

RECTANGULAR ALUMINUM BARS WITH SILVER-PLATED OR TIN-PLATED COPPER CONTACTS

Patent application no: RO128338 (A2) – 30.04.2013

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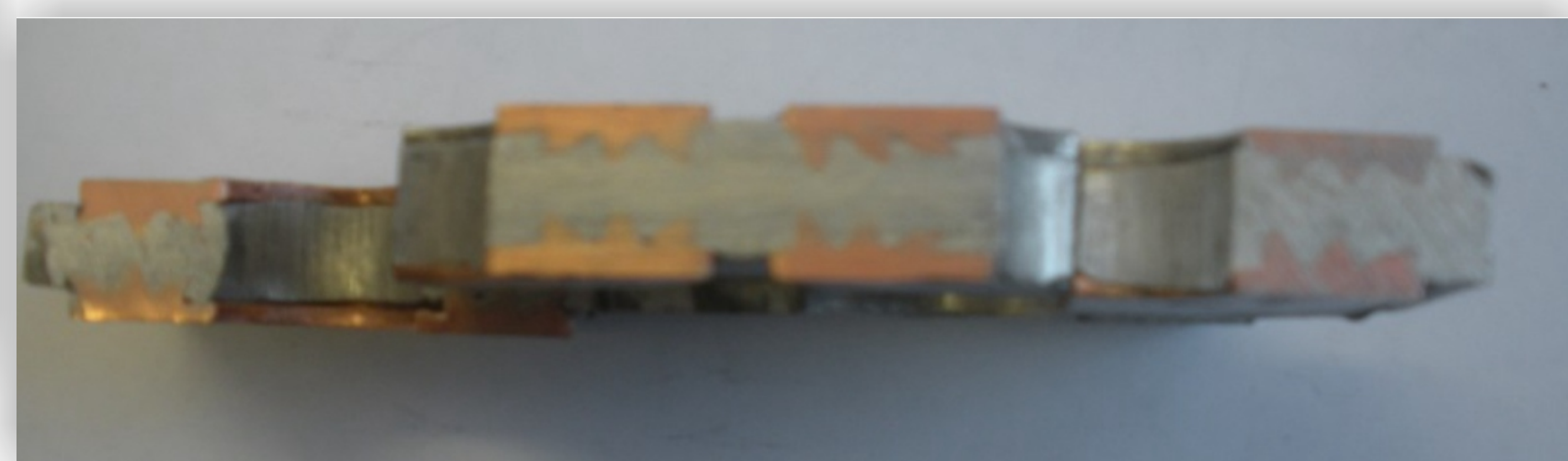
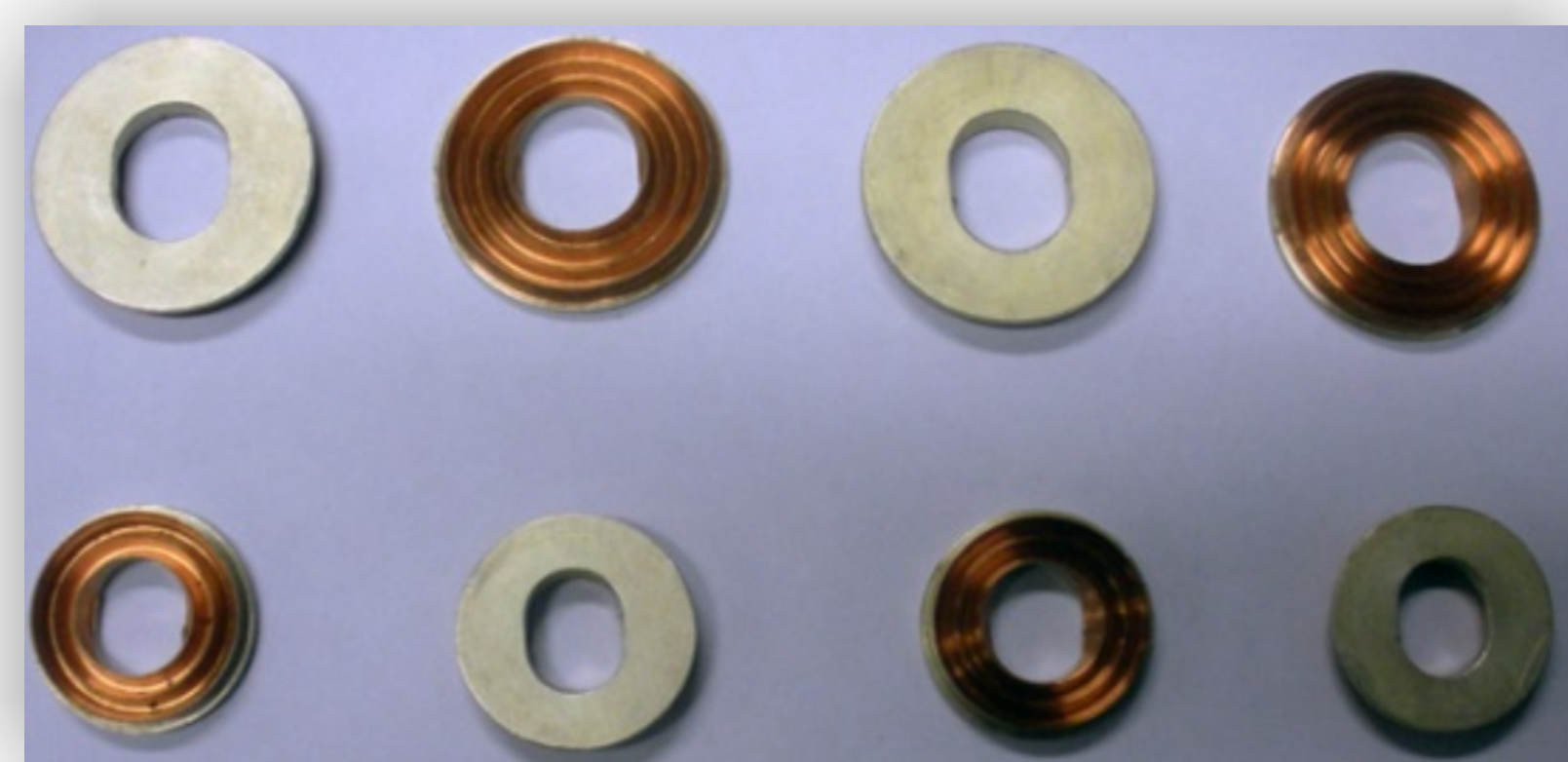
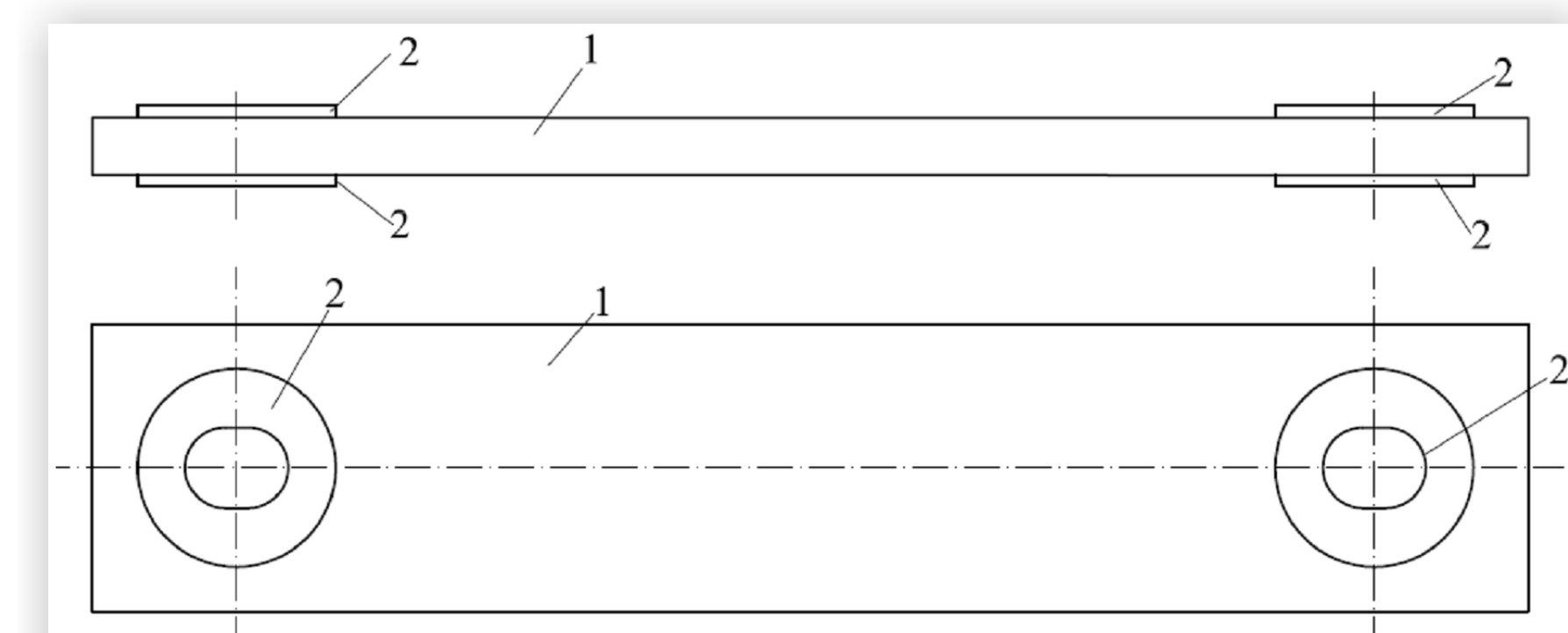
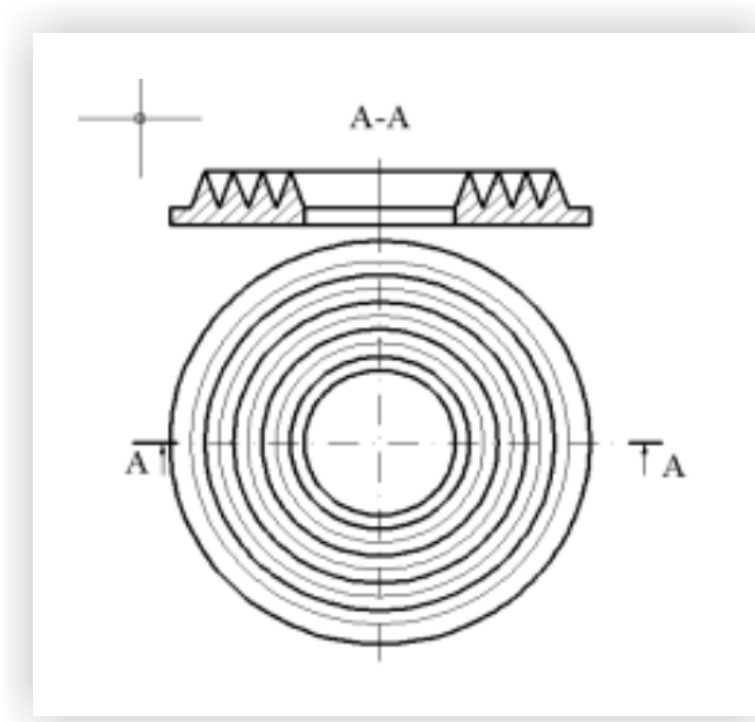
The invention relates to the execution of general bars and derivations for low and medium voltage panels by joining rectangular aluminum bars with copper contacts, using cold pressure welding method.

Description

According to the invention, the cold pressure welding technology of copper contacts relates to joining the 99,5% EN AW 1050 A aluminum rectangular bar with the copper contact, through a cold pressure welding method, using 99,97b1;1/2 hard copper contacts.

Harder metal components (2), with jagged, circular surfaces will be silver-plated (tin-plated) in advance, and then they will be pressed onto components made of ductile material (1), with flat surfaces.

Through cold pressure of these components, significant deformation is carried out, achieving a close contact between the two components.



Advantages

The aluminum rectangular bars with tin-plated or silver-plated copper contacts, achieved through cold pressure have a series of benefits, namely:

- they have the same electrical and mechanical characteristics as the equivalent copper bars;
- they weigh much less than the equivalent copper bars, providing;
- an easier handling during execution and fitting;
- have a lower cost price compared to the equivalent copper bars;
- the aluminum bars with copper contacts can always be connected to a copper bar.

Applicability

Due to both national and international high demand for copper, due to a reduction in resources, the price for this metal will be increasingly higher. Considering that in most cases the copper bars used in electrical contacts in the electrical engineering industry can be replaced for a certain segment by aluminum bars, the introduction of the new cold pressure welding technology is deemed desirable. This new constructive version can be implemented with low costs in low and medium voltage panels.