Title (en)

Concrete sleeper system.

Title (de)

Betonschwellensystem.

Title (fr)

Système de traverses en béton.

Publication

EP 0249574 A2 19871216 (DE)

Application

EP 87730062 A 19870606

Priority

DE 3619417 A 19860610

Abstract (en)

[origin: US4802623A] Modern D.C.-tractioned trains and track circuit signal systems as well as high load trains need a special track construction. A new concrete cross sleeper system is provided for high load and high velocity tracks as well as for urban rapid transit systems comprising rails and sleepers having center part, connected to bar shaped ends and having reinforcing means. On the bar shaped ends two rail seats for each rail are positioned having elastic, electrically non-conducting plastic pads. The rails are fastened onto the rail seat by special tension means clamping the foot of the rail and fixed into plugs in the sleepers. This feature allows a triple point fixing of the rail at each sleeper end. Tracks on asphalt pavement may be secured by anchor device of the general type as sold under the trademark NELSON. The new track construction decreases the intermittent load of the rail/sleeper system and avoids trouble in track circuit signal systems existing in normally used prestressed concrete sleepers (FIG. 1).

Abstract (de)

Moderne gleichstrombetriebene Bahnen und Gleisstrom-Meldesysteme sowie Hochleistungszüge verlangen Rücksicht bei der Gleisanlagenausbildung. Daher wird ein neues Betonschwellensystem für Schwerlast-, Hochgeschwindigkeits- und Stadtbahnstrecken in Gleisanlagen vorgeschlagen, wobei die Schwellenenden (1) eine Drei-Punkt-Befestigung der Schiene (2), bestehend aus zwei elastischen, elektrisch isolierten Auflagern (3, 4, 5, 6) und Spannmitteln (8, 9) zur Schienenfuß-Festlegung aufweist. Diese Bauweise, in Verbund mit einer neuen Bewehrungstechnik aus nicht leitendem Material, verringert die Belastung der Schwelle erheblich und vermeidet den störenden Einfluß einer Stahlbewehrung auf die elektrische Bahntechnik.

IPC 1-7

E01B 1/00; E01B 3/32; E01B 9/14; E01B 9/68

IPC 8 full level

E01B 3/28 (2006.01); **E01B 1/00** (2006.01); **E01B 3/32** (2006.01); **E01B 9/14** (2006.01); **E01B 9/68** (2006.01)

CPC (source: EP US)

E01B 3/32 (2013.01 - EP US); **E01B 9/14** (2013.01 - EP US); **E01B 9/68** (2013.01 - EP US); E01B 9/681 (2013.01 - EP US)

Cited by

DE102009049411A1; DE102010035675A1; US9145647B2; WO9705331A1

Designated contracting state (EPC)

AT BE CH DE ES FR GB GR IT LI LU NL SE

DOCDB simple family (publication)

EP 0249574 A2 19871216; **EP 0249574 A3 19881019**; **EP 0249574 B1 19910123**; AT E60381 T1 19910215; AU 597379 B2 19900531; AU 7401987 A 19871217; DE 3619417 A1 19871217; DE 3767576 D1 19910228; ES 2020297 B3 19910801; GR 3001787 T3 19921123; JP S62296001 A 19871223; US 4802623 A 19890207; ZA 874033 B 19871204

DOCDB simple family (application)

EP 87730062 A 19870606; AT 87730062 T 19870606; AU 7401987 A 19870605; DE 3619417 A 19860610; DE 3767576 T 19870606; ES 87730062 T 19870606; GR 910400497 T 19910416; JP 14163787 A 19870608; US 6003987 A 19870609; ZA 874033 A 19870605