

Title (en)

INTERNAL HIGH PRESSURE FORMING DEVICE AND METHOD AND CORRESPONDING TOOL SYSTEM

Title (de)

VORRICHTUNG UND VERFAHREN ZUR INNENHOCHDRUCKUMFORMUNG (IHU) UND IHU-WERKZEUGANORDNUNG

Title (fr)

DISPOSITIF ET PROCEDE DE FORMAGE SOUS HAUTE PRESSION INTERNE (INNENHOCHDRUCKUMFORMUNG : IHU) ET SYSTEME D'OUTILLAGE DE FORMAGE SOUS HAUTE PRESSION INTERNE

Publication

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Application

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Abstract (en)

[origin: WO0247839A1] The invention relates to an internal high pressure forming device and method and to a corresponding tool system. The aim of the invention is to produce even complex three-dimensional sheet metal shapes while ensuring a failure-free shaping process. To this end, the device comprises a tool (5) that is divided into two tool halves (5a, 5b) along a tool parting plane. The two tool halves (5a, 5b) define at least one shaping compartment (6) that can be subjected to a internal hydrostatic pressure (Pi) to shape a blank (7) to be shaped. The device further comprises a tool carrier (2) with tool carrier components (3, 4) for each tool half (5a, 5b) that are associated with at least one of said tool halves (5a, 5b). Every pair that consists of a tool carrier component (3, 4) and a tool half (5a, 5b) is associated with at least one fluid compartment (8) that is defined by a piston component and a piston-receiving component. The device is further provided with means for generating a hydrostatic fluid compartment pressure (Pa) that is at least equal to the hydrostatic internal pressure (Pi). Said hydrostatic fluid compartment pressure compensates for the internal hydrostatic pressure (Pi) and exerts a tool closing force on the two tool halves (5a, 5b).

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