

Title (en)

APPARATUS AND METHOD FOR HOT STAMPING OF METAL SHEETS WITH MODULATION OF THE QUENCHING RATE

Title (de)

VORRICHTUNG UND VERFAHREN ZUM HEISSPRÄGEN VON BLECHEN MIT MODULATION DER ABSCHRECKRATE

Title (fr)

APPAREIL ET PROCÉDÉ D'ESTAMPAGE À CHAUD DE FEUILLES MÉTALLIQUES AVEC MODULATION DE LA VITESSE DE TREMPÉ

Publication

EP 4032631 A1 20220727 (EN)

Application

EP 21153409 A 20210126

Priority

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Abstract (en)

Described herein are an apparatus (1) and a method for hot stamping of metal sheets (MS) with simultaneous modulation of the quenching rate. The apparatus (1) comprises:- a first die portion (2);- a second die portion (4), which defines, upon coupling with the first die portion (2), a die cavity (6) configured to impart a desired shape on a metal sheet (MS) to be subjected to stamping, the die cavity (6) being delimited by walls (2W; 16W) of the first die portion (2) and walls (10W, 12W; 16W) of the second die portion (4);- a first cooling jacket (8) provided in at least part of the first die portion (2), the first cooling jacket (8) being configured to operate in a relation of heat exchange with the die cavity (6) through at least part of the walls (2W, 16W) of the first die portion (2) that define the die cavity (6);- a second cooling jacket (14) provided in at least part (10, 12) of the second die portion (4), the second cooling jacket (14) being configured to operate in a relation of heat exchange with the die cavity (6) through at least part of the walls (10W, 12W, 16W) of the second die portion (4) that define the die cavity (6). One or more mobile elements (16) are prearranged in at least one of the die portions for modulation of the quenching rate.

IPC 8 full level

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Citation (search report)

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