



SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:
EP 21 92 70 36

Classification of the application (IPC):
B61L 27/00, B61L 19/06

Technical fields searched (IPC):
B61L

DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
X	CN 111923931 A (BEIJING NAT RAILWAY RES & DESIGN INST SIGNAL & COMMUNICATION LTD) 13 November 2020 (2020-11-13) * abstract; figures 1-11 *	1-10
E	& EP 4101719 A1 (CRSC RESEARCH & DESIGN INSTITUTE GROUP CO LTD [CN]) 14 December 2022 (2022-12-14) * paragraphs [0001], [0004] - [0023], [0028] - [0082]; figures 1-11 *	1-10
X	CN 111994131 A (BEIJING NAT RAILWAY RES & DESIGN INST SIGNAL & COMMUNICATION LTD) 27 November 2020 (2020-11-27) * paragraphs [0008] - [0026], [0029] - [0098]; figures 1-10 *	1-10
A	DE 19641521 C1 (SIEMENS AG [DE]; DEUTSCHE BAHN AG [DE]) 09 April 1998 (1998-04-09) * column 2, line 7 - line 32 * * column 3, line 13 - column 4, line 3 * * figures 1,2 *	1-10

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 04 August 2023	Examiner Massalski, Matthias
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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 04-08-2023
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Patent document cited in search report		Publication date	Patent family member(s)	Publication date	
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			EP	4101719 A1	14-12-2022
			WO	2022077967 A1	21-04-2022
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			EP	4101719 A1	14-12-2022
			WO	2022077967 A1	21-04-2022
CN 111994131	A	27-11-2020	NONE		
DE 19641521	C1	09-04-1998	NONE		