

Laser marking for the photovoltaic industry

TESCHAUER LASER – Station for wafer marking TL 2020-WM

Laser marking of mono- and multi-crystalline silicon wafers
"On the Fly" marking and "On the Fly" recognition of encoding



Laser marking for the photovoltaic industry

With its TL 2020-WM type laser marking station the Dr. Teschauer AG offers a top quality assurance solution for the marking of mono- and multi-crystalline silicon wafers in the manufacturing process. Due to its compact design that conforms to standard industrial sizes, it is possible to easily integrate the station even in already extant lines for wafer finishing.

The wafers are marked using "On the Fly" movement. This unique technology guarantees short cycle times of less than one second per wafer, up to 4,000 wafers per hour. After marking, the code is recognised during the manufacturing process "On the Fly". An image recognition system to identify the position of the wafers on a patented synchronous belt allows for positioning of the marking and continuous wafer transport, as well as the identification of wafer breakage.

Equipment

- High-quality fiber laser systems, laser output power 20 to 50 W
- Customer-specific machine frames and software solutions
- Synchronous belt for wafer transport free of oscillation
- Image recognition system to determine the wafer's actual position on the belt
- Camera system for process-integrated code recognition
- Integrated optical Z axis adjustment
- Communication with the MES
- Recording of statistical process data
- Special exhaust for silicon dust

