Title (en)

STEERING SYSTEM

Title (de)

LENKSYSTEM

Title (fr)

SYSTÈME DE DIRECTION

Publication

EP 3541685 A1 20190925 (DE)

Application

EP 17786877 A 20171006

Priority

- DE 102016122378 A 20161121
- EP 2017075503 W 20171006

Abstract (en)

[origin: WO2018091200A1] The invention relates to a steering system for a motor vehicle, comprising the following: - a steering gear which comprises - a housing (1), - a gear (2), - a screw pinion (3) which meshes with the gear (2), and - a screw pinion shaft (4) which comprises the screw pinion (3), wherein - the screw pinion shaft (4) is mounted in a fixed bearing (8) on one side of the screw pinion (3), said fixed bearing comprising a rotational bearing in which the screw pinion shaft (4) is received and which is received in a bearing sleeve (15); the fixed bearing (8) additionally comprises a pivot ring (16) which has an outer ring (20) and an inner ring (17) that are pivotally connected via one or more torsion webs (21); the inner ring (17) is connected to the bearing sleeve (15) or is integrated into same; and the outer ring (20) is fixed in the housing (1), and - the screw pinion shaft (4) is mounted in a floating bearing (10) on the other side of the screw pinion (3), said floating bearing comprising a rotational bearing in which the screw pinion shaft (4) is received and which is received in a bearing bushing (14) mounted in the housing (1), said bearing bushing (14) ensuring a radial mobility of the rotational bearing within the housing (1). The steering system also comprises a steering motor (6) which is drivingly connected to the screw pinion shaft (4) of the steering gear solely via a coupling element (40). The invention is characterized in that - the outer ring (20) of the pivot ring (16) of the fixed bearing (8) and/or the bearing bushing (14) of the floating bearing (10) is fixed in the housing (1) solely with the interposition of a vibration-damping decoupling element (38) and/or - the pivot ring (16) of the fixed bearing (8), the bearing bushing (14) of the floating bearing (10), the screw pinion (3), the gear (2), and/or the coupling element (40) are at least partly made of a vibration-damping material. In such a steering system, a vibration excitation, and thus a sound emission of the housing (1) due to vibrations produced from the rotation of the screw pinion shaft (4) and the gear (2), is kept as low as possible, thereby having a positive effect on the noise behavior of the steering system during operation.

IPC 8 full level

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CPC (source: EP US)

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Citation (search report)

See references of WO 2018091200A1

Designated contracting state (EPC)

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