

Title (en)

METHOD AND ASSEMBLY FOR CALIBRATING PARALLEL KINEMATICS

Title (de)

VERFAHREN UND ANORDNUNG ZUR KALIBRIERUNG EINER PARALLELKINEMATIK

Title (fr)

PROCÉDÉ ET ENSEMBLE POUR ÉTALONNAGE CINÉMATIQUE PARALLÈLE

Publication

EP 4214027 A1 20230726 (DE)

Application

EP 21755987 A 20210809

Priority

- DE 102020124136 A 20200916
- EP 2021072185 W 20210809

Abstract (en)

[origin: WO2022058092A1] The invention relates to a method for a usage-related calibration of parallel kinematics with a programmable actuation, said method having the steps of: releasably attaching a separate pose marking element in a uniquely defined position and angular orientation on the platform or on a base of the parallel kinematics so as to be secured against tilting using a kinematic coupling, detecting the pose of the pose marking element using a pose detection device, and determining a pose marking coordinate system in the coordinate system of the pose detection device, determining a calibrated reference coordinate system of the parallel kinematics from the pose marking coordinate system on the basis of a specified first coordinate transformation rule, and storing the calibrated reference coordinate system of the parallel kinematics in the actuator thereof or a measuring software, detecting the pose of the world coordinate system using a coordinate measuring device, determining the world coordinate system in the coordinate system of the pose detection device, storing the pose of the world coordinate system, and making available the two stored coordinate systems or the coordinate transformation between the two coordinate systems in order to adapt the hexapod movements with respect to the world coordinate system.

IPC 8 full level

B25J 9/16 (2006.01)

CPC (source: EP KR US)

B25J 9/0054 (2013.01 - US); **B25J 9/1623** (2013.01 - EP KR US); **B25J 9/1692** (2013.01 - EP KR US); **G05B 2219/39018** (2013.01 - EP KR); **G05B 2219/39019** (2013.01 - EP KR); **G05B 2219/39024** (2013.01 - EP KR); **G05B 2219/39032** (2013.01 - EP KR); **G05B 2219/39044** (2013.01 - EP KR); **G05B 2219/39552** (2013.01 - EP KR); **G05B 2219/40267** (2013.01 - EP KR); **G05B 2219/50162** (2013.01 - EP KR)

Citation (search report)

See references of WO 2022058092A1

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)

DE 102020124136 A1 20220317; **DE 102020124136 B4 20230907**; CN 116457158 A 20230718; EP 4214027 A1 20230726; JP 2023541642 A 20231003; KR 20230066086 A 20230512; US 2023347526 A1 20231102; WO 2022058092 A1 20220324

DOCDB simple family (application)

DE 102020124136 A 20200916; CN 202180075857 A 20210809; EP 2021072185 W 20210809; EP 21755987 A 20210809; JP 2023516812 A 20210809; KR 20237012233 A 20210809; US 202118025785 A 20210809