

Title (en)
HOLLOW DRIVE SHAFT FOR RAIL VEHICLES

Publication
EP 0144451 A3 19851106 (DE)

Application
EP 83112095 A 19831201

Priority
EP 83112095 A 19831201

Abstract (en)
[origin: EP0144451A2] 1. A hollow shaft drive for two driving axles (5) of an undercarriage for a rail vehicle whose draught-ventilated, unhooded electric traction motor (1) is positioned with its motor shaft at right angles to and between the driving axles (5) and is coupled to their hollow shafts (4) through gears, where the motor shaft and gears are supported in gearboxes (3) fastened at their front faces to thrust rings (2) which hold together the stack of stator laminations, which gearboxes (3) enclose ventilators (7) fastened on the motor shaft and in a ventilator chamber section, have peripheral air-vents (3D), where between the ventilator chamber sections and the gearbox heads (3C) which receive the hollow shafts (4), gearbox necks of slimmer dimensions are located from which laterally protrude housing components for auxiliary devices which are subject to outside influence, characterised in that a noise-reducing casing (10) is provided, made from noise-reducing material, which has openings at both end faces, provided with sound-absorbing means, for the passage of cool air conveyed by at least one fan positioned within the noise-reducing case, and which casing surrounds the region of the hollow shaft drive extending from gearbox neck (3B) to gearbox neck (3B), where the noise-reducing casing (10) is formed partly from non-reverberatory metal sheets and, at least at the traction motor (1), is insulated against structure-borne noise, where the floor surface (10C) of the casing (10) which is only non-reverberatory is positioned to serve as an air-conducting surface spaced from the two gearboxes (3) and from the underside of the stack of stator laminations (1A), and where the top and side faces (10A, 10B) of the casing (10), which are lined with additional sound-proofing means (11, 12, 13), lie closely against the outer side of the traction motor (1) up to the open longitudinal regions which serve as channels (17, 16) for cool air, and at the gearboxes (3) leave free an adequately large interspace for the cool air conveyed through the interior of the traction motor by way of the air vents ; and that at the open ends of the noise-reducing casing (10) the gearbox necks (3B) are provided with sound-proofing means which surround and are spaced from the gearbox necks and which leave a space free between them and the top face of the noise-reducing casing (10) and are closely connected only with the side faces (10B) and the bottom face (10C) of the noise-reducing casing (10).

IPC 1-7
B61C 9/50; B61F 3/04

IPC 8 full level
B61C 9/50 (2006.01); **B61F 3/04** (2006.01)

CPC (source: EP)
B61C 9/50 (2013.01); **B61F 3/04** (2013.01)

Citation (search report)
• [A] EP 0085022 A1 19830803 - SIEMENS AG [DE]
• [A] EP 0046135 A2 19820217 - SIEMENS AG [DE]
• [A] EP 0024294 A1 19810304 - THYSSEN INDUSTRIE [DE]
• [A] FR 2318050 A1 19770211 - BRITISH LEYLAND UK LTD [GB]
• [A] EP 0031131 A1 19810701 - MAGIRUS DEUTZ AG [DE], et al
• [AD] DE 2514265 A1 19761007 - SIEMENS AG

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

DOCDB simple family (publication)
EP 0144451 A2 19850619; EP 0144451 A3 19851106; EP 0144451 B1 19880316; AT E33004 T1 19880415; DE 3375996 D1 19880421

DOCDB simple family (application)
EP 83112095 A 19831201; AT 83112095 T 19831201; DE 3375996 T 19831201