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A DIE FOR HOT DEFORMATION, (U)  
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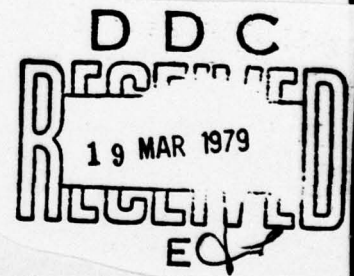
# FOREIGN TECHNOLOGY DIVISION



A DIE FOR HOT DEFORMATION

by

S. Z. Figlin, V. V. Boytsov,  
T. V. Levchenko



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A DIE FOR HOT DEFORMATION

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The invention can be used for the forging of low-plastic alloys.

Known are dies for the hot deformation of metals equipped with thermo-insulation protection made in the form of jackets fastened to the upper movable element and lower fixed plate. The shortcomings of such dies are the comparatively low efficiency and the impossibility of their heating for the forging of parts from low-plastic alloys up to higher temperatures.

The purpose of the invention is to ensure the possibility of increasing the heating temperature of the die and article, increasing the heating efficiency, and also improving the operating conditions. This is achieved by the fact that in the proposed die the upper movable jacket tightly enters into the fixed with the possibility of translational motion in it, and there is a window for the loading and unloading of the the billets.

The described die is given in cross section on the drawing.

The die 1 with the part 2 and punch 3 are correspondingly fastened to the fixed die holder 4 and movable punch plate 5, which in turn are connected through the thermo-insulation 6 and 7 with the lower 8 and upper 9 support plates.

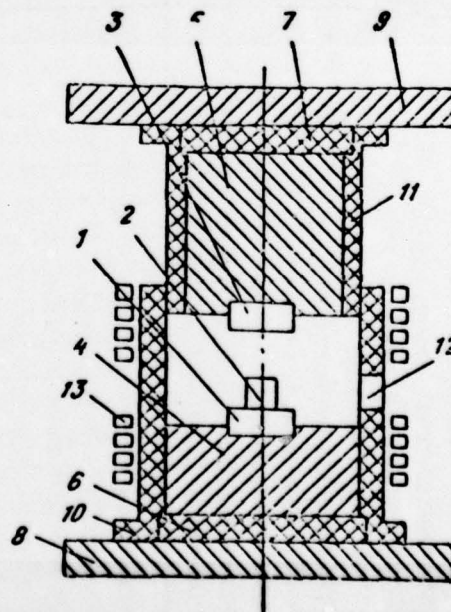
The die is equipped with a thermo-insulation protection, which is fulfilled in the form of two housings, the lower fixed 10 and

the upper movable 11, whereupon housing 11 tightly enters into housing 10 with the possibility of translational motion in it, and a window 12 is made for the loading and unloading of the billets in housing 10. Heating is carried out, for example, by means of inductors 13.

With the reverse stroke of the punch plate 5, the housing 11 does not emerge beyond the housing 10, thus forming a closed cavity of heating and forging.

#### Object of the Invention

A die for the hot deformation of metals, which is equipped with thermo-insulation protection made in the form of housings fastened to the upper movable element and lower fixed plate; this die is distinguished by the fact that for the purpose of ensuring the possibility of increasing the temperature of the die and the article being forged, increasing the efficiency of heating and improving the operating conditions, a housing fastened to the upper movable element tightly enters into the housing attached to the fixed plate with the possibility of translational motion in it, and a window is made for the loading and unloading of the billets in the fixed housing.



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