

Application example

Connection bolt on a conductor rail

PLASTIC WELDING

METAL WELDING

CUTTING

CLEANING

SCREENING



Task

The automotive industry is increasingly relying on aluminium conductor rails in an effort to save costs, weight, and, as a result, fuel. The insulated aluminium conductor rails with embossed terminals need to be equipped with screws on both sides for contacting purposes.

Solution

The screws are welded onto the aluminium conductor rails using a nickel-plated copper contacting plinth and torsional SONIQTWIST® ultrasonic technology.

Configuration advantages

The nickel plating on the copper contacting plinth reduces the risk of the aluminium corroding on the one hand, while also considerably increasing the strength of the weld compared to a copper/aluminium connection on the other. Torsional SONIQTWIST® ultrasonic technology is quick, environmentally friendly and easy to integrate into automatic production processes. Users also enjoy a wide range of options for monitoring the quality of results.



The application was produced on a 10kW torsional TSP8000 SONIQTWIST® welding system, as well as with corresponding components in a special system.