

Title (en)
SYSTEM AND METHOD FOR ALINGNING ROLLERS OF CONTINUOUS CASTING SEGMENTS OF SLABS

Title (de)
VORRICHTUNG UND VERFAHREN ZUM AUSRICHTEN VON ROLLEN VON STRANGFÜHRUNGSSEGMENTEN

Title (fr)
DISPOSITIF ET PROCÉDÉ POUR L'ALIGNEMENT DES ROULEAUX D'UN SEGMENT DE GUIDAGE D'UNE BRAMME

Publication
EP 2944398 A1 20151118 (EN)

Application
EP 15164201 A 20150420

Priority
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Abstract (en)
A measurement system (1) for measuring the position of the axes of the rollers of a containment and guide segment, adapted to contain and guide a cast product exiting from a crystallizer in a continuous casting process, the system comprising a robot (2) having an arm (4) provided at one end thereof with a reflector (5), said robot being adapted to move the reflector (5) in order to successively put it in contact with a plurality of points of each roller of the containment and guide segment; and comprising a laser tracker (3) adapted to track the reflector (5) by means of a laser beam and to calculate the position in space of each of said points of the containment and guide segment so as to determine the position of the axis of each roller.

IPC 8 full level
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Citation (search report)

- [A] US 4714339 A 19871222 - LAU KAM C [US], et al
- [A] AT 509606 A4 20111015 - SIEMENS VAI METALS TECH GMBH [AT]
- [A] EP 2574412 A1 20130403 - SIEMENS VAI METALS TECH GMBH [AT]
- [A] FR 2644715 A1 19900928 - SIDERURGIE FSE INST RECH [FR]
- [A] KR 20090057669 A 20090608 - POSCO [KR]
- [A] DE 102005037138 A1 20070208 - SMS DEMAG AG [DE]
- [A] KR 20140019711 A 20140217 - POSCO [KR]
- [A] DE 102009060638 A1 20100916 - SMS SIEMAG AG [DE]
- [A] LAU K ET AL: "ROBOT PERFORMANCE MEASUREMENTS USING AUTOMATIC LASER TRACKING TECHNIQUES", ROBOTICS AND COMPUTER INTEGRATED MANUFACTURING, ELSEVIER SCIENCE PUBLISHERS BV., BARKING, GB, vol. 2, no. 3/04, 1 January 1985 (1985-01-01), pages 227 - 236, XP002035850, ISSN: 0736-5845, DOI: 10.1016/0736-5845(85)90110-3
- [A] "Proc. of SPIE", vol. 6676, 2007, article JAMES H. BURGE, PENG SU, CHUNYU ZHAO, TOM ZOBRIST: "Use of a commercial laser tracker for optical alignment", XP002734373
- [A] J. WOLLNACK, P. STEPANEK: "Formkorrektur und Lageführung für eine flexible und automatisierte Grossbauteilmontage", WT WERKSTATTTECHNIK ONLINE, vol. 94, no. 9, 2004, XP002734374

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