

Title (en)

VEHICLE AND VEHICLE BODY COLLISION ENERGY ABSORPTION DEVICE THEREOF

Title (de)

FAHRZEUG UND FAHRZEUGKAROSSERIE-KOLLISIONSENERGIE-ABSORPTIONSVORRICHTUNG DAFÜR

Title (fr)

VÉHICULE ET DISPOSITIF ASSOCIÉ D'ABSORPTION D'ÉNERGIE DE COLLISION DE CARROSSERIE DE VÉHICULE

Publication

EP 3741643 A1 20201125 (EN)

Application

EP 20754132 A 20200225

Priority

- CN 201910141398 A 20190226
- CN 201920244002 U 20190226
- CN 2020076621 W 20200225

Abstract (en)

A vehicle and a vehicle body collision energy absorbing device thereof are disclosed by this application. A coupler (8) of the vehicle body collision energy absorbing device includes a coupler body (81) and an expansion pipe (82) that absorbs energy and expands relative to the coupler body, and the coupler body (81) is arranged on a coupler mounting plate (1). A vehicle body structure (2) is provided with an energy absorbing cavity, and the coupler mounting plate (1) and the expansion pipe (82) are arranged in the energy absorbing cavity. The vehicle body collision energy absorbing device further includes a compression energy absorbing unit (6) arranged in the energy absorbing cavity, a locking device (3) that locks the coupler mounting plate (1) relative to the energy absorbing cavity, a retreat support (5) arranged between the coupler mounting plate (1) and the compression energy absorbing unit (6), and a shear pin (4) connecting the vehicle body structure (2) with the retreat support (5). One end of the compression energy absorbing unit (6) abuts against a rear plate of the energy absorbing cavity. The retreat support (5) is slidably arranged in the energy absorbing cavity, and is provided with a locking component and a linkage structure. The locking component unlocks the locking device (3) after being away from the coupler mounting plate (1), and the linkage structure has a positioning structure axially positioned with the expansion pipe (82). The vehicle body collision energy absorbing device improves the energy absorption effect and ensures the safety of passengers' lives and properties.

IPC 8 full level

B61G 7/14 (2006.01); **B61G 11/16** (2006.01)

CPC (source: EP)

B61G 7/10 (2013.01); **B61G 11/16** (2013.01)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

EP 3741643 A1 20201125; **EP 3741643 A4 20211229**; **EP 3741643 B1 20230906**; HU E063554 T2 20240128; RS 64841 B1 20231229; SG 11202007588W A 20201029; WO 2020173436 A1 20200903

DOCDB simple family (application)

EP 20754132 A 20200225; CN 2020076621 W 20200225; HU E20754132 A 20200225; RS P20231090 A 20200225; SG 11202007588W A 20200225