Selmo

Cosma Engineering Europe GmbH

Selmo supports Cosma in the implementation of an innovative machine for sheet metal processing.



Cosma provides a comprehensive range of body, chassis and engineering solutions to global customers. Through robust product engineering, outstanding tooling capabilities and diverse process expertise, Cosma continues to bring lightweight and innovative products to market.

Services

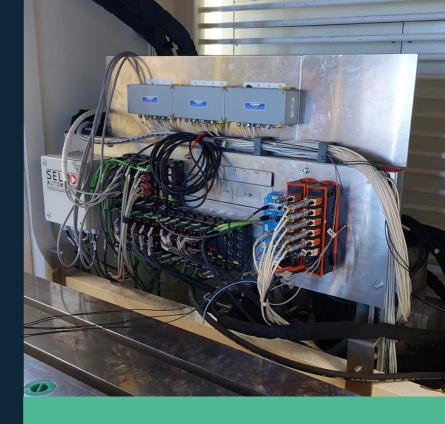
Selmo Services

Industry

Automotive supplier, toolmaking, prototyping, R&D

Location

Weikersdorf, Austria



Cosma commissioned Selmo to implement a new machine to control intelligent pressing tools. Selmo Services supported from the beginning with the conception of the project idea up to the ongoing support of further development.

The Result

- O1 Quality fluctuations reduced.
- O2 Increased process stability and reduced waste.
- Higher accuracy with a simultaneous reduction of steps.





| Part |

Brief project description

- Specification of assemblies for mechanics & electrics:
- The concept for the process was provided
- As a control, Beckhoff was requested
- Process modeled in the Selmo Studio
- · Basic electrical planning by Selmo
- Detailed electrical planning by Duatec Automation GmbH
- Installation by Duatec Automation GmbH
- Commissioning by Selmo
- MQTT interface through Selmo

The Facts

- Beckhoff C6030-0060 Compact IPc Control
- 113 PLC in- and outputs
- 1 Hardware zone
- 3 Sequences
- 41 Steps
- 206 Zones
- 4 Drivers
- 9248 Lines of Code

The ever-increasing market expectations in the automotive sector require manufacturers to optimize production further. As a result, high-strength sheet metal is needed in the automotive industry. Unfortunately, these sheet metal grades, which are difficult to process, generate higher scrap rates than in recent years. The project aims to minimize these rates.

The system controls two intelligent press tools. One that controls the pressure of the blank holder depending on the measured input variable, and another that controls several blank holders of the press separately to achieve higher forming accuracy. These are two independent tools.

In real-time, intelligent control of the retaining force was used to compensate for material fluctuations in the processed sheet. This both increases process stability and reduces scrap. In the second part of the project, the different control of the blank holders resulted in higher forming accuracy with a reduction in the number of forming steps. The increased forming accuracy improved quality and, in turn, reduced scrap.

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