

Title (en)

EARLY OVERLOAD DETECTION FOR A LOAD LIFTING DEVICE

Title (de)

FRÜHZEITIGE ÜBERLASTERKENNUNG FÜR EINE LASTHUBVORRICHTUNG

Title (fr)

RECONNAISSANCE PRÉCOCE D'UNE SURCHARGE, POUR UN ÉQUIPEMENT DE LEVAGE

Publication

EP 2313336 B1 20150401 (DE)

Application

EP 09777882 A 20090814

Priority

- EP 2009005907 W 20090814
- DE 102008045330 A 20080820

Abstract (en)

[origin: WO2010020378A1] The invention relates to a method for the dynamic detection of a faulty operation of a load lifting device, wherein the load lifting device has a force sensor, comprising the following steps: monitoring a signal of the force sensor for an increase; defining a time period required for lifting the load receiving means; monitoring the signal for an exceeding of the overload threshold; if the overload threshold is not exceeded during the defined time period, determining a weight force within the defined time period from the signal, and establishing the weight force determined as a base load; establishing a dynamic jump threshold as the nominal overload threshold, which is greater than the base load and smaller than the current overload threshold; and monitoring whether the signal is greater than or equal to the jump threshold, and generating a switch-off signal, if the signal is greater than or equal to the jump threshold.

IPC 8 full level

B66C 15/06 (2006.01)

CPC (source: EP KR)

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Citation (examination)

- EP 1445231 A2 20040811 - EKO STAHL GMBH [DE]
- WO 0181231 A1 20011101 - NATSTEEL ENGINEERING PTE LTD [SG], et al
- JAFARIPANAH, M.: "Load cell response correction using analog adaptive techniques", CIRCUITS AND SYSTEMS, 2003. ISCAS '03. PROCEEDINGS OF THE 2003 INTERNATIONAL SYMPOSIUM ON, vol. 4, 25 May 2003 (2003-05-25) - 28 May 2003 (2003-05-28), DOI: 10.1109/ISCAS.2003.1206283

Cited by

CN105293279A; WO2020088879A1; DE102018126964A1

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DOCDB simple family (publication)

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DOCDB simple family (application)

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