Title (en)

Method for designing a traction unit for a rail vehicle

Title (de)

Verfahren zum Entwurf einer Triebeinheit für ein Schienenfahrzeug

Title (fr)

Procédé de conception d'une unité de traction pour véhicule ferroviaire

Publication

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Application

EP 14156809 A 20140226

Priority

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Abstract (en)

The present invention relates to a method for designing a traction unit for a rail vehicle, the traction unit comprising at least one wheel unit (105) connected to a drive unit (107) driving the at least one wheel unit (105) and a controller unit (108) controlling the drive unit (107). The method comprises, in a mechanical design step (109.2), defining at least one mechanical design parameter of the traction unit (103, 108) as a function of at least one predefined performance parameter of the rail vehicle (101). The method further comprises, in a controller design step (109.3), defining at least one controller design parameter of the traction unit (103, 108) as a function of at least one predefined performance parameter of the rail vehicle (101) and/or as a function of at least one mechanical design parameter of the traction unit (103, 108). The method further comprises, in an evaluation step (109.7), defining at least one load value acting on the traction unit (103, 108) incorporating the at least one mechanical design parameter defined in the mechanical design step (109.2) and incorporating the at least one controller design parameter defined in the controller design step (109.3), and evaluating compliance of the traction unit (103, 108) with at least one structural integrity criterion predefined for the rail vehicle (101). The at least one load value is defined using a set of real operation adhesion characteristics, each of the real operation adhesion characteristics being representative of real operation slip dependent wheel to rail adhesion and having been previously obtained from real operation data, in particular, real service operation data, of at least one reference rail vehicle.

IPC 8 full level

B61C 15/14 (2006.01)

CPC (source: EP)

B61C 15/14 (2013.01)

Citation (search report)

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DOCDB simple family (publication)

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