

YAROSHEVA, A.A.

Teratoma of the brain associated with anterior encephalocele.
Vop.neirokhir. 22 no.6:38-39 N-D '58. (MIRA 12:2)

1. Kafedra patologicheskoy anatomii Stalinskogo meditsinskogo
instituta.

(BRAIN, neoplasms,
teratoma, with encephalocele in inf. (Rus))
(TERATOMA, in inf. & child,
brain, with encephalocele (Rus))
(ENCEPHALOCELE, compl.
brain teratoma (Rus))

YAROSHEVA, A.A., kand.med.nauk

Infectious-allergic arteritis (periarteritis nodosa) in children.
Pediatria 37 no.7:16-19 J1 '59. (MIRA 12:10)

1. Iz kafedry patologicheskoy anatomii Stalinskogo meditsinskogo
instituta (zav. - dotsent Ye.A.Dikshteyn).
(PERIOARTERITIS NODOSA, in inf. & child.
(Rus))

YAROSHEVA, A.A.

Rare case of primary rhabdomyosarcoma of the heart with metastasis.
Ark. pat. 22 no. 4:71-74 '60. (MIRA 14:1)
(HEART--TUMORS)

DANILKIN, N.P.; KOCHENOVA, N.A.; SVECHNIKOV, A.M.; CHAVDAROV, S.S.;
YAROSHEVA, A.I.

State of the ionosphere over Rostov-on-Don during the total
solar eclipse of Feb. 15, 1961. Geomag. i aer. 1 no.4:612-615
Jl-Ag '61. (MIRA 14:12)

1. Rostovskiy-na-Donu gosudarstvennyy universitet, kafedra
eksperimental'noy i teoreticheskoy fiziki.
(Ionosphere)
(Eclipses, Solar--1961)

YAROSHEVICH, A.

Simplify the financing of capital construction. Fin. SSSR 17 no. 11:
76-77 N '56. (MLRA 9:12)
(Construction industry--Finance)

YAROSHEVICH, A.A.; GALASHEV, M.A.; DOBKIN, G., redaktor; STEPANOVA, N.,
tekhnicheskiiy redaktor

[Heat system installations in collective farm centers] Teplofi-
katsiia vnutrusadebnogo sel'skokhoziaistvennogo proizvodstva v
kolkhoze. Minsk, Gos. izd-vo BSSR, Red. selkhoz. lit-ry, 1955.
239 p. (MLRA 8:7)
(Collective farms) (Electric power plants)

YAROSHEVICH, A. A.

YAROSHEVICH, A., kand. tekhn. nauk.

Heat supply on collective farm livestock sections. Tekhsov. MTS
18 no. 20:1-6 '57. (MIRA 10:10)
(Farm buildings--Heating and ventilation)

Yaroshevich, A.A.

OSTROVSKIY, Yu.M., KAGAN, D.Z., YAROSHEVICH, A.A.

Phthivazid and cholesterol metabolism [with summary in English]
Biul.eksp.biol. i med. 45 no.5:34-35 My'58 (MIRA 11:6)

1. Iz Plotskoy gorodskoy bol'nitsy (glavnyy vrach Ye.M. Polygalina)
i Polotskogo protivotuberkuleznogo dispansera (glavnyy vrach
H.Ya. Kregaus). Predstavlena deystvitel'nym chlenom AMN SSSR.
S.Ye. Severinym.

(ISONIAZID, effects,
on blood cholesterol (Rus))

(CHOLESTEROL, in blood,
eff. of isoniazid (Rus))

PIUNOVSKIY, I.I., kand. tekhn. nauk; ZHIVOTKO, B.I., kand. tekhn. nauk; RUKTESHEL', S.V., kand. tekhn. nauk; SHTOMPEL', B.N., kand. tekhn. nauk; BUTVILOVSKIY, F.A., inzh.; KORZHENEVSKAYA, R.A., inzh.; LOGVINOVICH, I.P., inzh.; UTEVSKAYA, L.I., kand. tekhn. nauk; RUNTSO, A.A., kand. tekhn. nauk; NAGORSKIY, I.S., kand. tekhn. nauk; TERPILOVSKIY, K.F., kand. tekhn. nauk; LOSEV, V.I., kand. tekhn. nauk; YAROSHEVICH, A.A., kand. tekhn. nauk; KATSYGIN, V.V., kand. tekhn. nauk, red.; BOROVIKOVA, R., red.

[Problems of the technology of mechanized agricultural production] Voprosy tekhnologii mekhanizirovannogo sel'skokhoziaistvennogo proizvodstva. Minsk, Izd-vo "Urozhai." Pt.2. 1964. 336 p. (MIRA 17:7)

1. Tsentral'nyy nauchno-issledovatel'skiy institut mekhanizatsii i elektrifikatsii sel'skogo khozyaystva nechernozemnoy zony SSSR.

YAROSHEVICH, A. G.

20-1-28/44

AUTHORS: Blokh, G.A., Yaroshevich, A.G.
TITLE: The Interaction between Soot and Sulphur in the Process of Rubber Vulcanization (O vzaimodeystvii sazhi s seroy v protsesse vulkanizatsii kauchuka)

PERIODICAL: Doklady AN SSSR, 1957, Vol. 116, Nr 1, pp. 105 - 108 (USSR)

ABSTRACT: First, a short report is given on previous works dealing with the same subject. The present work contains kinetical data concerning the interaction of soots (gas black, lamp black) with sulphur and with the accelerators. In connection with the investigation of these problems the following was studied: The interaction between radioactive sulphur and soot at temperature conditions which corresponds to vulcanization. The adsorption of caoutchouc molecules from the benzene solution by the surface of soot particles. The influence of pre-heating the soot sulphur accelerator mixture upon the physical and mechanical properties of the types of rubber on the basis of various synthetic rubbers. There follows a description of the experiments. First, the kinetics of the connection between radioactive sulphur with a gas black and lamp black is discussed. Three experi-

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20-1-28/44

The Interaction between Soot and Sulphur in the Process of Rubber Vulcanization

mental series were developed on this occasion: I. series: The exactly weighed quantities of soot are mixed with equal quantities of radioactive sulphur and are then heated at a temperature of 145° for 1, 3, 5, 8, 10 hours. II. series: Before being mixed with the soot the exactly weighed quantities of radioactive sulphur were kept at a temperature of 145° for 1 - 10 hours and were then mixed with the soot. III. series: The exactly weighed quantities of soot and of radioactive sulphur were mixed and not heated. The experimental series II and III made possible to explain the quantitative side of the adsorption binding of sulphur with soot. By comparing the remanent radioactivity of the I. experimental series with remanent radioactivity of the second it was possible to obtain a true picture of the chemical bond between sulphur and soot. On the occasion of the heating of soot with sulphur it is certain that a chemical bond between the two is formed. Even after a 600 hours' extraction of sulphur with benzene it was not possible to remove all the sulphur from the mixture with soot. Gas black is more strongly bound to sulphur than lamp black. The authors then deal with the adsorption of the caoutchouc molecules by soot-sulphur complexes and with the influence exercised by the pre-heating of the soot with accelerated vulcanized substances upon the porosity of types of rubber.

Card 2/3

The Interaction between Soot and Sulphur in the Process of Rubber Vulcanization 20-1-28/44

The thermal treatment of the soot at 145°, which takes 1 - 3 hours, increases the adsorption of the caoutchouc molecules by the soot particles. There are 4 figures and 13 references, 8 of which are ...Slavic...

ASSOCIATION: Dneproretrovsk Chemical Technology Institute imeni
F. E. Dzerzhinskiy
(Dnepropetrovskiy Khimiko-tehnologicheskii institut im. F.E.
Dzerzhinskogo)

PRESENTED: April 3, 1957, by P.A. Rebinder, Academician

SUBMITTED: July 12, 1956

AVAILABLE: Library of Congress

Card 3/3

BODYAKO, M. M. [Badziaka, M. M.]; YAROSHEVICH, G. B. [Yarashevich, H. B.]

Effect of the heating rate on the restoration of the physical
and mechanical properties of cold-deformed iron. Vestsi AN
BSSR. Ser. fiz.-tekh. nav. no. 1:103-110 '63. (MIRA 16:4)

(Iron—Metallurgy)

S/250/63/007/002/008/008
A059/A126

AUTHORS: Bodyako, M. N., Yaroshevich, G. B.

TITLE: Substructural changes of cold-deformed nickel and copper in the stage of recovery through induction heating

PERIODICAL: Doklady Akademii nauk BSSR, v. 7, no. 2, 1963, 124 - 126

TEXT: The influence of temperature and speed of heating on the change of the relative distortion $\Delta a/a$ of the crystal lattice of the second kind and of coherent x-ray scattering blocks was studied. Samples 20 x 10 mm in diameter, with different degrees of deformation (5, 10, 15, 30, 50, and 75%) were heated in the power generator MF3-102 (MGZ-102) with a speed of 30 and 300 degrees per second, and temperature was controlled with the thermoelectric pyrometer TЭП-1 (TEP-1) developed at the ФТИ АН БССР (FTI AS BSSR). The samples were subsequently sawed under cooling, perpendicular to the direction of sagging, etched with concentrated HNO₃ to dissolve the riveted metal layer, and x-ray photographs taken with the ionization device YPC-50 (URS-50). The copper standard was annealed at 510°C and the nickel standard at 800°C for 45 minutes with subsequent cooling

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Substructural changes of cold-deformed nickel...

S/250/63/007/002/008/008
A059/A126

down with the furnace. The fact that the relief of distortions of the crystal lattice in copper takes place more quickly than in nickel is explained to be due to the smaller interatomic forces in copper. The change of the distortions of the crystal lattice depends on the speed of induction heating, both for nickel and copper. When, for instance, a temperature of 200°C is reached at the rate of 30 degrees/second, the value of $\Delta a/a$ for copper is $1.1 \cdot 10^{-4}$ and at the rate of 300 degrees/second - $2.25 \cdot 10^{-4}$, while the corresponding values for nickel were $9.2 \cdot 10^{-4}$ and $10.6 \cdot 10^{-4}$, respectively. The intensity of growth D of the coherent-scattering blocks when a temperature of 200°C is reached at the rate of 30 degrees per second is $4.75 \cdot 10^{-6}$ cm and at a rate of 300 degrees per second - $4.35 \cdot 10^{-6}$ cm for copper, while the corresponding D values for nickel are $4.5 \cdot 10^{-6}$ cm and $4.0 \cdot 10^{-6}$ cm, respectively. Thus, the stage of recovery is characterized chiefly by the decrease of the relative distortions of the crystal lattice, while the intense growth of the coherent-scattering blocks should take place already in the stage of recrystallization. There are 1 figure and 1 table.

ASSOCIATION: Fiziko-tekhnicheskij institut AN BSSR (Physicotechnical Institute of the AS BSSR)

PRESENTED: by V. P. Severdenko, Academician of the AS BSSR

SUBMITTED: October 30, 1962

Card 2/2

BODYAKO, M.N.; YAROSHEVICH, G.B.; ASTAPCHIK, S.A.

Effect of the structural state on the integral intensity of
X-ray lines. Dokl. AN BSSR 7 no.11:752-755 II '63. (MIRA 17:9)

1. Fiziko-tehnicheskiy institut AN BSSR. Predstavleno akademikom
AN BSSR V.P. Severdenko.

BODYAKO, M.N. [Badziuka, M.M.]; ASTAPCHIK, S.A. [Antapchyk, S.A.];
YAROSHEVICH, G.B. [Iarushevich, H.B.]

Critical recrystallization during induction heating. Vestsi AN BSSR.
Ser. fiz.-tekh. nav. no.2:124-129 '64. (MIRA 18:1)

SOV/179-59-2-28/40

AUTHOR: Yaroshevich, G. O. (Khabarovsk)

TITLE: An Extension of the Kirchoff Analogue on the Effect of "Jump"
(Rasprostraneniye analogii Kirkhgofa na yavleniye "pereskoka")PERIODICAL: Izvestiya Akademii nauk SSSR OTN, Mekhanika i mashino-
stroyeniye, 1959, Nr 2, pp 169-171 (USSR)

ABSTRACT: According to Kirchoff, the equation of equilibrium (Eq 1) (Ref 1), of a thin rod straight when unstressed but becoming bent and twisted when forces are applied to its ends, can be identified with the Euler equation of motion of a rigid body turning about a fixed point. This analogy can be further extended to the effect of "jump" from one form of equilibrium to another by identifying it with the physical pendulum (Eq 2). (Eq (1): s - length of cord, P_0 - force acting on the point O of the rod, $H = EI$ - bending rigidity, ζ - angle of tangent to the direction of P_0 ; Eq (2): t - time of oscillation of the physical pendulum, P - weight of pendulum, A - moment of inertia in respect of the axis of rotation, ζ - angle of pendulum from the vertical, a - distance from the suspension point to the centre of gravity). The following comparisons are made: the length of cord s

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SOV/179-59-2-28/40

An Extension of the Kirchhoff Analogue on the Effect of "Jump" could be compared to the time t of oscillation of the pendulum; the direction of P_0 = direction of P ; magnitude of P = gravity force of pendulum P_a . The rigidity E = moment of inertia A ; the angle ξ of the tangent = angle ξ , inclination of pendulum from vertical; the compression point of the rod C = the lowest position of the pendulum ($\xi = 0$); the bending point B = the maximum deflection of the pendulum; the length of rod l = time τ of oscillation. In the case of "jump" of the rod two forms of equilibrium can occur when other factors (such as load) do not change. In the case of compression and bending, these two forms of equilibrium, if the axis of the rod has a different number of characteristic points, i.e. the form of equilibrium shown in Fig 1, represent the position of the pendulum with no lowest position being reached which corresponds to the rod with no compression points. The form of equilibrium shown in Fig 2, corresponds to the oscillation of the pendulum between the

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SOV/179-59-2-28/40

An Extension of the Kirchoff Analogue on the Effect of "Jump"

moment $t = 0$ and $t = \tau$. The form of equilibrium shown in Fig 3 corresponds to the oscillation between the point $t = 0$ and $t = \tau$ on the return. The experimental verification was made with the pendulum type MK-30, where the results showed sufficient accuracy for the effect of "jump", for example, in 1.25 sec the pendulum reached the second sequence of oscillation with the angle amplitude 180° , the first sequence - 122° ; in 1.67 sec the pendulum reached the third sequence with the amplitude 10° and the second 130° . Thanks are given to K. B. Kurenschikov and V. I. Zaporozhskiy for their help in the experiments. There are 3 Soviet references.

SUBMITTED: September 3, 1958.

Card 3/3

YAROSHEVICH, G.O. (Penza)

Linearization of equations of motion of autonomous systems
by means of asymptotic polynomials. Izv.vys.ucheb.zav.;
mat. no.6:176-179 '65. (MIRA 19:1)

1. Submitted April 7, 1964.

S/124/61/000/009/046/058
D234/D303

AUTHOR: Yaroshevich, G.O.

TITLE: Can a compressed and bent rod lose the stability of the first kind?

PERIODICAL: Referativnyy zhurnal. Mekhanika, no. 9, 1961, 29, abstract 9 V261 (Uch. zap Khabarovskiy gos. ped. in-t, Fiz.-matem. ser., 1959, 1, 25-35)

TEXT: The loss of stability of the second kind is understood in the case of an elastic rod subject to bending and compression as the phenomenon of jumping from one form of distortion to another which is qualitatively different from the former. It is remarked that analysis of this phenomenon must be based on the exact non-linear equation of bending. On the basis of results obtained in a previously published paper of the author (Inzhenernyy sb. 1952, 13) it is affirmed that the jump is possible under a load smaller than Euler's force. It is remarked that the same result

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S/124/G1/000/009/046/058
D234/D303

Can a compressed...

can be obtained with the aid of the well-known Kirchhof kinetic
analogy. [Abstracter's note: Complete translation]

60

45

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15

Card 2/2

YAROSHEVICH, G.O.

Dynamics of chronometric motion allowing for shocks produced by the
escapement and impulse. Uch. zap. PPI no.1:33-43 '63. (MIRA 17:2)

L 1, 104-66 EWT(d) IJP(c)

ACC NR: AP6001824 *10,44,55* SOURCE CODE: UR/0140/65/000/006/0176/0179AUTHOR: Yaroshevich, G. O. (Penza) *17*ORG: none *B*TITLE: Linearization of the equations of motion of autonomous systems by asymptotic polynomials *10,44,55*

SOURCE: IVUZ. Matematika, no. 6, 1965, 176-179

TOPIC TAGS: asymptotic polynomial, motion equation

ABSTRACT: An efficient method is suggested for constructing the fundamental harmonic of the solution of a nonlinear equation describing the motion of an autonomous system having one degree of freedom; also, a convenient stability criterion is established. The motion is described by this equation:

$\ddot{x} + \Phi(x, \dot{x}) + k^2x + f(x) = 0$, where $\Phi(x, \dot{x})$ is the even function of x and odd function of \dot{x} ; $f(x)$ is the odd function of x , both being continuous. A harmonic solution with amplitude A is found, $-A < x < +A$. The function $\Phi(x, \dot{x})$ is approximated by a polynomial as suggested by I. I. Eterman (IVUZ-Matematika, no. 3(28), 1962). The stability of self-oscillations of the above equation is investigated, and an idea of the degree of approximation is given. Orig. art. has: 24 formulas.

SUB CODE: 12 / SUBM DATE: 07Apr64 / ORIG REF: 000 / OTH REF: 001

HW
Card 1/1

UDC: 517.93

1. YAROSHEVICH, G. V.
2. USSR (600)
4. Iron Cres--Bashkiria
7. Report on the results of the geophysical exploration in the Inzer and Lapyshtinskiy iron ore regions of the Bashkir A. S. S. R. Izv. Glav. upr. geol. fon. no. 3 1947.

9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.

KUDZIN, Yu.; YAROSHEVICH, I. [Iaroshevych, I.]

Use of silicate bacteria in the steppe zone of the Ukraine.
Mikrobiol.zhur. 26 no.4:90-91 '64.

(MIRA 18:10)

KUDZIN, Yu., kand.sel'skokhoz.nauk; YAROSHEVICH, I.,; VLASOVA, N.

Supply collective and state farms with cornseeds thoroughly prepared for planting. Muk. elev. prom. 27 no.10:11 0 '61.
(MIRA 14:12)

1. Dnepropetrovskiy Vsesoyuznyy nauchno-issledovatel'skiy institut kukuruzy.

(Corn(Maize))

YAROSHEVICH, I V

USSR .

The effectiveness of phosphobacterin on chernozem and chestnut-brown soils of the steppe zone in the Ukraine. Yu. K. Kudzin and I. V. Yaroshevich. *Zemledelie* 3, No. 4, 83-8 (1955).—A dose of phosphobacterin increase the P intake of crops. J. S. Joffe. /

KUDZIN, Yu.K. [Kudzin, I.U.K.], kand. sel'skokhozyaystvennykh nauk;
YAROSHEVICH, I.V. [I.Aroshevych, I.V.], nauchnyy sotrudnik

Bacterial fertilizers. Nauk i zhyttia 9 no.3:40 Mr '59.
(MIRA 12:4)

(Soil inoculation)

YAROSHEVICH, I. V., Cand Agr Sci -- "Effectiveness of phosphobacterine in the steppe^s of ^{the} UkSSR and ^{refinement of technique} ~~technique improve-~~
~~ment~~ of its application." Voronezh, 1961. (Min of Agr RSFSR.
Voronezh Agr Inst) (KL, 8-61, 256)

KUDZIN, Yu.K.; YAROSHEVICH, I.V.

Mobilization of organic phosphates in Chernozem soils and the
phosphorus nutrition of plants. Trudy Inst. mikrobiol. no.11:
252-259 '61 (MIRA 16:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut kukuruzy.

*

KUDZIN, Yu.K., kand.sel'skokhozyaystvennykh nauk; YAROSHEVICH, I.V.;
VLASOVA, N.I.

Recent developments in the use of phosphorobacterin. Zemledelie
23 no.11:65-67 N '61. (MIRA 14:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut kukuruzy.
(Corn (Maize)--Fertilizers and manures)
(Bacteria, Phosphorus)

KUDZIN, Yu.K.; YAROSHEVICH, I.V.

Use of phosphobacterin in the Chernozem zone. Mikrobiologiya 31
no. 6:1098-1101 N-D '62. (MIRA 16:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut kukuruzy.
(UKRAINE—CHERNOZEM SOILS) (BACTERIA, PHOSPHORUS)

YAROSHEVICH, I.V., nauchnyy sotrudnik; VLASOVA, N.I., nauchnyy sotrudnik

Disinfecting and bacterizing corn seeds. Zashch.rast.ot vred.i
bol. 5 no.3:22-23 Mr '60. (MIRA 16:1)

1. Vsesoyuznyy institut kukuruzy.
(Seeds—Disinfection) (Corn(Maize)—Diseases and pests)
(Bacteria, Phosphorus)

YAROSHEVICH, K.K. (Voronesh)

Do it yourself; clamps and collars for tie repair. Pnt' i put. khoz.
no.3:42-43 Mr '57. (MIRA 10:5)

1. Nachal'nik putevykh dorozhnykh masterakikh Yugo-Vostochnoy dorogi.
(Railroads--Ties)

YAROSHEVICH, M.P., dorozhnyy master (st. Oshmyany, Belorusskoy dorogi)

Changing the dimensions of the tie tamper head. Put' i put.khoz.
4 no.10:31 0 '60. (MIRA 13'9)
(Railroads--Equipment and supplies)

YAROSHEVICH, M.S.

Studying Tertiary bitumens of some areas of Sakhalin. Trudy
VNIGRI no.181:191-194 '61. (MIRA 15:2)
(Sakhalin--Bitumen--Geology)

YAROSHEVICH, M.S.; KOZINA, T.A.

Study of the group and hydrocarbonaceous composition of bitumens in
Neogene sediments of the Okha-Ekhabi region in Sakhalin. Trudy VNIIGRI
no.224:34-44 '63. (MIRA 17:2)

YAROSHEVICH, M.S.

Division of Neogene sediments in the Okha-Ekhabi region; based on the
data of luminescence studies of bitumens. Trudy VNIIGRI no.224:45-52
'63. (MIRA 17:2)

YARGOSHEVICH, M.S.

Bituminosity of the Tertiary sediments of the Schmidt Peninsula
in Sakhalin. Trudy VNIGRI no.227 Seriya sbor. no.9:125-131 '64.
(MIRA 18:1)

AMOSOV, G.A.; YAROSHEVICH, N.S.

Primary migration. Geol. zhurn. 1962, 4 no. 8: 38-40. 18 refs. (MIRA 18:2)

L. Vsesoyuznyy neftyanoy nauchno-issledovatel'skiy geologorazvedochnyy
Institut, Leningrad.

GLEYSHERMAN, S.Ye.; YAROSHEVICH, N.A.

Acute myeloblastic leukemia in a four-month-old child. *Pediatria* 36
no.2:89 F '59. (MIRA 12:4)

1. Iz Znamenskoy zheleznodorozhnoy bol'nitsy Odessko-Kishinevskoy
zheleznoy dorogi. (LEUKEMIA) (INFANTS---DISEASES)

S/170/60/003/005/008/017
B012/B056AUTHOR: Yaroshevich, O. I.TITLE: Investigation of Heat-transfer Processes in Fuel Elements ¹ of Nuclear Reactors by the Method of Hydraulic Simulation ¹⁹PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1960, Vol. 3, No. 5, pp. 81 - 85 ✓C

TEXT: In the present paper, the method and the results of investigation of nonsteady temperature fields of fuel elements of water-cooled, water-moderated nuclear reactors are given. Investigations were carried out of the BBP (VVR) elements used in atomic power plants of the USSR, viz. the elements in the center of the core. The system (1) of differential equations for the temperature field of such elements is written down, and the boundary conditions for the solution of this system are given: Boundary conditions of the fourth kind at the points of contact of individual layers of the elements, such of the third kind on their outer surface, and the initial condition $t_i \Big|_{\tau=0} = f(r)$, where i denotes the

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Investigation of Heat-transfer Processes in Fuel Elements of Nuclear Reactors by the Method of Hydraulic Simulation S/170/60/003/005/008/017 B012/B056

layer number. As an analytical solution of system (1) is very difficult, the method of hydraulic analogs (Refs. 4,5,8) was used in this case. The investigations were carried out on a hydraulic integrator by V. S. Luk'yanov (Ref. 4). When investigating the temperature fields of the elements mentioned, this method made it possible to take account of the change in the heat-transfer coefficient in the materials of these elements with temperature, the change in the gap between the core and the can of the element on heating, as well as, with sufficient accuracy, the influence of the negative temperature coefficient of reactivity. The temperature dependence of the heat-transfer coefficient of uranium dioxide was determined from formula (3). The values calculated from this formula agree with those of Ref. 7. In determining the influence exerted by the negative temperature coefficient of reactivity, the continuous variation of reactivity was replaced by a number of successive stepped changes (Fig. 1). The experiments are briefly described. By means of the hydraulic integrator, the temperature fields of the reactor were examined under starting and emergency conditions. The results (Figs. 3 and 4) show that the elements of the type under consideration are very

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Investigation of Heat-transfer Processes in S/170/60/003/005/008/017
Fuel Elements of Nuclear Reactors by the B012/B056
Method of Hydraulic Simulation

reliable. There are 4 figures and 8 references: 5 Soviet and 2 US. ✓

ASSOCIATION: Institut energetiki AN BSSR, g. Minsk (Institute of
Power Engineering of the AS BSSR, Minsk)

Card 3/3

YAROSHEVIC, O. I.

"Approximation methods of hydraulic analogy in investigating heat-transfer processes in bodies with internal heat sources."

Report presented at the 1st All-Union Conference on Heat- and Mass- Exchange, Minsk, BSSR, 5-9 June 1961

88273

S/170/61/004/001/015/020
B019/B056

21.1200
26.223/
AUTHORS:

Yermakov, V. S., Zhuk, I. P., Yaroshevich, O. I.

TITLE:

Calculation of Temperature in Fuel Elements of a Nuclear Reactor in Transient Conditions

PERIODICAL:

Inzhenerno-fizicheskiy zhurnal, 1961, Vol. 4, No. 1, pp. 104-108

TEXT: The temperature distribution in fuel elements of a water-moderated water-cooled reactor in transient conditions is investigated. The authors proceed from the known set of differential equations for the temperature field of a cylindrical fuel element consisting of rod, airgap, and jacket. This nonlinear differential equation is simplified by assuming mean values of the thermal conductivity coefficient λ being a temperature function, for various temperature zones of the fuel element. This simplified linear differential equation reads:

$$c_i \rho_i \frac{\partial t_i}{\partial \tau} = \lambda_{ik} \nabla^2 t_i + Q_i(r, \tau), \text{ where } i = 1, 2, 3, \text{ corresponding to the}$$

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Calculation of Temperature in Fuel Elements
of a Nuclear Reactor in Transient Conditions

S/170/61/004/001/015/020
B019/B056

rod, the airgap or the jacket, and k is the k -th temperature zone. By means of this equation the fuel elements of a BBP (VVR) reactor with a power efficiency of 760 megawatts is investigated. The thermal capacity of the airgap and the jacket are neglected, and the He and Al-mass is assumed to be small compared to the UO_2 -mass; furthermore, the temperature drop in the Al-jacket is neglected. For the temperature of the core, the following expression is obtained by means of a Hankel-transformation;

$$t(\rho, \tau) = qT \left[1 - \frac{hl_0 \left(\frac{\rho}{\sqrt{aT}} \right)}{\frac{1}{aT} I_1 \left(\frac{1}{\sqrt{aT}} \right) + hl_0 \left(\frac{1}{\sqrt{aT}} \right)} \right] e^{-\tau/T} - \frac{2qh}{a} \sum_{i=1}^{\infty} \frac{e^{-a\mu_i^2 \tau}}{(\mu_i^2 + h^2) (\mu_i^2 + \frac{1}{aT})} \frac{J_0(\mu_i \rho)}{J_0(\mu_i)} \quad (15)$$

μ_i are the positive roots of the equation $\mu J_1(\mu) = hJ_0(\mu)$ (16). For

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88273

Calculation of Temperature in Fuel Elements
of a Nuclear Reactor in Transient Conditions

S/170/61/004/001/015/020
B019/B056

calculating with (15) it is now necessary to know the reactor period as well as the time within which the reactor attains a certain power output. Table 1 shows the results. There are 1 table and 7 references: 5 Soviet, 1 British, and 1 US.

ASSOCIATION: Institut energetiki AN BSSR, g. Minsk (Institute of Power Engineering of the AS BSSR, Minsk)

SUBMITTED: August 16, 1960

Legend to Table 1: 1) Time from the beginning of the reactor startup onward. 2) Core radius in mm. t^*) Temperature, calculated by means of a hydrintegrator. t^{**}) Temperature calculated analytically.

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Таблица 1
Температурное поле сердечника ТВЭЛ при изменении уровня
мощности реактора с $10^{-1} W_n$ до W_n
(время удвоения мощности 20 сек, $T = 28,8$ сек)

Время с начала разгона, сек	Радиус сердечника ТВЭЛ, мм									
	1,393		2,42		3,12		3,69		4,18	
	t^*	t^{**}	t^*	t^{**}	t^*	t^{**}	t^*	t^{**}	t^*	t^{**}
30	388	386	348	348	310	311	272	275	232	235
40	546	531	488	478	434	427	384	376	324	322
50	776	748	698	672	614	600	544	528	460	451
55	920	888	820	797	732	712	648	626	552	535
60	1092	1055	972	948	868	846	768	745	652	637
65	1290	1254	1148	1126	1020	2005	904	885	772	756
66	1376	1326	1218	1181	1080	1063	956	936	820	800

Примечания: t^* — температура, полученная с помощью гидроинтегратора, t^{**} — рассчитанная аналитически.

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YAROSHEVICH, O. I.

22025

S/170/61/004/005/011/015
B111/B214

26.2230

AUTHORS: Yermakov, V. S., Zhuk, I. P., Yaroshevich, O. I.

TITLE: The problem of nonstationary heat transmission in the fuel elements of a nuclear reactor

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, v. 4, no. 5, 1961, 96-99

TEXT: The problem of nonstationary heat transmission in the fuel elements of a nuclear reactor is solved in this paper. For this purpose, the simplifying assumptions made in Ref. 1 (IFZh, v. IV, no. 1, 1961) are not taken into account. It is assumed that the temperature distribution at the beginning of the transient $t(0, x) = \psi(x)$ is nonuniform and that the intensity of the heat production is time dependent as obtained by the solution of the dynamic reactor equation. The solution of the dynamic reactor equation in one-group approximation with a decay constant τ is found to be:

X

(1),

$$n = n_0 \left[\frac{\beta}{\beta - \rho} e^{\frac{\rho t}{L}} - \frac{\rho}{\beta - \rho} e^{-\frac{\beta - \rho}{L} t} \right]$$

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B111/B214

The problem ...

where n_0 is the density of thermal neutrons at the beginning of the transient
 ρ ... the reactivity of the reactor, β the fraction of slowed down neutrons,
and L the mean lifetime of neutrons. For the production of heat $Q(\tau)$ in a
thermal reactor one may write:

$$Q = Q_0 [A_1 e^{s_1 \tau} - A_2 e^{-s_2 \tau}], \quad (2)$$

where

$$A_1 = \frac{\beta}{\beta - \rho}; \quad A_2 = \frac{\rho}{\beta - \rho}; \quad s_1 = \frac{-\bar{\tau}\rho}{\beta - \rho}; \quad s_2 = \frac{\beta - \rho}{L}$$

The problem of the radial temperature distribution inside a fuel element may
be mathematically formulated in the following manner:

$$\frac{\partial t(r, \tau)}{\partial \tau} = a \left(\frac{\partial^2 t(r, \tau)}{\partial r^2} + \frac{1}{r} \frac{\partial t(r, \tau)}{\partial r} \right) + \frac{Q_0}{cV} (A_1 e^{s_1 \tau} - A_2 e^{-s_2 \tau}), \quad (3) \text{ to } (6)$$

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Equation (3) under the conditions (4) and (6) may be solved with the help of a Laplace transform. The solution is obtained in the following form:

$$\begin{aligned}
& 1 - \frac{Q_0 A_1}{c \gamma a_1} \left(1 - \frac{h J_0 \left(\sqrt{\frac{a_1}{a}} r \right)}{h J_0 \left(\sqrt{\frac{a_1}{a}} R \right) + \sqrt{\frac{a_1}{a}} J_1 \left(\sqrt{\frac{a_1}{a}} R \right)} \right) e^{-\lambda r} + \\
& + \frac{Q_0 A_2}{c \gamma a_2} \left(1 + \frac{h J_0 \left(\sqrt{\frac{a_2}{a}} r \right)}{h J_0 \left(\sqrt{\frac{a_2}{a}} R \right) - \sqrt{\frac{a_2}{a}} J_1 \left(\sqrt{\frac{a_2}{a}} R \right)} \right) e^{-\lambda r} \quad (7). \\
& - \left[\frac{Q_0}{\lambda} (1 + hR) + \frac{2Q_0 h}{c \gamma R} \left(\frac{A_1}{a_1} + \frac{A_2}{a_2} \right) - \frac{2hT}{R} \right] \times
\end{aligned}$$

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$$\begin{aligned}
 & \times \sum_{\mu_i} \frac{J_0(\mu_i r) e^{-\mu_i^2 a t}}{(\mu_i^2 + h^2) J_0(\mu_i R)} + \\
 & + \frac{2Q_0 A_1 a h}{c \gamma a_1 R} \sum_{\mu_i} \frac{\mu_i^2 J_0(\mu_i r) e^{-\mu_i^2 a t}}{(\mu_i^2 + a_1)(\mu_i^2 + h^2) J_0(\mu_i R)} + \\
 & + \frac{2Q_0 h}{\lambda R} \sum_{\mu_i} \frac{J_0(\mu_i r) e^{-\mu_i^2 a t}}{\mu_i^2 (\mu_i^2 + h^2) J_0(\mu_i R)} - \\
 & - \frac{2Q_0 A_1 a h}{c \gamma a_1 R} \sum_{\mu_i} \frac{\mu_i^2 J_0(\mu_i r) e^{-\mu_i^2 a t}}{(a_1 - \mu_i^2 a)(\mu_i^2 + h^2) J_0(\mu_i R)} + \theta \quad (7)
 \end{aligned}$$

Here, μ_i are the positive roots of the equation $\mu_i I_1(\mu_i R) = h I_0(\mu_i R)$. The solution of (7) can be considerably simplified. The first, second, and sixth terms of (7) vanish almost completely 1 second after the beginning of the transient if the temperature field differs only slightly from the stationary value. The simplified expression is:

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The problem ...

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B111/5214

$$\begin{aligned}
 & \left[1 - \frac{h I_0 \left(\sqrt{\frac{a_1}{a}} r \right)}{h I_0 \left(\sqrt{\frac{a_1}{a}} R \right) + \sqrt{\frac{a_1}{a}} I_1 \left(\sqrt{\frac{a_1}{a}} R \right)} \right] e^{-\lambda r} - \\
 & - \left[\frac{Q_0}{\lambda} (1 + hR) + \frac{2Q_0 h}{c \gamma R} \left(\frac{A_1}{a_1} + \frac{A_1}{a_2} \right) - \frac{2hT}{R} \right] \frac{J_0(\mu_1 r) e^{-\lambda^2 r^2}}{(\mu_1^2 + h^2) J_0(\mu_1 R)} + \\
 & + \frac{2Q_0 A_1 a h}{c \gamma a_1 R} \frac{\mu_1^2 J_0(\mu_1 r) e^{-\lambda^2 r^2}}{(\mu_1^2 a + a_1) (\mu_1^2 + h^2) J_0(\mu_1 R)} + \\
 & + \frac{2Q_0 h}{\lambda R} \frac{J_0(\mu_1 r) e^{-\lambda^2 r^2}}{\mu_1^2 (\mu_1^2 + h^2) J_0(\mu_1 R)} + \theta. \tag{9}
 \end{aligned}$$

The numerical calculations were made for the fuel elements of the reactor of type B&P (VVR) and compared with the calculations made earlier for an analogous problem with the help of an analogous computer. The values were

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B111/B214

The problem ...

found to be practically coincident so that both methods can be applied. The solution obtained describes the nonstationary temperature field of the fuel elements of a reactor with constant rate of starting up. There are 1 table and 3 Soviet-bloc references. ✓

ASSOCIATION: Institut energetiki AN BSSR, g. Minsk (Institute of Power Engineering, AS BSSR, Minsk)

SUBMITTED: February 14, 1961

Card 6/6

LYKOV , A.V., akademik, red.; SMOL'SKIY, B.M., prof., red.;
SHASHKOV, A.G., kand. tekhn. nauk, red.; PLYAT, SH.N.,
kand. tekhn. nauk, red.; POMERANTSEV, A.A., prof., red.;
ROMANENKO, P.N., prof., red.; PEREL'MAN, T.L., kand. fiz.-
mat. nauk, red.; YAROSHEVICH, O.I., kand. tekhn. nauk, red.;
BEL'ZATSKAYA, L., red. izd.-va; TIMOFEYEV, L., red. izd.-va;
SIDERKO, N., tekhn. red.; VOLOKHANOVICH, I., tekhn. red.

[Heat and mass transfer] Teplo i massoperenos. Minsk, Izd-
vo AN BSSR. Vol.1. [Thermophysical characteristics of materials
and methods for their determination] Teplofizicheskie kharakte-
ristiki materialov i metody opredeleniia. Pod obshchei red. A.V.
Lykova i B.M.Smol'skogo. 1962. 216 p. Vol.5. [Methods for
calculating and modeling heat-and mass-transfer processes] Meto-
dy rascheta i modelirovaniia protsessov teplo- i massobmena.
1963. 471 p. (MIRA 16:10)

1. Vsesoyuznoye soveshchaniye po teplo- i massobmenu. 1st,
Minsk, 1961. Akademiya nauk Bel.SSR (for Lykov).
(Materials--Thermodynamic properties)
(Heat--Transmission) (Mass transfer)

L 16470-66 EWT(m)/ETC(f)/EPF(n)-2/EWG(m) WW/DIA

ACC NR: AP6005534

SOURCE CODE: UR/0089/66/020/001/0061/0062

AUTHOR: Krasin, A. K.; Yaroshevich, O. I.

43
B

ORG: none

19.55
TITLE: Startup of the critical assembly at the Institute of Nuclear Power Engineering, AN BSSR

SOURCE: Atomnaya energiya, v. 20, no. 1, 1966, 61-62

TOPIC TAGS: chain reaction, fissile material, nuclear reactor moderator, nuclear reactor core, critical assembly, nuclear reactor technology, test stand

ABSTRACT: The authors describe a uranium-water critical assembly put into operation in April 1965 at the Institute of Nuclear Power Engineering, AN BSSR. The installation is designed for experiments on "clean" reactor cores. The stand for the critical assembly consists of the following basic elements: an open tank, components for the reactor core, a system for filling the moderator and controlling its level, a tank for storage and emergency dumping of water and a system for shielding and control. The open tank is a cylinder 1600 mm high and 1500 mm in diameter.

Card 1/2

UDC: 621. 039. 519

2

L 16470-66
ACC NR: AP6005534

Provision is made for varying the thickness of the lower reflector and for facilitating assembly of new reactor cores. Two safety rods are used, each consisting of two sections: an upper section containing a fissionable material (a type EK-10 fuel element), and a lower section containing a moderator material (boron carbide). The chain reaction in the assembly are controlled by varying the level of the moderator. The device is used for experiments on determining the critical masses of "clean" reactor cores in a wide range of nuclear concentrations of hydrogen and U^{235} , on the distribution of flux density for thermal and epithermal neutrons, etc. Orig. art. has: 1 figure.

SUB CODE: 18/ SUBM DATE: 06Oct65/ ORIG REF: 000/ OTH REF: 000

Card 2/2 m c

PANASYUK, V.I.; ASHRATOVA, Sh.K.; YAROSHEVICH, R.A.; SHIROKOVA, A.V.

Analyzing batches of opalescent, boron silicate, and some
other kinds of glass. Leg.prom. 18 no.12:19-23 D '58.
(MIRA 11:12)

(Glass manufacture--Chemistry)

YAROSHEVICH, Stanislav Iosifovich; KASHTANOV, F., red.; KALECHITS, G.,
tekh.red.

[Building a house with a single brigade; experience of the UNR-19
mixed financially accountable brigade of construction trust No.1]
Stroit' doma odnoi brigadoi; iz opyta raboty khozraschetnoi
brigady konechnoi produktsii UNR-19 stroitel'nogo tresta No.1.
Minsk, Gos.izd-vo BSSR, Red.proizvodstvennoi lit-ry, 1960. 22 p.
(MIRA 14:3)

1. Brigadir UNR-19 tresta No.1 (for Yaroshevich).
(Minsk--Building)

YAROSHEV, C. S. V.

PHASE I BOOK EXPLOITATION 60V/5312

49(3)

Abzhenitsy nauk SSSR. Astronomicheskoy sovets.

Syllabus' statitsiy opticheskogo nablyudeniya iskusstvennykh zvezdakh sovetsk. no. 7 (Bulletin of Statistics for Optical Observation of Artificial Earth Satellites, nr. 7) Moscow, 1959. 27 p. 500 copies printed.

Resp. Ed.: Ye. L. Gladin; Editorial Secretary: O. A. Svernyaya

PURPOSE: The book is intended for scientists engaged in earth-satellite research and for students of astronomy.

COVERAGE: The collection of articles summarizes the results of observations of the Soviet earth satellites. The treatment includes: methods of observation, accounts of maximum visibility, devices and cameras used, tables with data. There are numerous figures and some Soviet references. Each article in this collection is accompanied by an English annotation.

Gimelfarb, B.M., and V. Arkhangel'sk. Observations of Brightness Variations of the Rocket Carrier of the Third Soviet Satellite 18
The study was conducted at the satellite-observation station attached to the State Pedagogical Institute imeni Lomonosov at Arkhangel'sk. Six passages of the third Sputnik were recorded, in October and November of 1958, with the aim of establishing the mean period of brightness variations. Moments of maximum brightness were determined by a method suggested by V.M. Grigorovich. A magnetophone used for this purpose and the method used are described. The method was improved by A.A. Chirsov from Arkhangel'sk.

Yaroshich, S.Y. Computer Attached to the AT-1 Telescope 19
The article describes an automatic computer attached to the AT-1 telescope. The apparatus is used for determining equatorial coordinates of Sputniks. The tests were conducted at the Dnepropetrovsk satellite-observation station of the local state university, where the apparatus was designed. An annotation is enclosed, signed by S.M. Mikhail'son, a senior scientific staff member of the Main Astronomical Observatory, Leningrad-Pulkovo, in which he suggests an improvement in the method of using the described apparatus.

Dagoslavskaya, Ye. Ya. Special Satellite Plate Holder 20
A plate holder is described for obtaining time marks on the satellite image by means of a moving grating placed in front of the plate. The plate was designed by the author, in collaboration with Engineer N.I. Yelovlev, at the State Astronomical Institute imeni P.K. Ersternberg (University of Moscow), and tested by the author in collaboration with I.A. Khasanov.

DEMIDOVA, N.Ye. ; SOLOV'YEV, V.Ye.; YAROSHEVICH, S.V.

Observations of the illumination during the total solar eclipse
of February 15, 1961. Astron.tsir. no.227:5-7 F '62. (MIRA 16:1)

1. Dnepropetrovskiy gosudarstvennyy universitet.
(Eclipses, Solar--1961)

YAROSHEVICH, S.V.

Investigating high-speed rolling on blooming mills by means of
an electron model. Izv. vys. ucheb. zav.; Chern. met. 7
no.1:95-99 '64. (MIRA 17:2)

1. Dnepropetrovskiy gosudarstvennyy universitet.

DEMIDOVA, N.Ye.; SOLOV'YEV, V.Ye.; YAROSHEVICH, S.V.

Observation of the lunar occultation of Venus on October 7,
1961. Astron. tsir. no.228:32-34 Ap '62. (MIRA 16:6)

1. Dnepropetrovskiy gosudarstvennyy universitet.
(Occultations)

YAROSHEVICH, Svetlana Viktorovna, staryaya prepodavatel'nitsa

Modeling of an optimum control system of a blooming mill drive.
Izv. vys. ucheb. zav.; elektromekh. 8 no.4:474-476 '65.
(MIRA 18:5)

1. Fiziko-tehnicheskii fakul'tet Dnepropetrovskogo gosudarst-
vennogo universiteta.

DAVIDENKOV, N.N.; SMIRNOV, B.I.; YARGOSHEVICH, V.D.

Temperature effect on the creep strength of metals with
body-centered cubic lattices. Fiz. tver. tela 3 no.6:1731-1734
Je '61. (MIRA 14:7)

1. Fiziko-tehnicheskiy institut im. A.F.Ioffe AN SSSR, Leningrad.
(Creep of metals) (Metals, Effect of temperature on)
(Lattice theory)

18.8260

2970A
S/181/61/003/010/031/036
B125/B102

AUTHOR: Yaroshevich, V. D.

TITLE: Temperature dependence of Armco iron yield point

PERIODICAL: Fizika tverdogo tela, v. 3, no. 10, 1961, 3207 - 3210

TEXT: The aging process of cylindrical Armco iron samples (0.03 - 0.04% carbon content) was examined. The samples were vacuum-annealed for two hours at 600°C, and then left in the furnace to cool down. All annealed samples were pre-deformed at 20°C by 4% until a stress σ_{f0} , corresponding to the limit of the plastic range, was attained. Fracture followed in each case. One group of samples was quickly cooled down to -76 and -196°C, and deformed at these temperatures with stress σ_{fT} forming as a result. The other group of samples was aged at 100°C for 15, 40, and 60 minutes. Thereupon, all samples were deformed at 20, -76, and -196°C, and stress σ_{BT} appeared. The plane section of the stress-strain curve, $\sigma(\epsilon)$, corresponding to the yield, appeared after 15 minutes, and grew further in samples annealed for 40 and 60 minutes. The samples were

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S/181/61/003/010/031/036
B125/B102

Temperature dependence of...

deformed by an MM-12 (IM-12) machine. Measurement results are presented in Fig. 2 and in the table. The temperature dependence of the yield point determines the temperature dependence of the resistance to the motion of free dislocations through the metal lattice. By subtracting curve 1 from curve 2, the temperature dependence of consolidation with cold working is obtained. The temperature depends linearly upon the stresses characterizing the strength of the bond between dislocations and impurity atoms. N. N. Davidenko is thanked for proofreading and advice. There are 2 figures, 1 table, and 16 references: 4 Soviet and 12 non-Soviet. The three most recent references to English-language publications read as follows: D. K. Wilson a. B. Russel. Acta Met., 8, 36, 1960; D. E. Stein, I. R. Low. J. Appl. Phys., 31, 362, 1960; W. C. Johnston a. J. J. Gilman. J. Appl. Phys., 30, 129, 1959.

ASSOCIATION: Fiziko-tehnicheskij institut im. A. F. Ioffe AN SSSR
Leningrad (Physicotechnical Institute imeni A. F. Ioffe of
the AS USSR Leningrad)

SUBMITTED: April 15, 1961 (initially),
June 12, 1961 (after revision)

Card 2/5 2

DAVIDENKOV, N.N.[deceased¹]; YAROSHEVICH, V.D.

Effect of the deformation temperature on strain aging of
metals. Fiz. tver. tela 5 no.2:640-643 P '63. (MIRA 16:5)

1. Fiziko-tehnicheskii institut imeni A.F.Ioffe AN SSSR,
Leningrad.
(Deformations (Mechanics)) (Metals--Cold working)

33336

S/181/62/004/001/002/052

B102/B138

18.8200

AUTHORS: Davidenkov, N. N., and Yaroshovich, V. D.

TITLE: Influence of low-temperature deformation on the subsequent aging of Armco iron

PERIODICAL: Fizika tverdogo tela, v. 4, no. 1, 1962, 8 - 13

TEXT: The effects of aging were studied after previous plastic deformation at low temperatures. The specimens, made of Armco iron with 0.03 - 0.04% carbon, were cylinders, 15 cm high and 10 mm in diameter. They were annealed at 650°C for 4 hr and cooled in the furnace. Deformation was carried out on a VM-12 (IM-12) machine at the rate of

$\approx 3 \cdot 10^{-3} \text{ sec}^{-1}$. Measurements were made on three series of specimens, deformed at 20, -76 and -196°C, respectively. Aging temperatures were 20, 100 and 400°C, the latter in vacuo. Specimens predeformed at -196°C showed lower resistance to subsequent deformation at 20°C than those predeformed at 20°C. In each case aging after low-temperature deformation had a different affect from that when deformation took place at 20°C. The effect of low-temperature deformation is attributed to deformation twins

Card 1/2

Influence of low-temperature...

3336
S/181/62/004/001/002/052
B102/B138

and microcracks, which act as stress concentrators when the specimen reaches room temperature. With subsequent deformation they cause premature flow, i. e. lowering of the deformation curves. Since twins and microcracks have various different shapes, different stresses are concentrated on them, which means that the metal will have no yield point. The twins were revealed on microphotographs of polished non-etched sections. Twinning produced by deformation at -196°C has the same effect on subsequent deformation, either before or after aging. Tests were made at 20°C and -196°C with deformations of 4, 8 and 16%. At 20°C 6.7, 17.4 and 26.1 kg/mm^2 were measured and at -196°C : 5.9, 20.9 and 39.9 kg/mm^2 . There are 6 figures, 1 table, and 7 references: 1 Soviet and 6 non-Soviet. The four most recent references to English-language publications read as follows: A. W. Cochardt et al. Acta Met. 3, No. 6, 1955; G. Schoeck, A. Seeger. Acta Met., 7, 469, 1959; D. W. Wilson, B. Russel. Acta Met. 8, 36, 1960; J. T. Michalax, H. W. Paxton. J. Metals, 12, 80, 1960.

ASSOCIATION: Fiziko-tekhicheskiy institut im. A. F. Ioffe AN SSSR
Leningrad (Physico-technical Institute imeni A. F. Ioffe
AS USSR, Leningrad)

SUBMITTED: May 29, 1961
Card 2/2

L 290-64

EWP (q)/EWT (m)/EWP (b)/BDS AFFTC/ASD JD/JG

ACCESSION NR: AP3006379

S/0126/63/016/002/0260/0266

AUTHORS: Davidenkov, N. N. (deceased); Yaroshevich, V. D.

TITLE: Influence of stress type and temperature on cold shortness

SOURCE: Fizika metallov i metallovedeniye, v. 16, no. 2, 1963, 260-266

TOPIC TAGS: cold shortness, stress, temperature

ABSTRACT: Stress patterns which develop in steel lKh25Yu5 and tungsten during bending and torsion were studied and compared. This comparison made it possible to decide to what degree the normal and tangential stresses are responsible for metal failure. The results obtained with a chrome-aluminum steel (which had a tendency toward cold shortness) showed that the maximum tangential stresses at -78 and -196K are almost equal in magnitude. During the transition from -78 to -196K the apparent strength of steel was considerably lowered (24-29%). This was explained by the action of concealed stress concentrators (intergranular boundaries). It was concluded that twinning was responsible for the failure of lKh25Yu5 steel at -196K. The results of the tungsten tests showed that at -20, -78, and -196K the failure was caused by normal stresses, the magnitude of which did not depend on temperature. Orig. art. has: 4 figures and 1 table.

Card 1/2

L 290-64.

ACCESSION NR: AP3006379

ASSOCIATION: Fiziko-tehnicheskiy institut im. A. F. Ioffe AN SSSR (Physical-Technical Institute, Academy of Sciences, SSSR)

SUBMITTED: 03Dec62

DATE ACQ: 27Sep63

ENCL: 00

SUB CODE: ML

NO REF SOV: 014

OTHER: 011

Card 2/2

YAROSHEVICH, V.D.

Effect of the type of stressed state on the critical temperature
of cold brittleness of molybdenum. Fiz. met. i metalloved. 16 no.
5:764-767 N '63. (MIRA 17:2)

1. Fiziko-tekhnicheskiy institut im. A.F.Ioffe.

YAROSHEVICH, V.D.

Reversing device for tensile tests of metals. Zav.lab. 29 no.12:1502
'63. (MIRA 17:1)

YAROSHEVICH, V.D.; SMIRNOV, B.I.

Dependence of plastic flow stresses in metals with a body-centered cubic structure on temperature. Fiz. met. i metalloved. 17 no.2:252-255 F '64. (MIRA 17:2)

1. Fiziko-tehnicheskiy institut AN SSSR imeni A.F.Ioffe.

ACCESSION NR: AP4017358

S/0126/64/017/002/0252/0255

AUTHOR: Yaroshevich, V. D.; Smirnov, B. I.

TITLE: Temperature dependence of the plastic flow stresses in volume-centered cubical metals

SOURCE: Fizika metallov i metallovedeniye, v. 17, no. 2, 1964, 252-255

TOPIC TAGS: iron, molybdenum, tantalum, plastic flow, plastic flow stress, volume centered metal, cubical metal, plastic flow stress temperature dependence

ABSTRACT: In order to fill gaps in the literature, tests were undertaken in which cylindrical specimens, 8 mm in diameter and 12 mm high of technically pure Fe (0.0034% C), Mo (99.9% Mo) and Ta (99.11% Ta, 0.63% Nb) were vacuum-tempered at 900 K for two hours (Fe) or at 1100 K for one hour (Mo and Ta) and compressed in an IM-12A machine at 77 (liquid nitrogen) or 300 K up to 40% of their initial height. For all the metals, the curves relating $\Delta\sigma/\sigma_0$ and the degree of deformation show on otherwise uniform patterns, an upward trend with increasing deformation. Control studies showed that no fatigue, which might have affected the yield stress and interfered with temperature dependence tests, occurs during the 77-300 K transition. Of the current theories proposed to explain the mechanism of the dependence, the authors believe that a stepwise

Card: 1/2

ACCESSION NR: AP4017358

dislocation inhibition is the most likely. The calculating and curve plotting techniques are given in detail. Orig. art. has: 2 graphs.

ASSOCIATION: Fiziko-tehnicheskii institut AN SSSR im. A. F. Ioffe (Physico-technical Institute)

SUBMITTED:

DATE ACQ: 18Mar64

ENCL: 00

SUB CODE: ML

NO REF SOV: 005

OTHER: 007

2/2

Card

ACCESSION NR: AP4020052

S/0032/64/030/003/0361/0362

AUTHOR: Yaroshevich, V. D.

TITLE: Apparatus for brittle fracture of molybdenum under different conditions of stress

SOURCE: Zavodskaya laboratoriya, v. 30, no. 3, 1964, 361-362

TOPIC TAGS: molybdenum, brittle fracture, shearing stress, normal stress

ABSTRACT: In order to study the brittle fracture of molybdenum under different shear and normal stress components, the apparatus shown in Fig. 1 on the Enclosure was constructed. It provided stress conditions over a range $1 \leq \frac{\sigma}{\tau} \leq 2$. For this configuration the stress ratio is given by $\alpha = \frac{\sigma_{\max}}{\tau_{\max}} = 1 + \frac{1}{\sqrt{1 + (a/k)^2}}$ and the angle between the maximum normal stress plane and the plane perpendicular to the specimen axis is given by $\sin 2\phi = \frac{1}{\sqrt{1 + (k/a)^2}}$. Molybdenum samples (0.001% Ni, 0.001% SiO, 99.9% Mo), heated in a vacuum at 1570C for 2 hours and cooled slowly,

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ACCESSION NR: AP4020052

were fractured at the temperature of boiling nitrogen with α between 2 and 1. It was found that ϕ increased to 45° as α was changed from 1.68 to 1.08. Between $\alpha = 2$ and 1.53 the shear stresses determined the failure. After the normal stresses had reached $\sigma_t = 52 \text{ kg/mm}^2$ the samples could take more load until the shear stress reached $\tau_c = 34 \text{ kg/mm}^2$. For $\alpha = 1.53 - 1.0$, microcracks are formed when the shear stress reaches $\tau_c = 34 \text{ kg/mm}^2$ but the specimen would not fail until the normal stress reached $\sigma_t = 52 \text{ kg/mm}^2$. In this range of α failure occurs at constant normal stress as if the microcracks had been present before loading. Orig. art. has: 3 figures, 2 formulas, and 1 table.

ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk SSSR (Physicotechnical Institute, Academy of Sciences SSSR)

SUBMITTED: 00

DATE ACQ: 27Mar64

ENCL: 01

SUB CODE: MM

NO REF SOV: 001

OTHER: 000

Card 2/3

ACCESSION NR: AP4020052

ENCLOSURE: 01

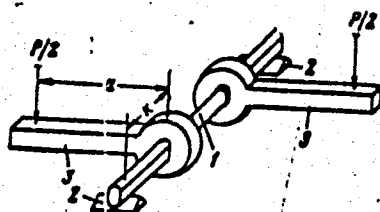


Fig. 1 Schematic diagram of apparatus for producing stressed conditions.

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S/0032/64/030/009/1119/1121

ACCESSION NR: AP4044900

AUTHOR: Yaroshevich, V. D.

TITLE: On the evaluation of the tendency of metals toward cold brittleness

SOURCE: Zavodskaya laboratoriya, v. 30, no. 9, 1964, 1119-1121

TOPIC TAGS: metal, metal brittleness, metal fracture, tensile strength, brittleness/ IM 4 testing machine

ABSTRACT: The author proposed and described a newer, simpler, and more definitive method for determining the tendency of metals toward brittle fracture. The method is based upon the varying influences of a scratch or incision on the strength characteristics of a brittle or plastic substance. When the original condition of a test material is known and when the results of tensile tests on a smooth and a scored sample are compared, the material's resistance to fracture can be determined. The author defined the critical temperature of brittleness as that temperature at which transition from fracture along the incision to fracture along the smooth portion takes place. The test specimens were described and shown in two views: the smooth part of the sample shaft had a diameter of 3.5 mm; the incision groove was cut with a radius of 0.2 mm and a depth of 0.5 mm. Testing machine IM-4 was used in specimen deformation, and testing took place through a temperature interval of

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ACCESSION NR: AP4044900

20 to -196C. The difference between the two types of fracture discussed was shown in a photograph of two fractured samples, one fractured at 20C and the other at -196C. The author urged careful control of experiment execution and measurements to minimize extraneous influences upon critical temperature determination. Orig. art. has: 2 figures.

ASSOCIATION: Fiziko-tehnicheskij institut im. Ioffe, Akademii nauk SSSR (Physico-technical Institute, Academy of Sciences SSSR)

SUBMITTED: 00

ENCL: 00

SUB CODE: MM

NO REF SOV: 003

OTHER: 004

Card 2/2

I 40719-65 EWT(m)/EWA(d)/EPF(n)-2/EWP(t)/T/EWP(k)/EWP(h)/EWA(c) Pf-4/
ACCESSION NR: AP5008794 Pu-4 [JP(c) JD/ 6/0126/65/019/003/0456/0460

HW/JG

AUTHOR: Yaroshevich, V. D.

40
393

TITLE: Effect of temperature on the modulus of strain hardening of bcc metals

SOURCE: Fizika metallov i metallovedeniye, v. 19, no. 3, 1965, 456-460

TOPIC TAGS: ²⁷molybdenum, ²¹tantalum, ¹⁷armco iron, ¹⁸strain hardening, strain hardening modulus, molybdenum strain hardening, tantalum strain hardening, armco iron strain hardening, modulus temperature dependence

ABSTRACT: A study has been made of the temperature dependence of the modulus of strain hardening of three bcc metals: molybdenum, tantalum, and armco iron. All specimens were vacuum annealed for 2 hr: molybdenum and tantalum at 1570C and armco iron at 800C. The armco-iron specimens were either furnace cooled or oil quenched. Compression tests of cylindrical specimens with a height-to-diameter ratio of 1.5 were conducted at room temperature, -78, and -196C. It was found that at the beginning of straining, tantalum and iron harden more intensively at room temperature than at -196C, while molybdenum hardens equally at both temperatures. At subzero temperatures, as the strain increases the hardening proceeds more rapidly than at room temperature. The strength of annealed and slow-cooled specimens of armco iron at 30% strain reached 26 kg/mm² at 20C and 33 kg/mm² at -196C,

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ACCESSION NR: AP5008794

while the strength of annealed and quenched specimens at the same strain was 45 kg/mm² at 20C and only 30 kg/mm² at -196C. Thus the temperature dependence of the strain-hardening modulus can be determined only if both the strain and the type of heat treatment are taken into account. Orig. art. has: 3 figures. [ND]

ASSOCIATION: Fiziko-tehnicheskiy institut im. A. F. Ioffe AN SSSR (Physico-technical Institute, AN SSSR)

SUBMITTED: 20Feb64

ENCL: 00

SUB CODE: MM

NO REF SOV: 001

OTHER: 006

ATD PRESS: 3231

Card 2/2

FB

YAROSHEVICH, V.D.

Effect of temperature on the strength ratio of metals with a body-centered cubic lattice. Fiz. met. i metalloved. 19 no.3:456-460
Mr 165. (MIRA 18:4)

1. Fiziko-tehnicheskij institut imeni Ioffe AN SSSR.

L 11219-66 EWT(d)/EWT(m)/EWP(v)/EWP(k)/EWP(h)/EWP(1) DIAAP
ACC NRT: AP6005535 SOURCE CODE: UR/0089/66/020/001/0063/0065

AUTHOR: Klimentov, V. B.; Nechidoruk, V. A.; Kopchinskiy, G. A.; Yaroshevich, V. F.; Strutsinskiy, V. A.; Popov, V. D.; Nilonov, A. V.

46
B

ORG: none

TITLE: Test stand at the Institute of Physics AN UkrSSR

SOURCE: ¹⁹Atomnaya energiya, v. 20, no. 1, 1966, 63-65

TOPIC TAGS: nuclear engineering, nuclear reactor, reactor fuel element, test stand

ABSTRACT: ¹⁹A test stand for critical assemblies was put into operation at the Institute of Physics AN UkrSSR at the end of 1964. The installation uses assemblies of fuel elements of the VVR-M research reactor; the moderator is ordinary water; the side reflector is made from the beryllium reflectors of the VVR-M reactor. The stand is located in a separate building. The radioactive zone is separated from the control panel by one meter of concrete shielding. The installation is equipped with sensitive monitoring and measuring systems as well as with systems for automatic and remote control. All precautions have been taken to assure reliable nuclear

UDC: 621.039.572

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L 11219-66
ACC NR: AP6005535

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safety and automatic control of the critical assemblies. A dc amplifier is connected to a galvanometer for monitoring currents in the ionization chamber down to 10^{-12} amp. Two recording potentiometers and a pulse rate counter are used for monitoring the power level. The instruments give reliable readings below the subcritical power level. Automatic control of the process is possible during operation at a power of more than 0.03 w which corresponds to an average thermal neutron flux of about $0.4 \cdot 10^6$ neutrons/cm²·sec. The automatic regulator consists of two KNK-56 ionization chambers connected in parallel, a potentiometric power controller with a high impedance input and a steel absorber, an electronic amplifier and an amplidyne. This automatic regulator is extremely convenient for operation with critical assemblies. It may be used for rapid compensation of a chain reaction at "zero" power levels and for calibration of control rods. The unit increases work safety and accuracy of holding a constant power level when detectors are activated. In addition to the steel absorber in the automatic regulator, chain reaction may be controlled by two or three boron remote control rods. An emergency signal automatically brings these rods together with three emergency safety rods into the radioactive zone of the assembly. All control and safety rods are moved by servo drives which are connected to selsyns and position indicators. Operational experience at

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L 14219-66

ACC NR: AP6005535

the Institute of Physics has shown that the test stand is a versatile tool which
may be conveniently used for experimental research in physics and nuclear engineer-
ing. Orig. art. has: 4 figures.

0
[14]

SUB CODE: 18/

SUBM DATE: 29Jul65/

ATD PRESS: 4195

TS
Card 3/3

YAROSHEVICH, V.M.

Kameski series of the Lower Cambrian in the Eastern Sayan Mountains.
Geol. i geofiz. no.10:175-178 '64. (MIRA 18:4)

L. Krasnoyarskaya kompleksnaya laboratoriya Instituta geologii i
geofiziki Sibirskogo otdeleniya AN SSSR.

YAROSHEVICH V. G.
USSR / Forest Science. Forest Cultures.

K-4

Abs Jour : Ref. Zhur - Biologiya, No 17, 1958, No. 77512

Author : Tsotsur, M. N.; Simutina, A. S.; Yaroshovich, V. G.

Inst : Dnepropetrovsk University

Title : Influence of Phosphor-Bacterin on the Growth of Seedlings
of Tree Species

Orig Pub : Nauchn. zap. Dnepropotr. un-t, 1955, 54, 49-59

Abstract : Tests conducted by Dnepropetrovsk University on chernozoms
in 1953-1954 showed that with the introduction of phosphor-
bacterin, the growth of seedlings of tree species is
increased (maple, cherry, pear); foliage is increased and
shedding is decreased. In addition, the content of P_2O_5
and N in the leaves was increased.

Card 1/1

23

YAROSHEVICH, V. M.

20-6-34/42

AUTHOR: Yaroshevich, V. M.

TITLE: New Representatives of Cambrian Archaeocyathidae From the Eastern Slope of Kuznetsk Ala-Tau (Novyye predstaviteli arkheotsiat kembriya vostochnogo sklona Kuznetskogo Ala-Tau).

PERIODICAL: Doklady AN SSSR, 1957, Vol. 116, Nr 6, pp. 1015-1017 (USSR).

ABSTRACT: By the aid of the material collected during the last 5 years the author describes new forms, especially of the Obrachev-horizon. Order: Loculo-cyathida Zhuravl. Family: Vologdinocyathidae fam. nov. Typical species: Vologdinocyathus gen. nov., - Typical kind: Vol. erbiensis sp. nov. - Place of finding: Batenev-chain, village Vorkhnyaya Yerba, Obrachev-horizon (figures la, b, v). Family Erbocyathidae, species: Erbocyathus Zhurvl., type of the species: Erb. krassnopeevae sp. nov. For the difference between the 2 known colonial representatives, the kind is solitary. 3 specimen. Place of finding, see above. Erb. chakassiensis sp. nov. (figures lzh, z, i, k). Is distinguished from E. obruchevi (Vol.) and Erb. heterovallum (Vol.) by the kind of forming colonies, by existence of solitary goblets and by the construction of pore-channels of the external wall. More than 10 specimen. Place of finding, see above. There are 1(10) figures, and 8 Slavic references, all of which are Slavic.

Card 1/2

New Representatives of Cambrian Archaeocyatidae From the Eastern
Slope of Kuznets Ala-Tau.

20-6-34/42

ASSOCIATION: Krasnoyarsk Geological Administration

(Krasnoyarskoye geologicheskoye upravleniye)

PRESENTED: June 8, 1957, by S. I. Mironov, Academician

SUBMITTED: June 6, 1957.

AVAILABLE: Library of Congress.

Card 2/2

AUTHOR: Yaroshevich, V.M., Engineer

110-58-6-22/22

TITLE: A Conference on New Electrical Insulating Materials and Technological Processes (Konferentsiya po osvoyeniyu novykh elektroizolyatsionnykh materialov i tekhnologicheskikh protsessov)

PERIODICAL: Vestnik Elektropromyshlennosti, 1958, Nr 6, pp 77 - 80 (USSR).

ABSTRACT: A conference on new insulating materials and technological processes was held in Leningrad in December, 1957. Called by the Nauchno-tekhnicheskoye obschestvo energeticheskoy promyshlennosti, it was attended by representatives of almost all the electrical manufacturing works of the USSR and of research institutes and other organisations, altogether 270 persons.

The first report was by Doctor of Chemical Sciences M.S. Aslanova and Engineer B.S. L'vov of the VNII Steklovolokna (Scientific Research Institute for Glass Fibre), who discussed the manufacture and general position of glass-fibre insulation. The conference considered that production of this material is inadequate.

The introduction of silicone insulation was discussed in detail and Candidates of Technical Sciences V.I. Kalitvyanskiy and

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110-58-6-22/22

A Conference on New Electrical Insulating Materials and Technological Processes

K.I. Zabirina reported on "Silicone Materials for the Insulation of Electrical Machines". Engineer Ye.P. Bogdanova spoke on "Experience in Mastering the Use of Silicone Insulation in the Elektrosila Works" and Engineer B.N. Topov made a similar report for the Dinamo Works. The present state of silicone insulation is then reviewed.

Candidate of Technical Sciences A.V. Khval'kovskiy reported on "High-voltage Insulation of Electrical Machines with Glass/Mica Insulation Using Thermosetting Epoxy-silicone Binders". The Elektrosila Works has developed another type of mica-tape high-voltage insulation which was the subject of a report by Engineers V.N. Korolev and F.A. Kolenko. Accounts of the use of epoxy resins at the Elektrosila and Uralelektroapparat Works were read. Four reports on the impregnation of electrical machines were made by Z.I. Kholopova (KhEMZ), Engineer R.S. Kholodovskiy (GIEKI), Engineer I.G. Limov and Candidate of Technical Sciences V.V. Skipetrov (VEI) and by Engineer Z.L. Zusmanovskaya. S.V. Tsukernik (KhEMZ) reported on "The Insulation of Low-voltage Class F Machines" for which glyptal-oil-melamine varnish is most heat-resistant. Candidate of

Card2/4

110-58-6-22/22

A Conference on New Electrical Insulating Materials and Technological Processes

Technical Sciences L.T. Ponomareva (Works imeni Kalinin) reported on "Ekspanon Insulating Material", which is a transparent polymer obtained by heating synthetic rubber under appropriate conditions. A.A. Davydova (Armelektro Works) spoke on "The Use of Polyethylene Terephthalate Film for Slot Insulation of Electrical Machines". Three reports on micanite were given by Professor N.V. Aleksandrov and Engineer L.A. Epshteyn, by L.M. Bernshteyn and Engineer A.S. Ovcharova. The economics of electrical insulation was reviewed by F.Ya. Kazovskiy of the Elektrosila Works. A technical section, on the soldering of machine windings and on mechanization of winding and insulation work, met concurrently with the conference plenum. Experience with hard-soldering was discussed. Mechanization of winding and insulation work was reviewed by V.V. Solomchinskiy of the VNIITekhnologii elektricheskikh mashin, Khar'kov (All-Union Scientific Research Institute of the Technology of Electrical Machines, Khar'kov).

Card 3/4