Title (en)

RAILWAY-TRACK CIRCUIT STATE DETERMINATION APPARATUS

Title (de)

VORRICHTUNG ZUR ZUSTANDSBESTIMMUNG EINES EISENBAHNGLEISSTROMKREISES

Title (fr)

APPAREIL DE DÉTERMINATION D'ÉTAT DE CIRCUIT DE VOIE FERRÉE

Publication

EP 3760510 A4 20211124 (EN)

Application

EP 19756596 A 20190221

Priority

- JP 2018032110 A 20180226
- JP 2019006545 W 20190221

Abstract (en)

[origin: EP3760510A1] A track circuit state determination apparatus (100) includes measurement terminals (200) provided at section boundaries between track circuits and a processing apparatus (300). The processing apparatus (300) calculates a current vector of transmission current to transmission voltage in each track circuit, and divides the calculated current vector into a segment of a period in the presence of an on-rail train and a segment of a period in the absence of an on-rail train. The processing apparatus (300) compares the current vector locus in each period with a reference vector locus based on past current vector loci of the corresponding track circuit to determine the state of the track circuit including at least one of a normal state and an abnormal state.

IPC 8 full level

B61L 1/18 (2006.01); **B61L 1/20** (2006.01); **B61L 27/00** (2006.01)

CPC (source: EP)

B61L 1/187 (2013.01); **B61L 1/20** (2013.01); **B61L 27/53** (2022.01)

Citation (search report)

- [AD] JP H11278269 A 19991012 - MITSUBISHI ELECTRIC CORP, et al
- [A] GB 2536452 A 20160921 - THALES HOLDINGS UK PLC [GB]
- [A] JP H058727 A 19930119 - HIGASHI NIPPON RYOKAKU TETSUDO, et al
- See references of WO 2019163888A1

Cited by

GB2608681A

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

DOCDB simple family (publication)

EP 3760510 A1 20210106; **EP 3760510 A4 20211124**; CN 111741885 A 20201002; CN 111741885 B 20220909; JP 2019147434 A 20190905; JP 6680818 B2 20200415; TW 201938413 A 20191001; TW I802653 B 20230521; WO 2019163888 A1 20190829

DOCDB simple family (application)

EP 19756596 A 20190221; CN 201980014704 A 20190221; JP 2018032110 A 20180226; JP 2019006545 W 20190221; TW 108106486 A 20190226