

Application example

Aluminium cable on a nickel-plated copper terminal

PLASTIC WELDING

METAL WELDING

CUTTING

CLEANING

SCREENING



Task

An aluminium cable with a cross-section of 120 mm² needs to be welded to a nickel-plated copper terminal. To add a further challenging aspect, the weld needs to be as narrow as possible for construction reasons. The tensile strength and shearing load also have to meet specified values.

Solution

In this case, the task was resolved with a torsional MT8000 PowerWheel® technology system with a maximum output of 10 kW. The system is equipped with a sound protection case that is accessible from three sides. The welding process is managed with a TCS5 controller with touchscreen operation.

Configuration advantages

PowerWheel® technology is able to distribute the welding force so that only 26 mm needs to be welded instead of 30 mm (as is the case in a linear process) while still protecting the aluminium cable. The nickel plating on the terminal increases corrosion protection on the one hand while achieving better strength values on the other. Tensile strength of up to 5000 N can be achieved.



The application was welded using a 10 kW MT8000 PowerWheel® system and TCS5 welding process controller.