

Title (en)
APPARATUS FOR FLEXIBLE INSTRUMENT INSERTION

Title (de)
VORRICHTUNG ZUR EINFÜHRUNG EINES FLEXIBLEN INSTRUMENTS

Title (fr)
APPAREIL D'INSERTION D'INSTRUMENT SOUPLE

Publication
EP 3562423 A1 20191106 (EN)

Application
EP 17835908 A 20171227

Priority
• US 201615392868 A 20161228
• US 201615392917 A 20161228
• US 2017068535 W 20171227

Abstract (en)
[origin: WO2018125917A1] A robotic system is described for determining whether a flexible instrument has buckled. The robotic system comprises a medical instrument comprising an elongate body with a sensor thereon and a controller. The controller compares a measured status, derived from sensor data generated by the sensor, and an expected status, based on a command to direct the elongate body. Responsive to the comparison being more or less than threshold, the system determines that the elongate body has buckled. A robotic system is also described for determining an insertion force threshold to avoid applying excessive force. A controller is receives instrument data based on a location of the flexible instrument, accesses patient data, determines a force threshold, receives a force detected by a sensor, compares the force with the force threshold, and when the force exceeds the threshold, generates a recommendation signal for the robotic system.

IPC 8 full level
A61B 34/30 (2016.01); **A61B 34/00** (2016.01); **A61M 25/01** (2006.01); **B25J 9/10** (2006.01)

CPC (source: EP KR)
A61B 34/20 (2016.02 - KR); **A61B 34/30** (2016.02 - EP KR); **A61B 34/71** (2016.02 - EP KR); **A61B 90/06** (2016.02 - KR); **B25J 9/1633** (2013.01 - EP KR); **A61B 2017/00809** (2013.01 - EP); **A61B 2017/22075** (2013.01 - EP); **A61B 2034/2048** (2016.02 - KR); **A61B 2034/2051** (2016.02 - KR); **A61B 2034/2055** (2016.02 - EP KR); **A61B 2034/2061** (2016.02 - EP KR); **A61B 2034/301** (2016.02 - EP KR); **A61B 2034/303** (2016.02 - EP); **A61B 2034/715** (2016.02 - EP KR); **A61B 2090/064** (2016.02 - EP KR); **A61B 2090/067** (2016.02 - EP KR); **G05B 2219/40223** (2013.01 - EP); **G05B 2219/40599** (2013.01 - KR); **G05B 2219/45118** (2013.01 - EP KR)

Cited by
US11701492B2; US11282251B2; US11771309B2; US11510736B2

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 2018125917 A1 20180705; **WO 2018125917 A8 20181011**; AU 2017388217 A1 20190502; AU 2017388217 B2 20221027; CN 108882966 A 20181123; CN 108882966 B 20220412; EP 3562423 A1 20191106; JP 2020513904 A 20200521; JP 2023103211 A 20230726; JP 7258755 B2 20230417; JP 7427829 B2 20240205; KR 102536940 B1 20230530; KR 102619317 B1 20240103; KR 20190101860 A 20190902; KR 20230082051 A 20230608

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US 2017068535 W 20171227; AU 2017388217 A 20171227; CN 201780021723 A 20171227; EP 17835908 A 20171227; JP 2019534667 A 20171227; JP 2023061290 A 20230405; KR 20187028120 A 20171227; KR 20237017365 A 20171227