ZOTOV, Konstantin Gavrilovich, inzh.; KIRILOV, Mikhail Mikhaylovich, kand. tekhn. nauk; KVITKOVSKIY, V.I., inzh., retsenzent; NOVIKAS, M.N., inzh., red.; USENKO, L.A., tekhn. red.

[Signaling and telecommunication devices and their use] Ustroistva STsB i sviazi i ikh ispol'zovanie. Izd.2., perer. i dop. Moskva, Transzheldorizdat, 1962. 283 p. (MIRA 15:9)

(Railroads--Signaling)
(Railroads--Communication systems)
(Railroads--Electric equipment)

L 11998-66 EWT(m)/EWP(t)/ETI IJP(c) JD/HW/JW

ACC NR: AP6000349 SOURCE CODE: UR/0286/65/000/021/0047/0047

AUTHORS: Sedov, L. N.; Li, P. Z.; Zotov, L. I.; Akutin, M. S.; Margin, V. A.; Krupkina, F. A. 44, 55

ORG: none

TITLE: Method for obtaining elastic copolymers. Class 39, No. 176062

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 21, 1965, 47

TOPIC TAGS: polymer, polymerization, polyester, polycondensation

ABSTRACT: This Author Certificate presents a method for obtaining elastic copolymers of unsaturated polyester resins with different monomers. To reduce shrinkage and the exothermic effect during hardening, the polyesters used are those obtained by condensation of unsaturated acids or their anhydrides with polyalkyleneglycols (e.g., with polytetramethyleneglycol) with molecular weight from 1000 to 10 000.

SUB CODE: 11/ SUBM DATE: 04May62

HW

Card 1/1

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510004-8"

ZOTOV, L.N., inzh.-mekhanik (stantsiya Ramenskoye, Moskovskoy dorogi)

Self-propelling mobile electric power plant. Put' i put.khoz.5 no.2:26-27 F '61. (MIRA 14:3)
(Railroads--Electric equipment)

3454

S/103/62/023/003/009/016
D201/D301

9.2100 (1385, 1153, 1159)
9.2200 (1001, 1482)

AUTHORS: Zotov, L.V., and Popov, V.S. (Kiyev, Leningrad)

TITLE: Heated metal resistor multipliers and dividers

PERIODICAL: Avtomatika i telemekhanika, v. 23, no. 3, 1962, 365 - 370

TEXT: The authors give the theory of voltage multipliers and dividers designed around metal resistors, consider the bridge method of multiplication and division, and analyze its errors. The bridge method is based on the fact that when a metal wire R is inserted in one of the bridge arms and heated by applying a voltage U_1 of one frequency, while the bridge supply voltage U_2 has a different frequency, then the detector voltage U_D is proportional to the product U_1 and U_2, providing U_1 lies within the linear part of the voltampere characteristic of the heated resistance, and voltage U_2 or supply current I_2 are small enough not to heat the resistance. The absolute multiplication error γ appears when U_1 deviates from its no-

Card 1/3

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510004-8"

Heated metal resistor multipliers ...

minal value U_{10} as a result of the destruction of proportionality between the function $F(U_1)$ and the argument U_1. The bridge has been experimentally tried for a platinum wire 24 microns in diameter and 20 mm long. The bridge supply current I_2 was 7.5 mA. The nominal voltage U_{10} was taken as 2000 mV. The results obtained show a proportionality between U_D and U_1 accurate to within 0.5 % for voltage changes from 1 - 2 V. The temperature error of the multiplying arrangement is less than 0.2 % for ± 10°C temperature changes. Types A and B heated resistances were investigated. Type A consists of a heater, a platinum wire 50 microns in diameter, placed in a thin molybdenym glass tube, with a heating element wound around it. In type A the sensing element may be used as a heater and vice versa. The time constant of the heated element is 0.6 sec. Type B is a copper wire with glass insulation, with a 5 micron wire wound on. The A wire diameter is 3 microns, with glass insulation 12 microns. Its time constant is 0.17 sec. Both types produced approximately the same results, with $U_D = f(U_1) = 0.1\ U_1$ deviating not more than 0.6% of its nominal value. The change of frequency of U_1 from 20 to 200 kc/s had no effect. In the divider arrangement the voltage U_2 to be

Heated metal resistor multipliers ...

divided is applied to the bridge which is connected in series to a high gain amplifier. One of the arms has a metal resistance, heated by voltage U_3, which is the divisor. The arms of the bridge are adjusted in such a manner that the detector arm voltage is proportional to the product of U_3 and U_D. It is stated in conclusion that the above arrangements may be applied not only in automation but also in the measurement techniques of a.c. current and as logarithmic meters. There are 2 tables, 3 figures and 2 Soviet-bloc references.

SUBMITTED: July 10, 1961

Card 3/3

ZOTOV, M.

Credit

Ways to strengthen industrial credit work, Den. i kred, 11, No. 2, 1952.

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

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510004-8"

ZOTOV, M.

Increase control over wage fund disbursement. Den. i kred. 20 no.2:15-22 F '62. (MIRA 15:2)

(Wages)
(Banks and banking)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510004-8"

ZOTOV, M.

Utilize hidden potentialities more fully. Dem. i kred. 20 no.9:3-12 S '62. (MIRA 15:9)

1. Upravlyayushchiy Rossiyskoy respublikanskoy kontoroy Gosbanka.
(Banks and banking) (Industrial management)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510004-8"

ZOTOV, M.

Improve the standard of economic work. Den. i kred. 18 no.9:9-17 S '60. (MIRA 13:8)

(Credit) (Russia--Industries)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510004-8"

ZOTOV, M.

Source of creative activity. Don. i kre. 21 no.9:3-11 S '63.
(MIRA 16:10)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510004-8"

ZOTOV, M.

Improve bank control through the ruble. Den.i kred. 21 no.4:3-11 Ap '63. (MIRA 16:4)

(Finance)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510004-8"

MIKOYAN, A.; IGNATOV, N.; KOROVUSHKIN, A.; GARBUZOV, V.; KABKOV, Ya.; KUDRYAVTSEV, A.; BORYCHEV, I; VOROB'YEV, V.; SVISHCHIKOV, M.; USHAKOV, V.; MIROSHNICHENKO, B.; ZENCHENKO, N.; BABUSHKIN, V.; NIKITKIN, N.; PODSHIVALENKO, P.; ZOTOV, M.; VOSKRESENSKIY, A.; KAZANTSEV, A.; KORDYUKOV, A.; NOSKO, P.; PLESHAKOV, S.; VERSOV, A.; ROMASHOV, A.

I.N. Kazakov; obituray. Den. i kred. 19 no.3:95 Mr '61. (MIRA 14:3)

(Kazakov, Ivan Nikolaevich, 1907-1961)

ZOTOV, M.

Aid further trade development with credit. Den. i kred. 19 no.7:14-20 Jl '61. (MIRA 14:7)
(Retail trade) (Credit)

ZOTOV, M.

Raise the level of economic work in State Bank institutions.
Den. i kred. 17 no.11:3-13 N '59. (MIRA 12:12)
(Banks and banking)

ZOTOV, M.

Banks and Banking

Ways to strengthen industrial credit work, Den. i kred, 11, No. 2 1952.

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

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510004-8"

ZOTOV, M.

Strengthen ties between the State Bank and regional economic councils.
Den. i kred. 16 no.1:10-17 Ja '58. (MIRA 11:3)
(Russia--Industries) (Banks and banking)

GRIBKOV, F.; ZOTOV, M.

Better organization of housing finances. Fin.SSSR 18 no.7:37-39 Jl '57. (MIRA 10:7)

1. Zamestitel' nachal'nika otdela finansirovaniya kommunal'nogo i zhilishchnogo khozyaystva Lengorfinotdela (for Gribkov).
2. Starshiy konsul'tant otdela finansirovaniya kommunal'nogo i zhilishchnogo khozyaystva Lengorfinotdela (for Zotov).
(Housing management)

ZOTOV, M.

Raising the role of credit in the development of the national economy. Den. i kred. 19 no.9:24-31 S '61. (MIRA 14:9)
(Credit)

GAPONENKO, Yu.A.; ZOTOV, M.D., naladchik mashiny

Electric timer. Put' i put.khoz. 9 no.4:34 '65.

(MIRA 18:5)

1. Nachal'nik rel'sosvarochnogo poyezda, stantsiya Syzran', Kuybyshevskoy dorogi.

LUKANIN, Ye.A., polkovnik; CHEREDNICHENKO, V.T., polkovnik; LESNEVSKIY, S.A., polkovnik; KOLOTOV, V.I., kapitan 1 ranga; KORKESHKIN, A.P., polkovnik; POROFONOV, I.F., podpolkovnik; ROZANOV, I.S., podpolkovnik; LISENKOV, M.M., podpolkovnik; SAPRONOV, A.T., mayor; BELASHCHENKO, T.K., mayor; SKAPENKOVA, T.N.; SOROKINA, L.D.; ZOTOV, M.M., polkovnik, red.; MYASNIKOVA, T.F., tekhn.red.

[Material for political studies; a manual for group leaders] Materialy k politicheskim zaniatiiam v pomoshch' rukovoditeliam grupp. Moskva, Voen.izd-vo M-va obor. SSSR, 1958. 199 p. (MIRA 11:5)

1. Russia (1923- U.S.S.R.) Armiya. Upravleniye propagandy i agitatsii. 2. Voyennyy otdel Gosudarstvennoy biblioteki imeni V.I.Lenina (for Skapenkova, Sorokina)
(Russia--Army--Education, Nonmilitary)

NEGODA, Grigoriy Pudovich, kontr-admiral; ZOTOV, M.M., red.; SOLOMONIK, R.L., tekhn. red.

"Besposhchadnyi." Moskva, Voen. izd-vo M-va obor. SSSR, 1961. 108 p. (MIRA 14:11)

(World War, 1939-1945--Naval operations)

ZOTOV, M.M., polkovnik, red.; MYASNIKOVA, T.F., tekhn. red.

[Winged youth; accounts and reminiscences] Krylatoia iunost'; ocherki i vospominaniia. Moskva, Voen. izd-vo M-va obor. SSSR, 1958. 142 p. (MIRA 11: 11)

(Russia--Air force)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065100048

Physicochemical factors in the formation of bubbles on bicycle tires. M. Zotov. *J. Rubber Ind.* (U. S. S. R.) 10, 421–8(1934).—An extensive study was made to det. the causes of the appearance of bubbles on the surface of rubber tires during vulcanization. It is believed that excess of volatile matter in rubber introduced with resin softeners and in the mixt. used for rubberizing the thread, the application of benzine (especially when it is contaminated with kerosene) for rubbing the tire thread before pressing, and sudden pressure drops during vulcanization are the chief factors in bubble formation. Contrary to other investigators, excessive moisture and the presence of carbonates in rubber did not promote bubble formation.

James Sorrel

ZOTOV, M.A.

Cutting tools from scrap metal. Sel'khozmashina no.5:3 of cover My '54.
(MLRA 7:5)
(Cutting tools)

ZOTOV, Mikhail Nikolayevich; YEFREMOVICH, Boris Arsent'yevich; YERSHOV, Mikhail Vasil'yevich; BRONFIN, M.S., inzh., retsenzent; KLOCHKOV, V.I., inzh., retsenzent; KOROTKOV, V.N., inzh., red.; KHITROVA, N.A., tekhn. red.

[Working principle and operation of automatic battery-powered loaders] Ustroistvo i ekspluatatsiia akkumuliatornykh avtopogruzchikov. Moskva, Vses. izdatel'sko-poligr. ob"edinenie M-va putei soobshcheniia, 1962. 77 p. (MIRA 15:4)
(Loading and unloading--Equipment and supplies)

ZOTOV,M.Ya.; BOLDOVKIN,I.A.

Device for making grooves in gypsum walls. Rats. i izobr. predl. v stroi. no.104:29-30 '55. (MLRA 8:11)
(Electric conduits)

GULYAYEV, B. B., (Prof., Dr. Tech. Sci.) POSTNOV, L. M. (ENgr.) ZOTOV, M. V. (ENgr.)

"Shrinkage Porosity and Means of Dealing with It."

in book - Improving the Quality of Steel Castings; Transaction of the All-Union Conference, Moscow, Mashgiz, 1958. 214 p.

Abstract: Various types of porosity are discussed, methods od detecting them are explained, and measures x for preventing porosity are described.

Some measures involve changes in design, while others are accomplished by improved techniques.

ZOTOV, N., polkovnik.

Characteristics of piloting jet planes. Kryl. rod. 8 no.5:9-10 My '57.
(Jet planes--Piloting) (MLRA 10:6)

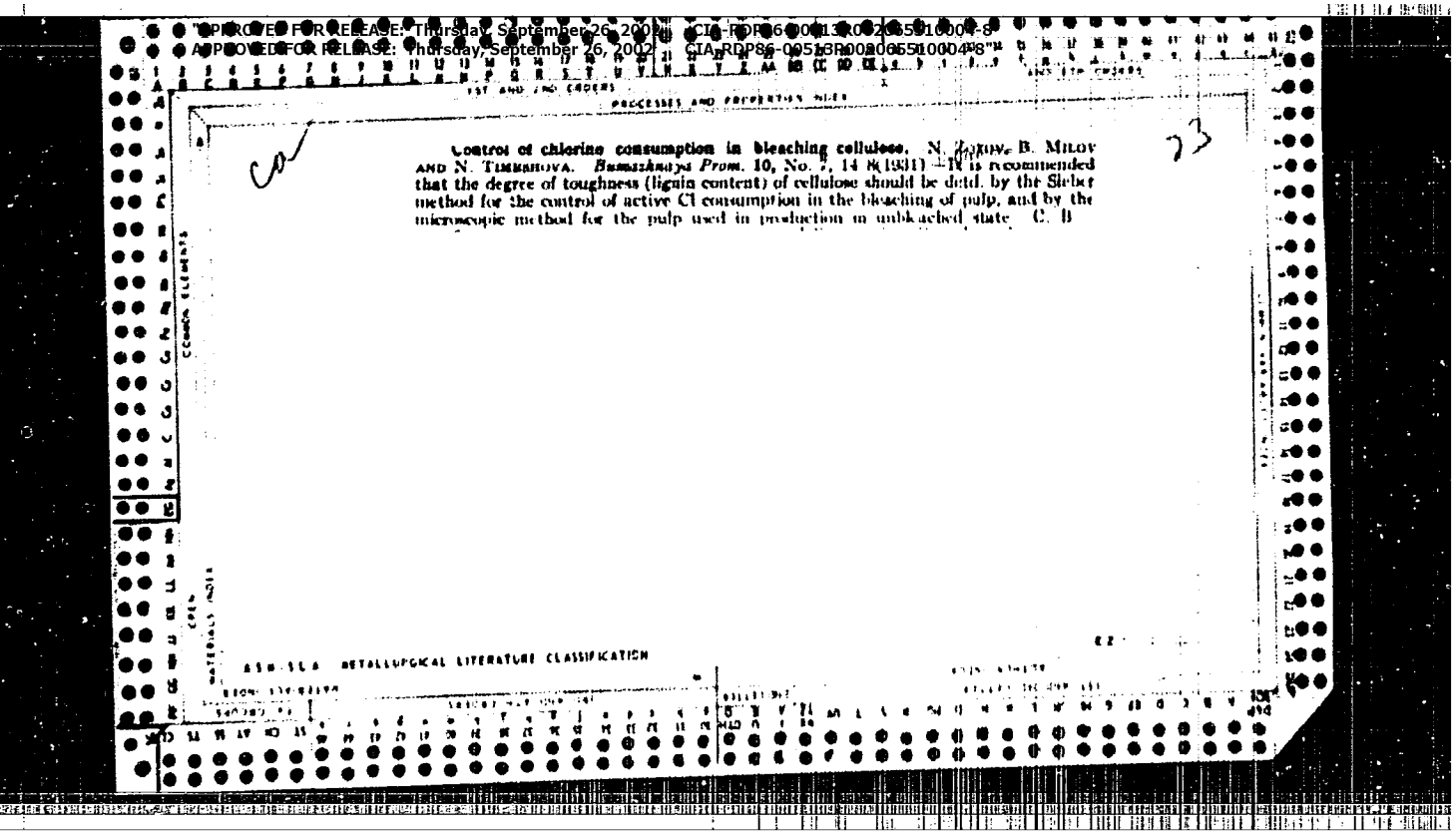
APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510004-8"

ZOTOV, N., inzhener.

Experimental tug pushing on reservoirs. Rech.transp. 14 [i.e. 15] no.3:20-21 Mr '56. (MLRA 9:8)
(Towing) (Tugboats)

Comparative characteristics of the methods for determination of the degree of cooking of cellulose. N. Zotov. *Bumazhnaya Prom.* (*Paper Ind.*) 10, No. 9, 31-2(1931). Chem. Abstr. cf. *C. A.* 26, 595.—Polemical.

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510004-8



PROCESSES AND PROPERTIES INDEX

Control of chlorine consumption in bleaching cellulose. N. Zorov, B. Milov and N. Timanova. *Bumazhnaya Prom.* 10, No. 7, 14-8(1931).—It is recommended that the degree of toughness (lignin content) of cellulose should be detd. by the Siebel method for the control of active Cl consumption in the bleaching of pulp, and by the microscopic method for the pulp used in production in unbleached state. C. B

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510004-8

ACC NR: AP7001111 SOURCE CODE: UR/0209/67/000/001/0022/0026

AUTHOR: Zotov, N. (Colonel)

ORG: none

TITLE: Aboard a fighter in the night sky

SOURCE: Aviatsiya i kosmonavtika, no. 1, 1967, 22-26

TOPIC TAGS: night flying, pilot training, all weather flying

ABSTRACT: The increase in night flying requires thorough pilot training on the ground, proper psychological attitude, practical experience, and regular instrument flights. Such errors as misjudgment of distances, premature loss of altitude, undershooting the runway, and sharp braking during the landing run are made by inexperienced pilots and can be avoided by training in instrument flying during bad weather and at night. The ability to shift from visual to instrument flight and back again is sometimes necessary. Interceptor pilots in particular need good training in instrument flying. Reference is made to several outstanding pilots and to their activities. Orig. art. has: 2 photographs.

SUB CODE: 01/ SUBM DATE: none

Card 1/1

GORBACHEV, S.V.; ZOTOV, N.A.

Electrodeposition of copper from solutions of its chloride complexes in CH_3OH. Zhur. fiz. khim. 38 no.10:2499-2501 O '64.

(MIRA 18:2)

1. Khimiko-tekhnologicheskiy institut imeni D.I. Mendeleyeva.

ZOTOV, N.A.; GORBACHEV, S.V.

Electrodeposition of copper from its chloride solutions in acetic acid and pyridine. Zhur. fiz. khim. 38 no.10:2501-2503 O '64.
(MIRA 18:2)

1. Khimiko-tekhnologicheskiy institut imeni D.I. Mendeleyeva.

AUTOV, N.A.; GORBACHEV, S.V.

Electrodeposition of copper from solutions of its chloride complexes in n-C_3H_7OH. Zhur. fiz. khim. 38 no.9:2302-2304 S '64. (MIRA 17:12)

1. Khimiko-tekhnologicheskiy institut imeni Mendeleyeva.

GORBACHEV, S.V.; ZOTOV, N.A.

Kinetics of the electroreduction of cupric chloride in non-aqueous solvents. Zhur. fiz. khim. 37 no.4:924-927 Ap '63. (MIRA 17:7)

1. Khimiko-tekhnologicheskiy institut imeni D.I. Mendeleyeva.

ZOTOV, N.A.; GORBACHEV, S.V.

Effect of temperature on the rate of cathodic reduction of copper dichloride in various solvents. Zhur.fiz.khim. 37 no.7:1606-1609 Jl '63. (MIRA 17:2)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni Mendeleyeva.

GORBACHEV, S.V.; ZOTOV, N.A.

Effect of complex formation on the kinetics of electroreduction of copper dichloride in various solvents. Zhur. fiz. khim. 37 no.6:1391-1393 Je '63. (MIRA 16:7)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni Mendeleyeva.

(Complex compounds) (Copper chlorides)
(Reduction, Electrolytic)

ZOTOV, N.D.; SOLOMONOV, M.A.

How we increased the output of head scarfs. Tekst. prom. 18 no.2:58 F '58. (MIRA 13:3)

1.Zaveduyushchiy proizvodstvom Gorodkovskoy tkatsko-otdelochnoy fabriki (for Zotov). 2. Nachal'nik planovo-proizvodstvennogo otdela Gorodkovskoy tkatsko-otdelochnoy fabriki (for Solomonov).
(Textile fabrics)

IPPOLITOV, I.K.; ZOTOV, N.D.; SEMENOV, G.A.

Specialization of loom filling. Tekst.prom. 19 no.8:72-73 Ag '59. (MIRA 13:1)

1. Glavnyy inzhener Gorodkovskoy fabriki (for Ippolitov). 2. Zaveduyushchiy tkatskim proizvodstvom Gorodkovskoy fabriki (for Zotov). 3. Starshiy master Gorodkovskoy fabriki (for Semenov).

(Looms)

SIDOROV, Pavel Petrovich; KALININ, B.A., retsenzent; ZOTOV, N.M., retsenzent; BRUNBLIER, G.A., red.; EBERLIN, K.Z., red.izd-va; SALAZKOV, N.P., tekhn.red.

[Ways of improving labor productivity in ship repairing and shipbuilding enterprises] Puti povysheniia proizvoditel'nosti truda v sudoremontnykh i sudostroitel'nykh predpriiatiiakh. Moskva, Izd-vo "Rechnoi transport," 1957. 58 p. (MIRA 11:1)
(Labor productivity) (Shipbuilding)

AKRIKOSOV, S.V.; ALEKSEYEV, A.P.; ZOTOV, N.M.; KUDRYASHOV, G.F.; LAPOV, N.I.; LEBEDEV, V.P., inzh.; CHEKMENEV, Ye.Ye.; MEYEROVICH, Ye.A., inzh., retsenzent; RYBAKOVA, V.I., inzh., red.izd-va; SOKOLOVA, T.F., tekhn.red.

[Gasoline-electric and diesel-electric power units with a capacity from 0.5 to 400 kilowatts; reference book] Benzoelektricheskie i dizel'elektricheskie agregaty moshchnost'iu ot 0,5 do 400 kvt; spravochnik. Pod red. V.P.Lebedeva. Moskva, Gos.nauchno-tekhn. izd-vo mashinostroit.lit-ry, 1960. 543 p.

(MIRA 14:1)

(Electric power stations)

ZOTOV, [illegible]

Headgear

Improving the assortment of kerchiefs. Tekst. prom. 12 No. 6, 1952.

Monthly List of Russian Accessions, Library of Congress
October 1952. UNCLASSIFIED.

ZOTOV, N. P., Cand of Tech Sci -- (diss) "Investigation of the Special Features of Liquid Media on the Process of Cutting Metals," Moscow, 1959, 14 pp (Moscow Institute of Chemical Machine Building) (KL, 2-60, 113)

POLTEV, Vladimir Kirillovich; SMOL'NIKOV, Lev Petrovich; ZOTOV, N.P., redaktor; BURDE, L.V., redaktor; KRAPIVIN, G.B., redaktor; KEL'NIK, V.P., redaktor; KOVALENKO, N.I., tekhnicheskiy redaktor.

[Reference manual for electricians in metallurgical plants] Spravochnoe rukovodstvo elektrika metallurgicheskogo zavoda. Sverdlovsk, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, Sverdlovskoe otd-nie, 1955. 456 p. (MLRA 8:12)
(Electric machinery--Maintenance and Repair) (Metallurgical plants)

PHASE I BOOK EXPLOITATION SOV/5139

Abrikosov, S. V., A. P. Alekseyev, N. M. Zotov, G. F. Kudryashov, N. I. Lapov, V. P. Lebedev, and Ye. Ye. Chekmenev

Benzoelektricheskiye i dizel'-elektricheskiye agregaty moshchnost'yu ot 0.5 do 400 kvt; spravochnik (Gasoline- and Diesel-Engine Electric Generating Sets, 0.5 to 400 kw Capacity; Handbook) Moscow, Mashgiz, 1960. 543 p. Errata slip inserted. 7,000 copies printed.

Ed. (Title page): V. P. Lebedev, Engineer; Reviewer: Ye. A. Meyerovich, Engineer; Ed. of Publishing House: V. I. Rybakova; Tech. Ed.: T. F. Sokolova; Managing Ed. for Information Literature: I. M. Monastyrskiy, Engineer.

PURPOSE: This handbook is intended for technical personnel concerned with the design and operation of electric generating sets.

COVERAGE: The handbook contains technical data on gasoline- and Diesel-engine electric generating sets with a capacity of 0.5 to 400 kw. Prime movers, electric generators, and electrical

equipment, as well as the materials required for the selection and designing of generating sets are discussed. The handbook also gives information on the basic requirements for the operation of the sets and on the automation of their control. No personalities are mentioned. There are 34 references, all Soviet.

TABLE OF CONTENTS:

ZOTOV, N.P.

Device for investigating cooling action of fluid media. Stan. i instr. 36 no.2:38-39 F '65. (MIRA 18:3)

OLEYNIKOV, Viktor Alekseyevich; ZOTOV, Nikolay Sergeyevich; FATEYEV, A.V., doktor tekhn. nauk, prof., retsenzent; KOTCHENKO, F.F., inzh., nauchnyy red.; BRUSKIN, D.M., ved. red.; SAFRONOVA, I.M., tekhn. red.

[Automatic control of technological processes in the petroleum and petrochemical industries]Avtomaticheskoe regulirovanie tekhnologicheskikh protsessov v neftianoi i neftekhimicheskoi promyshlennosti. Leningrad, Gostoptekhizdat, 1962. 321 p. (MIRA 15:11)

(Automatic control)
(Petroleum industry—Equipment and supplies)

FATEYEV, Aleksandr Vasil'yevich, doktor tekhn.nauk, prof.; OLEYNIKOV, Viktor Alekseyevich, kand.tekhn.nauk, dotsent; ZOTOV, Nikolay Sergeyevich, assistent; POLYAKOV, Yuriy Andreyevich, inzh.

System for the stabilization and regulation of the speed of a d.c. motor using a tachometer generator. Izv. vys. ucheb. zav.; elektromekh. 3 no.12:58-64 '60. (MIRA 14:5)

1. Zaveduyushchiy kafedroy avtomatiki i telemekhaniki Leningradskogo elektrotekhnicheskogo instituta (for Fateyev). 2. Leningradskiy elektrotekhnicheskiy institut (for Oleynikov). 3. Kafedra avtomatiki i telemekhaniki Leningradskogo elektrotekhnicheskogo instituta (for Zotov, Polyakov).

(Electric motors, Direct current)

ZOTOV, N.V., polkovnik, voyennyy letchik pervogo klassa

On a landing run. Vest.Vozd.Fl. no.6:32 Je '61. (MIRA 14:8)
(Airplanes--Landing)

ZOTOVA, N.V.; LAGUNOVA, T.S.; NASLEDOV, D.N.

Negative magnetic resistance in n-type indium arsenide at low temperatures. Fiz. tver. tela 5 no.11:3329-3331 N '63.
(MIRA 16:12)

1. Fiziko-tekhnicheskiy institut imeni A.F.Ioffe AN SSSR, Leningrad.

GAVRILOV, Ye.N., inzh.; GONIK, A.A., kand. tekhn. nauk; DONSKOY, I.P., kand. tekhn. nauk; ZHUKOV, G.A., inzh.[deceased]; LAZAREV, M.P., inzh.; NEFEDOV, S.I., inzh.; PETROV, Ya.P., kand. tekhn. nauk; SAVEL'YEV, V.V., kand. tekhn. nauk; FILIMONOV, S.S., inzh.; SHUL'TS, G.F., kand. tekhn. nauk; ZOTOV, N.V., inzh., retsenzent; ORLOV, N.N., inzh., otv. red.; KOZLOV, A.D., red.izd-va; AKOPOVA, V.M., tekhn. red.

[Water transportation of lumber] Vodnyi transport lesa; spravochnik. Moskva, Goslesbumizdat, 1963. 560 p. (MIRA 16:11)

(Lumber--Transportation)

SKVORTSOV, G.G., starshiy nauchnyy sotr.; ROMANOVSKAYA, L.I., mladshiy nauchnyy sotr.; Prinimal uchastiye ZOTOV, N.V., inzh.; RODIONOV, N.V., nauchnyy red.; GRISHINA, T.S., red. izd-va; BYKOVA, V.V., tekhn. red.

[Engineering geology prognoses of the conditions of the development of solid mineral deposits; methodological instructions] Inzhenerno-geologicheskie prognozy uslovii razrabotki mestorozhdenii tverdykh poleznykh iskopaemykh; metodicheskie ukazaniia. Moskva, Gosgeoltekhizdat, 1961. 82 p. (MIRA 15:7)

(Engineering geology)
(Mines and mineral resources)

ZOTOV, O. F.

F-2

USSR / Microbiology. Antibiosis and Symbiosis. Antibiotics.

Abs Jour : Ref Zhur - Biol., No 8, 1958, No 33771

Author : Zotov, O. F.
Inst : Not given
Title : A Study of Antibacterial Properties of Dnepr Fish.

Orig Pub : Nauk. zap. Kievsk. un-t, 1956, 15, No 12, 141-149.

Abstract : No abstract.

Card 1/1

AB, Sh.L., inzh.; ZOTOV, P.I., inzh.

F.P.Il'in, an efficiency expert. Energetik 11 no.1:33-34 Ja '63. (MIRA 16:1)

(Electric power plants)
(Electric power distribution)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510004-8"

ZOTOV, P.I., inzh.

Mechanization of operations in the reclamation of spent oils. (MIRA 15:7)
Energetik 10 no.7:15-16 Jl '62.
(Oil reclamation)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510004-8"

KOLIN, K.T., kand.tekhn.nauk; LISOGURSKIY, V.I., inzh.; ZOTOV, P.I., inzh.

Closed-circuit television system for the centralized control of the operation of boilers. Elek. sta. 31 no.8:15-24 Ag '60. (MIRA 14:9)

(Boilers) (Industrial television)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510004-8"

ZOTOV, P.I., inzh.; LOKSHIN, A.M.

Maintaining open water above hydroelectric power station structures and sluices by means of a machine for generating water currents. (MIRA 14:5)
Elek. sta. 31 no.12:44-47 D '60.
(Hydroelectric power stations)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510004-8"

ZOTOV, P.I.

Dispatching television unit for electric power stations. Biul.tekh.-ekon.inform. no.11:45-48 '59. (MIRA 13:4)
(Industrial television)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510004-8"

TVER'YE, M.M.; ZOTOV, P.I.

Electrician innovator, S.F.Pinaev. Energetik 8 no.1:34 Ja '60. (MIRA 13:5)

(Electricians)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510004-8"

ZOTOV, P.I.

AID P - 726

Subject : USSR/Electricity

Card 1/1 Pub. 29 - 19/26

Authors : Kazantsev, M. S., Eng. and Zotov, P. I., Eng.

Title : A simple method of shifting a generator to operate as a synchronous condensor.

Periodical : Energetik, 9, 25-28, S 1954

Abstract : The above shifting is often necessitated by the lack of reactive power in power systems. The authors describe a simple method of alteration of both parts of the turbine-generator coupling, which was applied to two 10,000-kw turbogenerators. 5 diagrams.

Institution : None

Submitted : No date

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510004-8"

Zotov, P. I.

KAZANTSEV, M.S., inzhener; ZOTOV, P.I., inzhener.

Simple method of switching a generator to synchronous compensator operation. Energetik 2 no.9:25-28 S '54. (MLRA 7:9)
(Dynamos)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510004-8"

ZOTOV, P. I., ENG.

Power Engineering

Personal Stakhanov plans for economizing fuel and electric power. Rab. energ., 2, No. 9, 1952.

Monthly List of Russian Accessions, Library of Congress
December 1952. UNCLASSIFIED.

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510004-8"

1. ZOTOV, P. I., Eng.

2. USSR (600)

4. Electric Power Plants

7. Thirtieth anniversary of the electric power station "Krasnyi Oktiabr'", Elek. sta., 23, No. 11, 1952.

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

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510004-8"

ZOTOV, P.I., mekhanik-naladchik

Suspension supports for the locators on the MRD52 defectoscope. Put' i put. khoz. 9 no.7:21 '65. (MIRA 18:10)

1. Stantsiya Yegorshino, Sverdlovskoy dorogi.

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510004-8"

ZOTOV P. P.

Zotov P. P., "Automatic Control of Ventilating Installations," Tekstil'naya Promyshlennost' [Textile Industry], 1953, No 5, Pages 32-36, 5 illustrations.

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510004-8"

CHERKINSKIY, Boris Mendeleyevich; TOKAREV, Dmitriy Georgiyevich; MAREYEVA, Anna Gerasimovna; ZOTOV, Petr Petrovich; GORODOV, K.I., retsenzent; SOROKINA, Ye.V., retsenzent; MOTORIN, I.V., retsenzent; KHALFIN, V.N., retsenzent; SHTEYNGART, M.D., red.; PYATNITSKIY, V.N., tekhn. red.

[Handbook for the power engineer in the textile industry] Spravochnik energetika tekstil'noi promyshlennosti. [By] B.M.Cherkinskii i dr. Moskva, Gizlegprom. Vol.2. [Heat engineering] Teplotekhnika. 1963. 615 p. (MIRA 17:2)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510004-8"

Zotov, P.P.

20-6-29/48

AUTHOR: Zotov, P.P.

TITLE: On the Succession of Intrusion and the Age of Intrusive Rocks of the Kounrad District (O posledovatel'nosti vnedreniya i vozraste intruzivnykh porod Kounradskogo rayona)

PERIODICAL: Doklady AN SSSR, 1957, Vol. 115, Nr 6, pp. 1157 - 1160 (USSR)

ABSTRACT: These rocks are highly developed here and occupy about 74 % of the district. According to their composition, structure and shape of bodies they are rather manifold and give a very complicated total view to the district. Beside widely spread intrusions of quartz diorites (and granodiorites), biotite-granites and amphlite-like granites, there is a great deal of manifold venous rock whose total length surpasses 1000 km. The study of the intrusive geology of this district is very valuable for an understanding of the entire palaeozoic magmatism, as this district, without exaggeration, according to intensity and perfection represents one of the classical regions of Kazakstan. During the last 15 years many scientists ustered 2 standpoints on the succession of intrusions, based on the study of this district:
a) The earliest researchers were of the opinion that a single gigantic Bektau-Ata ("Bektau-Atinskiy") batholith exists in the

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On the Succession of Intrusion and the Age of Intrusive Rocks of the Kounrad District

tion is neither to be observed between the venous rocks and quartz diorites, nor between the other rocks and granites. The intrusion of venous rocks took place at a time when the chief intrusions were already sufficiently crystallized and cooled. The position of the Kounrad intrusive complex with regard to its age still gives rise to discussions. The facts accumulated during the last years only approve of the standpoint that its age has to be considered early-Warissian. It was recently found that the effusive of the Kounrad district is not Devonian, as once assumed, but Middle-Carboniferous. The end of the intrusive processes apparently took place in the Permian, although reliable data on this are absent. The intrusions of biotite-, aplite-like granites and granite-porphyries thus are Permian (Late Warissian). This is more and more verified by the most recent data. There are 1 table and 2 Slavic references.

ASSOCIATION: Kazakh State University imeni S.M.Kirov (Kazakhskiy gosudarstvennyy universitet imeni S.M.Kirova)
PRESENTED: by D.S. Korzhinskiy, Academician, March 25, 1957
SUBMITTED: November 1, 1956
AVAILABLE: Library of Congress
Card 3/3

69062

S/026/60/000/03/041/047
D001/D006

~~3(6)~~ 3.9000

AUTHOR: Zotov, P.P., Candidate of Geological and Mineralogical Sciences

TITLE: Do Gravitational Forces Heat the Earth?

PERIODICAL: Priroda, 1960, Nr 3, pp 122-124 (USSR)

ABSTRACT: The author discusses the role of gravitational forces in creating terrestrial heat and tectogenesis. Dealing with axial revolution, he points out that it must create particle friction evoking an equivalent quantity of heat. On the supposition that the earth revolved more rapidly in its prehistoric past, the braking forces exerted furing slow-down would also serve to accumulate heat within the planet itself. The author calculates that while the period of revolution increased from 4 to 24 hours and the moon moved from 2,000 to

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APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510004-8"

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S/026/60/000/03/041/047
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Do Gravitational Forces Heat the Earth?

384,000 km away from earth the earth energy of revolution fell from 107.2 10^{36} erg to 3.0 10^{36} erg, 13.5 10^{36} erg were absorbed by the earth-moon process and 9.1 10^{37} erg (2.17 10^{30}cal) went to heat the earth. Using data derived from G.V. Voytkevich, Kivel, Evans and Goodman, Jeffries, Davis and S.I. Danilevich, he estimates that the earth gives off 3.0 10^{20}cal of radiogenous heat per annum. The author also maintains that gravitational forces have a considerable influence on the movements of the earth's crust. Ye.N. Lyustikh, Candidate of Physical and Mathematical Sciences, comments that Zotov's hypothesis has been given an inadequate scientific basis. Further flaws and shortcomings are pointed out by Professor V.A. Magnitskiy. Zotov's thesis has less

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D001/D006

Do Gravitational Forces Heat the Earth?

originality than the author claims. It has been dealt with before and was recently treated by Ye.N. Lyustikh on the basis of Academician O.Yu. Shmidt's hypothesis. Magnitskiy's attitude is not entirely critical and he finds much to approve in Zotov's conclusions. There are 8 references, 3 of which are English and 5 Soviet.

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ASSOCIATION: Kazakhskiy gosudarstvennyy universitet imeni S.M. Kirova (Kazakh State University imeni S.M. Kirov)

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APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510004-8"

ZOTOV, P.P.

Organization of a completely mechanized dust and waste removal in textile factories. Izv. vys. ucheb. zav.; tekh. tekst. prom. no.2:131-137 '65. (MIRA 18:5)

1. Moskovskiy tekstil'nyy institut.

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510004-8"

SELIVERSTOV, Aleksandr Nikolayevich; RATTEL', K.N., retsenzent; ZOTOV, P.P., kandidat tekhnicheskikh nauk, redaktor; GUSEVA, Ye.M., redaktor; MEDVEDEV, L.Ya., tekhnicheskiy redaktor

[Effect of the dynamic condition of the air medium on the ventilation of cotton spinning and weaving mills] Vliianie dinamicheskogo sostoianiia vozdushnoi sredy na ventiliatsiiu priadil'nykh i tkatskikh khlopchatobumazhnykh fabrik. Pod red. P.P.Zotova. Moskva, Gos. nauchno-tekhn. izd-vo Ministerstva promyshlennykh tovarov shirokogo potrebleniia SSSR, 1954. 94 p. (MIRA 8:4)
(Textile factories--Ventilation)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510004-8"

ZOTOV, P.P.

Succession of intrusion and the age of intrusive rocks of the Kounrad region. Dokl. AN SSSR 115 no.6:1157-1160 Ag '57. (MIRA 11:1)

1. Kazakhskiy gosudarstvennyy universitet im. S.M. Kirova. Predstavleno akademikom D.S. Korzhinskim.
(Kounrad District--Rocks, Igneous)

ZOTOV P.P.; SANTSEVICH, M.I.

Means of telephone and telegraph communications should be under the same administration. Vest. sviazi 21 no.3:23-24 Mr '61. (MIRA 14:6)

1. Starshiye kontrolery komissii Sovetskogo kontrolya Soveta Ministrov RSFSR.

(Telecommunication)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510004-8"

ZOTOV, PETR PETROVICH

CHERKINSKIY, Boris Mendeleyevich; TOKAREV, Dmitriy Georgiyevich; SHAPKIN, Il'ya Fedorovich; ZOTOV, Petr Petrovich; SIMKIN, M.Ye., redaktor; PLEMYANNIKOV, M.N., redaktor; BAKASTOV, V.N., retsenzent; BRAZHKIN, M.I., retsenzent; MOTORIN, I.V., retsenzent; HATTEL', K.N., retsenzent; SHVYREV, S.S., retsenzent; NEKRASOVA, O.I., tekhnicheskiy redaktor

[Manual of power engineering for the textile industry] Spravochnik energetika tekstil'noi promyshlennosti. Moskva, Gos.nauchno-tekhn. izd-vo Ministerstva tekstil'noi promysh. SSSR. Vol.2.[Thermotechnics] Teplotekhnika. Pod red.M.E.Simkina. 1955. 510 p. (MIRA 9:2)
(Thermodynamics)

GUS'KOV, V.V.; [illegible], S.A.

Introducing an automatic unit for the distribution of mold sand. Biul.tekh.-ekon.inform.Ges.nauch.-issl.inst.nauch.i tekh.inform. 18 no.5:20-22 My '65. (MIRA 18:6)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510004-8"

LEONT'YEV, M.N.; prinimali uchastiye: BAKINA, K.V.; KISELEVA, O.M.; KRAVETS, Ye.A.; KARLOVA, S.A.; DUBNOVA, S.S.; SEMENYAKO, A.G.; ZAMORINA, Z.T.; MILANINA, Ye.F.; KOZEL'SKAYA, O.P.; VASIL'KOVA, Z.I.; ZOTOV, S.N.; YERMOLOV, A.I.; BEZLYUDNAYA, V.V.; NAZAROV, B.A.; ASHIKHMINA, V.M.; ASYAKINA, A.N.; TROITSKAYA, B.I.; SKVORTSOV, A.V., red.; LESHAKOV, I.T., tekhn. red.

[The economy of Orlov Province; a statistical manual] Narodnoe khoziaistvo Orlovskoi oblasti; statisticheskii sbornik. Orel, Gosstatizdat, 1960. 281 p. (MIRA 14:5)

1. Orel(Province) Statisticheskoye upravleniye. 2. Zamestitel' nachal'nika statisticheskogo upravleniya Orlovskoy oblasti (for Leont'yev). 3. Statisticheskoye upravleniye Orlovskoy oblasti (for all except Leshakov) 4. Nachal'nik statisticheskogo upravleniya Orlovskoy oblasti (for Skvortsov)
(Orlov Province--Statistics)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510004-8"

ZOTOV, S.V.

Rod bolting theory. Izv.vys.ucheb.zav.; gor.zhur. no.7:9-13 '58.
(MIRA 12:3)

1. Sverdlovskiy gornyy institut.
(Mine roof bolting)

USSR/Physics - Magnetism, Coercivity 1 Oct 50
Alloys

"Dependence of the Coercive Force of Powders of High-Coercivity Alloys Upon the Dimensions of the Particles," T. D. Zotov, Ya. S. Shur, Inst Phys of Metals, Ural Affiliate, Acad Sci USSR

"Dok Ak Nauk SSSR" Vol LXXIV, No 4, pp 687, 688

Coercive force (H_c, 100-650 oersteds) vs particle diam (d, 0.700 microns) for various temp (T, 675-750°) of Al-Ni alloy (14% Al, 25% Ni; remainder Fe). Submitted 7 Jul 50 by Acad I. P. Bardin.

FDD 172183

ZOTOV, T. D.

USSR/Metals - Alsifer, Magnetic Properties 21 Nov 51

"On Relationship Between the Coercive Force and Particle Size of the Powders of Soft Magnetic Materials," Ya. S. Shur, T. D. Zotov, I. A. Chebotarev, Inst of the Phys of Metals, Ural Affiliate, Acad Sci USSR

"Dok Ak Nauk SSSR" Vol LXXXI, No 3, pp 387-389

Powders of alsifer (9.6% Si, 5.7% Al, balance Fe) were used to study dependence of coercive force on size of powder grains and effect of stresses and temp on this relationship. Coercive force was measured on specimens of 2 types: those receiving

214T63

high cold hardening during crushing and those annealed from 1,000° in high vacuum. Results are graphically represented and discussed. Submitted by Acad A. F. Ioffe 21 Nov 51.

214T63

ZOTOV, T. D.

235T100

USSR/Physics - Gol'dgammer-Thomson Effect Sep 52

Transformer Steel

"Change in the Electric Resistance of Monocrystals of Transformer Steel in a Magnetic Field," T. D. Zotov, Ya. S. Shur, Inst of Phys of Metals, Ural Affiliate, Acad Sci USSR

"Dok Ak Nauk SSSR" Vol 85, No 2, pp 267-270

Gol'dgammer found that the elec resistance of a ferromagnetic increased in a longitudinal magnetic field and decreased in a transverse field. It was found recently that resistance of some ferromagnetics decreases in both types of fields. 235T100

Describes exptl study of this effect in monocrystals of transformer steel (3.5% Si). Submitted by Acad I. P. Bardin 16 Jul 52.

235T100

PHASE I BOOK EXPLOITATION SOV/3544

Akademiya nauk SSSR. Otdeleniye fiziko-matematicheskikh nauk

Fizika tverdogo tela; sbornik statey, II (Solid State Physics; Collection of Articles, II) Moscow, Izd-vo AN SSR, 1959. 328 p. 3,500 copies printed.

Ed.: A.F.Ioffe, Academician; Ed. of Publishing House: V. N. Filipovich; Tech. Ed.: R.A. Zamarayeva.

PURPOSE: This collection of articles is intended for physicists investigating the structures and properties of solids.

COVERAGE: This volume II of a two-volume collection of articles dealing with problems of solid state physics, was prepared by the Department of Physics and Mathematics, Academy of Sciences, USSR. The authors report on the physical properties of semiconductors such as germanium, cadmium sulfide, cadmium selenide, gallium arsenide, silicon, and various metal alloys. The electrical conductivity of these substances is studied. The effects of irradiation and acoustic phonons on semiconductors are also investigated. Several articles are

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APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510004-8"

SOV/3544

Gordonov, A.Yu. Transients in a Transistor With a Common Emitter 319

AVAILABLE: Library of Congress

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6/1/60

SOV/126-7-6-17/24

AUTHOR: Zotov, T. D.

TITLE: Temperature Dependence of the Electric Resistance of a Magnetite Single Crystal, Cooled in a Magnetic Field Below its Low-Temperature Transformation

PERIODICAL: Fizika metallov i metallovedeniye, 1959, Vol 7, Nr 6, pp 906-909 (USSR)

ABSTRACT: The object of this investigation was to study the temperature-dependence of magnetite cooled below 111°K in a magnetic field and the effect of the field strength in which cooling was carried out on the electrical resistance. A natural magnetite single crystal from the Kosoy-Brod [Urals] deposit was used, its main impurity being 0.1-0.3% titanium. No static distortion of the crystal lattice could be detected. From the crystal two specimens in the form of 1.3 mm diameter rods 7 and 6 mm long were cut with their axes along the [100] direction. The data from the two specimens, agreed well: only those for the longer one are given. The ratio of resistance of the specimen cooled in a magnetic field to that when cooling was effected without a field is shown as a function of field strength in Figs 1 and 2 for longitudinally and

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Temperature Dependence of the Electric Resistance of a Magnetite Single Crystal, Cooled in a Magnetic Field Below its Low-Temperature Transformation

transversely applied fields, respectively. Temperature was measured to ± 0.3°K with a copper-constantan thermocouple, and resistance to ± 0.00005 ohm. Resistance was measured at the lowest temperature with no field applied. For studying the temperature dependence of the resistance (shown in Fig 3 as functions of 1000/absolute temperature or cooling in longitudinal and transverse fields and without a field) the specimen was demagnetized and the resistance determined while its temperature was rising at 3-8°C per hour from 63.5°K to room temperature. Considerable anisotropy of resistance was found, but only below the transformation temperature. A great 14.5-21.5-fold change in resistance occurs in the range 111.0-112.3°K. The ratio of resistance for cooling in a transverse field to that in a longitudinal field shows a maximum of 93°K when plotted against 1000/absolute temperature (Fig 4), which the author attributes tentatively to a further transformation. N. V. Volkenshteyn showed interest in this work and B. S. Borisov carried out the X-ray investigation of

Temperature Dependence of the Electric Resistance of a Magnetite Single Crystal, Cooled in a Magnetic Field Below its Low-Temperature Transformation

specimens.
There are 4 figures and 11 English references.

ASSOCIATION: Institut fiziki metallov AN SSSR (Institute of Metal Physics, Ac.Sc. USSR)

SUBMITTED: October 31, 1958

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67698

18.7100 SOV/126-8-4-22/22

AUTHOR: Zotov, T.D.

TITLE: Change in the Electrical Resistance of a Magnetite Monocrystal in a Magnetic Field near the Region of its Low-temperature Transformation

PERIODICAL: Fizika metallov i metallovedeniye, Vol 8, Nr 4, 1959, pp 639-640 (USSR)

ABSTRACT: It is well known that below 111°K, the physical properties of magnetite are rapidly altered (Refs 1-5). The change in the physical properties is usually associated with a low-temperature transformation in the magnetite. The present author has measured the temperature dependence of the electrical resistivity in a longitudinal magnetic field between 78° and 213°K using a natural monocrystal of magnetite. The specimen was in the form of a rod 7 mm in length and 1.33 mm in diameter. The axis of the rod was in the direction of the crystallographic axis. Electrical measurements and chemical analysis have shown that the monocrystal was close to the stoichiometric composition. Spectral analysis showed that the main impurity was titanium (0.01-0.03%). In addition traces of Al, Cu, Cr, Mg and

Change in the Electrical Resistance of a Magnetite Monocrystal in a Magnetic Field near the Region of its Low-temperature Transformation

certain other elements have also been found. X-ray analysis did not establish any static distortion of the lattice. The electrical conductivity was measured using a slow heating of the specimen from the liquid nitrogen temperature. It was placed in a longitudinal magnetic field of 20,000 oersted which is considerably greater than the field necessary to saturate the specimen. The specimen was cooled down to liquid nitrogen temperature in the absence of a magnetic field. In the figure, the continuous curve represents the relative change in the resistance of the rod when placed in the longitudinal magnetic field as a function of temperature. The dashed curve shows the temperature dependence of the resistivity. Both curves were obtained with the same specimen. As can be seen, the first of these two curves has two minima and passes through zero at 88 and 140 °K. The first minimum is due to a transition, on heating, from an ordered state

Change in the Electrical Resistance of a Magnetite Monocrystal in a Magnetic Field near the Region of its Low-temperature Transformation

to an unordered state. The second minimum is apparently due to the interaction of conduction electrons with fluctuations in the electron density, magnetization and ordinary density. On switching on the magnetic field, the fluctuations are reduced and consequently the mobility of the electrons is increased. This leads to a reduction in the electrical resistance.

Acknowledgement is made to N.V. Volkenshteyn for interest and advice, and to B.S. Borisov for the X-ray analysis of the specimen.

Card 3/3

There are 1 figure and 7 references, of which 2 are Soviet and 5 English.

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

SUBMITTED: April 13, 1959

PHASE I BOOK EXPLOITATION SOV/4893

Vsesoyuznoye soveshchaniye po fizike, fiziko-khimicheskim svoystvam ferritov i fizicheskim osnovam ikh primeneniya. 3d, Minsk, 1959

Ferrity; fizicheskiye i fiziko-khimicheskiye svoystva. Doklady (Ferrites; Physical and Physicochemical Properties. Reports) Minsk, Izd-vo AN BSSR, 1960. 655 p. Errata slip inserted. 4,000 copies printed.

Sponsoring Agencies: Nauchnyy sovet po magnetizmu AN SSSR. Otdel fiziki tverdogo tela i poluprovodnikov AN BSSR.

Editorial Board: Resp. Ed.: N. N. Sirota, Academician of the Academy of Sciences BSSR; K. P. Belov, Professor; Ye. I. Kondorskiy, Professor; K. M. Polivanov, Professor; R. V. Telesnin, Professor; G. A. Smolenskiy, Professor; N. N. Shol'ts, Candidate of Physical and Mathematical Sciences; E. M. Smolyarenko; and L. A. Bashkirov; Ed. of Publishing House: S. Kholyavskiy; Tech. Ed.: I. Volokhanovich.

PURPOSE: This book is intended for physicists, physical chemists, radio electronics engineers, and technical personnel engaged in the production and use of ferromagnetic materials. It may also be used by students in advanced courses in radio electronics, physics, and physical chemistry.

COVERAGE: The book contains reports presented at the Third All-Union Conference on Ferrites held in Minsk, Belorussian SSR. The reports deal with magnetic transformations, electrical and galvanomagnetic properties of ferrites, studies of the growth of ferrite single crystals, problems in the chemical and physicochemical analysis of ferrites, studies of ferrites having rectangular hysteresis loops and multicomponent ferrite systems exhibiting spontaneous rectangularity, problems in magnetic attraction, highly coercive ferrites, magnetic spectroscopy, ferromagnetic resonance, magneto-optics, physical principles of using ferrite components in electrical circuits, anisotropy of electrical and magnetic properties, etc. The Committee on Magnetism, AS USSR (S. V. Vonsovskiy, Chairman) organized the conference. References accompany individual articles.

Ferrites (Cont.) SOV/4893

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