

Title (en)
FORMING TOOL AND METHOD FOR HOT FORMING AND PARTIALLY PRESS HARDENING A WORKPIECE MADE OF SHEET STEEL

Title (de)
UMFORMWERKZEUG UND VERFAHREN ZUM WARMUMFORMEN UND PARTIELLEN PRESSHÄRTEN EINES WERKSTÜCKES AUS STAHLBLECH

Title (fr)
OUTIL DE FORMAGE ET PROCÉDÉ DE FORMAGE À CHAUD ET DE TREMPÉ À LA PRESSE PARTIELLE D'UNE PIÈCE EN TÔLE D'ACIER

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Application
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Abstract (en)
[origin: WO2012010418A1] The invention relates to a forming tool and to a method for hot forming and partially press hardening a workpiece made of sheet steel, wherein the workpiece is heated prior to forming and is subsequently hot formed in a forming tool comprising a die (3) and a punch (5), wherein the forming tool comprises a cooling device (8). The method is characterized in that, in the closed state of the forming tool (1, 1'), the contact between the workpiece (2) and the contact surfaces of the die (3) and the punch (5) of the forming tool is interrupted in regions by moving apart a movable die section (3.2) and a movable punch section (5.2) from a closed position to an opened position. The die (3) is made of a first die part (3.1) and at least one second die part (3.2) movable relative to the first die part, while the punch (5) is made of a first punch part (5.1) and at least one second punch part (5.2) movable relative to the first punch part, wherein the at least one movable second die part (3.2) and the at least one movable second punch part (5.2) interact with an opening device (17, 18) causing the at least one second die part (3.2) and the at least one second punch part (5.2) to contact the workpiece for a shorter closing time than the first die part (3.1) and the first punch part (5.1).

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