

Title (en)

SENSING SUB-ASSEMBLY AND METHOD OF OPERATING A HYDRAULIC FRACTURING SYSTEM

Title (de)

MESSBAUGRUPPE UND VERFAHREN ZUM BETRIEB EINES SYSTEMS ZUM HYDRAULISCHEN FRACKEN

Title (fr)

SOUS-ENSEMBLE DE DÉTECTION ET PROCÉDÉ DE FONCTIONNEMENT D'UN SYSTÈME DE FRACTURATION HYDRAULIQUE

Publication

**EP 3565951 A4 20200826 (EN)**

Application

**EP 17889796 A 20170105**

Priority

CN 2017070265 W 20170105

Abstract (en)

[origin: WO2018126392A1] A sensing sub-assembly for use with a drilling assembly includes a cylindrical body and at least one sensor coupled to the cylindrical body. The cylindrical body includes an internal flow channel extending therethrough, which is configured to channel a first fluid therethrough and a recessed cavity defined therein, which is configured to receive a continuous stream of a second fluid therethrough. The recessed cavity is coupled in flow communication with an ambient environment exterior of the cylindrical body, and the second fluid flows within the ambient environment. The at least one sensor is configured to determine characteristics of the second fluid in the continuous stream that flows through the recessed cavity.

IPC 8 full level

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CPC (source: EP US)

**E21B 47/06** (2013.01 - US); **E21B 47/10** (2013.01 - EP); **E21B 49/087** (2013.01 - EP US); **E21B 49/0875** (2020.05 - US)

Citation (search report)

- [X] US 2016010451 A1 20160114 - MELO RAFAEL ADOLFO LASTRA [SA]
- [X] CN 205370560 U 20160706 - ZHENGZHOU TECHNICAL COLLEGE
- [X] EP 1319799 A1 20030618 - SCHLUMBERGER SERVICES PETROL [FR], et al
- [X] US 2010089141 A1 20100415 - RIOUFOL EMMANUEL [US], et al
- See references of WO 2018126392A1

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)

**WO 2018126392 A1 20180712**; BR 112019013723 A2 20200303; EP 3565951 A1 20191113; EP 3565951 A4 20200826; US 2019345814 A1 20191114

DOCDB simple family (application)

**CN 2017070265 W 20170105**; BR 112019013723 A 20170105; EP 17889796 A 20170105; US 201716474851 A 20170105