

Title (en)  
RAIL VEHICLE BODY SHELL AND METHOD FOR MANUFACTURING SAME

Title (de)  
SCHIENENFAHRZEUGGROHBAU UND VERFAHREN ZU DESSEN HERSTELLUNG

Title (fr)  
CAISSE DE VÉHICULE FERROVIAIRE ET SON PROCÉDÉ DE FABRICATION

Publication  
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Application  
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Abstract (en)  
[origin: WO2012150091A1] The invention relates to a method for manufacturing a car body shell of a rail vehicle comprising the steps: preparation of a bogie (60), production of outer wall modules (1) according to a tailored blank method, in which cut-to-size pieces of sheet metal (10, 11) with different material properties are joined to one another in a butt-jointed fashion by means of laser welding to form a side wall face, with the result that an outer face (18) of the side wall face is produced without material discontinuities at the joints and wherein, when the outer wall modules (1) are produced on an inner side (17) of the side wall face, a framework structure (4) formed from framework profiles (5, 5a, 5b) is attached, joining of a plurality of outer wall modules (1) together to form at least one central side wall section (81), wherein the outer wall modules (1) are joined to one another in a butt-jointed fashion by means of laser welding without an offset occurring at the joints in the outer face (18a) of the side wall section (81), attachment of at least the central side wall section (81) and, if appropriate, of outer wall modules (1) embodied as side wall modules (94) and, if appropriate, front end modules on the bogie (60), and joining the roof elements (71, 72), wherein the step of producing an outer wall module (1) comprises joining a bent upper chord profile (2) to the side wall face, wherein the upper chord profile (2) terminates an upper edge of the outer wall module and is joined, in a butt-jointed fashion by means of laser welding, to adjacent pieces of the pieces of sheet metal (10, 11) with different material properties, without a material discontinuity occurring at the outer face (18) of the side wall face, wherein the upper chord profile (2) comprises a profile section (42) which is bent with respect to the outer face (18) of the side wall face towards the inside (17) of the outer wall module (1), and wherein, in the step of joining the framework structure (4) to the inside (17) of the side wall face, the framework structure profiles (5, 5a, 5b) are attached by end-side abutment edges (19, 20, 21) to the inside (17) of the side wall face including the upper chord profile by means of T joints and are fastened in a materially joined fashion by means of laser weld seams (13). The invention also relates to a car body shell and to an outer wall module.

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