Ultimate Safety in Material Handling

With Safety Integrated, a Swedish manufacturer of roll handling systems is able to meet all safety requirements while providing the highest level of flexibility. The company was one of the first in Sweden to choose a fail-safe programmable logic controller (PLC) to control its machines.

Trancel Restatic AB in Hisings Kärра, near Göteborg, is part of the Trancel Group, which is headquartered in Västra Frölunda. Among other things, the company manufactures custom-tailored safe and flexible roll handling systems for the processing of material such as plastic and paper. Trancel Restatic supplies leading companies all over the world.

The mechanical engineering company has relied on integrated safety solutions from Siemens down to the drive level since 2005. “We are working in a sensitive and dangerous industry with large machines and the risk of severe accidents where people might get trapped or even die,” explains Bengt Andreasson, who is responsible for the engineering department at Trancel Restatic. For this reason, the retrofitting of machines that did not conform to current safety requirements became one of the company’s special focuses.

Flexible systems from the very beginning

“With a fail-safe control system and integrated safety we are able to configure very flexible systems already at the project planning stage,” emphasizes Andreasson. “The functions can be amended at will, depending on changing conditions, so we avoid having to modify the circuits every time.” Erik Lundén, sales engineer at Siemens, helps the company develop the appropriate solutions with electronic, automation, and drive components. Sometimes that takes two weeks, but sometimes also up to six months. “These are complex machines that require special engineering,” emphasizes Lundén. He helps Trancel Restatic in particular with dimensioning the drive systems and documenting the calculations by means of the Sizer configuration software. The Simotion Scout engineering software, with the Starter commissioning software and Simatic Step 7, is used for programming. “It is a pleasure to collaborate with Trancel Restatic, as the company is a leader when it comes to integrated systems including HMI, logic, motion control, and safety,” says Lundén.

Overview of Safety Integrated

- Fail-safe Simatic S7-319F controller
- Simotion D445 motion control system
- Sinamics S120 servodrive
- Simotics M-1PH7 and S-1FK7 motors
- Sizer configuration software
- Programming with Simatic WinCC flexible, Simotion Scout, Starter, Simatic Step 7, and Distributed Safety
- Bus communication via Profinet and Profibus
- Simatic ET 200S distributed periphery
- Controlling and monitoring with Simatic WinCC flexible runtime on PC
- Sitop power supply

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A view of the Trancel Restatic workshop showing a machine for producing environmentally friendly plastic bags from biodegradable material