"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

SOZINOVICH, D.P.; AFONSKIY, S.S.

Preparation of chromic acid from calcium bichromate. Ukr. khim. zhur. 31 no. 12:1342 '65 (MIRA 19:1)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR. Submitted May 21, 1964.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

L 62961-65 EWT(1)/EWG(v)/FCC GW

ACCESSION NR: AT5019958 UR/2531/65/000/177/0095/0100

21
19
B+1

AUTHOR: Sozin, V. I.

TITLE: The ratio of the polar conductivities of air at the earth's surface

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy, no. 177, 1965. Atmosfernoye electrichestvo (Atmospheric electricity), 95-100

TOPIC TAGS: atmospheric electricity, air conductivity, polar conductivity, atmospheric surface layer 12,55

ABSTRACT: The author has investigated the influence of individual factors on the value of the ratio of polar conductivities of air at the earth's surface. The data were obtained in 1962-1963 near Kirov. The grid method was used for measurement of the polar conductivities; these conductivities were determined from the current flowing through a horizontal measurement plate in an artificial electrical field created by the grid. The polar conductivities $\lambda^+$ and $\lambda^-$ were recorded alternately by an automatic recorder. The ratio of the positive and negative polarities was determined each hour. A total of 129 hourly series of measurements were made in 1962 and 316 series in 1963. The electrical field of the atmosphere at the level of the earth's surface was measured simultaneously, as were wind velocity and direction. The mean value of the positive and negative conductivities at

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ACCESSION NR: AT5019958

2

the surface was found to be 1.11 in the autumn of 1962 and 1.03 in the spring of 1963, but individual values ranged from 1.68 to 0.75. Fig. 1 of the Enclosure shows the diurnal value of this ratio; the numbers in the figure indicate the number of hourly series used in averaging. There is a direct dependence between the ratio of positive and negative polar conductivities and the strength of the electrical field of the atmosphere. An example of this relationship is shown in Fig. 2 of the Enclosure; on this particular day, the electrical field changed its direction twice in a short period of time. A study was made to determine whether the ratio was dependent on air contamination. It was found that the ratio was constant for all wind directions and therefore was not affected by contamination from the chimney wastes from the nearby city, thereby refuting the contention made by Gunn (J. colloid. sci., vol. 11, No. 6, 1956) that the ratio is dependent on air contamination. Fig. 3 of the Enclosure shows the inverse dependence between the ratio and wind velocity. In calm weather the ratio $\lambda_+/\lambda_-$ is quite high (1.21); with increasing wind velocity the value of the ratio decreases rapidly, but this decrease slows down appreciably with approach of the ratio to a value equal to unity. Orig. art. has: 3 figures and 4 tables.

ASSOCIATION: Glavnaya geofizicheskaya observatoriya, Leningrad (Main Geophysical Observatory)

55

SUBMITTED: 00 ENCL: 03 SUB CODE: ES

NO REF SOV: 004 OTHER: 001

Card 2/5

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

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ACCESSION NR: AT5019958

ENCLOSURE: 01

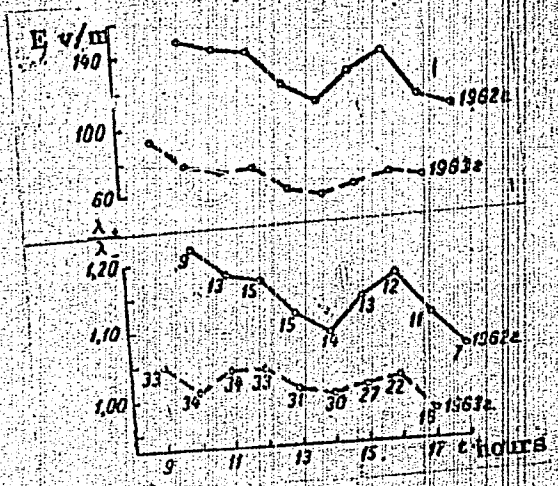


Figure 1. Diurnal variation of the ratio of negative to positive polar conductivities and strength of the atmospheric electrical field.

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L 62961-65

ACCESSION NR: AT5019958

ENCLOSURE: 02

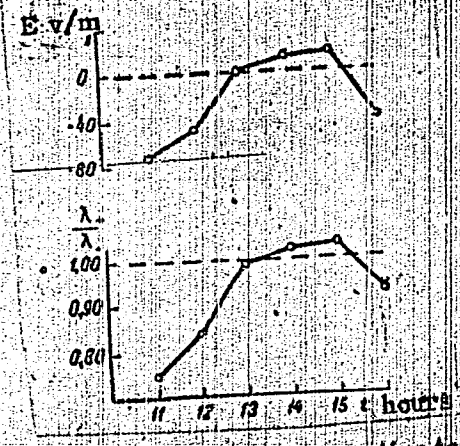


Figure 2. Variation of the values of the ratio of the negative to positive polar conductivities and strength of the atmospheric electrical field on 29 October 1962.

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L 62961-65

ACCESSION NR: AT5019958 ENCLOSURE: 03

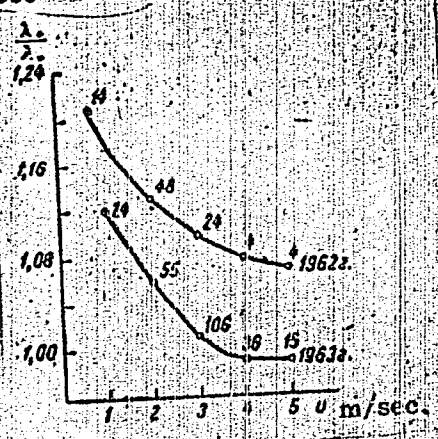


Figure 3. Dependence of the values of the ratio of negative and positive polar conductivities on wind velocity.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

SOZIN, Yu.A.

Experimental investigation of convective heat transfer in a pulsating noncompressible-fluid flow. Izv.vys.ucheb.zav.; av.tekh. 6 no.3: 87-91 '63. (MIRA 16:10)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

L 13343-63 EPA(b)/EPF(c)/EWT(1)/EPF(n)-2/BDS AFFTC/ASD/SSD Pd-4/Pr-4/Pu-4

ACCESSION NR: AP3004728 S/0147/63/000/002/0102/0110

69

AUTHOR: Sozin, Yu. A.

TITLE: Heat transfer during pulsed flow of an incompressible fluid

SOURCE: IVUZ. Aviats. tekhnika, no. 2, 1963, 102-110

TOPIC TAGS: pulsed heat transfer, flow pulsation, heat exchanger, incompressible fluid, heat transfer coefficient, heat transfer

ABSTRACT: Since the data on pulsed heat transfer available in the literature are incomplete or contradictory, an analysis has been made to derive relationships which can be used in the design of heat exchangers with pulsed flow of incompressible fluid. The effect of the nonlinear relationship between the heat transfer coefficient and sinusoidal flow pulsations was expressed by the formula:

$$\delta\alpha = \frac{\Delta\alpha}{\alpha_1} 100\% = -4(U_0') \%$$

where $\delta\alpha$ is the relative change in the heat transfer coefficient; $\Delta\alpha$, the absolute

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L 13343-63

ACCESSION NR: AP3004728

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change in the heat transfer coefficient; $\alpha_1$, the heat transfer coefficient under steady flow conditions; and $U_0'$, the relative amplitude of flow velocity pulsations. The formula shows that, compared with steady flow, flow pulsations caused a decrease in the average heat transfer coefficient. Also, the phase shift between the pulsations of the heat transfer coefficient and those of the temperature gradient reduces the average heat transfer coefficient. Formulas for the temperature gradient, the heat transfer coefficient, and the phase shift were derived on the assumption that the heat fluxes in pulsed and steady flow are identical. Pulsed heat transfer through a thick-walled heat-transfer surface is analyzed for the case when the heat capacity of the wall is much smaller than that of the fluid. Orig. art. has: 2 figures and 27 formulas.

ASSOCIATION: none

SUBMITTED: 14Sep62 DATE ACQ: 06Sep63 ENCL: 00

SUB CODE: AI, PR NO REF SOV: 002 OTHER: 001

Card 2/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

ACCESSION NR: AP4009653 S/0147/63/000/004/0132/0138

AUTHOR: Sozin, Yu. A.

TITLE: Heat transfer through a wall with pulsating heat emission coefficients at the wall surface

SOURCE: Izvestiya vy*sshikh uchebny/kh zavedeniy. Aviatsionnaya tekhnika, no. 4, 1963, 132-138

TOPIC TAGS: heat transfer, heat exchanger, heat emission, heat

ABSTRACT: The phase effect in a pulsating heat transfer is analyzed theoretically for sinusoidal pulsations of the heat release coefficients $\alpha$ and $\beta$, and formulas are derived for calculating this effect with or without the heat capacity of the liquids being taken into account. The phase effect always results, in the former instance, in a decrease of heat emission and heat transfer in general. Hence the specific heat flux decreases, as compared to stationary conditions, when $\alpha$ and $\beta$ pulsate and such pulsations can result in significant reductions in the efficiency of a heat exchanger (theoretically, up to 50%). An evaluation of the phase effect for temperature gradients $\varrho_1$ and $\varrho_2$ is especially significant when cooling walls heated by hot gases, to avoid the possibility of burns through a wall as the wall tem-

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

ACCESSION NR: AP4009653

perature on the gas side increases when $Q_1$ drops and gas temperature is constant. Orig. art. has: 14 formulas.

ASSOCIATION: None

SUBMITTED: 19Apr63 ENCL: 00

SUB CODE: TD NO REF SOV: 001 OTHER: 001

Card 2/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

SOZIN, YU. I.

SOZIN, YU. I. and YANSON, YU YA.

"Determination of Thickness of Dielectric Coating and of Magnetostriction", Uch. Zap. Kazansk, Univ., 113, No 9, 1953, pp 217-225.

The thickness of the dielectric coating by the capacitive method was measured by connecting the coated part as condenser into the oscillatory circuit of a HF oscillator and measuring the variation of beat frequency by a graduated measuring condenser. From the found capacity the thickness of coating x was found from the formula: $C = \varepsilon S / 4 \pi x$. (RZhFiz, No 1, 1955) (SO: Sum. No. 443, 5 Apr. 55

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

AUTHOR: Sozin, Yu.I. SOV/70-3-6-17/25

TITLE: A Method of Simultaneously Obtaining Electronograms in Reflection from a Substance Under Investigation and the Standard (Metod odnovremennogo polucheniya elektronogramm na otrazheniye issleduyemogo veshchestva i etalona)

PERIODICAL: Kristallografiya, 1958, Vol 3, Nr 6, p 748 +1plate (USSR)

ABSTRACT: A small wedge-shaped plate, of very small angle, has the unknown substance and a standard substance deposited on opposite faces. It is completely bathed in the electron beam so that the central spot is recorded as usual and the two electronograms from the two specimens are separately recorded on the two halves of the film. The method was applied to the Soviet EM-4 microscope but is generally applicable. The accuracy of spacing measurement can be improved thus by a factor of from 2 to 5.
There are 2 figures, and 3 Soviet references.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

SOV/70-3-6-17/25

A Method of Simultaneously Obtaining Electronograms in Reflection from a Substance Under Investigation and the Standard

ASSOCIATION: Kazanskiy filial AN SSSR, Khimicheskiky institut (Kazan' Branch of the Ac.Sc.USSR, Chemical Institute)

SUBMITTED: June 15, 1958

Card 2/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

Sozin, Yu. I.

32-2-54/60

AUTHOR: Sozin, Yu. I.

TITLE: X-Ray Trap in the Debye Chamber (Lovushka v Debayevskoy kamere)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol.24, Nr 2, pp.248-248 (USSR)

ABSTRACT: In order to prevent the occurrence of a superfluous background on X-ray diagrams, which is caused by the dispersion of the X-ray, a so-called trap for the X-ray is proposed. The disadvantage of the formerly proposed lead groove consisted of the fact, that it might damage the investigation sample, whereas in the case of the X-ray trap in question only the conically shaped part projects into the interior of the chamber. The X-ray, which penetrates through the sample first passes through the trap and strikes the screen only afterwards. The diameter of the opening of the trap is computed taking into account the diameter of the diaphragm, of the screen etc. a certain reserve, however, must be taken into consideration in connection with the minimum aperture and

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32-2-54/60

X-Ray Trap in the Debye Chamber

with the maximum length, respectively. The X-ray trap is set into the chamber simultaneously with the screen and the lead glass. The disadvantage of the chamber consists of the fact that the exposure must be increased (from 15 - 30 hours). There are 1 figure and 1 reference, which is Slavic.

ASSOCIATION: Kazan' Branch of the AS USSR (Kazanskiy filial Akademii nauk SSSR)

AVAILABLE: Library of Congress

1. X-ray photography-Equipment 2. X-rays-Scattering

Card 2/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

SOV/126-8-2-13/26

AUTHOR: Sozin, Yu.I.

TITLE: Contribution on the Investigation of Rolling Texture by the Electron-diffraction Method

PERIODICAL: Fizika metallov i metallovedeniye, 1959, Vol 8, Nr 2, pp 240 - 248 (USSR)

ABSTRACT: The author has attempted to apply the electron-diffraction method to determine the comparatively complicated texture produced by rolling. For this, the method has some advantages over X-ray diffraction, since it enables the rolled texture of a cubic-system metal to be obtained simply from one diffraction picture obtained by reflection from the specimen surface. The author discusses the general principles of electron diffraction and the pattern obtained from a rolled texture (Figure 2). He then goes on to discuss the concrete example of rolled aluminium on the basis of experimental results obtained with a type EM-4 diffraction apparatus with an accelerating potential of 40 kV and one focusing electromagnetic lens. Calibration patterns were obtained also by reflection from deposited magnesia at the same time as from the specimen which

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

SOV/126-8-2-13/26

Contribution on the Investigation of Rolling Texture by the Electron-diffraction Method

increased accuracy considerably (Yu.I. Sozin - Ref 12). The cold-rolled (83% deformed) aluminium specimen, after being subjected to anodic solution in phosphoric-chromic electrolyte, gave a clear texture pattern (Figure 3). The author outlines the treatment of the diffraction pattern, tabulating the results. He discusses reflections emanating from planes not belonging to any group, noting that such discussions should be treated with caution. The thickness of the specimens used (0.25 mm and less) is sufficiently low to ensure that the observed texture is that of the specimen. There are 3 figures, 1 table and 12 references, of which 11 are Soviet and 1 Japanese

ASSOCIATION: Kazanskiy filial AN SSSR (Kazan' Branch of the Ac.Sc., USSR)

SUBMITTED: May 9, 1958

Card 2/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

S/126/60/009/06/013/025
E073/E335

AUTHOR: Sozin, Yu.I.

TITLE: Determination of Polar Patterns of Textured Metal by Electron-diffraction Methods

PERIODICAL: Fizika metallov i metallovedeniye, 1960, Vol 9, Nr 6, pp 892 - 896 (USSR)

ABSTRACT: In earlier work (Ref 2) the author of this paper determined the characteristics of a textured rolled material without plotting polar patterns, using an electron-diffraction picture taken in the direction transverse to rolling, using thereby all the rings of the electron-diffraction pattern. Furthermore, for verifying and improving accuracy of deciphering an electron-diffraction pattern can be used which was obtained in the direction of rolling. This has been done and the results were in good agreement with those obtained from the electron-diffraction pattern taken in the direction transverse to rolling. In this paper a method is described which has been developed for obtaining polar patterns of rolled metal from reflected electron-diffraction patterns which considerably simplify and accelerates the process of obtaining polar patterns, as

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

S/126/60/009/06/013/025
E073/E335

Determination of Polar Patterns of Textured Metal by Electron-diffraction Methods

compared to those obtained by X-ray methods. The polar patterns {111}, {001} and {011} were made of aluminium rolled with a reduction of 83% and copper, rolled with a reduction of 90%, of which the polar pattern {001} of copper is reproduced in this paper. The obtained polar patterns are in good agreement with those obtained by means of X-ray diffraction.
There are 5 figures and 9 references, 8 of which are Soviet and 1 is English.

ASSOCIATION: Khimicheskiy institut Kazanskogo filiala AN SSSR (Chemical Institute, Kazan Branch of the Ac.Sc., USSR)

SUBMITTED: November 9, 1959

B

Card 2/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

SOZIN, Yu. I.

Cand Phys-Math Sci - (diss) "Study of favorable orientations in metals using the electronography method." Kazan', 1961. 16 pp; (Ministry of Higher and Secondary Specialist Education RSFSR, Kazan' Order of Labor Red Banner State Univ imeni V. I. Ul'yanov-Lenin); 120 copies; price not given; (KL, 7-61sup, 22C)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

DMITRIYEV, V.A.; AVDEYEVA, O.I.; SOZIN, Yu.I.

Problem of the formation of a disperse precipitate on an aluminum anode. Izv.Kazan.fil. AN SSSR. Ser.khim.nauk no.6:176-182 '61. (MIRA 16:5)

(Electrodes, Aluminum)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

SOZIN, Yu.I.

Some improvement devices for an X-ray powder camera and their design. Izv.Kazan.fil. AN SSSR. Ser.khim.nauk no.6:192-197 '61. (MIRA 16:5)

(X rays--Equipment and supplies)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

GORBACHUK, G.A.; SOZIN, Yu.I.

Electron diffraction study of oxides formed in the anodic solution of copper during electrolytic polishing. Izv.Kazan.fil. AN SSSR. Ser.khim.nauk no.6:248-253 '61. (MIRA 16:5)
(Electrodes, Copper) (Electrolytic polishing)
(Electron diffraction examination)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

VOZDVIZHENSKIY, G. S.; SOZIN, Yu. I.

Mechanism of the anodic dissolution of iron in the electropolishing electrolyte at low polarizing current densities. Zhur. fiz. khim. 36 no.12:2794-2795 D '62. (MIRA 16:1)

1. Kazanskiy khimicheskiy institut AN SSSR.

(Electrodes, Iron) (Polarization(Electricity))

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

SOZIN, Yu.I.; GORBACHUK, G.A.

Mechanism of oxide film formation on the surface of electrolytically polished copper. Zhur. fiz. khim. 37 no.4:888-890 Ap '63. (MIRA 17:7)

1. Kazanskiy filial khimicheskogo instituta AN SSSR.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

BERG, L.G.; SIDOROVA, Ye.Ye.; VLASOV, V.V.; SOZIN, Yu.I.; AVVAKUMOVA, K.N.

Cadmium nitrate tetrahydrate and the products of its dehydration. Zhur. neorg. khim. 9 no.3:538-546 Mr '64. (MIRA 17:3)

1. Khimicheskiy institut AN SSSR i Kazanskiy filial AN SSSR.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

DEZIDER'YEV, G.P.; GORBACHUK, G.A.; SOZIN, Yu.I. (Kazan')

Local passivation in electrolytic polishing. Zhur. fiz. khim. 39 no. 1:55-57 Ja '65 (MIRA 19:1)

1. Khimicheskiy institut imeni A. Ye. Arbuzova AN SSSR. Submitted December 10, 1963.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

SOZINA, A. N.

USSR/Physics - Electrical Conductivity Jan 50
Polarization

"Influence of a Transverse Electrical Field Upon Electrical Conductivity and the Mechanism of Polarization in Rochelle Salt," M. S. Kosman, A. N. Sozina, Leningrad State Pedagogical Inst, 9 pp

155T61

"Zhur Eksper i Teoret Fiz" Vol XX, No 1 pp 39-47

Studies variation in resistance of electrodes, which are the plates of a condenser, when a field is imposed upon this condenser. Shows when graphite electrodes are applied, variations in resistance are fully measurable. Results indicate magnitude of

155T61

USSR/Physics - Electrical Conductivity Jan 50
(Contd)

effect is directly related to quantity of electricity stored on the plates, which agrees with theory. Studies using layers of Rochelle salt show variations in resistance of cathode and anode in many cases differ sharply. This indicates that at least part of the charge bound on the plates is provided not by classical mechanism of polarization, but by migration of charges in the Rochelle salt crystal. Submitted 30 Jul 49.

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APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

See N.N.

SOZINA, A.N.

Transverse electric field technique for investigating polarization in seignette salt. Uch. zap. Ped. inst. Gerts., 125:65-71 '56. (MLRA 9:12)

(Polarization (Electricity))
(Potassium sodium tartrate)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

SOZINA, A.N. (Sov. (N.A.)

Pulse technique for investigating the electric properties of seignette salt. Uch.zap.Ped.inst.Gerts.125:73-84 '56. (MLRA 9:12)

(Polarization (Electricity))
(Potassium sodium tartrate)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

SOZINA, M.K.

Clin Pharmacology

Influences of some drugs on transmission of central nerve impulses to the heart. V. V. Zolotov and M. K. Sozina (I. P. Pavlov Inst. Med. Inst., Leningrad). *Farmakol. i Toksikol.* 17, No. 1, 3-8(1954).—Procaine (I) and chloral hydrate (II) are active, medinal (III) less active, depressants of central nerve impulse transmission to the rabbit heart. Arrhythmia follows I at 40-50 or II at 100 mg./kg. Main effects follow efferent paths, but peripheral effects also occur (with I by choline neg. action; with III by affecting synapses of cardiac ganglia; with II by intensifying cardiac vagus effects, an effect related to the cholinesterase-inhibiting activity of II). Julian F. Smith

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

ACCESSION NR: AP4041142 S/0020/64/156/004/0778/0780

AUTHOR: Kosman, M. S.; Sozina, A. N.; Alikhanov, A. I.

TITLE: Relaxation oscillations in dielectrics

SOURCE: AN SSSR. Doklady*, v. 156, no. 4, 1964, 778-780

TOPIC TAGS: dielectric relaxation oscillation, resistance variation, volume charge, barium titanate

ABSTRACT: The authors have found in a previous work (Fiz. tverd. tela 3, 2504, 1961) that current oscillations are produced in silicon upon application of a sufficiently high voltage. They find now a similar phenomenon in dielectrics such as polycrystalline barium titanate, and in many others. The oscillations are observed with an oscilloscope on a 1 mm thick sample, with one flat and one pointed electrode; the applied voltage is about 700 v. The current pulses are not strictly periodical. Higher "frequency" corresponds to a lower amplitude. The circuit resistance greatly influences the pattern. With $10^6$ ohms, the current reaches the maximum in about $10^{-6}$ sec, the decrease is somewhat longer. It appears that while in the semiconductors the resistance changes during the oscillations only in the

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

ACCESSION NR: AP4041142

layer near the surface, in the dielectric the resistance of the whole specimen is periodically changing. Orig. art. has: 3 figures.

ASSOCIATION: Leningradskiy gosudarstveiiy*y pedagogicheskiy institut im. A. I. Gertsena (Leningrad State Pedagogical Institute)

SUBMITTED: 11Jan64 ENCL: 00

SUB CODE: EM NO REF SOV: 003 OTHER: 002

Card 2/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

GA SOZINA, N.N.

19

**Electrolysis of glass, high-voltage polarization, and electrolytic conductivity.** M. S. Kozina and N. N. Sozina (Certain State Pedagog. Inst., Leningrad). *Zhur. Eksper. Teoret. Fiz.* 17, 340-50 (1947).—By ballistic measurements, the polarization capacity $C$ of glass subjected to forming by d.c. which produces a high-resistance quartz layer at the anode, is not inversely proportional to the amt. $Q$ of electricity passed. In most samples, $1/C$ first increases with $Q$ nearly linearly, but soon levels off, tending to min. Occasionally $1/C$ as a function of $Q$ is represented by a straight line, but then it does not pass through the origin. That the observed variations of $C$ do not reflect changes of the thickness of the quartz layer, follows from the observation that, upon heating to 280° of a glass previously formed at 280°, passage of an added, very small amt. of electricity, and cooling back to 280°, $C$ was found decreased by a factor of 2.0-3, whereas a substantial change of the thickness by that treatment was out of the question. The most plausible explanation is the appearance of high-voltage polarization in the quartz layer. Generally, the slope of the curve of $1/C$ against $Q$ is less steep with high-alkali glasses. Besides the high-voltage charge, of the order of $10^{-6}$ coulomb/sq. cm., there arises a relatively large low-voltage charge, attaining $10^{-3}$ coulomb/sq. cm., with the low-voltage polarization attaining 7 v. The dependence of the log of the residual current on the square root of the potential drop is of the form characteristic of autoelectronic emission. The effective dielec. const. of the quartz layer, referred to its actual thickness, is 60; however, with reference to the total thickness of the glass sample, the dielec. const., from the polarization capacity, is of the order $10^{4}$-$10^{5}$. The observations lead to the conclusion that, with electrodes other than of alkali metal, at least 80% of the elec. cond. of glass is electronic.

N. Thon

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

SOZINA, N.N.

2

**Dielectric constants of solid dielectrics at high temperatures.** M. S. Kosman and N. N. Sozina (Gertsen State Pedagog. Inst., Leningrad). *J. Exptl. Theoret. Phys.* (U.S.S.R.) 17, 472-5(1947)(in Russian).—The existence of a high-voltage polarization e.m.f. $P$ was established beyond doubt on calcite crystals heated to 400-430° and polarized with d. c. voltages $U$ up to 800 v., using a ballistic method and compensating the interfering low-voltage counter-e.m.f. of about 0.65 v.; the ballistic deviation $b$ increases with $U$ and shows some tendency to satn.; for a sample 8 mm. long, base area 1.5 sq. cm., at 400°, $U$ = 800, $b$ = 4 × $10^{-7}$ coulomb; the effective dielec. const. $\epsilon$ = 3000. A more perfected setup, involving insertion into the discharge circuit of a counter-voltage $U'$ opposed to $P$, and switching over to the ballistic galvanometer by means of an electron-tube circuit allowing passage of current only in the case $P > U'$, eliminates the low-voltage e.m.f. altogether and permits detn. of $P$; the deviation $b$ is proportional to $P - U'$ if the capacity of the sample is const.; actually, the relation proved to be nonlinear in many cases and the detn. of $P$ by extrapolation of $b$ against $U'$ to its point of intersection with $U'$ axis requires plotting of the complete curve. By this method, calcite at 410° gave $P$ values close to those of the applied $U$; at $U$ = 800 v., $b$ = 3.5 × $10^{-7}$ coulomb, and hence $\epsilon$ = 2000. Shale (2 mm. long, base area 2 sq. cm.) at 000° gave $b$ against $U'$ plots consisting of two intersecting straight lines, $\epsilon$ = 5000; from the value of $P$, $\epsilon$ = 12,000. A beryl sample (8 mm., 3 sq. cm.) gave noticeable $b$ from 350° up; at 570°, $\epsilon$ = 1000 (from $U$) and 3000 (from $P$). Other solid materials (brick, granite, mica) showed abnormally high $\epsilon$ values of the same order; glass gave $\epsilon$ of the order of $10^6$, strongly variable with the amt. of electricity passed. High-voltage polarization is thus proved to persist at high temps. Abnormally high $\epsilon$ seems to be the rule with all dielectrics heated to a temp. high enough to give rise to electronic conduction without perturbation of the lattice. N. Thon

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2

CA SOZINA, N.N.

[illegible]

1707

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

SOZINA, N. N.

"Examination of the Photoconductivity of Bismuth Selenide and Bismuth Telluride," pp 65-74, ill, 4 ref

Abst: An examination is made of the photoelectric properties of layers of $Bi_2Se_3$ and $Bi_2Te_3$, obtained by evaporation in a vacuum. Conditions are determined for preparing photoconductive layers having high sensitivity on condensation.

SOURCE: Izvestiya Leningr. Elektrotekhn. In-ta im. V. I. Ul'yanova (Lenina) (News of the Leningrad Electrical Engineering Institute imeni V. I. Ul'yanov /Lenin/), No 30, Leningrad, 1956

Sum 1854

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

24(3) SOV/139-59-1-12/34

AUTHORS: Kozyrev B.P., and Sozina N.N.

TITLE: An Investigation of Germanium Photoresistors (Issledovaniye germaniyevykh fotosoprotivleniy)

PERIODICAL: Izvestiya Vysshikh Uchebnykh Zavedeniy, Fizika, 1959, Nr 1, pp 71-76 (USSR) (+ 1 plate)

ABSTRACT: Basic characteristics and parameters of germanium photoresistors have been investigated and the results are now reported. The photoresistors were cut from monocrystals of n- and p-type germanium with different specific resistance. Low and high resistance specimens of n-Ge and p-Ge were available. The dimensions of the specimens were: contact area 12-100 mm$^2$, thickness 0.23-0.43 mm. To obtain low temperatures a cryostat was constructed and is shown schematically in Fig 1. Measurements were carried out on 15 specimens from three groups of germanium photoresistors. In measuring the current-voltage characteristics, the response to light and the spectral characteristics, the dark current was compensated for by using the Wheatstone bridge shown in Fig 2. Fig 3 shows the dependence on the sensitivity of the photoresistors on temperature for E = 103 lux. The

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SOV/139-59-1-12/34

An investigation of Germanium Photoresistors

main parameters of the photoresistors are summarized in the table on p 73. The current-voltage characteristics of the various groups of germanium photoresistors were found to be practically linear at 290 °K (up to 320 lux) and were noticeably non-linear at 90 and 77 °K. This non-linearity is ascribed to thermal effects associated with dark currents. Fig 4 shows typical current-voltage characteristics at 290 and 90 °K. The dependence of the photocurrents on the illumination was found to be of the form $\Delta I = AE^x$. The response to light is illustrated in Fig 5 in the case of a high-resistance specimen. The frequency characteristics, i.e. the relative sensitivity as a function of frequency, are plotted in Fig 6, where Curve 1 refers to a temperature of 290 °K and Curve 2 refers to 90 °K. The frequency characteristics were obtained using modulated light. At room temperature germanium photoresistors have the best frequency characteristics. The frequency characteristic is practically flat up to $f_{mod}$ = 6 kc/s at T = 290°K while at $f_{mod}$=10 kc/s the decrease in the sensitivity is not more than 18%. At low temperatures there is no flat portion. The

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An Investigation of Germanium Photoresistors

relative spectral sensitivity is plotted as a function of wavelength in Fig 7 for two temperatures. Curve 1 of this figure refers to T=290°K, and Curve 2 refers to T=90°K. The photoresistors in this part of the experiment were irradiated using a tungsten lamp (35 watt). The first curve has a peak at about 1.4 μ and the second at about 1.6 μ. The temperature characteristics were also determined in the range 77 - 373 °K. In all cases the resistance had a maximum at some temperature $T_m$. In the case of high-resistance specimens of both types of germanium, this temperature was less than 290 °K. In the case of low-resistance specimens of n-Ge the temperature $T_m$ was close to 340 °K. In the region $T < T_m$ germanium behaves as metal and for $T > T_m$ it behaves as a semiconductor. M.A. Kropotkin and O.A. Krovyakova are

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SOV/139-59-1-12/34

An Investigation of Germanium Photoresistors

thanked for carrying out the measurements.
There are 7 figures, 1 table and 8 English references.

ASSOCIATION: Leningradskiy Elektrotekhnicheskiy Institut imeni V.I. Ul'yanova (Lenina)
(Leningrad Electrotechnical Institute imeni V.I. Ul'yanov (Lenin)

Card 4/4

SUBMITTED: June 11, 1958

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

65719

2.2600 SOV/139-59-2-18/30

AUTHORS: Sozina, N.N. and Kozyrev, B.P.

TITLE: Some Aspects of Photoconductivity in Cooled Films of PbSe and PbTe

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, 1959, Nr 2, pp 120-128 (USSR)

ABSTRACT: The materials are prepared by vacuum evaporation from compounds made by fusion under a pressure of $10^{-2}$ mm Hg (synthesis at atmospheric pressure in sealed vessels gives almost identical results). The layers are most sensitive if they are 0.8 to 1.2 μ thick; no heat-treatment is needed. Aquadag electrodes are used. Fig 2 shows the cell used to cool the samples to 90°K. The field used is less than 500 V/cm; at 10 V the sensitivity of PbSe at 90°K is found to be 0.13 to 0.15 A/watt (for the light from a tungsten lamp run at 2480°K). The sensitivity of PbTe is 0.6 to 0.7 A/wt. A mixture of 17% PbSe and 63% PbTe distils to give a sensitivity of 5.7 A/watt. Temperature has little effect on the photocurrent for PbSe; at 90°K the dark current is 1/5 to 1/40 of the room temperature value, whereas the figures for PbTe are 1/100 to 1/1000; PbTe shows a much higher photo-

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Some Aspects of Photoconductivity in Cooled Films of PbSe and PbTe

sensitivity at 90°K. Gibson's effect (a rise in sensitivity with time of illumination) is reported for PbTe and PbSe. Fig 3 illustrates the effect for PbTe at 90°K with 80 V applied; Fig 4 shows similar data for 3 V at 290 and 90°K (E, the light intensity, in both cases is in lux). Figure 5 shows voltage-current curves; 1 and 1' relate to PbSe, and 2 and 2' to PbTe, and 3 and 3' to 50% PbSe + 50% PbTe; E = 50 lux. Fig 6 shows light response curves (current versus intensity); the caption is clear from the explanation for Fig 5. Fig 7 shows the curve of Fig 6 for PbTe taken with both directions of change to higher intensities. Fig 8 shows spectral response curves (the wavelengths are in μ; the currents are relative). Figure 9 shows a frequency-response curve (f is in c/s). There are 9 figures and 12 references, 2 of which are Soviet, and 10 English.

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut imeni V.I.Ul'yanova (Lenina) ( Leningrad Institute of Electrical Engineering imeni V.I.Ul'yanov (Lenin) )

SUBMITTED: June 11, 1958

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

SOZINA, N. A.

PHASE I BOOK EXPLOITATION SOV/5058

Bogoroditskiy, N. P., and V. V. Pasynkov, eds.

Spravochnik po elektrotekhnicheskim materialam. V dvukh tomakh. t. 2; Magnitnyye, provodnikovyye, poluprovodnikovyye i drugiye materialy (Handbook on Electrical Engineering Materials. In two volumes. Vol. 2; Magnetic, Conducting, Semiconducting, and Other Materials) Moscow, Gosenergoizdat, 1960. 511 p. Errata slip inserted. 30,000 copies printed.

Eds. of Handbook: K. A. Andrianov, N. P. Bogoroditskiy, Ya. V. Koritskiy, V. V. Pasynkov, and B. M. Tareyev; Eds. (This vol.): N. P. Bogoroditskiy and V. V. Pasynkov; Tech. Ed.: Ye. Ye. Bobeleva.

PURPOSE: This handbook is intended for technical personnel of electrical and radio engineering establishments, power stations and substations, electric repair shops, laboratories, and scientific research institutes.

COVERAGE: This volume of the handbook contains basic information on magnetic materials, metallic conductors, electrical carbon, and important electrolytes used in modern engineering. It describes characteristics of semiconductor, ferroelectric, and piezoelectric materials. It does not include insulating materials, which were covered in Volume I. The authors thank the scientists associated with the Department of Dielectrics and Semiconductors of the Leningradskiy elektrotekhnicheskiy institute imeni V. I. Ul'yanova (Lenina) [Leningrad Electrotechnical Institute imeni V. I. Ul'yanov (Lenin)], especially Ya. I. Panov, Candidate of Technical Sciences, R. K. Manakov and R. P. Voylochnikov, assistants, and O. I. Panteleyev and O. M. Kornev for their assistance. References accompany each part.

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8. Boron 213
9. Certain information on gas absorbers 215

Ch. XVII. Metals for Photoelectric Devices (B. P. Kozyrev and N. N. Sozina)
1. Information on photocells 216
2. Metals for simple photocathodes 216
3. Materials for sensitized and complex photocathodes 226
4. Metals for manufacturing electrodes of photoresistors and photocells (with barrier layer) 232

Ch. XVIII. Materials for Electric Arcing Contacts (V. V. Usov)
1. General information 233
2. Concepts on the operation and damaging of arcing contacts 235
3. Bases for selecting contact materials 239
4. Materials used as arcing contacts 240
5. Recommendations on the use of contact materials 245



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4. Electrical data on Soviet-manufactured transistors 368

Ch. XXV. Photoelectric Materials for Photoresistors and Photocells (With Barrier Layer) (B. P. Kozyrev and N. N. Sozina)

1. General information on photoelectric materials 374
2. Basic semiconductor chemical elements displaying photoeffect 375
3. Sulfides, selenides, and tellurides 381
4. Intermetallic compounds 389
5. Basic characteristics of photoresistors and photocells with barrier layer 391

Ch. XXVI. Semiconductors With Large Temperature Coefficient of Electrical Resistance (Thermal Resistance) (P. V. Sharavskiy)

1. Basic definitions and the fields of thermoresistor applications 392
2. Materials used for manufacturing thermoresistors 393



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D201/D305

A study of germanium...

and U ≅ 8 V. They exhibit also a smaller inertia in comparison with other types of photo resistors and must have heat sinks because of considerable dark currents. A study has also been made of germanium photo resistors with accurately known impurities, when cooled to 90°K. The photo resistive samples were prepared of high resistivity n-type germanium with Sb and Sb-Au doping. 17 references. [Abstracter's note: Complete translation]

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

BAGIYEV, A.D.; LISTENGARTEN, L.B.; SOZINA, V.S.

Recent data on the oil potential of the Surakhany series in the Balakhan'-Sabunchi-Ramany field. Azerb. neft. khoz. 40 no.10: 4-6 O '61. (MIRA 15:3)

(Apsheron Peninsula--Petroleum geology)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

LISTENGARTEN, B.M.; SOZINA, V.S.; KONDRUSHKIN, Yu.M.

Recovery factor of the oil pool of the Sub-Kirmaki series in the eastern part of the Ramany area in the Balakhany-Sabunchi-Ramany field. Neft. khoz. 43 no.8:18-22 Ag '65. (MIRA 18:12)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

M-3

USSR / Cultivated Plants. Grains.

Abs Jour: Ref Zhur-Biol., 1958, No 16, 72899.

Author : Garkavity, P. F.; Sozinov, A. A.
Inst : All-Union Academy of Agricultural Sciences imeni V. I. Lenin.
Title : Barley for Brewing in the Southern Ukraine.

Orig Pub: Dokl. VASKHNIL, 1958, No 1, 3-7.

Abstract: In the All-Union Selection Genetics Institute study is being made of thepossibility of obtaining barley for brewing in the south, while the brewing qualities of the varieties are being evaluated. In 1957 the "Odesskiy 9" and "Odesskiy 18" varieties were introduced as brewing barleys for Odesskaya, Nikolayevskaya and Kirovogradskaya Oblasts. New varieties were obtained - the "Lesostepnoy" and "Yuz-

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

SOZINOV, A. A. Cand Agr Sci -- (diss) "[redacted] barley [redacted] the southern Ukraine." Odessa, 1959. 16 pp (Min of Agr USSR. Odessa Agr Inst), 150 copies (KL, 49-59, 142)



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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

SOZINOV, A.A., kand. sel'skokhoz, nauk; KOZLOV, V.G.

Importance of the environmental conditions in the formation of the technological qualities of the grain of winter wheat. Agrobiologiia no.1:115-119 Ja-F '64 (MIRA 17:3)

1. Vsesoyuznyy selektsionno-geneticheskiy institut, Odessa.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

SOZINOV, A.A., kand. sel'skokhoz. nauk; KOZLOV I.G.; PAVLOVICH, I.G.

Fertilizers and the quality of grain. Zemledelie 27 no.6:60-64 Je '65. (MIRA 18:9)

1. Vsesoyuznyy selektsionno-geneticheskiy institut.

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L 38686-66 EWT(d)/EWT(m)/EWP(f)/EWP(c)/EWP(v)/EWP(t)/ETI/EWP(k)/EWP(h)/EWP(l)

ACC NR: AP6017659 IJP(c) JD SOURCE CODE: UR/0117/66/000/002/0033/0033

AUTHOR: Sozinov, A. I.; Zaytsev, V. I.; Lobanov, V. M.

ORG: None

TITLE: Milling solids of revolution with a heated cutting zone

SOURCE: Mashinostroitel', no. 2, 1966, 33

TOPIC TAGS: lathe, hot machining, body of revolution, stress distribution, titanium alloy, cutting tool, shaft, heating

ABSTRACT: The authors describe a method for reducing cutting stresses in end milling round forgings made of titanium alloys on standard lathes. Preliminary heating and softening of the forgings was part of the cutting process. A diagram is given showing the lathe, mill, forging and heating devices. Blanks made of VTZ-1, VT-5 and VT-8 alloys 60-100 mm in diameter and 1000 mm long are machined by end mills 130 mm in diameter. The cutters are reinforced with VK8 hard alloy. The parameters for the cutting part of the end mill are given. The optimum time for the operation is 60 minutes, and the heating temperature is 500-550°C. The maximum cutting speed is 60 m/min and the depth of cut is 3-4 mm. A formula is given for calculating principal time which shows that the new method increases productivity by a factor of 2.6. End milling solids of revolution with cutting zone heating is very efficient in machining the skin off long shafts of large diameter with nonuniform marginal allowances. Orig. art. has: 1 figure, 1 formula.

SUB CODE: 13/ SUBM DATE: none/ ORIG REF: 000/ OTH REF: 000

UDC: 621.914-436

Card 1/1

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

L 40827-66 EWT(d)/EWT(m)/EWP(v)/ (t)/ ... /EWP(h)/EWP(1) IJP(c) JD

ACC NR: AP6019934 (A) SOURCE CODE: UR/0122/66/000/006/0078/0078

57
B

AUTHOR: Sozinov, A. I. (Engineer)

ORG: None

TITLE: Cutting forces during face milling of heated titanium alloys

SOURCE: Vestnik mashinostroyeniya, no. 6, 1966, 78

TOPIC TAGS: cutting tool, milling machine, hot machining, titanium alloy, durability, oscillograph, thermocouple, METAL CUTTING

ABSTRACT: The author studies cutting forces during milling of heated titanium alloys. One of the difficulties in cutting titanium alloys is the instability of the cutting tool. This instability is reflected in the vibration along the contact surface of the cutter causing chipping of the cutting edge. The extreme load on the tool causes binding and cutter wear. This is particularly true in face milling of titanium alloys. One method for eliminating these problems is to increase the area of contact between workpiece and tool combined with heating of the workpiece. Experiments to this effect were done on the 6M12P vertical milling machine. Cutting forces were measured by a universal dynamometer built by VNII. Cutting temperature was determined by the natural thermocouple method. The N-102 oscillograph was used to record cutting forces and temperatures. The work to be machined was heated to 500°C in a muffle furnace. Tempera-

UDC: 621.914.0,16.2:669.295

Card 1/2

Card 2/2 MLF

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

L 11281-67 EWT(1)/EWT(m)/EWP(k)/EWP(t)/ETI IJP(c) JD/HW

ACC NR: AP6032048 SOURCE CODE: UR/0145/66/000/005/0138/0141

31

AUTHOR: Sozinov, A. I. (Graduate student)

ORG: None

27

TITLE: Cutting temperature in milling heated titanium alloy work

SOURCE: IVUZ. Mashinostroyeniye, no. 5, 1966, 138-141

TOPIC TAGS: titanium alloy, metal machining, milling machine, temperature measurement

ABSTRACT: The author presents the results of an experimental study on cutting temperature during face milling of VTZ-1 alloy heated to 500°C. These results show that cutting temperature increases at slow cutting speeds by 150°C as compared to normal milling. At cutting speeds above 125 m/min, the cutting temperatures are the same for both processes. The data also show that the effect of feed on cutting temperature of preheated work is insignificant. This makes it possible to use low cutting speeds and large feeds in milling preheated VTZ-1 titanium alloy. The article was presented for publication by Professor A. S. Pronikov, Doctor of technical sciences at the Moscow Aviation and Technological Institute. Orig. art. has: 3 figures.

SUB CODE: 13/ SUBM DATE: 08Jun65

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UDC: 621.914

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40504

S/263/62/000/013/008/015
I007/I207

21.2530

AUTHORS: Leykum, V. I., Oleynik, B. N., Sozinov, G. Ya.

TITLE: Measurement of heat conductivity of semiconductors

PERIODICAL: Referativnyy zhurnal, otdel'nyy vypusk. 32. Izmeritel'naya tekhnika, no. 13, 1962, 46, abstract 32.13.335. (Tr. in-tov Kom-ta standartov, mer i izmerit. priborov pri Sov. Min. SSSR, no. 51 (111), 1961, 131–137)

TEXT: This is a brief review of various methods for measuring heat conductivity. The method of steady heat flow was used for measuring the heat conductivity of semiconductors. There is a description of apparatus, based on this method and developed at the VNIIM, for measuring the heat conductivity of two semi-conductor test specimens, 10 mm in diameter and 200 mm long. The measuring device consists of four separate units: a vacuum furnace for the 20 to 800°C range, a low-temperature unit for the −80 to + 20°C range, a vacuum-generating unit and a measuring unit. The apparatus, based on the "two plate" method, works in the following manner: the test specimen is cut into two approximately equal parts between which the flat heating element is placed. Each of the two parts is provided with a differential thermocouple for measuring the temperature gradient along their height. The temperature level at which measurements may be carried out is determined according to the readings

Card 1/2

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of a third (non-differential) thermocouple, mounted so as to make thermal contact with the specimen. The temperature gradient along both parts of the specimen is determined according to the readings of the differential thermocouple with allowance for the distance between the thermocouple junctions. For measurements, the specimen on a quartz support is placed either into the vacuum heating furnace where it is heated for 4 to 6 hours at a uniform temperature between 100 and 800°C, or into the low-temperature unit for measuring the heat conductivity at temperatures ranging from − 180°C to + 20°C. The vacuum unit ensures a vacuum of $10^{-4}$ mm Hg and above. The measuring unit contains a КЛ-48 (KL-48) compensator for measuring the termal emf of the thermocouples, devices for measuring the current intensity of the heating element (an M-106 voltmeter and a H-104 [N-104] ammeter), a ВИТ-1 (VIT-1) vacuum gage, as well as devices for measuring and controlling the current intensity of the heating elements. Results are reported on measurements of heat conductivity of fused quartz. There are 2 figures and 4 references.

[Abstracter's note: Complete translation.]



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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

57-28-3-33/33

AUTHORS: Boltaks, B. I., Sozinov, I. I.

TITLE: On the Diffusion of Copper in Silicon (O diffuzii medi v kremnii)

PERIODICAL: Zhurnal Tekhnicheskoy Fiziki, 1958, Vol. 28, Nr 3, pp. 679-679 (USSR)

ABSTRACT: In a short report the authors here give the results obtained from a measurement of the coefficients of the diffusion of copper in silicon for the range of from 800 ÷ 1100°C. The measurements were performed according to the usual method of a successive removal of layers with the use of the radioactive isotope of copper - 64 as an indicator. According to the obtained data the diffusion coefficient varies from $4.10^{-7}$ $cm^2/sec$ (at 807°C) to $4.10^{-6}$ $cm^2/sec$ (at 1094°C). The modification of the diffusion coefficient with temperature can be expressed in the following way: $D_{Cu \to Si} = 4.10^{-2} \exp(-1,0\ eV/kT) cm^2/sec$. Thus copper in the range of from 800 to 1100°C possesses an anomalously high rate of diffusion in silicon. In comparison with germanium, however the

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On the Diffusion of Copper in Silicon 57-28-3-33/33

diffusion coefficients at the same temperature are here 15- to 2o-fold less. Such a difference is entirely justified in connection with the more solid linkage and the correspondingly much higher melting point of silicon as compared to germanium. At 875°C no influence of the constant electric field upon the diffusion of copper in silicon could be found to exist. There are 1 figure and 2 references.

ASSOCIATION: Institut poluprovodnikov AN SSSR, Leningrad (Leningrad Institute for Semiconductors, AS USSR)

SUBMITTED: August 17, 1957

1. Copper--Diffusion 2. Silicon--Analysis 3. Diffusion--Temperature factors 4. Diffusion--Electricallfactors 5. Copper isotopes (Radioactive)--Applications

Card 2/2

USCOMM-DC-60232

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

AUTHORS: Boltaks, B. I., Sozinov, I.I. 57-28-5-17/36

TITLE: Influence of the Electric Field on the Diffusion of Antimony in Rock Salt Crystals (Vliyaniye elektricheskogo polya na diffuziyu sur'my v kristallakh kamennoy soli)

PERIODICAL: Zhurnal Tekhnicheskoy Fiziki, 1958, Vol. 28, Nr 5 pp. 1012-1018 (USSR)

ABSTRACT: In the present paper antimony served the authors as an object for the investigation of diffusion in rock salt, antimony being an element with chemically amphoteric properties. The antimony diffusion was investigated in wide temperature range as well as the influence of a constant electric field on the diffusion. The obtained results partly supplement the existing experimental data and the conceptions on the diffusion mechanism of foreign impurities in the lattice of rock salt. The first series of experiments was devoted to the determination of the diffusion coefficient of antimony in NaCl-crystals at different temperatures of diffusion annealing, (figure 2). The second series essentially amounted to an examination of the character of the influence of a constant electric field on the antimony diffusion in NaCl. The shift of

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the maximum of the concentration curves towards the anodes indicated, that the antimony in NaCl crystals is shifted in the form of negative ions. The analysis of these curves also permits to evaluate the value of the charge of the diffusion ions. It can be assumed, that the antimony exists in the NaCl lattice in the state of treble charged negative ions $Sb^{3-}$. It was shown, that the dependence of the diffusion coefficient on temperature can be expressed by the equation:

$$D_{Sb \rightarrow NaCl} = 0{,}076 \exp(-1{,}8\ eV/kT)\ cm^2/sec$$

From a comparison of the ionic radius of $Sb^{3-}$ with the ionic radii of other negative ions, $Br^-$ and $J^-$ (table), which diffuse by anionic vacancies, it can be concluded, that such a dislocation mechanism is possible in the case of the ion diffusion of $Sb^{3-}$. In order to satisfy the neutrality conditions three anion vacancies must be created for each $Sb^{3-}$ ion in the lattice of NaCl. This amount of vacancies can exceed the thermally equalized chncentration and can cause local disturbances in the lattice as well as the occurrence of a new phase. In the table also data on the activation energy of the $Cl^-$, $Br^-$ and $J^-$, and $Sb^{3-}$ ions at the diffusion in NaCl are



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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

Influence of the Electric Field on the Diffusion of Antimony in Rock Salt Crystals 57-28-5-17/36

compared and the electron affinity of these elements is given. In this case an apparently not random regularity is observed. The reduction of the activation energy with an increase of the radius of the impurity ions can be caused by the greater deformation of the surrounding medium and the reduction of the potential energy connected with it. On the other hand, the probability of a separated existence of the impurity atoms and of the electrons absorbed by them is increased by the reduction of the electron affinity of the element. This can also lead to a reduction of the activation energy during diffusion. The possibility of a separate existence of the impurity atoms and of the electrons absorbed by them (during the period $t_a < t_i$, $t_i$ denoting the "life" of the ionic state) must also lead to a deviation from Einstein's equation, disregarding which complexes (or phases) are produced. This effect also was observed. There are 6 figures, 1 table and 13 references, 6 of which are Soviet.

ASSOCIATION: Institut poluprovodnikov AN SSSR, Leningrad (Leningrad Institute for Semiconductors, AS USSR)

SUBMITTED: August 17, 1957 1. Antimony--Diffusion 2. Electric fields--Applications 3. Sodium chloride--Crystal structure

Card 3/3

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

SOZINOV, N.A.

Concretions containing uranium. Lit. i pol. iskop. no.2: 104-112 Mr-Ap '65. (MIRA 18:6)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

SOZINOV, S.I.

Case of stomach disease in disseminating lupus erythematosus.
Khim. med. 38 no.5:132-133 My '60. (MIRA 13:12)
(LUPUS) (STOMACH--DISEASES)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

IVANOV, P.N., polkovnik meditsinskoy sluzhby, kand.med.nauk; MANSUROV, A.R., podpolkovnik meditsinskoy sluzhby, kand.med.nauk; SOZINOV, S.I., podpolkovnik meditsinskoy sluzhby

Anomalies of development of the skeleton in aviators. Voen.-med. zhur. no.3:60-62 Mr '61. (MIRA 14:7)
(AVIATION MEDICINE) (SPINE--ABNORMITIES AND DEFORMITIES)

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L 08304-67 EWT(d)/EWT(m)/EWP(h) JKT/DRJ

ACC NR: AN6030889 (N) SOURCE CODE: UR/9008/66/000/220/0002/0002

AUTHOR: Sozinov, V. (Major general; Chief of staff of Moscow district of PVO)

ORG: none

34
B

TITLE: In search of a powerful enemy [Air defense training]

SOURCE: Krasnaya zvezda, 21Sep66, no. 220, p. 2, cols. 1—3

TOPIC TAGS: military training, air defense tactic, military operation

ABSTRACT: The Chief of Staff of the Moscow Air Defense District states that the Moscow District has used a complex method of training for many years. In pilot training, bombers from nearby air force units simulate "enemy" operations. This is considered to be the most effective method of training, since of presents a complex and instructive situation very near reality. The bombers fly in compact mass formations composed of numerous groups and use various jamming techniques and maneuvers. This method provides training for interceptors, missle specialists and radar specialists, as well as for the bombers.

SUB CODE: 05, 15/ SUBM DATE: none

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

USSR MIL

SOZINOV, V. D., Lt Gen,
is the author of an article entitled "Elevate the Role of the Staffs in the Organization of Combat Training."

Vestnik Protivovozdushnoy Oborony, No 3, 1965

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

SOZINOVA, M.

7083. SOZINOVA, M. Tematicheskiy vecher v Cherdynskom dome kul'tury. Molotov, 1954. 6 s. 20sm. (Metod, kabinet Upr. kul'tury Molotovskogo oblispolkoma, Vpomoshch' rabotniku kul'tury). 1.500ekz. B.ts. - Sost. ukazan v kontse teksta. -[55-2289] 374.28(47.813)

Knizhnaya Letopis' No. 6, 1955

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

GALIMON, L.S., kand. ekon. nauk; IOFFE-GONCHARUK, N.A.; KOTSAREVA, T.G.; SOZINOVA, O.A.; STEKLOVA, A.N.; KHURGINA, Z.A.; KOTKOV, M.I., otv. red.; NADEZHDINA, A., red. izd-va; TELEGINA, T., tekhn. red.

[Control over wage fund disbursement] Kontrol' za raskhodovaniem fondov zarabotnoi platy. Moskva, Gosfinizdat, 1962. 117 p. (MIRA 15:7)

1. Gosudarstvennyy bank Moskvy (for Ioffe-Goncharuk, Kotsareva, Sozinova, Steklova, Khurgina). 2. Nachal'nik Otdela kontrolya za zarabotnoy platoy Pravleniya Gosudarstvennogo banka SSSR (for Kotkov).

(Moscow--Banks and banking) (Moscow--Wages)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

CZECHOSLOVAKIA/General Problems of Pathology. Neoplasms U

Abs Jour: Ref Zhur-Biol., No 8, 1958, 37243.

Author : Sablik, J., Sozm, F.
Inst :
Title : Antineoplastic Action of 6-Azauracil on Some Transplantable Experimental Tumors.

Orig Pub: Neoplasma, 1957, 4, No 2, 113-117.

Abstract: The antineoplastic action of 6-azauracil (I) was investigated in a series of strains of tumors. Animals received I in doses of 70 mg.kg daily, subcutaneously, in form of a suspension in olive oil. In one series of experiments, I was administered simultaneously with the antigen obtained from yeast of the order Torulopsis utilis (T-112) in doses of 0.2 ml in the course of the first 5 days. In the authors' opinion

Card : 1/2



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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

SOZOKER, V. I. PA 43/49T41

USSR/Engineering Jun 48
Construction Industry
Construction Materials

"Materials for a Construction Industry Code: Concrete and Reinforced-Concrete Works and Finished Construction," V. I. Sozoker, Cand Tech Sci, 1½ pp

"Stroi Prom" No 6

Lists selected elements of various constructions, arranged under categories of materials, chapter I-B of the first part of the "Construction Code," which includes present-day manufactured goods, concrete and reinforced concrete products, and articles yet to be used for industrial purposes.

FDB 43/49T41

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

SOZON-YAROSHEVICH A.YE.

BASHENIN, V.A., professor, dotsent; VYSHEGORODTSEVA, V.D., professor, dotsent; KLIONSKIY, Ye.Ye.; PETROV-MASLAKOV, M.A., professor, dotsent; PISAREV, V.N., professor, dotsent; PROZOROV, V.A., professor, dotsent; SOZON-YAROSHEVICH, A.Ye., zasluzhennyy deyatel' nauki; TAL'MAN, I.M., professor, dotsent; TIKHOMIROV, P.Ye., professor dotsent; TROITSKAYA, A.D., professor dotsent; KHILOV, K.L., professor dotsent; ZEBOL'D, A.N., redaktor. RULEVA, M.S., tekhnicheskiy redaktor

[Handbook for feldshers in health and first-aid stations of industrial enterprises] Posobie dlia fel'dsherov zdravpunktov promyshlennykh predpriiatii. [Leningrad] Gos. izd-vo med. lit-ry, Leningradskoe otd-nie, 1954. 271 p. (MLRA 7:10)

(Medicine, Industrial)
(First aid in illness and injury)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

SOZON-YAROSHEVICH, A.Yu., professor, zasluzhennyy deyatel' nauki.
adres avtora: Leningrad, Gangutskaia Ul.d. 10, kv.15.

Results of accident prevention according to data of industrial enterprises in N precinct in Leningrad. Vest.khir.74 no.7:37-39 O-N '54. (MLRA 8:10)

1. Iz kafedry operativnoy khirurgii (zav.-prof. A. Yu.Sozon-Yaroshevich) Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta.
(ACCIDENTS, prevention and control, in Russia)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

SOZON-YAROSHEVICH, A.Ye., professor, zasluzhennyy deyatel' nauki

Prevention of injuries in industry. Sov.zdrav. 14 no.3:26-30 My-Je '55. (MLRA 8:7)

1. Iz Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta.

(INDUSTRIAL HYGIENE
in Russia, prev. of inj.)
(WOUNDS AND INJURIES,
indust., prev. in Russia)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

L 14258-63 EPA(b)/EWT(1)/BDS AFFTC/ASD Pd-4
ACCESSION NR: AP3001036 S/0055/63/000/003/0044/0049

AUTHOR: Sozonenko, Yu. A.

[redacted]

56

TITLE: Reflection of a simple wave from a moving piston

SOURCE: Moscow. Universitet. Vestnik. Seriya I. Matematika, mekhanika, no. 3, 1963, 44-49

TOPIC TAGS: gas flow, hypergeometric function, partial differential equation

ABSTRACT: The author treats the problem of the flow of an absolutely nonviscous and non-heat conducting gas between two planar pistons moving apart with constant velocity by means of various standard techniques. The problem is ultimately solved in terms of integrals of hypergeometric functions. Let $\gamma$ be the exponent of the adiabatic, and let $n = (\gamma + 1)/2(\gamma - 1)$. For whole positive n, the author was able to obtain a solution in elementary functions. Orig. art. has: 29 formulas and 2 figures.

ASSOCIATION: Moskovskiy universitet, kafedra volnovoy i gazovoy dinamiki (Moscow University, Chair of Wave and Gas Dynamics)

SUBMITTED: 16 Apr62 DATE ACQ: 17Jun63 ENCL: 00
SUB CODE: MM NO REF SOV: 002 OTHER: 006
Card 1/1

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

S/055/63/000/001/007/008
D251/D308

AUTHOR: Sozonenko, Yu. A.

TITLE: The interaction of a simple wave with a contact discontinuity

PERIODICAL: Moscow. Universitet. Vestnik. Seriya I. Matematika, Mekhanika, no. 1, 1963, 54-61

TEXT: The author derives an exact solution of the problem which is valid up to the instant of impact of the wave, reflected from a shock front, on the contact discontinuity. The motion of the gas, excluding zones of simple waves and the constants of the solutions, is written in the form of Riemann's equation, and a solution is derived for contact discontinuities $x = 0$ and $x = -2$ with the usual techniques of boundary value problems. The evaluation of certain functions arising in the solution in the case of real characteristics is reduced to Cauchy's problem, which is solved with the aid of Riemann's function. In the case of complex characteristics, the solution is obtained in terms of trigonometrical functions. There

Card 1/2

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The interaction of a ...

S/055/63/000/001/007/008
D251/D308

are 2 figures.

ASSOCIATION: Kafedra volnovoy i gazovoy dinamiki (Department of Wave and Gas Dynamics)

SUBMITTED: April 16, 1962

Card 2/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

L 18592-63 BDS

ACCESSION NR: AP3003248 S/0040/63/027/003/0535/0540

AUTHOR: Sozonenko, Yu. A. (Moscow)

41

TITLE: Movement of a piston under the effect of gas pressure

SOURCE: Prikladnaya matematika i mekhanika, v. 27, no. 3, 1963, 535-540

TOPIC TAGS: adiabatic index, reduction to nonlinear equation, monoatomic gas, piston motion, nonlinear equation

ABSTRACT: The problem of motion of a piston pushed by expanding gas with exponent of the adiabatic index 11/9 was solved in series form by A. E. H. Love and F. B. Pidduck (Lagrange's Ballistic Problem. Transactions of the Royal Society of London, 1922, 222, 167-226). In the article, the author reduces this problem to one of solving an ordinary nonlinear differential equation for any exponent of the adiabatic $\gamma$. In the case $\gamma = 1.67$ (monoatomic gas) he obtains a precise solution of the indicated differential in Bessel functions. The latter make it possible to determine the velocity of the piston and the velocity of sound on the piston in the zone of the first reflection. Some computations are given. Orig. art. has: 44 formulas and 4 figures.

ASSOCIATION: none

SUBMITTED: 08Feb63 DATE ACQ: 23Jul63 ENCL: 00

SUBCODE: PH NO REF SOV: 004 OTHER: 005

Card 1/1

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

BTP SOZONOV, P.V.

31

11198* The Action of DDT and BHC on Bacteria. (Russian.) P. V. Sozonov and I. N. Fedorova. *Doklady Vsesoiuznoi Ordena Lenina Akademii Sel'skokhoziaistvennykh Nauk imeni V. I. Lenina*, v. 17, no. 5, 1952, p. 39-41.

The influence of concentration and time of application of above insecticides on cultures of *Colstridium Felsineum* were determined. Data are tabulated.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

OPARIN, Vyacheslav Grigor'yevich; SOZONOV, S.G., red.; SHEVCHENKO, L.V., tekhn. red.

[One against six] Odin protiv shesti. Petrozavods, Gos. izd-vo Karel'skoi ASSR, 1961. 50 p. (MIRA 14:8)
(Petrov, Petr Mikhailovich, d.1942)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

178T25

SOZONOV, V. G. Engr

USSR/Electricity - Amplidynes Dec 50
Control Circuits

"Mechanical Characteristics of a Motor in a Motor-Generator Circuit With Feedback," Engr V. G. Sozonov, Ural Polytech Inst imeni Kirov

"Elektrichestvo" No 12, pp 21-24

Discusses graphical method for constructing mech characteristics of motor fed by generator whose exciter circuit is connected with main circuit. Using electric-drive systems with 3-winding exciter and amplidyne exciter, shows how mech characteristics can be deduced using new method.

178T25

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

~~SHUBENKO, V. A.~~ SOZONOV, V. G.

621.316.718 : 621.34

4607. Limits of the speed control of an electric drive of the generator-motor type. V. A. SHUBENKO AND V. G. SOZONOV. *Elektrichestvo*, 1954, *No.* 5, 37-40. ~~(in Russian)~~

The effect of the coefficient of relative rigidity of the mechanical characteristic on the speed control range of various types of generator-motor speed control range of various types of generator-motor speed control systems is considered. These systems work either with voltage feedback or with speed feedback by means of a tachometer generator. The amplifier in the latter case takes the form of an exciter connected in series with the reference voltage to the armature of the tachometer generator. It is shown that the coefficient of relative rigidity is useful for determining not only the limits of the speed regulation range, but also other parameters of the speed control system.

B. P. KRAUS

Ural Polytech. Inst. im. Kirov

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

137-58-4-7067

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 4, p 109 (USSR)

AUTHOR: Sozonov, V.G.

TITLE: Electric Power and Transmission Problems in Auxiliary Rolling-mill Drives (Voprosy elektroprivoda vspomogatel'nykh mekhanizmov prokatnykh stanov)

PERIODICAL: V sb.: Materialy konferentsii-kursov po elektroprivodu i avtomatiz. tekhnol. protsessov metallurg. predpriyatiy. Sverdlovsk, Metallurgizdat, 1957, pp 130-148

ABSTRACT: The time for starting or final adjustments of a given routing (when a triangular speed graph is employed) depends upon the power of the motor (D) and the train value of the reduction gear. A comparative evaluation of the dynamic properties of an electric drive when the reduction gear has an optimum train value, as determined from the condition of minimum time for starting or final adjustment to a required shift, given a constant moment and a specific D, may be made in accordance with the magnitude of the ratio of the flywheel moment of the armature of the D to the square of its rated moment. Calculated data for D of various series are presented. The dynamic index of a D of a given series

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

137-58-4-7067

Electric Power and Transmission Problems in Auxiliary Rolling-mill Drives

improves as power increases, but little change occurs above the 25-30 kw level. Deviation of the train value from the optimum value, particularly on the side of diminution, increases the transient time. However, when the drive has certain specific parameters, this increase is negligible even if the deviation in train value is quite large. The moment of resistance of the mechanism may be ignored in the calculations. The employment of a two-motor drive reduces transient time, particularly with D of low power. The method of analysis of the dynamic properties of electrical drives for the selection of the power of a D and the train value of the reduction gear are illustrated by an example.

D. K.

1. Rolling mills 2. Electric motors--Performance 3. Power supplies--Performance

Card 2/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

SOZONOV V. G.

AUTHORS: Shubenko, V. A., Docent, Candidate of Technical Sciences, Sozonov, V. G., Docent, Candidate of Technical Sciences

105-58-4-10/37

TITLE: Series Wound Motor Characteristics for Dynamic Braking With Self Excitation (Kharakteristiki dvigatelya posledovatel'nogo vozbuzhdeniya v rezhimakh dinamicheskogo tormozheniya s samovozbuzhdeniyem)

PERIODICAL: Elektrichestvo, 1958, Nr 4, pp. 48-50 (USSR)

ABSTRACT: A simple method for the construction of the characteristics taking into account the shape of magnetization curve and the magnitude of the residual magnetism is given. When using the transition characteristics $\frac{E}{n} = f(I_{excitation})$ this method coincides with that of reference 2. In order to obtain the characteristics $n = f(I)$ in the case of self excitation of the motor it is necessary to enter the magnetization curve of the motor $E_o = f(I_{excitation})$ (taken at a certain speed of revolution). In equal coordinate axes the self excitation circuit

Card 1/2

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

Series Wound Motor Characteristics for Dynamic Braking With Self Excitation 105-58-4-10/37

$I(R_a + R_c + R_{dt})$ is constructed. (The motor excitation being connected in series with the rotor through the resistance $R_{dt}$ serving as limit for the current I). The intersection of both characteristics determines the electromotive force up to which the machine will be excited with the resistance of the outer circuit $R_{dt}$ and $n_o$. The analysis of the characteristics obtained with different values of the residual magnetism shows that the residual magnetism in braking exerts a favorable influence on the current diagram. A motor with saturated magnetic circuit has a more favorable braking characteristic than that with unsaturated magnetic circuit. In all cases possible in practice the brake effect occurs without exception till a speed of zero. This is explained by the fact that the magnitude of the residual magnetism in the equipment is not equal to zero. There are 4 figures and 3 references, 3 of which are Soviet.

ASSOCIATION: Ural'skiy politekhnicheskiy institut im. Kirova (Ural Polytechnical Institute imeni Kirov)

SUBMITTED: June 27, 1957

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Card 2/2

1. Dynamic braking-Characteristics 2. Electric motors-Applications

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

AUTHOR: Sozonov, V.G., Docent 105-58-5-15/28

TITLE: The Influence Exercised by the Deviation of the Transmission Ratio From the Optimum on the Duration of Transitional Operations of an Electric Drive (Vliyaniye otkloneniya peredatochnogo chisla ot optimal'nogo na vremya perekhodnykh rezhimov elektroprivoda.)

PERIODICAL: Elektrichestvo, 1958, Nr 5, pp. 63-67 (USSR)

ABSTRACT: A quantitative evaluation of the influence exercised by a deviation of the transmission ratio from the optimum upon the duration of transitional operation is given for the following special cases: starting of the motor, operation with a triangular- and with a trapezoidal velocity diagram. It is assumed that motor moments during starting and braking are equal and invariable. It is shown that warranting an optimal transmission ratio for starting is more important than in the case of operation with a triangular velocity diagram. In the case of operation with a trapezoidal velocity diagram electric drive attains a stabilized velocity, which, according to the purpose for which the mechanism is used, can be either accurately given or not fixed. Both cases are studied here.

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The Influence Exercised by the Deviation of the Transmission Ratio From the Optimum on the Duration of Transitional Operations of an Electric Drive 105-58-5-15/28

The following summary is given: 1.) In the case of deviations of the transmission ratio from the optimum, the time needed by transitory operation of the electric drive increases. This time increases with particular rapidity if the transmission ratio is reduced. If it is increased, this time increases, but not with the same rapidity as in the case of a reduction. 2.) In the case of considerable moments of resistance of the machine the deviations of the transmission ratio exercises greater influence upon the mode of operation than in the case of low moments of resistance. 3.) The analysis mentioned here offers the possibility of drawing general conclusions as to the deviations of the transmission ratio permitted from the point of view of transitional operation. There are 6 figures, 1 table, and 4 references, 3 of which are Soviet.

ASSOCIATION: Ural'skiy politekhnicheskiy institut im. Kirova (Ural Polytechnic Institute imeni Kirov)

SUBMITTED: March 15, 1957

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Card 2/2 1. Electric motors--Performance 2. Electric motors--Operation

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SOV/143-59-3-7/20

8(5)

AUTHOR: Sozonov, V.G., Docent

TITLE: The Reductor Gear Ratio and the Power of an Electric Drive With a Trapezoidal Speed Graph (Peredatochnoye chislo reduktora i moshchnost' elektroprivoda, rabotayushchego po trapetseidal'nomu skorostnomu grafiku)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy - Energetika, 1959, Nr 3, pp 50-58 (USSR)

ABSTRACT: The author investigates the influence of the reductor gear ratio on the work indexes of an electric drive (operating time, trapezoidal criterion, root-mean-square torque). The reductor is located between the driving electric motor and the driven machine. The author also investigates the problem of the combined selection of motor power and gear ratio under given conditions. For these investigations, the author assumes that the speed graph of the electric drive has a trapezoidal shape. The steady-state speed is not fixed and may vary within given ranges, whereby the latter are sufficiently wide. Machines with

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SOV/143-59-3-7/20

The Reductor Gear Ratio and the Power of an Electric Drive With a Trapezoidal Speed Graph

such a speed characteristic are widely used in rolling mills. The author establishes that the operating time of an electric drive, rotating with a trapezoidal speed graph, and the root-mean-square torque of a motor depend on the reductor gear ratio. It has its minimum at a certain (optimum) gear ratio; the root-mean-square torque disappears gradually with a gear ratio increase. It is desireable to select the optimum gear ratio from the viewpoint of the work time minimum. However, from the viewpoint of the root-mean-square torque, it is desireable to increase this gear ratio above the optimum value, taking into consideration that an increase of more than two times has little effect. The following equations should be used for combined selection of motor power and gear ratio

$$t = 0.4967 \sqrt[3]{\frac{GD^2 \ldots}{\rho_{sr}}}$$

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The Reductor Gear Ratio and the Power of an Electric Drive With a Trapezoidal Speed Graph

$$i_{\text{[illegible]}} = 0.0441 \sqrt[3]{\frac{GD^2_{r.m}\, n_{dv.n}}{S_{r.m}\, M_{s.r}}}$$

whereby $GD^2_{r.m}$ - flywheel moment of the driven machine, $S_{r.m}$ - full path of the driven machine in rpm, $n_{dv.n}$ - nominal rotation speed of the motor, $M_{s.r}$ - torque during starting and braking, $P_{sr}$ - mean power developed by a motor during starting and braking. The results obtained with these equations are to be corrected with the data contained in graphs figures 2-5. Finally, the author presents a calculation example for the electric drive of an ingot mover of a blooming mill, using a motor of the MP series.

Card 3/4

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SOV/143-59-3-7/20

The Reductor Gear Ratio and the Power of an Electric Drive With a Trapezoidal Speed Graph

There are 5 graphs and 3 Soviet references.

ASSOCIATION: Ural'skiy politekhnicheskiy institut imeni S.M. Kirova (Ural Polytechnic Institute imeni S.M. Kirov) Kafedra elektrifikatsii promprepriyatiy i ustanovok (Chair for Electrification of Industrial Installations and Devices)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

SOZONOV, V.G., dotsent, kand.tekhn.nauk

Starting characteristics of an electric drive in the generator-motor system. Trudy Ural.politekh.inst. no.78:167-180 '60. (MIRA 14:5)

(Electric driving)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

SOZONOV, V.G.

Effect of the power rating of an unregulated drive motor on the duration of the transients. Trudy Ural. politekh. inst. no.106:43-52 '60. (MIRA 15:5)

(Electric driving)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

SOZONOV, V.G., kand. tekhn. nauk, dotsent

Operational indices of an electric drive with triangular speed graph and deviation of the reducing mechanism from an optimum ratio. Izv.vys.ucheb. zav.; energ. 7 no.7:28-33 Jl '64 (MIRA 17:8)

1. Ural'skiy politekhnicheskiy institut imeni Kirova. Predstavlena kafedroy elektroprivoda i avtomatizatsii promyshlennykh ustanovok.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

SYROMOV, Vadim Georgiyevich; SUD, I.I., red.

[Electronically excited electric drives] Jonnyi elektro-privod. Moskva, Energiia, 1965. 149 p. (MIRA 18:5)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

SOZONOV, Yu.

Treatment of lambs in white muscle disease. Veterinariia 39 no.1:60 Ja '62. (MIRA 15:2)

1. Glavnyy veterinarnyy vrach Nukutskogo rayona, Irkutskoy oblasti.

(Muscular dystrophy)
(Lambs—Diseases and pests)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1

SOZONOVA,

MOSKOVSKIY, Vasiliy Petrovich, general-mayor; SOZONOVA, A., red.; KOROBOVA, L., tekhn.red.

[Army of the motherland] Rodnaia armiia. Moskva, Izd-vo TsKVLKSM "Molodaia gvardiia," 1958. 126 p. (MIRA 11:2)
(Russia--Army)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001652620017-1"