

68482

S/126/60/009/01/009/031
E111/E191

24.7600
AUTHOR: Zotov, T.D.

TITLE: Temperature Dependence of Changes in Electrical
Resistance of Magnetite Single Crystals in a Magnetic
Field at Low Temperatures

PERIODICAL: Fizika metallov i metallovedeniye, 1960, Vol 9, Nr 1,
pp 48-52 (USSR)

ABSTRACT: The author carried out the work described to supplement the meagre published information on the influence of temperature on the electrical resistivity changes in a magnetic field in the low-temperature magnetic transformation range of magnetite. Single crystals, previously subjected to cooling below the low-temperature transformation in a magnetic field, were studied in the temperature range 78-213 °K. The Kosoy-Brod magnetite crystals were shown to be of almost stoichiometric composition (main impurity 0.01-0.3% Ti), and without static lattice distortion. Two rods 1.33 mm in diameter and 7.0 and 6.0 mm long were cut from a regular crystal with their axes in the [100] direction and leads were spark-welded on. Temperature was measured with a copper-

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Temperature Dependence of Changes in Electrical Resistance of
Magnetite Single Crystals in a Magnetic Field at Low Temperatures

constantan couple. Before the test the specimen was cooled to liquid-nitrogen temperature in a longitudinal or transverse field of 10 000 Oe or without a field, and then demagnetized. Electrical resistivity measurements were effected during heating at 2 °C per hour in a 20 000 Oe field. Fig 1 shows the relative change in resistivity (continuous line) and the resistivity in a longitudinal field as functions of temperature for a specimen cooled without a magnetic field. The corresponding relative-change curve for the specimen cooled in a longitudinal field is shown in Fig 2. Figs 3 and 4 show the relative-change curves with a transverse field for specimens cooled in a transverse field and without a field, respectively. All the curves of relative change in resistivity show minima at 111.5 and 95 °K. The author attributes these effects to preferential scattering of conduction electrons by fluctuations of different types and discusses some reported related effects (Refs 10, 11 and 12).

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S/126/60/009/01/009/031
E111/E191

Temperature Dependence of Changes in Electrical Resistance of
Magnetite Single Crystals in a Magnetic Field at Low Temperatures

There are 4 figures and 12 references, of which 6 are
Soviet and 6 English.

ASSOCIATION: Institut fiziki metallov AN SSSR
(Institute of Physics of Metals, Acad. Sci. USSR)

SUBMITTED: August 16, 1959

Card 3/3

L 1717-66 EPF(c)/EWT(m)/EWP(b)/T/EWP(w)/EWP(t) IJP(c) JD/JG

ACCESSION NR: AP5021944

UR/0126/65/020/002/0308/0309
539.292:538.114

50
49
3

AUTHOR: Samokhvalov, A. A.; Bamburgov, V. G.; Volkonshteyn, N. V.; Zotov, T. D.;
Ivakin, A. A.; Morozov, Yu. K.; Simonova, M. I.

TITLE: Magnetic properties of Eu_3O_4

SOURCE: Fizika metallov i metallovedeniye, v. 20, no. 2, 1965, 308-309

TOPIC TAGS: magnetization, saturation magnetization, temperature dependence, Curie temperature, Weiss-Ferrari method, magnetic moment, europium compound

ABSTRACT: To elucidate the magnetic properties of Eu_3O_4 the authors measured the temperature dependence of magnetization in the presence of different magnetizing fields at temperatures of upward of 1.65°K and thus determined for the first time the principal magnetic characteristics of Eu_3O_4 : saturation magnetization σ_s and Curie temperature T_C . The measurements were performed with the aid of a pendulum magnetometer. The external magnetic field in the measurements reached 10,000 oe, which sufficed to bring the specimen to magnetic saturation. Through extrapolation from the set of curves $\sigma(H, T)$ to $H = \infty$ the saturation magnetization σ_s was found

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ACCESSION NR: AP5021944

to be $89.4 \text{ gauss}\cdot\text{cm}^3/\text{g}$. From the same curves, using the Weiss-Fowler method of lines of equal magnetization, the authors found the Curie temperature, which proved to be 7.8°K . With its relatively large magnetic moment and low Curie point, this oxide appears a suitable means of verifying the spin-wave theory. Verification of this theory showed that the linear T^2 -dependence of saturation magnetization exists throughout a broad temperature range (from 1.65 to 4.6°K) ($0.6 T_C$). The same dependence is also observed for a number of uncompensated antiferromagnetics and for certain rare earths. Orig. art. has: 1 figure.

ASSOCIATION: Institut fiziki metallov AN SSSR (Institute of Metal Physics, AN SSSR)

SUBMITTED: 20Oct64

ENCL: 01

SUB CODE: IC, EN

NO REF SOV: 000

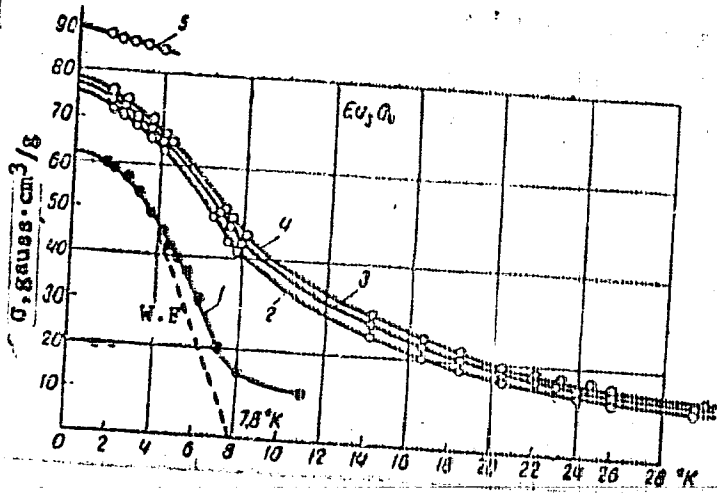
OTHER: 004

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L 1717-66

ACCESSION NR: AF5021944

ENCLOSURE: 01



Temperature dependence of $\chi_{Eu_2O_3}$ in the presence of different fields:

- 1 - $H = 0$; 2 - $H = 15,200$ oe;
 - 3 - $H = 17,300$ oe;
 - 4 - $H = 10,400$ oe; 5 - $H = \infty$;
- broken line denotes the magnetization curve plotted by the Weiss-Ferrari method

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L 07101-67 EWT(d)/EWT(1)/EWT(m)/EWP(t)/EII IJR(c) HD/STU

ACC NR: AP6029113

SOURCE CODE: UR/0048/66/030/006/0979/0980

AUTHOR: Volkenshteyn, N.V.; Zotov, T.D.

ORG: Institute of Metal Physics, Academy of Sciences, SSSR (Institut fiziki metallov Akademii nauk SSSR)

TITLE: Investigation of the temperature dependence of the spontaneous magnetization of a magnetite single crystal at low temperatures [Report, All-Union Conference on the Physics of Ferro- and Antiferromagnetism held 2-7 July 1965 in Sverdlovsk]

SOURCE: AN SSSR, Izvestiya. Seriya fizicheskaya, v. 30, no. 6, 1966, 979-980

TOPIC TAGS: spontaneous magnetization, ferrite, single crystal, temperature dependence, low temperature effect, spin wave theory

ABSTRACT: The authors have employed a pendulum magnetometer of the type described by Domenikali (Rev. Sci. Instrum., 21, 327 (1950)) to measure the spontaneous magnetization of a natural magnetite single crystal at temperatures from 4.2 to 50° K. The 19.3 kOe external magnetic field was more than adequate to insure saturation of the spherical specimen. The main impurity of the specimen was 0.1 to 0.3% titanium, and x-ray studies down to liquid nitrogen temperatures revealed no static lattice deformations. The specimen was cooled through the 111° K transition temperature in an external magnetic field parallel to [100] and the measurements were made with the field in that direction. The spontaneous magnetization M(T) at temperature T was

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L 07101-67

ACC NR: AP6029113

found to be well represented by the formula $M(T)/M(O) = 1 - \alpha T^n$ with $n = 3/2$ and $\alpha = 3.5 \times 10^{-5} \text{ deg}^{-3/2}$, which does not conflict with the spin wave theory of the spontaneous magnetization of ferrites. The experimental data exclude the possibility that $n = 2$ in the above formula. The authors thank A.P.Pronina for assisting with the work. Orig. art. has: 2 figures and 1 formula.

SUB CODE: 20

DATE SUBM: 00

ORIG. REF: 008

OTH REF: 003

Card

2/2



ACC NR: AP6026700

SOURCE CODE: UR/0181/66/008/008/2450/2454

44
B

AUTHOR: Samokhvalov, A. A.; Bamburov, V. G.; Volkenshteyn, N. V.; Zotov, T. D.;
Ivakin, A. A.; Morozov, Yu. N.; Simonova, M. I.

ORG: Institute of Metal Physics, AN SSSR, Sverdlovsk (Institut fiziki metallov AN SSSR)

TITLE: Magnetic properties of EuO at low temperatures

SOURCE: Fizika tverdogo tela, v. 8, no. 8, 1966, 2450-2454

TOPIC TAGS: europium compound, spontaneous magnetization, magnetic susceptibility

ABSTRACT: EuO was prepared by the solid-state reaction $\text{Eu}_2\text{O}_3 + \text{C} \rightarrow 2\text{EuO} + \text{CO}$, and its magnetization curves were plotted for 4.2, 20.4 and 82°K. The temperature dependence of spontaneous magnetization was measured at 1.7°K and above, and was analyzed from the standpoint of the spin-wave theory. At 4.2 and 20°K, the magnetization reaches saturation in fields slightly above 4000 Oe. The paramagnetic Curie point and the effective magnetic moment, both determined from the temperature dependences of the magnetic susceptibility, were found to be 75°K and 7.3 μB respectively. The exchange integral I was calculated from the low-temperature range ($T < T_c/2$) and found to be equal to 0.394k. It is shown that when the term with $T^{5/2}$ is taken into account in Bloch's law, the range of applicability of Bloch's law expands, but the value of coefficient C_1 at $T^{5/2}$, determined experimentally and giving the best agreement with the experi-

ACC NR: AP6026700

mental spontaneous magnetization curve, differs markedly from the calculated value.
Orig. art. has: 4 figures, 1 table and 3 formulas.

SUB CODE: 20/ SUBM DATE: 10Nov65/ ORIG REF: 002/ OTH REF: 005

Card 2/2 *hh*

L APPROVED FOR RELEASE: Thursday, September 26, 2002

CIA-RDP86-00513R002065510005-7

2

ACC NR: AP6029115

SOURCE CODE: UR/0048/86/030/006/0984/0989

AUTHOR: amokhvalov, A.A.; Ivakin, A.A.; Morozov, Yu.N.; Simonova, M.I.; Baburov, V.G.; Volkenshteyn, N.V.; Zotov, T.D.

ORG: none

TITLE: Magnetic, high frequency, and electric properties of some oxide compounds of divalent europium Report, All-Union Conference on the Physics of Ferro- and Anti-ferromagnetism: held 2-7 July 1965 in Sverdlovsk

SOURCE: AN BSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 6, 1966, 984-989

TOPIC TAGS: ferromagnetism, dielectric constant, dielectric loss, magnetization, temperature dependence, europium compound, oxide, aluminate, silicate, *ELECTRIC PROPERTY, MAGNETIC PROPERTY*

ABSTRACT: The authors have synthesized EuO , Eu_3O_4 , $\text{Eu}_3\text{Al}_2\text{O}_6$, EuAl_2O_4 , Eu_2SiO_4 , and two series of solid solutions containing EuO and CaO , or EuO , CaO , and Eu_2O_3 , and have investigated their magnetic and electric properties. The investigation was undertaken because the high magnetization of divalent europium compounds make them of interest in connection with technical applications and the simple crystal structure of EuO makes it a suitable material with which to compare the predictions of theories of ferromagnetism. The magnetization measurements were made with a Domsnikali type pendulum magnetometer in fields up to 19 kOe and at temperatures down to 1.6° K. The ferro- and paramagnetic resonance of EuO was investigated at 9 and 35.7 kMc down to 4.2° K.

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ACC NR: AP6029115

and of the other materials, at room temperature. The dc electrical properties of the materials were investigated and their ultrahigh frequency complex dielectric constants were measured with a resonant cavity technique. Some of the measurement results are presented graphically and others are discussed briefly. The saturation magnetization of EuO, extrapolated to infinite field and 0° K, was found to be 232 Gs cm³/g. The saturation magnetization of Eu₃O₄ was approximately one-third that of EuO, indicating that the ferromagnetic properties of Eu₃O₄ are due to the divalent Eu ion. The low temperature spontaneous magnetization of EuO was a linear function of T^{3/2}, and not of T², whereas that of Eu₃O₄ and of the solid solutions containing it was a linear function of T², and not of T^{3/2}. The aluminates and silicate had a g factor (determined by paramagnetic resonance) of 2, as did EuO, and their spontaneous magnetizations followed the T^{3/2} law. The ultrahigh frequency conductivity of EuO was found to be approximately 5 x 10⁻³ ohm⁻¹ cm⁻¹, which is some six orders of magnitude higher than the dc conductivity. It is suggested that the same ultrahigh frequency dielectric loss mechanism is active in EuO as in the 3d transition metals. Other results than those listed above are presented. The authors thank S.V. Vonsovskiy for his interest and advice. Orig. art. has: 4 figures and 2 tables.

SUB CODE: 20 SUBM DATE: 00 ORIG. REF: 001 OTH REF: 006

Card

2/2

edk

ZOTOV, T.D.

Specific electric resistance of natural magnetite single crystals.
Kristallografiia 9 no.6:929-930 M-D '64. (MIRA 18:2)

1. Institut fiziki metallov AN SSSR.

ZOTOV, V.; SHEREMET, A.

Production and finance. Fin. SSSR 37 no.7:53-61 JI '63.
(MIRA 16:8)
(Moscow Province--Industrial management) (Moscow Province--Finance)

MIKOYAN, A; PODGORNYY, N.; ZOTOV, V.; PAVLOV, D.; DUDIN, Yu.; KOROLEV, D.;
MASTEROV, N.; NEVSKIY, Ye.; KLEMENCHUK, A.; ARSENT'YEV, V.; GAVRILOV, A.;
PARSHIKOV, M.; ZHARSKIY, A.; SOKOLOVSKIY, V.

Vladimir Evdokimovich Chalyi; obituary. Kons.i ov.prom. 17 no.12:
48 D '62. (MIRA 15:12)
(Chalyi, Vladimir Evdokimovich, 1905-1962)

ZOTOV, V.

For further progress in the meat industry. Mias.ind. SSSR 31
no.6:1-3 '60. (MIRA 13:12)

1. Zamestitel' predsedatelya Gosplana SSSR.
(Meat industry)

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7
APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

ZOTOV, V.

Irkutsk Veterinary Research Station. Trudy VIVV 23:374-375 '59.
(MIRA 13:10)
(Irkutsk--Veterinary research)

ZOTOV, V., starshiy nauchnyy sotrudnik

Felt that is not made of wool. Prom.koop. 14 no.8:20 Ag '60.
(MIRA 13:8)

1. Tsentral'nyy nauchno-issledovatel'skiy institut shersti,
Moskva.

(Felt)

ZOTOV, V.

Manufacture of consumers' goods in the seven-year plan.
Sov.torg. 33 no.3:3-13 Mr '60. (MIRA 13:6)

1. Zamestitel' predsedatelya Gosplana SSSR.
(Russia--Manufactures) (Food industry)

ZOTOV, V.

Seven-year plan for the meat industry. Mias. ind. SSSR 29 no.6:
1-4 '58. (MIRA 11:12)

1. Zamestitel' predsedatelya Gosplana SSSR.
(Meat industry)

LYASHENKO, V., ZOTOV, V., IVANOV, V., and ANDREYEV, V.

"Corrosion Resistance of Certain Materials in Sodium and Lithium."

paper to be presented at 2nd UN Intl. Conf. on the peaceful uses of Atomic Energy, Geneva, 1 - 13 Sep 58.

ZOTOV, V.

A "chicken war." Vnesh. torg. 43 no.1:24-25 '64.
(MIRA 17:2)

ZOTOV, V.; YERSHOVA, I., red.; IVANOV, N., tekhn. red.

[Guide to the K.E.Tsiolkovskii Residence Museum]
Putevoditel' po domu-muzeiu K.E.Tsiolkovskogo. Kaluga,
Kaluzhskoe knizhnoe izd-vo, 1961. 81 p. (MIRA 17:3)

1. Kaluga. Dom-muzei K.E.Tsiolkovskogo.

KOSTGIN, A.; NOVIKOV, V.; MURAV'YEVA, N.; ZOTOV, V.; AKIMOV, I.;
SPORYSHEV, V.; KOLOSOVA, V.; CHESNOKOV, N.; NEPEDOVA, O.;
BOGAYEVA, A.; PIKOVSKIY, G.; KARMANOV, M.; SIYTAM, Ye.;
KHODAKOVA, S.; KUSHNER, P.; BLYAKHMAN, I.; BASSIAS, L.;
KINESHEMTSEVA, A.; REZNIKOV, M.; KALININ, S.; MILANOVA, D.;
VENEROVA, R.; AGROSKINA, M.; RATNER, B.; NARODETSKIY, B.;
MARKOVA, L.; GOLUBENKOVA, N.; TSEKHANSKAYA, S.; TERENT'YEVA, N.;
NESTEROVA, S.; AKSENOV, S.

D.M.Khazan-Andreeva; obituary. Tekst.prom. 21 no.12:90 D '61.
(MIRA 15:2)
(Khazan-Andreeva, Dora Moiseevna, 1894-1961)

ZOTOV, V.

Fight for high quality and greater quantity. Mias. ind. SSSR 29
no.1:1-5 '58. (MIRA 11:3)

1. Ministr SSSR, samestitel' predsedatelya Gosplana SSSR.
(Meat industry)

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APPROVED FOR RELEASE: Thursday, September 26, 2002

CIA-RDP86-00513R002065510005-7
APPROVED FOR RELEASE: Thursday, September 26, 2002

AMSTISLAVSKIY, D.M.; KOVALEVSKIY, S.Ye.; ZOTOV, V.A.

Automatic temperature measurement in control heating flues of coke
ovens. Koks i khim. no.1:35-39 '58. (MIRA 11:2)

1. Zhdanovskiy koksokhimicheskiy zavod.
(Coke ovens) (Pyrometers and pyrometry)

AVIROM, S.M., kand. tekhn.nauk, nauchn. sotr.; GLOTSER, L.I., kand. tekhn.nauk, nauchn. sotr.; GORELIK, S.A., kand. tekhn. nauk, nauchn. sotr.; LEYTES, L.G., kand. tekhn. nauk, nauchn. sotr.; PLATONOVA, Ye.I., nauchn. sotr.; KOPKOVA, M.V., kand. tekhn. nauk, nauchn. sotr.; Prinyati uchastiyev: ZOTCOV, V.A., nauchn. sotr.; FILATOVA, M.V., nauchn. sotr.; NIKITIN, G.N., nauchn. sotr.; ROMASHOV, A.I.; GODINER, F.Ye., red.

[Recovery and use of secondary wool in consumers' goods] Poluchenie i primeneniye vtorichnoi shersti v izdeliyakh narodnogo potrebleniya. [By] S.M.Avirom i dr. Moskva, Izd-vo "Legkaia industriia," 1964. 260 p. (MIRA 17:5)

1. Nachal'nik pryadil'nogo tsekha Pushkinskoy fabriki No.13 (for Romashov).

ZOTOV V.A.

68-1-9/22

AUTHORS: Amstislavskiy, D.M., Kovalevskiy, S.Ye., and Zotov, V.A.
TITLE: Experimental Automation of Measuring Temperatures in the Control Heating Flues of Coke Ovens (Opyt avtomatizatsii izmereniya temperatur v kontrol'nykh otopitel'nykh kanalakh koksovykh pechey)

PERIODICAL: Koks i Khimiya, 1958, no.1, pp. 35 - 39 (USSR)

ABSTRACT: Experiments on the application of stationary recording pyrometers for measuring temperatures in the coke oven control heating flues carried out on the Zhdanov Coke Oven Works are described. The diagram of the installation is shown in Fig.1. Radiation pyrometers enclosed in water-cooled jackets (Fig.2) were placed in specially made shafts on the top of the battery over the 4th control flue on the coke and pusher sides on every 10th oven. The optical part of pyrometers was kept clean by a stream of air. The recording equipment was placed in the control room. Examples of records obtained are given in Figs. 3-6 and Tables 1-4. Causes of the variation of the temperature in the control flue during the coking period are discussed: before pushing the temperature reaches maximum, after the oven is pushed and recharged, the temperature falls to a minimum and rises again to a maximum, then falls again on charging the neighbouring oven, reaches the second minimum

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Experimental Automation of Measuring Temperatures in the Control
Heating Flues of Coke Ovens. 68-1-9/22

(higher than the first minimum) and rises again to a maximum before the oven is pushed (Fig.6,1- descending stream, 2 - ascending stream). The results obtained indicated that an automatic measuring of temperatures in the control flues is possible. There are 4 tables and 6 figures.

ASSOCIATION: Zhdanov: Coke Oven Works (Zhdanovskiy koksokhimicheskiy zavod)

AVAILABLE: Library of Congress

Card 2/2

CA

Preparation of analytical solutions of tanning extracts from large quantities of the solid extract. V. A. Zotov and S. S. Martynova. *Azobenzon-Oshchivaya Pisma*, U. S. S. R. 12, No. 4, 55(1939); *Chem. Zentr.* 1939, II, 2004. -- In dissolving 100-200 g. of tanning ext. and diln.

to 0.5 to 1 l., the soln. becomes turbid owing to the pptn of phlobaphenes. It is recommended to dissolve 80 g. of the ext. in 5 vols. of hot water and to boil the mixt. on a water bath for 15 min. to complete solution, to transfer to a 2-l. measuring flask cooling on the water bath to 21°, to fill to the mark with cold water, to mix thoroughly, to transfer 100 cc. to a second flask and to dil. with boiling water to 2 l. The turbidity is thus eliminated. A. A. Bochtlingk

ASB-51A METALLURGICAL LITERATURE CLASSIFICATION

COIN
METALLS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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CA

Rapid determination of the moisture content in dry tanning extracts. V. A. Zotov. *Koshevanno-Otkrytiya Prom. S. S. S. R.* 18, No. 11, 34-5 (1930). An ext. sample derived from the "Kestner" extn. app. is cooled to room temp., cut into shavings and weighed on an analytical balance. The H₂O detn. is then carried out in a Dean and Stark app. with xylene or gasoline as solvent.
A. A. Bochtlingk

CHARACTER ELEMENTS

MATERIALS

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00
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ASEYEV, Georgiy Mikhaylovich; ZOTOV, Veniamin Alekseyevich;
KUKOLEVSKIY, G.M., red.; ROMANOVA, Z.A., tekhn. red.

[Medical control of the physical education of students]
Vrachebnyi kontrol' za fizicheskim vospitaniem studentov.
Moskva, Medgiz, 1963. 193 p. (MIRA 16:7)
(SPORTS MEDICINE) (COLLEGE SPORTS)

~~APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7~~
YASTROPIN, Leonid Sergeyevich; BUSHIN, V.P., retsenzent; ZOTOV, V.A.,
retsenzent; MEDVEDEV, P.I., retsenzent; EYZERMAN, V.L.,
retsenzent; REGEL'SON, L.M., kand. tekhn. nauk, dots.,
red.; DOZORISEVA, Ch.I., red.

[Elements of antenna and wave-guide systems] Elementy
antennno-volnovodnykh ustroystv. Moskva, Izd-vo Mosk. univ.,
1964. 102 p. (MIRA 17:11)

I.Z.; KASPAROVA, S.A.; KONOROVA, Ye.V.; KOPCHITSEH,
V.A., red.

[Exercise therapy in the psychiatric hospital] Iachetnaia
fizicheskaia k'l'tura v psikhiatricheskoi bol'nitse. Mo-
skva, Meditsina, 1965. 235 p.
(MIRA 18:8)

CHERNOV, I.S.; POYARKOV, A.A.; ZETZEL, V.A., kand. veter. nauk (Smolenskaya oblast'); KRYUCHKOV, I.I., starsh'y veterinarnyy vrach

Prophylaxis of distycoaulosis in cattle; a selection of articles.
Veterinariia 41 no 4:45-48 Ap '65. (MIRA 18:6)

1. Upravleniya veterinarii Ministerstva sel'skogo khozyaystva RSFSR (for Chernov). 2. Nachal'nik veterinarnogo otdela Smolenskoy oblasti (for Poyarkov). 3. Zavodoyushchiy Priborskiy veterinarnoy laboratoriy Kalininskoy oblasti (for Kryuchkov).

Moscow Veterinary Academy, Min Higher Education USSR

ZOTOV, V. A.- "An experiment in curing ruminant agricultural animals of the basic helminthoses under the conditions of the enlarged kolkhoz in Moscow Oblast." Moscow Veterinary Academy, Min Higher Education USSR. Moscow, 1956.
(Dissertation for the Degree of Candidate in Veterinary Sciences)

SO: Knizhnaya Letopis' No. 20, 1956

ZOTOV, V.A.

USSR

Classification of packing devices. Standartizatsia
26 no.9:17-21 S '62. (MIRA 15:9)
(Packing (Mechanical engineering))

ZOTOV, V.A., inzh.

Investigation of helical ring sealings. Vest.mashinotr. 44
no.1:7-12 Ja '64. (MIRA 17:4)

KUNIN, Samuil Karpovich; ZOTOV, V.A., redaktor; PETROVA, M.D., tekhnicheskii redaktor

[Problems of pre-school hygiene] Voprosy doshkolnoi gigieny. Moskva, Gos. uchebno-pedagog. izd-vo Ministerstva prosveshchenia (MLRA 8:5)
RSFSR, 1954. 212 p.
(Children--Care and hygiene)

KAZAKOV, B.N., kandidat veterinarnykh nauk; **ZOTOV, Y.A.**, aspirant.

Intramuscular carbon tetrachloride injections in fascioliasis
in sheep. Veterinariia 32 no.8:50-52 Ag '55. (MIRA 8:10)

1. **Nadterechnaya rayvetlechebnitsa, Greznskey oblasti.**
(VETERINARY MATERIA MEDICA AND PHARMACY)

ZOTOV, V. A.

Tanning

Efficient method of extracting tanbark material. Leg. prom. 12 No. 5, 1952.

Monthly List of Russian Accessions, Library of Congress, August 1952. Unclassified.

157A

Preservation of oak extract. M. I. Karpman and V. A. Zotov. *Lezhaya Prom.* 11, No. 6, 43 (1951) - Satisfactory preservatives in open storage are 2% *d*-naphthol, 0.5% HgI₂, and 1% chloramine by wt. of the liquid ext. The HgI₂ is mixed with an equal amt. of KI before adding. Preservation with *p*-dichlorobenzene, Na₂SO₃, chloroform, formalin, xylene, and DDT proved unsatisfactory. In air-tight containers, satisfactory preservatives are *d*-naphthol 0.25, HgI₂ 0.1, Na₂SO₃ 1, HCHO 0.3, and chloramine 1% by wt. of liquid ext. B. Z. Kamich

L 21786-66 EMI(1)/EMA(H)
ACC NR: AP6002873

SOURCE CODE: UR/0286/65/000/024/0035/0035

AUTHOR: Zotov, V. A.

ORG: none

TITLE: A method for automatic frequency trim of superhigh frequency oscillators
(resonators). Class 21, No. 176954

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 24, 1965, 35

TOPIC TAGS: oscillator, superhigh frequency, frequency selection, automatic frequency control

ABSTRACT: This Author Certificate presents a method for automatic fine tuning of the frequency of oscillators (resonators) of the superhigh frequency range with the use of a periodically retuned frequency selection device. This design eliminates the automatic fine tuning high frequency standard from the circuit. The automatic frequency trim is accomplished by setting and maintaining as constant the time intervals between the successive selections of the frequency selection device. The selections are retuned with a constant average rate. The automatic fine tuning is also accomplished by setting and maintaining the harmonics of the stabilized

Card 1/2

UDC: 621.316.726.1

L 21786-66
ACC NR: AP6002873

oscillator (resonator). The frequency of the stabilized oscillator (resonator) is changed by altering the magnitude of the fixed time interval with a constant rate of retuning of the frequency selection device. The frequency can also be changed by altering the tuning rate of the frequency selection device with a constant value of the fixed time interval.

SUB CODE: 09/ SUBM DATE: 27Nov64

Card 2/2 *ULR*

ZOTOV, V.A.

Effect of the physicomachanical properties of shrub stems
on their cutting. Nauch. trudy AKKH no.32:205-216 '64.

Selecting the optimum shape of the cutting edge in support-
less cutting. Ibid.:217-224 (MIRA 19:1)

AKHMEDBABAYEV, M.Kh.; ARIFDZHANOV, E.A.; BELOUSOV, N.A.; BELYAKOV, S.P.;
ZQTOV, V.G.; ISAYEVA, Z.D.; MAKHMUDOV, I.A.; ISHCHEKOV, F.S.;
KRASIL'NIKOV, Ya.A.; NIKOL'SKIY, I.P.; NETSETSKIY, A.M.;
PERGAT, F.F.; PAVLOVSKAYA, M.D.; SAMSONOV, L.S.; POLIZHAYEV,
A.I.; SMIRNOV, F.Ye.; SABININ, M.N.; SHUTYAYEV, N.A.; GHIZHIK,
V.I.; KARPENKO, P.M.; IMEROV, A.I.

Mikhail Aleksandrovich Nenetskii; obituary. Veterinaria 37
no.10:94 0 '60. (MIRA 15:4)
(Nenetskii, Mikhail Aleksandrovich, 1899-1960)

BURAKOV, Ye.B., inzh.; ZOTOV, V.G., inzh.; NESTEROV, A.A., inzh.;
SHAMRAY, B.V., kand.tekhn.nauk

Magnetic-transistor amplifier for a thermal e.m.f. to d.c. converter.
Izv. LETI no.45:194-200 '61. (MIHA 10.5)
(Electric current converters) (Telemetry)

39213
S/263/62/000/007/012/014
1007/1207

26.1430

AUTHOR: Burakov, E. B., Zotov, V. G., Nesterov, A. A. and Shamray, B. V.
TITLE: Magnetic semiconductor amplifier for the conversion of thermoelectromotive force into d.c. voltage
PERIODICAL: Referativnyy zhurnal, otdel'nyy vypusk. Izmeritel'naya tekhnika, no. 7, 1962, 49, abstract 32.7.318. "Izv. Leningr. elektrotekhn. in-ta", no. 45, 1961, 194-200

TEXT: Description is given of a magnetic semiconductor amplifier for conversion of thermoelectromotive force into d.c. voltage according to the a.c. amplifying method. The amplifier consists of three components—modulator, a.c. amplifier and rectifier. The modulator is a magnetic voltage amplifier with a double-frequency output, permitting separate adjustment of modulus and phase in the a.c. windings, and hence equalization of odd (uneven) harmonics. The modulator is fed from a semiconductor RC-generator of 8.5 kcs. At an input voltage of about 4 to 5 Mv, the amplifier has satisfactory linear characteristics. The output resistance is 70 ohms, the sensitivity 10 microvolts and the voltage amplification 4000 volts. The amplifier is designed for a load of 4000 ohms. X

[Abstracter's note: Complete translation.]

Card 1/1

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7"

ZOLOV, V.D., starshiy operator blyuminga.

New flowsheet for rolling on blooming mills. Metallurg 3 no.12:37-38
D '58. (MIRA 11:12)

1.Zavod "Krasnyy Oktyabr'."
(Rolling mills)

AUTHOR: Zotov, V.D. SOV/130-58-12-17/21
TITLE: New Rolling Schedule for a Blooming Mill (Novaya skhema
prokatki na blyuminge)
PERIODICAL: Metallurg, 1958, Nr 12, pp 37-38 (USSR)
ABSTRACT: The author states that his shift have increased blooming-
mill productivity by 8% since 1955 by adopting a new
schedule, which he outlines. A three-man crew is used
and their work and that of the mill has been organized so
as to reduce idle time, one of the innovations being
proposed by the author. He considers that reserves of
productivity remain.
ASSOCIATION: "Krasnyy Oktyabr'" works

Card 1/1

APPROVED FOR RELEASE Thursday, September 26, 2002 CIA-RDP86-00513R00206551000517

APPROVED FOR RELEASE Thursday, September 26, 2002 CIA-RDP86-00513R00206551000517

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APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7
APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510005-7

ZOTOV, Vasilii Fedorovich; YARTSEV, N., red.; KUZNETSOVA, A., tekhn.
red.

[Lamochkin's brigade assembles houses] Montazh vedet brigada
Lamochkina. Moskva, Mosk. rabochi1, 1961. 26 p. (MIRA 15:3)
(Building)

PROSHLYAKOV, A.I.; ZHELEZNYKH, V.I.; BYCHEVSKIY, B.V.; ZOTOV, V.F.;
LYAMIN, N.I.; IVANOV, D.S.; BLAGOSLAVOV, B.V.; KHANOV, M.P.
PANKOV, M.A.; OGORODNIKOV, V.A.; FILONENKO-BORODICH, M.M.;
IL'YASEVICH, S.A.; RABINOVICH, I.M.; OLISOV, B.A.; DAVYDOV,
S.S.; ZIMIN, D.D.; SHEPK, B.F.; USKOV, V.N.; BUKNIK, P.K.

Boris Aleksandrovich Olivetskii; obituary. Voen.-inzh.zhur.
101 no.12:42 D '57. (MIRA 10:12)
(Olivetskii, Boris Aleksandrovich, 1896-1957)

ZOTOV, V.G., veterinarnyy vrach

From the practices in the use of biogenic stimulants. Veterinariia
38 no.3:29 Mr '61 (MIRA 18:1)

1. Uzbekskaya respublikanskaya veterinarnaya laboratoriya.

ZOTON, OVI, (Veterinary Surgeon, Veterinary Laboratory of the Republic, Uzbek SSR).

"Experience in the utilization of biogenic stimulants."

Veterinariya, Vol. 38, No. 3, 1961, p. 29.

ZOTOV, Y.I.

Interaction of monoamines of aluminum bromide and iodide with
certain metals. Ukr.khim.zhur. 19 no.5:473-478 '53. (MLRA 8:2)

1. Kiyevskiy politekhnicheskiiy institut, laboratoriya neorganiches-
koy khimii.
(Aluminum halides) (Ammines)

ZOTOV, V.I., inzh.; YAKOBSON, G.I., inzh.

Concerning the construction of the boiler chasis within the framework
of the boiler plant. Elek. sta. 32 no.2:87-89 F '61.

(MIRA 16:7)

(Boilers)

UDOVENKO, V.V.; ZOTOV, V.I.

Interaction of mercury (II) halides with monoethanolamine halohydrates.
Izv.vys.ucheb.zav.;khim.i khim.tekh. 6 no.4:543-545 '63.(MIRA 17:2)

1. Kiyevskiy politekhnicheskoy institut .Kafedra obshchey i neorgani-
cheskoy khimii.

ZOTOV, V.I., inzh.

Effect of transverse nonsymmetry on the threshold of the static stability of a simple electrical system. Izv. vys. ucheb. zav.; energ. 9 no.1:1-8 Ja '66. (MIRA 19:1)

1. Dal'nevostochnyy politekhnicheskii institut imeni V.V. Kuybysheva. Predstavlena kafedroy elektricheskikh sistem. Submitted November 26, 1964.

ИЗВЕЩАНИЕ И.А. Шенников, (дата: 1985 г. 1. 1. 1985)

Effect of non-symmetry and intermediate load inputs on the stability
of intersystem couplings. Elektricheskoe no. 517-12. May '85.
(MIRA 3886)

1. Moskovskiy energeticheskiy institut.

3152 ZOTOV. V. I. AND ASTAKHOV, A. I.

Zanimatel'naya Khmiya. Kiev, "Molody." 1954. 135. (5) s.s. ill. 23 sm.
30.000 Ekz. 3 R. 80K. Vpier.- Na ukr. Yaz. (54-56722) 54-542.

ZOTOV, V. I.

5391. Zotov, V. I. Parkticheskiye raboty i uprazhneniya po obshchey khimii.
(Ucheb. posobiye dlya vyssh. ucheb. zavedeniy Ukr. SSR) Pod red. Yu. K. Delimars-
kogo. Kiyev, "Rad. shkola", 1954. 264 s. s ill. 23 sm. 5 ekz. 6r. 70 k. V.
per.---Na ukr. yaz. (55-659) 54 (076.5)

SO: Knizhnaya Letopis', Vol. 1, 1955

ZOTOV, V.I.

Zotov, V.I., Zubkov, A.P., and Chishevskiy (Mil. Vet. Lab No 413)

"Portable Unit 'VL-413' for Determination of Sulfur Dioxide in Gas Chambers,"

SO: Veterinariya, Vol 20, No 2, 1943.

L 08082-67 EWT(1) TT/AT
ACC NR: AP7001674

SOURCE CODE: UR/0143/66/000/008/0001/0009

AUTHOR: Zotov, V. I. (Engineer)

ORG: Far Eastern Polytechnical Institute im. V. V. Kuybyshev (Dal'nevostochnyy politekhnicheskikh institut)

TITLE: Influence of automatic control of excitation on static stability of an electrical system in an asymmetrical operating mode

SOURCE: IVUZ. Energetika, no. 8, 1966, 1-9

TOPIC TAGS: automatic control technology, electric generator

ABSTRACT: An attempt to investigate the influence of an asymmetrical operating mode on the stability limit of a system of automatic control of generator excitation. The work analyzes a simple system -- a generator operating through a passive quadrupole into conductors of unchanging voltage. The system is assumed ideally stabilized. It is determined that if the generator is equipped with automatic excitation control of current deviations, the determination of the transmitted power limit in an asymmetrical operating mode using only the direct sequence components can lead to a considerable error. The appearance of an asymmetrical operating mode with this type of generator is equivalent to an increase in the amplification coefficient depending on the degree and type of asymmetry. Orig. art. has: 5 figures, 20 formulas and 1 table. [JPRS: 38,490]

SUB CODE: 13, 09 / SUBM DATE: 01Mar65 / ORIG REF: 006

UDC: 621.310.016.351

Card 1/1 *plw*

0924 1492

**VLADZIYEVSKIY, A.P., doktor tekhn. nauk; ZOTOV, V.K.; ZUZANOV, G.I.; PEREPRELI-
TSEY, P.G.; SVIRIDENKO, S.Kh.; SHCHEGOL'KOVA, L.I.; BORUSHMOY, I.V.,
red.; KOGAN, F.L., tekhn. red.**

[Machine-tool industry in Italy; survey] Stankostroenie Italii; ob-
zor. Moskva, TSentr. in-t nauchno-tekhn. informatsii mashinostroeniia,
1961. 172 p. (MIRA 14:9)

(Italy--Machine-tool industry)

GOLOVANOV, Yu.N.; BREZHNEVA, N.Ye.; OZIRANER, S.N.; YEREMIN, A.A.; ZOTOV, V.L.

Mechanism underlying high-temperature volatilisation of ruthenium
coprecipitated with various substances. Atom. energ. 15 no.3:
219-223 S '63. (MIRA 16:10)

(Ruthenium) (Evaporation)

GOLOVANOV, Yu.N.; BREZHNEVA, N.Yá.; OZIRANER, S.N.; YEREMIN, A.A.; ZOTOV, V.L.

Dependence of the chemical stability and crystallization power of
melted glass on its composition and the conditions of its preparation.
Atom. energ. 15 no.2:130-138 Ag '63. (MIRA 16:8)
(Glass manufacture--Chemistry)

SMIRNOVA, V.F., inzh.; ZOTOV, V.L., inzh.; Prinsipal'nyy uchastiyets: BELYAYEV,
N.N.; OCHKASOVA, Z.P., inzh.

Coating of headwear with a nap finishing by means of the
electrostatic method. Nauch.-issl. trudy TSNII Shersti
no.17:124-126 '62. (MIRA 17:12)

1. Rukovoditel' laboratorii avtomatizatsii Tsentral'nogo
nauchno-issledovatel'skogo instituta sherstyanoy promyshlennosti
(for Belyayev).

AUTHOR: Golovanov, Yu. N.; Krasovskiy, A. I.; Zotov, V. L.; Kuz'mina, V. P.

TITLE: Deposition of tungsten from the vapor phase

SOURCE: Zhurnal neorganicheskoy khimii, v. 10, no. 8, 1968, 194-1950

TOPIC TAGS: metal vapor deposition, tungsten fluoride, tungsten

ABSTRACT: Investigations carried out by the authors for several years established the following: the reduction of WF_6 to metallic W over heated tungsten occurs only at 3000°C or above. At lower temperatures, the reduction of WF_6 to metallic W is not observed.

APPROVED FOR RELEASE: Thursday, September 26, 2002

CIA-RDP86-00513R002065510005-7

APPROVED FOR RELEASE: Thursday, September 26, 2002

CIA-RDP86-00513R002065510005-7

GOLOVANOV, Yu.N.; KRASOVSKIY, A.I.; ZOTOV, V.L.; KUZ'MIN, V.F.

Tungsten precipitation from the vapor-gas phase.
Zhur.neorg.khim. 10 no.8:1948-1950 Ag '65.

(MIRA 19:1)

1. Submitted December 19, 1964.

TITOV, V.A.; ZOTOV, V.L.; MEDVEDEVA, S.F.

Corrosion and protection of the equipment of chemical plants.
Khim.prom. no.4:286-288 Ap '61. (MIRA 14:4)

1. Moskovskiy institut stali imeni I.V.Stalina.

(Chemical engineering - Equipment and supplies)
(Corrosion and anticorrosives)

21783

18,8300 1138 1208 1454

S/064/61/000/004/003/003
B110/B207

AUTHORS: Titov, V. A., Zotov, V. L., Medvedeva, S. F.
TITLE: Corrosion and the protection of the equipment of chemical factories

PERIODICAL: Khimicheskaya promyshlennost', no. 4, 1961, 64-66

TEXT: Subject of the present study is the selection of a corrosion-proof metal for reaction vessels of melamine production at 250°C and 120 atm, and the rectification columns for the separation of hydrochloric acid and methanol (15.3% HCl; 22.8% H₂O and 61.9% CH₃OH). Cr-3 (St-3) vessels must be replaced after 1.5-2 months, since in melamine production their upper parts are affected by corrosion-active water-, ammonia- and hydrogen sulfide vapors. Zinc U-2 (Ts-2), cadmium (99.78% Cd), aluminum A-0 (A-0), Cr-3 (St-3), steel 1X18H9T (1Kh18N9T) samples as well as of the nickel alloy ЭИ-461 (EI-461) castalloy, of the type "B" ("V") were suspended on fluoroplast threads in the circular space between the body of the reaction vessel and the melamine cartridge. Zinc showed the least
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B110/B207

Corrosion and the protection ...

stability, followed by cadmium with a corrosion of 127 g/m^2 in 107 hr, (Fig.). Aluminum was very stable (approximately 5 g/m^2 in 207 hr, depth index 0.09 mm/year), its stability is due to the good protective properties of its oxide layer, stainless steel 1Kh18N9T (depth index in 207 hr = 0.2 mm/year). ЭИ-461 (EI-461) were less stable (depth index in 207 hr = $0.87/\text{year}$ and St-3, 70 g/m^2 in 100 hr. It is suggested to line the St-3 reaction vessel with a $\leq 3 \text{ mm}$ thick layer of 1Kh18N9T stainless steel. The following alloys were tested with respect to their suitability for rectification columns: the titanium alloys: BT-1 (VT-1); BT-3 (VT-3); BT-5 (VT-5); BT-10 (VT-10); the following titanium- and niobium alloys: TH-3 (TN-3), TH-27 (TN-27), TH-50 (TN-50), TH-75 (TN-75); sheet lead, the alloys ЭИ-461 (EI-461) and ЭИ-943 (EI-943). Tantalum and niobium as well as their above alloys showed only a weight increase of 0.001 g after a 100 hr test in the boiling mixture of hydrochloric acid and methanol. The protective films were closely connected with the metal surface. Tantalum develops probably a Ta_2O_5 protective film. After rolling cold hardened tantalum corrodes at a

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S/064/61/000/004/003/003
B110/B207

Corrosion and the protection ...

rate of $0.062 \text{ g/m}^2 \cdot \text{hr}$; 1.25 hr in vacuum of 10^{-4} mm Hg at 1200°C ,
tempered tantalum corroded at a rate of $0.010 \text{ g/m}^2 \cdot \text{hr}$. Corrosion (100 hr)
was increased from $0.033 \text{ g/m}^2 \cdot \text{hr}$ to $0.040 \text{ g/m}^2 \cdot \text{hr}$ owing to inhomogeneities
at the welding points. With respect to corrosion stability, the
following order is maintained (Fig. 2): titanium alloy BT-1A (VT-1D),
(corrosion rate: $4.2 \text{ g/m}^2 \cdot \text{hr}$). A reduction of corrosion after some time
could be hardly noticed. Since boiling, chemically aggressive media do
not only electrochemically dissolve the metal, but destroy it due to
erosion, there must be added a special protective substance to the metal
with the exception of Ta, Nb and their alloys. 0.01; 0.02; 0.03, and
0.04 mole $\text{CuCl}_2 \cdot 2\text{H}_2\text{O}$ were added per 1 l as protective agent since the
addition of semi-noble metals leads to the precipitation of metal islands,
microvapor formation, and anodic surface passivation. An addition of
0.02 mole/l reduced the corrosion rate of BT-1A (VT-1D) titanium alloy
by the 17-fold to $0.247 \text{ g/m}^2 \cdot \text{hr}$. The electroprotecting method is there-
fore also convenient for other metals. TN-75 can be recommended for

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Corrosion and the protection ...

column lining as the cheapest among the extremely stable niobium- and tantalum alloys: TN-3, TN-27, TN-50, TN-75. There are 3 figures and 1 table.

ASSOCIATION: Moskovskiy institut stali im. I. V. Stalina (Moscow Steel Institute im. I. V. Stalin)

Legend to the Table:

- a) Titanium alloy;
- b) chemical composition in %.

a) Сплав титана	b) Химический состав, %									
	Ti	C	Si	Cr	Fe	Al	H ₂	N ₂	O ₂	W
BT-1	99,671	—	0,03	—	0,12	—	0,015	0,024	0,14	—
BT-3	92,49	0,03	0,09	2,54	0,2	4,6	0,01	0,02	0,02	—
BT-5	93,58	0,05	—	—	0,17	5,0	—	—	—	1,2
BT-10	97,795	0,005	—	—	0,5	—	—	0,02	0,08	1,6

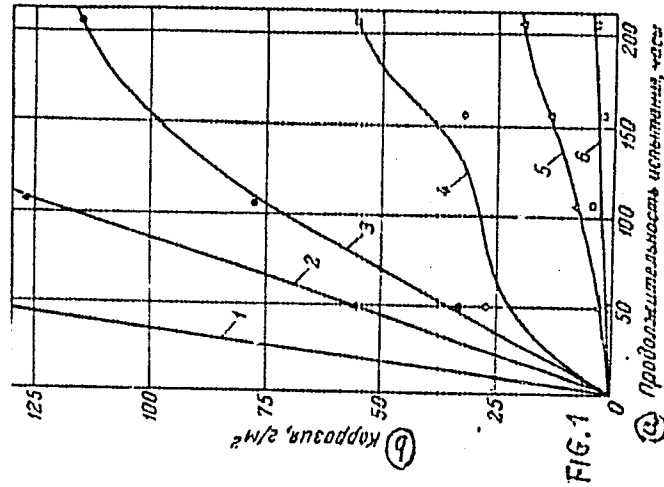
X

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B110/B207

Corrosion and the protection ...

Legend to Fig. 1: Corrosion rate of various materials under the conditions of melamine production. 1) Zinc (Ts-2); 2) cadmium; 3) St-3; 4) EI-461; 5) 1Kh18N9T; 6) aluminum (A-0); a) time of experiment in hr; b) corrosion g/m^2 .

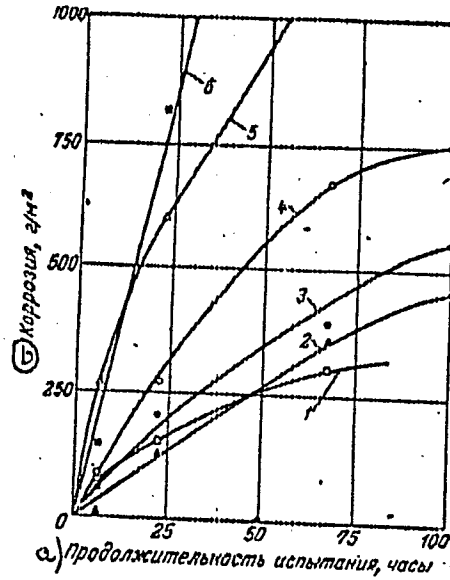


Corrosion and the protection ...

Legend to Fig. 2: Corrosion rate of various materials in boiling HCl and CH₃ mixture.

- 1) VT-1D; 2) EI-943;
- 3) VT-5; 4) VT-1;
- 5) Pb; 6) VT-3; a) time of experiment, hr; b) corrosion g/m².

21783
S/064/61/000/004/003/003
B110/B207



GUSEVA, V.A.; ZOTOV, V.P.; KLEBANOV, M.K.; TSLAF, M.Ya.

Analog control systems for drilling machines. Mashinostroitel'
no.7:6-8 J1 '63. (MIRA 16:9)
(Drilling and boring machinery--Numerical control)

GOLOVANOV, Yu.N.; BREZHNEVA, N.Ye.; OZIRANER, S.N.; YEREMIN, A.A.;
ZOTOV, V.L.

Mechanism underlying the volatilization of cesium coprecipitated
with double nickel and potassium ferrocyanide at high temperatures.
Atom. energ. 15 no.3:261-262 S '63. (MIRA 16:10)

(Ferrocyanides) (Cesium)

- I 17893-63

ACCESSION NR: AP3005221

purpose a powdered model composition (powder) consisting of $\text{Fe}(\text{OH})_3$, $\text{Na}_2\text{U}_2\text{O}_7$, and $\text{Ca}(\text{OH})_2$, with a ratio of $\text{Fe}_2\text{O}_3/\text{Na}_2\text{O}_2/\text{CaO} = 1/2/1$, was used in certain ratios with glass-forming additives, such as sand and soda, for preparation of a series of glasses. The glasses were prepared by the powder method, in neutral atmosphere, in a vacuum furnace, in a Vahl method. The temperature of the furnace was 300, and the holding time, 1 hour. The optimum melting temperature, time, and powder-to-additive ratio depend on the ability of heavy-metal oxides to form glass with the additives. This ability depends on the viscosity of the melt, which in turn depends on the SiO_2 and Na_2O content. It was found that a certain additive ratio of SiO_2 , a melting temperature of 1200C, and melting time of 1 hour, was optimum for the preparation of glasses. The content of SiO_2 and Na_2O in the glasses was 10% and 10%, respectively. The glasses were prepared in a vacuum furnace. Further experiments were conducted in order to decrease the melting temperature by replacing SiO_2 with fluxes such as B_2O_3 (as boric acid). A decrease of 150C in melting temperature was achieved. Attempts to enhance the chemical durability of the glass by introducing Al_2O_3 failed. Thus, the optimum conditions for

Card 2/4

ZOTOV, V.L.

Using cavitation-effect machinery for making reprocessed fibers.
Tekst.prom. 20 no.10:17-18 0'60. (MIRA 13:11)
(Textile fibers) (Textile machinery)

ZOTOV, V.L., starshiy nauchnyy sotrudnik

Hydraulic method of scutching fibrous materials. Tekst.prom. no.2:23-24
F '63. (MIRA 16:4)

1. Tsentral'nyy nauchno-issledovatel'skiy institut sherstyanoy
promyshlennosti (TSNIIShersti). (Rags) (Textile industry--Hydraulic equipment)

GEL'MAN, A.S.; GRINEVICH, G.F., prof.; GRINEVICH, G.G.; ZOTOV, V.P.;
KOMAROV, G.V.; PAVLOV, S.M.; FIRMON, A.V.; TRUBIN, V.A., glav.
red.; SOSHIN, A.V., zam. glav. red.; YEPIFANOV, S.F., red.;
ONLFIYEV, I.A., red.; KHOKHLOV, B.A., red.; ZIMIN, P.A., red.;
KROMOSHCH, I.L., inzh., red.; NAUMOVA, G.D., tekhn. red.

[Handbook on loading, unloading, and conveying operations in
construction] Sptavotchnik po pogruzochno-razgruzochnym i trans-
portnym rabotam na stroitel'stve. Pod red. G.F.Grinevicha.
Moskva, Gosstroizdat, 1962. 376 p. (MIRA 15:9)
(Material handling) (Building materials)

USSR, Engineering
Welding Machines
Aluminum Welds

Nov 48

"Accumulated Energy Welding," V. P. Zotov, Cand Tech
Sci, Ind Inst imeni Knybyshev, 3 PP

"Elektrichestvo" No 11

Results of theoretical and experimental investigation
conducted to clarify number of problems arising
in connection with operation of welding machines
which work on principle of accumulated energy. This
method, which consists of using either the energy of
a charged condenser or a magnetic field, is used
mainly in welding aluminum and light alloys.

27/49753

Electrical Engineering Abstracts
May 1954
Electric Waves and Oscillations

Electromagnetic
1953. Energy diagram of magnetically coupled circuits. V. F. Kraus, *Elektronika*, 1953, No. 11, 81-4. In Russian.

When magnetically coupled circuits are analyzed theoretically by the well-known differential equations, great difficulties are encountered if a variable resistance is contained in at least one of the circuits. In such a case the investigation is best carried out by means of an energy diagram which is very simple to plot from the curve $i_1 = f(t)$ in rectangular coordinates. This curve may be derived from current oscillograms, or directly obtained by a single-beam oscillograph to the Y-plates of which a voltage proportional to i_1 is applied, whereas a voltage proportional to i_2 is fed to the X-plates. The position of any point of the curve fully determines the energy content of the main flux as well as leakage fluxes, in other words, of the fluxes linking with the inductances of one and of both circuits, respectively, and also the energy exchanges between the circuits. A numerical example shows the application of the energy diagram to electromagnetic welding.

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TITLE: Electric Braking of Hydroelectric Generators for Increased Stability
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ABSTRACT: A system of artificial electric braking of hydroelectric generators is considered. If the three-phase stator winding and the excitation winding of a synchronous generator are made of two parallel branches placed at the double pole pitch apart, then two independent electrical systems will be formed in the generator and their currents will be superimposed. If the currents in both parallel branches of the rotor are equal, the generator will operate under normal conditions. If the current in one of the excitation branches decreases and the other correspondingly increases, difference EMFs will be introduced in the

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