

Title (en)
FLUID RECOVERY

Title (de)
FLUIDRÜCKGEWINNUNG

Title (fr)
RÉCUPÉRATION DE FLUIDE

Publication
EP 1974124 A1 20081001 (DE)

Application
EP 06817489 A 20061214

Priority
• AT 2006000516 W 20061214
• AT 872006 A 20060119

Abstract (en)
[origin: WO2007082319A1] After a rock anchor (1), in particular an expandable friction tube anchor (1), comprising an anchor bolt (2) has been inserted into a pre-sunk borehole with an end sleeve (4) first, an adapter (6) having a liquid inflow and outflow is arranged on a sleeve (3). On the one hand, a holding pressure which secures the adapter (6) to the sleeve (3) is produced via a holding-pressure line (8). On the other hand, fluid flows into the anchor bolt (2) via an expansion line (7) and starts to fill said bolt. In the process, the increase in pressure (inflation pressure) causes the anchor bolt (2) to expand in the borehole, with the result that its outer surface presses against the borehole wall and thus secures the rock anchor (1) in the borehole. A gas supply connected to the adapter (6) makes it possible for a gas under pressure, in particular compressed air, to be introduced into the anchor bolt (2) before and/or after the expansion thereof. The compressed gas is relieved following the removal of the adapter (6) (pressure equalization) and conveys the fluid contained in the anchor bolt (2) virtually completely from the anchor (1).

IPC 8 full level
E21D 21/00 (2006.01)

CPC (source: EP KR US)
E21D 20/00 (2013.01 - EP US); **E21D 21/00** (2013.01 - KR); **E21D 21/004** (2013.01 - EP US); **E21D 21/0093** (2013.01 - EP US)

Citation (search report)
See references of WO 2007082319A1

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)
HR RS

DOCDB simple family (publication)
WO 2007082319 A1 20070726; AT 502825 A4 20070615; AT 502825 B1 20070615; AT E472044 T1 20100715; AU 2006336179 A1 20070726; AU 2006336179 B2 20110630; BR PI0613174 A2 20101221; CA 2610221 A1 20070726; CA 2610221 C 20140902; CL 2007000099 A1 20080118; CN 101198764 A 20080611; CN 101198764 B 20110608; DE 502006007295 D1 20100805; DK 1974124 T3 20101011; EP 1974124 A1 20081001; EP 1974124 B1 20100623; ES 2343652 T3 20100805; HK 1120588 A1 20090403; HR P20100381 T1 20100831; HR P20100381 T8 20101031; IL 187315 A0 20080413; IL 187315 A 20120131; JP 2009523929 A 20090625; JP 4958916 B2 20120620; KR 20080094653 A 20081023; NO 20082260 L 20081010; PL 1974124 T3 20101130; PT 1974124 E 20100727; RS 51379 B 20110228; RU 2007145054 A 20090610; RU 2398968 C2 20100910; SI 1974124 T1 20101029; US 2010074695 A1 20100325; US 8152416 B2 20120410; ZA 200710307 B 20090624

DOCDB simple family (application)
AT 2006000516 W 20061214; AT 06817489 T 20061214; AT 872006 A 20060119; AU 2006336179 A 20061214; BR PI0613174 A 20061214; CA 2610221 A 20061214; CL 2007000099 A 20070115; CN 200680021127 A 20061214; DE 502006007295 T 20061214; DK 06817489 T 20061214; EP 06817489 A 20061214; ES 06817489 T 20061214; HK 08111804 A 20081027; HR P20100381 T 20100709; IL 18731507 A 20071112; JP 2008550587 A 20061214; KR 20087005529 A 20080306; NO 20082260 A 20080516; PL 06817489 T 20061214; PT 06817489 T 20061214; RS P20100304 A 20061214; RU 2007145054 A 20061214; SI 200630782 T 20061214; US 91964406 A 20061214; ZA 200710307 A 20061214