

Title (en)
METHOD FOR PRODUCING PARTIALLY HARDENED STEEL COMPONENTS

Title (de)
VERFAHREN ZUM HERSTELLEN PARTIELL GEHÄRTETER STAHLBAUTEILE

Title (fr)
PROCÉDÉ DE FABRICATION DE COMPOSANTS EN ACIER PARTIELLEMENT TREMPÉS

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Abstract (en)
[origin: WO2010109012A1] The invention relates to a method for producing partially hardened steel components, a billet made of hardenable sheet steel being subjected to a temperature increase which suffices for quench hardening and, after having reached a desired temperature and optionally after a desired holding time, the billet being transferred into a forming tool in which the billet is formed into a component and at the same time quench-hardened, or the billet being cold-formed and the component obtained by the cold forming process being subsequently subjected to a temperature increase, said temperature increase being conducted such that a temperature of the component is achieved which is required for quench hardening, and the component subsequently being transferred into a tool in which the heated component is cooled and thereby quench-hardened, characterized in that during the heating of the billet or the component, for the purpose of increasing the temperature to a temperature required for hardening, absorption compounds are present in regions that are to have lower hardness and/or higher ductility and/or spaced apart from each other with a small gap, wherein the absorption compounds are dimensioned with respect to the expansion and thickness thereof, the thermal conductivity thereof and the thermal capacity thereof and/or with respect to the emission level thereof such that the thermal energy in the ductile remaining region and acting on the component flows through the component into the absorption compound.

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