

Title (en)

APPARATUS AND METHOD FOR CHARACTERIZATION OF A DUCTILE MEMBRANE, SURFACE AND SUB-SURFACE PROPERTIES

Title (de)

VORRICHTUNG UND VERFAHREN ZUR CHARAKTERISIERUNG EINER DUKTILEN MEMBRAN, OBERFLÄCHEN- UND UNTEROBERFLÄCHENEIGENSCHAFTEN

Title (fr)

APPAREIL ET PROCÉDÉ DE CARACTÉRISATION DE PROPRIÉTÉS D'UNE MEMBRANE DUCTILE, D'UNE SURFACE ET D'UNE SOUS-SURFACE

Publication

EP 3821347 A4 20220323 (EN)

Application

EP 18925875 A 20180713

Priority

US 2018042138 W 20180713

Abstract (en)

[origin: WO2020013868A1] An ultrasound signal processor uses an excitation generator to cause displacement of a membrane or surface while a series of ultrasound pulses are applied to the membrane or surface. Phase differences between a transmitted signal and received signal are examined to determine the movement of the membrane or surface in response to the applied excitation. An examination of the phase response of the membrane or surface provides a determination as to whether the fluid type behind the membrane or surface is one of: no fluid, serum fluid, or purulent fluid.

IPC 8 full level

G01S 7/539 (2006.01); **G01S 15/02** (2006.01)

CPC (source: EP KR)

G01S 7/52042 (2013.01 - KR); **G01S 7/52079** (2013.01 - KR); **G01S 7/523** (2013.01 - KR); **G01S 7/539** (2013.01 - EP KR); **G01S 15/02** (2013.01 - EP KR)

Citation (search report)

- [X] US 2017014053 A1 20170119 - MOEHRING MARK A [US], et al
- [A] US 2017290503 A1 20171012 - LARIN KIRILL V [US], et al
- [A] US 5178147 A 19930112 - OPHIR JONATHAN [US], et al
- See also references of WO 2020013868A1

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 2020013868 A1 20200116; AU 2018431763 A1 20210204; CA 3105427 A1 20200116; CN 112673361 A 20210416; EP 3821347 A1 20210519; EP 3821347 A4 20220323; JP 2021535360 A 20211216; JP 2023063592 A 20230509; JP 7249400 B2 20230330; KR 102594614 B1 20231025; KR 20210030388 A 20210317; KR 20230153501 A 20231106

DOCDB simple family (application)

US 2018042138 W 20180713; AU 2018431763 A 20180713; CA 3105427 A 20180713; CN 201880097310 A 20180713; EP 18925875 A 20180713; JP 2021500897 A 20180713; JP 2023042986 A 20230317; KR 20217003198 A 20180713; KR 20237036251 A 20180713