

Title (en)
Derailment detecting method and derailment detecting apparatus for rolling stock

Title (de)
Verfahren und Gerät für die Entgleisungsdetektion der Schienenfahrzeuge

Title (fr)
Methode et appareillage pour détecter le déraillement des véhicules ferroviaires

Publication
EP 1400427 A1 20040324 (EN)

Application
EP 03026141 A 19980810

Priority
EP 98936719 A 19980810

Abstract (en)
The invention is directed to a derailment detecting method for rolling stock (1), which is applied to rolling stock having a truck (3) which comprises wheels (5) rolling on rails (4), and spring rigging (6), and a carbody (2) to which said truck is attached, said derailment detecting method for rolling stock comprising: a step of detecting vertical acceleration at said carbody (2) above said spring rigging (6) during running of said rolling stock on said rails (4); a step of calculating a vertical displacement amount by double integral of said vertical acceleration every evaluating time, said evaluating time being defined as a time period from a start of descent of said carbody to arrival at half a height $\frac{h}{2}$ of said rails, in a free fall of one axle of said wheels (5) by a distance equal to the height (h) of said rails; and a step of determining that said rolling stock (1) is derailed, in the case that said vertical displacement amount is negative and an absolute value thereof is not less than a predetermined reference value. <IMAGE>

IPC 1-7
B61F 9/00; **B61K 13/00**

IPC 8 full level
B61F 9/00 (2006.01); **B61K 13/00** (2006.01)

CPC (source: EP)
B61F 9/00 (2013.01); **B61K 13/00** (2013.01)

Citation (search report)
[X] PATENT ABSTRACTS OF JAPAN vol. 1997, no. 06 30 June 1997 (1997-06-30)

Cited by
EP2436574A1; US2020361501A1; US11618487B2; AT521877A1; AT521877B1; WO2020089035A1

Designated contracting state (EPC)
AT BE CH DE DK ES FI FR GB GR IE IT LI LU NL PT SE

DOCDB simple family (publication)
EP 1400427 A1 20040324; ES 2235345 T3 20050701

DOCDB simple family (application)
EP 03026141 A 19980810; ES 98936719 T 19980810