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SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:
EP 16 77 20 44

Classification of the application (IPC):

C22C 38/60, C21D 8/02, C21D 9/46, C21D 6/00, C23C 2/28, C23C 2/40,
C25D 3/22, C22C 38/00, C22C 38/02, C22C 38/04, C22C 38/06, C22C 38/08,
C22C 38/12, C22C 38/14, C22C 38/38, C22C 38/16

Technical fields searched (IPC):

C21D, C23C, C22C

DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
Y	US 2014182748 A1 (NAKAGAITO TATSUYA [JP] ET AL) 03 July 2014 (2014-07-03) * abstract * * paragraph [0030] - paragraph [0072] * * paragraph [0081] - paragraph [0082] * * claims 1-6 *	1-8
Y	JP 2014095155 A (NIPPON STEEL & SUMITOMO METAL CORP) 22 May 2014 (2014-05-22) * abstract * * paragraph [0001] * * paragraph [0005] - paragraph [0006] * * claim 1 *	1-8
A	US 2014290810 A1 (KIMURA HIDEYUKI [JP] ET AL) 02 October 2014 (2014-10-02) * abstract * * tables 2,4 * * paragraph [0135] *	6-8
A	US 2014241933 A1 (NIPPON STEEL & SUMITOMO MTAL) 28 August 2014 (2014-08-28) * abstract *	1-8
A	JP 2014133944 A (KOBE STEEL LTD) 24 July 2014 (2014-07-24) * abstract *	1-8

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

Place of search The Hague	Date of completion of the search 10 July 2018	Examiner Vermeulen, Yves
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CATEGORY OF CITED DOCUMENTS

X: particularly relevant if taken alone
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E: earlier patent document, but published on, or after the filing date
D: document cited in the application
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Application number:
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DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
A	<p>CHIAKI OUCHI ET AL: "The Effect of Hot Rolling Condition and Chemical Composition on the Onset Temperature of [gamma]-[alpha] Transformation after Hot Rolling" <i>TRANSACTIONS OF THE IRON AND STEEL INSTITUTE OF JAPAN</i> JP 01 January 1982 (1982-01-01), vol. 22, no. 3, DOI: 10.2355/isijinternational1966.22.214, ISSN: 0021-1583, pages 214-222, XP055457563 * the whole document *</p>	6-8

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

Place of search The Hague	Date of completion of the search 10 July 2018	Examiner Vermeulen, Yves
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A: technological background	E: earlier patent document, but published on, or after the filing date
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ANNEX TO SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:
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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 10-07-2018
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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2014182748 A1	03-07-2014	CA 2712226 A1	06-08-2009
		CN 101932744 A	29-12-2010
		CN 103146992 A	12-06-2013
		EP 2258886 A1	08-12-2010
		JP 5369663 B2	18-12-2013
		JP 2009203548 A	10-09-2009
		KR 20100092503 A	20-08-2010
		TW 200940722 A	01-10-2009
		US 2011139315 A1	16-06-2011
		US 2014182748 A1	03-07-2014
		US 2009096344 A1	06-08-2009
		JP 2014095155 A	22-05-2014
JP 2014095155 A	22-05-2014		
US 2014290810 A1	02-10-2014	CN 103857817 A	11-06-2014
		EP 2767604 A1	20-08-2014
		JP 5408314 B2	05-02-2014
		JP 2013100594 A	23-05-2013
		KR 20140068183 A	05-06-2014
		TW 201315819 A	16-04-2013
		US 2014290810 A1	02-10-2014
		WO 2013054464 A1	18-04-2013
US 2014241933 A1	28-08-2014	BR 112014000063 A2	14-02-2017
		CA 2841061 A1	10-01-2013
		CN 103781932 A	07-05-2014
		EP 2730672 A1	14-05-2014
		ES 2665318 T3	25-04-2018
		KR 20140030335 A	11-03-2014
		RU 2014104025 A	20-08-2015
		US 2014241933 A1	28-08-2014
		US 2013005618 A1	10-01-2013
		JP 2014133944 A	24-07-2014
JP 5632947 B2	26-11-2014		
JP 5867883 B2	24-02-2016		
JP 2014133944 A	24-07-2014		
JP 2015025208 A	05-02-2015		
KR 20150068501 A	19-06-2015		
US 2015299834 A1	22-10-2015		
US 2014092025 A1	19-06-2014		