

## Testing the purity of copper by conductivity measurement with SIGMATEST 2.070

### Case & challenge

For many applications it is very important to have a very pure copper, as example for a wire mesh which is used for electric shielding. Producers of such products need to check the delivered material for its pureness. Copper is a very costly resource and a wrong delivery could be very costly for the company. On the other side producers of the copper raw material need to check the pureness of their product.

### Commonly used solutions

- Conductivity meter
- Spectrometer

### Application solution

With the eddy current based SIGMATEST a certain conductivity value around 58 MS/m is expected for pure copper. Also for copper alloys there is a defined electrical conductivity because those materials are used often for electrical components.

### Benefits of the solution

- High measurement accuracy especially for copper.
- High frequency measurement (960 kHz) for measuring thin materials.
- Small probe (down to 3.5 mm) available for measuring slim flat wires.
- Cost efficient solution

### Technical setup

SIGMATEST 2.070 14 mm  
KIT (5851009 + 5851408)



Fig. 1: Copper plate



Fig. 2: Semi-finished copper products