

## Application example

### Enamelled wire on a stator

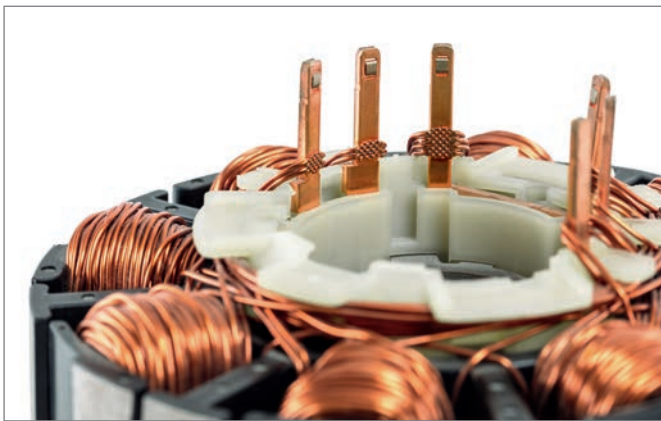
PLASTIC WELDING

METAL WELDING

CUTTING

CLEANING

SCREENING



#### Task

A total of six contact pins on an electric motor's stator have to be electrically connected to the enamelled winding wires so that electricity can be conducted without issue. The number of wires to be welded to each contact pin varies. The enamelled copper wire needs to be reliably welded to the copper contact pin without removing the enamel in advance.

#### Solution

The connection was created using a linear MPX spot welding system. In order to remove the enamel layer in a preceding cleaning phase, a pressure and amplitude profile is created. The connection is then reliably welded with a high level of pressure and energy. To weld contact points with varying numbers of wires, various cleaning and welding parameter data sets are defined and loaded depending on the position.

#### Configuration advantages

The enamel is easily removed from the wire before welding and without having to move the wire. All contact pins with varying numbers of wires can be reliably welded with a consistent standard of quality thanks to automatic parameter selection. The TCS5 process controller offers extensive quality assurance options. A sonotrode with multiple spare weld surfaces keeps operating costs to a minimum.



The application was welded with a linear 20 kHz, 3.6kW MPX metal welding system, MAG generator and TCS5 process controller.