



SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:
EP 18 85 36 01

Classification of the application (IPC):

C22C 38/00, C22C 38/02, C22C 38/04, C22C 38/06, C22C 38/08, C22C 38/12, C22C 38/14, C22C 38/16, C22C 38/18, C22C 38/42, C22C 38/44, C22C 38/46, C22C 38/48, C22C 38/50, C22C 38/54, C22C 38/58, C21D 8/02, C21D 1/18, C21D 6/00

Technical fields searched (IPC):

C22C, C21D

DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
X	EP 2942414 A1 (JFE STEEL CORP [JP]) 11 November 2015 (2015-11-11) * claims 1-9 * * tables 1-5 * * paragraphs [0011] - [0067] *	1-6
X	EP 3135787 A1 (JFE STEEL CORP [JP]) 01 March 2017 (2017-03-01) * claims 1-4 * * tables 1-2 * * paragraphs [0011] - [0068] *	1-6
A	EP 3120941 A1 (JFE STEEL CORP [JP]) 25 January 2017 (2017-01-25) * claims 1-11 * * tables 1-2 * * paragraphs [0015] - [0093] *	1-6
A	WO 2016114146 A1 (JFE STEEL CORP [JP]) 21 July 2016 (2016-07-21) * claims 1-9 * * tables 1-2 * * paragraphs [0008] - [0025] *	1-6
A	JP 2015143398 A (JFE STEEL CORP) 06 August 2015 (2015-08-06) * the whole document *	1-6
A	EP 2765210 A1 (JFE STEEL CORP [JP]) 13 August 2014 (2014-08-13) * claims 1-5 * * tables 1-2 * * paragraphs [0020] - [0067] *	1-6

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 20 April 2020	Examiner Vlassi, Eleni
------------------------------	---	---------------------------

CATEGORY OF CITED DOCUMENTS

X: particularly relevant if taken alone	P: intermediate document
Y: particularly relevant if combined with another document of the same category	T: theory or principle underlying the invention
A: technological background	E: earlier patent document, but published on, or after the filing date
O: non-written disclosure	D: document cited in the application
& : member of the same patent family, corresponding document	L: document cited for other reasons

Disclaimer: this document has been automatically generated using data structured in accordance with WIPO standard ST.36 from the database of search reports of the European Patent Office. For technical reasons, its content and layout may differ from that of the original publication. Only the original published information is legally binding.



SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:
EP 18 85 36 01

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
A	EP 2617852 A1 (JFE STEEL CORP [JP]) 24 July 2013 (2013-07-24) * claims 1-4 * * claims 1-3 * * paragraphs [0015] - [0056] *	1-6

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 20 April 2020	Examiner Vlassi, Eleni
------------------------------	---	---------------------------

CATEGORY OF CITED DOCUMENTS

X: particularly relevant if taken alone	P: intermediate document
Y: particularly relevant if combined with another document of the same category	T: theory or principle underlying the invention
A: technological background	E: earlier patent document, but published on, or after the filing date
O: non-written disclosure	D: document cited in the application
& : member of the same patent family, corresponding document	L: document cited for other reasons

Disclaimer: this document has been automatically generated using data structured in accordance with WIPO standard ST.36 from the database of search reports of the European Patent Office. For technical reasons, its content and layout may differ from that of the original publication. Only the original published information is legally binding.


**ANNEX TO SUPPLEMENTARY EUROPEAN
SEARCH REPORT**

 Application number:
EP 18 85 36 01

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 20-04-2020
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 2942414	A1	11-11-2015	CA 2899570 A1	18-09-2014
			CN 105008570 A	28-10-2015
			EP 2942414 A1	11-11-2015
			JP 5928654 B2	01-06-2016
			JP WO2014141697 A1	16-02-2017
			KR 20150114574 A	12-10-2015
			KR 20170030095 A	16-03-2017
			SG 11201505732R A	28-08-2015
			US 2016010192 A1	14-01-2016
			WO 2014141697 A1	18-09-2014
			EP 3135787	A1
CN 106232850 A	14-12-2016			
EP 3135787 A1	01-03-2017			
JP 5871109 B1	01-03-2016			
JP WO2015162939 A1	13-04-2017			
KR 20160143732 A	14-12-2016			
SG 11201608464U A	29-11-2016			
US 2017044639 A1	16-02-2017			
WO 2015162939 A1	29-10-2015			
EP 3120941	A1	25-01-2017		
			EP 3120941 A1	25-01-2017
			JP 6156574 B2	05-07-2017
			JP WO2015140846 A1	06-04-2017
			KR 20160124847 A	28-10-2016
			NO 3120941 T3	25-08-2018
			SG 11201607711X A	29-11-2016
			US 2017088913 A1	30-03-2017
			WO 2015140846 A1	24-09-2015
			WO 2016114146	A1
CN 107208212 A	26-09-2017			
EP 3246426 A1	22-11-2017			
JP 6048626 B1	21-12-2016			
JP WO2016114146 A1	27-04-2017			
KR 20170095307 A	22-08-2017			
SG 11201704242T A	29-06-2017			
US 2017369958 A1	28-12-2017			
WO 2016114146 A1	21-07-2016			
JP 2015143398	A	06-08-2015		
			JP 2015143398 A	06-08-2015



ANNEX TO SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:
EP 18 85 36 01

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 20-04-2020
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent document cited in search report	Publication date	Patent family member(s)	Publication date	
EP 2765210	A1	13-08-2014	CN 103874777 A	18-06-2014
		EP 2765210 A1	13-08-2014	
		JP 5817832 B2	18-11-2015	
		JP 5924058 B2	25-05-2016	
		JP 2013091845 A	16-05-2013	
		JP WO2013051231 A1	30-03-2015	
		KR 20140064933 A	28-05-2014	
		SG 11201400459W A	29-05-2014	
		US 2014246131 A1	04-09-2014	
		WO 2013051231 A1	11-04-2013	
		EP 2617852	A1	24-07-2013
EP 2617852 A1	24-07-2013			
JP 5029749 B2	19-09-2012			
JP 2012062558 A	29-03-2012			
KR 20130080037 A	11-07-2013			
US 2013167985 A1	04-07-2013			
WO 2012036309 A1	22-03-2012			