

Title (en)

SPARK PLUG ELECTRODE MATERIAL AND SPARK PLUG

Title (de)

ZÜNDKERZENELEKTRODENMATERIAL UND ZÜNDKERZE

Title (fr)

ALLIAGE POUR ELECTRODE DE BOUGIE D'ALLUMAGEET BOUGIE D'ALLUMAGE

Publication

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Application

EP 12707053 A 20120215

Priority

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Abstract (en)

[origin: WO2012139791A1] The invention relates to a spark plug electrode material containing nickel, silicon, and copper, wherein the electrode material, if used correctly, forms a nickel oxide layer from nickel oxide crystals on at least a part of the surface thereof, wherein the crystal boundary phase of the nickel oxide crystals includes silicon and/or silicon oxide.

IPC 8 full level

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Citation (examination)

- US 2958598 A 19601101 - DOUGLAS MOGFORD REGINALD
- FR 858196 A 19401119
- DE 102010024488 A1 20111222 - THYSSENKRUPP VDM GMBH [DE]
- SPIEKERMANN P: "LEGIERUNGEN - EIN BESONDERES PATENTRECHTLICHES PROBLEM? - LEGIERUNGSPRUEFUNG IM EUROPÄISCHEN PATENTAMT -", MITTEILUNGEN DER DEUTSCHEN PATENTANWAELTE, HEYMANN, KOLN, DE, 1 January 1993 (1993-01-01), pages 178 - 190, XP000961882, ISSN: 0026-6884

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