

Title (en)
METHOD FOR ANCHORING AN ATTACHMENT ELEMENT

Title (de)
VERFAHREN ZUM VERANKERN EINES BEFESTIGUNGSELEMENTS

Title (fr)
PROCÉDÉ DESTINÉ À L'ANCRAGE D'UN ÉLÉMENT DE FIXATION

Publication
EP 2192261 B1 20180523 (DE)

Application
EP 09175875 A 20091113

Priority
DE 102008044128 A 20081127

Abstract (en)
[origin: EP2192261A1] The method involves drilling a borehole (7) in a constructional component (6) with a percussively-rotationally driven hollow drill (12). The produced drillings and drilling dust are aspirated with a vacuum source (26) e.g. vacuum cleaner, between an outer side of the hollow drill and a borehole wall during drilling of the borehole. The borehole is filled with a self-hardenable mortar immediately after formation of the suction-cleaned borehole. A fastening element e.g. threaded rod, is inserted into the self-hardenable mortar. An independent claim is also included for a method for forming a cleaned borehole in a constructional component for anchoring a fastening element in a constructional component with a self-hardenable mortar.

IPC 8 full level
E21B 21/015 (2006.01); **E21D 20/00** (2006.01); **B23B 51/00** (2006.01); **B23Q 11/00** (2006.01); **B25D 17/18** (2006.01)

CPC (source: EP US)
E21B 21/015 (2013.01 - EP US); **E21D 20/003** (2013.01 - EP US); **Y10T 408/03** (2015.01 - EP US)

Citation (opposition)
Opponent : **Black & Decker Inc.**
• EP 1627705 B1 20071212 - HILTI AG [LI]
• DE 2912396 A1 19801009 - GUERGEN KARL HEINZ
• JP 2004268560 A 20040930 - KIKUCHI PLANT KK
• US 4291799 A 19810929 - BOWER JR ARNOLD B
• US 4098166 A 19780704 - LANG GUSZTAV
• US 4094222 A 19780613 - LANG GUSZTAV, et al
• "AC100 Plus™ Specification & Design Manual", POWERS FASTENERS, 2005, pages 1 - 24, XP055568763
• ANONYMOUS: "2003/2004 buyers guide", POWERS FASTENERS, 2003, pages 1 - 65, XP055568777
• ANONYMOUS: "2004/2005 buyers guide", POWERS FASTENERS, 2004, pages 3, 30 - 31, XP055568841

Cited by
CN106808434A; CN103470297A

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

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EP 2192261 A1 20100602; EP 2192261 B1 20180523; DK 2192261 T3 20180723; ES 2671373 T3 20180606; US 2010126112 A1 20100527

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EP 09175875 A 20091113; DK 09175875 T 20091113; ES 09175875 T 20091113; US 59252409 A 20091124