

Title (en)

METHOD FOR IMPROVING OVERALL PERFORMANCE OF RAIL VEHICLE BOGIE AND SUSPENSION DAMPING SYSTEM

Title (de)

VERFAHREN ZUR VERBESSERUNG DER GESAMTLEISTUNG EINES SCHIENENFAHRZEUGDREHGESTELLS UND
AUFHÄNGUNGSDÄMPFUNGSSYSTEMS

Title (fr)

PROCÉDÉ D'AMÉLIORATION DE PERFORMANCE GLOBALE DE BOGIE DE VÉHICULE FERROVIAIRE ET SYSTÈME D'AMORTISSEMENT
DE SUSPENSION

Publication

EP 3369640 A1 20180905 (EN)

Application

EP 16858570 A 20160112

Priority

- CN 201510709115 A 20151028
- CN 2016070656 W 20160112

Abstract (en)

Disclosed are a method for improving overall performance of a rail vehicle bogie and a suspension damping system. The system rigidity of a torque arm node is adjusted by changing and adjusting torque arm node parameters so as to lower the longitudinal rigidity and the deflection rigidity of the torque arm node; meanwhile the axial rigidity is increased, such that a reduction in the torsional rigidity of the torque arm node is avoided. The structure of a vertical stop is changed to lower the vertical rigidity of a primary suspension. The structure of a supporting ball joint of an anti-side-roll torsion bar is changed to prevent the axial movement of the anti-side-roll torsion bar. The structure of a traction ball joint of a traction rod system component is adjusted to control the non-linear rigidity of the traction ball joint such that the non-linear rigidity of the traction ball joint has a smooth transition. The longitudinal rigidity, axial rigidity, torsional rigidity and deflection rigidity of the entire bogie are adjusted by changing the torque arm node and the vertical stop of the primary suspension system, changing the structure of the supporting ball joint of the anti-side-roll torsion bar of a secondary suspension system and changing the structure of the traction ball joint, such that the overall performance of the bogie is further improved.

IPC 8 full level

B61F 5/24 (2006.01)

CPC (source: EP)

B61F 5/24 (2013.01); **B61F 5/301** (2013.01)

Cited by

CN112046527A; WO2023077331A1

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

DOCDB simple family (publication)

WO 2017071119 A1 20170504; EP 3369640 A1 20180905; EP 3369640 A4 20181114

DOCDB simple family (application)

CN 2016070656 W 20160112; EP 16858570 A 20160112