



international projects  
engineering & services

## Control Retrofit – Siemens S5 to Allen-Bradley ControlLogix

Location: Spartanburg, South Carolina  
Technologies: Siemens S5; Allen-Bradley ControlLogix  
Customer: Andritz Küsters Inc.  
Project Value: < \$50.000

REFERENCE



### Project Description

ANDRITZ Küsters GmbH is a global manufacturer of textile, nonwoven and paper industry products. The company has three manufacturing locations with approximately 480 employees: Germany (Krefeld), Switzerland (Bülach) and the USA (Spartanburg). In addition, Küsters has field offices around the globe which provide customers consulting, comprehensive service and state-of-the-art machinery.



In 2008, ANDRITZ in Spartanburg contracted INP to convert a Schmalz Grinder controlled by a system consisting of Siemens S5 PLC and SIMODRIVE 611 drive to a newer control system. This type of request is common since it is difficult to obtain support for this discontinued technology in the U.S.

A general practice in this situation is to retrofit to newer technology due to the following reasons:

- High price and limited availability of Siemens S5 spare parts compared to newer systems.
- Additional communication interfaces with the new control system allow for better control, convenience (i.e. touchscreen panel versus pushbutton HMI) and optimization.
- Increased reliability with the new equipment thereby cutting maintenance costs, reducing downtime and yielding a higher return on the initial investment.

An additional consideration, specifically in the USA, is the conversion of a Siemens control system to Allen-Bradley, the largest manufacturer of control systems in North America. This inter-brand conversion improves service availability in this market, a benefit for many companies that cannot obtain qualified Siemens support or likewise would benefit from a higher knowledge base that allows technicians and engineers to perform most services in-house.

All of the above were valid factors for ANDRITZ Küsters' decision to invest in a Siemens S5 to Allen-Bradley ControlLogix upgrade with INP North America, Inc. The following parts and services were included in the project value.

## **INP Parts & Services**

- Replaced Siemens S5 system with an Allen-Bradley ControlLogix system
  - Analyzed software to capture previous updates and individual calibration
  - Converted the PLC application software for the operation of the machine
  - Panelview 600
  - Panel wiring and field wiring
  
- Assembled hardware (completed as much as possible in INP's facility to minimize downtime)
  - 1 Processor
  - Digital I/O Modules
  - Sercos Servo System communications module
  - 2 Servo amplifiers
  - Ethernet module.
  - Two 700 series Variable Frequency Drives. One 10 hp drive and one 15 hp drive, both with encoder feedback
  
- Wrote and published an operating manual
  
- Provided a new set of electrical drawings (American Standard)
  
- Installation and startup in a 5-day shutdown