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63-4-2

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FTD-TT- 63-567

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TRANSLATION

A METHOD OF DIE-FORGING UNDER PRESSURE

By

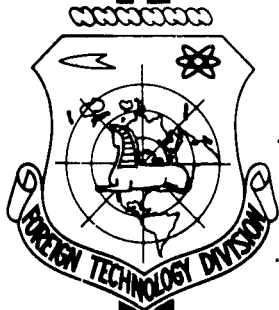
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FOREIGN TECHNOLOGY DIVISION

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UNEDITED ROUGH DRAFT TRANSLATION

A METHOD OF DIE-FORGING UNDER PRESSURE

BY: V. A. Khoruzhiy

English Pages: 3

SOURCE: Russian Patent Nr. 150085 (721979/25,
25 March 1961), pp 1-2

Ref. In (S/19-62-0-18)

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A METHOD OF DIE-FORGING UNDER PRESSURE

by
V. A. Khoruzhiy

The methods of stamping and forging with the aid of pressure are well known; as, for example, liquid pressure which is transferred to the surfaces of sheet billets which are inserted into a die. However, a disadvantage of the above method is the necessity for a reliable sealing device which, in turn, complicates the die design.

In the proposed method this disadvantage is eliminated by simultaneously subjecting two billets to the press, which have been welded together along the edges, and then between these billets inject liquid under pressure.

The drawing gives a schematic presentation of the method for this application.

The stamping, for example, of spherical bottoms for receptacles can be accomplished in two dies: a lower (1) and an upper (2), and, to which, a mold of pressable parts are added. The lower die can be mounted in a concrete base (3) in which guide columns (4) are rigidly embedded. Between the flanges of the dies, two billets (5&6) which have been welded along the edges, are inserted. The upper billet has a center hole into which a pipe (7) is welded for the supply of the working liquids from the pump.

After the stamping, this orifice can be used for the welding on of a connecting pipe under a drain cock of high pressure or a water reservoir.

The removal of air and stray water is made from the die (1) through a

tube (8), and from die (2) through the gaps (9) between the pipe (7) and the opening in the die.

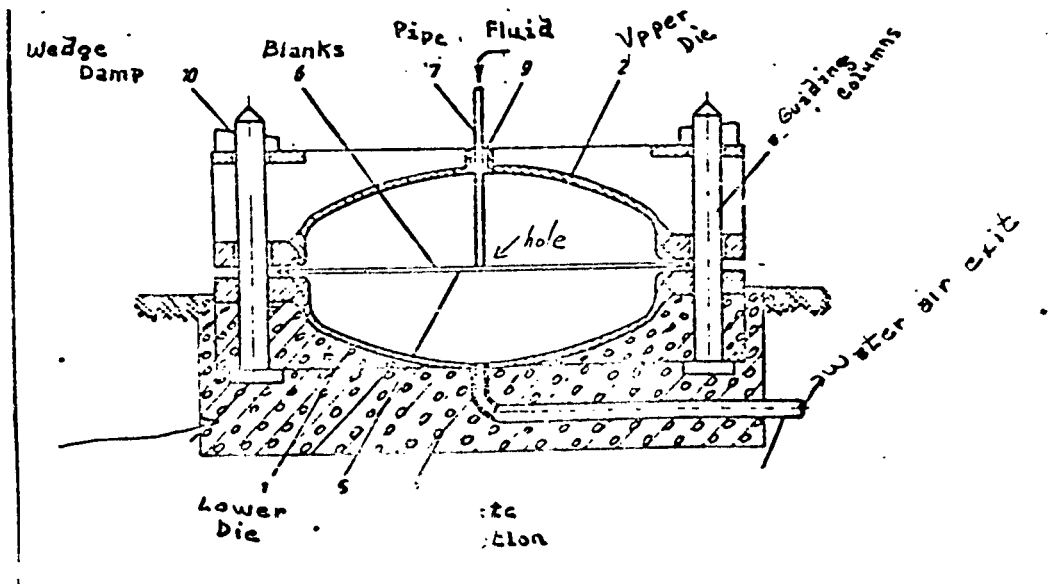
The pressing of the billet by the die (2) in die (1) is accomplished by wedge clamps (10) or any other method; for example, by screw or hydraulic pressure.

At the beginning of the stamping process and up to the achievement of maximum pressure, the cupping occurs along a large radius with no perceptible movement, so that axisymmetry of the bottom is secured. Accordingly, increases of pressure weakens the grip of the billet edges and the cupping occurs along a small radius.

Welding the edges of the billets and pressing them between the die flanges eliminates the possibility of a corrugated formation.

SUBJECT OF INVENTION:

The method of die-forging by the pressure, for example, of liquid transferred to the surface of sheet billets which have been inserted in a stamp, is distinguished by its goal of securing reliable sealing; whereby two billets, welded together along the edges, are simultaneously subjected to the stamp and a supply of, for example, liquid under pressure is injected between the given billets.



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