



SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:
EP 17 88 45 36

Classification of the application (IPC):
B22D 11/20, B22D 11/128, B22D 11/12, B21B 1/46

Technical fields searched (IPC):
B22D, B21B

DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
X	JP 2000005853 A (SUMITOMO METAL IND; SUMITOMO HEAVY INDUSTRIES) 11 January 2000 (2000-01-11) * abstract * * paragraphs [0001], [0005], [0006], [0017], [0018], [0036], [0038] - [0042], [0046], [0047] * * figures 1,4,5 *	1-9
A	JP 2016179485 A (KOBE STEEL LTD) 13 October 2016 (2016-10-13) * paragraphs [0006], [0007], [0011], [0013] * * figures 1,2 *	1-9
A	JP H0433757 A (NIPPON STEEL CORP) 05 February 1992 (1992-02-05) * abstract * * figures 4,5 *	1-9

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 13 August 2019	Examiner Grave, Christian
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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

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ANNEX TO SUPPLEMENTARY EUROPEAN SEARCH REPORT

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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 13-08-2019
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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
JP 2000005853 A	11-01-2000	JP 3452799 B2 JP 2000005853 A	29-09-2003 11-01-2000
JP 2016179485 A	13-10-2016	NONE	
JP H0433757 A	05-02-1992	JP H0433757 A JP H0692022 B2	05-02-1992 16-11-1994