

Title (en)
CONNECTING AN ANCHORING ROD TO A DRILLING TOOL

Title (de)
VERBINDUNG EINER ANKERSTANGE MIT EINEM BOHRGERÄT

Title (fr)
ASSEMBLAGE D'UNE TIGE D'ANCRAGE ET D'UN OUTIL DE FORAGE

Publication
EP 1407115 A1 20040414 (DE)

Application
EP 01274371 A 20010719

Priority
AT 0100247 W 20010719

Abstract (en)
[origin: US2004184872A1] An anchoring rod for rock anchoring (self-drilling injection bolts), includes an outer thread for connecting the anchoring rod to a drilling tool via a coupling sleeve. The end of the anchoring rod, which is screwed into the coupling sleeve, comprises a section which has a reduced diameter in comparison with the outer diameter of the anchoring rod. The free end of the section of the anchoring rod with the reduced diameter comprises a bevel. An open space is thus formed between the inner surface of the coupling sleeve and the reduced diameter end of the anchoring rod. The space stops the anchoring rod from becoming stuck in the coupling sleeve, even when the end of the rod is plastically deformed during the drilling process, so that the anchoring rod can be unscrewed from the coupling sleeve without applying significant force.

IPC 1-7
E21D 21/00; **E21B 17/042**

IPC 8 full level
E21D 20/00 (2006.01); **E02D 5/80** (2006.01); **E21B 17/042** (2006.01); **E21D 21/00** (2006.01)

CPC (source: EP US)
E21B 17/0426 (2013.01 - EP US); **E21D 21/0026** (2013.01 - EP US); **E21D 21/0053** (2016.01 - EP US); **Y10T 403/57** (2015.01 - EP US); **Y10T 403/5733** (2015.01 - EP US); **Y10T 403/5741** (2015.01 - EP US); **Y10T 403/5746** (2015.01 - EP US); **Y10T 403/5786** (2015.01 - EP US)

Citation (search report)
See references of WO 03008763A1

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)
US 2004184872 A1 20040923; **US 7044678 B2 20060516**; AT 8246 U2 20060415; AT 8246 U3 20100215; AT E320546 T1 20060415; CA 2454067 A1 20030130; CA 2454067 C 20091027; CN 100378294 C 20080402; CN 1535348 A 20041006; CZ 200459 A3 20040616; CZ 302129 B6 20101103; DE 50109210 D1 20060511; DK 1407115 T3 20060410; EP 1407115 A1 20040414; EP 1407115 B1 20060315; ES 2258061 T3 20060816; HK 1067401 A1 20050408; JP 2004522030 A 20040722; JP 4570871 B2 20101027; NO 20040209 L 20040315; NO 333038 B1 20130218; PL 198229 B1 20080630; PL 367345 A1 20050221; PT 1407115 E 20060531; SI 1407115 T1 20060831; SK 287944 B6 20120604; SK 352004 A3 20050804; WO 03008763 A1 20030130

DOCDB simple family (application)
US 48427004 A 20040513; AT 0100247 W 20010719; AT 01274371 T 20010719; AT 80762004 U 20041222; CA 2454067 A 20010719; CN 01823493 A 20010719; CZ 200459 A 20010719; DE 50109210 T 20010719; DK 01274371 T 20010719; EP 01274371 A 20010719; ES 01274371 T 20010719; HK 04107915 A 20041014; JP 2003515057 A 20010719; NO 20040209 A 20040116; PL 36734501 A 20010719; PT 01274371 T 20010719; SI 200130549 T 20010719; SK 352004 A 20010719