

Title (en)

FLEXIBLE RACK WITH STEEL CORD EMBEDDED IN POLYMER

Title (de)

FLEXIBLES GESTELL MIT IN POLYMER EINGEBETTETEM STAHLKORD

Title (fr)

CRÉMAILLÈRE FLEXIBLE AVEC CÂBLE D'ACIER INCORPORÉ DANS UN POLYMÈRE

Publication

EP 3390701 A1 20181024 (EN)

Application

EP 16808614 A 20161207

Priority

- EP 15201001 A 20151218
- EP 2016079989 W 20161207

Abstract (en)

[origin: WO2017102478A1] A flexible rack for use in a drive system such as a window elevator system, sunroof drive system, sun shade or cover actuators in a vehicle comprises a steel cord embedded in a polymer jacket. In the polymer recesses are provided at regular distances that engage with the teeth of the drive gear. In order to act as a backbone to the flexible rack, the steel cord must account for at least 90% of the total longitudinal stiffness of the flexible rack otherwise it succumbs to compressive stresses and/or stretches too much under tensile loads. In contradistinction therewith the bending stiffness contribution of the steel cord must remain below 15% of the total bending stiffness of the flexible rack so that the flexible rack can follow the curvature of the guiding channel the flexible rack is running in. By preference the steel cord is free of second and higher order helical deformation. Particularly preferred is that the steel cord is situated slightly 'off- centre' as therewith a preferred bending direction is induced.

IPC 8 full level

D01B 1/06 (2006.01); **F16H 55/26** (2006.01)

CPC (source: EP)

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Citation (search report)

See references of WO 2017102478A1

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Designated extension state (EPC)

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DOCDB simple family (publication)

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