Title (en)

PRESSURISED FLUID FLOW SYSTEM FOR A DTH HAMMER AND NORMAL CIRCULATION HAMMER BASED ON SAME

Title (de)

DRUCKFLUIDSTRÖMUNGSSYSTEM FÜR EINEN DTH-HAMMER UND NORMALZIRKULATIONSHAMMER AUF BASIS DAVON

Title (fr)

SYSTÈME D'ÉCOULEMENT DE FLUIDE SOUS PRESSION POUR MARTEAU DTH ET MARTEAU À CIRCULATION NORMALE COMPRENANT LEDIT SYSTÈME

Publication

EP 3553270 A4 20200826 (EN)

Application

EP 17880617 A 20171211

Priority

- US 201615375286 A 20161212
- CL 2017050073 W 20171211

Abstract (en)

[origin: EP3553270A1] A pressurized fluid flow system for a normal circulation down-the-hole hammer comprises a cylinder coaxially disposed in between an outer casing and a piston which reciprocates due to changes in pressure of pressurized fluid contained inside a front chamber and rear chamber located at opposites sides of the piston, the supply/discharge of fluid to/from these chambers being conducted through sets of supply and discharge channels defined by recesses on the outer surface of the cylinder and arranged in a parallel, the fluid flowing in and out of the front and rear chambers being controlled solely by the relative overlap of the piston and the cylinder and channeling of the flow of fluid below the inner surface of the cylinder and above the outer surface of the piston. A hammer provided with this system comprises a drill bit with one or more flushing passages.

IPC 8 full level

E21B 4/14 (2006.01); **E21B 10/36** (2006.01); **E21B 10/38** (2006.01)

CPC (source: EP KR)

E21B 4/14 (2013.01 - EP KR); **E21B 10/36** (2013.01 - EP); **E21B 10/38** (2013.01 - EP KR)

Citation (search report)

- [A] US 2011209919 A1 20110901 - AROS JAIME ANDRES [CL]
- [A] US 4583601 A 19860422 - TECHY MARCEL [BE]
- [A] US 2016340983 A1 20161124 - BRUANDET OLIVIER [FI]
- See references of WO 2018107304A1

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

DOCDB simple family (publication)

EP 3553270 A1 20191016; **EP 3553270 A4 20200826**; **EP 3553270 B1 20210609**; AU 2017377092 A1 20190704; AU 2017377092 B2 20220811; CA 3084682 A1 20180621; CL 2019001594 A1 20191018; CN 110382811 A 20191025; CN 110382811 B 20211102; KR 102422904 B1 20220721; KR 20190104341 A 20190909; MX 2019006837 A 20190826; PE 20191218 A1 20190911; WO 2018107304 A1 20180621; WO 2018107304 A8 20190221; ZA 201903817 B 20220126

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EP 17880617 A 20171211; AU 2017377092 A 20171211; CA 3084682 A 20171211; CL 2017050073 W 20171211; CL 2019001594 A 20190610; CN 201780086219 A 20171211; KR 20197020445 A 20171211; MX 2019006837 A 20171211; PE 2019001226 A 20171211; ZA 201903817 A 20190612