Title (en)

METHOD FOR MANUFACTURING PIERCING PLUG

Title (de)

VERFAHREN ZUR HERSTELLUNG EINES DURCHSTECHSTECKERS

Title (fr)

PROCÉDÉ DE FABRICATION D'UN MANDRIN DE PERÇAGE

Publication

EP 2845655 B1 20180801 (EN)

Application

EP 13782357 A 20130319

Priority

- JP 2012098448 A 20120424
- JP 2013001858 W 20130319

Abstract (en)

[origin: EP2845655A1] A method for producing a plug for use in a piercing rolling mill for producing a seamless steel tube/pipe includes an arc-spraying step of melting iron wires, and spraying molten material thereof onto a surface of a base metal of a plug by use of an arc-spray gun, so as to form a film containing oxide and Fe on the surface of the base metal of the plug. In the arc-spraying step, the surface of the base metal of the plug is divided into plural sections along an axial direction of the plug (for example, two sections: the tip end portion and the body portion), and in turn, the arc-spraying is separately carried out in each of the plural sections while an intersection angle between the center line of a spraying stream from the arc-spray gun and the surface of the plug base metal is maintained within a range of 35 degrees to 90 degrees. This method secures firm adhesiveness of the arc-sprayed film formed on the surface of the plug, and realizes steady enhancement of durability life of the plug.

IPC 8 full level

B21B 19/04 (2006.01); **B21B 25/00** (2006.01); **C23C 4/06** (2016.01); **C23C 4/131** (2016.01)

CPC (source: EP US)

B21B 19/04 (2013.01 - EP US); **B21B 25/00** (2013.01 - EP US); **C23C 4/06** (2013.01 - EP US); **C23C 4/131** (2016.01 - EP US)

Citation (examination)

"HANDBOOK IF THERMAL SPRAY TECHNOLOGY", 1 June 2005, ISBN: 978-0-87170-795-6, article DAVIS J R: "Coating Structures, Properties, and Materials", pages: 47 - 53, XP055412786

Cited by

EP3767002A4

Designated contracting state (EPC)

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DOCDB simple family (publication)

EP 2845655 A1 20150311; **EP 2845655 A4 20160224**; **EP 2845655 B1 20180801**; AR 090817 A1 20141210; BR 112014023120 A2 20170620; BR 112014023120 B1 20210928; CA 2867101 A1 20131031; CA 2867101 C 20170516; CN 104284741 A 20150114; CN 104284741 B 20160817; JP 2013226563 A 20131107; JP 5365723 B2 20131211; MX 2014012499 A 20150115; MX 367930 B 20190909; RU 2014146991 A 20160610; RU 2593884 C2 20160810; RU 2593884 C9 20161227; US 2015132501 A1 20150514; WO 2013161176 A1 20131031

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