

Title (en)

FASTENING OF RAILS ON SLEEPERS BY RESILIENT CLIPS

Title (de)

BEFESTIGUNG VON SCHIENEN AUF SCHWELLEN MITTELS ELASTISCHER KLEMMEN

Title (fr)

FIXATION DE RAILS SUR DES TRAVERSES À L'AIDE D'ATTACHES ÉLASTIQUES

Publication

EP 2247795 A2 20101110 (EN)

Application

EP 08850553 A 20081114

Priority

- HR 2008000035 W 20081114
- HR P20070525 A 20071115

Abstract (en)

[origin: WO2009063260A2] A solution to the problem comprising a reliable and fast fastening of rails on wooden or concrete sleepers and their dismounting is carried out according to this invention by a metal pressure plate - clip in the form of a trapezoid (Fig. 1, Pos. 1.5) and a plastic tie-plate (Fig. 1, Pos. 1.4). The metal pressure plate - clip and the plastic tie-plate constitute an entirety, which allows pre-assembling of the whole assembly in a factory and subsequent incorporation of a rail on the location itself. The form of the metal pressure plate - clip provides a continuous pressure along its entire edge (Fig. 3, Pos. 2.1), providing a firm and reliable connection. The edge leaning on the rail base is formed in the way to enable a smooth gliding along the rail base during pulling on, preventing unnecessary resistance and damage. The other, narrower side of the pressure plate is formed in the way that it has a fixation edge at its end (Fig. 3, Pos. 3.2), preventing any shifting, after the metal pressure plate - clip is pulled on the rail and the mounting is finished. The plastic tie-plate has a fixation groove at its outer end (Fig. 4, Pos. 4.2) in which the narrower, outer end of the pressure plate enters. The groove is formed in the way that it forms a firm connection with the outer end of the metal pressure plate - clip, so that taking out of the pressure plate is not possible. The tie-plate also contains a bigger groove (Fig. 4, Pos. 4.4), which allows deformation of the pressure plate during dismounting. Due to the coloured edge made on the tie-plate, a very simple and quick visual checking is sufficient to establish whether all the pressure plates are properly pulled on the rail base, thus preventing the spending of time to the control of every screw and pressure plate. A technical solution to the problem comprising the fastening of rails on sleepers by resilient clips according to the invention, includes the use of a corresponding device, which may be installed on the maintenance vehicle and the whole process including the fastening of rails on sleepers and removing them from the sleepers may be carried out with a high degree of automation, which allows significant savings of funds and workers to be engaged in it and the reduction of time to be spent on the fastening of rails and releasing them from the sleepers.

IPC 8 full level

E01B 9/30 (2006.01)

CPC (source: EP US)

E01B 9/306 (2013.01 - EP US)

Citation (search report)

See references of WO 2009063260A2

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA MK RS

DOCDB simple family (publication)

WO 2009063260 A2 20090522; WO 2009063260 A3 20090702; AU 2008322690 A1 20090522; BR PI0819807 A2 20150721; CA 2705284 A1 20090522; CN 101970758 A 20110209; CN 101970758 B 20120718; EA 016114 B1 20120228; EA 201000631 A1 20101230; EP 2247795 A2 20101110; HR P20070525 A2 20100228; MX 2010005289 A 20100810; TN 2010000207 A1 20111111; UA 98984 C2 20120710; US 2011101121 A1 20110505

DOCDB simple family (application)

HR 2008000035 W 20081114; AU 2008322690 A 20081114; BR PI0819807 A 20081114; CA 2705284 A 20081114; CN 200880124704 A 20081114; EA 201000631 A 20081114; EP 08850553 A 20081114; HR P20070525 A 20071115; MX 2010005289 A 20081114; TN 2010000207 A 20100511; UA A201005946 A 20081114; US 74210608 A 20081114