Title (en)

METHOD AND DEVICE FOR TRAIN LENGTH DETECTION

Title (de)

VERFAHREN UND VORRICHTUNG ZUR ZUGLÄNGENERKENNUNG

Title (fr)

PROCÉDÉ ET DISPOSITIF PERMETTANT DE DÉTECTER LA LONGUEUR D'UN TRAIN

Publication

EP 2547568 B1 20160511 (DE)

Application

EP 11710157 A 20110316

Priority

- DE 102010011949 A 20100318
- EP 2011053950 W 20110316

Abstract (en)

[origin: WO2011113856A1] The invention relates to a method and a device for train length detection in a train set which is composed of a plurality of carriages (1a - 1c) and which, by means of a pneumatic braking system, is braked in a plurality of braking stages according to the pressure in a main air line (HL) coupled from carriage (1a) to carriage (1c), the pressure (pHL) and throughflow (formula (I)) of said main air line and the ambient temperature (T) being detected along the time axis by sensors, and from these the train length (L) being calculated by means of an electronic evaluation unit (4), wherein the measurement variables are detected by sensors, proceeding from the steady state of a present braking stage (I.), during the execution of the next braking stage (II.) until a steady state is again reached. The volume (V) of the main air line (HL) is calculated by additive integration of the throughflow (formula (I)) during the ventilation of the main air line (HL) for the execution of the next braking state (II.), taking into consideration the pressure (pHL) prevailing in the initial state and the end state and the ambient temperature (T), in order to determine the train length (L) corresponding to the main air line length at a known line cross section (Q) using said volume.

IPC 8 full level

B61L 15/00 (2006.01)

CPC (source: EP)

B61L 15/0054 (2013.01)

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)

DE 102010011949 A1 20110922; AU 2011229236 A1 20121011; AU 2011229236 B2 20150129; CN 102822032 A 20121212; CN 102822032 B 20160302; EP 2547568 A1 20130123; EP 2547568 B1 20160511; ES 2586578 T3 20161017; RU 2012144281 A 20140427; RU 2561481 C2 20150827; WO 2011113856 A1 20110922

DOCDB simple family (application)

DE 102010011949 A 20100318; AU 2011229236 A 20110316; CN 201180014614 A 20110316; EP 11710157 A 20110316; EP 2011053950 W 20110316; ES 11710157 T 20110316; RU 2012144281 A 20110316