Title (en)

Method for calibrating laser scanners to a container transportation crane

Title (de)

Verfahren zum Kalibrieren von Laserscannern an einem Containerumschlagkran

Title (fr)

Procédé d'étalonnage de scanners laser sur une grue de manutention de conteneurs

Publication

EP 2910512 B1 20160525 (DE)

Application

EP 14156183 A 20140221

Priority

EP 14156183 A 20140221

Abstract (en)

[origin: CN104860203A] The invention relates to a method for calibrating 3D laser scanners (20). The laser scanner is fixed on a support structure (12) of a crane used for container transportation, so that the containers (18) can be scanned in a working zone of the crane. The calibration includes at least one scanning of a calibrator (24) having ISO container features. The calibrator has a calibration mark (26) and can carry recognition and positioning during a scanning process. The method measures movement offset of at least one laser scanner relative to the support structure if the movement offset is not known. The crane is controlled, so that the calibrator can be caught and brought to different predetermined heights above the ground (8) and the scanning of the calibrator is performed through at least one laser scanner. The rotation offset of the at least one laser scanner (20) relative to the support structure (12) can be measured with the scanning result and the movement offset.

IPC 8 full level

B66C 13/46 (2006.01); **B66C 19/00** (2006.01)

CPC (source: CN EP)

B66C 13/46 (2013.01 - CN EP); **B66C 19/007** (2013.01 - CN EP)

Cited by

US2020211222A1; CN110546101A; CN109696125A; US11506565B2; CN105819341A; CN107445067A; CN109269620A; CN113415725A; CN114671349A; EP4318036A1; US11299376B2; US11530118B2; WO2018185088A1; CN112486169A; US2021256706A1; US11995841B2; WO2024028003A1; DE102017204306A1; WO2018166718A1; US11472415B2

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

DOCDB simple family (publication)

EP 2910512 A1 20150826; **EP 2910512 B1 20160525**; CN 104860203 A 20150826; CN 104860203 B 20170104

DOCDB simple family (application)

EP 14156183 A 20140221; CN 201510080744 A 20150213