

Title (en)  
UNDERFRAMES FOR RAILWAY FREIGHT CARS

Publication  
**EP 0182138 B1 19901010 (DE)**

Application  
**EP 85113438 A 19851023**

Priority  
DE 3442046 A 19841116

Abstract (en)  
[origin: EP0182138A2] 1. Underframe for rail freight cars, a) without a car body which is rigid against torsion, comprising at least b) external longitudinal bearers (1 or 8) and c) transverse bearers (4) arranged fixed between these and d) at least one additional hollow bearer (2 or 9), arranged between the external longitudinal bearers (1 or 8) in the transverse direction of the car and e) connected in a manner rigid against torsion to the external longitudinal bearers (1 or 8), characterised in that f) the system not yet containing the hollow bearers, and comprising external longitudinal bearers (1 or 8) and the transverse bearers (4) arranged fixed between these, has a rigidity against torsion which is so low that this rigidity against torsion is too low, taken by itself, for the underframe, g) the desired and required torsional rigidity of the underframe is achieved by providing each of the hollow bearers (2 or 9) with a specially established torsional rigidity such that this torsional rigidity determines the torsional rigidity of the entire underframe and thus of the rail freight car, and h) openings (3) on the underside of the hollow bearers determine the magnitude of the torsional rigidity of the hollow bearers (2 or 9) by the shape and size or the cross-sections of the hollow bearers or the wall thickness of the hollow bearers or several of these parameters together.

IPC 1-7  
**B61F 1/00**

IPC 8 full level  
**B61F 1/00** (2006.01)

CPC (source: EP)  
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Cited by  
EP0333152A3; DE3911138A1

Designated contracting state (EPC)  
AT CH FR GB IT LI NL SE

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**EP 0182138 A2 19860528; EP 0182138 A3 19870121; EP 0182138 B1 19901010**; AT E57348 T1 19901015; CZ 278887 B6 19940817; CZ 807785 A3 19940316; DD 243678 A5 19870311; DE 3442046 A1 19860522; DE 3442046 C2 19921029; DK 159385 B 19901008; DK 159385 C 19910408; DK 519085 A 19860517; DK 519085 D0 19851111; ES 296329 U 19870901; ES 296329 Y 19880416; FI 85247 B 19911213; FI 85247 C 19930726; FI 854230 A0 19851028; FI 854230 L 19860517; HU 195152 B 19880428; HU T40043 A 19861128; NO 166072 B 19910218; NO 166072 C 19910529; NO 854566 L 19860520; PL 151533 B1 19900928; PL 256195 A1 19860923; PT 81486 A 19851201; PT 81486 B 19870918; RO 94260 A 19880330; RO 94260 B 19880331; SK 277953 B6 19950913; SK 807785 A3 19950913

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**EP 85113438 A 19851023**; AT 85113438 T 19851023; CS 807785 A 19851108; DD 28291485 A 19851115; DE 3442046 A 19841116; DK 519085 A 19851111; ES 296329 U 19851115; FI 854230 A 19851028; HU 437385 A 19851115; NO 854566 A 19851115; PL 25619585 A 19851111; PT 8148685 A 19851114; RO 12068085 A 19851107; SK 807785 A 19851108