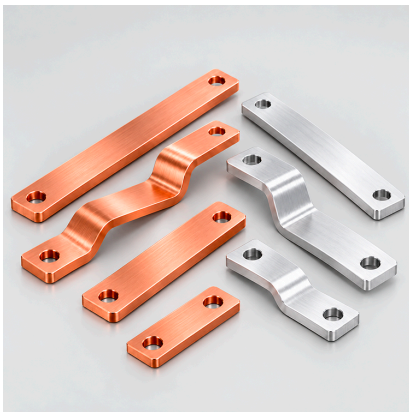


RELIABLE CONDUCTIVITY TESTING OF COPPER AND ALUMINUM BUS BARS

Electrical conductivity is a key quality factor for copper and aluminum bus bars. Non-destructive testing with SIGMATEST and TCM SIGMATEST enables fast material verification and early detection of deviations throughout production.

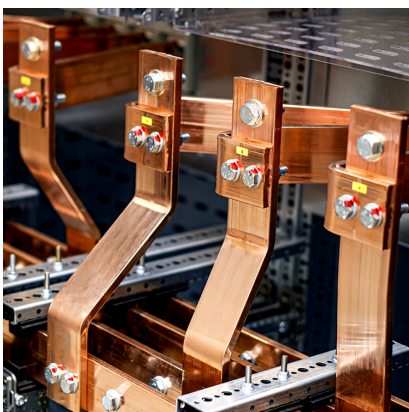


THE CHALLENGE

Bus bars are widely used in EV charging stations, battery systems, data centers and industrial power distribution. Although copper and aluminum offer excellent electrical properties, their conductivity can vary depending on alloy composition, heat treatment and processing conditions. These differences are not visible on the component's surface. Manufacturers therefore need a reliable method to verify material consistency throughout production without damaging the finished parts.

THE SOLUTION

FOERSTER's SIGMATEST and TCM SIGMATEST enable fast, non-destructive conductivity measurements using eddy current technology. Both portable solutions measure the electrical conductivity of copper and aluminum directly on the component. Measurements can be performed during incoming material inspection, after heat treatment or as part of final quality control. By comparing the results with defined reference ranges, deviations in material properties can be identified at an early stage.



THE RESULT

Reliable conductivity measurements support consistent material quality throughout bus bar production. Manufacturers can identify unexpected variations, compare production batches and monitor the effects of manufacturing processes without destructive sampling. Immediate measurement results enable faster quality decisions, reduce unnecessary material waste and help ensure that finished bus bars meet specified conductivity requirements.

THE PRODUCTS

SIGMA TEST

Portable conductivity meter for fast and reliable testing of non-ferromagnetic metals



SIGMA TEST TCM

Electrical conductivity measurement of non-ferromagnetic metals



SIGMA TEST PROBES

Flexible conductivity probes for precise testing of non-ferromagnetic metals



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