



SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:
EP 20 88 11 38

Classification of the application (IPC):
E21D 21/00

Technical fields searched (IPC):
E21D

DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
Y	CN 104343460 A (XUZHOU MINING BUSINESS GROUP CO LTD) 11 February 2015 (2015-02-11) * paragraphs [0016] - [0025]; figures 1-3 *	1-9
Y	CN 108754339 A (HE MANCHAO; XIA MIN) 06 November 2018 (2018-11-06) * paragraphs [0028] - [0051]; figures 1-7 *	1-9
A	US 2013115013 A1 (HE MANCHAO [CN]) 09 May 2013 (2013-05-09) * the whole document *	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 Munich	Date of completion of the search 31 October 2022	Examiner Simunec, Duro
---------------------------	---	---------------------------

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 20 88 11 38

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 31-10-2022
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
CN 104343460	A	11-02-2015	<i>NONE</i>	
CN 108754339	A	06-11-2018	<i>NONE</i>	
US 2013115013	A1	09-05-2013	CN 101858225 A	13-10-2010
			US 2013115013 A1	09-05-2013
			WO 2011153810 A1	15-12-2011