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FOREIGN TECHNOLOGY DIVISION

DIE FOR HOT DEFORMING

by

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

EDITED TRANSLATION

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U. S. BOARD ON GEOGRAPHIC NAMES TRANSLITERATION SYSTEM

Block	Italic	Transliteration	Block	Italic	Transliteration
А а	*А а*	A, a	Р р	*Р р*	R, r
Б б	*Б б*	B, b	С с	*С с*	S, s
В в	*В в*	V, v	Т т	*Т т*	T, t
Г г	*Г г*	G, g	У у	*У у*	U, u
Д д	*Д д*	D, d	Ф ф	*Ф ф*	F, f
Е е	*Е е*	Ye, ye; E, e*	Х х	*Х х*	Kh, kh
Ж ж	*Ж ж*	Zh, zh	Ц ц	*Ц ц*	Ts, ts
З з	*З з*	Z, z	Ч ч	*Ч ч*	Ch, ch
И и	*И и*	I, i	Ш ш	*Ш ш*	Sh, sh
Й й	*Й й*	Y, y	Щ щ	*Щ щ*	Shch, shch
К к	*К к*	K, k	Ъ ъ	*Ъ ъ*	"
Л л	*Л л*	L, l	Ы ы	*Ы ы*	Y, y
М м	*М м*	M, m	Ь ь	*Ь ь*	'
Н н	*Н н*	N, n	Э э	*Э э*	E, e
О о	*О о*	O, o	Ю ю	*Ю ю*	Yu, yu
П п	*П п*	P, p	Я я	*Я я*	Ya, ya

*ye initially, after vowels, and after ъ, ь; e elsewhere. When written as ë in Russian, transliterate as yë or ë. The use of diacritical marks is preferred, but such marks may be omitted when expediency dictates.

GREEK ALPHABET

Alpha	A	α		Nu	N	ν	
Beta	B	β		Xi	Ξ	ξ	
Gamma	Γ	γ		Omicron	O	ο	
Delta	Δ	δ		Pi	Π	π	
Epsilon	E	ε	ϵ	Rho	P	ρ	ϱ
Zeta	Z	ζ		Sigma	Σ	σ	ς
Eta	H	η		Tau	T	τ	
Theta	Θ	θ	ϑ	Upsilon	T	υ	
Iota	I	ι		Phi	Φ	φ	ϕ
Kappa	K	κ	ϰ	Chi	X	χ	
Lambda	Λ	λ		Psi	Ψ	ψ	
Mu	M	μ		Omega	Ω	ω	

RUSSIAN AND ENGLISH TRIGONOMETRIC FUNCTIONS

Russian	English
sin	sin
cos	cos
tg	tan
ctg	cot
sec	sec
cosec	csc
sh	sinh
ch	cosh
th	tanh
cth	coth
sch	sech
csch	csch
arc sin	$\sin^{-1}$
arc cos	$\cos^{-1}$
arc tg	$\tan^{-1}$
arc ctg	$\cot^{-1}$
arc sec	$\sec^{-1}$
arc cosec	$\csc^{-1}$
arc sh	$\sinh^{-1}$
arc ch	$\cosh^{-1}$
arc th	$\tanh^{-1}$
arc cth	$\coth^{-1}$
arc sch	sech^{-1}
arc csch	csch^{-1}
rot	curl
lg	log

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DIE FOR HOT DEFORMING

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

The invention can be used for stamping low-plastic alloys.

Dies are known for the hot deforming of metals which are equipped with thermal insulation protection made in the form of housings which are fastened on an upper movable element and a lower stationary plate. The shortcomings of such dies are their comparatively low efficiency and the impossibility of heating them for the stamping of parts from low-plastic alloys to higher temperatures.

The purpose of the invention is to provide the opportunity to raise the heating temperature of the die and article, to increase the heating efficiency, and improve the operating conditions. This is attained by the fact that in the proposed die the upper movable housing tightly enters the stationary housing with the possibility of forward motion in it and a window is made for the loading and unloading of the blank in the stationary cover.

The drawing portrays a cross section of the described die.

The die 1 with the part 2 and punch 3 are fastened respectively to the stationary die holder 4 and the movable punch holder

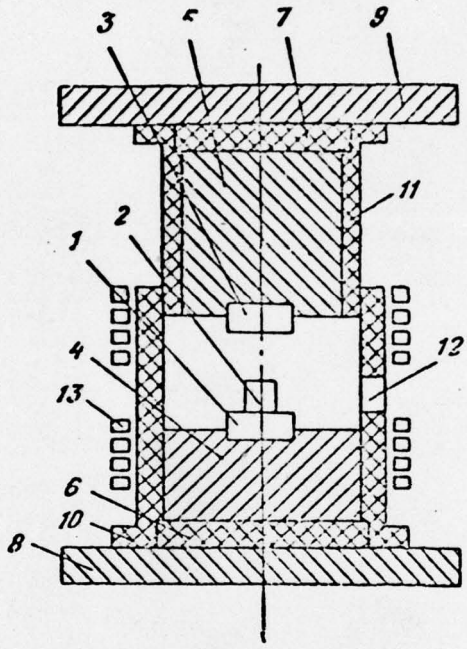
5 which, in turn, are connected through the thermal insulation 6 and 7 with the lower 8 and upper 9 bearing plates.

The die is equipped with thermal insulation protection which is made in the form of two housings, a lower stationary 10 and upper movable 11 housings, in which regard the housing 11 tightly enters the housing 10 with the possibility for forward motion in it, and a window 12 is made in the housing 10 for loading and unloading the blanks. Heating is accomplished, for example, using inductors 13.

In the reverse stroke of the punch holder 5 the housing 11 does not emerge beyond the limits of the housing 10, thereby forming a closed cavity for heating and stamping.

Subject of invention

A die for the hot deforming of metals ~~which is~~ equipped with thermal insulation protection ~~made~~ in the form of housings fastened to an upper movable element and a lower stationary plate. ~~which~~ *It is distinguished* by the fact that to ensure the possibility of raising the temperature of the die and the article being stamped, increasing the heating efficiency, and improving operating conditions, a housing which is fastened on the upper movable element enters ~~tightly~~ into a housing which is fastened on a stationary plate with ~~the possibility for~~ forward motion ~~in it~~, ~~and~~ a window is made in the stationary housing for loading and unloading blanks.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