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(54) **Locking assurance construction**

(57) The invention concerns a locking assurance construction in an extension joint for precast reinforced concrete piles. The first reinforced concrete pile (P1) and the second reinforced concrete pile (P2) have, at their interconnectible ends (11, 12), lock housings (2a) provided with transverse holes (3a), and lock spindles (2b) provided with transverse holes (3b). The lock housings and lock spindles extend one within the other with said transverse holes in line with each other. Said locking assurance construction comprises a locking ring (4) in each internal extension (13) of the transverse holes (3a) in the

lock housings (2a). Said locking ring has between its outer diameter (D1) and inner diameter (D2) a continuous peripheral segment (5), and between the inner diameter (D2) and the bore diameter (D3) of a central aperture (15), spring tabs (6) separated from each other by radial slots (9). Said locking assurance construction also comprises in the insert pins (16), a cylindrical or cross-sectionally polygonal inner end (7), having an engagement diameter (D4) which is less than the locking ring's inner diameter (D2) and more than the locking ring's bore diameter (D3).

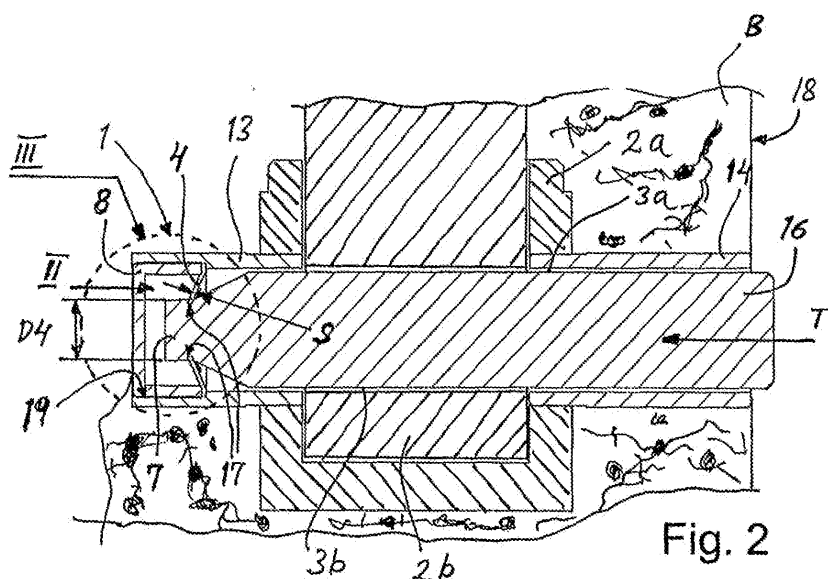


Fig. 2



EUROPEAN SEARCH REPORT

Application Number
EP 09 17 5649

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	EP 1 582 633 A2 (TERRATEST TECN ESPECIALES S A [ES]) 5 October 2005 (2005-10-05) * page 2, paragraph 12 - page 3, paragraph 19; figures 1-5 *	1-5	INV. E02D5/52
A	DE 85 04 456 U1 (OTTO, JOACHIM) 13 June 1985 (1985-06-13) * page 5, paragraph 6 - page 6, paragraph 4; figures 1-7 *	1-5	
A,D	SE 508 943 C2 (LEIMET OY [FI]) 16 November 1998 (1998-11-16) * the whole document *	1	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC) E02D
Place of search Munich		Date of completion of the search 24 April 2012	Examiner Friedrich, Albert
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.**

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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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24-04-2012

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
EP 1582633	A2	05-10-2005	EP	1582633 A2		05-10-2005
			ES	1057314 U		16-07-2004

DE 8504456	U1	13-06-1985	NONE			

SE 508943	C2	16-11-1998	AT	237036 T		15-04-2003
			AU	1446697 A		29-10-1997
			DE	69720708 D1		15-05-2003
			EP	0891454 A1		20-01-1999
			NO	965558 A		10-10-1997
			SE	508943 C2		16-11-1998
			SE	9604758 A		10-10-1997
			WO	9738173 A1		16-10-1997
