

Title (en)
METHOD FOR THE PRE-PROCESSING OF A THREE-DIMENSIONAL IMAGE OF THE SURFACE OF A TYRE USING SUCCESSIVE B-SPLINE DEFORMATIONS

Title (de)
VERFAHREN ZUR VORVERARBEITUNG EINES DREIDIMENSIONALEN BILDES DER OBERFLÄCHE EINES REIFENS MITTELS SUKZESSIVER B-SPLINE-VERFORMUNGEN

Title (fr)
METHODE DE PRE-TRAITEMENT D'UNE IMAGE TRIDIMENSIONNELLE DE LA SURFACE D'UN PNEUMATIQUE A L'AIDE DE DEFORMATIONS B-SPLINE SUCCESSIVES

Publication
EP 2633492 A1 20130904 (FR)

Application
EP 11770805 A 20111020

Priority
• FR 1058825 A 20101027
• EP 2011068322 W 20111020

Abstract (en)
[origin: WO2012055752A1] The invention relates to a method for inspecting the surface of a tyre by comparing same with a three-dimensional reference surface, said surfaces comprising embossed markings. The invention comprises the following steps consisting in: determining the three-dimensional profile of the surface to be inspected; extracting the contours of the graphical elements; locating the characteristic points on the surface to be inspected and pairing said points with the corresponding characteristic points of the reference surface, such as to create a set of pairs of paired points; associating a first reset B-Spline surface with the reference surface, by associating the characteristic points of said surface with the control points of the first reset B-Spline surface; and deforming the reference surface, by moving the control points of the first reset B-Spline surface so that they are superimposed on the characteristic points of the surface to be inspected with which they were paired.

IPC 8 full level
G06T 3/00 (2006.01); **G06K 9/64** (2006.01)

CPC (source: EP KR US)
G06T 3/00 (2013.01 - KR); **G06T 3/14** (2024.01 - EP US); **G06T 7/00** (2013.01 - KR); **G06T 7/0004** (2013.01 - US); **G06V 10/75** (2022.01 - KR); **G06V 10/755** (2022.01 - EP US); **G06T 2207/10028** (2013.01 - EP US); **G06T 2207/20016** (2013.01 - EP US); **G06T 2207/30108** (2013.01 - EP US)

Citation (examination)
• WO 2007102920 A2 20070913 - UNIV MARYLAND [US], et al
• GOSHTASBY A: "REGISTRATION OF IMAGES WITH GEOMETRIC DISTORTIONS", IEEE TRANSACTIONS ON GEOSCIENCE AND REMOTE SENSING, IEEE SERVICE CENTER, PISCATAWAY, NJ, US, vol. 26, no. 1, 1 January 1988 (1988-01-01), pages 60 - 64, XP000030927, ISSN: 0196-2892, DOI: 10.1109/36.3000
• See also references of WO 2012055752A1

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)
WO 2012055752 A1 20120503; BR 112013009290 A2 20160719; CN 103210417 A 20130717; EP 2633492 A1 20130904; FR 2966956 A1 20120504; FR 2966956 B1 20121214; JP 2014500484 A 20140109; KR 20140009209 A 20140122; US 2013266189 A1 20131010

DOCDB simple family (application)
EP 2011068322 W 20111020; BR 112013009290 A 20111020; CN 201180052269 A 20111020; EP 11770805 A 20111020; FR 1058825 A 20101027; JP 2013535370 A 20111020; KR 20137013315 A 20111020; US 201113881783 A 20111020