

Title (en)
METHOD AND FORMING TOOL FOR HOT FORMING AND PRESS HARDENING WORK PIECES MADE OF SHEET STEEL, IN PARTICULAR GALVANIZED SHEET STEEL

Title (de)
VERFAHREN UND UMFORMWERKZEUG ZUM WARMUMFORMEN UND PRESSHÄRTEN VON WERKSTÜCKEN AUS STAHLBLECH, INSBESONDERE VERZINKTEN WERKSTÜCKEN AUS STAHLBLECH

Title (fr)
PROCÉDÉ ET OUTIL DE FORMAGE À CHAUD ET DE TREMPÉ SOUS PRESSE DE PIÈCES EN TÔLE D'ACIER, EN PARTICULIER DE PIÈCES EN TÔLE D'ACIER GALVANISÉE

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Priority

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Abstract (en)
[origin: CA2856679A1] The invention relates to a method for hot forming and press hardening plate-shaped or preformed workpieces made of sheet steel, in particular galvanized workpieces (1) made of sheet steel, in which the workpiece (1) is heated to a temperature exceeding the austenitizing temperature and subsequently formed and quenched in a cooled forming tool comprising a stamp (2) and a die (3), characterized in that the drawing edge region, which is defined by a positive die radius, of the die (3) used for hot forming and press hardening is provided with a materially bonded coating of a material (6, 6') and/or is provided with an insert (5) having a thermal conductivity that is lower than the thermal conductivity of section (3.1) of the die (3), which is adjacent to the drawing edge region, by at least 10 W/ (m * K), which section comes into contact with the workpiece (1) during hot forming and press hardening of the same. The surface of the material (6; 6') applied to the drawing edge region and facing the workpiece (1) or the surface of the provided insert (5) has a lateral dimension extending across the drawing edge (7), which is in the range of 1.6 times to 10 times the positive die radius of the die (3). The invention also relates to a corresponding forming tool.

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