

Title (en)

MACHINE AND CONTROL SYSTEM OF A ROBOTIC DEVICE

Title (de)

MASCHINE UND STEUERUNGSSYSTEM EINES ROBOTERS

Title (fr)

MACHINE ET SYSTÈME DE COMMANDE D'UN DISPOSITIF ROBOTISÉ

Publication

**EP 4096552 A1 20221207 (EN)**

Application

**EP 21707370 A 20210201**

Priority

- IT 202000001900 A 20200131
- IB 2021050767 W 20210201

Abstract (en)

[origin: WO2021152556A1] A control method for a robotic manipulator cooperating with the surgeon, in particular for application in spine surgery, specifically in a tapping operation of the vertebral peduncles. The general aim of the invention is to guarantee to the surgeon to have a continuous control of the force/torque applied on the vertebral peduncles whereas the robotic arm constraints the position and orientation of the surgical instrument along the axis of motion identified in the pre-operative phase. The method provides that the surgeon controls directly and continuously the interaction forces/torques along the tapping axis, whereas the robotic arm constraints the position and orientation of the surgical instrument in the directions orthogonal to the tapping axis identified in pre-operative phase.

IPC 8 full level

**A61B 34/30** (2016.01); **A61B 34/32** (2016.01); **A61B 90/00** (2016.01)

CPC (source: EP)

**A61B 34/30** (2016.02); **A61B 34/32** (2016.02); **A61B 90/37** (2016.02); **A61B 2034/2055** (2016.02); **A61B 2090/061** (2016.02); **A61B 2090/064** (2016.02); **A61B 2090/376** (2016.02)

Citation (search report)

See references of WO 2021152556A1

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

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

**WO 2021152556 A1 20210805**; EP 4096552 A1 20221207; IT 202000001900 A1 20210731

DOCDB simple family (application)

**IB 2021050767 W 20210201**; EP 21707370 A 20210201; IT 202000001900 A 20200131