

Title (en)

METHOD FOR CAPACITIVE CANCELLATION OF TUNING FORK FOR FLUID PROPERTY MEASUREMENTS

Title (de)

VERFAHREN ZUR KAPAZITIVEN AUFHEBUNG DER STIMMGABEL FÜR MESSUNGEN VON FLUIDEIGENSCHAFTEN

Title (fr)

PROCÉDÉ POUR ÉLIMINATION CAPACITIVE DE DIAPASON POUR MESURES DE PROPRIÉTÉS DE FLUIDE

Publication

EP 3810339 A1 20210428 (EN)

Application

EP 19739476 A 20190620

Priority

- US 201862687445 P 20180620
- US 2019038268 W 20190620

Abstract (en)

[origin: WO2019246410A1] An apparatus for determining properties of an uncharacterized downhole fluid. The apparatus comprises an oscillation driver circuit comprising an amplifier having an output and an input, a feedback loop between the output and input of an amplifier or a logic gate, an electromechanical resonator disposed within the feedback loop such that the resonator is driven by the oscillation driver circuit, wherein a resonant frequency of the resonator defines an oscillation frequency of the oscillator circuit, and a switch device for causing the oscillator circuit to stop driving the resonator, which thereby enables observation of a decay rate of the oscillation of the electromechanical resonator within the uncharacterized fluid. The electromechanical resonator is enclosed in a conductive layer to protect the resonator against capacitive effects of the downhole fluid.

IPC 8 full level

B06B 1/06 (2006.01); **G01N 11/16** (2006.01)

CPC (source: EP KR)

E21B 49/0875 (2020.05 - EP KR); **G01N 11/16** (2013.01 - EP KR); **G01N 2009/006** (2013.01 - EP KR)

Citation (search report)

See references of WO 2019246410A1

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)

WO 2019246410 A1 20191226; CN 112188937 A 20210105; EP 3810339 A1 20210428; JP 2021529304 A 20211028; KR 20210023978 A 20210304; SA 520420536 B1 20221204; SG 11202011832W A 20210128

DOCDB simple family (application)

US 2019038268 W 20190620; CN 201980034564 A 20190620; EP 19739476 A 20190620; JP 2020570573 A 20190620; KR 20217000478 A 20190620; SA 520420536 A 20201112; SG 11202011832W A 20190620