

Title (en)  
Copper strip or plate with brown coating and process for the production

Title (de)  
Kupferband oder -blech mit brauner Deckschicht und Verfahren zu seiner Herstellung

Title (fr)  
Bande ou plaque en cuivre pourvue d'un revêtement brun et procédé de fabrication

Publication  
**EP 0751233 B1 19990107 (DE)**

Application  
**EP 96109446 A 19960613**

Priority  
DE 19523646 A 19950629

Abstract (en)  
[origin: EP0751233A1] Copper strip or sheet has a dark brown covering layer consisting of a 1st layer, made of Cu<sub>2</sub>O adhering to the base metal, of thickness of 0.05-5 (pref. 0.1-1) microns, and a second layer made of CuO of thickness of 1-100 (pref. 10-50) nm over the 1st layer. In the prodn. of a covering layer on a semi-finished prod. sheet made of Cu, a strip-like Cu semi-finished prod. is heat-treated at 250-750 degrees C for 0.1-5 mins. in a mixed gas atmos. contg. up to 15 vol.% O<sub>2</sub> to form a Cu<sub>2</sub>O layer, and then heat-treated under oxidising conditions to form a CuO layer at 200-450 degrees C for 1-30 mins. in a mixed gas atmos. contg. 10-21 vol.% O<sub>2</sub>. Alternatively, a strip-like Cu semi-finished prod. is heat treated at 250-750 degrees C for 0.1-5 mins. for 0.1-5 mins. in a mixed gas atmos. contg. 1-21 vol.% O<sub>2</sub>, and then treated with an aq. soln. contg. alkaline salt alone or in cpd. with a salt of (in)organic peroxide and oxychloride acids. One surface of the semi-finished prod. is textured before heat treated. Heat treatment is carried out at 450-600 degrees C. The O<sub>2</sub> content in the mixed gas atmos. is 3-10 vol.%. The aq. treating soln. has a pH of 10-14. The strip-like semi-finished prod. is electrolytically treated in the aq. soln., where the prod. is connected as anode, using a current density of 1-20 A/dm<sup>2</sup>. The strip-like semifinished prod. is deformed by up to 40 (pref. 5-7)%.

IPC 1-7  
**C23C 8/10**

IPC 8 full level  
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