

Title (en)
METHOD AND DRILLING APPARATUS FOR DOWN-THE-HOLE DRILLING

Title (de)
VERFAHREN UND BOHRVORRICHTUNG FÜR ABWÄRTSLOCHBOHRUNGEN

Title (fr)
PROCEDE ET APPAREIL DE FORAGE POUR FORAGE EN FOND DE TROU

Publication
EP 2337918 A1 20110629 (EN)

Application
EP 09820305 A 20090903

Priority
• FI 2009050700 W 20090903
• FI 20085961 A 20081013

Abstract (en)
[origin: WO2010043757A1] The invention relates to a method and drilling apparatus for down-the-hole drilling, the drilling being carried out by a drilling apparatus, having a drilling device (1) that comprises a casing part (2) and at least during a drilling situation an essentially inside thereof existing drilling unit (3), at the drilling head of which there are at least first drilling means (4) for drilling a center hole, a second drilling means (5) for reaming the center hole for the casing part (2), a flushing flow arrangement (6) for leading of drilling waste by influence of the flushing medium to outside of the drilling device, at least partly upward along the outer surface of the drilling device (1), and a pressure medium operated hammering device for transmitting of a hammering motion (t4) to the drilling means (4, 5) for drilling. The first drilling means (4) are coupled with the second drilling means (5) first of all power-transmittedly in order to carry out cooperation thereof at least during a drilling situation with the second drilling means (5) for a rotational motion (w4), a feeding motion (z4) and the hammering motion (t4), and on the other hand removably in order to enable removal thereof from the hole. For producing the hammering motion (t4) a hammering device (7) is being used that is operated essentially by a water-based pressure medium, whereby at least a part of the water-based pressure medium operating the hammering device (7) is being used furthermore in the drilling as the flushing medium.

IPC 8 full level
E21B 4/14 (2006.01); **E21B 7/20** (2006.01); **E21B 21/00** (2006.01)

CPC (source: EP US)
E21B 4/14 (2013.01 - EP US); **E21B 7/20** (2013.01 - EP US); **E21B 10/40** (2013.01 - EP US)

Citation (search report)
See references of WO 2010043757A1

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

Designated extension state (EPC)
AL BA RS

DOCDB simple family (publication)
WO 2010043757 A1 20100422; EP 2337918 A1 20110629; FI 20085961 A0 20081013; US 2011198129 A1 20110818

DOCDB simple family (application)
FI 2009050700 W 20090903; EP 09820305 A 20090903; FI 20085961 A 20081013; US 200913123987 A 20090903