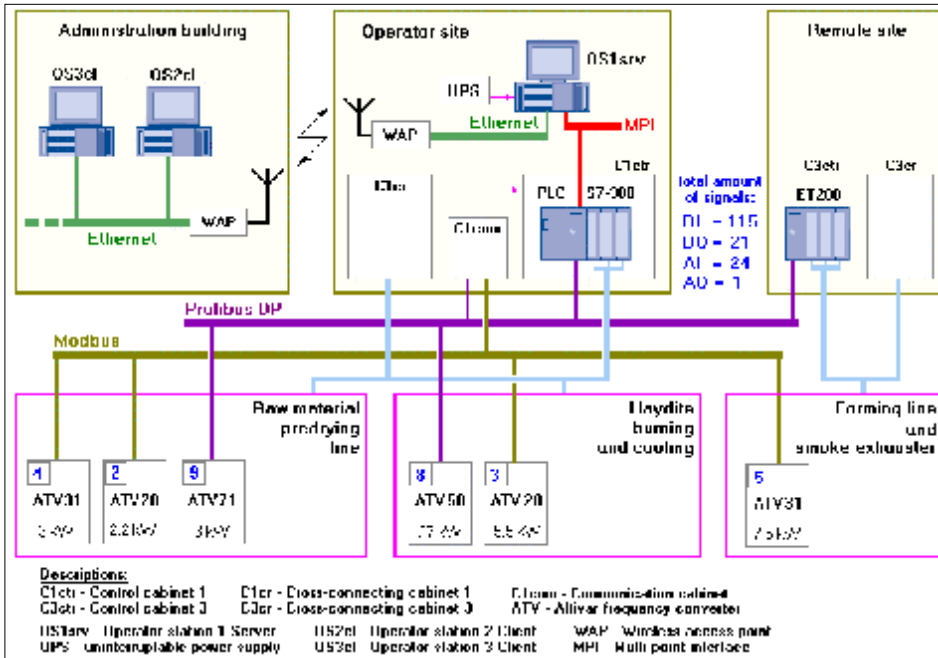


AUTOMATED CONTROL SYSTEM OF HAYDITE BURNING AREA AND ROTARY KILN BURNER

The system is put into operation at Sambirsky Haydite Plant (Lviv region). System of haydite burning area and rotary kiln burner is intended for acquisition, representation and archiving the information, that permits to operator to carry out the control for process of haydite burning, for rotary kiln burner. Also the system is intended for remote control of technological objects of the kiln.



OBJECTS OF AUTOMATION:

- elevator #1 (#2) of finished-products storage area
- mechanism of haydite grading
- folder gates ##1...6
- haydite breaker #1 (#2)
- clay opener
- box transporter
- batcher #1 (#2) of in-process stock charging
- batcher of ground limestone
- burning kiln, main drive, dust precipitation chamber, kiln burner, kiln head
- silo banks #1...6
- cooler, chambers ##1...3
- blow fan of burner and cooler
- transporter #8
- power supply standby generator
- drying drum #2
- main smoke exhauster D-19
- chain elevator CS-1 (CS-2)
- in-process stock grinder

The developed system is integrated automated system that is based on programmable logic controller SIMATIC S7-300 from SIEMENS, distributed I/O modules ET-200 and operator stations, which in a whole perform the functions of measurement, monitoring, automatic and manual remote control, visualization and archiving of events and parameters of technological process.

Lower layer of the system is based on programmable logic controller Simatic S7-300, that provides reception of information (digital and analog) about flow of technological process, state of systems and machinery, values of measurable parameters. It also performs processing of the information in accordance with specified program, generation of commands and information transfer to operator station OS1srv. PLC Simatic S7-300 is located in control cabinet C1ctr in operator building, distributed I/O modules ET-200 are located in control cabinet C3ctr in remote plant building near technological equipment.

Upper layer of the system consists of 3 operator stations on basis of personal computers - OS1srv, OS2cl, OS3cl. OS1srv - operator station, server, that is located in operator building; OS2cl and OS3cl - operator stations, clients, that are located in remote administration building. Data exchange between OS1srv and OS2cl, OS3cl is realized via Ethernet network.

