

Application example

Aluminium cable on a silver-plated copper blade terminal

PLASTIC WELDING

METAL WELDING

CUTTING

CLEANING

SCREENING

**Task**

The terminals for contacting the battery in a car have to be reliably connected to various electrical aluminium cables with a cross-section of 35–42 mm². The welding system must be able to be adapted to various cable sizes. At the same time, it is important to make sure the aluminium does not stick to the tools.

Solution

The application was welded on a linear MPX ultrasonic welding system with special equipment. The welding system logs the exact location of the terminals to make sure the cable is fed into the right place. Using an exclusive, fixed oscillator helps to create a smooth weld – an essential factor when welding aluminium cables.

Configuration advantages

The MPX welding system enables you to monitor quality levels using data collected by a built-in load cell. Thanks to the rigidity of the fixed oscillator (which eliminates almost all bending during the welding process) and the controlled application of the ultrasonic oscillations, the aluminium no longer sticks to the tools. The sonotrode's unique design means that it can produce exceptionally strong welded bonds. The use of wear-proof material in the tool guarantees a long service life with minimal downtimes.



The application was produced on a linear 20 kHz MPX ultrasonic welding system and suitable special equipment.