

(43) International Publication Date
21 May 2015 (21.05.2015)

(51) International Patent Classification:

G01B 11/27 (2006.01) G01B 11/24 (2006.01)
G01B 5/00 (2006.01) G11B 5/455 (2006.01)

(21) International Application Number:

PCT/EP2014/074249

(22) International Filing Date:

11 November 2014 (11.11.2014)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

BO2013A000617 12 November 2013 (12.11.2013) IT

(71) Applicant: MARPOSS SOCIETA' PER AZIONI
[IT/IT]; Via Saliceto 13, I-40010 Bentivoglio BO (IT).(72) Inventor: CIPRIANI, Riccardo; via delle Mandriole 59,
I-44124 Ferrara (IT).(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY,
BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM,
DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,

HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR,
KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG,
MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM,
PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC,
SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN,
TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ,
TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU,
TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE,
DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU,
LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK,
SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, KM, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- of inventorship (Rule 4.17(iv))

Published:

- with international search report (Art. 21(3))

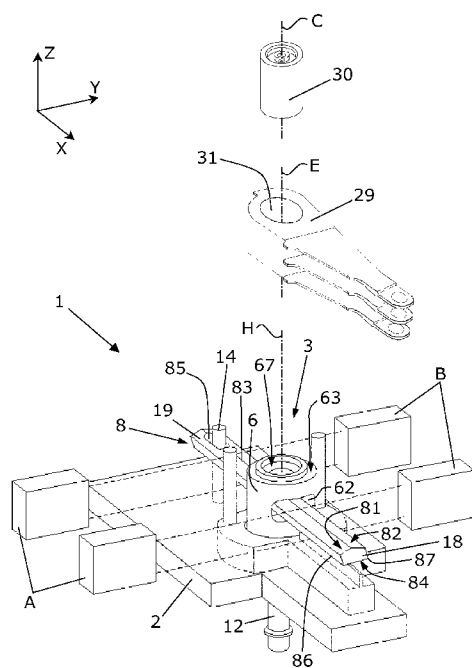
(54) Title: SYSTEM AND METHOD FOR CHECKING THE MUTUAL POSITION OF COMPONENTS OF A WORKPIECE
AND EQUIPMENT USING SUCH SYSTEM AND METHOD

Fig. 3

(57) Abstract: A system for checking the axial position of a bearing (30) inside an hole (31) of an E-block (29), preferably during the assembly of an HSA, comprises a reference system (3) that locates the E-block, a coupling element (17) that comes into contact with the bearing, a floating element (8) that, being connected to the coupling element, assumes the attitude of the bearing, two or more detection devices, for example optoelectronic, that cooperate with the floating element and detect at the same time, at checking areas spaced apart from each other, quantities indicative of the position and, in case, of the attitude of the bearing with respect to the E-block, and a processing unit (50) for receiving and processing the detected quantities. A corresponding method for checking comprises the steps of locating E-block and bearing to mutually movable parts of the reference system, detecting at the same time, at least at two checking areas spaced apart from each other, quantities indicative of the position and, in case, of the attitude of the bearing with respect to the E-block, and processing the detected quantities. The invention relates also to an equipment and a method for assembling HSAs, that respectively employ the above-mentioned system and method for checking the mutual position and, in case, the attitude of the bearing with respect to the E-block.