(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) EP 1 129 824 A3

(12) EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
12.11.2003 Bulletin 2003/46

(43) Date of publication A2:
05.09.2001 Bulletin 2001/36

(21) Application number: **01103964.1**

(22) Date of filing: **19.02.2001**

(51) Int Cl.[7]: **B24D 3/28**, B24D 3/08, B24D 5/04

(84) Designated Contracting States:
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR
Designated Extension States:
AL LT LV MK RO SI

(30) Priority: **02.03.2000 JP 2000056923**

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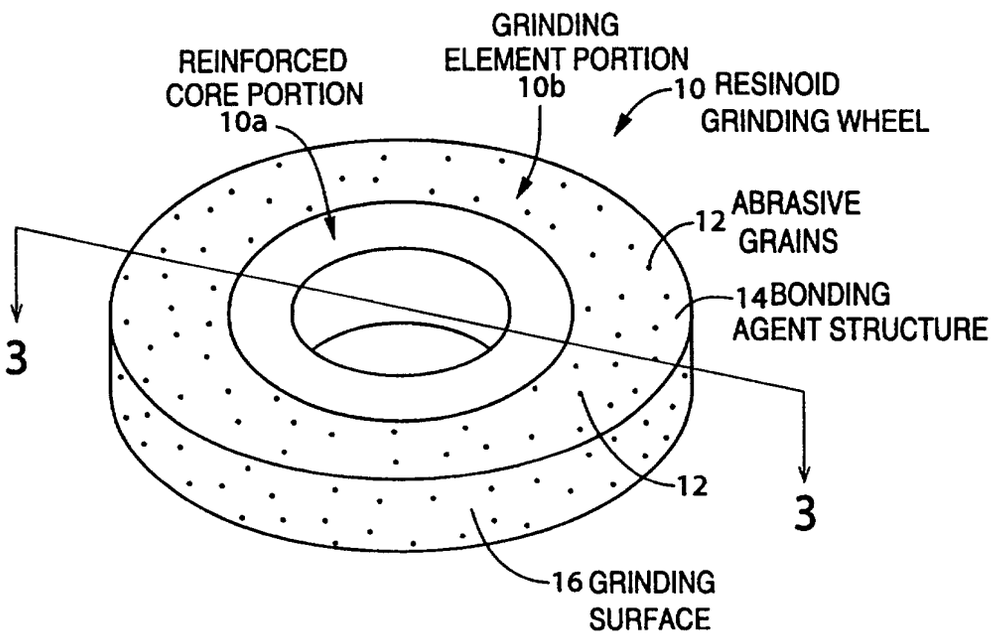
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(54) Resinoid grinding wheel having core portion made of metallic material

(57) A grinding wheel (10) including a reinforced core portion (10a) and a grinding portion (10b) which is located radially outwardly of the reinforced core portion and which has an abrasive structure in which abrasive grains (12) are held together by a bonding agent (18) in the form of a thermosetting resin. The grinding wheel is characterized in that the reinforced core portion is made of a metallic material which has a thermal expansion coefficient ranging from α-(5×10^{-6}) [1/°C] to α+(5×10^{-6}) [1/°C], where α represents a thermal expansion coefficient of the grinding portion.

FIG. 1



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EUROPEAN SEARCH REPORT

Application Number
EP 01 10 3964

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.7)
A	US 5 834 569 A (RAMANATH SRINIVASAN ET AL) 10 November 1998 (1998-11-10) * claim 1 *	1-6	B24D3/28 B24D3/08 B24D5/04
A	PATENT ABSTRACTS OF JAPAN vol. 2000, no. 05, 14 September 2000 (2000-09-14) & JP 2000 052258 A (TOYODA MACH WORKS LTD), 22 February 2000 (2000-02-22) * abstract *	1-6	
A	PATENT ABSTRACTS OF JAPAN vol. 015, no. 244 (M-1127), 24 June 1991 (1991-06-24) & JP 03 079277 A (MIZUHO KENMA TOISHI KK), 4 April 1991 (1991-04-04) * abstract *	1-6	
A	EP 0 260 850 A (BRITISH PETROLEUM CO PLC) 23 March 1988 (1988-03-23) * claim 1 *	1-6	

TECHNICAL FIELDS SEARCHED (Int.Cl.7)

B24D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	19 September 2003	De Gussem, J

CATEGORY OF CITED DOCUMENTS

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EPO FORM 1503 03.82 (P04C01)

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19-09-2003

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5834569 A	10-11-1998	AT 187668 T	15-01-2000
		AU 4992096 A	08-10-1996
		BR 9607820 A	07-07-1998
		CA 2213845 A1	26-09-1996
		DE 69605656 D1	20-01-2000
		DE 69605656 T2	06-07-2000
		EP 0817701 A1	14-01-1998
		JP 3108104 B2	13-11-2000
		JP 10510222 T	06-10-1998
		KR 260669 B1	01-11-2000
		WO 9629179 A1	26-09-1996
		ZA 9601568 A	03-09-1996
JP 2000052258 A	22-02-2000	NONE	
JP 03079277 8 A		NONE	
EP 0260850 A	23-03-1988	AU 601764 B2	20-09-1990
		AU 7797587 A	24-03-1988
		CA 1282246 C	02-04-1991
		DE 3774981 D1	16-01-1992
		EP 0260850 A2	23-03-1988
		JP 2622386 B2	18-06-1997
		JP 63092445 A	22-04-1988
		US 4859542 A	22-08-1989
		US 4911625 A	27-03-1990

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82