USE CASE

STIWA AUTOMATION

NEW MOBILITY

Complex laser welding with a short cycle time

COMPONENTS FOR EV BATTERIES

In these two STIWA machines, components for cell contacting systems are manufactured. These systems are installed in electric vehicle (EV) batteries and form the battery's electrical network.

With a size of 800 m^2 two adjacent machines handle the production: the first machine welds the lower part of the cell contacting system onto cylindrical cells, while the second machine welds the upper part. The two independently manufactured components are then assembled and subsequently installed in vehicles. The components are loaded manually using lifting aids and conveyor belts.

PRECISE POSITIONING OF ADHESIVE STRIPS

A robot cuts adhesive strips to a defined length and applies them to an insulating plate. Precise positioning is crucial in this step. Following a vision inspection, the cell connectors are welded to the plate and permanently mounted.

TEN PROCESSING POSITIONS IN 40 SECONDS

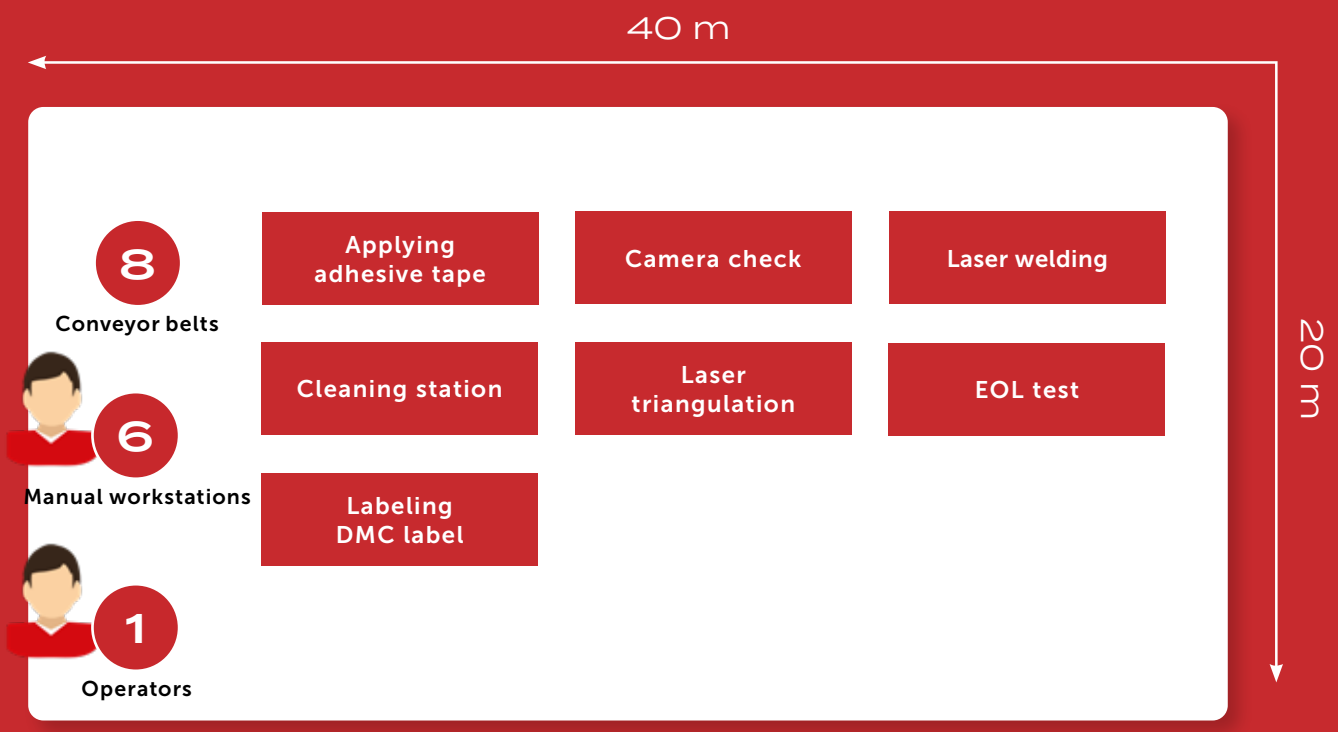
The robot works precisely and quickly, moving to up to ten different processing positions in 40 seconds. Well-designed process steps enable a short overall machine cycle time. During the welding process, 32 welding seams are created on each part within 35 seconds.

HIGHEST PRODUCT QUALITY THROUGH CLEANING AND TESTING

After the assembly process, the product is thoroughly cleaned to achieve clean room level quality. Tests such as EOL testing, and camera checks are performed to ensure product quality.

References

See more automation solutions



THE FACTS

Performance	367,000 parts/year
Product variants	1 type
Area	800 m^2
Location	Europe
Special requirements	Clean room
Degree of automation	Fully automated

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