Title (en)

Auxiliary drive device, wheelchair and method for determining physical performance data of a wheelchair user

Title (de)

Hilfsantriebsvorrichtung, Rollstuhl und Verfahren zur Ermittlung von physischen Leistungsdaten eines Rollstuhlfahrers

Title (fr)

Dispositif d'entraînement auxiliaire, fauteuil roulant et procédé d'établissement de données de puissance physiques d'un conducteur de fauteuil roulant

Publication

EP 2433604 A3 20141231 (DE)

Application

EP 11172333 A 20110701

Priority

DE 102010037710 A 20100922

Abstract (en)

[origin: US2012068435A1] A drive assistance device for a wheelchair includes a drive motor, a running wheel and a sensor device which is adapted to determine a driving force manually induced into the running wheel; and a control unit which is adapted to control the drive motor for driving the running wheel depending on the driving force manually induced by the user into the running wheel. The control unit of the drive assistance device includes a user force analysis operational mode which is adapted to determine data concerning physical efficiency and capacity of the user. These include a maximum force of the user as well as the maximum speed which can be reached with purely manual drive.

IPC 8 full level

A61G 5/02 (2006.01); **A61G 5/04** (2013.01)

CPC (source: EP US)

A61G 5/045 (2013.01 - EP US); **A61G 5/048** (2016.10 - EP US); **A61G 5/1054** (2016.10 - EP US); A61G 5/1032 (2013.01 - EP US)

Citation (search report)

- [XYI] CREMERS G B: "HYBRID-POWERED WHEELCHAIR: A COMBINATION OF ARM FORCE AND ELECTRICAL POWER FOR PROPELLING A WHEELCHAIR", JOURNAL OF MEDICAL ENGINEERING & TECHNOLOGY, NASINGSTOKE, HANTS, GB, vol. 13, no. 1/02, 1 January 1989 (1989-01-01), pages 142 - 148, XP000605971
- [XYI] MIYAZAWA T ET AL: "A power-assisted wheelchair taking running environment into account", THE 29TH ANNUAL CONFERENCE OF THE IEEE INDUSTRIAL ELECTRONICS SOCIETY, 2003. IECON '03, IEEE SERVICE CENTER, PISCATAWAY, NJ, vol. 2, 2 November 2003 (2003-11-02), pages 1343 - 1348, XP010691084, ISBN: 978-0-7803-7906-0, DOI: 10.1109/IECON.2003.1280252
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EP3053563A1

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

DOCDB simple family (publication)

DE 102010037710 A1 20120322; **DE 102010037710 B4 20160317**; DE 202010017965 U1 20130502; EP 2433604 A2 20120328; EP 2433604 A3 20141231; US 2012068435 A1 20120322; US 8641070 B2 20140204

DOCDB simple family (application)

DE 102010037710 A 20100922; DE 202010017965 U 20100922; EP 11172333 A 20110701; US 201113226692 A 20110907