

Title (en)

Hydraulic lifting device in particular for battery-powered industrial trucks and control method therefor

Title (de)

Hydraulische Hubvorrichtung insbesondere für batteriegetriebene Flurförderzeuge und Verfahren zu deren Steuerung

Title (fr)

Dispositif de levage hydraulique en particulier pour chariots industriels alimentés par batterie et son procédé de commande

Publication

EP 1308415 A3 20050525 (DE)

Application

EP 02024330 A 20021102

Priority

DE 10154449 A 20011106

Abstract (en)

[origin: EP1308415A2] At the beginning of the load lowering operation the hydraulic pressure prevailing in the lift cylinder (12) is built up both in the section (L2.3) of the return line located upstream of the hydraulic pump (P) and the section (L1.2) downstream of it, whereby the pump is operated at an actual RPM which lies below a RPM threshold value and a proportional pressure relief valve (PDBV) in the return line downstream of the pump is fully opened via a ramp function if the actual RPM of the pump lies above the threshold value, whereby the electric motor (M) of the pump then operates as a generator. <??>An Independent claim is included for a hydraulic system for executing the proposed method of controlling a hydraulic lifting device.

IPC 1-7

B66F 9/22; **F15B 21/14**

IPC 8 full level

B66F 9/22 (2006.01); **F15B 11/044** (2006.01); **F15B 21/14** (2006.01)

CPC (source: EP)

B66F 9/22 (2013.01); **F15B 11/044** (2013.01); **F15B 21/14** (2013.01); **F15B 2211/20538** (2013.01); **F15B 2211/30505** (2013.01); **F15B 2211/3057** (2013.01); **F15B 2211/40507** (2013.01); **F15B 2211/40515** (2013.01); **F15B 2211/411** (2013.01); **F15B 2211/426** (2013.01); **F15B 2211/46** (2013.01); **F15B 2211/50518** (2013.01); **F15B 2211/50536** (2013.01); **F15B 2211/5151** (2013.01); **F15B 2211/526** (2013.01); **F15B 2211/528** (2013.01); **F15B 2211/55** (2013.01); **F15B 2211/7052** (2013.01); **F15B 2211/7128** (2013.01); **F15B 2211/75** (2013.01)

Citation (search report)

- [AD] DE 19921629 A1 20001116 - DAMBACH LAGERSYSTEME GMBH [DE]
- [PA] EP 1193211 A2 20020403 - STILL WAGNER GMBH & CO KG [DE]
- [A] DE 4416173 A1 19951109 - JUNGHEINRICH AG [DE]
- [A] EP 0908413 A2 19990414 - STILL WAGNER GMBH & CO KG [DE]

Cited by

CN107601390A; CN107458999A; CN112209305A; CN107352473A; EP2508464A4; CN107601391A; EP3165496A1; CN107010571A; US2011162447A1; CN102116285A; US8196464B2; EP1369377A3; US2013199170A1; EP2660184A4; US9422949B2; WO2011060844A1; US9079755B2; WO2022193769A1

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