

Title (en)

METHOD FOR THE REFRACTORY ASSEMBLY OF A CARBON MATERIAL AND A COPPER ALLOY

Title (de)

VERFAHREN ZUR HERSTELLUNG EINES FEUERFESTEN KOHLENSTOFFMATERIALS UND EINER KUPFERLEGIERUNG

Title (fr)

PROCÉDÉ D'ASSEMBLAGE RÉFRACTAIRE ENTRE UN MATERIAU CARBONE ET UN ALLIAGE DE CUIVRE

Publication

**EP 2125281 A1 20091202 (FR)**

Application

**EP 08761889 A 20080214**

Priority

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Abstract (en)

[origin: FR2912675A1] The use of an alloy (I) based on copper (Cu) and silicon (Si), containing (atomic basis) 25-60% Cu, 40-75% Si and at least 95% Cu plus Si (preferably 60% Cu and 40% Si), is claimed for bonding porous carbon workpiece(s) to copper-rich metallic workpiece(s). Independent claims are included for: (1) a soldering paste (A), comprising a mixture of powdered (I) and an inorganic binder; (2) a method for bonding a porous carbon workpiece to a copper-rich metallic workpiece, involving (a) depositing (I) or (A) on the carbon workpiece in an amount (as (I)) of 50-500 mg/cm<sup>2</sup>, (b) heating under vacuum or an inert atmosphere to melt (I) or (A), (c) contacting the assembly with the other workpiece and (d) heating the assembly under vacuum or an inert atmosphere at a temperature below the m.p.s. of the copper workpiece and (I) or (A); (3) an assembly consisting of the porous carbon and copper-rich workpieces, bonded at their interface by a fused and solidified layer of (I); and (4) a device comprising at least one of the assemblies.

IPC 8 full level

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