

Title (en)

MANUFACTURING METHOD OF STEEL IN WHICH AN ELEMENT OF TREATMENT GAS IS DISSOLVED AND DIFFUSED

Title (de)

HERSTELLUNGSVERFAHREN VON STAHL, BEI DEM EIN ELEMENT VON BEHANDLUNGSGAS DARIN GELÖST IST UND VERTEILT IST

Title (fr)

PROCÉDÉ DE FABRICATION D'ACIER DANS LEQUEL UN ÉLÉMENT DU GAZ DE TRAITEMENT EST DISSOUT ET DIFFUSÉ

Publication

EP 2977484 A1 20160127 (EN)

Application

EP 15177811 A 20150722

Priority

JP 2014149488 A 20140723

Abstract (en)

A manufacturing method of steel (1a) in which an element of the treatment gas is dissolved and diffused includes heating the steel, making a treatment gas contact a surface of the steel such that an element of the treatment gas dissolves and diffuses from the surface of the steel into a surface layer thereof, and reducing a concentration of the treatment gas near a non-treatment surface that is a portion of the surface of the steel.

IPC 8 full level

C23C 8/04 (2006.01); **C23C 8/22** (2006.01); **C23C 8/26** (2006.01); **C23C 8/34** (2006.01)

CPC (source: EP US)

C23C 8/02 (2013.01 - US); **C23C 8/04** (2013.01 - EP US); **C23C 8/22** (2013.01 - EP US); **C23C 8/26** (2013.01 - EP US);
C23C 8/32 (2013.01 - US); **C23C 8/34** (2013.01 - EP US)

Citation (applicant)

JP H11217626 A 19990810 - AISIN SEIKI

Citation (search report)

- [XA] US 5330813 A 19940719 - HIROOKA KOUICHI [JP], et al
- [XA] EP 0867524 A1 19980930 - NARD INSTITUTE LTD [JP], et al
- [AD] JP H11217626 A 19990810 - AISIN SEIKI & US 6149734 A 20001121 - ISOGAI TAKEFUMI [JP], et al

Cited by

EP3412792A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

EP 2977484 A1 20160127; CN 105296914 A 20160203; JP 2016023344 A 20160208; JP 6168008 B2 20170726; US 2016024636 A1 20160128

DOCDB simple family (application)

EP 15177811 A 20150722; CN 201510430901 A 20150721; JP 2014149488 A 20140723; US 201514805899 A 20150722