

Title (en)

METHOD FOR MANUFACTURING A MOTOR VEHICLE COMPONENT WITH AT LEAST TWO DIFFERENT STRENGTH AREAS

Title (de)

VERFAHREN ZUR HERSTELLUNG EINES KRAFTFAHRZEUGBAUTEILS MIT MINDESTENS ZWEI VONEINANDER VERSCHIEDENEN FESTIGKEITSBEREICHEN

Title (fr)

PROCÉDÉ DE FABRICATION D'UN ÉLÉMENT DE VÉHICULE AUTOMOBILE COMPRENANT AU MOINS DEUX ZONES DE FIXATION DIFFÉRENTES L'UNE DE L'AUTRE

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Application

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Abstract (en)

[origin: WO2017144612A1] The invention relates to a method for producing a motor vehicle component (14) with at least two regions of different strengths and a protective layer. The method is characterized by the following steps: - providing pre-coated blanks (2), in particular pre-cut blanks, made of a steel alloy which can be hardened, - homogeneously heating the blank to a heating temperature which is at least equal to or greater than the AC1 temperature, preferable equal to or greater than the AC3 temperature - maintaining the heating temperature such that the pre-coating alloys with the blank (2), - homogeneously intercooling the alloyed blank (2) to an intercooling temperature between 450 and 700 °C, - partially heating the blank (2) from the intercooling temperature in regions of a first type (10) to at least the AC3 temperature and keeping regions of a second type (11) substantially at the intercooling temperature, - hot-forming and press-hardening the partially tempered blank (12) so as to form a motor vehicle component (14), wherein a tensile strength greater than 1400 MPa is produced in regions of the first type (10), a tensile strength of less than 1050 MPa is produced in regions of the second type (11), and a transition region (19) is produced between said regions.

IPC 8 full level

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Cited by

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