

Title (en)
RAIL VEHICLE WITH A FIBER COMPOSITE MATERIAL HEAD MODULE

Title (de)
SCHIENENFAHRZEUG MIT EINEM KOPFMODUL AUS EINEM FASERVERBUNDWERKSTOFF

Title (fr)
VEHICULE FERROVIAIRE COMPORTANT UN MODULE DE TETE EN MATERIAU COMPOSITE RENFORCE PAR DES FIBRES

Publication
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Application
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Abstract (en)
[origin: US6431083B1] The subject matter of the invention is a rail vehicle with a head module made of a composite fiber material. For this, a joining region with height-tolerance compensating means (5) is arranged on the underframe (3) and a joining edge with longitudinal and lateral tolerance compensating means (7 and 8) is arranged on the wagon body module (2). The head module has joining edges that point toward the wagon body module (2) and the underframe (3) and is provided with reinforced sections (18, 19) that are integrated into the fiber composite material. The head module is attached to the underframe (3) and at least at the head module side walls (14) of the wagon body module (2) by means of fastening means (20, 21), which build up a pre-tensioning force, in such a way that shear-resistant connections are created. As a result, it is possible to control size deviations resulting from the production methods in order to avoid undefined internal stresses during the joining, to absorb without damage the differing heat expansions of a head module of fiber composite material and a wagon body module, as well as to produce the head modules of a fiber composite material and the connections of said modules to the wagon body module (2) and the underframe (3) so as to be not only self-supporting but also load-sharing and easy to repair.

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