Title (en)

Automatic drill rod handling

Title (de)

Automatische Bohrstangenhandhabung

Title (fr)

Manipulation de tiges de forage automatique

Publication

EP 2799661 A3 20141217 (EN)

Application

EP 14166503 A 20140430

Priority

- FI 20135450 A 20130430
- FI 20136017 A 20131011

Abstract (en)

[origin: EP2799661A2] There is provided a manipulator (210) comprising a mounting base (212), a gripping unit (214) for gripping a drill rod (216), and a swivel arm (218) attached to the mounting base (212) and to the griping unit (214), wherein the swivel arm (218) comprises a plurality of swivels (220 to 230) between the mounting base (212) and the gripping unit (214); wherein the swivel arm (218) is configured to automatically move the gripping unit (214) according to a programmed three-dimensional trajectory between a first position (232) and a second position (234), wherein: in the first position (232), the gripping unit (214) is able to grip or release the drill rod (216) directly from/to a storage unit (202) for a plurality of drill rods, and in the second position (234), the gripping unit (214) is able to grip or release the drill rod (216) when the drill rod (216) is along a drilling axis (116) connected to a drill string (108) entering a borehole (110); and to automatically grip or release the drill rod (216) in the first position (232) or in the second position (234).

IPC 8 full level

E21B 19/20 (2006.01); **E21B 19/14** (2006.01); **E21B 19/15** (2006.01)

CPC (source: EP)

E21B 19/087 (2013.01); **E21B 19/14** (2013.01); **E21B 19/15** (2013.01); **E21B 19/155** (2013.01)

Citation (search report)

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- [A] US 2005161227 A1 20050728 - HAYES MICHAEL [US], et al
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Designated contracting state (EPC)

AL 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 RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

EP 2799661 A2 20141105; **EP 2799661 A3 20141217**; **EP 2799661 B1 20160217**; AU 2014202340 A1 20141113; AU 2014202340 B2 20171026; CA 2850746 A1 20141030; CA 2850746 C 20210316; CL 2014001102 A1 20150116; PL 2799661 T3 20160630

DOCDB simple family (application)

EP 14166503 A 20140430; AU 2014202340 A 20140430; CA 2850746 A 20140429; CL 2014001102 A 20140429; PL 14166503 T 20140430