

Application example

Connection bolt on a conductor rail

PLASTIC WELDING

METAL WELDING

CUTTING

CLEANING

SIEVING



Task

Aluminum conductor rails are increasingly being used in automotive engineering to save costs and weight. The insulated aluminum conductor rails with embossed terminals need to be equipped with screws on both sides for contacting purposes.

Solution

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

Advantages of this configuration

The nickel plating on the copper contacting plinth reduces the risk of the aluminum corroding on the one hand, while also considerably increasing the strength of the weld compared to a copper/aluminum 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 welded using torsional SONIQTWIST® technology. Above, the TSP8000 torsional welding system.