

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 A1 20150311 (EN)**

Application

**EP 13782357 A 20130319**

Priority

- JP 2012098448 A 20120424
- JP 2013001858 W 20130319

Abstract (en)

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** (2006.01); **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)

Cited by

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BA ME

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**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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