

Title (en)
METHOD FOR PRODUCING CONTINUOUS-FIBRE-REINFORCED MOULDED PARTS FROM THERMOPLASTIC PLASTICS AND MOTOR VEHICLE MOULDED PART

Title (de)
VERFAHREN ZUR HERSTELLUNG VON ENDLOSFASERVERSTÄRKTEN FORMTEILEN AUS THERMOPLASTISCHEM KUNSTSTOFF SOWIE KRAFTFAHRZEUGFORMTEIL

Title (fr)
PROCÉDÉ DE FABRICATION DE PIÈCES MOULÉES EN THERMOPLASTIQUE RENFORCÉ PAR DES FIBRES CONTINUES ET PIÈCES MOULÉES DE VÉHICULES À MOTEUR

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Abstract (en)
[origin: WO2011085792A1] The invention relates to a method for producing continuous-fibre-reinforced moulded parts (1) from thermoplastic plastics, the method comprising the following steps: preparation of cut-to-size, substantially flat, unidirectionally fibre-reinforced mats (2) with a thermoplastic matrix which at least partially surrounds the fibres; transfer of the mats (2) to a workpiece carrier (5) which predetermines the rough contour (4) of the moulded part (1); depositing and progressive build-up of the mats (2) on the workpiece carrier (5) to form a three-dimensional preform (6) such that the orientation of the fibres in the mats (2) is adapted to the forces applied when the moulded part (1) is subsequently in use and to the load paths resulting therefrom within the moulded part (1); securing the mats (2) in place relative to each other during or after build-up of the preform (6); heating of the preform (6) up to or above the melting temperature of the thermoplastic matrix of the preform (6); introduction of the three-dimensional preform (6) into a mould tool (10) forming the final contour of the moulded part (1); setting of a homogeneous pressure within the mould tool in order to ensure that the preform (6) consolidates whilst simultaneously retaining the orientation of the fibres within the preform (6); and removal of the consolidated moulded part (1) from the mould tool (10).

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