

Title (en)
Breakaway coupling for roadside appurtenances

Title (de)
Trennkupplung für Strassenrandelemente

Title (fr)
Raccord séparable pour l'équipement routier

Publication
EP 1477611 A1 20041117 (EN)

Application
EP 03011207 A 20030516

Priority
EP 03011207 A 20030516

Abstract (en)
In a breakaway coupling (10) for a highway and roadside appurtenance, a controlled breaking region (14) is provided which has at least two axial spaced necked-down (16,18) portions coaxially arranged between the axial ends (13,13') of the coupling (10) which are configured to be attached both to the appurtenance, at one end, and to the support base (B), at the other end. Each necked-down portion (16,18) essentially consists of two axially aligned conical portions (60,62,64,66) inverted one in relation to the other and generally joined at their apices to form a generally hour-glass configuration having a region of minimal cross section at an inflection point (16',18') having a gradually curved annular concave surface defining a radius of curvature. Each of the two necked-down (16,18) portions has different radii of curvature that at respective inflection points (16',18') to provide preferred failure modes as a function of the position and direction of impact of a force on the appurtenance. The breakaway coupling (10) preferably has a minimum ultimate tensile strength equal to or greater than about 53.8 kN and a minimum ultimate restrained shear strength equal to or greater than about 5.8 kN. The minimum ultimate restrained shear strength of the breakaway coupling (10) is preferably about from about 6% to about 12% of the minimum ultimate tensile strength. <IMAGE>

IPC 1-7
E01F 9/018; **E01F 9/011**

IPC 8 full level
E01F 9/681 (2016.01); **E01F 9/011** (2006.01); **E01F 9/018** (2006.01); **E01F 9/635** (2016.01)

CPC (source: EP)
E01F 9/635 (2016.02); **E01F 9/681** (2016.02)

Citation (applicant)
• US 3637244 A 19720125 - STRIZKI RICHARD A
• US 3951556 A 19760420 - STRIZKI RICHARD A
• US 3967906 A 19760706 - STRIZKI RICHARD A
• US 3570376 A 19710316 - OVERTON DOLPHIN D, et al
• US 3606222 A 19710920 - HOWARD EDWARD J
• US 3755977 A 19730904 - LEWIS T
• US 3837752 A 19740924 - SHEWCHUK J
• US 6056471 A 20000502 - DINITZ ARTHUR [US]

Citation (search report)
• [DX] US 6056471 A 20000502 - DINITZ ARTHUR [US]
• [A] TRANSPO: "Pole-Safe Model 4125", XP002256456

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

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