

Title (en)
Industrial lift truck with speed control

Title (de)
Industriegabelstapler mit Geschwindigkeitssteuerung

Title (fr)
Chariot élévateur industriel doté d'un contrôle de la vitesse

Publication
EP 2123594 A1 20091125 (EN)

Application
EP 08156829 A 20080523

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Abstract (en)
The present invention relates to industrial lift truck (1), comprising: a lifting frame having a vertically movable load lifting device (9), a hydraulic cylinder assembly (11) for driving the load lifting device (9), a variable hydraulic pump (17) for supplying hydraulic fluid to the hydraulic cylinder assembly (11), a variable hydraulic valve assembly (19a-b) arranged for controlling the hydraulic fluid supplied to/drained from the hydraulic cylinder assembly (11), a position measuring assembly (25a-b) for measuring vertical positions of the load lifting device (9) with respect to the lifting frame, an operator input device (31) for choosing an operation mode of the load lifting device (9), a controller (33) comprising: means for calculating the actual speed of the load lifting device (9) based on the vertical position measurements, means for generating a set point speed of the load lifting device (9) based on the chosen operation mode, and means (37) for comparing the calculated actual speed with the set point speed, The controller (33) is characterised in that it comprises means for determining any differences between the calculated actual speed and the set point speed, and means (39) for sending signals to the hydraulic pump to change its speed, and/or signals to the hydraulic valve assembly (19a-b) to change its valve opening degree, if a difference exist between the calculated actual speed and the set point speed of the load lifting device (9), so as to compensate for the difference.

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Citation (applicant)
US 2005263354 A1 20051201 - PERKINS GERARD T [US]

Citation (search report)
• [XY] GB 2196447 A 19880427 - JUNGHEINRICH KG
• [X] US 2008034853 A1 20080214 - TABOR KEITH A [US], et al
• [XY] GB 2099184 A 19821201 - TOYODA AUTOMATIC LOOM WORKS, et al
• [X] EP 1052215 A2 20001115 - DAMBACH LAGERSYSTEME GMBH [DE]
• [XY] JP H0398997 A 19910424 - TOYODA AUTOMATIC LOOM WORKS
• [X] US 6374153 B1 20020416 - BRANDT EVERETT G [US], et al
• [YA] EP 1593645 A2 20051109 - BT IND [SE]
• [DA] US 2005263354 A1 20051201 - PERKINS GERARD T [US]
• [A] EP 0866026 A2 19980923 - JUNGHEINRICH AG [DE]

Cited by
CN102917972A; CN102756997A; CN102730608A; CN108368862A; RU2731353C2; EP3549902A1; CN110342437A; EP2636637A1; CN103303845A; EP3336050A1; US11434119B2; US11959469B2; WO2021032838A1; WO2017076965A1; WO2023132094A1; EP3786104A1

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