

Title (en)

METHODS AND DEVICES FOR MONITORING TRAIN INTEGRITY

Title (de)

VERFAHREN UND VORRICHTUNGEN ZUR ÜBERWACHUNG DER ZUGINTEGRITÄT

Title (fr)

PROCÉDÉS ET DISPOSITIFS PERMETTANT DE SURVEILLER L'INTÉGRITÉ D'UN TRAIN

Publication

**EP 3686081 A1 20200729 (EN)**

Application

**EP 20153910 A 20200127**

Priority

IN 201941003444 A 20190128

Abstract (en)

A railroad train includes an integrity monitoring system with a three-axis inertial measurement unit. Incremental rotation values are measured along three reference axes during a plurality of measurement periods using the three-axis inertial measurement unit. A quaternion including first, second and third numerical values representative, respectively, of the measured incremental rotation values along the three reference axes is calculated for each measurement period. An anomalous variation of at least one of the first, second or third numerical values of the calculated quaternion is detected, said anomalous variation being representative of a train break-up condition.

IPC 8 full level

**B61L 15/00** (2006.01); **B61L 25/02** (2006.01); **B61L 27/00** (2006.01)

CPC (source: EP)

**B61L 15/0054** (2013.01); **B61L 15/0081** (2013.01); **B61L 27/40** (2022.01); **B61L 25/025** (2013.01); **B61L 2205/04** (2013.01)

Citation (search report)

- [X] JP 2018117478 A 20180726 - RAILWAY TECHNICAL RES INST, et al
- [A] DE 102004057545 A1 20060608 - ALCATEL SA [FR]
- [A] EP 2944537 A1 20151118 - BOMBARDIER TRANSP GMBH [DE]

Cited by

CN112406958A

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 RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

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**EP 3686081 A1 20200729**; AU 2020200401 A1 20200813

DOCDB simple family (application)

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