

Title (en)
A METHOD AND AN ARRANGEMENT FOR CONTROLLING A ROCK DRILL

Title (de)
VERFAHREN UND ANORDNUNG ZUR STEUERUNG EINES GESTEINSBOHRERS

Title (fr)
PROCÉDÉ ET DISPOSITION DE COMMANDE DE PERFORATRICE

Publication
EP 2342421 B8 20180207 (EN)

Application
EP 09819504 A 20091009

Priority
• SE 2009051137 W 20091009
• SE 0802169 A 20081010

Abstract (en)
[origin: WO2010042050A1] An arrangement and a method for controlling at least one drill parameter when drilling in rock with a rock drill, comprising an impulse-generating device arranged to induce shock waves in a tool acting against the rock with a percussive force generated via a shock wave-generating pressure. The arrangement also comprises a rotation- generating device arranged to supply a torque to the impact device with a rotation generated via a rotation pressure, and a pressurisable damping chamber arranged to at least partially regulate the rock drill's contact with the rock via the prevailing pressure in the damping chamber, in which connection the shock wave-generating pressure is regulated depending on the rotation pressure. The arrangement comprises a control system arranged to: determine a first parameter value representing the damping pressure or feed pressure, determine a second parameter value representing the drill bit's rotation pressure, determine a deviation between the above second parameter value and a rotation pressure reference value, determine a parameter reference value depending on the above deviation and regulate the percussion pressure based on a function of the above deviation and the above parameter reference value.

IPC 8 full level
E21B 44/00 (2006.01); **E21B 44/02** (2006.01); **E21B 44/04** (2006.01); **E21B 44/06** (2006.01)

CPC (source: EP SE US)
E21B 44/00 (2013.01 - EP SE US); **E21B 44/02** (2013.01 - EP US); **E21B 44/04** (2013.01 - SE); **E21B 44/06** (2013.01 - EP US)

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

DOCDB simple family (publication)
WO 2010042050 A1 20100415; AU 2009302895 A1 20100415; AU 2009302895 B2 20141127; CA 2735960 A1 20100415; CA 2735960 C 20170801; CN 102171411 A 20110831; CN 102171411 B 20150225; EP 2342421 A1 20110713; EP 2342421 A4 20160727; EP 2342421 B1 20171213; EP 2342421 B8 20180207; ES 2662011 T3 20180405; JP 2012505328 A 20120301; JP 5470394 B2 20140416; SE 0802169 A1 20100411; SE 533986 C2 20110322; US 2011147084 A1 20110623; US 8708058 B2 20140429; ZA 201101476 B 20120627

DOCDB simple family (application)
SE 2009051137 W 20091009; AU 2009302895 A 20091009; CA 2735960 A 20091009; CN 200980138938 A 20091009; EP 09819504 A 20091009; ES 09819504 T 20091009; JP 2011530999 A 20091009; SE 0802169 A 20081010; US 73787009 A 20091009; ZA 201101476 A 20110224