Application example
Welding in sensor holders

PLASTIC WELDING	METAL WELDING	CUTTING	CLEANING	SCREENING

Task

A modern, thin-walled car bumper (wall thickness 2.8 – 3.0 mm) has been prepunched with the holes for the sensor holders. The task is to weld the holders for the sensors into the holes. The bumper is already painted and extremely delicate; at the same time, extremely strong, secure welds are expected without spoiling the appearance of the visible side.

Solution

The task was performed reliably with torsional technology. The application runs fully automatically: either in a special machine with all four welds simultaneously or with a freely programmable robot.

Configuration advantages

With torsional ultrasonics, it is possible to create extremely strong welds on trim parts that are just 2.5 mm thick. As the sonotrode does not penetrate the material underneath, the weld is created exclusively through boundary friction between the holder and the bumper. The holders can be smaller than before as only a ring-shaped weld is now produced. This creates welds which meet the usual strength requirements (250 – 300 N) easily and reliably. No marks are left during the process.

The application was produced with a TSP3000 torsional SONIQTWIST® welding system, or with corresponding components in a special system.

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