

Title (en)

LEAF SPRING CONSISTING OF A SPECIAL FIBRE-COMPOSITE MATERIAL

Title (de)

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Title (fr)

RESSORT A LAMES FABRIQUE DANS UN MATERIAU COMPOSITE RENFORCE EN FIBRES SPECIFIQUE

Publication

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Application

**EP 06818044 A 20061104**

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Abstract (en)

[origin: WO2007054069A1] The invention relates to a leaf spring consisting of a fibre-composite material and having a central longitudinal section and two adjoining axial end sections for a wheel suspension in a vehicle, the end sections of said leaf spring tapering with respect to the leaf spring width. The leaf spring is composed of resin-impregnated fibre layers and axially orientated uncut first fibres of the fibre-composite material extend the full length of the leaf spring to the two axial ends of said spring. Before the finished leaf spring is produced, the axial end sections have an essentially V-shaped geometry or an essentially V-shaped notch and thus form two respective limbs lying transversally to the longitudinal extension of the axis of the untreated leaf spring, said limbs abutting one another in the finished leaf spring. The fibre volume fraction in the cured leaf spring is more than 50 %. According to the invention, said leaf spring is produced from the following fibre-composite material: a) EPR 05322 synthetic resin provided by the company Hexion; b) EPH 778 curing agent provided by Hexion; c) EPC 120 accelerator provided by Hexion; and d) type SE 1500 2400 tex AdvantexT30 fibre glass provided by Owens Corning Fiberglas. In the uncured leaf spring, between 0.012 kg to 0.018 kg curing agent and between 0.003 kg and 0.007 kg accelerator is added to 0.1 kg synthetic resin to form the initially liquid workpiece component.

IPC 8 full level

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