OGIBALOV, P.M.; BIKBENINA, Yu.V.

Calculating the strength of reinforced plastics. Vest.Mosk.un.-
Ser.1: Mat.,mekh. 17 no.3:44-57 My-Je '62. (MIRA 15:7)

1. Kafedra teorii uprugosti Moskovskogo universiteta.
(Reinforced plastics)

PETROVSKIY, I.G., akademik; OGIBALOV, P.M., prof.; ZAYKIN, A.D., dotsent

Leonid Nikolaevich Sretenskii; on his sixtieth birthday anniversary. Vest.Mosk.un.Ser.1:Mat., mekh. 17 no.2:76-80 Mr-Ap '62. (MIRA 15:6)

1. Rektor Moskovskogo universiteta (for Petrovskiy).
(Sretenskii, Leonid Nikolaevich, 1902-)

QUIBALOV, P.M.; BIKKENINA, Yu.V.

Mechanical properties of reinforced plastics. Vest.Mosk.un.Ser.1:-Mat., mekh. 17 no.2:44-52 Mr-Ap '62. (MIRA 15:6)

1. Kafedra teorii uprugosti Moskovskogo universiteta.
(Plastics) (Strength of materials)

Short-period creep ...

S/055/62/000/006/006/006
D251/D308

6 figures and 5 tables.

ASSOCIATION: Kafedra teorii uprugosti (Department of the Theory of Elasticity)

SUBMITTED: April 17, 1962

Card 2/2

S/055/62/000/006/006/006
D251/D308

AUTHORS: Ogibalov, P.M. and Tyuneyeva, I.M.

TITLE: Short-period creep of textolite at normal temperature

PERIODICAL: Moscow. Universitet. Vestnik. Seriya I. Matematika, mekhanika, no. 6, 1962, 70-77

TEXT: Tables and graphs are given, illustrating the results of experimental investigations of 6 to 10 mm thick textolite at normal temperatures. Samples were cut out of textolite along the base, and at 45° and 90° to the base, and kept for 0, 15, 30, 60 and 180 min under constant load. The deformation increased quickly during the first 10 min and relatively slowly up to 30 min. After that the process became steady. After quick unloading (10-15 sec) deformation of inverse sign took place and initial form and size was completely restored. Recovery of differently oriented specimens occurred in different periods of time. The rate of recovery is the lower and shorter the period of direct creep. There are

Card 1/2

covered with uniform sand, a limiting pattern of repose appears, whose coordinates represent the value of pressure at corresponding points. The volume of the sand heap is proportional to the total pressure under conditions of plastic flow. This analogy is examined in the case of pressing a plate with a chessboard pattern of webs and a plate with hemispherical craters. Experimental results agree well with the analogy. The extrusion of bars and tubes is also considered in order to determine the total pressure required. There are 6 figures.

S/838/62/000/000/001/001
E191/E481

AUTHORS: Ogibalov, P.M., Kiyko, I.A.

TITLE: Determination of forces in the stamping and extrusion of certain machine elements

SOURCE: Raschety protsessov plasticheskogo formoizmeneniya metallov. Inst. mashinovoved. AN SSSR. Ed. by A. D. Tomlenov. Moscow, Izd-vo AN SSSR, 1962, 73-77

TEXT: It is assumed that plastic material flows in a thin layer contained between rigid parallel plane faces of the die which approach each other along their common normal. If one or both faces contain slots of some profile, the material will flow into the slots to form webs. The slot depth is assumed large enough so that the pressing is unconstrained. The linear dimensions of the region of flow are assumed to exceed greatly the thickness of the layer. The inertia tems are neglected and the Prandtl law concerning friction at the contact surfaces is assumed leading to simplified equations of plastic flow. Adding the boundary condition, a so-called "sand model" is suggested after A.A.Il'yshin (Prikladnaya matematika i mekhanika, no.3, 1954). If a plate is made in the shape of the region of flow and is

Card 1/2

Moskvitin, Doctor of Physics and Mathematics, for their valuable comments. They also thank N. A. Skoryy, Docent, Candidate of Physics and Mathematics, S. A. Orlova, and G. N. Kuz'makova. There are 94 references: 78 Soviet, 14 English, and 2 German.

TABLE OF CONTENTS:

PHASE I BOOK EXPLOITATION SOV/6109

Ogibalov, Petr Matveyevich, and Igor' Anatol'yevich Kiyko

Povedeniye veshchestva pod davleniyem (Behavior of Materials Under Pressure). Moscow, Izd-vo Mosk. univ., 1962. 153 p. 5000 copies printed.

Ed.: I. A. Skoryy; Tech. Ed.: L. V. Lazareva.

PURPOSE: This book may serve as a textbook for students, aspirants, and teachers at universities and schools of higher technical education. It may also be useful to engineers and scientific research workers concerned with problems of the strength of materials.

COVERAGE: An attempt is made to give a general idea of the effect of pressure on the physical and mechanical properties of various materials and especially on the mechanical properties of solids. The authors thank L. F. Vereshchagin, Professor, Corresponding Member, Academy of Sciences USSR, and V. V.

Card 1/4 2

OGIBALOV, P.M.; TYUNEYEVA, I.M.

Total static diagrams for stressed deformations of steel ropes.
Vop.mekh. no.[illegible]52-56 '61. (MIRA 14:8)
(Deformations (Mechanics))

LOMAKIN, V.A.; OGIBALOV, P.M.; TYUNEYEVA, I.M.

Mechanical properties of glass-cloth laminate under static loads [with summary in English]. Vest. Mosk. un. Ser. 1: Mat., mekh. 16 no.3:46-52 My-Je '61. (MIRA 14:7)

1. Kafedra teorii uprugosti Moskovskogo universiteta.
(Glass reinforced plastics)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001237800018-6

OGIBALOV, P.M.; SENTYURIN, G.G.

Aging of industrial lubricants undergoing compression by high pressure of short durati n. Izv. vys. ucheb. zav.; neft' i gaz 4 no.2:65-67 '61. (MIRA 15:5)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.
(Lubrication and lubricants)

29407
S/055/61/000/005/002/004
D205/D303

On formulating the problem of ...

Sci., 24, no. 5, May 1957.

SUBMITTED: May 3, 1961

X

Card 3/3

On formulating the problem of ...

an undisturbed state. Then the force $Z = \frac{BV}{R} \frac{\partial \omega}{\partial \alpha} - B_1 \frac{\partial \omega}{\partial t}$ where B = coefficient of oscillation, B_1 = damping coefficient. The limits of V are treated quantitavely with respect to Z. The problem of shells can be summarized by $\Phi(\alpha, \beta, t) \equiv 0$. The problem of flutter consists of determining conditions, in which undisturbed motion is stable. Consider the equation $\Phi(\alpha, \beta, t) = \psi(\alpha, \beta) e^{\omega t}$ where $\omega = p + iq$ is a complex number, $\psi(\alpha, \beta)$ = a complex function. The condition for instability is Re $\omega > 0$. Critical velocities are those which separate regions of stable and unstable states of a shell. Let λ_1, λ_2 be points on the "stability parabola", then $\lambda_1 = \rho Eh^2 / B^2 h^2 . \lambda_2^2$ where E = coefficient of elasticity. To find the critical velocity the values of λ have to be investigated. There are 19 references: 16 Soviet-bloc and 3 non-Soviet-bloc. The references to the English-language publications read as follows: I.M. Hedgepeth, B. Budiansky, R.W. Leonhard, Analysis of Flutter in Compressible Flow of a Panel on Many Supports. J. Aeronaut. Sci. 21, no. 7, July, 1954; J.W. Miles, On the Aerodynamic Instability of Thin Panels. J. Aeronaut. Sci. 28, no. 8, Aug. 1956; R.W. Leonhard, J.M. Hedgepeth, On the Flutter of Infinitely Long Panels on Many Supports. J. Aeronaut.

Card 2/3

29407
S/055/61/000/005/002/004
D205/D303

10 6300

AUTHOR: Ogibalov, P.M.

TITLE: On formulating the problem of flutter for shells and panels

PERIODICAL: Moscow. Universitet. Vestnik. Seriya I. Matematika, Mekhanika, no. 5, 1961, 60 - 65

TEXT: The basic equation for the shells is

$$\nabla^2 \nabla^2 \nabla^2 \nabla^2 \Phi + \frac{1 - \nu^2}{c^2} \frac{\partial^4 \Phi}{\partial \alpha^4} = \frac{R^4}{D} Z. \qquad (1)$$

where c^2 = a constant, D = rigidity of the cylinder, R = radius, ν - Poisson's coefficient, Z - component of transversal load, α, β - coordinates of a point on the cylinder, $\nabla^2 = \partial^2/\partial\alpha^2 + \partial^2/\partial\beta^2$, Φ - a scalar function which also determines the magnitude of internal forces. Transversal forces are determined by Kirchhoff's formulae. When a shell moves in a gas with a constant velocity V and is in an equilibrium position, it is said to be in

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Time effects in glass...

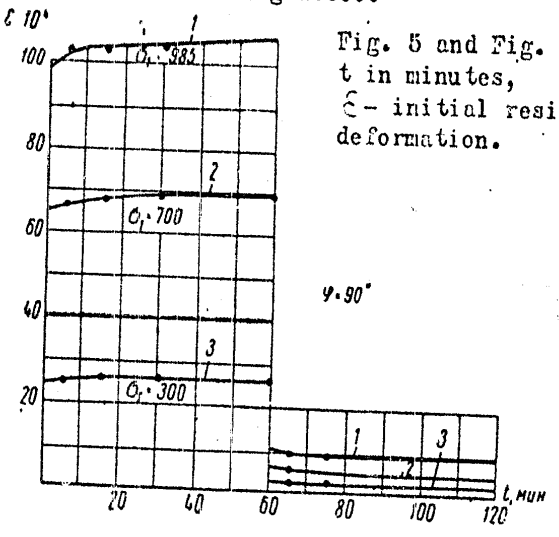

Рис. 5

Fig. 5

Fig. 5 and Fig. 8: t in minutes, ε - initial residual deformation.

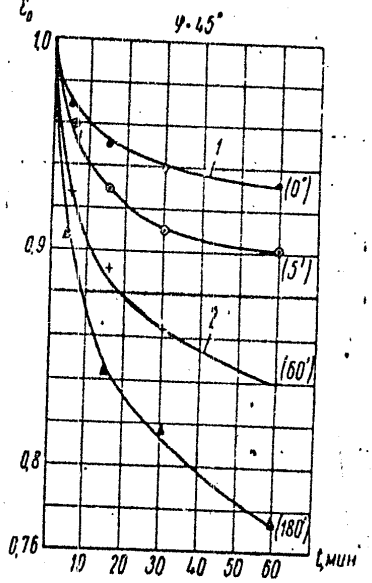

Fig. 8

Рис. 8

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deformation at loading (ε_m) and creep deformation (ε_n). Experimental data can be represented by $\varepsilon_o/(\varepsilon_m + \varepsilon_n) = \text{const}$. There are 8 figures, 6 tables and 2 references: 1 Soviet-bloc and 1 non-Soviet-bloc.

ASSOCIATION: Kafedra teorii uprugosti (Department of the Theory of Elasticity)

SUBMITTED: October 6, 1960

Time effects in glass...

every 2 minutes during the next 20 minutes, then every 5, 10, 20, 30 minutes during each hour). For each value of ϕ, 3 specimens were tested. To investigate the initial stage of creep and retrogressive creep, the specimen was loaded up to a certain tension σ_1, remaining thus for a certain period t_1, then unloaded and left for another period t_2. Measurements were made during both periods. Results are given for $t_1 = t_2 = 1$ hour and different values of σ_1. Creep is maximal in the direction of minimal rigidity ($\phi = 45^0$). More detailed analysis is said to show that there is anisotropy of creep similar to the anisotropy of elastic properties. Presence of creep at σ_1 changes essentially the speed and magnitude of restoration after unloading. The higher the speed of retrogressive creep, the larger is σ_1, the duration of creep being the same (Fig. 5). If the duration of direct creep is varied, the speed of retrogressive creep is higher, the longer the former (Fig. 8). These effects were studied by varying t_1 from 5 minutes to 3 hours, t_2 being of the order of 24-48 hours. The instantaneous residual deformation (ε_0) depends both on instantaneous

15.8510 also 2409 25500 S/055/61/000/004/001/003
D219/D303

AUTHORS: Lomakin, V.A., Ogibalov, P.M., and Tyuneyeva, I.M.

TITLE: Time effects in glass textolite during deformation

PERIODICAL: Moscow. Universitet. Vestnik. Seriya 1: Matematika, mekhanika, no. 4, 1961, 39-47

TEXT: The results are given of experimental investigations on short-period creep (order of magnitude--1 hour) at high stresses, and on restoration effects, in particular, retrogressive creep, carried out on standard sheets of textolite of type KAST-V (10mm thick) at room temperature. Measurements of deformation were made with a Marten's instrument giving high accuracy. If a specimen of glass textolite is stretched and then unloaded, there is a residual deformation which diminishes perceptibly with time, at first comparatively quickly, then with vanishing speed. Specimens cut at angles $\phi = 0^\circ, 45^\circ, 90^\circ$ to the base were loaded to 0.75 of the ultimate strength of the specimen in the corresponding direction, then unloaded and left thus for 24 hours, during which the deformations were registered (every minute during the first 10 minutes,

Card 1/4

OGIBALOV, P.M. (Moskva); KIYKO, I.A. (Moskva)

Problems of plastic flow. Inzh. zhur. 1 no.3:181-184 '61.
(MIRA 15:2)

(Plasticity)

GRYAZNOV, Ivan Mikhaylovich; LENSKIY, Viktor Stepanovich; OGIBALOV, Petr Matveyevich; SKORYY, Ivan Aleksandrovich; KIYKO, I.A., red.; YERMAKOV, M.S., tekhn.red.

[Laboratory manual on the strength of materials and on deformations] Laboratornyi praktikum po soprotivleniiu materialov, deformirovaniiu. Pod obshchei red. P.M.Ogibalova i I.A.Skorogo. Moskva, Izd-vo Mosk.univ., 1961. 199 p. (MIRA 14:6)
(Strenght of materials)
(Deformations (Mechanics))

Problems of Mechanics; (Cont.) SOV/5724

AVAILABLE: Library of Congress

AC/dfk/ec
11-6-61

Card 3/3

TABLE OF CONTENTS:

OGIBALOV, P.M.

PHASE I BOOK EXPLOITATION SOV/5724

Moscow. Universitet.

Voprosy mekhaniki; sbornik statey. vyp. 193. (Problems of Mechanics; Collection of Articles. no. 193) [Moscow] Izd-vo Mos. univ., 1961. 169 p. Errata slip inserted. 5,000 copies printed.

Sponsoring Agency: Moskovskiy gosudarstvennyy universitet imeni M. V. Lomonosova.

Ed.: L. N. Sretenskiy, Corresponding Member, Academy of Sciences USSR. Ed. (This vol.): I. Z. Pirogov; Tech. Ed.: G. I. Georgiyeva.

PURPOSE: This book is intended for engineers and scientific workers interested in the mechanics of materials, fluid dynamics, and radiation.

COVERAGE: The book contains articles on problems of algebra, nonlinear programming, motion of particles, elasticity, stress-strain, vibration, and flow of liquids. No personalities are mentioned. References follow all but one article.

Card 1/3

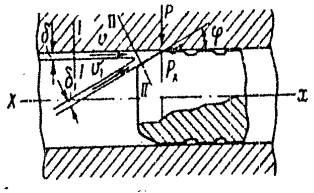
28005
S/508/60/030/000/007/013
D234/D306

On the effect of ...

units as before, w = 2,56/E; $\sigma_1 = 0$; $\sigma_2 = 2,88$; $\sigma_3 = 0,96$ (the outer surface is supposed to be free). There are 2 figures.

SUBMITTED: May 27, 1959

Fig. 1.



Фиг. 1.

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On the effect of ...

rections, and at x = 0 in the section where the concentrated annular pressure P acts, one can put $dw/dx = 0$, $D\,d^2w/dx^3 = P/2$. From her and (12) $A = B = P/8k^3D$, and

$$w = \frac{P}{8k^3D} = \varepsilon_2 R, \qquad \frac{d^2w}{dx^2} = -\frac{P}{4kD} = \frac{2\varepsilon_3}{h}. \tag{17}$$

Substituting the values in (17) and taking into account (11) one finds for the inner surface $\eta = 1{,}29$, for the outer surface $\eta = 1{,}63$. Analogous calculations give $\xi = 0.63$. The quantities are (expressed in units $\delta\,\frac{(Rh)^{1/2}}{h^2}\rho v^2 \sin\varphi$); on the inner surface: $\sigma'_{ia} = 1{,}29$; $\sigma'_1 = 0$; $\sigma'_2 = 0{,}328$; $\sigma'_3 = -0{,}935$; on the outer surface: $\sigma'_{ib} = 1{,}63$; $\sigma_1 = 0$; $\sigma_2 = 1{,}1$; $\sigma_3 = 1{,}4$; the radial displacement: $w = 0{,}64/E$. Assuming that the piston is at the free end of the pipe and putting the origin of coordinates at the end section one has $d^2w/dx^2 = 0$, $D\,d^3w/dx^3 = P$, $A = P/2k^3D$, $B = 0$. In the same

Card 5/6

On the effect of ...

The indices 1, 2, 3 refer to the radial, tangential and axial stress or elongation. The solution of (6) is

$$w = (A \cos kx + B \sin kx)e^{-kx}. \qquad (12)$$

The intensity of stresses on the inside and outside surface of the shell $\sigma_1^2 = \sigma_2^2 - \sigma_2\sigma_3 + \sigma_3^2$ will be

$$\sigma_i = \eta \frac{\delta \sqrt{Rh}}{h^2} \rho v^2 \sin \varphi. \qquad (13)$$

and the radial displacement

$$w = \frac{\delta R \sqrt{Rh}}{h^2} \frac{\rho v^2}{E} \sin \varphi. \qquad (14)$$

The coefficients η and ξ depend on boundary conditions. If one considers a section at a distance larger than $(Rh)^{1/2}$ from the end of the cylinder, one can treat the latter as infinite in both di-

Card 4/6

On the effect of ...

$$\frac{d^4w}{dx^4} + 4k^4w = 0, \qquad (6)$$

x being the coordinate taken along the generating line of the cylinder. For Poisson's number m = 3 (steel)

$$k = \sqrt{\frac{2}{Rh}}\sqrt{\frac{2}{3}} = \frac{1,278}{\sqrt{Rh}} . \qquad (7)$$

The bending moment and the shearing force acting on a strip are: $M = - D\, d^2w/dx^2$, $N = - D\, d^3w/dx^3$, D being the cylindrical rigidity = $3\ EH^2/32$. The stresses on the inside surface and the corresponding relative elongations are

$$\sigma_1 = 0, \quad \sigma_2 = \frac{9E}{8}(\varepsilon_2 + \frac{1}{3}\varepsilon_3), \quad \sigma_3 = \frac{9E}{8}(\varepsilon_3 + \frac{1}{3}\varepsilon_2), \qquad (10)$$

$$\varepsilon_1 = \frac{1}{3E}(\sigma_2 + \sigma_3), \quad \varepsilon_2 = \frac{w}{R - \frac{1}{2}h} \approx \frac{w}{R}, \quad \varepsilon_3 = \frac{h}{2}\frac{d^2w}{dx^2}. \qquad (11)$$

Card 3/6

On the effect of ...

$\delta v_1 \rho_1 = \delta v \rho$. Assuming that the pressure in II is already stabilized, one obtains from (1) and Bernoulli's equation (taking into account that $\rho = 0$ in I and II): $v = v_1$, $\delta = \delta_1$.

$$\rho v_1 \delta_1 = \rho v \delta \ . \tag{1}$$

The law of conservation of momentum gives the following values for the axial force P_x and annular force P referred to a unit of circumference of the section:

$$P_x = \rho \delta v^2 (1 + \cos \varphi), \quad P = \rho \delta v^2 \sin \varphi. \tag{4}$$

Since φ is not larger than $\pi/2$,

$$P < P_{max} = \rho \delta v^2. \tag{5}$$

The author assumes that the walls of the pipe are relatively thin, $h = b - a$ being the thickness of the wall, R the average radius of the pipe. The deflection on the central surface w satisfies the equation

Card 2/6

28005
S/508/60/030/000/007/013
D234/D306

26.2182

AUTHOR: Ogibalov, P.M. (Moscow)

TITLE: On the effect of lubrication on stresses in a pipe with moving piston

PERIODICAL: Akademiya nauk SSSR. Institut mekhaniki. Inzhenernyy sbornik, v. 30, 1960, 106 - 111

TEXT: It is assumed that the inside surface of the hollow cylinder is covered homogeneously with a relatively thick layer of lubricant. The velocity of motion of the piston at a given moment is denoted by v, the thickness of the layer by δ and the density of the lubricant by $\rho = \gamma/g$. One can consider the lubricant as moving towards the piston with the velocity v and is reflected from the piston at a certain angle φ. One considers a cross-section I of the stream before reaching the piston and a section II, distant from the point of reflection, where the thickness is δ_1 and the velocity v_1 (Fig. 1). From the conservation of mass it follows that

Card 1/6

GIBALOV, P.M. (Moskva); LOMAKIN, V.A. (Moskva)

Mechanical properties of glass reinforced plastics. Inzh.sbor. 30:17-30 '60. (MIRA 13:10)
(Glass reinforced plastics--Testing)

OGIBALOV, P.M. (Moskva)

Investigating the wear of a metal pair subjected to friction. Inzh. sbor. 28:190-196 '60. (MIRA 13:10)
(Mechanical wear)

27727
S/508/60/028/000/010/022
D237/D305

Hardness of a thick ...

Expansion of Copper Bombardment by 19-Mev deuterons, Bull. Amer. Phys. Soc., vol. 29, no. 7, 1954; J.A.Brinkman, On the nature of radiation damage in metals, J. Appl. Phys., vol. 25, no. 961, 1954; J.C. Wielson, R.G. Berggren, Effects of neutron irradiation in steel, Pros. A.S.T.M., vol. 55, 1966, p. 689-707.

SUBMITTED: May 27, 1959

Card 6/6

Hardness of a thick ...

and $\bar{T} = T(\alpha, \beta, z; p)$. The problem of finding the value of p_*, for which flow occurs, i.e. $\sigma_i = \sigma_s$ at any point of the shell M^* ($z = z_*$, $\alpha = \alpha_*$, $\beta = \beta_*$) is then stated and the solution when $\frac{\partial N}{\partial \alpha} = \frac{\partial N}{\partial \beta} = 0$, is

$$p_* = \frac{\sigma_s(N_{z_*})}{2\sqrt{3}\, G\sqrt{\bar{P} - 2z_* \bar{P}_x + z^2 \bar{P}_x}} . \qquad (23)$$

For M^* on the surface $z = \pm h/2$ the problem is solved by putting $\bar{P} = 0$. A hollow cylinder is considered next, whose inner and outer radii are a and b respectively, subject to radial outward directed radiation N, resulting in the inner pressure p. $\bar{p}$ is sought, for which a plastic deformation first occurs. G is assumed constant. There are 4 figures, and 14 references: 10 Soviet-bloc and 4 non-Soviet-bloc. The references to the English-language publications read as follows: Snyder, Koufeld, Disordering of Solids by Neutron Radiation, Phys. Rev., vol. 97, no. 1636, 1955; H. Kierstead,

Card 5/6

Hardness of a thick ...

$= + \frac{h}{2}$ where h = thickness of the shell, then for the layer z = const.

$$N_z = Ne^{-\mu(\frac{h}{2} - z)} \tag{14}$$

and by (7)

$$T = \sigma_s(N_z) - 3Ge_1 = \sigma_s[Ne^{-\mu(\frac{h}{2} - z)}] - 2\sqrt{3}G\sqrt{P_\varepsilon - 2zP_{\varepsilon x} + z^2P_x}. \tag{15}$$

Let p be a load parameter and

$$P_\varepsilon = p^2\bar{P}_\varepsilon,\ P_x = p^2\bar{P}_x,\ P_{\varepsilon x} = p^2\bar{P}_{\varepsilon x}. \tag{16}$$

Then

$$T = \sigma_s[Ne^{-\mu(\frac{h}{2} - z)}] - 2\sqrt{3}Gp\sqrt{\bar{P}_\varepsilon - 2z\bar{P}_{\varepsilon x} + z^2\bar{P}_x},$$

Card 4/6

Hardness of a thick ...

$$N_r = N \frac{a}{r} e^{-\mu(r-a)} \tag{8}$$

and for the hollow sphere

$$N_r = N \frac{a^2}{r^2} e^{-\mu(r-a)}. \tag{9}$$

Using the theory of elastic shells the author then obtains intensity of deformation e_i at the distance z from the inner surface as

$$e_i = \frac{2}{\sqrt{3}} \sqrt{P_\varepsilon - 2zP_{\varepsilon x} + z^2 P_x}, \tag{12}$$

and stress intensity

$$\sigma_i = 3Ge_i \tag{13}$$

where P, P_x, $P_{\varepsilon x}$ are known quadratic forms for ε and x. If the stream N is incident from the direction of the inner surface z =

Card 3/6

S/508/60/028/000/[illegible]/022
D228/D126

Hardness of a thin [illegible]

and is of the order of [illegible] and where σ = effective nuclear cross section, ρ = density, A = atomic weight, A_o = Avogadro's number, n_o = number of nuclei in 1 cc. If I_o is independent of time then

$$I = I(z) = I_o \cdot te^{-\mu z}, \qquad (3)$$

It has been shown experimentally that on irradiation, the elasticity modulus change is 1.5 - 5 %, while hardness and critical stress values are affected to a greater degree. For a solid with a plane surface, the number of neutrons at the depth z in time t is

$$(nvt)_z = nvt \cdot e^{-\mu z} \qquad (6)$$

and hence $\sigma_s = \sigma_s(z)$ and $G = G(z)$. If it is assumed that $G = G(nvt)$ $\sigma_s = \sigma_s(nvt)$, then

$$G = G(Ne^{-\mu z}), \quad \sigma_s = \sigma_s(Ne^{-\mu z}). \qquad (7)$$

In the case of a cylindrical shell (6) becomes

Card 2/6

27197
S/508/60/028/000/010/022
D237/D305

21.2200

AUTHORS: Il'yushin, A.A., and Ogibalov, P.M. (Moscow)

TITLE: Hardness of a thick walled cylindrical shell and a hollow sphere under the influence of radiation

PERIODICAL: Akademiya nauk SSSR. Otdeleniye tekhnicheskikh nauk. Inzhenernyy sbornik, v. 28, 1960, 134 - 144

TEXT: Irradiated solids exhibit volume deformation Θ and changes in elastic and plastic properties. A neutron passing through a crystal lattice causes thermal or dislocation effects, and in case of neutron nucleus interaction produces fission. A homogeneous isotropic body occupying a semi space $z \geq 0$ is considered. If the intensity of a normal neutron beam of a mean energy on $z = 0$ is I_0 n/cm^2 sec., then at z = const.

$$I(z) = I_0 e^{-\mu z} \text{ n/cm}^2 \cdot \text{sec.} \qquad (1)$$

where $\mu = \sigma N_0 = N(A_0 \rho / A)$ (2)

Card 1/6

88416

S/055/60/000/006/007/008
C111/C222

On the Calculation of Glass Plastics in the Plane State of Stress

The investigation shows that КАСТ-Б can be understood as an elastic orthotropic body. Beside of the values given in the table the authors still give the following values for calculations: G_{12} = 20 700 kg/cm^2 , ν_{12} = 0.19 . The value E_{45} in the table is the E-value for $\varphi = 45^\circ$.
There are 3 figures, 1 table and 4 Soviet references.

ASSOCIATION: Kafedra teorii uprugosti (Chair of Theory of Elasticity)

SUBMITTED: February 15, 1960

Card 5/6

On the Calculation of Glass Plastics in the Plane State of Stress

where

(6) $$a = \frac{E_2}{E_1}, \qquad b = \frac{E_2}{G_{12}} - 2\nu_{21}.$$

Furthermore

(9) $$\frac{G}{G_{12}} = \frac{1}{1 + \frac{1 + a - b}{b + 2\nu_{21}} \sin^2 2\varphi}$$

The figures 1,2,3 show these dependences (unbroken lines), where the mean experimental data are denoted by small circles.

(See card 6/6 for sketches 1-3)

On the Calculation of Glass Plastics in the Plane State of Stress

	h = 10mm	h = 6mm	mean value
E_1 (kg/cm^2)	210 000	220 000	215 000
E_2 (kg/cm^2)	120 000	125 000	122 500
E_{45} (kg/cm^2)	65 000	70 000	67 500
ν_{21}	0.12	0.10	0.11

For the E - modulus and the Poisson coefficient ν for a stretching for the angle φ to the x_1-axis, from the orthotropic theory there follow the expressions

$$\frac{E}{E_1} = \frac{a}{a\cos^4\varphi + b\sin^2\varphi\cos^2\varphi + \sin^4\varphi},$$

(5)

$$\nu = \frac{\nu_{21} - \frac{1}{4}(1 + a - b)\sin^2 2\varphi}{a\cos^4\varphi + b\sin^2\varphi\cos^2\varphi + \sin^4\varphi},$$

Card 3/6

On the Calculation of Glass Plastics in the Plane State of Stress

(3) $\varepsilon_1 = \frac{1}{E_1}(\sigma_1 - \nu_{12}\sigma_2)$, $\varepsilon_2 = \frac{1}{E_2}(\sigma_2 - \nu_{21}\sigma_1)$, $\gamma_{12} = \frac{1}{G_{12}}\tau_{12}$

and $\varepsilon_3 = -\frac{1}{E_3}(\nu_{31}\sigma_1 + \nu_{32}\sigma_2)$, where only four of the five constants appearing in (3) are independent since

(2) $\nu_{12}E_2 = \nu_{21}E_1$, $\nu_{23}E_3 = \nu_{32}E_2$, $\nu_{31}E_1 = \nu_{13}E_3$.

The authors report on the experimental examination of the correctness of the formulas (3) and their conclusions in the orthotropic theory for the glass extolit КАСТ - В (KAST - V). They investigated foils of 6 and 10 mm for a step by step load (one step 100 kg). The determination of the constants yielded the values of the table

88416

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C111/C222

16.7300

AUTHORS: Lomakin, V.A., and Ogibalov, P.M.

TITLE: On the Calculation of Glass Plastics in the Plane State of Stress

PERIODICAL: Vestnik Moskovskogo universiteta. Seriya I. Matematika, mekhanika, 1960, No. 6, pp. 79 - 83

TEXT: The authors consider an elastic orthotropic body ; let the axes x_i be the normals of the planes of the elastic symmetry; let σ_i and ϵ_i be the normal stresses and the corresponding elongations; let τ_{ik}, γ_{ik} be the tangential stresses and shifts. Let E_i be the normal moduli of elasticity in the directions x_i, let G_{jk} be the moduli of shear in the planes (x_j, x_k), ν_{jk} be the Poisson coefficients for a contraction in the direction x_k for a stretching in the direction x_j. Then in the plane state of stress it holds: $\sigma_3 = \tau_{23} = \tau_{31} = \gamma_{23} = \gamma_{31} = 0$,

Card 1/6

Elastic-Plastic Deformations of (Cont.) SOV/5455

effects, the theory of the boundary layer during thermal shock, and the action of repeated thermal pulses on a thick-walled cylinder. Solutions of some other problems concerning the strength of thick-walled cylinders are also given. The authors thank the coworkers of the Department of the Theory of Elasticity of the Moscow State University, I.M. Tyuneyeva and S. A. Orlova. There are 71 references: 58 Soviet (including 5 translations from English and 1 translation from German), 7 English, 3 German, 2 Polish, and 1 French.

TABLE OF CONTENTS:

Card 2/5

OGIBALOV, P.M.

PHASE I BOOK EXPLOITATION SOV/5455

Il'yushin, Aleksey Antonovich, and Petr Matveyevich Ogibalov

Uprugo-plasticheskiye deformatsii polykh tsilindrov (Elastic-Plastic Deformations of Hollow Cylinders) [Moscow] Izd-vo Mosk. univ., 1960. 224 p. Errata slip inserted. 4,000 copies printed.

Ed.: S. F. Kondrashkova; Tech. Ed.: M. S. Yermakov.

PURPOSE : This book is intended for scientists and engineers, and for advanced students and aspirants concerned with problems in structural mechanics.

COVERAGE: The book is primarily concerned with various effects and possible methods of strengthening thick-walled cylinders. Methods involving strengthening through elastic-plastic autofrettage, nonuniformity of the material, nonuniform heating through the thickness, the action of high pressure and exposure to penetrating radiation are considered. Attention is given to problems pertaining to repeated loads and dynamic

Card 1/5

S/179/59/000/06/015/029
E081/E141

Action of High Pressure in Strengthening a Hollow Cylinder

where p is the internal pressure under which flow begins at the internal surface of the cylinder. Using the linear approximation, an expression (Eq 16) is obtained for η in the case of the hollow cylinder; numerical substitution in this expression with $b/a = e = 2.71828$ (b = external radius of the tube, a = internal radius) and $\delta = 0.3$, leads to the value $\eta = 2.27$. The strengthening effect in this case is therefore substantial.

Card 2/2

There are 1 table and 2 Soviet references.

SUBMITTED: June 29, 1959

S/179/59/000/06/015/029
E081/E141

AUTHORS: Il'yushin, A.A., and Ogibalov, P.M. (Moscow)

TITLE: Action of High Pressure in Strengthening a Hollow Cylinder

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Mekhanika i mashinostroyeniye, 1959, Nr 6, pp 110-112 (USSR)

ABSTRACT: The flow limit (τ_s) for metals under hydrostatic pressure (σ) is given by

$$\tau_s = \tau_0 S(\sigma) \qquad (1)$$

where τ_0 is the flow limit in shear when $\sigma = 0$. Assuming a linear approximation, the function $S(\sigma)$ can be written

$$S(\sigma) = 1 - \delta(\sigma/\tau_0) \qquad (\delta > 0) \qquad (2)$$

where δ is a constant. The solution of Lamé's problem for a tube under the influence of internal pressure leads to expression (3) for the hydrostatic pressure and for the maximum shear stress. The strengthening coefficient is defined as the ratio

$$\sigma(\delta) \qquad \frac{(p)_{\delta \neq 0}}{(p)_{\delta=0}} \qquad \frac{b^2}{b^2 + \delta a^2} < 1 \qquad (6)$$

Card 1/

Large Elastic - Plastic Symmetric Deformations of a Thick-Walled Tube

SOV/155-59-1-17/30

where

(1.9) $\varrho_a = a + w(a)$, $\varrho_b = b + w(b)$,

a and b are the inner and outer radii and $w(r)$ are the radial shifts. The obtained system of equilibrium is solved explicitly under consideration of corresponding boundary conditions. The author investigates especially plane finite deformations and the question concerning the maximal rigidity. The obtained results are more real than the results of the theory of small deformations (no infinitely increasing inner pressure !). The author mentions A.A. Il'yushin.
There are 5 references, 4 of which are Soviet, and 1 American.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova (Moscow State University imeni M.V. Lomonosov)

SUBMITTED: December 18, 1953

Card 2/2

SOV/155-59-1-17/30

~~16(1)~~ 16,7300

AUTHOR: Ogibalov, P.M.

TITLE: Large Elastic - Plastic Symmetric Deformations of a Thick-Walled Tube

PERIODICAL: Nauchnyy doklady vysshey shkoly. Fiziko-matematicheskiye nauki, 1959, Nr 1, pp 110-116 (USSR)

ABSTRACT: The author considers a thick-walled tube under the influence of inner and outer pressure and of an axial force P. He uses the logarithmic deformations and the usual relations between tensions σ_ϱ, σ_θ, σ_x and the corresponding deformations, since the orientation of the principal axes does not change during the deformation. Because of the assumption of large deformations the conditions of equilibrium have to be set up in the form

$$(1.7) \qquad \frac{d\sigma_\varrho}{d\varrho} + \frac{\sigma_\varrho - \sigma_\theta}{\varrho} = 0$$

$$(1.8) \qquad P = 2\pi \int_{\varrho_a}^{\varrho_b} \sigma_x \varrho \, d\varrho ,$$

Card 1/2

The Plastic Deformation of a Thick-Walled Tube Under the Action of Heat Impulses and Pressure

the duration of the heat impulse and Q_o is the mean flow of heat from the gas to the tube. For a steel tube, the equations reduce to

$\delta = 5.45 \sqrt{T}$ mm (T in seconds),

$V = 3620\ Q_o \sqrt{T}$ deg. (Q_o in k cal/cm^{2}sec),

or, for $T = 0.01$, $\delta = 0.54$ mm and for $Q_o = 2$, $V_o = 724^oC$. On the basis of these estimates, it is shown that in the heating period, the axial and tangential strains, which are predominantly of thermal origin, are compressive and are of the order of 1%, whereas in the cooling period, the strains are tensile and are also of the order of 1%. In each case, the strains are above the respective plastic limits and, on subjecting the tube to repeated thermal and pressure cycles, it may fail by fatigue.

SUBMITTED: 24th September 1957.

Card 2/2

SOV/24-58-12-13/27

AUTHOR: Il'yushin, A.A., Ogibalov, P.M. (Moscow)

TITLE: The Plastic Deformation of a Thick-Walled Tube Under the Action of Heat Impulses and Pressure (O plasticheskikh deformatsiyakh tolstostennoy truby pod deystviyem teplovykh impul'sov i davleniya)

PERIODICAL: Izvestiya Akademii Nauk, Otdeleniye Tekhnicheskikh Nauk, 1958, Nr 12, pp 85-89 (USSR)

ABSTRACT: When a tube is subjected internally to impulses of heat and pressure, for example, from a jet of hot gas, a thin layer of the material adjacent to the inner surface of the tube will be heated and cooled. Approximate consideration of the basic heat conduction equation shows that the thickness (δ) and the maximum temperature (V_0) of the layer will be of the order of

$$\delta = \sqrt{\frac{2\lambda T}{c\gamma}}, \quad V_0 = Q_0 \sqrt{\frac{2T}{c\gamma\lambda}} \qquad (8)$$

where λ is the thermal conductivity, c the heat capacity and γ the density of the tube material, T is

Card 1/2

SOV/24-58-9-24/31

Testing of Thick-walled Tubes Under High Internal Pressures of Short Duration

10-15 repeated loadings at a pressure exceeding 20-25% of that causing an initial residual external strain of 0.4 - 0.6%.

There are 9 figures, 1 table and 3 Soviet references.

SUBMITTED: September 24, 1957

Card 2/2

AUTHOR: Ogibalov, P.M. (Moscow) SOV/24-58-9-24/31

TITLE: Testing of Thick-walled Tubes Under High Internal Pressures of Short Duration (Ispytaniya tolstostennykh trub pri kratkovremennykh vysokikh vnutrennikh davleniyakh)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, 1958, Nr 9, pp 134 - 139 (USSR)

ABSTRACT: The paper is a continuation of the author's earlier work (Refs 2, 3). Detailed drawings are given of a pneumatic apparatus, based on that of Il'yushin (Ref 1) for subjecting a thick-walled tube to controlled internal pressures up to 20 000 atm for periods of up to 10^{-3} sec, with provision for measuring the external diameter of the tube. Tests were carried out on steel tubes of 260 mm length, 45-65 mm external diameter and ratio of external to internal diameter of about 2:1. Stress-strain curves are given and also a table showing the residual radial strain as a function of pressure and number of loadings. Rupture resulted as a rule after

Card 1/2

under every possible condition : bending and loss of stability, elasticity, plastic deformations, and vibrations. This book is concerned mainly with the mechanical aspects of the problem. Numerical calculations are carried out and new methods of solutions are investigated. In preparing this book the author used lectures which he gave during the past seven years at the Moscow State University, Faculty of Mechanics and Mathematics. Basic textbooks, monographs, and current journals (mainly Soviet) in this field were also used. The author gives recognition to professors A.S. Il'yushin and Yu.N. Rabotnov, Corresponding Members of the Academy of Sciences of the USSR, professors N.I. Bezukhov, G.Yu. Dzhanelidze, B.G. Korenev, M.G. Slobodyanskiy, Docent I.A.. Skoryy, I.M. Tyuneyev (the author's faculty associate in the theory of elasticity at Moscow University), and S.A. Orlov for their participation in the compilation of this book. The introduction consists of a short review of contributions to the theory of plates and methods of calculation. The outstanding scientists (both Soviet and other) who have contributed to this field are listed along with their contributions and works. There are 156 references, of which 108 are Soviet, 23 English, 20 German, 5 French.

PHASE I BOOK EXPLOITATION 1084

Ogibalov, Petr Matveyevich

Izgib, ustoychivost' i kolebaniya plastinok (Bending, Stability and Vibrations of Plates) [Moscow] Izd-vo Moskovskogo univ-ta, 1958. 389 p. 5,000 copies printed.

Sponsoring Agency: Moscow. Universitet.

Ed.: Skoryy, I.A.; Ed. of Publishing House: Kondrashkova, S.F.; Tech. Ed.: Mulin, Ye.V.

PURPOSE: This book is intended as a textbook for university students specializing in the theory of elasticity and plasticity. It may also prove useful to students and graduate students at technical institutes of higher learning and to engineers engaged in planning and calculating laminated elements widely used in the various branches of modern technology.

COVERAGE: The author throws light on present-day problems in the theory and calculation of isotropic and anisotropic thin plates

Card 1/9

A New Compressed Air Quick Blow Mechanism. PA - 3073

3 hypotheses. 1) The occurence of air expansion takes place adiabatically 2) The friction of the mallet during motion was not taken under consideration. 3) The gas escape through the slot was also not considered. The dependence of pressure behind the mallet on its position in the pipe is calculated, as well asthe dependence of the velocity of motion of the mallet on its position in the pipe, and also themaximal acceleration of the mallet during the blow(overload-coefficient). Finally the manner in which the machine operates is desribed.
(With 18 illustrations and 6 Slavic references).

ASSOCIATION
PRESENTED BY
SUBMITTED 7.11.1956.
AVAILBLE Library of Congress.
Card 2/2

AUTHOR IL'YUSHIN, A.A., OGIBALOV, P.M., (Moscow), PA - 3073

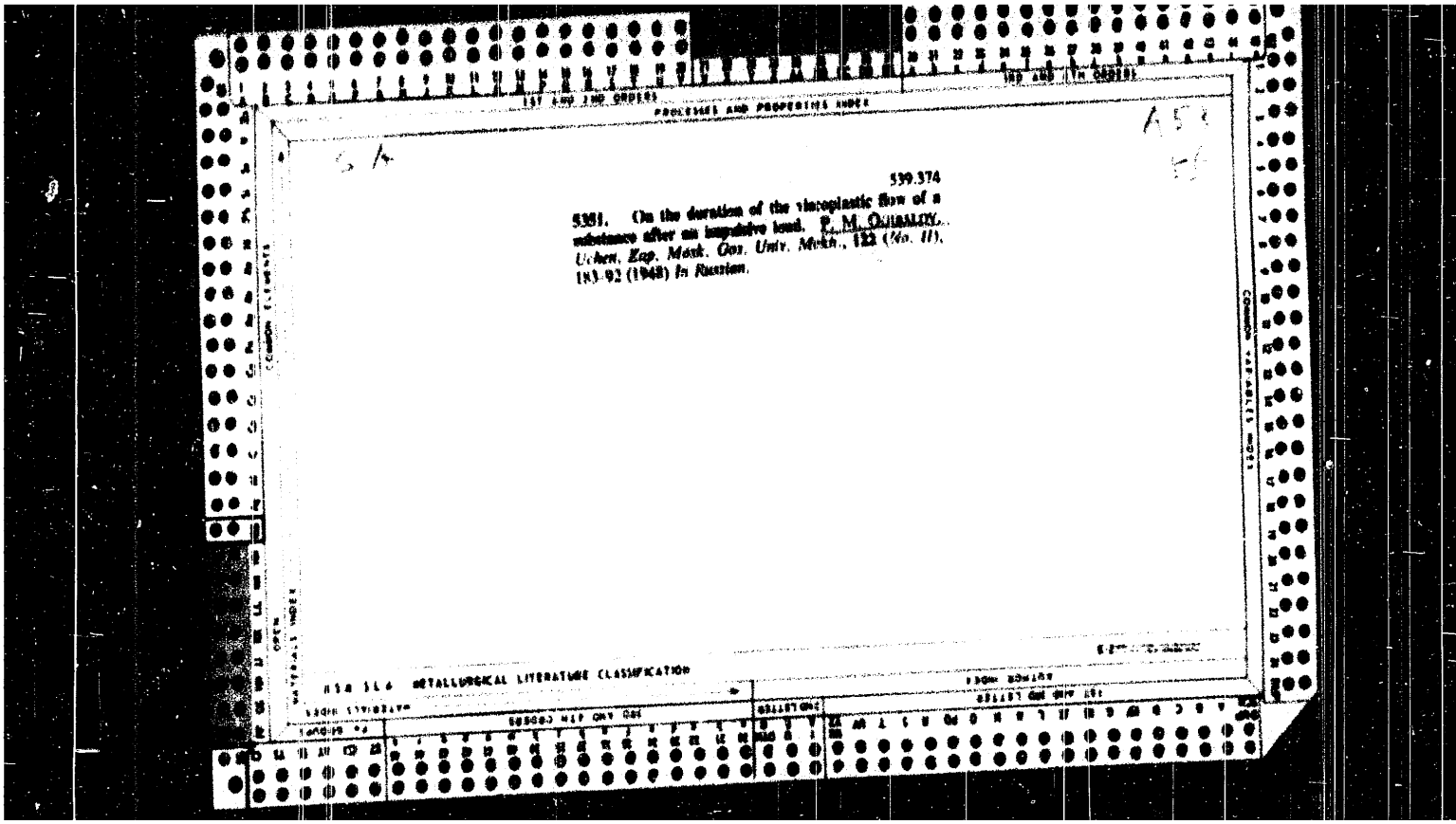
TITLE A New Compressed Air Quick Blow Mechanism.
(Novyy pnevmatichekiy skorostnoy koper - Russian)

PERIODICAL Izvestiia Akad. Nauk SSSR, Otdel. Tekhn., 1957, Vol 21, Nr 3, pp 57-65, (U.S.S.R.)
Received 6/1957 Reviewed 7/1957

ABSTRACT The new PSK-3 rapid experimental engine is described. It was developed and built in the laboratory for material-festing of the Moscow State University. It is intended for dynamic tests and has higher characteristic values than its forerunners, the PSK-1 and PSK-2. The reconed striking velocity amounts to $3x10^2$ m/sec and the striking energy over $3.5x10^4$ mkg. The principle diagrams and a describtion of the construction are given. A thick walled cylinder serves as a frame and it is further strengthened by ribs. At the end of it is a compressed air block which consists of a thick walled pipe and which is rigidly fixed to a pressure tank. A starting mechanism is also mounted on it. On the other end is a massively heavy "swimming" anvil which serves in propping up the model under investigation and which is also capable of taking the reaction of the blow. The frame absorbs the recoil of the anvil by means of an oil shock absorber. The reaction of the starting and braking of the mallet is absorbed by the frame, hence the machine needs no special bases. One of the most complicated parts worked out as a slide which in the last position excludes the admission of compressed air. The jointing is taken care of with chlorvynil "collars". The calculation of the dynamic characteristics was made under

OGIBALOV, P.M. (Moscow)

Effect of internal pressure and varying temperature on the deformation of pipes. Inzh. sbor. 20 55-58 '54. (MLRA 8:7)
(Pipe) (Deformations (Mechanics))



539.374

5351. On the duration of the viscoplastic flow of a substance after an impulsive load. P. M. O'REILLY. *Uchen. Zap. Mask. Gos. Univ. Moskv.*, 123 (*No. 11*), 183–92 (1948) *In Russian.*

OGHINA, V.

Decoppering pyrite ashes in order to extract copper and obtain iron ore of high quality. p. 70.

METALURGIA SI CONSTRUCTIA DE MASINI

Vol. 8, no. 1, Jan. 1956

Rumania

Source: EAST EUROPEAN LISTS Vol. 5, no. 10 Oct. 1956

OGGERO, Mario, inz.

Plasma jet in aeronautics. Letecky obzor 7 no.6:169-172 Je '63.

Country : USSR
Category : Soil Science. Fertilizers. General. J

Abs Jour : RZhBiol., No 6, 1959, No 24634

Author :
Inst :
Title :

Orig Pub :

Abstract : green peas is of local importance. For potatoes and sugar beets, this method of P and K application is of no significance. -- O. P. Medvedeva

Card : 4/4

Country : USSR
Category : Soil Science. Fertilizers. General. J

Abs Jour : RZhBiol., No 6, 1959, No 24634

Author :
Inst :
Title :

Abstract : the following are widely used: Na, Naa + $CaCO_3$ (calcium ammonium nitrate), N_s, $(NH_4)_2PO_4$ and nitrophosphate. 60 percent of fertilizers are manufactured in Great Britain in the form of compounds. 90 percent of the compound and 50 percent of all fertilizers are manufactured in the form of granules. The tendency to increase the manufacture of concentrated fertilizers is characteristic. The most effective method of introducing P and K under grain, vegetables and

Card : 3/4

Country : USSR
Category : Soil Science. Fertilizers. General. J

Abs Jour : RZhBiol., N_o 6, 1959, No 24634

Author :
Inst :
Title :

Orig Pub :

Abstract : under potatoes and sugar beets. Perennial grasses (meadow and pasture) are fertilized inadequately, and in the majority of the regions of the land are not fertilized at all. At the present time, about 50 percent of phosphoric fertilizers are applied in the form of the trivalent P_s; 25 percent, in the form of Thomas slag; 10 percent, in the form of phosphoric meal. Among the nitrogen fertilizers

Card : 2/4

Country : USSR
Category : Soil Science. Fertilizers. General. J

Abs Jour : RZhBiol., No 6, 1959, No 24634

Author : Ogg, U. G.
Inst :
Title : The Application of Fertilizers in England.

Orig Pub : Vestn. s.-kh. nauki, 1958, No. 2, 127-130

Abstract : For the period of the years 1913-1916, the consumption of mineral fertilizers in Great Britain was greatly increased: N, 10 times; P_2O_5, twice, and K_2O, 13 times. In 1956, 4 million tons of fertilizers were applied to the soil. More than 20 kg of N and K_2O and 36 kg of P_2O_5 are introduced per one ha of the land's cultivated area. The greatest quantity of the mineral fertilizers is appled

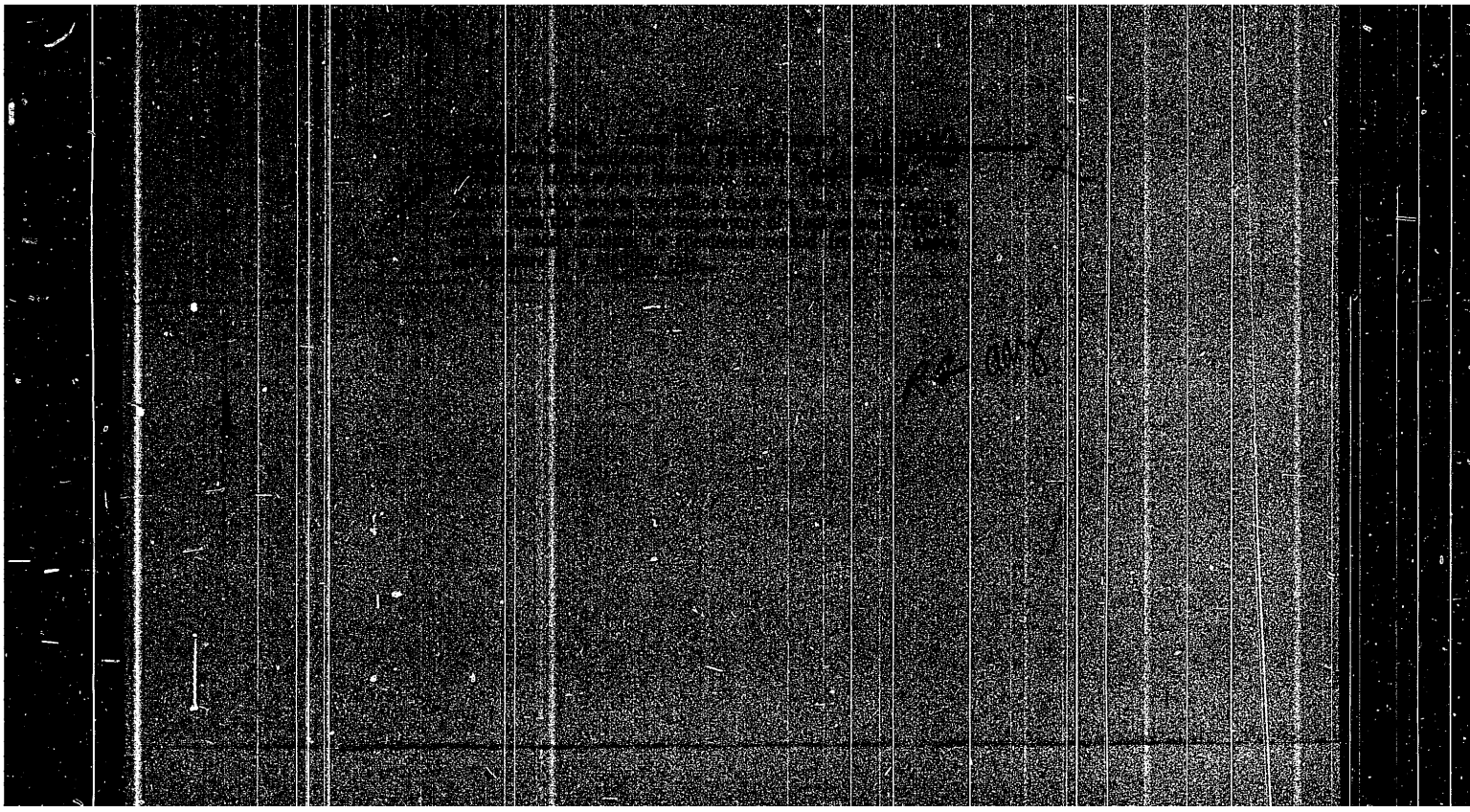
Card : 1/4

OGERMAN, Jerzy

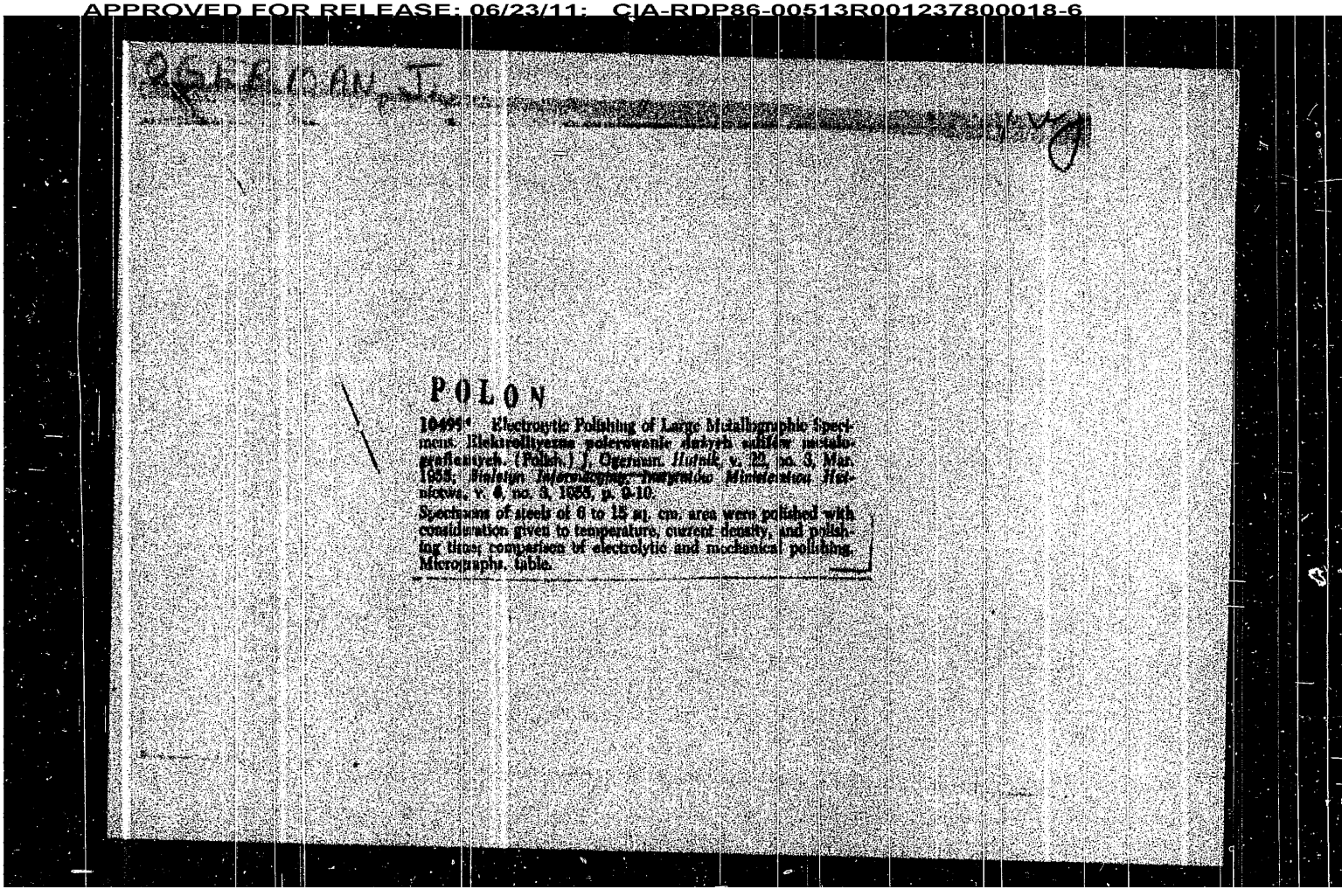
Jerzy Ogerman, "Korngrenzenschaedigung eines CrNiW-Stahles durch Ueberhitzen," Bergakademie (Berlin), 10/1, January 1958, pp. 28-30.

Damage to Grain Boundaries of a Cr Ni W Steel Due to Overheating

The author is affiliated with the Gliwice Polytechnic Institute.
This paper was presented at the 2nd Student Colloquium on Metal Physics and Metal Technology in Freiberg, 20-22 June 1957.



APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001237800018-6



POLON

10499* Electrolytic Polishing of Large Metallographic Specimens. [Elektrolityczne polerowanie dużych zgładów metalograficznych. (Polish.)] J. Ogierman. *Hutnik*, v. 22, no. 3, Mar. 1955; *Polskie Towarzystwo Inżynierów i Techników Hutnictwa*, v. 4, no. 3, 1955, p. 9-10.

Specimens of steels of 6 to 15 sq. cm. area were polished with consideration given to temperature, current density, and polishing time; comparison of electrolytic and mechanical polishing. Micrographs, table.

OGERMAN, J.

POLAND

"Importance of Microstructure Examination in Metallurgical Examinations," by W. HACZEWSKI, Z. WOJCIK, and J. OGERMAN; Prace Instytutow Ministerstwa Hutnictwa, Gliwice, Nos. 2-4, 1955.

[redacted]

OGERMAN

2

POL.

3160 620.18 : 5[illegible].45

Ogerman J. Vacuum Metallography.

"[illegible] próżniowa". Przegląd Mechaniczny, Nr. 7, 1953, pp. [illegible]–[illegible], 13 figs.

This article reviews some of the more important works in foreign literature dealing with vacuum metallography — a science facilitating research over structural changes and variations in the endurance occurring in metals and alloys subjected to higher temperatures. The author describes the present state of vacuum metallography and deals with the difficulties met with in designing the requisite apparatus — difficulties which have hitherto handicapped the development of this branch of metallurgy. Critical review of opportunities for carrying out microscope observations in the higher temperature range, using ordinary refracting and reflecting microscopes. The article contains a description of experiments carried out by the author with an apparatus designed by him for the purpose of vacuum metallography. The author also quotes a number of typical instances of vacuum metallography application.

M BP

OVENGENDEN, N.Ye., SERGIYENKO, S.F.

Service life of coal mine suction pumps. Sbor.DonUGI no.22: 97-103 '61. (MIRA 15:6)
(Hydraulic mining--Equipment and supplies) (Pumping machinery)

L 33366-66 T/EWP(t)/ETI IJP(c) JD

ACC NR: AP6024602 SOURCE CODE: RU/0017/65/000/009/0480/0483

AUTHOR: Niculescu, Gr. (Engineer); Ogea, M. (Engineer); Nita, D. (Engineer)

ORG: [Niculescu; Orea] Technological Research Institute for Machine Building (Institutul de Cercetari Tehnologice Pentru Constructii de Masini); [Nita] Factory of Aggregates and Machine-Tools, Bucharest (Fabrica de Masini-Unelte si Agregate)

TITLE: Studies on the induction hardening of cast iron guides for machine-tool frames

SOURCE: Metalurgia, no. 9, 1965, 480-483

TOPIC TAGS: cast iron, induction hardening, machine tool

ABSTRACT: Experimental studies reported by the authors show that very similar results are obtained with medium-frequency (8 kilocycles per second) or high-frequency (250 kc/sec) induction currents, with the guides having similar depths of hardened layers, hardness of essentially the same degree, and similar martensitic structures in the upper layers. Orig. art. has: 9 figures and 3 tables. [Based on authors' Eng. abst.] [JPRS: 33,732]

SUB CODE: 13, 11 / SUBM DATE: none / ORIG REF: 001 / SOV REF: 002
OTH REF: 001

Card 1/1 BLG

UDC: 621.785.6:621.91-231.323:669.13

09/5 2035

OGEA, Mircea, ing.

Industrial application of high-frequency electrothermics. Metalurgia constr mas 14 no. 2:188-189 F'62.

OGEA, M.

Industrial application of high frequency electrotherm.
Electrotehnica 10 no.4:145-146 Ap '62.

OGDANETS, Z.

Problems of issuing credit to state farms. Den.i kred. 21 no.1:55-58 Ja '63. (MIRA 16:2)

1. Nachal'nik otdela kreditovaniya i finansirovaniya sel'skogo khozyaystva Donetskoy oblastnoy kontory Gosbanka.
(Donetsk Province--State farms--Finance)

OGLOBLETS

KRASOVITSKIY, B.N.; KHOTINSKAYA, Ye.Ye.; OGLOBLETS, N.D.; ALENICH, Ye.M.

Yellow pigments from aminophenylimides of naphthalic acid. Uch.zap. KHGU 71:253-254 '56. (MLRA 10:8)

(Pigments) (Naphthalic acid)

BOCHNACKI, Z.; OGAZA, S.

On the magnetic properties of the ^{153}Eu nucleus. Inst fiz jadr report no.359:1-8 Ag '64.

1. Institute of Nuclear Physics, Krakow.

OGAZA, Stanislaw

Magnetic properties of strongly deformed nuclei. Inst fiz jadr report no.362:1-52 '64.

1. Institute of Nuclear Physics, Krakow, of the Polish Academy of Sciences.

BOCHNACKI, Z.; OGAWA, S.

Spin polarization effect and magnetic moments of odd-A deformed nuclei. Inst fiz jadr report no.351:1-14 '64.

1. Institute of Nuclear Physics, Krakow, of the Polish Academy of Sciences.

BOZEK, E.; HRYNKIEWICZ, A.Z.; OGAZA, S.; STYCZEN, J.

Magnetic interaction of the 155 Gd nucleus in the 87 keV excited state with the electronic shell. Inst fiz jadr report no.299:1-10 '63.

1. Instytut Fizyki Jadrowej, Krakow.

BOZEK,E.; LEBEDEV,N.A.; NIEWODNICZANSKI,H.; OGAZA,S.; RYBICKA,M.; STYCZEN,J.

Gamma-gamma directional correlations in ^{146}Eu. Acta physica Pol. 24 no.1:131-133 Jl'63.

1. Institute of Nuclear Physics, Krakow. 2. Joint Institute for Nuclear Research, Dubna, USSR (for Lebedev).

S/058/62/000/008/021/134
A061/A101

AUTHORS: Bożek, E., Hrynkiewicz, A. Z., Konieczna, Z., Ogaza, S., Rybicka, M., Szymczyk, S.

TITLE: Attenuation of the angular correlation of the Ta^{181} 133 - 482 kev γ-cascade in liquid sources

PERIODICAL: Referativnyy zhurnal, Fizika, no. 8, 1962, 42, abstract 8B301 (Rept. Inst. fizyki jądrow. Krakowie, 1962, no. 155, 8pp. illust., English; summaries in Polish and Russian)

TEXT: The time dependence of the anisotropy of the angular correlation of the Ta^{181} 133 - 482 kev γ-cascade was investigated. The measurements were conducted with a liquid Hf source ($Hf(OH)_4$ solution in concentrated sulfuric acid) at various temperatures (10, 30, 60, and 80°C). For all of the four temperatures the attenuation of anisotropy in time followed an exponential law; the λ_2 attenuation constants were determined for all the temperatures. The temperature dependence of λ_2, established experimentally, was compared with the theoretical one. At a temperature increase the experimental λ_2 dropped more slowly, than was required by the theory. [Abstracter's note: Complete translation]

Card 1/1

BOZEK, E.: HRYNKIEWICZ, A.Z.; KONIECZNA, Z.; OGAZA, S.; RYBICKA, M.; SZYMCZYK, S.

The attenuation of the angular correlation of the ^{181}Ta 133-482 KeV cascade in liquids. Inst fiz jadr report no.155:1-9 Ja '62.

1. Institute of Nuclear Physics, Krakow, of the Polish Academy of Sciences.

T. Walczak for assistance in measurements. There are 6 figures, 3 tables, and 7 references: 4 Soviet-bloc. The 3 references to English-language publications read as follows: Ref. 1: Mihelich, J. W., Harmatz, B., Handley, T. H., Phys. Rev., 108 989 (1957); Ref. 2: Jacob, K. B., Mihelich, J. W., Harmatz, B., Handley, T. H., Bull. Am. Phys. Soc., 3, 358 (1958). Ref. 6: Boskma, P. De Waard, H., Nuclear Phys., 12, 533 (1959).

ASSOCIATION: Institute of Nuclear Physics, Cracow; Joint Institute for Nuclear Research, Dubna (Yu. V. Nersesyev)

SUBMITTED: October 7, 1960

Baranovskiĭ, W. I., Pokrovskiĭ, W. N., Izv. Akad. Nauk SSSR, 23, 819 (1959)]. Besides a confirmation of the results of [6] (see list of English references), the authors obtained the following coincidences: between the 710-kev line and the 460-, 710-, 790-kev peaks; between the 790-kev line and the 185-, 460-, 710-kev peaks; between the 1180-kev line and the 880-kev peak; between the 1270-kev line and the 185- and 600-kev peaks, and between the 2070-kev line and the 80- and 185-kev photopeaks. On the basis of these experiments and the energy values of transitions given by Gromov et al., the authors suggest a new level scheme for ^{166}Er from the decay of ^{166}Tm (Fig. 6). The branching ratios of transitions between the levels with K=2 and K=0 are calculated on the strength of Alaga's theory. For the level scheme proposed by the authors, they are in better agreement with the experimental values than for the scheme given in [6]. The present proposal of the level scheme for ^{166}Er needs some more confirmation. To get this, the authors are starting now gamma-gamma directional correlation experiments in order to obtain definite values of spins for the 788-, 862-, 957-, and 2140-kev levels. The authors thank S. Chojnacki and I. A. Yutlandov for the preparation of sources, and K. Malinowski and

it was established that the coincidence measurements for ^{166}Yb may be carried out in the first week of measurements. In the next two runs, gamma-gamma coincidence measurements were performed. The single-count gamma spectrum was recorded by a scintillation spectrometer using a 1 1/2" × 1" NaI (Tl) crystal, an EMI 6097 F photomultiplier and a 100-channel pulse-height analyzer. The resolution of this spectrometer for the 661-kev ^{137}Cs line was 8.2%. The gamma-gamma coincidence spectra were recorded on the multichannel pulse-height analyzer, gating the spectrum from one counter with coincidence pulses from a fast-slow coincidence circuit (Fig. 1). NaI (Tl) crystals 1 3/4" × 2" and 2" × 2" and EMI 6097 F photomultipliers were used. Resolution was 9% for the ^{137}Cs line. The resolution time of the coincidence circuit was $2\tau=5.5\times10^{-8}$ sec. The existence of an 880-kev transition reported up to now only by Brabec et al. [Ref. 4: Brabec, W., Gromov, K., Dzhelepow, B. S., Dmitriev, A. G., Morozov, W. A., Izv. Akad. Nauk SSSR, 23, 812 (1959)] is confirmed by the coincidence measurements of the authors, but they could not find the 153- and 522-kev lines measured by Baranovskiĭ and Pokrovskiĭ [Ref. 5:

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TITLE: Energy levels in the ^{166}Er nucleus

PERIODICAL: Acta Physica Polonica, v. 20, no. 3, 1961, 257-266

TEXT: In the present paper, some gamma-gamma coincidence experiments in the decay of ^{166}Yb are described, and a level scheme of ^{166}Er is proposed, which is more complete than that given by Gromov et al. [Ref. 7: Gromov, K. I., Dzhelepov, B. S., Pokrovskiy, V. N., Izv. Akad. Nauk SSSR, 23, 821 (1959)]. The isotopes of Yb were obtained by irradiation of Ta targets with 660-Mev protons from the synchrocyclotron of the Dubna Joint Institute of Nuclear Research (USSR). The measurements in Cracow were begun 1.5 to 3 days after the irradiations, which were performed in intervals of about two months. In the first two runs, the measurements of gamma radiation were made at different times for the decay analysis of the entire spectrum of the isotope mixture of ytterbium. From this analysis

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