



## ON THE SAFE PATH FOR SURE

The automobile industry is constantly working on new safety systems, such as ABS or ESP, to make driving on the streets safer. In addition to the know-how, behind all this protection is the highest product quality — even in the processing of the respective cable.

The moose test — Nearly everyone is still familiar with this term. This term became popular in 1997 when the A class of Daimler-Benz landed on its roof during a test in Sweden. But hardly anyone remembers the consequences which resulted from this test: Daimler-Benz installed the electronic stability program (ESP) in the standard vehicle version, thus ensuring the desired stability.

Today, nearly every new vehicle comes equipped with ESP, and as a result: The

number of traffic deaths has been going down continuously, and today is the lowest it has been since the beginning of statistics recording.

### **Safety through high quality**

SEGU Systemelektrik GmbH has been specialized in the processing of cables for the automobile industry for over 10 years, as well as the production of sensor cables for ABS and ESP systems. Since these cables

have to withstand special loads, the safety requirements are correspondingly high. Metzner became aware of this, too, when Segu made an inquiry about a customized system for processing the cables.

### **The requirements**

The system must process the cables so that, at the end, a protective housing can be moulded on with a water- and gas-tight bond. To guarantee this, the cables must be

## The Facts

### Customer profile

Segu Systemelektrik GmbH has been specialized in cable processing for the automobile industry for over ten years. With sites in Germany and Eastern Europe, they produce for well-known automobile manufacturers according to the current quality requirements.

### Requirement

In addition to numerous technical specifications, the following main requirements had to be met:

- Complete cable processing line: Printing, roughing, stripping, cutting and depositing in a magazine within 4.5 seconds for a cable 1500 mm long
- Fully automatic positioning in the workpiece holder system
- Design, realization and commissioning in less than four months

### Benefit

Segu can produce cables for ABS and ESP systems at top quality with the customized Metzner system. The interlinkage with a connected system is done fully automatically and requires no additional personnel.

The cable processing line guarantees that the cable is completely processed with the desired high productivity.



roughened to an exactly defined depth. In addition, a camera system must check and record the various work steps. Finally, the processed cables must be transferred to a workpiece carrier system fully automatically and with high precision.

### The implementation

The main processing features consist of four steps: printing, roughing, stripping and depositing in a conveyor magazine.

The cable to be processed is fed from an electrically driven dereeler via a feed device with sag control. Two hot stamp markers take care of clearly marking the cable on both sides. The cable is then delivered to the roughing station. The roughing station grinds the cable with two diamond grinding wheels, which rotate around the cable, to the exact roughing depth. Afterwards, the cable is



stripped at the desired place. The system requires 4.5 seconds for the entire cable processing, incl. depositing. All parameters, such as cable length, roughing depth or printing, are freely programmable and can be



edited via the operating terminal.

### Transport and safety

Depositing finished cables involves further safety requirements: The cables are placed in a magazine, eight at a time, after processing. Four gripper arms automatically remove the cables and place these exactly positioned in the available magazines. Afterwards, the cables are checked via video monitoring for any defects/errors.

Although the sensor lines for ABS and ESP systems are stable and robust, the system handles them with great care. After all, it's about safety, and safety comes first.