

Title (en)
Vehicle having side wind effect compensation

Title (de)
Fahrzeug mit Seitenwindwirkungskompensation

Title (fr)
Véhicule avec compensation de l'effet du vent latéral

Publication
EP 2842827 A1 20150304 (EN)

Application
EP 13182037 A 20130828

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Abstract (en)
The present invention relates to a vehicle, in particular a rail vehicle, comprising a wagon body (102), in particular a double deck wagon body, a first running gear (104), a second running gear (114) arranged at a distance from the first running gear (104) in a vehicle longitudinal direction, in particular, trailing the first running gear (104), a side wind compensation device (118) and, in particular, a rolling compensation arrangement. The wagon body (102) is supported on the first running gear (104) and the second running gear (114) in a vehicle height direction by means of spring devices (103, 113), the side wind compensation device (118) comprises a control device (107.2) and an active device (107.1, 117.1) acting between the wagon body (102) and the first running gear (104) and/or the second running gear (114) to at least reduce, in a side wind control mode, side wind induced wheel unloading at the first running gear (104) caused by a side wind load acting on the wagon body (102). The control device (107.2) is configured to control, in the side wind control mode, a magnitude of an action of the active device (107.1, 117.1) as a function of a first input variable and a second input variable. The first input variable is a first deflection variable representative of a first transverse deflection between the wagon body (102) and the first running gear (104) in a vehicle transverse direction, while the second input variable is a second deflection variable representative of a second transverse deflection between the wagon body (102) and the second running gear (114) in the vehicle transverse direction. The control device (107.2) is configured to control, in the side wind control mode, the magnitude of the action of the active device (107.1, 117.1) as a function of a third input variable, the third input variable being a variable representative of a track curvature related load acting on the wagon body (102). The third input variable has a third range and a fourth range, the third input variable, in the third range, being representative of an increased track curvature related load compared to the fourth range. The magnitude of the action, at least in a first range of the first input variable and/or at least in a second range of the second input variable, is increased in the third range compared to the fourth range.

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Citation (applicant)

- EP 1075407 B1 20011024 - TALBOT GMBH & CO KG [DE], et al
- EP 1190925 A1 20020327 - HITACHI LTD [JP]
- WO 2007048765 A1 20070503 - SIEMENS AG [DE], et al
- WO 2010113045 A2 20101007 - BOMBARDIER TRANSP GMBH [DE], et al

Citation (search report)

- [AD] WO 2010113045 A2 20101007 - BOMBARDIER TRANSP GMBH [DE], et al
- [AD] WO 2007048765 A1 20070503 - SIEMENS AG [DE], et al
- [AD] EP 1075407 B1 20011024 - TALBOT GMBH & CO KG [DE], et al
- [AD] EP 1190925 A1 20020327 - HITACHI LTD [JP]

Cited by
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