



Europäisches
Patentamt
European
Patent Office
Office européen
des brevets

SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:
EP 22 94 37 31

Classification of the application (IPC):
C22C 29/08, B22F 5/00

Technical fields searched (IPC):
C22C, B22F

DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
Y	MASARU KAWAKAMI ET AL: "Effect of Sintering Cooling Rate on V Segregation Amount at WC/Co Interface in VC-doped WC-Co Fine-Grained Hardmetal" <i>J. JPN. SOC. POWDER METALLURGY</i> , 15 August 2004 (2004-08-15), vol. 51, no. 8, pages 576-585, XP093199791 * the whole document *	1-10
Y	KAWAKAMI MASARU ET AL: "Segregation layers of grain growth inhibitors at WC/WC interfaces in VC-doped submicron-grained WC-Co cemented carbides" <i>INTERNATIONAL JOURNAL OF REFRACTORY METALS AND HARD MATERIALS</i> AMSTERDAM, NL, 26 June 2015 (2015-06-26), vol. 52, DOI: 10.1016/j.ijrmhm.2015.06.014, ISSN: 0263-4368, pages 229-234, XP093199796 * the whole document *	1-10
Y	JAROENWORALUCK A. ET AL: "Segregation of Vanadium at the WC/Co Interface in VC-doped WC-Co" <i>JOURNAL OF MATERIALS RESEARCH</i> US, 01 September 1998 (1998-09-01), vol. 13, no. 9, DOI: 10.1557/JMR.1998.0341, ISSN: 0884-2914, pages 2450-2452, XP093199797 * the whole document *	1-10
Y	CN 110578067 A (ZHUZHOU CEMENTED CARBIDE GROUP CO LTD) 17 December 2019 (2019-12-17) * claim 2 *	1-10
Y	LAN SUN ET AL: "VC, CrCdoped ultrafine WC Co cemented carbides prepared by spark plasma sintering" <i>INTERNATIONAL JOURNAL OF REFRACTORY METALS AND HARD MATERIALS, ELSEVIER, AMSTERDAM, NL</i> , 08 September 2010 (2010-09-08), vol. 29, no. 2, DOI: 10.1016/J.IJRMHM.2010.09.004, ISSN: 0263-4368, pages 147-152, XP028127591 * figure 5 * * table 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 13 September 2024	Examiner Traon, Nicolas
------------------------------	---	----------------------------

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.



SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:
EP 22 94 37 31

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
X	JP 2006131974 A (SUMITOMO ELECTRIC INDUSTRIES; SUMITOMO ELEC HARDMETAL CORP) 25 May 2006 (2006-05-25) * claims 1, 5 * * Samples no. 1-5;table 2 * * paragraph [0022] *	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 13 September 2024	Examiner Traon, Nicolas
------------------------------	---	----------------------------

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 22 94 37 31

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 13-09-2024
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
CN 110578067	A	17-12-2019	NONE	
JP 2006131974	A	25-05-2006	NONE	