

Automatic sheet sorting system for the cross cutting machine of the electrotinning line 1200/III

Customer: Karaganda Metallurgical Plant JSC “ARCELOR MITTAL TEMIRTAU”

RECONSTRUCTION OBJECT SPECIFICATION

The cross cutting machine of the electrotinning line needs as follows:

- for strips cutting, coming to the machine in coils, on the sheets of exact length.
- sheet sorting according to thickness, punctures, surface defects.
- sheet arrangement in condition and non condition section
- production in the form of packs with set amount of sheets.

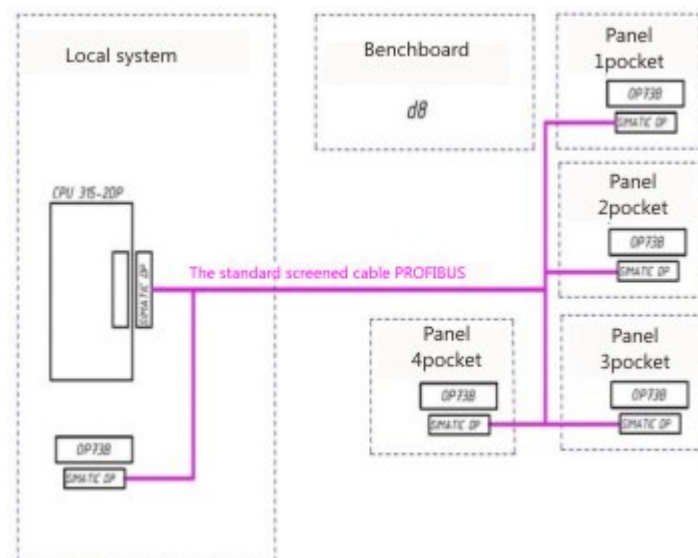
REQUIREMENTS TO SYSTEM

- To use available sensors as much as possible
- To provide magnet rollers current regulation in preset limits.
- To provide the possibility to set sheet quantity in the pack.
- Automatic account of sheets quantity in laying places
- Possibility of magnet rollers work in continuous service
- To provide magnet rollers isolation control.
- To provide the connection with automatic control system of the cross cutting machine



SOLUTION AND AUTOMATION SYSTEM CHARACTERISTICS

Automatic sheet sorting system is implemented on the basis of programmable controller SIMATIC S7-300 CPU 315-2DP of the firm SIEMENS. Irreversible converters Simoreg DC Master 6RA70 are used for magnet rollers control. The connection between the controller and the converters is carried out through the switching processor CP340 according to USS protocol. As number of sheets counters on the laying places №1,2,3,4, Operator's panels OP 73 are used, which are connected with the controller by the busbar PROFIBUS. Systems components are mounted in the separate, airproof cabinets, provided ventilation system. All sorting machine control system is a part of the electrotinning line 1200/III control system.



The structure of sorting machine automatic control system.

Project implementation period

Project implementation period is 1,2 months, commissioning is August, 2007.