



## SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:  
EP 21 78 84 13

Classification of the application (IPC):  
F01N 1/12

Technical fields searched (IPC):  
F01N

DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
X A	JP 2002235522 A (KOMATSU MFG CO LTD) 23 August 2002 (2002-08-23) * paragraph [0017] - paragraph [0023]; figure 1 *	1, 4, 5, 7, 10, 12 2, 3, 6, 8, 9, 11
X	US 3042138 A (RICHARD REINERT) 03 July 1962 (1962-07-03) * column 1, line 54 - column 2, line 27; figure 2 *	1, 2, 4-7, 12
X	US 5376341 A (GULATI SURESH T [US]) 27 December 1994 (1994-12-27) * column 1, line 42 - column 2, line 20; figure 1 *	1, 4, 5, 7, 12

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 Munich	Date of completion of the search 08 March 2024	Examiner Zebst, Marc
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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 08-03-2024  
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
JP 2002235522	A	23-08-2002	NONE	
US 3042138	A	03-07-1962	NONE	
US 5376341	A	27-12-1994	EP 0579956 A1 JP H06101466 A US 5376341 A	26-01-1994 12-04-1994 27-12-1994