

(11) **EP 3 816 307 A3**

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3: 23.06.2021 Bulletin 2021/25

(51) Int Cl.: C21D 9/46 (2006.01) B21D 25/00 (2006.01)

B21D 1/05 (2006.01)

(43) Date of publication A2: **05.05.2021 Bulletin 2021/18**

(21) Application number: 20203912.9

(22) Date of filing: 26.10.2020

(84) Designated Contracting States:

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 States:

BA ME KH MA MD TN

(30) Priority: 30.10.2019 BE 201905751

(71) Applicant: Saey NV 8501 Heule (BE)

(72) Inventor: Saey, Bernard 8501 Heule (BE)

(74) Representative: Brantsandpatents bvba Pauline Van Pottelsberghelaan 24 9051 Ghent (BE)

(54) METHOD FOR PRODUCTION OF FLAT STEEL PLATES

(57) In a first aspect, the invention provides a method for the production of flat steel sheets, comprising the uncoiling of a coil of steel material, the flattening of the uncoiled steel material, the stretching of a segment of the steel material and the transverse cutting of said segment. In particular, a steel material is used with a silicon content

of at most 0.60 %, preferably at most 0.50 %, a yield strength of minimum 235 N/mm2 and a tensile strength of minimum 340 N/mm2 . In a further aspect, the invention also provides a flat steel sheet, preferably obtained by applying the method.

Fig. 1A

300

301

342

321

392

321

392

392

392

EP 3 816 307 A3



EUROPEAN SEARCH REPORT

Application Number

EP 20 20 3912

10	
15	
20	
25	
30	
35	
40	
45	
50	

55

Category	Citation of document with indicatio	n, where appropriate,	Relevant	CLASSIFICATION OF THE
Jalogory	of relevant passages		to claim	APPLICATION (IPC)
Y,D	EP 3 150 294 A1 (THE MA 5 April 2017 (2017-04-0 * paragraphs [0007] - [[0020]; figures 1-7 *	5)	1-15	INV. C21D9/46 B21D1/05 B21D25/00
X,D	CN 102 703 808 B (WUHAN CORP) 14 May 2014 (2014		15	
Y	* abstract *		1-14	
Υ	CN 106 282 796 B (RIZHA LTD) 27 March 2018 (201 * abstract *		1-15	
Y	CN 101 844 162 A (HEBEI IRON & STEEL CO LTD; SH 29 September 2010 (2010 * abstract *	OUGANG GROUP)	7	
				TECHNICAL FIELDS SEARCHED (IPC)
				C21D B21D
	The present search report has been dr	awn up for all claims		
	Place of search	Date of completion of the search		Examiner
Munich		17 May 2021 R		schard, Marc
CATEGORY OF CITED DOCUMENTS X: particularly relevant if taken alone Y: particularly relevant if combined with another document of the same category A: technological background O: non-written disclosure P: intermediate document		T : theory or principle E : earlier patent doo after the filling date D : dooument cited in L : dooument cited fo	ument, but publication rother reasons	shed on, or
			& : member of the same patent family, corresponding	

EP 3 816 307 A3

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 20 20 3912

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

17-05-2021

	Patent document cited in search report	Publication date	Patent family member(s)	Publication date
	EP 3150294 A1	05-04-2017	CN 106560274 A EP 3150294 A1 ES 2664451 T3 PL 3150294 T3 US 2017095848 A1	12-04-2017 05-04-2017 19-04-2018 29-06-2018 06-04-2017
	CN 102703808 B	14-05-2014	NONE	
	CN 106282796 B	27-03-2018	NONE	
	CN 101844162 A	29-09-2010	NONE	
DRM P0459				

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82