

Title (en)
ENERGY ABSORPTION DEVICE FOR THE FRONT FACE OF RAIL VEHICLES

Title (de)
ENERGIEVERZEHREINRICHTUNG FÜR DIE STIRNSEITE VON SCHIENENFAHRZEUGEN

Title (fr)
DISPOSITIF D'ABSORPTION D'ENERGIE POUR LA FACE FRONTALE DE VEHICULES SUR RAILS

Publication
EP 1390245 B1 20070627 (DE)

Application
EP 02745097 A 20020528

Priority
• DE 0201953 W 20020528
• DE 10126483 A 20010531

Abstract (en)
[origin: US6685040B2] An energy-absorbing device for the end of rail vehicles is provided. In order in particular to reduce the cost of adaptation and matching between vehicle manufacturers and suppliers of the energy-absorbing device and the couplings (3) and the design and/or quality risks, the energy-absorbing device exhibits a base frame (1) which carries all the proposed elements for energy absorption in the end area and which is fastened as a compact preassembled module to the sub-frame (9) entirely in the defined interface area.

IPC 8 full level
B61D 15/06 (2006.01); **B61F 1/10** (2006.01); **B61G 7/08** (2006.01); **B61G 11/00** (2006.01)

CPC (source: EP KR US)
B61D 15/06 (2013.01 - EP US); **B61F 1/10** (2013.01 - EP US); **B61G 7/08** (2013.01 - EP US); **B61G 11/00** (2013.01 - EP US);
B61G 11/14 (2013.01 - KR)

Cited by
EP3524489A1

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)
WO 02096734 A1 20021205; AT E365662 T1 20070715; AU 2002317168 B2 20060803; CN 100425489 C 20081015; CN 1463235 A 20031224;
DE 10126483 A1 20021205; DE 50210383 D1 20070809; DK 1390245 T3 20070924; DK 1390245 T4 20121015; EP 1390245 A1 20040225;
EP 1390245 B1 20070627; EP 1390245 B2 20120808; ES 2288191 T3 20080101; ES 2288191 T5 20121126; KR 100847157 B1 20080717;
KR 20030022875 A 20030317; MX PA03000871 A 20040405; PL 201652 B1 20090430; PL 358612 A1 20040809; PT 1390245 E 20070905;
US 2002178967 A1 20021205; US 6685040 B2 20040203

DOCDB simple family (application)
DE 0201953 W 20020528; AT 02745097 T 20020528; AU 2002317168 A 20020528; CN 02801966 A 20020528; DE 10126483 A 20010531;
DE 50210383 T 20020528; DK 02745097 T 20020528; EP 02745097 A 20020528; ES 02745097 T 20020528; KR 20037001205 A 20030127;
MX PA03000871 A 20020528; PL 35861202 A 20020528; PT 02745097 T 20020528; US 15916802 A 20020530