

Title (en)

System for automatic creation of load cycles of a machine for turning loads

Title (de)

System zur automatischen Erfassung von Lastzyklen einer Maschine zum Umschlagen von Lasten

Title (fr)

Système de détection automatique de cycles de charges d'une machine destinée à envelopper des charges

Publication

EP 2298688 A3 20130821 (DE)

Application

EP 10008610 A 20100818

Priority

DE 102009041661 A 20090916

Abstract (en)

[origin: EP2298688A2] A lifting apparatus raises the load (3) and a transport apparatus performs horizontal movement of the load. The load change detection automatically detects load change based on output signals of lifting force measurement apparatus. A load cycle detection detects position of load as load pick-up point when positive load change is detected and evaluates positive load change as state of new load cycle on basis of query as to whether load has been moved preset distance from load pick-up point. Independent claims are included for the following: (1) system for automatic detection of exchange of load suspension unit; and (2) method for the operation of system for automatic detection of load cycles.

IPC 8 full level

B66C 15/06 (2006.01); **B66C 13/16** (2006.01); **B66C 23/90** (2006.01)

CPC (source: EP KR US)

B66C 13/16 (2013.01 - EP KR US); **B66C 13/18** (2013.01 - KR); **B66C 13/40** (2013.01 - KR); **B66C 15/065** (2013.01 - EP KR US); **B66C 23/905** (2013.01 - EP KR US)

Citation (search report)

- [A] EP 1150019 A1 20011031 - HIAB AB [SE]
- [A] EP 1103511 A2 20010530 - LIEBHERR WERK EHINGEN [DE]

Cited by

CN107285207A; CN104340875A; US9932213B2

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 SE SI SK SM TR

Designated extension state (EPC)

BA ME RS

DOCDB simple family (publication)

EP 2298688 A2 20110323; **EP 2298688 A3 20130821**; **EP 2298688 B1 20141008**; AU 2010214735 A1 20110331; AU 2010214735 B2 20140410; BR PI1003528 A2 20130108; CA 2713651 A1 20110316; CA 2713651 C 20170110; CN 102020201 A 20110420; CN 102020201 B 20151125; DE 102009041661 A1 20110324; ES 2527598 T3 20150127; JP 2011063444 A 20110331; JP 2014218379 A 20141120; JP 5725776 B2 20150527; JP 5815820 B2 20151117; KR 101831990 B1 20180223; KR 20110030357 A 20110323; RU 2010138225 A 20120320; RU 2544074 C2 20150310; US 2011062104 A1 20110317; US 8793011 B2 20140729

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