

Title (en)

PROCESS FOR MANUFACTURING AN ELECTRIC CONDUCTOR WITH SUPERCONDUCTING CORES, AND THUS MANUFACTURED CONDUCTOR

Title (de)

VERFAHREN ZUR HERSTELLUNG EINES ELEKTRISCHEN LEITERS MIT SUPRALEITENDEN KERNEN SOWIE EIN SOLCHER LEITER

Title (fr)

PROCEDE DE FABRICATION D'UN CONDUCTEUR ELECTRIQUE AVEC DES COEURS SUPRACONDUCTEURS ET CONDUCTEUR AINSI FABRIQUE

Publication

EP 0966767 A1 19991229 (DE)

Application

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Priority

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Abstract (en)

[origin: WO9828802A1] In order to manufacture an electric conductor (21), workpieces are produced having each a core (3) enclosed in cross-section by at least one electroconductive envelope (4, 6) and a sheath (5) at least partially made of at least one metal-oxygen compound, for example barium zirconate (BaZrO₃). The workpieces are bundled together, elongated by plastic deformation and subjected to at least one thermal treatment in an oxygen-containing atmosphere. During the thermal treatment(s), the material forming the cores (3) is transformed into a superconducting phase without the sheath material affecting the superconducting properties of the cores (3). The sheaths (5) are electrically insulating or at least have a substantially higher specific electric resistance than the envelopes (4), and counteract eddy current losses when the conductor (21) is used.

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