

Title (en)

Railway vehicle having shock absorbing structures

Title (de)

Schienenfahrzeug mit einer Energieverzehr-Struktur

Title (fr)

Véhicule ferroviaire doté d'une structure d'absorption d'énergie

Publication

**EP 2371651 A2 20111005 (EN)**

Application

**EP 10251349 A 20100729**

Priority

JP 2010069143 A 20100325

Abstract (en)

The invention provides a shock absorbing structure of a railway vehicle capable of ensuring a doorway (escape port) region while absorbing collision energy during collision. The impact caused when a railway vehicle experiences collision is transmitted via an end structure (30) constituting the railway vehicle, a roof structure end section (42), an underframe end section (52) and a second doorway frame (74) to an upper third doorway frame (76a) and a lower third doorway frame (76b). When the impact exceeds a predetermined level, the roof structure end section (42), the underframe end section (52), the upper doorway frame (76a) and the lower doorway frame (76b) disposed in the crushable region (200) are crushed and plastically deformed in the longitudinal direction of the railway vehicle (1), absorbing the shock during the process. A width (L1) of the doorway section (60) after absorbing shock becomes smaller than a width (L0) of the doorway section (60) prior to absorbing shock, but the first doorway frame (72, 72a, 72b), the roof structure (40) and the underframe (50) disposed in the survival region (100) are not crushed, so that the doorway width (L1) can be ensured as an escape port.

IPC 8 full level

**B61D 15/06** (2006.01); **B61D 17/06** (2006.01)

CPC (source: EP)

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Citation (applicant)

JP 2008062817 A 20080321 - HITACHI LTD

Cited by

CN104512429A; CN104144839A; AT521565A1; AT521565B1; EP3584136A4; AT524864A4; AT524864B1; WO2020126507A1

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