

Title (en)
NOZZLE DEVICE, ITS USE AND METHOD FOR TREATING A FLAT STEEL PRODUCT

Title (de)
DÜSENEINRICHTUNG, DEREN VERWENDUNG UND VERFAHREN ZUR BEHANDLUNG EINES STAHLPRODUKTES

Title (fr)
BUSE, SON UTILISATION ET PROCÉDÉ DE TRAITEMENT D'UN PRODUIT PLAT EN ACIER

Publication
EP 3137834 B1 20190327 (DE)

Application
EP 15718220 A 20150423

Priority
• DE 102014106135 A 20140430
• EP 2015058818 W 20150423

Abstract (en)
[origin: WO2015165799A1] The present invention relates to a nozzle device for treating a flat steel product. Said nozzle device comprises an outer tube and an inner tube arranged inside said outer tube, the inner tube having a primary opening for feeding a gas flowing through the nozzle device to an outer tube, and the outer tube having a secondary opening for the gas to exit from the nozzle device in the direction of the flat steel product, the primary opening and the secondary opening being arranged offset to one another along a circumferential direction.

IPC 8 full level
F27D 7/02 (2006.01); **F27D 7/06** (2006.01)

CPC (source: EP KR)
C21D 1/767 (2013.01 - EP KR); **C21D 9/561** (2013.01 - EP KR); **F27D 7/02** (2013.01 - EP KR); **F27D 7/06** (2013.01 - EP KR);
F27D 2007/023 (2013.01 - KR); **F27D 2007/063** (2013.01 - KR)

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

DOCDB simple family (publication)
DE 102014106135 A1 20151105; EP 3137834 A1 20170308; EP 3137834 B1 20190327; ES 2725896 T3 20190930; JP 2017528302 A 20170928;
JP 6608846 B2 20191120; KR 102487313 B1 20230112; KR 20170002525 A 20170106; TR 201908935 T4 20190722;
WO 2015165799 A1 20151105

DOCDB simple family (application)
DE 102014106135 A 20140430; EP 15718220 A 20150423; EP 2015058818 W 20150423; ES 15718220 T 20150423;
JP 2016565269 A 20150423; KR 20167033601 A 20150423; TR 201908935 T 20150423