

SUPPLEMENTARY EUROPEAN SEARCH REPORT

Classification of the application (IPC): Technical fields searched (IPC): G01N 29/06, G01N 29/32, G01N 29/44, G01N 29/22, G01N 29/265, G01N 29/28 G01N

DOCUMENTS CONSIDERED TO BE RELEVANT				
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim		
x	US 2019242854 A1 (MATSUI YUTAKA [JP] ET AL) 08 August 2019 (2019-08-08) * abstract; figures 6a-11b * * paragraphs [0047] - [0073] *	1, 5, 6, 13-15		
x	KR 101995418 B1 (SHIN YOUNG CO LTD [KR]) 02 July 2019 (2019-07-02) * abstract; figures 2,3 * * paragraphs [0029] - [0071] *	1-15		
х	JP H06265529 A (HITACHI LTD; HITACHI CONSTRUCTION MACHINERY) 22 September 1994 (1994-09-22) * abstract; figures 1-8 * * paragraphs [0025] - [0038] *	1, 13-15		

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 18 October 2023	Examiner Uttenthaler, Erich		
CATEGORY OF CITED DOCUMENTS				
X: particularly relevant if taken alone Y: particularly relevant if combined with another document of the same category	P: intermediate documen T: theory or principle und E: earlier patent docume			

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& : member of the same patent family, corresponding document

- D: document cited in the application
- L: document cited for other reasons

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ANNEX TO SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number: EP 20 88 25 61

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 18-10-2023 The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent document cited Publication Publication Patent family in search report date member(s) date US 2019242854 A1 08-08-2019 CN 109564197 A 02-04-2019 EΡ 3489676 A1 29-05-2019 JP 6274378 B1 07-02-2018 JP WO2018016303 A1 19-07-2018 KR 20190016086 A 15-02-2019 RU 2704429 C1 30-10-2019 US 2019242854 A1 08-08-2019 WO 2018016303 A1 25-01-2018 KR 101995418 B1____ 02-07-2019 NONE А 22-09-1994 JP H06265529 NONE

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