



Replacement of QUIX QX3 drives with ABB ACS355 for Aperam Stainless Services & Solutions Poland

CLIENT

Aperam Stainless Services & Solutions Poland Sp. z o.o., a service centre in Siemianowice Śląskie, offers a wide range of flat stainless steel products. With its machinery and highly automated production lines, Aperam offers steel coils slitting, cutting into sheets, various grinding, polishing and other special surface finishes. Aperam is a company spun-off from ArcelorMittal. It has 2.5 million tonnes of flat stainless and electrical steel capacity in Brazil and Europe and is a leader in high value specialty products.

TASK

The Replacement of 16 existing GEFRAN Quix QX3 inverters (10 x 0.75 kW and 6 x 1.5 kW) with ABB ACS355 inverters. Changes were made to the Siemens PLC S7-300 software to control the operation of new inverters via the Profibus network. Supplied inverters in connection with standard squirrel-cage motors and gearboxes form the basis for variable speed drives of roller and belt conveyors in the facility. Changes in the PLC software included: configuration of Profibus communication, mapping data exchanged with new inverters into memory areas used by the existing program in the PLC, changing the data format exchanged with new inverters due to differences between the data storage format in ABB and Quix inverters and improving the control algorithm of one of the conveyors. Prior to delivery of the inverters to the customer, their parameterization was carried out in a way that ensures compliance with the performance characteristics of existing inverters. After assembly work, drive testing and communication testing, the commissioning of the machines was carried out with the simultaneous supervision of the devices and the execution of the PLC program.

ACCOMPLISHED WORKS:

- Delivery of 16 ABB ACS355 inverters
- Parameterisation of inverters
- Changes in the PLC S7-300 software
- establishment of Profibus communication with inverters
- Performing tests in manual and automatic mode
- Commissioning of the machines

TECHNICAL SPECIFICATION:

- Siemens S7-300 PLC
- Profibus Network
- ABB ACS355 drives

