

Title (en)

Precise determination of travel time of rail vehicles

Title (de)

Exakte Ermittlung der Fahrzeit von Schienenfahrzeugen

Title (fr)

Détermination exacte du temps de trajet de véhicules ferroviaires

Publication

EP 1719687 A3 20070725 (DE)

Application

EP 05025843 A 20051126

Priority

DE 102005020771 A 20050502

Abstract (en)

[origin: EP1719687A2] Method involves solving of acceleration phase by differential equation $v'(t) = av^2(t) + bv(t) + c$, with speed $v(t)$ and parameters a, b, c depending on the time t , by formulae. These formulae are to be used with constant speed or constant braking deceleration in order to determine travel time for train travel. During positive acceleration $v'(t)$ greater than 0, it examines, whether the sufficient distance is there to attain maximum permissible speed. During negative acceleration $v'(t)$ less than 0, it is examined, that whether the train eventually comes to a standstill and the point of time of the standstill and thereby mileage distance is determined. During the steady travel $v'(t) = 0$, a break-down speed of v_0 is maintained. Basically a specific limitation is allowed for a exit speed by a timely application of a braking device.

IPC 8 full level

B61L 3/00 (2006.01)

CPC (source: EP)

B61L 15/0058 (2024.01)

Citation (search report)

- [A] WO 03097424 A1 20031127 - TMG INTERNAT HOLDINGS PTY LTD [AU], et al
- [A] DE 19535122 C1 19970123 - SIEMENS AG [DE]
- [DA] FRANKE R ET AL: "An algorithm for the optimal control of the driving of trains", DECISION AND CONTROL, 2000. PROCEEDINGS OF THE 39TH IEEE CONFERENCE ON DEC. 12-15, 2000, PISCATAWAY, NJ, USA, IEEE, vol. 3, 12 December 2000 (2000-12-12), pages 2123 - 2127, XP010536926, ISBN: 0-7803-6638-7

Cited by

CN113184022A; CN113682353A; CN115805974A; CN117436371A

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR MK YU

DOCDB simple family (publication)

EP 1719687 A2 20061108; EP 1719687 A3 20070725; AU 2006201839 A1 20061116; DE 102005020771 A1 20061109

DOCDB simple family (application)

EP 05025843 A 20051126; AU 2006201839 A 20060502; DE 102005020771 A 20050502