value encoders.
Control of motors is improved by introducing micromaster 4 frequency drives.
For remote monitoring a video surveillance system with Siemens SISTORE is installed.

Project overview

- 75 motors
- 15 analogue instruments
- 1000 digital signals

- Control system with 317-2PN/DP
- 2 OS stations with WinCC v7.0
- 5 ET 200M
- Industrial Ethernet and Profibus DP
- Based on network topologies
- Micromaster 4 frequency drives
- Absolute value encoders
- 5 IP cameras
- SISTORE camera monitoring system

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