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08.03.89 Bulletin 89/10(71) Applicant: **UNITED KINGDOM ATOMIC
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Patents Branch United Kingdom Atomic
Energy Authority 11 Charles II Street
London SW1Y 4QP(GB)**(54) **Metal matrix composites.**

(57) A composite material comprising a refractory, inorganic filler material (e.g. SiC or Al₂O₃) in a matrix of aluminium or an aluminium-containing alloy is made by incorporating the filler material into the aluminium or aluminium-containing alloy at a temperature above its liquidus, e.g. by vacuum stirring, followed by cooling to solidify the composite. In order to improve the wettability of the filler by the molten metal, the filler has a bismuth additive, for example in the form of a bismuth compound such as bismuth oxide, dispersed therein. This may be done by intimately mixing elemental bismuth with particulate filler followed by oxidation of the bismuth to bismuth oxide. e.g. by heating in air.

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
X	PATENT ABSTRACTS OF JAPAN, vol. 10, no. 123 (C-344)[2180], 8th May 1986; & JP-A-60 251 150 (OKUNO SEIYAKU KOGYO K.K.) 11-12-1985 * Abstract *	1-2,8-10	C 22 C 1/10
Y	IDEM ---	3-7	
Y	GB-A- 959 442 (E.I. DU PONT DE NEMOURS) * Claim 4; page 6, lines 41-46; page 12, lines 16-19 *	3-7	
A	US-A-4 189 522 (S. MORI) * Claims 1,8 *	1-10	
A	FR-A-1 276 929 (THE BENDIX CORP.) * Abstract 1 *	1-10	
A	DE-B-1 111 836 (THE GENERAL ELECTRIC CO.) * Claim 1 *	1	
			TECHNICAL FIELDS SEARCHED (Int. Cl.4)
			C 22 C
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 02-12-1988	Examiner SCHRUERS H.J.
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			