ACCESSION NR: AT4008773

in the durations of the positive and negative half cycles of the combined signal is a function of both the ratio of the amplitudes of the first and second harmonics and of the phase shift between them. This makes it possible to use as the second conversion stage a circuit similar to an ordinary phase detector with switching transistors and to obtain both proportionality of the conversion and power amplification of the measured signal. The performance of the circuit is analyzed for different harmonic ratios as a function of the circuit parameters. The detector was used as a demodulator in a stabilized dc amplifier developed at the Institut mashinovedeniya i avtomatiki AN UkrSSR (Institute of the Science of Machines and Automation, AN UkrSSR). Orig. art. has: 8 figures and 19 formulas.

ASSOCIATION: Institut mashinovedeniya i avtomatiki AN UkrSSR (Institute of the Science of Machines and Automation, AN UkrSSR)

SUBMITTED: 00 DATE ACQ: 25Jan64 ENCL: 02

SUB CODE: SD NO REF SOV: 000 OTHER: 000

Card 2/#2

ACCESSION NR: AP4015897 Z/0039/64/025/001/0021/0024

AUTHOR: Vorobkevic, V. Ju. (Vorobkevich, V. Yu.); Daniljuk (Danilyuk), I. S.; Rakov, M. A.; Sinickij (Sinitskiy), L. A.; Sumkov, Ju, M. (Shumkov, Yu. M)

TITLE: A phase demodulator of the second harmonic, with width modulation

SOURCE: Slaboproudy obzor, v. 25, no. 1, 1964, 21-24

TOPIC TAGS: phase demodulator, modulation, width modulation, second harmonic, phase detector

ABSTRACT: A new phase demodulator of the second harmonic, with width modulation, is described, and its response (transfer coefficient, zero point stability, dynamic characteristics) is analyzed theoretically and confirmed experimentally. Designed with semiconductor triodes, the phase demodulator needs only a small signal power with sufficient zero stability and yields a high power gain. It was used in a measuring amplifier for constant current of high stability, described by Hlazhkevich, et al . in Trudy* konferentsii NTO Priboroprom, K 962. Orig. art. has 17 formulas and 7 figures.

Association: Ustav teorie stroju a automatizace Akademie ved Ukrajinske SSR, Lvov (Institute of the Theory of Machines and Automation, AN UkrSSR)

Card 1/1

SUBMITTED: 23 Apr 63

VOROBKEVIC, V.Ju. [Vorobkevich, V.Yu.]; DANILJUK, I.S. [Danilyuk, I.S.]; RAKOV, M.A.; SINICKIJ, L.A. [Sinitskiy, L.A.]; SUMKOV, Ju.M. [Shumkov, Yu.M.]

Phase detector of the second harmonic with width modulation. Slaboproudy obzor 25 no.1:21-24 Ja'64.

1. Ustav teorie stroju a automatizace Akademie ved Ukrajinske SSR, Lvov.

VASIL'YEV, Ye.D.; VERKHOVTSEV, V.S.; VOROBKEVICH, V.Yu.; [illegible], I.S.; PETRUSHKO, I.V.; PILIPENKO, N.S.; RAKOV, M.A.; [illegible], R.V.; SINITSKIY, L.A., kand. tekhn. nauk; SHKOL'NYY, V.A.; SHUMKOV , Yu.M.; YEVSEYENKO-MISYURENKO, I.V., red.

[Direct current measuring converters] Izmeritel'nye preobrazovateli postoiannogo toka. Kiev, Naukova dumka, 1965. 373 p. (MIRA 18:6)

1. Akademiya nauk URSR, Kiev. Fizyko-mekhanichnyi instytut.
2. Fiziko-mekhanicheskiy institut AN Ukr.SSR, g.L'vov (for all except Yevseyenko-Misyurenko).

L 30358-66 EWT(1) GD

ACC NR: AT6008316 SOURCE CODE: UR/0000/65/000/000/0067/0072

AUTHOR: Danilyuk, I.S. (L'vov)

ORG: none

TITLE: Diode functional converters without bias sources

SOURCE: AN UkrSSR. Elementy sistem otbora i peredachi informatsii (Elements of systems for selecting and transferring information). Kiev, Naukova dumka, 1965, 67-72

TOPIC TAGS: semiconductor device, electronic circuit, circuit design

ABSTRACT: The low magnitude of the bias of semiconductor diodes prevented their early use in diode functional converters (DFC). The present article studies theoretically certain diode functional converter designs not containing bias sources. The proposed circuits can be utilized whenever there is a need to reproduce functions with slight nonlinearities. Tests show that best results are achieved by means of silicon stabilitrons. Fig. 1 shows a DFC approximating a function with a positive second derivative. Fig. 2 shows a DFC circuit approximating functions with a negative second derivative. In addition, the author develops the methodology for the design of DFC circuits. Orig. art. has: 7 formulas and 3 figures.

Card 1/2

L 30358-66
ACC NR: AT6008316

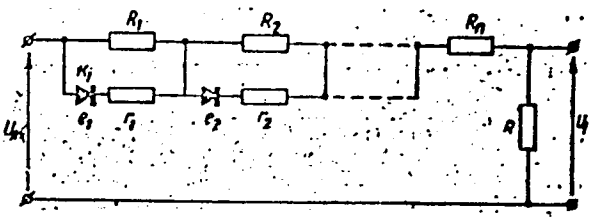


Fig. 1. Diode functional converter without bias source. The case of the positive second derivative.

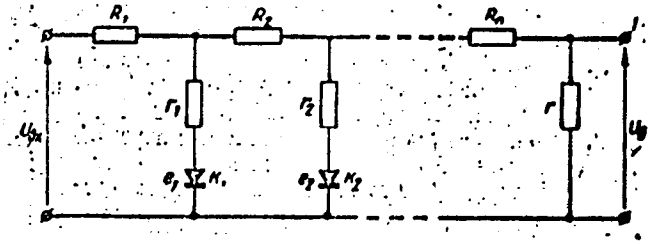


Fig. 2. Diode functional converter without bias sources. The case of the negative second derivative.

SUB CODE: 09/ SUBM DATE: 06Nov65/ ORIG REF: 005

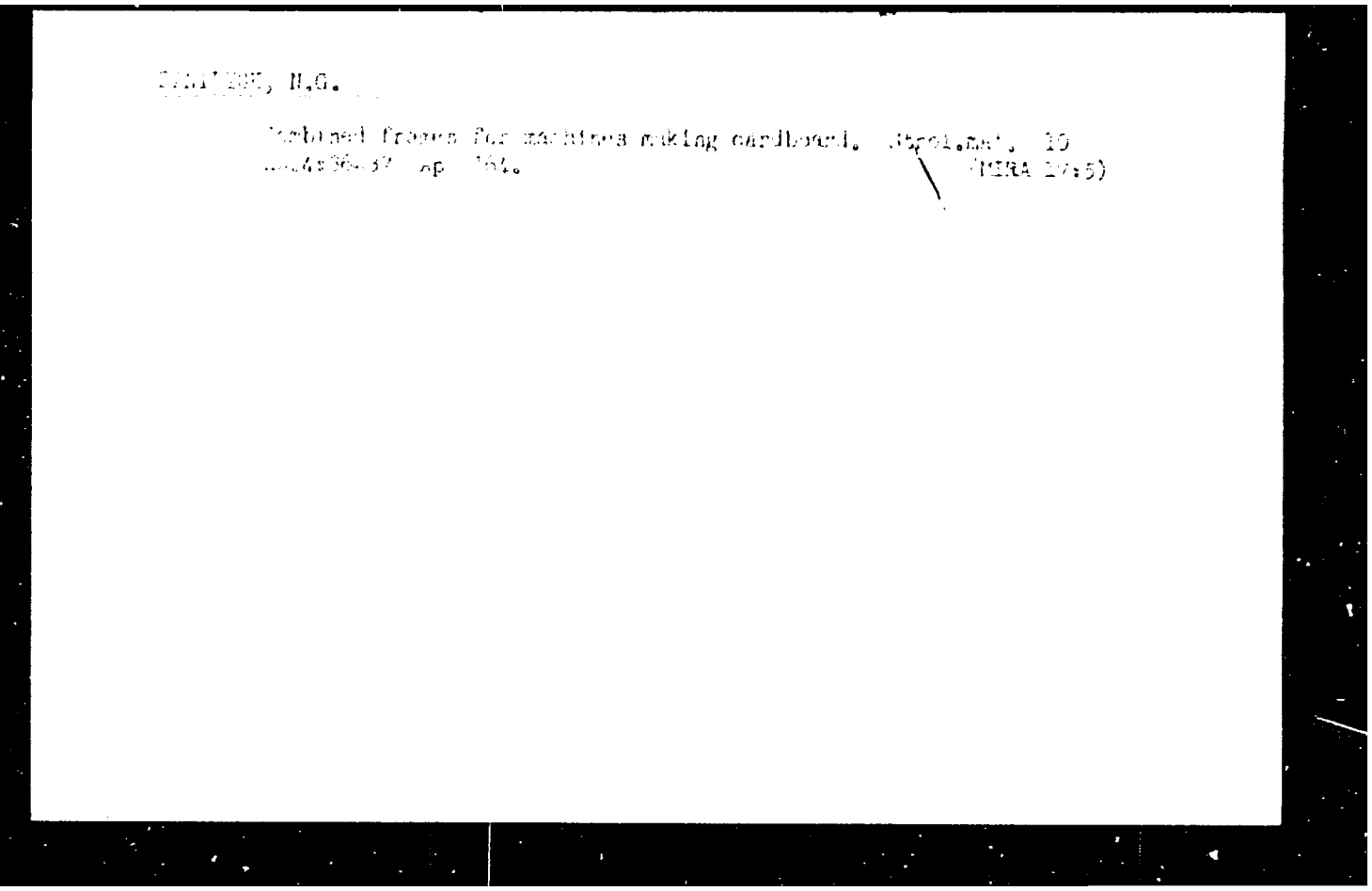
Card 2/2

DANILYUK, I.V., red.; KUZEMBAYEVA, A.I., tekhn. red.

[Rudnyy Altai] Altai Rudnyi. Alma-Ata, Kazakhskoe gos. izd-vo, 1962. 122 p. (MIRA 15:8)
(East Kazakhstan Province--Economic conditions)
(East Kazakhstan Province--Physical geography)

DANILYUK, M.G., inzh.; GORSHKOVA, Z.A., inzh.; BOGDANOVA, N.A., inzh.

Tin plating in an electrolyte with the addition of the OP-10 surface-active substance. Mashinostroenie no.1:84-85 Ja-F '65. (MIRA 18:4)



[illegible], N.G.

[illegible] frames for machines making cardboard. [illegible], 10 [illegible] pp. 1954. (MIRA 17:5)

DANILYUK, O.T.

STARCHENKO, V.F., golovnyy red.; KANEVS'KIY, O.P., red.; RUDNITS'KIY, P.V. red.; LUTSENKO, F.G., red.; BILOZUB, V.G., red.; PAVLENKO, M.K., red.; SVISTEL'NIK, A.N., red.; KHOTENKO, M.P., red.; ZADONTSEV, A.P., red.; POPOV, F.A., red.; DANILYUK, O.T., red.; TRITINCHENKO, A.P., red.; AKS'ONOV, G.G., tekhn.red.

[Agricultural manual for administrative personnel of province and district organizations, directors of machine-tractor stations, chairmen of collective farms and agricultural specialists] Posibnik po sel's'komu hospodarstvu dlia kerivnykh pratsivnykiv oblasnykh i raionnykh organizatsiy, dyrektoriv MTS, holiv kolhospiv i fakhivtsiv sil's'koho hospodarstva. Skladenyi za red.: V.F.Starchenka [and others] Holovnyi red.V.F.Starchenko. Kyiv, Derzh.vyd-vo sil's'kohospodars'koi lit-ry URSR. Book 1. 1946. 1269 p. (MIRA 11:1)

1. Chlen-korrespondent akademii nauk URSR (for Starchenko).
(Agriculture)

Danilyuk, O.T.

PAVLOV, I.P.; EMCHENKO, A.I., professor, redaktor; DANILYUK, O.T., [translator]; GREBENYUK, M.I., redaktor; POLITYENKO, S.R., tekhnichniy redaktor.

[Twenty year's experience in an objective study of the higher nervous activity (behavior) of animals. Translated from the Russian] Dvadtsiatyrichnyi dosvid ob'iektyvnoho vyvchennia vyshchoi nervovoi diial'nosti (povedinky) tvaryn. Kyiv, Derzhavne uchbovo-pedagogichne vyd-vo "Radians'ka shkola," 1953. 614 p. (MIRA 8:2)
(Psychology, Physiological)

DANILYUK, P.M.

Control of the standard specification of straight-toothed bevel gears by their inner edges. Izm.tekh. no.6:23-26 N-D '55.
(MLRA 9:3)

(Gearing--Tables, calculations, etc.)

SOV/124-58-10-10827

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 10, p 16 (USSR)

AUTHOR: Danilyuk, P. M.

TITLE: Some General Geometry Problems of the Involute of a Circumference (Nekotoryye voprosy obshchey geometrii evol'venty okruzhnosti)

PERIODICAL: Tr. Krasnodarsk. in-ta pishch. prom-sti, 1957, Nr 16, pp 109-112

ABSTRACT: In manufacturing an involute cylindrical wheel by means of the envelope method the mean line of the initial generating rack contour rolls without slipping along the base circle. In practice, since the initial contour has to be displaced by a certain amount, the author proposes that the conventional equation of the involute

$$x = r_o (\cos \phi_x + \phi_x \sin \phi_x), \quad y = r_o(\sin \phi_x - \phi_x \cos \phi_x)$$

be converted by adopting the radial distance mi from a point of the involute to the base circle as the independent parameter instead of ϕ_x. In the expression above, m is the module and f is the coefficient of radial distance. Angle ϕ_x is expressed in terms of f

Card 1/2

Some General Geometry Problems of the Involute of a Circumference

by the formula below

$$\Phi_x = \sqrt{(1+2f/z)^2 - \cos^2 \alpha_\partial} \; / \cos \alpha_\partial$$

where z is the number of teeth on the wheel and α_∂ is the obliquity on the base circle. The value of f is investigated for different points of a tooth.

V. S. Lyukshin

DANILYUK, P.M.

General geometry of a tooth of involute spur gears. Trudy KIPP no.16:113-115 '57. (MIRA 12:7)

1. Krasnodarskiy institut pishchevoy promyshlennosti, Mekhanicheskiy fakul'tet, kafedra matematiki i teoreticheskoy mekhaniki. (Gearing, Spur)

DANILYUK, P.M.

Constructing the profile of a tooth or the intertooth space of a spur gear by points. Trudy KIPP no.16:117-120 '57.
(MIRA 12:7)

1. Krasnodarskiy institut pishchevoy promyshlennosti, Mekhanicheskiy fakul'tet, kafedra matematiki i teoreticheskoy mekhaniki.
(Gearing, Spur)

AUTHOR: Danilyuk, P.M. SOV/115-58-6-8/43

TITLE: Inspection of the Common Normal in Straight-Tooth Bevel Gears by Generating Method (Kontrol' obshchey normali pryamozubykh konicheskikh koles po obrazuyushchim)

PERIODICAL: Izmeritel'naya tekhnika, 1958, Nr 6, pp 18-22 (USSR)

ABSTRACT: The measuring of the common normal is a simple method for checking the thickness of the teeth in cylindrical tooth gears. During measurements the measuring device is in contact with the teeth which decreases the accuracy of the method. If the generatrices of the teeth are taken for checking, the mentioned drawbacks are eliminated. For this purpose a cylinder must be regarded as cone with the same basis, but with its summit lying in infinity. The planes P_1 and P_2 must form a certain angle ω (Figure 2). For the determination of this angle the evolute conical surface ABO (Figure 3) is turned around the axis OZ in such a way that the new vertical coordinate plane X_1OZ coincides with the general axis plane P_0 of the conical gear (Figure 4). Several equations are then derived. The checking of the common normal using the generatrices in finished parts is made by putting the bevel gears in a special device (Figure 5).

Card 1/2

Inspection of the Common Normal in Straight-Tooth Bevel Gears by Generating Method

Along the side planes two rulers are fastened. The side surfaces of two teeth must touch the on two symmetric generatrices. The described method may be used for average and large modules. In laboratory checking it may be employed for all modules and all accuracy classes.
There are 3 diagrams, 2 graphs, 1 table and 2 Soviet references.

DANILYUK, P.N.

Checking the thickness of teeth of straight bevel gears by checking the edges. Izm.tekh. no.1:14-16 Ja '60. (MIRA 13:5)
(Gearing--Testing)

S/115/60/000/007/004/011
B019/B058

AUTHOR: Danilyuk, P. M.

TITLE: Calculating the Distortion of the Original Outline of Gears in the Inspection With Balls

PERIODICAL: Izmeritel'naya tekhnika, 1960, No. 7, pp. 25 - 26

TEXT: The inspection of spur gears with balls is dealt with here. With the aid of Fig. 1, formulas (6) and (8) respectively are derived for the angle between the center line of the cap of tooth and the radius OA (Fig. 2) for even and uneven numbers of teeth of the gears. This angle can also be expressed by (9), when the gear was produced with a distortion of the original outline. Formula (12) is finally obtained for the coefficient of distortion, and formula (14) is derived for the radius vector of the point of contact of the ball with the flank face. There are 2 figures.

Card 1/1

DANILYUK, P.M., dotsent, kand.tekhn.nauk

Checking the degree of tapering of spur-gear teeth. Vest. mash. 41 no.2:16-18 F '61. (MIRA 14:3)
(Gearing, Spur)

DANILYUK, P.M.

Calculating the diameters of balls used for checking gear wheels. Izm.tekh. no.5:12-13 My '62. (MIRA 15:6)
(Gearing--Testing)

DANILYUK, P.M., kand. tekhn. nauk, dotsent

Calculation for checking cylindrical spur gears with rollers.
Vest. mashinostr. 43 no.10:21-23 O '63. (MIRA 16:11)

DANILYUK, P.P.

SKVORTSOV, S.O.; DANILYUK, P.P.

Air purification in formalin production. Gidroliz.i lesokhim.pro-. 10 no.5:22-23 '57. (MLRA 10:7)

1.Veliko-Bychkovskiy lesokhimicheskiy zavod (for Danilyuk).
2.TSentral'nyy nauchno-issledovatel'skiy lesokhimicheskikh institut.
(Air--Purification) (Formaldehyde)

Negative magnetoresistivity in hexagonal, n-type silicon carbide.
V. Mirzabayev, V. M. Tuchkevich, Yu. V. Shmartsev (10 minutes).

Structure and electrical properties of the system CdSe-HgSe.
M. V. Kot, V. A. Mshenskiy.

Structure and electrical properties of the system HgTe-ZnTe.
S. A. Danilyuk, M. V. Kot.

Structure and electrical properties of the system ZnSe-HgSe.
M. V. Kot, A. V. Simashkevich.

Report presented at the 3rd National Conference on Semiconductor Compounds, Kishinev, 16-21 Sept 1963

ACCESSION NR: AP4041380 S/0048/64/028/006/1073/1076

AUTHOR: Danilyuk, S.A.; Kot, M.V.

TITLE: Structure and electric properties of the HgTe-ZnTe system /Report, Third Conference on Semiconductor Compounds held in Kishinev 16 to 21 Sep 1963/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.28, no.6, 1964, 1073-1076

TOPIC TAGS: semiconductor property, thin film, electric conductivity, light absorption, IR absorption, mercury telluride, zinc telluride

ABSTRACT: Polycrystalline specimens and thin films (1 to 6 microns) of HgTe-ZnTe solid solutions were prepared and some of their properties were determined. The bulk materials were prepared by heating the elements in quartz ampules with vibration. Solid solutions with the sphalerite structure were obtained at all compositions. The lattice constant varied linearly with composition. The materials obtained in this way were porous, and their electric properties were not examined. The films were deposited on heated glass or mica by vaporizing the binary compounds. Single phase portions of the films were located by electron diffraction. The films had the same structure and lattice constants as the bulk materials of like composi-

Card 1/2

TURKEVICH, O. M., zasluzhennyy vrach Ukrainskoy SSR; KUTSURUBA, Ye. N.; DANILYUK, S. I.

Use of methyldiazil and methyldiphacil in psychiatric practice. Vrach. delo no.3:16-19 Mr '62. (MIRA 15:7)

1. Kiyevskaya gorodskaya psikhonevrologicheskaya bol'nitsa imeni I. P. Pavlova.

(ANTISPASMODICS) (PSYCHIATRY)

MIZRUKHIN, I.A., prof.; TURKEVICH, O.M., zasluzhennyy vrach UkrSSR;
DANILYUK, S.I.; MEL'NIKOVA, M.R.

Benzohexonium treatment in arteriosclerotic psychosis. Vrach. delo no.23151-152 F '63. (MIRA 16:5)

1. Kiyevskaya psikhonevrologicheskaya bol'nitsa imeni akademika I.P. Pavlova.
(HEXONIUM--THERAPEUTIC USE) (ARTERIOSCLEROSIS)
(PSYCHOSES)

ALEKSANDROV, N.I.; GEFEN, N.Ye.; GAPOCHKO, K.G.; GARIN, N.S.; DANILYUK, S.S.; YEGOROVA, L.L.; KUZINA, R.F.; KORIDZE, G.G.; [redacted] LABINSKIY, A.P.; LEBEDINSKIY, V.A.; MASLOV, A.I.; OSIPOV, N.P.; SILICH, V.A.; SMIRNOV, M.S.; TSYGANOVA, N.I.

Study of a method of aerosol immunization with powdered plague vaccine in large population groups. Zhur. mikrobiol., epid. i immun. 40 no.12:22-28 D '63.

(MIRA 17:12)

DANILYUK, T. I.

BUNIN, D.A.; DANILYUK, T.I.; PERESETSKIY, A.Z.; RAPPOPORT-PALAGUTA, B.N.; TAVROVSKAYA, A.F.; SHUBIN, A.A.; MANOLE, M.G., redaktor; POGREBNAYA, L.L., redaktor; MURASHOVA, N.Ya., tekhnicheskiy redaktor

[German-Russian railroad dictionary] Nemetsko-russkii zheleznodorozhnyi slovar'. Sost. D.A. Bunin i dr. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry, 1957. 532 p. (MIRA 10:4)
(German language--Dictionaries--Russian)
(Railroads--Dictionaries)

DANILYUK, V.A.; ZHUKOV, V.N.; PANOV, G.I.; KUTSENKO, G.L.; LUGOVETS, V.A.; NEKHOMOV, N.A.; PORTNYAGIN, A.I.; RECHKIN, L.A.; SEREGIN, V.P.; SIVTSOV, V.P.; KHOLODNOV, Yu.I.; MEL'NIKOV, V.V., kand.tekhn.nauk, red.; KOZULIN, B., red.; CHERNIKHOV, Ya., tekhn. red.

[Radio amateur's handbook]Spravochnik radioliubitelia. Sverdlovsk, Sverdlovskoe knizhnoe izd-vo, 1962. 838 p. (MIRA 15:8)

(Radio--Handbooks, manuals, etc.)

SHTARK, M.B.; DANILYUK, V.P.

Induced potentials in the cerebral cortex of hibernating animals. Dokl. AN SSSR 151 no.3:740-743 Jl '63. (MIRA 16:9)

1. Odesskiy nauchno-issledovatel'skiy psikhonevrologicheskiy institut. Predstavleno akademikom V.N.Chernigovskim.
(Cerebral cortex) (Hibernation) (Electrophysiology)

DANILYUK, V.P. (Khar'kov)

Prevention of alveolar pain. Stomatologiia 42 no.4:99 Jl-Ag'63 (MIRA 17:4)

SHTARK, M.B.; DANILYUK, V.P.

Dendrite potentials of the cerebral cortex in [illegible] mammals. Biul. eksp. biol. i med. 59 no.2:12-15 F '65. (MIRA 18:7)

1. Laboratoriya elektrofiziologii (zav. - kand. med. nauk M.B. Shtark) Psikhonevrologicheskogo instituta (dir. - A.G. Leshchenko), Odessa.

DANILYUK, V.P.

Effect of rausedil (reserpine) on the behavior of animals and the bioelectrical activity of the brain. Farm. i toks. 28 no.1:4-8 Ja-F '65. (MIRA 18:12)

1. Laboratoriya klinicheskoy i eksperimental'noy elektrofiziologii (zav. - kand.med.nauk M.B.Shtark; nauchnyy konsul'tant - prof. F.N.Serkov) Odesskogo nauchno-issledovatel'skogo psikhonevrologicheskogo instituta. Submitted May 21, 1963.

BABKIN, I.A.; BOGOLYUBSKIY, G.N.; BURLINOV, I.I.; VOZNESENSKIY, V.V.; DANILYUK, V.S.; ZAPOL'SKIY, G.N.; ZUBKIN, A.S.; IL'YASHEV, A.S.; KIPRIYAN, K.M.; KONDRAT'YEV, P.V.; KORABLEV, M.D.; LEBEDEVA, Yu.A.; MAKAROV, Yu.K.; MIROSHNIKOV, I.P.; NOVICHENKO, I.P.; POPOV, A.V.; SEREBRYAKOV, V.A.; KANEVSKAYA, M.D., red.; ANDRIANOV, B.I., tekhn.red.

[Protecting the public from present-day means of destruction; a textbook for organizations of the All-Union Voluntary Society for the Promotion of the Army, Aviation, and Navy] Zashchita naseleniia ot sovremennykh sredstv porazheniia; uchebnoe posobie dlia organizatsii Vsesoyuznogo dobrovol'nogo obshchestva sodeystviya armii, aviatsii i flotu. Moskva, Izd-vo DOSAAF, 1958. 334 p. (MIRA 12:4)
(Civil defense)

BOGOLYUBSKIY, G.N.; BURLINOV, I.I.; VINOGRADOV, L.V.; VOZNESENSKIY, V.V.; DANILYUK, V.S.; ZUBKIN, A.S.; IL'YASHEV, A.S.; KORABLEV, M.D.; LEBEDEVA, Yu.A.; MAKAROV, Yu.K.; MIROSHNIKOV, I.P.; NOVICHENKO, I.P.; POPOV, A.V.; SEREBRAKOV, V.A.; VARENNIKOV, I.S., red.; GODINER, F.Ye., red.; SORKIN, M.Z., tekhn. red.

[Protecting the population from present-day means of destruction] Zashchita naseleniia ot sovremennykh sredstv porazheniia; uchebnoe posobie dlia organizatsii DOSAAF. Pod obshchei red. I.S.Varennikova i L.V.Vinogradova. Izd.2., perer. i dop. Moskva, Izd-vo DOSAAF, 1962. 254 p. (MIRA 16:4)
(Civil defense)

8

PHASE I BOOK EXPLOITATION SOV/6426

Bogoiyubskiy, G. N., I. I. Burlinov, L. V. Vinogradov, V. V. Voznesenskiy, V. S. Danilyuk, A. S. Zubkin, A. S. Il'yashev, M. D. Korablev, Yu. A. Lebedeva, Yu. K. Makarov, I. P. Miroshnikov, I. P. Novichenko, A. V. Popov, and V. A. Serebryakov

Zashchita naseleniya ot sovremennykh sredstv porazheniya; uchebnoye posobiye dlya organizatsii DOSAAF (Protection of the Population From Modern Means of Destruction; Handbook for DOSAAF Organizations) 2d ed., rev. and enl. Moscow, DOSAAF, 1963. 254 p. 450,000 copies printed.

Sponsoring Agency: Vsesoyuznoye ordena krasnogo znameni Dobrovol'noye obshchestvo sodeystviya armii, aviatsii i floty.

Eds. (Title page): I. S. Varennikov and L. V. Vinogradov; Compilers: M. D. Korablev and Yu. A. Lebedeva; Ed.: F. Ye. Godiner; Tech. Ed.: M. Z. Sorkin.

Card 1/β

ACCESSION NR: AP4011782 S/0181/64/006/001/0322/0324

AUTHORS: Danilyuk, Yu. L.; Kharitonov, Ye. V.

TITLE: Electron paramagnetic resonance in nonstoichiometric barium titanate

SOURCE: Fizika tverdogo tela, v. 6, no. 1, 1964, 322-324

TOPIC TAGS: electron resonance, paramagnetic resonance, barium titanate, nonstoichiometric barium titanate

ABSTRACT: Centers responsible for the semiconductor properties of barium titanate were studied by the method of electron paramagnetic resonance (EPR). Single crystals of $BaTiO_3$ and ceramics made of bario-titano-oxalate were used. The latter contained no more than 0.003% of Fe and 0.0015% of Cu. Both types of samples were held for 40 min at 1200C in hydrogen. EPR was measured at frequency f = 9400 Mhertz and at T = 70K. Its spectrum consisted of six equidistant components and may be described by the Hamiltonian equation

$$\mathcal{H} = g\beta H_z S_z + A S_z I_z + eqQ\frac{3I_z^2 - I(I+1)}{4I(2I-1)}$$

Card 1/2

ACCESSION NR: AP4011782

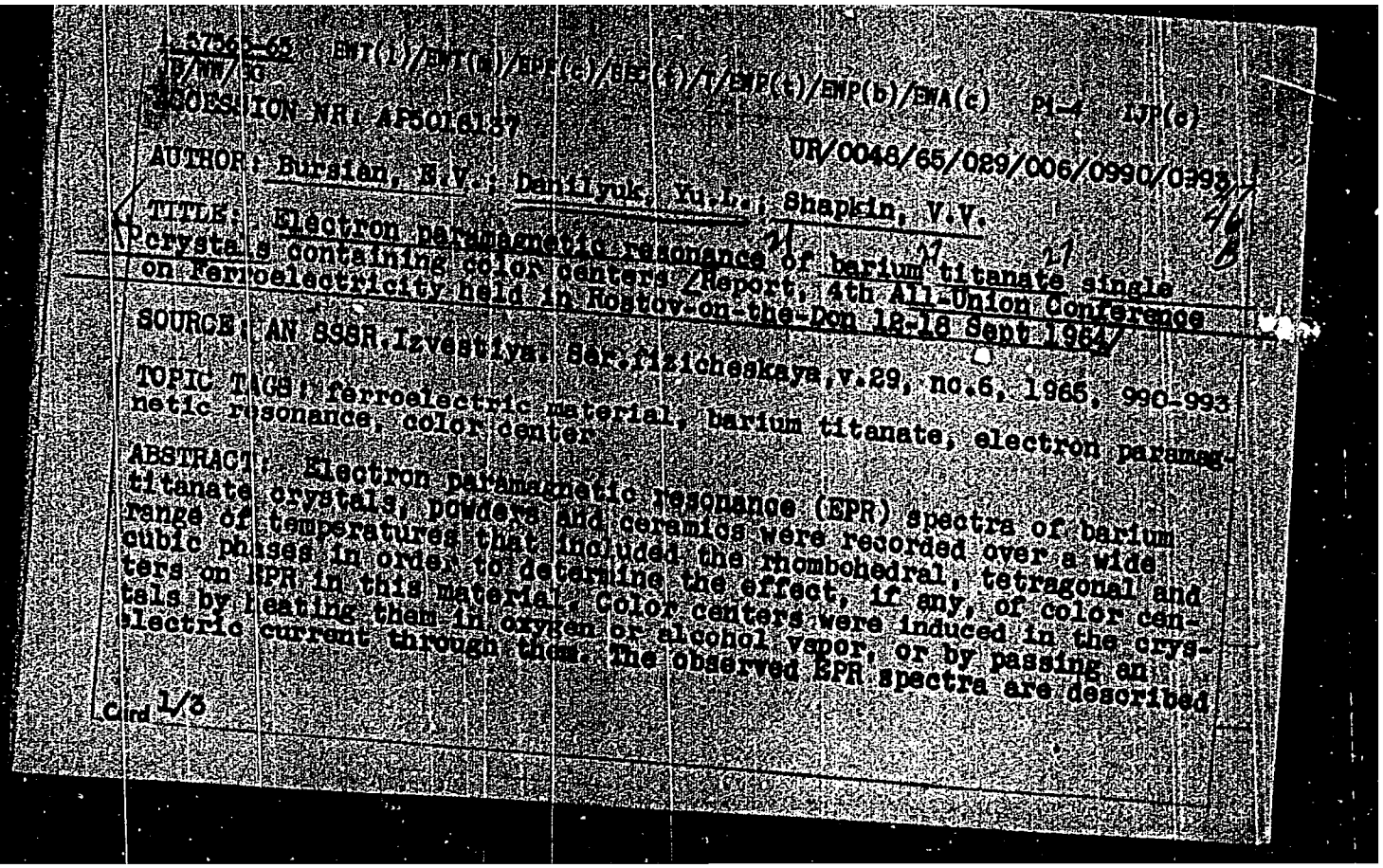
for the electron spin S = 1/2 and for nucleus spin I = 5/2. Also, g = 2.004 ± 0.001 and corresponds to the spectrum center, the constant of superthin structure (STS) A = 94 ± 4 oersted, while the constant of quadrupolar interaction eqQ = 20 ± 3 Mhertz. The nature of the spectrum is shown in Fig. 1 in the Enclosure. Results obtained by the authors differ greatly from those cited by Z. Sroubek and K. Zdansky (Czech. J. Phys., 13, 309, 1963). These differences are probably caused by the dissimilar intensities of $BaTiO_3$ reduction (the process was carried out by Sroubek and Zdansky for 10 minutes at T = 700C). Orig. art. has: 1 figure and 1 equation.

ASSOCIATION: none

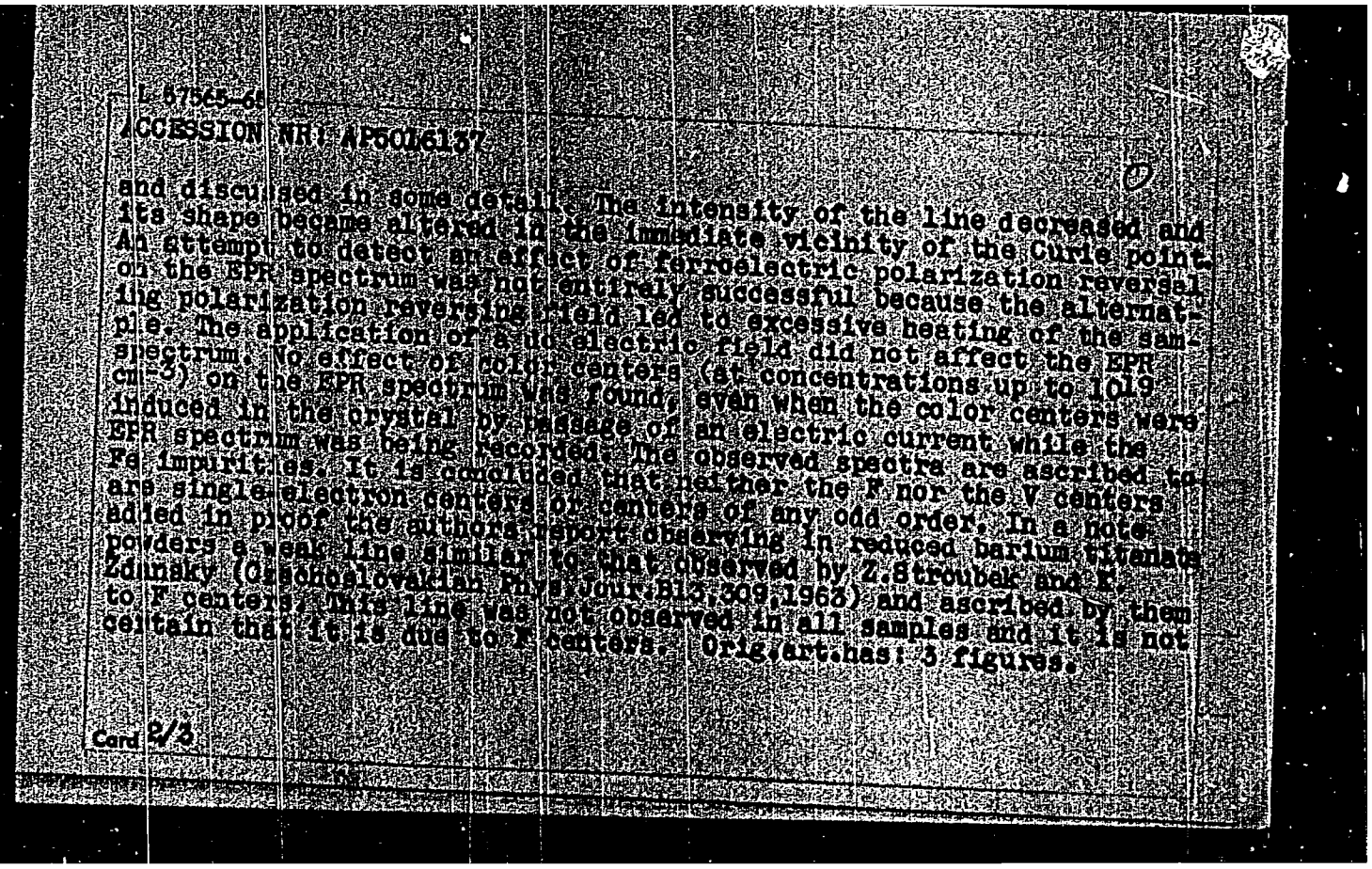
SUBMITTED: 20Aug63 DATE ACQ: 14Feb64 ENCL: 01

SUB CODE: PH NO REF SOV: 001 OTHER: 005

Card 2/2



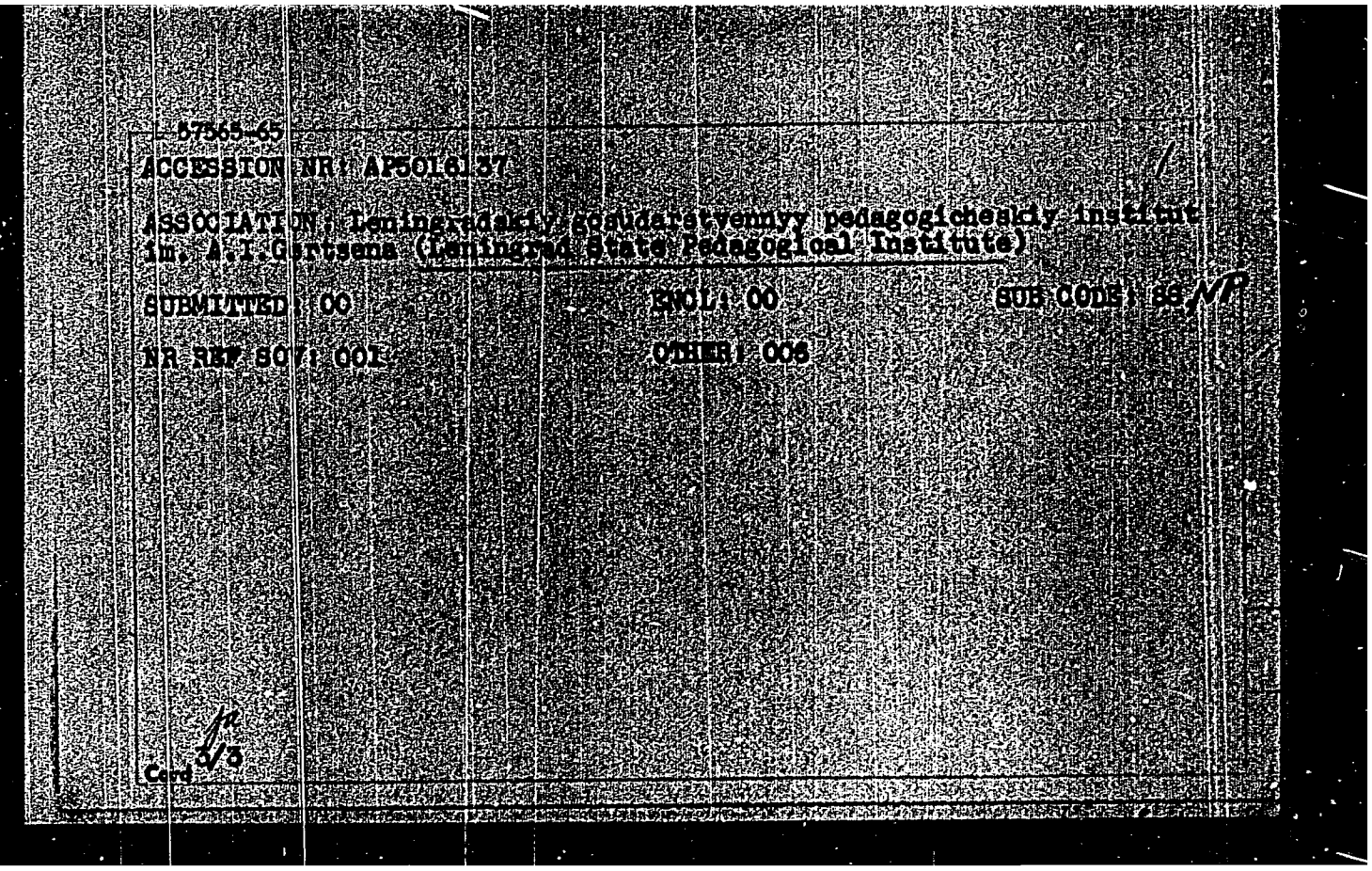
L 5736-65 EWT(l)/EWT(m)/EPF(c)/EEC(t)/T/EWP(t)/EWP(b)/EWA(c) Pl-4 IJP(c)
JD/WW/JG
ACCESSION NR: AP5016137 UR/0048/65/029/006/0990/0993
AUTHOR: Bursian, E.V.; Danilyuk, Yu.I.; Shapkin, V.V.
TITLE: Electron paramagnetic resonance of barium titanate single crystals containing color centers (Report, 4th All-Union Conference on Ferroelectricity held in Rostov-on-the-Don 18-18 Sept 1964)
SOURCE: AN SSSR. Izvestiya. Ser.fizicheskaya, v.29, no.6, 1965, 990-993
TOPIC TAGS: ferroelectric material, barium titanate, electron paramagnetic resonance, color center
ABSTRACT: Electron paramagnetic resonance (EPR) spectra of barium titanate crystals, powders and ceramics were recorded over a wide range of temperatures that included the rhombohedral, tetragonal and cubic phases in order to determine the effect, if any, of color centers on EPR in this material. Color centers were induced in the crystals by heating them in oxygen or alcohol vapor, or by passing an electric current through them. The observed EPR spectra are described
Card 1/3



L 07565-66
ACCESSION NR: AP5006137

and discussed in some detail. The intensity of the line decreased and its shape became altered in the immediate vicinity of the Curie point. An attempt to detect an effect of ferroelectric polarization reversal on the EPR spectrum was not entirely successful because the alternating polarization reversing field led to excessive heating of the sample. The application of a dc electric field did not affect the EPR spectrum. No effect of color centers (at concentrations up to 10^{19} cm^{-3}) on the EPR spectrum was found, even when the color centers were induced in the crystal by passage of an electric current while the EPR spectrum was being recorded. The observed spectra are ascribed to Fe impurities. It is concluded that neither the F nor the V centers are single-electron centers or centers of any odd order. In a note added in proof the authors report observing in reduced barium titanate powders a weak line similar to that observed by Z. Stroubek and K. Zdansky (Czechoslovakian Phys. Jour. B13:309, 1963) and ascribed by them to F centers. This line was not observed in all samples and it is not certain that it is due to F centers. Orig. art. has: 3 figures.

Card 2/3



57565-65
ACCESSION NR: AP5016137

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

SUBMITTED: 00 ENCL: 00 SUB CODE: SS, NP

NR REF SOV: 001 OTHER: 006

Card 1/3

DANIL'YUK, Yu.I.; PAKHOL'CHIK, P.L.; KOLEDA, F.A.

Microwave spectroscopic goniometer with double rotation. Prib. i tekh. eksp. 10 no.1:213-214 Ja-F '65. (MIRA 18:7)

L 10582-66 EWT(m)/EWP(t)/EWP(b) IJP(c) JD

ACC NR: AP5025385 SOURCE CODE: UR/0181/65/007/010/3048/3053

AUTHOR: Rotenberg, B. A.; Danilyuk, Yu. L.; Gindin, Ye. I.; Prokhvatilov, V. G.

ORG: none

TITLE: Electrophysical and microwave spectral study of barium titanate with admixtures of oxides of trivalent elements

SOURCE: Fizika tverdogo tela, v. 7, no. 10, 1965, 3048-3053

TOPIC TAGS: barium titanate, solid solution, electron paramagnetic resonance, microwave spectroscopy, oxide, semiconductor research, crystal lattice defect, electric conductivity, polycrystal

ABSTRACT: The authors study some of the electrical properties and the structure as well as paramagnetic resonance absorption of polycrystalline barium titanate with small admixtures of oxides of trivalent elements. Preparation of the specimens is breifly described together with an explanation of the experimental methods and equipment used. Paramagnetic resonance absorption was measured at 9320 Mc and 78°K. It is experimentally established that there are four possible types of solid solutions in $BaTiO_3$-R_2O_3 systems. 1. A solid solution of substitution in the barium ion sublattice with the formation of weakly bound electrons (donor levels)

$$Ba_{1-x}R_x^{3+}TiO_3 + xe^-.$$

Card 1/3

L 10582-66

ACC NR: AP5025385

Solid solutions of this type have high electrical conductivity. 2. A solid solution of substitution with subtraction in the barium ion sublattice

$$Ba_{1-x/2}\boxed{Ba}_{x/2}R_x^{3+}TiO_3;$$

in this case, the lattice is neutral due to barium vacancies, and the specimens are dielectrics. 3. A solid solution of substitution in the titanium sublattice

$$BaTi_{1-x}R_x^{3+}O_{3-\frac{x}{2}},$$

where it is most natural to assume that electric neutrality of the lattice in the case of oxide semiconductors is due to oxygen vacancies formed during annealing, and electrical conductivity does not increase. 4. A more complex solid solution of substitution in both sublattices with the formation of oxygen vacancies and donor levels

$$(Ba_{1-y}R_y^{3+})(Ti_{1-x}R_x^{3+})O_{3-\frac{x}{2}} + ye^-.$$

An increase in electrical conductivity is possible in this case. When $x = y$, electric neutrality may be maintained without the formation of oxygen vacancies and donor levels according to the formula

$$\left(Ba_{1-\frac{x}{2}}R_{\frac{x}{2}}^{2+}\right)\left(Ti_{1-\frac{x}{2}}R_{\frac{x}{2}}^{3+}\right)O_3.$$

Other cases are also possible if the alloying additive has variable valence. It is

Card 2/3

L 10582-66
ACC NR: AP5025385

shown that electrical conductivity is related to impurity concentration through changes in the type of solid solution formed during annealing of barium titanate with impurities in concentrations of 0.1-0.3 mol %. The experimental data indicate that the same types of defects are formed by reduction of the ceramic and by alloying. It is possible that these are not single-electron defects or defects of odd order in general. This hypothesis agrees with the conclusions made by other researchers. Orig. art. has: 4 figures.

SUB CODE: 20,07/ SUBM DATE: 30Jan65/ ORIG REF: 002/ OTH REF: 008

Card 3/3

DANILYUK, Z.Z. [Danyliuk, Z.Z.], mladshiy nauchnyy sotrudnik

On the path toward socialism. Nauka i zhyttia 10 no.2:58-59 F '60. (MIRA 13:6)

1. Institut ekonomiki AN USSR.
(Czechoslovakia--Economic conditions)

GOLUBUSHIN, Yuriy Sergeyevich [Holubushin, IU.S.]; DANILIUK, Zinoviy Zinov'yevich [Danyliuk, Z.Z.]; CHUMACHENKO, V.S., red. izd-va; ROZENTSVEYG, Ye.N., tekhn. red.

[Socialist countries on the path toward communism] Sotsialistychni krainy na shliakhu do kommunizmu. Kyiv, Vyd-vo Akad. nauk URSR, 1962. 51 p. (MIRA 15:12)
(Communist countries—Economic conditions)

L 25455-66 EWP(1)/EWT(m) RM

ACC NR: AP5002576 SOURCE CODE: UR/0076/64/038/012/2889/2894

AUTHOR: Ashkinazi, M. S. (Kiev); Karpitskaya, V. Ye. (Kiev); Dain, B. Ya. (Kiev) 27 B

ORG: Institute of Physical Chemistry im. L. V. Pisarzhevskoy, AN UkrSSR (Institut fizicheskoy khimii AN USSR)

TITLE: Photochemical oxidation of diphenylamine

SOURCE: Zhurnal fizicheskoy khimii, v. 38, no. 12, 1964, 2889-2894

TOPIC TAGS: oxidation, photochemical oxidation, ultraviolet oxidation, diphenylamine

ABSTRACT: Diphenylamine is photochemically oxidized by oxygen when exposed to ultraviolet or red light in the presence of chlorophyll as the sensitizer. The product of the sensitized reaction was shown to be a long-life radical (I) absorbing at 460 and 250 mμ. During the ultraviolet oxidation, a stable free radical (II) showing no characteristic peaks in the visible region is also formed. Oxidation in the ultraviolet light proceeds via the free radical (I). Data are presented bearing evidence that the radicals formed in the photochemical reactions are diphenyl-nitrogen (I) and diphenylnitric oxide (II). Reaction arrangements are proposed by the author. [AM]

SUB CODE: 07/ SUBM DATE: 02Dec63/ ORIG REF: 005/ OTH REF: 005

Card 1/1 CC UDC: 541.14

ZLOBIN, Anatoliy; SMIRNOV-CHERKEZOV, A.; AZHAYEV, Vasiliy, red.; VASILEVSKIY, Vitaliy, red.; VERSHIGORA, Petr, red.; DANIN, Daniil, red.; PROMYSLOV, V.F., red.; KORENEV, G., red.izd-va; YAKOVLEVA, Ye., tekhn.red.

[Twenty-three stories on builders] 23 rasskaza o stroiteliakh. Moskva, Mosk.rabochii, 1958. 386 p. (MIRA 12:11)
(Moscow--Construction workers)

PHASE I BOOK EXPLOITATION SOV/5465

Danin, D.

The Friendly Atom. Moscow, Foreign Languages Publishing House, 1960. 107 p. No. of copies printed not given. Transl. of Dobryy atom.

No contributors mentioned.

PURPOSE: This book is for the general reader.

COVERAGE: The booklet is an English-language translation of a Russian popular-science monograph which explains, in simple language, some fundamental facts, concepts, and laws of nuclear physics. While the reader is guided through the microworld of the atom by "Mike" the micromidget, examples of peaceful applications of atomic energy are presented and discussed. No personalities are mentioned. There are no references.

Card ~~1/2~~

The Good Atom (Cont.) Call Nr: QC 773.D3

20th Congress of the Communist party that at the end of the sixth Five-year Plan Soviet reactors would produce isotopes in an amount equal to 10,000 tons of radium. The following Soviet scientists are named as outstanding contributors: Alikhanov, Artsimovich, Blokhintsev, Kapitsa, Kurchatov, Landau, Leypunskiy, Leontovich, Mysovskiy, Skobel'tsyn, Tamm, and Cherenkov (p. 28).

TABLE OF CONTENTS: None

AVAILABLE: Library of Congress

Card 2/2

DANIN, D., red.

[Today and tomorrow; a book of essays about our industries] Segodnia i zavtra; kniga ocherkov o nashei industrii. Moskva, Sovetskii pisatel', 1958. 577 p. (MIRA 13:3)
(Russia--Industries)

DANIN, D.

Antiparticles, antiatoms, antiworlds. IUn.tekh. 3 no.9:8-16 S '58.
(Nuclear physics) (MIRA 11:10)

DANIN, D.

Antiparticles, antiatoms, antiworlds...(to be continued) IUn. tekh. 3 no.11:69-78 N '58. (MIRA 11:12)
(Cosmogony)

DANIN, D.

Where radio was born. IUn.tekh. 3 no.3:5-9 Mr '59.
(Popov, Aleksandr Stepanovich, 1859-1906) (MIRA 12:4)

DANIN, D.

In the city of concentration. IUn.tekh. 3 no.5:42-46 My '59.
(MIRA 12:7)
(Dubno--Nuclear engineering)

DANIN, D.

Biography of an electron. IUn. tekh. 3 no.8:24-28 Ag '59.
(MIRA 12:12)
(Electrons)

DANIN, D.

From the biography of the electron. IUn.tekh. 4 no.12:20-25 D '59. (MIRA 13:4)
(Electrons)

DANIN, D.

From the biography of the electron. IUn.tekh. 4 no.8:19-21 Ag '60. (MIRA 13:9)

(Nuclei, Atomic)
(Rutherford, Ernest Rutherford, Baron, 1871-1937)

DANIN, Daniil Semenovich; FEDCHENKO, V., red.; KOVALEV, A., tekhn.red.

[Inevitability of a strange world] Neizbezhnost' strannogo mira. Moskva, Izd-vo TsK VLKSM "Molodaia gvardiia", 1961. 358 p. (MIRA 14:6)

(Physics—Juvenile literature)

DANIN, D.

Memorable meetings. Nauka i zhizn' 28 no.8:30-33 Ag '61.
(MIRA 14:8)
(Ioffe, Abram Fedorovich, 1880-1960)

DANIN, D.

Seventy-five volumes of optimism. Nauka i zhizn' 29 no.11: 72-76 N '62. (MIRA 16:1)
(Physics--Periodicals)

DANIN, D.

Comments by academician Landau. Nauka i zhyttia 12 no.2:46-48 F '63. (MIRA 16:4)

(Physics--Research)
(Landau, Lev Davidovich, 1908-)

DANIN, I.S.; KLIMOV, V.A.; BRODSKIY, L.N.; ISAKOV, A.I.

Introducing standards of tolerance and fitting at the Kharkov furniture combine. Der. i lesokhim.prom.3 no.11:19-21 N '54. (MLRA 7:12)

1. Khar'kovskiy mebel'nyy kombinat (for Danin, Klimov & Brodskiy)
2. UkrNIIMOD (for Isakov)
(Kharkov--Woodwork--Standards)

DANIN, I.S.

Mechanization of labor consuming operations at the Shchors Furniture Combine in Kharkov. Bum. i der. prom. no.4:26-27 O-D '63. (MIRA 17:3)

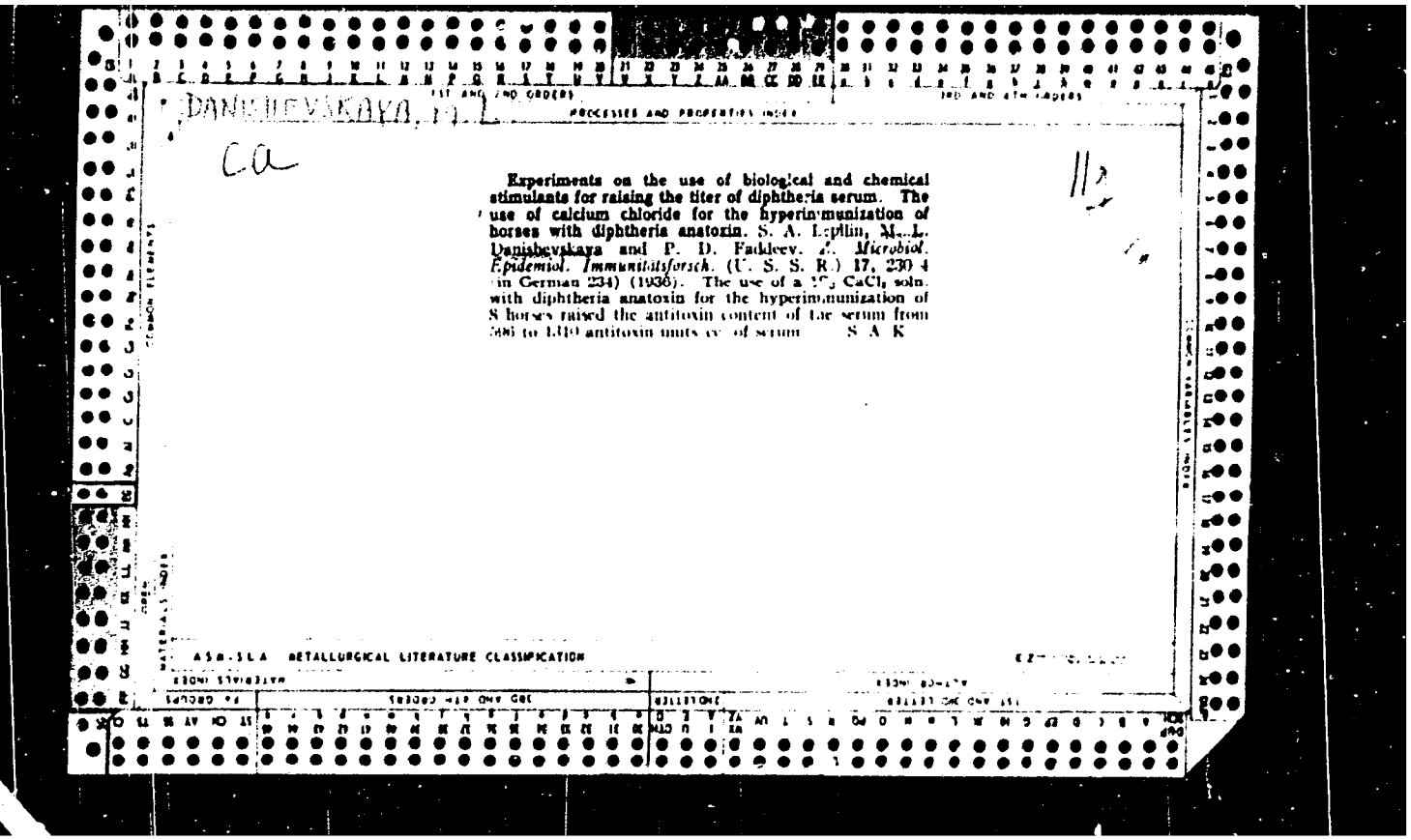
DANINI, Ye. M.

"Experiments on the Adsorption of Volatile Phytoncides," Fitontsidy, Ikh Rol' v Prirode i Znacheniye Dlya Meditsiny, Moscow, 1952, pp 291-306.

DANISH, G. Ya. (Kiyev)

Clinical manifestations of disturbances of the hematoparenchymatous barrier in endocarditis. Vrach. delo no.6:62-66 Je '62. (MIRA 15:7)

(ENDOCARDITIS) (RHEUMATIC FEVER)



DANISHEVSKAYA, M. L.

Ca

11?

Experiments on the use of biological and chemical stimulants for raising the titer of diphtheria serum. The use of calcium chloride for the hyperimmunization of horses with diphtheria anatoxin. S. A. Leplin, M. L. Danishevskaya and P. D. Faddeev. *Z. Mikrobiol. Epidemiol. Immunitätsforsch.* (U. S. S. R.) 17, 230-4 (in German 234) (1936). The use of a 1% $CaCl_2$ soln. with diphtheria anatoxin for the hyperimmunization of S horses raised the antitoxin content of the serum from 586 to 1,110 antitoxin units (v. of serum. S. A. K.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

DANISHEVSKAYA, M. L., KOROTOVSKAYA, N. T. and DOTSENKO, T. I.

"Sewage from the City of Kuybyshev as a Source of Contamination of the Volga and Samara Rivers by Helminth Eggs."

Tenth Conference on Parasitological Problems and Diseases with Natural Reservoirs, 27-29 October 1959, Vol. II, Publishing House of Academy of Sciences, USSR, Moscow-Leningrad, 1959.

Kuybyshev Institute of Epidemiology, Microbiology and Hygiene

DANISHEVSKIY, B.; KROLIK, A.; BARDAKOV, N.

Laying thin pavements mixed on the road. Avt. dor. 21 no.2:12 F '58. (MIRA 11:2)
(Pavements)

DAVTSHEVSKIY, GRIGORIY MIKHAYLOVICH.

7K/5
640.2
.D1

Akklimatizatsiya cheloveka na severe (Acclimatization of man in the north)
S ocherkom krayevoy patologii i gigiyeny. Moskva, Medgiz, 1955.
357 p. illus., diagrs., tables.
"Literatura": p. 347- (353)

DANISHEVSKIY, G.M., prof.

Problem of the acclimatization of man; general results and prospects of the study in the USSR. Vest. AMN SSSR 13 no.5:28-37 '58 (MIRA 11:6)

1. Institut terapii AMN SSSR.
(CLIMATE,
acclimatization, problems (Rus))

DANISHEVSKIY, G.M., prof.

Into intense cold... Zdorove'e 6 no.2:6-7 F '60. (MIRA 13:5)
(RUSSIA, NORTHERN--MAN--INFLUENCE OF CLIMATE)

FRANK, G.M.; VLODAVETS, I., starshiy nauchnyy sotrudnik; TUMANOV, I.I.; DANISHEVSKIY, G.M., prof.

Biometeorology. Znan.sila 35 no.1:25-27 Ja '60. (MIRA 13:5)

1. Chlen-korrespondent AMN SSSR (for Frank). 2. Institut fizicheskoy khimii AN SSSR (for Vlodavets). 3. Chlen-korrespondent AN SSSR, direktor fitotrona Instituta fiziologii rasteniy AN SSSR (for Tumanov).
(Meteorological research) (Bioclimatology)

DANISHEVSKIY, G.M., prof., red.; VUL'FSON, I.Z., red.; MIRONOVA, A.M., tekhn. red.

[Problems of climatopathology in the clinical aspects of cardiovascular diseases]Voprosy klimatopatologii v klinike serdechno-sosudistykh zabolevanii. Pod red. G.M.Danishevskogo. Moskva, Medgiz, 1961. 231 p. (MIRA 15:10)

1. Nauchnaya konferentsiya po voprosam klimatopatologii v klinike serdechno-sosudistykh zabolevaniy, 1st, 1959. 2. Institut terapii Akademii meditsinskikh nauk SSSR (for Danishevskiy).
(CARDIOVASCULAR SYSTEM—DISEASES) (CLIMATOLOGY, MEDICAL)

DANISHEVSKIY, G.M., prof. (Moskva)

History of the foundation and development of the International League Against Rheumatism (in memory of its founder Jan van Breemen). Vop.revm. 1 no.2:81-83 Ap-Je '61. (MIRA 16:4)
(INTERNATIONAL LEAGUE AGAINST RHEUMATISM)
(VAN BREEMEN, JAN FRANS LEONARD, 1874-1961)

DANISHEVSKIY, G.M.

Problems of acclimatization and hygiene of the population of the Soviet North as related to the new stage of its development. Probl. Sev. no.6:25-33 '62. (MIRA 16:8)

1. Problemnaya komissiya po akklimatizatsii i krayevoy patologii naseleniya na Kraynem Severe pri Uchenom meditsinskom Sovete Ministerstva zdravookhraneniya RSFSR.
(RUSSIA, NORTHERN—ACCLIMATIZATION)
(RUSSIA, NORTHERN—PUBLIC HEALTH)

DANISHEVSKIY, G.M.

Developmental trend in the agriculture of the North in light of the problems of health improvement of the adult population and children in the northern regions of the Soviet Union. Probl. Sev. no.6:150-157 '62. (MIRA 16:8)

1. Problemnaya komissiya po akklimatizatsii i krayevoy patologii naseleniya na Kraynem Severe pri Uchenom meditsinskom sovete Ministerstva zdravookhraneniya RSFSR.
(RUSSIA, NORTHERN--AGRICULTURE)
(RUSSIA, NORTHERN--FOOD)

L 34367-66

ACC NR: AT6009033 (A) SOURCE CODE: UR/2925/65/000/009/0287/0291

31
B+1

AUTHOR: Danishevskiy, G.M.

ORG: none

22

TITLE: A summary of scientific work on the problem of human acclimatization in the north, and problems requiring further investigation

SOURCE: AN SSSR. Komissiya po problemam Severa. Problemy Severa, no. 9, 1965. Ekonomika (Economics), 287-291

TOPIC TAGS: human physiology, low temperature research

ABSTRACT: The author reviews the principal directions characterizing Soviet research and study into problems of regional pathology and human acclimatization in northern regions in recent years. A brief historical statement is included, identifying and describing the work of the organizations and groups primarily interested in and responsible for research in this sector. On the basis of the work carried out over a fairly extensive period by these organizations, and partially also on the basis of published findings, a number of conclusions are discussed, which have a theoretical and pratical bearing on human acclimatization in the North as well as on problems of health and professional safety and hygiene.

Card 1/2

L 34367-66

ACC NR: AT6009033

Despite the negative conditions of extended work in transpolar regions, no real threat has been found to the health of normally healthy (and especially young) human beings. On the other hand, certain individuals suffering from a relatively small number of specific medical problems, should in all likelihood be exempted from Far North service. The paper also contains general recommendations with respect to vitamin consumption and dietary considerations.

SUB CODE: 06 / SUBM DATE: none / ORIG REF: 006

20/

Card 2/2 gc

L 3129-66 EWT(1)/EWA(j)/EWT(m)/EWA(b)-2/EWA(h) RO/JK

AM5023887 BOOK EXPLOITATION UR/

Gritchenko, Nikolay Vasil'yevich; Danishevskiy, Isay Naumovich; Meshkov, Vasiliy Vasil'yevich (Docent; Candidate of Medical Sciences)

Giving first aid to victims of mass-destruction weapons (Okazaniye pervoy meditsinskoy pomoshchi postradavshim ot oruzhiya massovogo porazheniya). Moscow, Izd-vo DOSAAF, 1964. 63 p. illus. Number of copies printed not given.

TOPIC TAGS: first aid, chemical warfare, bacteriological warfare

PURPOSE AND COVERAGE: This book is intended for the general public. It is a civil-defense manual describing methods of giving first aid to victims of mass-destruction weapons. A study of this manual is recommended by the authors in order to better acquaint the public with the problem of self preservation in the event of war.

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L 3129-66

6

AM5023887

TABLE OF CONTENTS [abridged]: -- 64

19,55

Ch. I. Giving first aid to victims of nuclear explosion -- 3

6, 4, 55

Ch. II. Giving first aid to victims of chemical warfare -- 39

Ch. III. Methods of preventing infection in bacteriological warfare -- 50

SUB CODE: CB SUBMITTED: 31Oct63 NO REF SOV: 000

OTHER: 000

Card 2/2

KUDRĔVICH, Boris Ivanovich; FARMAKOVSKIY, S.F., doktor tekhn. nauk, red.; DOROFEYEV, I.T., kand. tekhn. nauk, nauchn. red.; MATVEYEV, S.S., kand. tekhn. nauk, nauchn. red.; DANISHEVSKIY, L.V., kand. tekhn. nauk, nauchn. red.; KAL', M.M., red.

[The theory of gyroscopic instruments; selected works] Teoriia giroskopicheskikh priborov; izbrannye trudy. Leningrad, Sudostroenie. Vol.2. 1965. 295 p. (MIRA 18:4)

DANISHEVSKIY, M., konstruktor; FEL'DMAN, Ya., konstruktor.

A standard for antenna insulators is necessary. Standartizatsiia no.2: 59 Mr-Ap '54. (MLRA 7:6)
(Electric insulators and insulation)

DANISHEVSKIY, S. D.

"The introduction of new chemical substances in the national economy from the hygienic point of view."

report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists and Inflectionists, 1959.

DANISHEVSKIY, S.K.

2

2242* Introduction Into Industry of Tungsten-Molybdenum Thermocouples for Measurement of Liquid Steel Temperatures. Promyshlennoe vnedrenie volfram-molibdenovykh termopar dlia izmereniia temperatury zhidkoi stali. (Russian.) S. K. Danishevskii. *Stal'*, v. 15, no. 11, Nov. 1955, p. 984-986.

An inexpensive thermocouple to determine temperatures up to 2400 C for short periods. Photographs, table, graphs, diagrams. 4 ref.

PH

DANISHEVSKIY, S. K

USSR / Atomic and Molecular Physics. Heat. D-4

Abs Jour : Ref Zhur - Fizika, No 4, 1957, 9005

Author : Danishevskiy S.K.
Inst : Central Laboratory of Automation of the Ministry of Ferrous Metallurgy USSR
Title : Setup for Calibration of Tungsten-Molybdenum Thermocouples

Orig Pug : Zavod. laboratoriya, 1956, 22, No 10, 1235-1240

Abst : The calibration of tungsten-molybdenum thermocouples in the 1300 -- 1700° range was carried out with an optical pyrometer in steps of 100°. A thermocouple with two-channel beads of clay was equipped with a protective tubular made of clay and mounter in a hole (diameter 13 mm, length 160 mm) drilled through the central rod of a graphite heater (resistan- 0.017 - 0.040 ohms, voltage 6 -- 12 volts). The optical pyrometer is aimed on the end of the protective tubing of the thermocouple, which is located in the center of the hole.

Card : 1/2

DANISHEVSKIY, S.K.

Immersion thermocouples. Zav. lab. 24 no.12:1470-1475 '58. (MIRA 12:1)

1.TSentral'naya laboratoriya avtomatiki.
(Thermocouples)

SOV/115-59-5-15/27

28(2)

AUTHOR: Danishevskiy, S.K.

TITLE: Selection and Calibration of Tungsten and Molybdenum Wires for Thermocouples

PERIODICAL: Izmeritel'naya Tekhika, 1959, Nr 5, pp 25-29 (USSR)

ABSTRACT: The article presents a new selection and calibration method which is used successfully by Central Laboratory of Automatics MS RSFSR (Tsentral'naya loboratoriya avtomatiki MS RSFSR). Every coil of tungsten and molybdenum wire is checked for its homogeneity at temperatures of 1500 ± 20° C. For this purpose, thermocouples of wire samples (0.5 - 1 m) were taken from the "begining" and the "end" of each coil. If the quantity is higher than 0.03 millivolt, the wire is considered not suitable for thermocouples. Of the coils, which have been checked for their homogeneity, one with a minimum "t.e.d.s." not higher than 0.005 mV is chosen (one of each, tungsten and molybdenum). This is considered as a control coil. The setting of tungsten and molybdenum wires to thermocouples has shown, that the use of wires from different coils of the same type of tungsten (VRN) and molybdenum (M.Ch.) gives differ-

Card 1/2

Selection and Calibration of Tungsten and Molybdenum Wires for Thermocouples

ent calibration characteristics, which are parallel to each other throughout the whole temperature interval (1200-1700° C) (Fig.1). The calibration characteristics should differ more than ± AmV (± 0.03 mV from that of the control thermocouple. For the corresponding inequalities (1) (2) (3) (4) the temperature of 1500° C was chosen. At the present time, the Central Laboratory of Automatics produces large quantities of thermocouples, all of them of two calibrations: 5-56 and 7-56. There are 1 graph, 2 tables, 4 diagrams and 1 Soviet reference.

DANISHEVSKIY, S.K.

New thermoelectric materials. Trudy inst.Kom.stand., mer i izm. prib. no.42:44-52 '60. (MIRA 14:1)
(Thermocouples)

S/131/61/000/004/003/003
B105/B202

AUTHORS: Yefroymovich, Yu. Ye., Vinogradov, V. M., Pirozhnikov, V. Ye., Danishevskiy, S. K.

TITLE: Application of refractory endpieces for controlling the lining temperature of electric arc furnaces by means of thermocouples

PERIODICAL: Ogneupory, no. 4, 1961, 181-184

TEXT: The authors describe thermocouples with refractory endpieces for measuring the temperature of liquid steel and of the refractory lining. The Tsentral'naya laboratoriya avtomatiki (TsLA) (Central Laboratory of Automation) and the zavod "Elektrostal'" (Works "Elektrostal'") are conducting comprehensive work for the automation of the steel melting process in electric arc furnaces. The following persons participate in this work: L. V. Vinogradova, N. I. Voronin, L. I. Gellis, I. A. Getman, V. V. Levchuk, T. Z. Malikova, O. M. Margulis, K. G. Romanchenko, and D. S. Rutman. Fig. 1 shows the arrangement of the thermocouples for continuous temperature measurement of the lining as well as of the

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liquid steel temperature in the electric arc furnace. Thermocouples with tungsten-rhenium electrodes with a content of 5% and 20% of rhenium BP5/20 (VR5/20) which had been developed by the TsLA and the Moskovskiy elektrolampovyy zavod (Moscow Incandescent Lamps Factory) and tungsten-molybdenum electrodes with an addition of 0.5% aluminum, which were produced by the TsNIIChM (Tsentral'nyy nauchno-issledovatel-skiy institut chernoy metallurgii (Central Scientific Research Institute of Ferrous Metallurgy)) proved to be the most stable thermocouples for a continuous temperature control. The temperature of the lining is continuously recorded by a self-recording potentiometer. To select the most suitable endpieces the products obtained from ZrO_2, Al_2O_3, BeO, MgO were tested which had been produced by the VIO, UNIIO (Ukrainskiy nauchno-issledovatel'skiy institut ogneuporov (Ukraine Scientific Research Institute of Refractories)) as well as by the Podol'skiy zavod (Podol'sk Works). The experiments were made in a 20-t furnace operating with a 9000-kva transformer. Maximum stability was observed in high-alumina endpieces which had been produced by the Podol'sk Works of Refractories. The experimental results showed that endpieces with a wall

thickness of more than 1.0 mm, are suited best for the continuous temperature measurement of the lining of walls and arcs during 4.5 hours (duration of melt) (Fig. 4). Endpieces with higher thermal stability are necessary for temperatures exceeding 1700°C. The duration of melting and thus also the overheating of the lining can be reduced by increasing the temperatures of the metal in the period of oxidation. Test melts of remolten ШХ15 (ShKh15) steel showed that with a reduction of the specific current consumption by 50-55 kwh on the average, the average duration of melt could be reduced by 33 and/or 17 min. The control of electrical and thermal conditions resulted in an increase of the average stability of walls and arcs of electric arc furnaces by approximately 3-5 melts. There are 4 figures, 2 tables, and 4 Soviet-bloc references.

ASSOCIATION: TsLA Glavproyektmontazhavtomatiki

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Legend to Fig. 1:
I - immersion thermocouple; II - thermocouple in the arc; III - thermocouple in the wall; 1) metal tube; 2) graphite block; 3) refractory endpiece

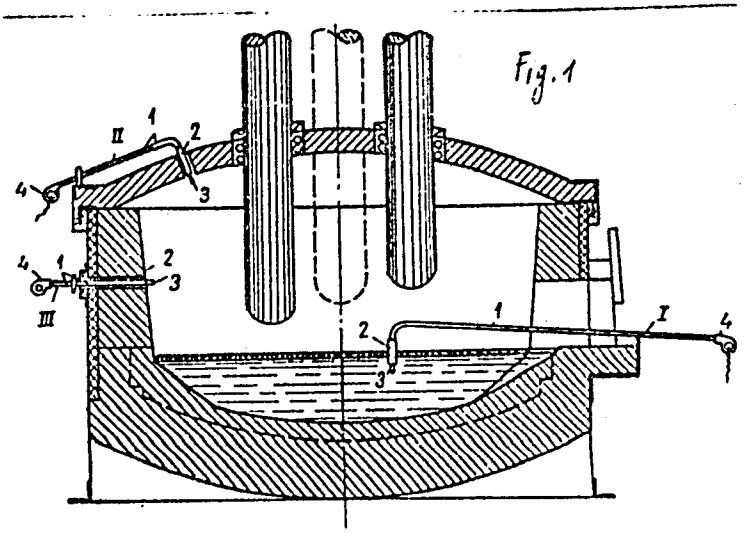

Fig. 1

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Legend to Fig. 4: durability of the endpieces as depending on their wall thickness when measuring the temperatures of electric arc furnaces.
a) durability, hr; b) wall thickness, mm.

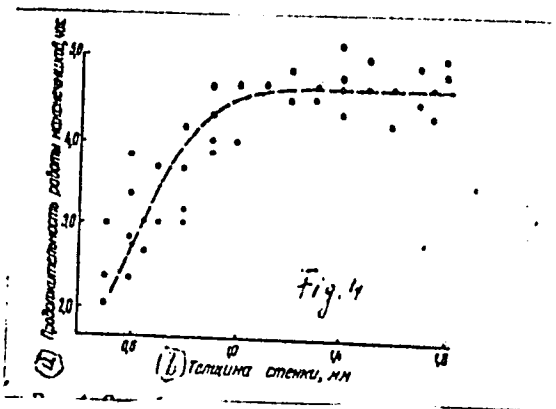

Fig. 4

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A060/A101

AUTHOR: Danishevskiy, S.K.

TITLE: New thermoelectrode materials

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 1, 1962, 11, abstract 1B57 ("Tr. in-tov Kom-ta standartov, mer i izmerit. priborov pri Sov. Min. SSSR", 1960, no. 42 (102), 44 - 52)

TEXT: Three types of thermocouples from the Pt group have been investigated in industrial conditions for the measurement of temperature of molten steel: ПР 10/0, ПР13/1, and ПР30/6 (PR 10/0, PR13/1 and PR30/6). Thermocouples with various framework constructions were tested. The greatest stability is possessed by PR30/6 - no changes in the characteristics occur after 20-25 immersions in molten metal. The temperature deviation of PR 10/0 after 15-30 immersions varied between -8 and -15°C at 850-900°C, and from -15 to -30°C at operating temperatures. The stability of the thermocouple PR 13/1 occupies an intermediate position. The mechanical stability of the thermocouple PR 10/0 is greater than that of the thermocouple PR 30/6 (the former withstood 10-16 immersions without renewing the junction; the latter withstood 4-7 immersions with unannealed wire

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and 5-22 immersions when the wire was annealed). When the electrodes are short - 130 mm in length, the temperature at the point of connection to the compensating leads attains up to 120-140°C 15 sec after immersing the thermocouple in the vat of the open-hearth furnace and up to 800-900°C 2-3 min after extracting the thermocouple from the furnace. Thermocouples with short electrodes cannot be recommended for measuring the temperature of molten steel. Junction protection by an additional Mo cap is inefficient, since the thermal inertia of the thermocouple is then raised by about a factor of two. In the case of destruction of the quartz cap the molybdenum one easily dissolves in the molten steel and does not protect the thermoelectrode. Of the frameworks tested the tupe ТПП-137 (TPP-137) was recognized as better for electric arc furnaces and ТПП-107 (TPP-107) for open-hearth furnaces.

G. Glinkov

[Abstracter's note: Complete translation]

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