Application example

Contact on insulated conductor

Task
An insulated aluminium conductor needs to be automatically and securely connected to power tapping bolts at any chosen place. The aim is to avoid complex partial insulation before making contact at the corresponding points.

Solution
The task was solved using torsional technology. The machine displaces the specially designed aluminium bolts using torsional oscillations. This punctures the insulation and welds securely to the aluminium conductor rail in a ring-shaped design. The outer edge of the bolt is pressed securely in the insulation while the inside is firmly bonded to the aluminium.

Configuration advantages
Intricate partial insulation of the conductor rail is not required. Furthermore, precise positioning of the previously insulated segments is no longer required in the production process. This process can take place quickly and securely at any point on the insulated conductor. The outer edge of the bolt is pressed into the insulation, thereby guaranteeing a strong seal.

The application was created with a torsional TSP3000 SONIQTWIST® system with MAG generator and TCSS welding process controller.