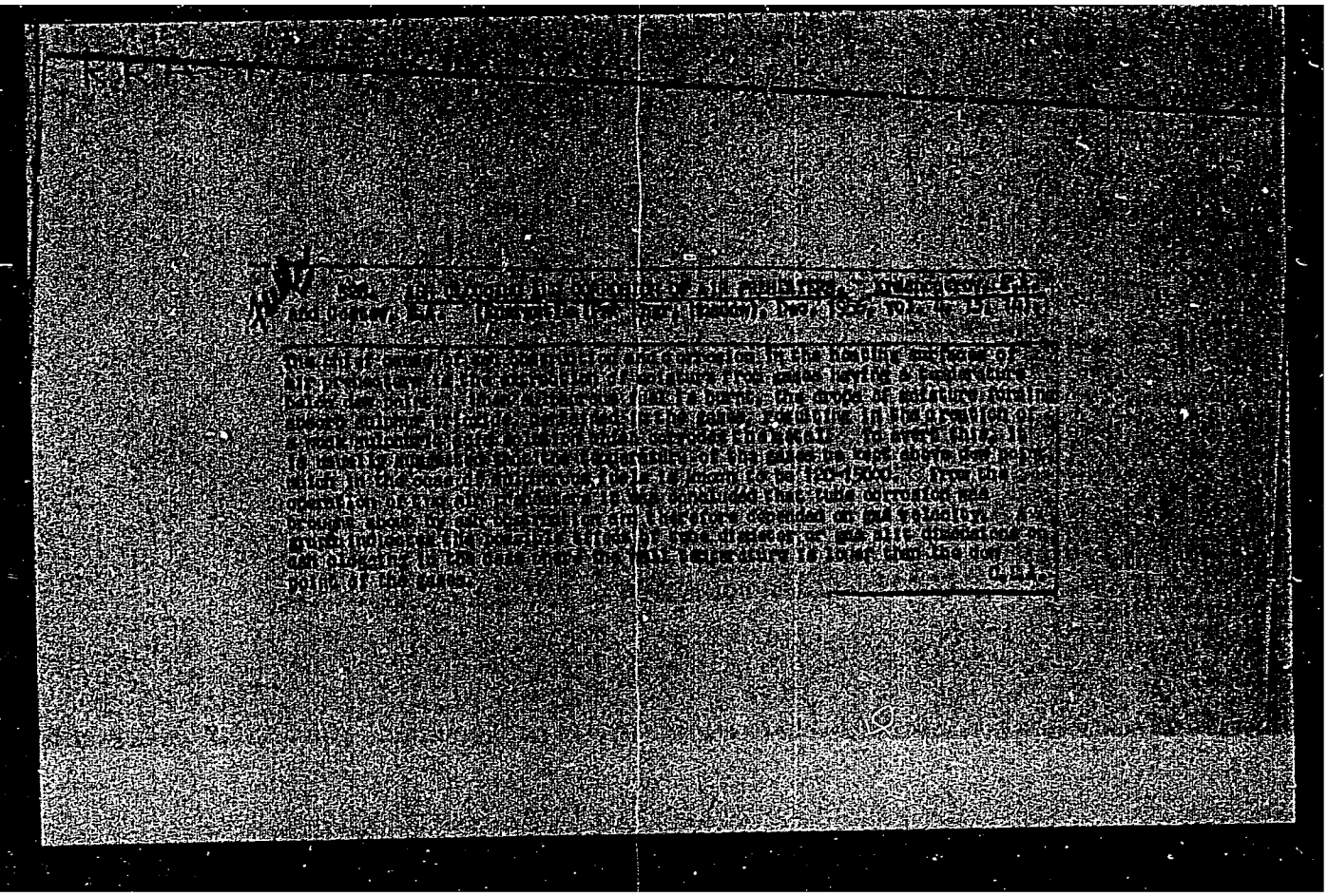

KRASNOPEROV, F.A., inzhener.

Protecting the external surfaces of piping against sweating and corrosion. Energetik 5 no.1:18 Ja '57. (MLRA 10:2)

(Water pipes) (Corrosion and anticorrosives)

AUTHOR: Krasnoperov, F.A., Engineer

91-58-5-4/35

TITLE: Devices for the Transporting of Air Heater Cubes (Prisposobleniya dlya transportirovki kubov vozdukhopodogrevateley)

PERIODICAL: Energetik, 1958, Nr 5, p 8 (USSR)

ABSTRACT: When assembling a tubular air heater at a Soviet thermal electric power station, some simple devices are used for transporting the air heater "cubes". The device shown in Figure 2 was attached to the upper plate of a 13.5 ton cube (Figure 1). The thin plate is protected against bending by a special device. For the transporting of cubes, in the horizontal position, the device shown in Figure 3 is used.

AVAILABLE: Library of Congress

Card 1/1 1. Heaters - Maintenance

KRASNOPEROV, F.T.

Clinical aspects of rheumatic myocarditis with total atrioventricular block. Terap. arkh. 27 no.7:89-90 '55. (MLRA 9:1)

1. Iz kafedry fakul'tetskoy terapii (zav.--zasluzhennyy deyatel' nauki Tatarskoy ASSR prof. Z.I. Malkin) i kafedry patologicheskoy anatomii (zav. dotsent N.S. Podol'skiy) Kazanskogo meditsinskogo inst.

(HEART BLOCK,
AV in rheum. heart dis.)
(RHEUMATIC HEART DISEASE, complications,
AV block)

KRASNOPEROV, F.T., assistent

Amount of prothrombin in the blood in some vascular lesions of the brain and their treatment with dicumarin. Kaz. med. zhur. no. 2:28-30 Mr-Ap '61. (MIRA 14:4)

1. Fakul'tetskaya terapevticheskaya klinika (zav. - prof. Z.I. Malkin) i klinika nervnykh bolezney (zav. - prof. L.I. Omorokov) Kazanskogo meditsinskogo instituta.
(PROTHROMBIN) (COUMARIN) (BRAIN--DISEASES)

KRASNOPEROV, F.T.; LUSHNIKOVA, L.A. (Kazan')

Problems in cardiovascular pathology at the First Interprovince Conference of Therapeutists of the Ural Mountain Region. Kaz. med. zhur. no. 2:98-101 Mr-Ap '61. (MIRA 14:4)
(CARDIOVASCULAR SYSTEM—DISEASES)

KRASNOPEROV, F.T., assistent

Anticoagulant treatment in thrombophlebitis of the extremities.
Kaz. med. zhur. no.5:34-35 S-O '61. (MIRA 15:3)

1. Fakul'tetskaya terapevticheskaya klinika (zav. - prof.
Z.I. Malkin) i klinika obshchey khirurgii (zav. - prof.
V.N. Shubin) Kazanskogo meditsinskogo instituta.
(ANTICOAGULANTS (MEDICINE))
(PHLEBITIS)

KANTSEROV, I.Kh., kand.med.nauk (Kazan'); KRASNOPEROV, F.T. (Kazan')

Problems of hypertension, atherosclerosis and coronary insufficiency at the Twelfth Scientific Session of the Institute of Therapy of the Academy of Medical Sciences of the U. S. S. R. (January 28-30), 1961 in Mosvow). Kaz. med. zhur. no.5:94-95 S-O '61. (MIRA 15:3)

(HYPERTENSION)
(ARTERIOSCLEROSIS)
(CORONARY HEART DISEASE)

ANISIMOV, V.Ye. (Kazan'); KRASNOPEROV, F.T. (Kazan')

Microfocal myocardial infarcts and chronic hepatitis at the expanded plenum of the board of the All-Russian Society of Therapeutists; January 21-22, 1962 in Moscow. Kaz.med.zhur. no.3:95-97 My-Je '62. (MIRA 15:9)

(HEART--INFARCTION) (LIVER--DISEASES)

KRASNOPEROV, F.T.

Comparative data on some indices of the blood coagulation and anticoagulation systems in patients with atherosclerosis and pulmonary heart disease. Nauch. trudy Kaz. gos. med. inst. 14: 455-456 '64.

Prothrombin index and heparin time in diseases of the liver. Ibid.:457-458 (MIRA 18:9)

1. Kafedra fakul'tetskoy terapii (zav. - prof. Z.I.Malkin) Kazanskogo meditsinskogo instituta.

24(3) SOV/48-23-3-23/34

AUTHOR: Krasnoperov, G. V.

TITLE: On the Magnetization of Ferromagnetic Powders in Strong Magnetic Fields (O namagnichivanii ferromagnitnykh poroshkov v sil'nykh magnitnykh polyakh)

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959, Vol 23, Nr 3, pp 405-406 (USSR)

ABSTRACT: It is comparatively easy to calculate the curve of magnetization in strong magnetic fields where the reversible rotation processes play the most important part. The law of saturation approximation $I = I_s \left(1 - \frac{A}{H} - \frac{B}{H^2} - \ldots\right) + I_d$ (1) was investigated in the present paper with ferromagnetic powders. It was found that the law of saturation approximation holds in the case of ferromagnetic powders in the range of the fields of 3,000 ÷ 9,000 oe. This confirms the agreement of I_s and I'_s. Figure 1 shows the dependence of the quantity χH^3 on H in the case of nickel powder (diameter of the particles $\delta \leq 0.25$ mm). The table gives the values of saturation magnetization I_s as well as those of the coercive force H_c and of the initial

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On the Magnetization of Ferromagnetic Powders in Strong Magnetic Fields

SOV/48-23-3-23/34

susceptibility χ_0 for nickel powder. Similar investigations were made with Fe-, Co-, and Permalloy powders, as well as with mixtures of these substances. Figure 2 indicates that the non-magnetic inclusions have an effect upon both coefficients of the law (1). The effect of the non-magnetic inclusions upon the variation of the coefficients A and B depends on the type of ferromagnetism and the size of the powder particles. The author thanks V. V. Parfenov for his assistance. There are 2 figures, 1 table, and 3 references, 2 of which are Soviet.

ASSOCIATION: Laboratoriya pretsizionnykh splavov Ural'skogo instituta chernykh metallov (Laboratory of Precision Alloys of the Ural Institute of Ferrous Metals)

Card 2/2

85963

S/126/60/010/005/005/030
E073/E535

18.1141

AUTHORS: Krasnoperov, G. V. and Lapkin, N. I.

TITLE: Investigation of Heat Treatment of Iron-Aluminium Magnetically Soft Alloys

PERIODICAL: Fizika metallov i metallovedeniye, 1960, Vol.10, No.5, pp.668-671

TEXT: The aim of the investigations was to find methods of heat treatment which ensure high magnetic properties in hot rolled sheets of iron alloyed with 16% Al. The alloy Yu 16 (Yu16), corresponding to the American "alphenol", was produced in an open 100 kg capacity induction furnace using as charge materials pure iron and refined grades of Al. Prior to alloying with Al, the melt was treated with a vacuum of 10 to 15 mm Hg col. for the purpose of decarburization and deoxidation. The metal was poured into metallic moulds and heated to 500°C. To eliminate thermal stresses and cracks, the ingots were cooled from 800°C with a speed of 80 to 90°C/hour. The specimens had the following composition in percent: C 0.009, Si 0.38, Mn 0.03, S 0.002, P 0.004, Cr traces, Ni 0.04, Cu 0.02, Al 15.7. The hot rolling was by means of a 2-high mill in packets consisting of sheets of dynamo steel and of the

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S/126/60/010/005/005/030
E073/E535

Investigation of Heat Treatment of Iron-Aluminium Magnetically Soft Alloys

alloy Yu16. Discs of 30 and 20 mm diameter were stamped from hot rolled 0.35 x 600 x 1200 mm pickled sheets. The specimens, consisting of 20 sheets, were air annealed in a silite furnace in the temperature range 800 to 1200°C, followed by cooling at a rate of 100°C to the quenching temperature, held at that temperature for 30 min and then quenched in a 20% NaOH solution, water or transformer oil. The magnetic properties were measured ballistically, the electric properties were measured by means of resistance bridges. For determining the influence of the annealing temperature on the magnetic properties, the specimens were cooled at the rate of 100°C/hr and then quenched in the alkali from 600°C. An increase in the annealing temperature from 850 to 1050°C brings about an improvement of the magnetic properties. On increasing this temperature further, the magnetic properties will become somewhat poorer. An increase in the annealing temperature leads to some burning off of the Al. The quenching medium and the quenching temperature have a considerable influence on the permeability and on the coercive force; the highest μ_o values were obtained after oil quenching from 650°C

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S/126/60/010/005/005/030
E073/E535

Investigation of Heat Treatment of Iron-Aluminium Magnetically Soft Alloys

(annealing at 950°C) and 700°C (annealing at 1050°C). An increase in the annealing temperature shifts towards higher temperatures the optimum quenching temperature from the point of view of μ_o. The initial permeability is considerably lower for specimens quenched in alkali and water. For obtaining high maximum permeabilities it is necessary to quench the alloy from 650°C (after annealing at 950°C) and 600°C (after annealing at 1050°C). An increase in the annealing temperature and the quenching speed leads to a decrease in the optimum quenching temperature. In the case of oil quenching, the coercive force decreases with temperature up to 650-700°C. It was found that an increase in the quenching temperature and the cooling speed leads to an increase in the electric resistance and, consequently, to a decrease in the degree of ordering. An increase in the soaking time from 15 min to 3 hours during annealing and also of the cooling rate from 50 to 200°C/hr does not affect greatly the magnetic properties. The results show that with this alloy magnetic properties can be obtained which compare favourably with those obtained for an iron alloy with a 50% Ni content. Acknowledgments

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S/126/60/010/005/005/030
E073/E535

Investigation of Heat Treatment of Iron-Aluminium Magnetically Soft Alloys

are made to the personnel of the Precision Alloy Laboratory of the Ural Scientific Research Institute for Ferrous Metals (I. A. Gorlach, N. A. Krasil'nikov and A. S. Matyugin) and to the student, L. N. Polovnikova for producing the specimens and for assistance with the heat treatment and the magnetic tests. There are 2 figures, 1 table and 5 references: 1 Soviet and 4 English.

ASSOCIATION: Ural'skiy nauchno-issledovatel'skiy institut chernykh metallov (Ural Scientific Research Institute for Ferrous Metals)

SUBMITTED: May 7, 1960

Card 4/4

KRASNOPEROV, G.V.; POLOVNIKOVA, L.A.

Kinetics of the ordered iron-aluminum IU16 alloys. Fiz. met. i metalloved. 11 no. 1:149-150 Ja '61. (MIRA 14:2)

1. Ural'skiy nauchno-issledovatel'skiy institut chernykh metallov.
(Iron-aluminum alloys--Metallography)

S/276/63/000/002/014/052
A052/A126

AUTHORS: Lapkin, N.I., Krasnoperov, G.V., and Rukhvostova, N.G.

TITLE: Investigation of heat treatment of soft magnetic alloys

PERIODICAL: Referativnyy zhurnal, Tekhnologiya mashinostroyeniya, no.2, 1963, 61, abstract 2B270 (Tr. Ural'skogo n.-i. in-ta chern. metallov, 1, 1961, 160-175)

TEXT: Heat treatment of Fe-Ni 50 H (50N), 79 HM (79NM) and Fe-Al IO16 (Yu16) soft magnetic alloys was investigated. Fe-Ni alloys were hot rolled on a 300 merchant mill. 50N and 79NM alloys after normalizing (heating to 1,050°C, holding 710 min, air cooling) and etching were cold rolled on a 6-roll mill with 87.5% reduction in area without intermediate annealing. The heat treatment of these alloys was carried out in an inertialess MIIB-2 (MPV-2) vacuum furnace under different conditions: the annealing temperature was varied from 950 to 1,350°C, the holding from 0.25 to 3 hours, the rate of cooling in the 1,350-600°C range from 50 to 500°C/hour. From the temperature of 600°C the samples were cooled in a switched-off furnace at a rate from 100 to 5°C/min. Yu16 alloy was rolled to 0.35mm thickness on a

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Investigation of heat treatment...

2-roll hot rolling mill and then annealed in a saltpeter bath without protecting atmosphere under following conditions: temperature 800, 900, 1,000, 1,100 and 1,200°C, holding 1 hour, cooling to hardening temperature at a rate of 100°C/hour. The hardening temperature of Yu16 alloy was varied from 450 to 700°C. As hardening media water, 20% caustic soda solution and transformer oil were used. The effect of annealing and hardening temperature on the magnetic properties of 50N, 79NM and Yu16 alloys was determined as well as the effect of heat treatment on the thermal stability and ageing of these alloys. As a result of the investigations it has been established that the highest values of magnetic permeability can be reached for 50N alloy at an annealing temperature of 1,200-1,250°C and for 79NM alloy at 1,150-1,300°C. Tempering at ordering temperature (480°C) reduces the heterogeneity and increases the thermal stability of magnetic properties of 79NM alloy. The temperature of secondary recrystallization in 50N alloy is in the 1,200-1,400°C range. Yu16 alloy has the highest magnetic properties after annealing at 950-1,050°C and oil hardening at 650°C. There are 7 figures and 6 references.

T. Kislyakova

(Abstracter's note: Complete translation.)

Card 2/2

18.1141

S/126/61/011/005/006/015
E073/E335

AUTHORS: Lapkin, N.I. and Krasnoperov, G.V.

TITLE: Influence of Heat-treatment on the Temperature Stability and Ageing of the Alloy [illegible] (Yu16)

PERIODICAL: Fizika metallov i metallovedeniye, 1961, Vol. 11, No. 5, pp. 693 - 697

TEXT: The authors investigated the influence of heat-treatment on the temperature dependence of the permeability, coercive force and the magnetic induction of a hot-rolled high-ordering alloy Yu16 (16% Al, rest Fe) in the temperature range -80 to +200 °C. They also investigated the influence of ageing on the magnetic and electrical properties of this alloy. According to earlier results of the authors and their team (Ref. 1 - Byulletin TsNIIChM, 1960, 34, No. 23; Ref. 2 - Fiz. met. i metallovedeniye, 1960, Vol. 10, No. 5, p.668) this alloy possesses very favourable magnetic properties after quenching from the temperature range 700 - 500 °C and as a result of this the alloy may prove to be in an unstable state. The specimens

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S/126/61/011/005/006/015
E073/E535

Influence of Heat-treatment ....

were produced from hot-rolled, heat treated 0.35 mm thick sheet. Various heat-treatments were applied to stabilise their magnetic properties, i.e. various temperatures of annealing and quenching and various cooling speeds. The magnetic hysteresis properties were measured ballistically in the temperature range -80 to +200 °C, using a thermostat. A mixture of liquid nitrogen and gasoline was used as a quenching medium. Prior to the magnetic measurements, individual specimens were subjected to artificial ageing (at 50, 100, 200 and 250 °C for 24 hours) and natural ageing (15-20 °C for 2 880 and 5 040 hours). For all the investigated heat-treatments (annealing at 950 and 1 050 °C for one hour; quenching from 700, 650, 600, 500 and 450 °C in an alkali, water and oil) the magnetic properties changed considerably on changing the test temperature. The induction at H = 13 Oe is highest at low temperatures (-80 °C) and this drops rapidly with increasing test temperature, indicating a low Curie point. The residual induction as well as the permeability and the coercive force change with the test

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Influence of Heat-treatment ....

temperature and the appropriate curves show a pronounced maximum (or minimum). The residual induction has a maximum at 20 - 40 °C and shows little dependence on the heat-treatment conditions. At low quenching temperatures (400 - 500 °C) and high cooling speeds, the magnitude and the temperature stability of the magnetic properties are low. The highest initial and maximum permeabilities were obtained in tests at 100-120 and 40-60 °C after annealing followed by oil-quenching. Artificial ageing at 50 - 100 °C resulted in an improvement in the magnetic properties by 5-20%. The results have shown that heat-treatment, which leads to improved magnetic properties of the alloy, brings about a decrease in the temperature stability of these properties. An increase in the cooling speed during quenching narrows the range of operating temperatures; at 150-180 °C an irreversible deterioration in the magnetic properties will occur. Artificial ageing at 50 and 100 °C improves, and artificial ageing at 200-250 °C reduces the magnetic properties of the investigated alloy. Natural ageing for periods of four and

Influence of Heat-treatment ....

seven months also results in a deterioration of the magnetic properties. There are 3 figures, 1 table and 5 Soviet references.

ASSOCIATION: Ural'skiy nauchno-issledovatel'skiy institut chernykh metallov (Ural Scientific-research Institute for Ferrous Metals)

SUBMITTED: August 6, 1960

Card 4/4

KUZ'MIN, V.I., dotsent; KRASHOPEROV, M.Ya., inzh.

Investigating the accuracy and conditions for using the standard specifications method. Izv.vys.ucheb.zav.; gor.zhur. no.11: 52-58 '58. (MIRA 12:8)

1. Khar'kovskiy gornyy institut.
(Donets Basin--Coal geology) (Prospecting)

KRASNOPEROV, N.K.

Device for adjustment of multiple-purpose and instruments microscopes. Izm. tekh. no. 1:15-16 Ja '61. (MIRA 14:1)
(Microscope--Testing)

KRASNOPEROV, N. P. Prof. Dr. Vet. Sci.

"On the Affection of the Hoof Tissues of Horses with Onchocerciasis," Veterinariya, 24, No.3, p. 22, 1947

Veterinary Faculty, Kirov Agric. Inst.

KRASNOPEROV, N. P.

Onchocerciasis

Present-day classification and characteristics of onchocerciasis processes in withers of horses. Trudy Gel8m. lab. no. 5, 1951.

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

AUTHORS: Karpov, Yu., Engineer, Krasnoperov, V., Engineer, Okunev, Yu., ~~Engineer~~ SOV/29-58-9-26/30

TITLE: An Unusual Motor (Neobychnyy dvigatel')

PERIODICAL: Tekhnika molodezhi, 1958, Nr 9, pp 37 - 37 (USSR)

ABSTRACT: In the course of their studies at the Leningradskiy elektrotekhnicheskiy institut imeni V.I.Ul'yanova (Lenina) (Leningrad Institute of Electrical Engineering imeni V.I.Ul'yanov (Lenin)) the authors of this paper invented an electrical motor which they called "dielectric motor". This is a description of its principle of operation. This motor has neither a conventional steel stator with a copper winding nor a massive rotor. It operates by using the principles of static electricity - the interaction of stationary electric charges. The disk does 6000 revs/min. Attempts were made to increase the speed of the motor by producing the rotor from different materials. The best results were obtained with plexiglass. The speed can also be increased by placing the rotor in a vacuum, thus reducing air friction. The power of the motor can be increased by

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An Unusual Motor

SOV/29-58-9-26/30

placing it in a high-pressure chamber . In a fluid dielectric the nominal voltage is reduced almost by a factor of 10. As a compensation the speed is considerably reduced owing to the increased friction of the rotor in the fluid. The dielectric motor is still anything but perfect. Nevertheless it is capable of being used in practical work. If a vane is attached to it it may serve as a ventilator. If the shaft of the rotor is arrested by a spring this motor is transformed into an instrument measuring high d.c.tension. The angle of deflection of the rotor will be proportional to the potential applied to the electrodes. The high speed of such motors and the lacking of a commutator recommends such motors for use in gyroscopes. Although at present it may sound phantastically, there is no denying that in principle such a motor could be used in connection with a radioactive electrostatic generator. There are 3 figures.

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KRASNOPEROV, V.A.

PHASE I BOOK EXPLOITATION SOV/4779

Vsesoyuznaya konferentsiya po fizike dielektrikov. 2d, 1958

Fizika dielektrikov; trudy vtoroy vsesoyuznoy konferentsii (Physics of Dielectrics. Transactions of the 2d All-Union Conference on the Physics of Dielectrics) Moscow, Izd-vo AN SSSR, 1960. 532 p. Errata slip inserted. 5,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Fizicheskiy institut imeni P.N. Lebedeva.

Ed. of Publishing House: Ioff, Ye.I. Ed: I.E. Dorfman; Editorial Board: (Resp. Ed.) G.I. Skanavi, Doctor of Physics and Mathematics (Deceased), and K.V. Filippov, Candidate of Physics and Mathematics.

PURPOSE: This collection of reports is intended for scientists investigating the physics of dielectrics.

COVERAGE: The Second All-Union Conference on the Physics of Dielectrics held in Moscow at the Fizicheskiy institut imeni P.N. Lebedeva (Physics Institute imeni P.N. Lebedev) in November 1958 was attended by representatives of the principal scientific centers of the USSR and of several other countries. This collection contains most of the reports presented at the conference and summaries of the discussions which followed. The reports in this collection deal with dielectric properties, losses, and polarization, and with specific inductive capacitance of various crystals, chemical compounds, and ceramics. Piezoelectric, ferroelectric crystals, and various radiation and irradiation effects on dielectrics are investigated. The volume contains a list of other papers presented at the conference dealing with polarization, losses, and breakdown of dielectrics, which were published in the journal Izvestiya AN SSSR, seriya fizicheskaya, Nos. 1 and 2, 1960. No personalities are mentioned. References accompany each report.

ACC NR: AP7004962 (A) SOURCE CODE: UR/0048/66/030/009/1430/1432

AUTHOR: Krasnoperov,V.A.; Mironov,I.A.; Khomenok,G.A.

ORG: State Institute of Applied Chemistry (Gosudarstvennyy institut prikladnoy khimii)

TITLE: Investigation of the properties of luminescent aluminum nitride /Report, Fourteenth All-Union Conference on Luminescence (Crystal Phosphors) held at Riga, 16-23 Sept. 1965/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 9, 1966, 1430-1432

TOPIC TAGS: luminescence, aluminum nitride, photoluminescence, cathodoluminescence, electroluminescence

ABSTRACT: The authors investigated the photoluminescence, cathodoluminescence, and electroluminescence of chromium, manganese, samarium, and europium doped aluminum nitride powders synthesized from the elements and either containing or not containing a donor (sulfur) or an acceptor (zinc). The presence of sulfur decreased the electrical resistance of the specimens, while the presence of zinc increased it. As regards photoluminescence, the specimens separated into two groups, depending on whether the activator was manganese or chromium (group a), or samarium or europium (group b). Photoluminescence was excited in the type "a" phosphors by ultraviolet radiation with wavelengths shorter than the 280 mμ absorption edge and there was a

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ACC NR: AP7004962

prolonged afterglow, the luminescence intensity dropping to 3% of its initial value only after several minutes. The presence of zinc or sulfur did not affect the luminescence. Photoluminescence was excited in the type "b" specimens by radiation with wavelengths ranging from 260 to 400 mμ, and the duration of the afterglow was less than 0.1 sec. The presence of Zn did not affect the photoluminescence of AlN:Sm, and the presence of sulfur quenched it. The cathodoluminescence of all the specimens exhibited a characteristic band peaking at 380-400 mμ. Electroluminescence was excited by fields of the order of 10^4 V/cm in a cell equipped with brass and conducting glass electrodes. No luminescence appeared when the field was first applied, but if the glass electrode was negative and the polarity was suddenly reversed there appeared a flash with a duration of no longer than 1 sec. The flashes produced by subsequent field reversals decreased in intensity, and no electroluminescence was observed in alternating fields with frequencies of 20 Hz or higher. The brightest electroluminescence was obtained with an AlN:Eu:Zn:S specimen; its spectrum exhibited the two bands characteristic of the photoluminescence of AlN:Eu (narrow bands at 380 mμ and 357 mμ) and a broad band in the 270-300 mμ region. After a brief discussion of the possible mechanisms giving rise to the electroluminescence it is concluded that further experimental work is required. Orig. art. has: 3 figures.

SUB CODE: 20 SUBM DATE: none ORIG. REF: 000 OTH REF: 005

Card 2/2

CHERNYY, V.S.; KRASNOPEROVA, A.P.

Effect of temperature on the solubility of some silver salts in nonaqueous solvents. Zhur. fiz. khim. 39 no.2:430-433 F '65. (MIRA 18:4)

1. Khar'kovskiy gosudarstvennyy universitet.

FRISMAN, E.V.; SIBILEVA, M.A.; KRASNOPEROVA, A.V.

Hydrodynamic and optical properties of polymer solutions in the range of high concentrations. Vysokom.soed. 1 no.4:597-606 Ap '59. (MIRA 12:9)

1. Leningradskiy gosudarstvennyy universitet im. A.A.Zhdanova.
(Polymers)

39638
S/191/62/000/008/008/013
B124/B180

15.8050

AUTHORS: Tarakanov, O. G., Krasnoperova, A. V.

TITLE: Foaming of polyvinyl chloride pastes. Study of factors affecting the foam structure

PERIODICAL: Plasticheskiye massy, no. 8, 1962, 30-33

TEXT: Investigation was made into the foaming of pastes based on Igelit-F PVC emulsion with dioctyl phthalate (DOP) plasticizer mixed, at a weight ratio of 100:200, for 30 min at room temperature. At 40°C viscosity was ~100 cP. The best foam structure is achieved with a resin containing 0.5% and DOP with 0.7% H_2O, and viscosity between 250 and 400 cP. Slower heating produces better structures.. The resin in the plasticizer must swell to the maximum for PVC foam pastes. Dry CO_2 and dried paste components will retard the increase in viscosity and improve foaming; which starts at 130 instead of 250 cP. The following surfactants were tested: Ufapast O sodium sulfonate, sodium sulfonol HП-1 (NP-1), emulsifier MK(MK), fluoroester (ester of glycerin and fluoric acid telomers), and a soy phosphatide. The surfactant was dissolved in the

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Foaming of polyvinyl chloride ...

plasticizer at a weight ratio of 3 : 100, and mixed with the resin. When these surfactants were added to a paste of unrefined dry resin and dry plasticizer, the structure of the foams was only altered at low viscosities. Foaming with surfactants was much improved when the resin was first washed several times in 1% NaOH and distilled water and dried at 60°C to constant weight. V. I. L'vova and A. G. Oshuyev are thanked for supplying the fluoroester. There are 6 figures. The English-language reference is: M. F. Fuller, Ind. Eng. Chem., No. 4, 730 (1957).

Card 2/2

Cultivated Plants. Fruits. Berries. Nuts. Tea.

SOV. JOUR : Ref. Zhur -Biologiya, No. 5, 1959, No. 20458

AUTHOR : Kresnoperova, A.Ye.

INST. : --

TITLE : Yubileynoye Variety Apple.

PUB. : Sad i ogorod, 1956, No.8, 60

ABSTRACT : No abstract

CARD: 1/1

USSR / Pharmacology and Toxicology--Medicinal Plants V-5

Abs Jour: Ref Zhur-Biol, No 23, 1958, 107351

Author : Koroleva, K. I., Krasnoperova, E., Volynchikova, M., Korchuganova, G.

Inst : Gorno-Altayskiy State Pedagogical Institute

Title : The Effect of Black Mountain Ash and Sea Buckthorn on the Rate of Regeneration of Injured Tissue

Orig Pub: Uch. zap. Gorno-Altayskiy gos. ped. in-t, 1957, vyp. 2, 278-280

Abstract: Experimental wounds in rabbits were wetted with juices of the black mountain ash and sea buckthorn. Observations showed that the wounds wetted with the juices, especially with the simultaneous introduction of the juices per os, in a dose of 3 ml,

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USSR / Pharmacology and Toxicology--Medicinal Plants V-5

Abs Jour: Ref Zhur-Biol, No 23, 1958, 107351

healed 15 to 16 days in advance, with a rapidity of regeneration of 0.4 to 0.56 cubic centimeters. The wounds of the control rabbits healed after 18 to 23 days.

Card 2/2

PAVLOVICH, G.A.; KRASNYANOVA, K.A.

Increasing the wear resistance of cutter bits of coal cutters. Mikh. tokh.-ekon. inform. Gos. nauch.-issl. inst. nauch. i tekh. inform. 17 no.6:25 Je '64. (MIRA 17:11)

KRASNOPEROVA, K.Ye.

Humoral mediators of nervous stimulation in exudative diathesis in children. Nauch. trudy Kaz. gos. med. inst. 14:459-460 '64. (MIRA 18:9)

1. Kafedra gospital'noy pediatrii (zav. - prof. A.Kh. Khamidullina) Kazanskogo meditsinskogo instituta.

KORNIYENKO, V.P., dotsent; SELIKHOVA, M.N.; KRASNOPEROVA, Yu.S., studentka

Thermal decomposition of copper and zinc formates. Uch. zap. KHGU 82:59-68 '57. (MIRA 12:9)
(Formic acid)

KRASNOPEVTSEV, M. P.

USSR/Engineering - Fuel manifold

Card 1/1 : Pub. 12 - 6/16

Authors : Kurov, B. A.; Podol'skiy, S. M.; and Krasnopevtsev, M. P.

Title : Improvement of the intake manifold for the ZIS-120 engine

Periodical : Avt. trakt. prom. 8, 16-20, Aug 1954

Abstract : The Scientific Automotive Institute at the Stalin Automobile Factory in Moscow designed several types of intake manifolds for special use with K-80, K-28, K-21, and K-82 type carburetors. General description of the operation of the above manifolds and their specifications are given. Illustrations; drawings; graphs.

Institution : .....

Submitted : .....

Sci. Automotive Inst.
Moscow Auto Plant im. Stalin

ARMAND, G.B.; VYAZ'MIN, V.A.; GRINSHTEYN, L.M.; GOL'DBERG, G.I.; GOLUBEV, B.S.; KASHLAKOV, M.V.; KRASNOPEVTSEV, M.P.; KUZNETSOV, S.I.; KURAYEV, A.V.; KAYUKOV, G.I.; MASHATIN, V.I.; MOLOTILOV, V.I.; NERUSH, A.R.; PRAL', G.I.; RAGUSKAYA, L.F.; RUBINSHTEYN, S.M.; SEMENKOV, P.L.; TARASOV, L.A.; FEDOROVA, A.A.; TSEPKIN, M.F.; SHAYEVICH, A.G.; ZARUBIN, A.G., otv.red.; VASIL'YEVA, I.A., red. izd-va; SOKOLOVA, T.F., tekhn.red.

[ZIL-157 motortruck; operation and service] Avtomobil' ZIL-157; instruktsiia po ekspluatatsii. Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1958. 235 p. (MIRA 11:12)

1. Moskovskiy avtomobil'nyy zavod.
(Motortrucks)

KRASNOPEVTSEV, N.D.

Prospecting for underground waters and their appraisal. Mat.GKZ no.2: 13-25 '61. (MIRA 16:3)

(Water, Underground)

USSR/Cultivated Plants. Grains. M

Abs Jour : Ref Zhur-Biol., No 15, 1958, 68095

Author : Krasnopevtsev, N. G.
Inst : Buryat Mongolian State Pedagogical Institute.
Title : The Effect of T. S. Mal'tsev Soil Treatment Method on Growth, Development, and Yield of Spring Rye.

Orig Pub : Uch. zap. Buryat-Mong. gos. ped. in-t, 1956, No. 10, 85-109

Abstract : According to 1955 data, the highest yield was obtained when stubble was harrowed twice in the spring at a depth of 8-10 cm with ordinary spring soil treatment (8.55 centners/hectare, 34.8 percent higher than of control which was

Card : 1/2

GINZBURG, Abram Solomonovich,; KRASNOPEVTSEV,N.I., retsenzent,; KHMEL'NITSKAYA, A.Z., red.; DOBUZHINSKAYA, L.V., tekhn. red.

[Modern types of bakery ovens] Sovremennye konstruktsii khlebopekarnykh pechei. Moskva, Pishchepromizdat, 1958. 154 p. (MIRA 11:11)

(Ovens)

KRASNOPEVTSEV, N.I.

Bakery oven with a daily capacity of 25 tons. Trudy TSNIIKHP no.8:69-74 '60. (MIRA 15:8)

(Ovens)

Krasnopevtsev, S.A.

KRASNOPEVTSEV, S. A.

Vzaimodeisvie artillerii s aviatsiei pri proryve oboronitel'noi polsy. (Voennaia mysl', 1941, no. 1, p. 38-45, charts.
Title tr.: Coordination of artillery operations and air activity during the breakthrough of the defense line.

U4.V82 1941

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

KRASNOPEVTSEV, V. V.

Krasnopevtsev, V.V., G.I. Skanavi, and Ye. A. Konorova. [Fizicheskiy institut imeni P.N. Lebedeva AN SSSR (Physical Institute imeni P.N. Lebedev, AS USSR)] Temperature Dependency of the Pulse Electrical Stability of Several Polycrystalline Dielectrics

(The Physics of Dielectrics; Transactions of the All-Union Conference on the Physics of Dielectrics) Moscow, Izd-vo AN SSSR, 1958. 245 p. 3,000 copies printed.

This volume publishes reports presented at the All-Union Conference on the Physics of Dielectrics, held in Dnepropetrovsk in August 1956 sponsored by the "Physics of Dielectrics" Laboratory of the Fizicheskiy institut imeni Lebedeva An SSSR (Physics Institute imeni Lebedev of the AS USSR), and the Electrophysics Department of the Dnepropetrovskiy gosudarstvennyy universitet (Dnepropetrovsk State University).

KRASNOPEVTSEV, V. V.

AUTHORS: Konorova, Ye. A., Krasnopevtsev, V. V., Skanavi, G. I. 48-22-4-11/24

TITLE: On the Temperature Dependence of the Pulsed Dielectric Strength of Some Polycrystalline Dielectrics (K temperaturnoy zavisimosti impul'snoy elektricheskoy prochnosti nekotorykh polikristallicheskikh dielektrikov)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, 1958, Vol. 22, Nr 4, pp. 408-413 (USSR)

ABSTRACT: In modern theories of electric breakdown of solid dielectrics it is supposed in accordance with experiments that the breakdown is conditioned by the behaviour of the conduction electrons in the crystal lattice under the influence of a strong electric field. New dielectrics were recently synthesized by the authors in their laboratory (strontium--bismuth-titanates - SBT) with an high dielectric permeability ($\varepsilon \approx 800$ at room temperature), showing no piezoelectric properties. The temperature dependence of ε in SBT is represented in figure 1. ε is independent from the electric field strength. For this reasor, this dielectric possesses properties, which are necessary for an investigation of the

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influence of ε on the breakdown strength (ref. 7). In this connection, the temperature dependence of E_{br} was investigated in this paper in the field of electric breakdown in various dielectrics with different dielectric permeability. This were dielectrics of different polarization character, different ε and a temperature dependence of ε, being represented by titanates of zinc ZnO TiO_2 (ε =30), of calcium $CaTiO_3$ (ε =130), of barium $BaTiO_3$ (ε =1000) and by SBT (ε =800). (The value of ε is referred to room temperature at a frequency of 1 kc). The maximal errors in the determination did not exceed 12%. Mean and maximum values for Zn, Ca and Ba titanates and for SBT are given on a table. The dielectric strength of the investigated polycrystalline dielectrics does not change with the duration of voltage application at room temperature (figure 2). A certain correlation exists between the temperature dependence of ε and the breakdown voltage (figures 3 and 1). A higher breakdown voltage corresponds to smaller values of ε, although the temperature minimum of E_{br} and the maximum of ε do not coincide. The dielectric strength of $CaTiO_3$ and $BaTiO_3$ is practically independent from temperature

(figure 4). The examinations of the theory of electric breakdown in solid dielectrics proceed from the conception of impact ionization by electrons in a medium electric field. The disturbance of electron distribution is a consequence of the avalanche-like accumulation of conduction electrons in the crystal lattice. The interrelation between electric disruption and the polarization effect (frequency, effective ionic charge) can be caused by energetical losses of the conduction electrons on lattice vibrations. The effects of polarization on the magnitude of dielectric strength of the dielectric must be caused by the energetical losses of the electrons on the vibrations of the basic lattice ions (atoms) as well as of the ions causing a polarization accompanied by an high dielectric permeability. Moreover a strongly effective field is in a position to modify the frequency of the basic ions into either direction, which will show in the energy losses of the conduction electrons. From this viewpoint it proves to be extremely difficult to obtain an analytical representation of the dependence of dielectric strength on dielectric permeability and makes necessary special investigations.

On the Temperature Dependence of the Pulsed Dielectric Strength of Some Polycrystalline Dielectrics

48-22-4-11/24

The representation of the interrelations between dielectric strength and dielectric permeability must be examined and proved with pure monocrystals. The authors performed experiments with polycrystalline samples. For this reason the here investigated dependence is rendered more complicated by secondary effects, as caused by macroscopic heterogeneity of the substance (crystallites, vitreous layers, pores etc.). A final answer as to the nature of the temperature dependence of dielectric strength on dielectric permeability can presumably be achieved by means of experiments with monocrystals. There are 6 figures, 1 table, and 11 references, 7 of which are Soviet.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Institute of Physics imeni P. N. Lebedev, AS USSR)

AVAILABLE: Library of Congress

1. Dielectrics--Theory 2. Electrons--Applications 3. Magnetic fields--Effectiveness

Card 4/4

89291

S/181/61/003/001/030/042
B102/B204

24.7800 (1142, 1395, 1469)

AUTHOR: Krasnopevtsev, V. V.

TITEL: The effect of a thermal neutron irradiation upon the dielectric properties of alkali halide crystals

PERIODICAL: Fizika tverdogo tela, v. 3, no. 1, 1961, 214-216

TEXT: Whereas, on the one hand, the effect of particle radiation upon mechanical properties, electrical conductivity, and absorption spectrum of alkali halides has been sufficiently studied, the effect upon dielectric losses and dielectric constants of such crystals (from which important data concerning the lattice defects may be obtained) has hardly been studied at all. Now, the effect of irradiation by means of thermal neutrons upon the electrical conductivity σ with constant voltage upon the loss angle tangent and upon ε, as well as upon optical absorption in the visible range of KBr single crystals and natural rock salt was studied, and a brief report is given on the results obtained. The crystals were irradiated in a research reactor with various total doses and fluxes at 60-70°C. Measurements of tan δ and ε were carried out at audio-frequen-

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cies within the range of from room temperature up to 250°C, and of σ within the same range. The specimens were in a metal cylinder under 10^{-2} mm Hg. The absorption spectrum was recorded at room temperature within the range of 220-1100 mμ by means of an CΦ-4 (SF-4) spectrophotometer. Fig.1 shows log tan δ = f(1/T) at 1 kc/sec for non-irradiated and irradiated (10^{17} and 10^{16} cm^{-2}, resp. 10^{13} and 10^{12} $cm^{-2}sec^{-1}$) KBr (curve 2 and 1, respectively). The non-irradiated specimens gave the broken curves. From the latter, the activation energy was calculated as being 0.9 ev. The σ(T) curves of irradiated KBr showed no peculiarities; in semilogarithmic representation, they were straight lines; those for 10^{16} neutrons/cm^2 were considerably lower than the specimens irradiated with 10^{17} neutrons/cm^2. The absorption spectra of the irradiated KBr single crystals showed F- and M-bands, whose intensities decreased with decreasing total flux. When heating the crystal to 200°C, these bands vanished and there remained a monotonically decreasing absorption curve which was higher than that of the non-irradiated crystal. An estimation of the F-center concentration of

KBr crystals irradiated with 10^{16} n/cm^2 gave $0.6 \cdot 10^{17}$ cm^{-3}, and of the M-centers, $0.6 \cdot 10^{15}$ cm^{-3} (and $1.6 \cdot 10^{16}$ cm^{-3} with 10^{17} n/cm^2). tan δ = f(T) of natural rock salt has no maximum; its absorption spectrum has F-, R_2-, and M-bands, as well as a band at 910 mμ. Heat treatment of the crystal at 205°C (2 hours) weakens these bands and increases the R_2-bands a little. The maximum on the curve tan δ = f(T) of KBr is explained by the fact that the M-centers formed at 110-130°C during neutron irradiation begin to decompose into F-centers and pairs of vacancies. As the pairs make no contribution whatever to ionic conductivity, tan δ may increase steeply. This work was undertaken on the initiative of the late Professor G. I. Skanavi. There are 2 figures and 3 references: 2 Soviet-bloc and 1 non-Soviet-bloc.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva AN SSSR Moskva
(Institute of Physics imeni P. N. Lebedev, AS USSR, Moscow)

SUBMITTED: July 11, 1960

Card 3/4

S/181/61/003/001/030/042
B102/B204

The effect of a thermal neutron...

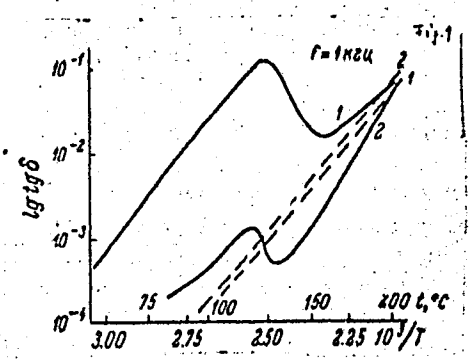

Fig. 1

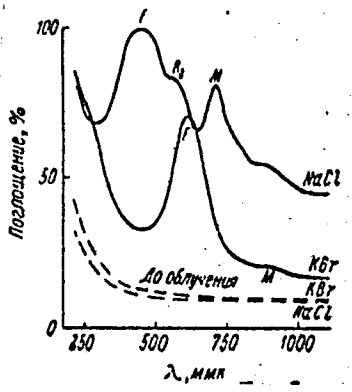

Fig. 2

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B108/B138

24.7800

AUTHORS: Vodop'yanov, L. K., and Krasnopevtsev, V. V.

TITLE: Methods of irradiating solid dielectrics in a nuclear reactor

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, v. 4, no. 11, 1961, 129-131

TEXT: The authors present some methods of irradiating solids by slow neutrons from a nuclear reactor with a view to studying the resulting dielectric properties. In earlier works (Vodop'yanov L. K. and Skanavi G. I. "Izv. AN SSSR", ser fiz., 24, 253-257, 1960) they had measured the past-irradiation dielectric properties of titanates of the second group in the periodic system, and of alkali halides. Platinum electrodes, applied to the specimens by evaporation coating, proved to be the most stable. The samples were sealed into aluminum containers and placed in special cavities in a heavy-water test reactor. The specimens in the container must not be allowed to screen one another. The specimens were subjected chiefly to slow and fast neutrons and to gamma rays. Electrons, uranium fission fragments, alphas, etc., which usually have to

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be considered as well, had almost no effect in the authors' experiments. In order to irradiate the specimens with thermal neutrons with a low enough percentage of fast neutrons, test channels in the reflector of the reactor were used. Cadmium filters were used to absorb the thermal neutrons, so that the effect of the fast neutrons and of gamma-background alone could be studied. All samples irradiated by thermal neutrons showed considerable beta and gamma activity. V. S. Vavilov and S. A. Gavrilov are thanked for discussions and collaboration. There are 2 Soviet references.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR, g. Moskva (Institute of Physics imeni P. N. Lebedev of the Academy of Sciences USSR, Moscow)

SUBMITTED: June 3, 1961

Card 2/2

ACCESSION NR: AT4016318 S/0000/62/000/000/0350/0357

AUTHOR: Krasnopevtsev, V. V.

TITLE: Dielectric properties of reactor-irradiated alkali halide crystals

SOURCE: Vses. soveshch. po fiz. shchelochnogaloidn. kristallov. 2d, Riga, 1961. Trudy*. Fiz. shchelochnogaloidn. kristallov (Physics of alkali halide crystals). Riga, 1962, 350-357

TOPIC TAGS: dielectric, dielectric constant, alkali halide, alkali halide crystal, nuclear reactor, neutron bombardment, irradiated alkali halide crystal, potassium chloride, potassium bromide, sodium chloride

ABSTRACT: Three to five days after irradiation with neutrons in a research reactor at 60-70C with integral flows of 10^{15} to 10^{18} cm^{-2} and a neutron flow up to $1.5 \cdot 10^{13}$ cm^{-2} sec^{-1}, the dielectric permeability ε, the tangent of the angle of dielectric loss tgδ, the electrical conductivity σ and the optical absorption were studied in disc-shaped, plano-parallel, 0.5 mm thick and 20-25 mm in diameter, KCl-, KBr- and NaCl-crystals. The specimens were fastened between armco iron electrodes, placed in a container and tested in an oven at room temperature to 250C in 10^{-2}mm vacuum. The ε, tgδ and σ were

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ACCESSION NR: AT4016318

measured within the range of 100 - 20000 kcps, and the absorption spectrum was photographed at room temperature within the range of 220 - 1100 mμ. Curves for the dependence of these quantities on temperature show patterns which were rather complex and not uniform for different individual salts, irradiation intensities and frequencies of measurement. "The author expresses thanks to V. A. Mizonova for the monocrystals of KCl and KBr, and A. N. Gubkin and V. S. Vavilov for evaluating the results obtained." Orig. art. has: 6 figures.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva AN SSSR (Institute of Physics, AN SSSR)

SUBMITTED: 00

DATE ACQ: 06Mar64

ENCL:00

SUB CODE: NP, IC

NO REF SOV: 004

OTHER:002

Card 2/2

24.7800

3891.0

S/181/62/004/007/012/037
B102/B104

AUTHOR: Krasnopevtsev, V. V.

TITLE: Dielectric relaxation in colored KBr crystals

PERIODICAL: Fizika tverdogo tela, v. 4, no. 7, 1962, 1807-1812

TEXT: KBr crystals irradiated and colored in a reactor show a substantially increased value of tan δ (Krasnopevtsev, FTT, 3, 214, 1961). The effect of an additive coloring on the dielectric properties was now investigated, measuring ε, tan δ, and the electrical conductivity σ at constant voltage in the range of 100-20,000 cps at temperatures of 20-200°C. The light absorption spectrum was determined for λ = 220-1100 mμ at room temperature. The additive coloring was effected at 450, 600, and 650°C (holding times, 9, 7, and 6 hrs). The concentration of the F centers ranged from $3.5 \cdot 10^{16}$ to $4.6 \cdot 10^{17}$ cm^{-3}. tan δ and ε were determined as functions of 1/T and ν. In all cases, tan δ showed a distinct maximum of 0.6-1.0. This maximum shifts to higher frequencies when the temperature is increased, and to higher temperatures when the frequency is increased, which corresponds to the relaxation character of

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Dielectric relaxation in colored ...

the losses. This dielectric relaxation is of the Debye type. In the case of crystals with more than $3 \cdot 10^{17}$ F-centers/cm^3, the parameter α which characterizes the distribution of τ increases with temperature; tan δ decreases at the frequency maximum. ε_∞ and ε_o (i.e., the respective h-f and d-c values of ε) varied respectively from 4.6 to 5.3 and from 13.0 to 34.2. The activation energies varied from 0.90 to 1.32 ev. The dielectric relaxation may be ascribed to the presence of F-centers containing doubly positive ions. These relaxation defects probably are electrically neutral Z_2 centers containing F-centers. An admixture of Z_3 centers is possible, but these make only an insignificant contribution to the ionic conductivity. The concentration n of relaxation centers, and their dipole moment μ, are governed by the relation $4\pi n\mu^2/27kT = (\varepsilon_o - \varepsilon_\infty)/(\varepsilon_o + 2)(\varepsilon_\infty + 2)$. The fact that the relaxation times appear as a complete set indicates the existence of several types of relaxation centers in the lattice. This may be due to impurities of different kinds (Ba^{2+}, Ca^{2+}, Mg^{2+}, etc.) or to various more

Card 2/3

complex compositions of Z_2 and F centers. The value of μ is estimated at $(8\text{-}16)\cdot10^{-17}$ CGSE units or 80-160 Debye units. As $\mu = el$, the dipole length l can be estimated at 5-7 lattice constants. There are 4 figures and 1 table.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva AN SSSR Moskva
(Physics Institute imeni P. N. Lebedev AS USSR, Moscow)

SUBMITTED: February 5, 1962

Card 3/3

KRASNOPEVTSEV, V.V.

Dielectric properties of KBr single crystals irradiated by fast electrons. Fiz. tver. tela 5 no.8:2261-2269 Ag '63.
(MIRA 16:9)

1. Fizicheskiy institut im. P.N.Lebedeva AN SSSR, Moskva.
(Potassium bromide--Electric properties)
(Dielectrics, Effect of radiation on)

L 29932-66 EWT(l)/EWT(m)/T/EWP(e)/EWP(t)/ETI IJP(c) AT/WH/JD

ACC NR: AP6018580 SOURCE CODE: UR/0181/66/008/06/1964/1965

71
66
B

AUTHOR: Vavilov, V. S.; Guseva, M. I.; Konorova, Ye. A.; Krasnopevtsev, V. V.; Sergiyenko, V. F.; Titov, V. V.

ORG: Physics Institute im. P. N. Lebedev, AN SSSR, Moscow (Fizicheskiy institut AN SSSR)

TITLE: Semiconductor diamonds obtained by ion bombardment

SOURCE: Fizika tverdogo tela, v. 8, no. 6, 1966, 1964-1965

TOPIC TAGS: semiconductor alloy, semiconductor crystal, semiconductor conductivity, diamond

ABSTRACT: An investigation was made of the dependence of electric conductivity on the temperature and concentration of the impurities introduced into a layer of diamond doped with lithium and boron by ion bombardment. Diamond doping was carried out in an ion-ray installation with a magnetic separation at a focusing angle of 180°. Lithium and boron ions with an energy of 40 kev were introduced into the natural face of the crystal or into the cleavage plane perpendicularly to the crystallographic directions [111] and [100]. The activation energy for lithium was (0.29 ± 0.01) ev and for boron (0.25 ± 0.01) ev. Lithium-doped diamond has an electron-type conductivity, while in boron-alloyed diamond the holes are the major charge carriers. Annealing of specimens at 600C for three hours in an argon atmosphere had virtually no effect on the activa-

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tion energy of electric conductivity; the general resistance of the doped layer increased somewhat only in the case of boron. The acceptor and donor levels appearing in the forbidden band as the result of radiative defects are deep and have only a slight effect on the activation energy. With an increasing concentration of lithium, the activation energy decreases in the range of high temperatures as well as in the range of lower temperatures. These rules apply to the impurity band, in which the concentration of lithium is about 10^{20} cm^{-3}. Ion bombardment makes it possible to obtain semiconducting layers of diamond whose electric conductivity can change by 5 to 10 orders, depending on the extent of doping. The energy level corresponding to the lithium admixture is separated by 0.29 ev from the bottom of the conductivity band, while the energy level of boron is 0.25 ev from the top of the valence band. The authors thank V. M. Gusev for collaboration in the work, V. A. Mizonova and N. A. Shuvalova for the preparation of specimens, Yu. Ye. Andreyev for participation in the measurements, and S. A. Shevchenko for supplying a device for determining the sign for the Hall coefficient. Orig. art. has: 2 figures and 1 table. [JA]

SUB CODE: 20/ SUBM DATE: 08Jan66/ OTH REF: 004/ ATD PRESS: 5011

ACC NR: AP6022222 SOURCE CODE: UR/0362/66/002/006/0636/0646

AUTHOR: Krasnopevtsev, Yu. V.

ORG: Institute of Applied Geophysics (Institut prikladnoy geofiziki)

TITLE: Measurements of atmospheric conductivity from the aeroplane

SOURCE: AN SSSR. Izvestiya. Fizika atmosfery i okeana, v. 2, no. 6, 1966, 636-646

TOPIC TAGS: data analysis, polarimeter, air turbulence, lower atmosphere

ABSTRACT: An airborne apparatus and a method for simultaneous measurements of polar conductivities of both signs under clear weather conditions are described. The instrument is based on Gerdien's principle, employing two identical cylindric capacitors as measuring units. The change of the zero point current is analyzed and shown to be caused by the charge of the metal electrode by coarse aerosols. A procedure for eliminating this effect is presented. Deviations due to air turbulence are shown to lower the magnitude of ion concentrations in the capacitors by approximately 8% and to influence similarly conductivity. Analysis of data obtained over the Ukraine, Siberia, and the Far East region indicated that the ratio $\lambda_+/\lambda_- > 1$ in the lower layer of the atmosphere, decreases with an increase in altitude, and changes to values below unity at heights depending on conditions. In conclusion, the author expresses his gratitude to A. G. Ovchinnikov for assistance in the preparation of

UDC: 551.594.13

Card 1/2

ACC NR: AP6022222

the equipment and in conducting all the measurements, as well as to L. V. Kirichenko and A. G. Laktionov who organized the summer expeditions. The author is also indebted to N. V. Kzasnogorskaya, N. N. Komarov, and Yu. S. Sedunov for useful comments. Orig. art. has: 8 formulas, 2 tables, and 4 figures.

SUB CODE: 04/ SUBM DATE: 30Nov65/ ORIG REF: 014/ OTH REF: 005

Card 2/2

KRASNOPEVTSEV, Yu.V.

Conference on nuclear meteorology. Izv. AN SSSR. ser. geofiz. no.11:1733-1735 N '64. (MIRA 17:12)

L 02459-67 EWT(1)/EWT(m) GW

ACC NR: AT6028960 (N) SOURCE CODE: UR/2566/66/082/000/0056/0071

43

AUTHOR: Karol', I. L.; Krasnopevtsev, Yu. V.; Vilenskiy, V. D.; Malakhov, S. G.

B+1

ORG: none

TITLE: Comparative analysis of the world-wide fallout of nuclear-explosion products over the continents and oceans

SOURCE: AN SSSR. Institut okeanologii. Trudy, v. 82, 1966. Issledovaniya radioaktivnoy zaryaznennosti vod mirovogo okeana (Investigations of radioactive contamination of waters of the oceans), 56-71

TOPIC TAGS: nuclear radiation, strontium [redacted], ocean radioactivity, radioactive fallout, radioactivity, RADIOISOTOPE

ABSTRACT: An attempt at a qualitative and quantitative comparison between the intensities of world-wide radioactive fallout over the oceans and continents was carried out through an estimation of accumulated Sr^{90} at the same latitudes in a unit area of the ocean surface and a unit area of continental surface. The results of direct measurement of radioactive-fallout intensity on the continents and on the islands and the data on the concentration of radioactive fission products in the air above the sea surface and above the surface of dry land were also taken into consideration. On the basis of these data, it is supposed that the intensity of radioactive fallout over the sea surface is greater than over dry land. Orig. art. has: 5 tables and 4 figures.

SUB CODE: 18, 08/ SUBM DATE: none/ ORIG REF: 018/ OTH REF: 010

Card 1/1 pd

BRANDT, Aleksandr Aleksandrovich; KRASNOPEVTSEV, Yu.V., redaktor; TERREKHOVA, D.F., tekhnicheskiy redaktor

[The technique of assembling and repairing radio circuits] Tekhnika montazha i nalazhivaniia radioskhem. [Moskva] Izd-vo Moskovskogo univ., 1956. 246 p. (MLRA 10:1)
(Radio circuits)

KRASNOPEVTSEV, Yu. V.

Transfer of radiactive aerosols in the troposphere from the Northern Hemisphere to the Southern Hemisphere. Meteor. i gidrol. no. 4: 3-8 Ap '64. (MIRA 17:5)

1. Institut prikladnoy geofiziki.

BENDRIKOV, G.A.; KRASNUSHKIN, P.Ye.; REYKHRUDEL', E.M.; POTEMKIN, V.V.; MUSTEL', Ye.R.; RZHEVKIN, K.S.; IVANOV, I.V.; KHARLAMOV, A.A.; TIKHONOV, Yu.V.; STRELKOVA, L.P.; KAPTSOV, L.N.; ORDANOVICH, A.Ye.; KHOKHLOV, R.V.; VORONIN, E.S.; BERESTOVSKIY, G.N.; KRASNOPEVTSEV, Yu.V.; MINAKOVA, I.I.; YASTREBTSEVA, T.N.; SEMENOV, A.A.; VINOGRADOVA, M.B.; KARPEYEV, G.A.; DRACHEV, L.A.; TROFIMOVA, N.B.; SIZOV, V.P.; RZHEVKIN, S.N.; VELIZHANINA, K.A.; NESTEROV, V.S.; SPIVAK, G.V., red.; NOSYREVA, I.A., red.; GEORGIYEVA, G.I., tekhn. red.

[Special practical manual in physics] Spetsial'nyi fizicheskii praktikum. Moskva, Izd-vo Mosk.univ. Vol.1. [Radiophysics and electronics] Radiofizika i elektronika. 1960. 600 p. (MIRA 13:7)

1. Professorsko-prepodavatel'skiy sostav otdeleniya radiofiziki fizicheskogo fakul'teta Moskovskogo gosudarstvennogo universiteta (for all, except Spivak, Nosyreva, Georgiyeva).

(Radioactivity) (Electronics)

L 2655-66 EWT(1)/EWT(m)/FCC DIAAP OS/CW

ACCESSION NR: AT5023944 UR/0000/65/000/000/0307/0322

AUTHOR: Vilenskiy, V. D.; Dmitriyeva, G. V.; Krasnopevtsev, Yu. V. 44,55 44,55 44,55 36 B+1

TITLE: Natural and artificial radioactivity of the atmosphere over the oceans and the relationship to meteorological factors

SOURCE: Nauchnaya konferentsiya po yadernoy meteorologii. Obninsk, 1964. 44,55 Radioaktivnyye izotopy v atmosfere i ikh ispol'zovaniye v meteorologii (Radioactive isotopes in the atmosphere and their use in meteorology); doklady konferentsii. Moscow, Atomizdat, 1965, 307-322

TOPIC TAGS: nuclear meteorology, air pollution, radioactive air pollution, 19 radioactive aerosol, radioactive isotope, 12,44,55 atmospheric radioactivity

ABSTRACT: Data collected on the summer 1960 voyage of the Soviet research ship "Yu. M. Shokal'skiy" from Odessa across the Black, Mediterranean, and Red Seas, and the Indian and Pacific Oceans to Vladivostok form the basis of a study of the distribution and concentration of natural (Rn) and artificial (Sr^{90} and Pb^{210}) radioactive products in the near-water layer of the atmosphere in the low and equatorial latitudes, and of the relationship of this distribution to meteorological conditions

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L 2655-66
ACCESSION NR: AT5023944

prevailing during the voyage. Information contained in this paper includes descriptions of the sample-collecting techniques and apparatus. Orig. art. has: 9 figures. [ER]

ASSOCIATION: none

SUBMITTED: 28Apr65 ENCL: 00 SUB CODE: ES, NP

NO REF SOV: 007 OTHER: 003 ATD PRESS: 4101

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KRASNOPEVTSEVA, L. S.

26634 Gemodinamicheskie sdvigi pri serdechnolegochioy medostatochiosti. Trudy fak. Terapevt. Kliniki (Ivan. Gos. Med. In-T), vyp. 3, 1949, s. 36-44

SO: LETOPIS' NO. 35, 1949

TRATSEVITSKAYA, B.Ya.; RATNER, Yu.Ye.; KRASNOPEVTSEVA, G.N.

Interaction of nickel-bearing minerals with carnallite. Trudy Inst. met. no.12:45-48 '63. (MIRA 16:6)

(Nickel ores) (Carnallite)

ACC NR: AT6034504 SOURCE CODE: UR/0000/66/000/000/0043/0056

AUTHOR: Davydova, N. I.; Krasnopevtseva, G. V.; Manilov, S. A.; Levi, V. A.; Lobastova, L. A.; Shekinskiy, E. M.; Tvaltvadze, G. K.

ORG: none

TITLE: Results of deep seismic sounding in the Caucasus

SOURCE: AN SSSR. Otdeleniye nauk o Zemle. Nauchnyy sovet po kompleksnym issledovaniyam zemnoy kory i verkhney mantii. Glubinnoye stroyeniye Kavkaza (Abyssal structure of the Caucasus). Moscow, Izd-vo Nauka, 1966, 43-56

TOPIC TAGS: Mohorovicic discontinuity, earth crust, deep seismic sounding, granitic layer, basaltic layer, seismic velocity, SEISMIC PROSPECTING / CAUCASUS

ABSTRACT: The results are summarized of deep seismic sounding conducted in 1960 to 1962 along a 300-km submeridional profile between Stepnoye and Bakuriani and a 700-km sublatitudinal profile extending along the axial part of the Transcaucasian intermountain region between the Black and Caspian Seas. Continuous, piece wise continuous and point profiling methods were used. The analysis of data shows that the Earth's crust, 32-km thick in the region of El'iehotovo, increases to 38—40 km in the area of Stepnoy-Nizhniy Kurp and to 42—46 km in the southern part of the profile. The boundary velocity along the Mohorovivic discontinuity determined in the area of Nabakhtevi is 8.4 km/sec. The depth to the top of the consolidated crust with a boundary velocity of 6 km/sec varies from 7 km in the Zaterechnaya

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ACC NR: AT6034504

Plain to 300—400 m at Rokskiy Pass. Although the interfaces within the crust were not determined, seismic data appears to indicate a layered structure. The thickness of the Earth's crust along the sublatitudinal profile varies from 40—41 km at the western end of the profile and near the city of Kirovabad to 47—49 km under the Dzirul'skiy massif and east of Lake Dzhandar. The boundary velocity is 8 km/sec. The boundary velocity along the top of the consolidated crust is 5.8—6.2 km/sec. The depth to the top of the consolidated crust varies from 0 (Dzirul'skiy massif) to 12—15 km in the area of Barda-Agdzhabedi. Two interfaces with boundary velocities of 6.7—7 and 7.2—7.5 km/sec were established within the crust at a depth of 10—20 and 30 km, respectively. Sharp variations were established in the ratio of the thickness of granitic to basaltic layers along the sublatitudinal profile. A downwarping of the Mohorovicic discontinuity under the mountains along both profiles is noted. The results obtained are in qualitative agreement with earlier geophysical investigations. However, deep seismic-sounding data indicate a downwarping of the Mohorovicic discontinuity under the Dzirul'skiy massif, while gravity data indicate upwarping. The article contains 7 figures including a map showing the locations of the profiles, a rough seismic cross section along the submeridional profile, a seismic cross section along the sublatitudinal profile and three other seismic-geologic cross sections of the same general area compiled from seismic and gravity data by other investigators. Orig. art. has: 7 figures. [WA-794]

SUB CODE: 08/ SUBM DATE: 26Feb66/ ORIG REF: 013/

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ACC NR: AT6034508 SOURCE CODE: UR/0000/66/000/000/0097/0102

AUTHOR: Krasnopevtseva, G. V.

ORG: none

TITLE: Results of an investigation of the deep-seated structure of the Earth's crust in the western Caucasus along the Anaklia-Zestafoni profile

SOURCE: AN SSSR. Otdeleniye nauk o Zemle. Nauchnyy sovet po kompleksnym issledovaniyam zemnoy kory i verkhney mantii. Glubinnoye stroyeniye Kavkaza (Abyssal structure of the Caucasus). Moscow, Izd-vo Nauka, 1966, 97-102

TOPIC TAGS: Mohorovicic discontinuity, earth crust, seismic velocity, granitic layer, basaltic layer / Western Caucasus

ABSTRACT: The correlation method of refracted waves was used in the investigation of the structure of the crystalline basement along a 60-km profile running between Anaklia and Zestafoni along the Rionskaya and Kolkhidskaya lowlands as far west as the Dzirul'skiy massif. A refracting seismic horizon with a boundary velocity of 5.7—6.3 km/sec was identified as the surface of the crystalline basement. Several blocks separated by subcrustal faults are found in the basement along the profile. Each block is characterized by a boundary velocity and probably by a slightly different petrographic composition. Although the scope of the investigation did not include a study of the structure of the subbasement, it was established that the Earth's crust along the profile consists of 3 layers with layer velocities of

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ACC NR: AT6034508

3—7.2 km/sec. The approximate depths to the interfaces are 3, 6, and 10 km. The gravity data were used in preparing a cross section showing the depth to the Mohorovicic discontinuity, which varies between 45 and 46 km along the seismic line. The article contains 4 more figures including a cross section of apparent velocities along the seismic profile down to a depth of 27 km. [WA-794]

SUB CODE: 08/ SUBM DATE: 26Feb66/ ORIG REF: 004/

Card 2/2

BROUN, R.G.; KRASNOPEVTSEVA, N.G.

Comparative data on the nucleotide composition of nucleic acids on the cell nuclei of brain tissues. Vest.LGU 18 no.3:90-98 '63. (MIRA 16:2)
(NUCLEOTIDES) (NUCLEIC ACIDS)

KRASNOPEVTSEVA, N.V., starshiy nauchnyy sotrudnik

Improvement of the establishment of technological norms in the finishing operations. Tekst. prom. 24 no.8:8-11 Ag '64.
(MIRA 17:10)

1. Tsentral'nyy nauchno-issledovatel'skiy institut shersti promyshlennosti (TsNIIShersti).

KRASNOPEVTSEVA, N.V., nauchnyy sotrudnik; SEDOVA, L.A., nauchnyy sotrudnik

Norms of amortization deductions for equipment in the woolen industry. Tekst.prom. 22 no.1:13-16 Ja '62. (MIRA 15:2)

1. TSentral'nyy nauchno-issledovatel'skiy institut sherstyanoy promyshlennosti (TsNIIShersti).
(Woolen and worsted manufacture--Accounting)

KRASNOPEVTSEVA, N.V., inzh.; SEDOVA, L.A., inzh.

Development of the norms of amortization deductions for the technological equipment in the wool industry. Nauch.-issl. trudy TSNIISHersti no.17:112-124 '62. (MIRA 17:12)

KRASNOPEVTSEVA, O.S.

Material for the evaluation of carbon and carbon-blood media for growing Hemophilus pertussis. Zhur.mikrobiol.epid. i immun. 29 no.5:21-25 My '58 (MIRA 11:6)

1. Iz Instituta eksperimental'noy meditsiny AMN SSSR.
(HEMOPHILUS PERTUSSIS, culture,
carbon and carbon-blood culture media (Rus))

PASHININ, P. M.; KRASNOPEVTSEVA, O. S.

C-reactive protein in burn disease. Eksper. khir. no.3:58-61 '62. (MIRA 15:7)

1. Iz kafedry mikrobiologii (nach. - prof. A. A. Sinitskiy) i kafedry termicheskikh porazheniy (nach. - prof. T. Ya. Ar'yev) Voyenno-meditsinskoy ordena Lenina akademii imeni S. M. Kirova.

(BURNS AND SCALDS) (PROTEINS)

YAKOVLEV, A.M.; KRASNOPEVTSEVA, O.S.; PUTERMAN-LIPPERT, F.E.; PETROVA, Ye.K.

Bacteremia as one of the pathogenetic factors in burn disease. Khirurgiia 38 no.10:34-40 O '62. (MIRA 15:12)

1. Iz Voyenno-meditsinskoy ordena Lenina akademii imeni S.M. Kirova.

(BURNS AND SCALDS) (BACTEREMIA)

YAKOVLEV, A.M.; KRASNOPEVTSEVA, O.S.; KOMLEVA, G.G. (Leningrad)

Factors in autoimmunization of the body in burns. Pat. fiziol. i eksp. terap. 7 no.3:30-33 My-Je '63 (MIRA 17:4)

1. Kafedry mikrobiologii (nachal'nik - prof. A.A. Sinitskiy) i kafedry termicheskikh porazheniy (nachal'nik - prof. T. Ya. Ar'yev) Voyenno-meditsinskoy ordena Lenina akademii imeni S.M. Kirova.

YAKOVLEV, A.M.; KRASNOPEVTSEVA, O.S.

Methodology of studying nonspecific bacteremia. Lab. delo no. 11:682-684 '64. (MIRA 17:12)

1. Kafedra termicheskikh porazheniy (nachal'nik - prof. T.Ya. Ar'yev) i kafedra mikrobiologii (nachal'nik - prof. A.A.Sinitskiy) Voyenno-meditsinskoy ordena Lenina akademii im. S.M.Kirova, Leningrad.

KRASNOFEVTSEVA, T. V.

"Investigating Phase Changes In Iron-Cobalt- Vanadium Alloys Having A Constant 51-Percent Cobalt Content and a Varying Vanadium Content of 0 to 12 Percent." Cand Tech Sci, Moscow Inst of Steel, Moscow, 1954. (RZhKhim, No 21, Nov 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (11)

SO: Sum. No. 521, 2 Jun 55

HUME-ROTHERY, W.; CHRISTIAN, I.W.; PEARSON, W.B.; KADYKOVA, G.N. [translator]; KRASNOPYATSKAYA, T.N. [translator]; RAVDEL', M.P. [translator]; SELISSKIY, Ya.P., redaktor; GOL'DENBERG, A.A., redaktor; ARKHANGEL'SKAYA, M.S., redaktor izdatel'stva; EVENSON, I.M., tekhnicheskiy redaktor

[Metallurgical equilibrium diagrams. Translated from the English] Diagrammy ravnovesiia metallicheskikh sistem. Perevod s angliiskogo B.N.Kadykovoi i dr. Pod red. IA.P.Selisskogo. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1956. 399 p. (Phase rule and equilibrium) (MLRA 10:4)
(Alloys) (Solutions, Solid)

KRASNOPEVTSEVA, T. V.

137-1957-12-24904

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 12, p 279 (USSR)

AUTHORS: Krasnopevtseva, T. V., Livshits, B. G.

TITLE: The Effect of Vanadium on the $\gamma \rightarrow \alpha$ Transformation in Fe-Co-V Alloys (Vliyaniye vanadiya na $\gamma \rightarrow \alpha$ prevrashcheniye v zhelezokobal'tvanadiyevykh splavakh)

PERIODICAL: Sb. tr. Tsentr. n.-i. in-t chernoy metallurgii, 1956, Nr 15, pp 68-85

ABSTRACT: The effect of V on the $\gamma \rightarrow \alpha$ transformation (T) was studied under continuous cooling of the gamma phase, as well as under isothermal conditions. The investigation was carried out on alloys with 0, 2, 4, 6, 8, 10, and 12 percent V content, all alloys having a constant content of 51 percent Co. All measurements were performed on Akulov's anisometer. Measurements of coercive force were also performed and the microstructure of the alloys was studied. Increasing the V content from 0 to 12 percent causes the temperature, which corresponds to the beginning of the $\gamma \rightarrow \alpha$ transformation, to vary from 925° to 525°. In alloys with 2 percent V or less the $\gamma \rightarrow \alpha$ occurs purely by diffusion. An analogous process takes place also in an alloy

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137-1957-12-24904

The Effect of Vanadium on the $\gamma \rightarrow \alpha$ Transformation in Fe-Co-V (cont.)

containing 12 percent V; in this process also no martensite T was detected. In super-cooling the γ phase of alloys containing 4 - 10 percent V, as well as during isothermal exposure of these alloys, the decomposition process also occurs by diffusion; however, when alloys containing 6 - 10 percent V are cooled at a rate of 5 - 6 deg/min the process of the $\gamma \rightarrow \alpha$ T assumes a non-diffusive martensite character. At identical cooling rates the $\gamma \rightarrow \alpha$ T in a 4 percent V alloy is of intermediate nature, but changes to a martensite nature when the cooling rate is increased. From the results obtained it is concluded that both the kinetics and the mechanism of T in a super-cooled gamma phase of the alloys investigated may be interpreted by means of the usual theory of decomposition and martensitic transformation.

P. S.

1. Iron-cobalt-vanadium alloys - Transformations - Effects of vanadium

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Krasnopevtseva, T. V.

137-1957-12-25255

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 12, p 330 (USSR)

AUTHORS: Pshechenkova, G. V., Krasnopevtseva, T. V.

TITLE: An Investigation of Fe-Co Alloys With a High Degree of Magnetic Saturation (Issledovaniye zhelezokobal'tovykh splavov s vysokim magnitnym nasyshcheniyem)

PERIODICAL: Sb. tr. Tsentr. n.-i. in-t chernoy metallurgii, 1956, Nr 15, pp 102-110

ABSTRACT: Hardness, microstructure, critical points, and magnetic properties were investigated in alloys containing 50 percent Co and 2 percent V. V substantially affects the critical points of alloys of the Fe-Co system, by lowering the temperature of the $\alpha \rightleftharpoons \gamma$ transformation. The microstructure of slowly cooled alloys exhibits a characteristic grain lattice, probably due to the phenomenon of orderly regulation of grains. The hardness of cold rolled specimens is considerably increased by heating to 400-600°; any further increase in temperature reduces the hardness due to incipient recrystallization. Initial permeability is strongly affected by the degree of reduction in the process of cold deformation. Optimal results are, apparently, obtained at a 60-70 percent reduction.

P. N.

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1. Iron-cobalt alloys-Properties-Analysis 2. Iron-cobalt alloys-Magnetic properties

KRASNOPEVTSEVA, T.V.

Effect of vanadium on the thermomagnetic properties of permendur. Sbor.trud.TSNIICHM no.23:213-218 '60.
(MIRA 13:7)

(Vanadium permendur) (Thermomagnetism)

S/776/62/000/025/014/025

AUTHORS: Krasnopevtseva, T. V., Baretskaya, R. M.

TITLE: Investigation of the physical properties of alloys with an elevated Chromium content.

SOURCE: Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii. Sbornik trudov. no. 25. Moscow, 1962. Pretsizionnyye splavy. pp. 214-226.

TEXT: The paper describes the results of an experimental investigation of some physical chemical properties of a number of high-Cr alloys. The objective of the investigation was the possible identification of Cr-based precision alloys. The investigation comprised a number of alloys of the systems: Cr-Co (10-30% Co), Cr-Mn (10-40% Mn), Cr-Ni (30-47.5% Cr), Cr-Co-Fe (10-20% Co and 10-20% Fe), Cr-Mn-Fe (10-20% Mn and 10-25% Fe), and Cr-Ni-Mo(W) (30-47.5% Cr and up to 10% Mo (W)). The study of the physical properties of Cr alloys has at all times been impeded by their excessive brittleness, both at elevated and at room T, which rendered the making of the needed specimens by deformation methods very difficult. The selection of the alloys for the investigation was made from existing phase diagrams under the premise that the selection be made from large areas of the phase

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diagrams showing single-phase solid solutions, since deformable alloys with suitable physical properties lie precisely within the regions of solid solutions or are subject to dispersion hardening. The exact composition of the alloys investigated and the heating temperature prior to forging are shown in a full-page table. Another full-page table shows the dependence of the ultimate tensile strength and the ductility of the various alloys on the heat treatment used. The dependence of the hardness of the alloys on both the T and the duration of the anneal are portrayed graphically, and the various microstructures attained are shown in illustrative photographs. It is found that hot deformation (forging) is practicable for the following high-Cr alloys which had previously been regarded as nondeformable: Cr-Co with 70-80% Cr; Cr-Co-Fe with 70-80% Cr, 10-20% Co, and 10-20% Fe; Cr-Mn-Fe with 60% Cr, 20% Mn, and 20% Fe. Alloys of the systems Cr-Ni, Cr-Ni-W, and Cr-Ni-Mo with 42-47.5% Cr and up to 5-6% W or Mo appear to be dispersion-hardening. The mechanical properties of some of these alloys after quench or cold working (with anneal) come close to the mechanical properties of the corrosion-resistant spring alloy H36XTYu (N36KhTU) and, in view of their nonmagnetic and corrosion-resistant qualities, could well be utilized for elastic elements in instruments and elsewhere. There are 9 figures, 3 tables, and 4 references (1 Russian-language Soviet and 3 English-language, of which 1 in Russian translation).

Krasnopevtseva, T.V.

T.V. Krasnopevtseva, R.M. Baretskaya. Chromium-base precision alloys.

Title: Seminar on refractory metals, compounds, and alloys (Kiev, April 1963).

Source: Atomnaya energiya, v. 15, no. 3, 1963, 266-267