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(54) Title: METHOD FOR THE TREATMENT OF FISSURES IN CONCRETE STRUCTURES

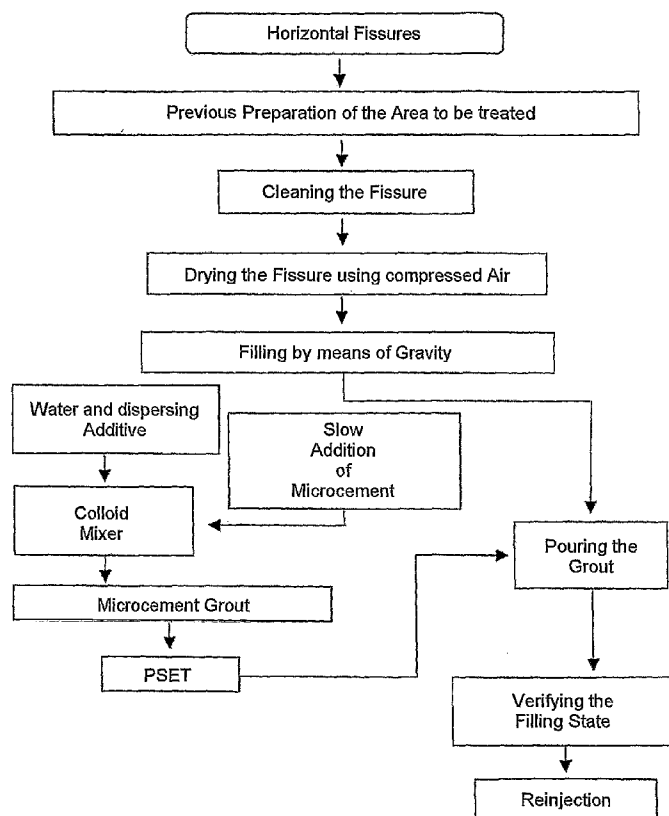


Fig. 1

(57) Abstract: A method for the treatment of fissures (11) in concrete structures by means of repairing them with microcement-based material, comprising a method wherein the fissures, both horizontal and vertical or inclined fissures, are identified and analyzed. The treatment of the mentioned horizontal fissures comprises cleaning them and drying their surface using compressed air and subsequently filling them by means of gravity, the grout being poured with the help of a "pset". The vertical or inclined fissures are treated by demarcating the sites for drilling and inserting the injector nozzles that permit cleaning and saturating the fissures with water, followed by the injection of the microcement grout under pressure.

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<b>B. FIELDS SEARCHED</b>		
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Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, PAJ		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
<b>Category*</b>	<b>Citation of document, with indication, where appropriate, of the relevant passages</b>	<b>Relevant to claim No.</b>
X	- ANONYMOUS: "Product Data Sheet, edition 1: Sika Addiment Microcem A / Sika Microcement 550" SIKA CONSTRUCTION, [Online] 2004, pages 1-3, XP002473377 Retrieved from the Internet: URL: <a href="http://www.sika.cn/cn_con-tds-microcem_a_n_microcement_550.pdf">http://www.sika.cn/cn_con-tds-microcem_a_n_microcement_550.pdf</a> the whole document	1,2,4
A	DE 43 01 985 A1 (BILFINGER BERGER BAU [DE]) 29 July 1993 (1993-07-29) column 2, lines 2-26	1,8,9
A	DE 91 16 109 U1 (DYCKERHOFF & WIDMANN AG, 8000 MUENCHEN, DE) 27 February 1992 (1992-02-27) pages 5,6	1,10-12
	----- -/--	
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C.	<input checked="" type="checkbox"/> See patent family annex.	
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Date of the actual completion of the international search	Date of mailing of the international search report	
19 March 2008	19/08/2008	
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer  Saretta, Guido	

## INTERNATIONAL SEARCH REPORT

 International application No  
 PCT/IB2007/003171

## C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 769 939 A (DINGS YR ELDAR O [NO] ET AL) 23 June 1998 (1998-06-23) column 1, line 16 - column 2, line 57 -----	1
A	EP 0 748 782 A (SOFITECH NV [BE]) 18 December 1996 (1996-12-18) page 3, lines 1-50 -----	1
A	EP 0 299 121 A (YAMAZOE TOYOHISA) 18 January 1989 (1989-01-18) pages 8-9; figures 14,15 -----	1
A	GB 2 254 642 A (KING TECH REHABILITATION CO LT [TW]) 14 October 1992 (1992-10-14) pages 5-6 -----	1
A	DE 299 16 603 U1 (KAIM UWE [DE]) 15 February 2001 (2001-02-15) the whole document -----	1-12

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No  
PCT/IB2007/003171

Patent document cited in search report	Publication date	Patent family member(s)	Publication date																											
DE 4301985	A1	29-07-1993	NONE																											
DE 9116109	U1	27-02-1992	NONE																											
US 5769939	A	23-06-1998	NONE																											
EP 0748782	A	18-12-1996	<table style="width: 100%; border: none;"> <tr> <td style="width: 10%;">CA</td> <td style="width: 40%;">2178707 A1</td> <td style="width: 50%;">14-12-1996</td> </tr> <tr> <td>DE</td> <td>69632610 D1</td> <td>08-07-2004</td> </tr> <tr> <td>DE</td> <td>69632610 T2</td> <td>30-06-2005</td> </tr> <tr> <td>DK</td> <td>748782 T3</td> <td>11-10-2004</td> </tr> <tr> <td>FR</td> <td>2735465 A1</td> <td>20-12-1996</td> </tr> <tr> <td>GB</td> <td>2302091 A</td> <td>08-01-1997</td> </tr> <tr> <td>ID</td> <td>17225 A</td> <td>11-12-1997</td> </tr> <tr> <td>NO</td> <td>962474 A</td> <td>16-12-1996</td> </tr> <tr> <td>US</td> <td>6312515 B1</td> <td>06-11-2001</td> </tr> </table>	CA	2178707 A1	14-12-1996	DE	69632610 D1	08-07-2004	DE	69632610 T2	30-06-2005	DK	748782 T3	11-10-2004	FR	2735465 A1	20-12-1996	GB	2302091 A	08-01-1997	ID	17225 A	11-12-1997	NO	962474 A	16-12-1996	US	6312515 B1	06-11-2001
CA	2178707 A1	14-12-1996																												
DE	69632610 D1	08-07-2004																												
DE	69632610 T2	30-06-2005																												
DK	748782 T3	11-10-2004																												
FR	2735465 A1	20-12-1996																												
GB	2302091 A	08-01-1997																												
ID	17225 A	11-12-1997																												
NO	962474 A	16-12-1996																												
US	6312515 B1	06-11-2001																												
EP 0299121	A	18-01-1989	NONE																											
GB 2254642	A	14-10-1992	NONE																											
DE 29916603	U1	15-02-2001	NONE																											