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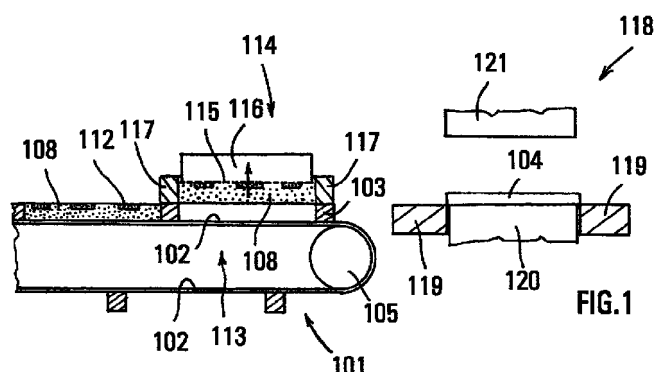
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(54) **Method and means for transfer of granular materials**

(57) A method includes preparing together first layer means (112, 209, 256) and second layer means (108) in order to form layer means (108, 112; 108, 209; 108, 256) of ceramic granular material on support means (102), subjecting at least a portion of said layer means (108, 112; 108, 209; 108, 256) to a vacuum, to transfer together said first layer means (112, 209, 256) and said second layer means (108) of at least a portion of said layer means (108, 112; 108, 209; 108, 256) and pressing said at least a portion of said layer means (108, 112; 108, 209; 108, 256) in order to obtain a ceramic tile (104); an apparatus includes preparing means (206, 213, 210) arranged in order to prepare together first layer means (108) and second layer means (112; 209, 256) of layer means (108, 112; 108, 209; 108, 256) of ceramic granular material on support means (102) and transfer means (114) arranged to transfer together said first layer means (108) and said second layer means (112; 209, 256) into pressing means (118) through vacuum means in order to obtain a ceramic tile (104).





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EUROPEAN SEARCH REPORT

Application Number
EP 99 11 8949

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)
X,P	EP 0 927 687 A (ALGERI MARIS ;CAMORANI CARLO ANTONIO (IT)) 7 July 1999 (1999-07-07) * the whole document * * column 8, line 46 - column 14, line 49 * * claims 15-35 * * figures 12-32 * ----	1-17	B28B5/00 B28B13/02
X	EP 0 858 873 A (GRUPPO CONCORDE S P A) 19 August 1998 (1998-08-19) * the whole document * * column 4, line 21 - column 5, line 57 * * figures 1-9 *	1,11,15	
A	----	2,3,5,7, 9,10, 12-14,16	
A	US 5 019 200 A (KAWABATA SHOICHI ET AL) 28 May 1991 (1991-05-28) * the whole document * ----	1,2,7, 10-12, 15,16	
A	US 4 306 595 A (LONGINOTTI ALFREDO) 22 December 1981 (1981-12-22) * the whole document * ----	1,10,11, 15	TECHNICAL FIELDS SEARCHED (Int.Cl.7) B28B
A	EP 0 860 256 A (SACMI) 26 August 1998 (1998-08-26) * the whole document * ----	1,10,11, 15	
A	WO 98 23424 A (ALGERI MARIS ;CAMORANI CARLO ANTONIO (IT)) 4 June 1998 (1998-06-04) * the whole document * ----	1-3,5-7, 9,11-14, 17	
A	EP 0 569 070 A (MASS SPA) 10 November 1993 (1993-11-10) * the whole document * -----	1,10,11, 15	
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 27 October 2000	Examiner Gourier, P
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			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 99 11 8949

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
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27-10-2000

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0927687 A	07-07-1999	IT M0970233 A EP 0997248 A	23-06-1999 03-05-2000
EP 0858873 A	19-08-1998	IT MI970347 A	18-08-1998
US 5019200 A	28-05-1991	JP 2162710 A JP 6070941 B CA 2005554 A,C DE 3941346 A GB 2228368 A,B	22-06-1990 07-09-1994 15-06-1990 21-06-1990 22-08-1990
US 4306595 A	22-12-1981	IT 1104301 B DE 2949737 A ES 487138 A FR 2444543 A JP 55086704 A	21-10-1985 03-07-1980 16-09-1980 18-07-1980 30-06-1980
EP 0860256 A	26-08-1998	IT B0970080 A	21-08-1998
WO 9823424 A	04-06-1998	IT M0960151 A IT M0970004 A IT M0970005 A AU 5120198 A EP 0939691 A	22-05-1998 16-07-1998 16-07-1998 22-06-1998 08-09-1999
EP 0569070 A	10-11-1993	IT 1257499 B AT 154279 T DE 69311439 D	25-01-1996 15-06-1997 17-07-1997

EPO FORM P0459

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