"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

USSR

UDC 621.383.8

ZAMFIR, G. N., Leningrad, ZOLOTAREV, V. F., Moscow

"A Photoelectric Image Converter Which Utilizes the Suhl Effect"

Moscow, Avtomatika i Telemekhanika, No 8, Aug 1970, pp 159-165

Abstract: A method is developed for calculating the parameters of a device which converts an image to a video signal on the basis of the Suhl magneto-concentration effect. Expressions are given for the signal-to-noise ratio, resolution, video signal amplitude and so forth. It is found that the resolution of a Suhl effect image converter is limited by the mobility of the minority charge carriers (minimum Hall angle) and the mobility of the majority carriers (maximum Hall angle). The most suitable semiconductor which satisfies the requirements for maximum mobility of majority carriers and minimum mobility of minority carriers is gallium arsenide.

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USSR

UDC 620.198.539.431.621

KARPENKO, G. V., POKHMURSKIY, V. I., DALISOV, V. B., and ZAMIKHOVSKIY, V. S., Institute of Physics and Matehmatics, Academy of Sciences Ukrainian SSR

Vliyaniye Diffuzionnykh Pokrytiy na Prochnost' Stal'nykh Izdeliy (The Effect of Diffusion Coating on the Strength of Steel Parts), Kiev, "Naukova Dumka," 1971, 166 pp

Translation of Annotation: This monograph studies the effect of electroplating and diffusion coating on the short-term static and fatigue strength of steel articles in the air and in some working media. The role of residual stresses is examined and a new classification is proposed for them. The possibility of healing such defects as cracks through diffusion metallization and the restoration of the continuity and strength of defective parts is shown. Some methods of intensifying the processes of diffusion saturation are presented.

This monograph is intended for metal scientists, process engineers, and designers in the machine building industry, and for instructors at higher educational institutions.

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KARPENKO, G. V., et al., "Naukova Dumka," 1971, 166 pp

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KARPENKO, G. V., et al., "Naukova Dumka," 1971, 166 pp

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

USSR UDC 621.785.53:620.194.8

PROTSIK, V. G., ZAMIKHOVSKIY, V. S., and POKHMURSKIY, V. I., Institute of Physico Mechanics of the Ukrainian Academy of Sciences, L'vov

"Effect of Alloying Elements on the Cyclical Durability of Medium-Carbonized Steel After Boronizing"

Kiev, Fiziko-Khimicheskaya Mekhanika Mateiralov, Vol 6, No 5, 1970, pp 18-21

Abstract: To obtain the proper steels for their experimental research, the authors used each of the following elements: silicon manganese, nickel, and chromium. These were added to the extent of one or two percent to medium-carbonized steel (type 45 alloy). The boron was diffused by the contact method in a powdered mixture of boron carbide and borax for six hours at a temperature of 950° C. The structure of the diffused layers and the mechanical characteristics of the steels before and after the boronization process as well as the method used for investigating the cyclic durability of the steels in air and in the corrosive medium were described in an earlier paper 1/2

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USSR

PROTSIK, V. G., et al., Fiziko-Khimicheskaya Mekhanika Materialov, Vol 6, No 5, 1970, pp 18-21

by the authors for this same journal (No 6, 1969). The results of the experiments showed that the alloying elements in the medium-carbonized steels in the one or two-percent concentration affected the durability of the steels in different ways, in air and in the corrosive medium, before as well as after boronizing. After boronization, the durability limit in all steels treated with the above-named elements increased. The greatest effect on the durability was observed for the steel to which silicon in the amount of 1% was added.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

1/2 028

UNCLASSIFIED

TITLE--EFFECT OF COMPLEX SATURATION WITH BORON AND COPPER ON THE STRENGTH CHARACTERISTICS AND WEAR RESISTANCE OF CARBON STEEL -U-

PROCESSING DATE--04DEC70

AUTHOR-(05)-POKHMURSKY, V.I., VAGULA, R.G., GRIBOVSKY, YA.S, ZAMIKHOVSKY, V.S., TABINSKY, K.P.

COUNTRY OF INFO--USSR

SOURCE--FIZ.-KHIM. MEKHAN. MAT., 1970, 6,(2), 18-21

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--WEAR RESISTANCE, COPPER ALLOY, BORIDE, CARBON STEEL, IMPACT STRENGTH, FATIGUE STRENGTH

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3003/0213

STEP NO--UR/0369/70/006/002/0018/0021

CIRC ACCESSION NO--AP0129469

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

2/2 028 UNCLASSIFIED

CIRC ACCESSION NO--AP0129469 PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF COMPLEX SURFACE SATURATION WITH B AND CU ON THE UTS, YS, IMPACT STRENGTH, FATIGUE RESISTANCE, DUCTILITY, AND WEAR RESISTANCE OF C STEELS WAS STUDIED. AFTER SATURATION WITH B AND CU THE DUCTILITY OF THE STEEL ROSE, THE FATIGUE STRENGTH REMAINED AT THE SAME LEVEL AS THAT OF UNTREATED SAMPLES, WHILE THE WEAR RESISTANCE EQUALLED THAT OF B SATURATED MATERIAL. THE EFFECT ON THE OTHER CHARACTERISTICS WAS LESS SPECIFIC.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

1/2 034 UNCLASSIFIED PROCESSING DATE--11SEP70

TITLE--EFFECT OF SMALL QUANTITIES OF ALLOYING ELEMENTS ON THE STRUCTURE AND STRENGTH OF MEDIUM CARBON BORATED STEEL -U-

AUTHOR--PROTSIK, V.G., ZAMIKHOVSKIY, V.S., POKHMURSKIY, V.I.

COUNTRY OF INFO--USSR

SOURCE--FIZ. KHIM. MEKH. MATER. 1970, 5(6) 661-5

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--MEDIUM CARBON STEEL, CREEP, IMPACT STRENGTH, PLASTICITY, BORIDING, BORONIZING, NICKEL CONTAINING ALLOY, SILICON CONTAINING ALLOY, MANGANESE CONTAINING ALLOY, CHROMIUM CONTAINING ALLOY, CARBIDE CONTAINING ALLOY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/0626 STEP NO--UR/0369/70/005/006/0661/0665

CIRC ACCESSION NO--AP0105605

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

2/2 034 UNCLASSIFIED

CIRC ACCESSION NO--AP0105605 PROCESSING DATE--11SEP70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TITLE STUDY WAS CARRIED OUT WITH STEEL 45 TO WHICH ONE OF THE FOLLOWING ELEMENTS (1 AND 2 WT. PERCENT) WAS ADDED: SI, MN, NI, AND CR. THE BORONIZING WAS CARRIED OUT BY POWDER CONTACT METHOD IN A MIXT. OF B CARBIDE AND BORAX FOR 6 HR AT 950DEGREES. THE PRESENCE OF ALL ALLOYING INGREDIENTS DECREASED THE THICKNESS OF THE BORONIZED DIFFUSION LAYER, (WITH SI AND MN 20-30PERCENT AND WITH CR AND NI IS SIMILIAR TO 10PERCENT). MICROHARDNESS DID NOT CHANGE, AT 1PERCENT LEVEL, WHILE AT 2PERCENT THERE WAS SOME DECREASE (10-20PERCENT). TENSILE STRENGTH AND ULTIMATE CREEP POINT INCREASED 15-30PERCENT, WHILE PLASTICITY INDICES (INCLUDING IMPACT STRENGTH) DECREASED SHARPLY AND VARIOUSLY (10-50PERCENT). WITH NI THE IMPACT STRENGTH DECREASED TO ONE SEVEN. THE INCREASE OF ALLOYING LEVEL FROM 1 TO 2PERCENT ACCENTUATED THE DECREASE OF PLASTICITY INDICES.

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USSR

UDC 620.198;621.793.3

KARPENKO, G. V., POKHMURSKIY, V. I., DALISOV, V. B., RUSIN, S. I., ZAMIKHOVSKIY, V. S., and BRODYAK, YA. P., Academy of Sciences Ukrainian SSR, Physicomechanical Institute

"Endurance of Chemically Nickel-Plated Aluminum Alloy D16"

Moscow, Zashchita Metallov, Vol 8, No 3, May-Jun 72, pp 364-367

Abstract: The article describes results of a study of the effect of chemical nickel-plating on the fatigue and corrosion-fatigue strength of D16, an aluminum alloy widely used in industry (0.74 percent Mn, 4.6 percent Cu, 0.87 percent Si, 0.56 percent Fe, 1 percent Mg). Specimens were nickel-plated in an alkaline solution of the composition (g/l): $NiCl_2$ 21, NaH_2PO_2 24, $NaO_2C(CO_2H)_2(OH)C_3H_4$ 45, NH_4OH 50, NH_4Cl 30 at a temperature of 75-80°. Fatigue tests showed that the endurance of aluminum alloy D16 with a nickel layer of about 0.045 (nickel-plating for three hours without subsequent heat treatment) is no less than that of the alloy without a coating, despite the presence of residual tensile stresses. Heat treatment of chemically nickel-plated specimens at 240° for one hour significantly increased their fatigue

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KARPENKO, G. V., et al., Zashchita Metallov, Vol 8, No 3, May-Jun 72, pp 364-367

strength. The endurance limit of specimens with a coating about 0.008-0.010 mm thick (nickel-plating for 0.5 hour) increased 45 percent compared to uncoated specimens and specimens nickel-plated without subsequent heat treatment. An increase in the coating thickness to 0.040-0.045 mm led to a further rise in the endurance limit to almost 70 percent. The effect of a rise in endurance declines somewhat with a further increase in the coating thickness to 0.070-0.075 mm (nickel-plating for five hours). In the case of the simultaneous action of cyclic strains and a corrosive medium (3-percent aqueous solution of sodium chloride), chemically deposited nickel is not an effective means of protection against corrosion-fatigue failure of aluminum alloy D16.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

USSR

UDC 616-001.7

ZHIYEVSKIY, V. I., PYATYSHEV, L. I., KONRADI, G. G., and ZAMILATSKIY, YE. P.

"Cryostat with a Recharging Device for Tensile Testing Materials at 20° K"

Moscow, Zavodskaya Laboratoriya, No 10, Oct 72, pp 1271-1273

Abstract: The authors developed a cryostat which makes it possible to remove fractured samples and put new samples in without having to remove the liquid hydrogen from the working chamber. This newly developed cryostat also allows a sample to be pre-cooled, clamped and stressed in a special chamber containing liquid nitrogen before being submerged in the liquid hydrogen. Three to six samples can be tested before having to recharge the cryostat with liquid hydrogen. One figure, 3 bibliographic references.

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USSR UDC 539.257:669.24

ZMIYEVSKIY, V. I., YEGOROV, V. N., PYATYSHEV, L. I., ZAMILATSKIY, Ye. P.
KONARDI, G. G. (Kaliningrad, Moskovskaya Oblast)

"Methods of Evaluating the Mechanical Properties and Structural Strength of Metal Materials at Low Temperatures"

Kiev, Problemy Prochnosti, No 12, December 1971, pp 26-29

Abstract: In the present article is briefly considered the state of the question with respect to each test category, previously conducted projects are described, and problems concerning further developments are presented on the basis of discussion. An analysis is given of the procedures for determining the mechanical characteristics of materials at temperatures down to 20° K (tests for elongation, and tests for impact viscosity with a previously created fatigue crack). Diagrams are presented for installations used in hydraulic and pneumatic tests of containers at a temperature of 20° K. 6 figures. 3 references.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

USSR UDC 620.193.918

ZAMIRYAKIN, L. K., and CHIKUNOV, V. K., Ural Polytechnical Institute imeni Kirov

"Device for Testing Metals for Their Tendency Toward Stress Corrosion Cracking at High Temperatures and Pressures"

Moscow, Zavodskaya Laboratoriya, Vol XXXVI, No 9, 1970, pp 1134-1136

Abstract: This article contains a description of the UPI-IV autoclave for testing metals and welded joints for their tendency toward stress corrosion cracking at high temperatures and pressures. The new device permits achievement of correspondence between industrial and laboratory tests and eliminates the problem of Y-shaped samples used in the UPI-III which are unsuitable for testing welded joints.

The operation of the new autoclave is discussed in detail. As a result of using a bellows loading unit, the UPI-IV permits the creation of constant or increasing stresses in the samples with or without application of additional periodic stresses. Sixteen samples can be tested simultaneously, including butt welded joints under various stresses, temperatures, and

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ZAMIRYAKIN, I. K., and CHIKUNOV, V. K., Zavodskaya Laboratoriya, Vol XXXVI, No 9, 1970, pp 1134-1136

pressures of an aggressive medium. All parameters can be varied independently. The results of investigating the strength of welded joints of OKh18N10T steel at various temperatures in an alkaline solution correspond to the previously published data and indicate high reliability of the new device.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

USSR

UDC 621.791.011

ZAMIRYAKIN, L. K.

"Corrosion Testing of Weld Joints under Stress"

Kiev, Avtomaticheskaya Svarka, No 2, Feb 70, pp 69-70

Abstract: A description is given of corrosion tests on weld joints under stress. Tests were carried out in a solution of nitrates (45% $CaNO_3$, 35% NH_4NO_3, H_2O) at 120°C, and welding was conducted at q/v = 1000 kj/m. The incubation period of stress corrosion cracking of weld joints lasted from 16 to 24 hrs, indicating that the residual stresses in the specimens are approximately identical in magnitude and are equal to the yield point of steel. The places of origin of corrosion cracks, the direction of propagation in relation to the axis of the seam, and the length of the cracks in all the specimens were different. Round plates 100 mm in diameter with a circular seam 40 mm in diameter or 130 x 130 mm plates with a longitudinal fillet and annular welds 90 mm in diameter are recommended.

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USSR

UDC 537.228.4

VOLKOVA, Ye. A., ZAMKOV, V. A., NALBANDOV, L. V.

"Precision Measurements of the Absolute Value of Kerr Constants"

Leningrad, Optika i Spektroskopiya, No. 3, Mar 71, pp 556-561

Abstract: A device is described for the exact measurement of Kerr constants by an absolute method. It is pointed out that the double refraction of light in a substance placed in an electric field (the Kerr effect) is being more widely applied in science and technology and in investigating structures of complex organic compounds, developing modulators and Q-regulators for laser resonators, and for developing devices for the precision measurement of high and ultrahigh voltages. The development of these fields required precise methods for measuring electric double refraction and determining the electro-optical parameters of substances used in science and technology. A method for measuring phase distances proposed in 1968 by Keymakh and Kudryavtsev and the possibilities of applying it for absolute measurements of electric double refraction with an error of the order of 0.1% was studied at the All-Union Scientific Research

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

VOLKOVA, Ye. A., et al, Optika i spektroskopiya, No. 3, Mar 71, pp 556-561

Institute of Metrology imeni D. I. Mendeleyev. The structure of a Kerr cell for making precision measurements of the constants is described, the optical system of the device is given, and the errors of the method are discussed. Measurements of Kerr constants for carbon bisulfide and chloroform are given and discussed and their variation with temperature in the interval 20-30°C for carbon bisulfide and 20-37°C for chloroform are also given. It is concluded that carbon bisulfide is still the most suitable standard material for relative measurements of the Kerr constant. However, it is very desireable to replace it with chloroform from the aspects of the electrooptics of the device and also from the aspect of flammability and toxicity; methods for refining and deionizing chloroform, however, are still poorly developed and the problem requires further research.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

USSR

UDC 535

ARTAMONOV, V. G., AKHMETOV, A. T., ZAMKOV, V. A.

"Dependence of Mandelstam-Brillouin Components in a Liquid on Temperature"

V sb. Sovrem. probl. fiz. khimii (Modern Problems of Chemical Physics -- Collection of Works), Vol. 5, Moscow, Moscow University, 1970, pp 275-279 (from RZh-Fizika, No 7, Jul 71, Abstract No 7D924)

Translation: The speed of hypersound in benzene and acetone was investigated by the light scattering method along the saturation line up to a temperature 20-30° below critical. The linear dependence of the speed on temperature that was obtained leads to a quadratic dependence of the adiabatic compressibility on $T_c - T$, which contradicts the curve found from the equation of state. An attempt is made to interpret this in the spirit of the theory of "dimensionality." V. Z.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

USSR UDC: 535.51

ZAMKOV, V. A., NALBANDOV, L. V., All-Union Scientific Research Institute of Metrology imeni D. I. Mendeleyev

"Theoretical Basis of an Absolute Method of Measuring the Kerr Constant"

Leningrad, Issledovaniya v Oblasti Opticheskikh i Svetovykh Izmereniy, Trudy Metrologicheskikh Institutov SSSR, No 114(174), 1970, pp 38-44

Abstract: An absolute method is proposed for measuring the Kerr constant of liquids without comparison with a standard. The procedure is based on the property of a ¼-wave plate to produce circularly polarized light which does not vary in intensity as the analyzer is rotated. Analysis of measurement errors shows that use of the proposed method would increase the precision of measurement of the Kerr constant by nearly an order of magnitude, which would enable more precise measurement of the optical properties of organic materials which might be used as standards for relative measurements. Two figures, bibliography of seven titles.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

USSR UDC 621.791.754.546.821

GUREVICH, S. N., Doctor of Technical Sciences, ZAMKOV, V. N., Candidate of Technical Sciences, PRILUTSKIY, V. P., TOPOL'SKIY, V. F., and DYKHNO, S. L., Engineers

"ANT-23A Flux for Argon-Arc Welding of Titanium Alloys"

Kiev, Avtomaticheskaya Svarka, No 6 (243), Jun 73, p 75

Abstract: Argon-arc welding is often used for the manufacture of structures from titanium alloys. Use of the ANT-17A flux permits one-time operation thus ensuring its wide-spread application. However this flux has certain disadvantages in welding thin-sheet metal below 5 mm. Thus the ANT-23A flux has been developed as a highly effective medium to replace the ANT-17A. Using the ANT-23A it is possible to carry out a second welding without first cleansing the surface. Adhesion of the flux and the titanium is much lower and the slag film can be easily removed with a steel brush. The mechanical properties of the joints correspond to those of the base metal. The flux has successfully undergone testing under industrial conditions and is being used in the commercial production of titanium products.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

USSR UDC 621.791:546.821

GUREVICH, S. M., ZAMKOV, V. N., KUSHNIRENKO, N. A., Institute of Electric Welding imeni Ya. O. Paton, Acad. Sci. UkSSR

"Welding of Type VT-15 Titanium Alloys"

Avtomaticheskaya Svarka, No 10, 1971, pp 46-49.

Abstract: Many researchers have shown the necessity of decreasing the content of impurity gases in β-alloys of titanium type VT-15 to improve weldability. Improvement of this alloy has occurred in two directions: reduction of the content of impurities and decreasing their harmful influence by introduction of zirconium. This article presents a study of the weldability of alloys of both types. High purity VT-15 alloys and zirconium-containing VT-15 alloys should be joined by cathode-ray welding in severe modes. Argon-arc welding with ANT-19A flux can be recommended for metal with $\delta \leq 5$ mm. The q/δ ratio should be maintained near the design value during welding. The optimal welding rate is 14-18 m/hr. Joints made by these methods have satisfactory mechanical properties following ageing. Preliminary hardening of the base metal has a good influence on the properties of welded joints, assuring equal strength of seams and base metal following optimal heat treatment.

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USSR UDC: 621.791.856.3:546.821

ZOTOVA. Ye. M., LANGER, N. A., PRILUTSKIY, V. P., and ZAMKOV, V. N.:
Institute of Electric Welding imeni Ye. O. Paton, Academy of Sciences Ukrainian SSR

"Corrosion Resistance of Titanium Joints Made by Argon Arc Welding Using AN-T17A Flux"

Kiev, Avtomaticheskaya Svarka, No 11, Nov 70, pp 54-56

Abstract: A study was made of the corrosion resistance of titanium joints produced by argon arc welding using flux. Various methods of removing the slag film were also assessed. Involved were two experimental alloys, one of which was T55 of the titanium-aluminum-zirconium-tin-vanadium system and the other was OT4. The specimens were welded using AN-T17A flux and titanium powder metal wire. Hydrochloric, sulfuric, and nitric acids served as the corrosive media. Mechanical removal of the slag film was found to insure a corrosion resistance of the joints equal to two-sided plan. . Regardless of the method of slag film removal, welds made with the use of AN-T17A flux appear to have a higher corrosion resistance than those made by conventional argon-arc welding.

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Acc. Nr.: AP0046768

Ref. Code: UR 0125

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UDC 621.791:620.181:669.295

GRABIN, V. F., ZAMKOV, V. N., KUSHNIRENDO, N. A., GUREVICH, S. M.

"Effect of the Cooling Rate After Aging on the Properties of Welded Joints of VT15 Alloy"

Kiev, Avtomaticheskaya Svarka (Automatic Welding), No 1, 1970, pp 9-12 (from Avtomaticheskaya Svarka, No 1, 1970, p 79)

Translation: This article contains a study of the cause of the drop in impact toughness of the weld metal made of VT15 alloy during slow cooling and obtaining a weld metal with satisfactory impact toughness. There are 4 illustrations and an 8-entry bibliography.

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USSR

UDC: 539.4:629.7.02

ZAMOLODCHIKOVA, V. N.

"Frame of a Cylindrical Shell Under the Effect of a Concentrated Radial Force"

Kazan', Izvestiya Vysshikh Uchebnykh Zavedeniy, Aviatsionnaya Tekhnika, No 1, 1973, pp 25-29

Abstract: The author studies the contact problem associated with a cylindrical shell and a frame which is under the effect of a concentrated radial force. The (m+n) system of ordinary differential equations for an average length cylindrical shell which is unstretchable in the direction of the contour was obtained on the basis of semimomentless theory using the V.Z. Vlasov variation method. An elastic line equation is used for the frame where the equation is differential of the sixth order. Changes in the value of the bending moment in the frame are studied in conjunction with changes in some of the geometric parameters of the shell.

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UDC 620.172:193.57

POPOVICH, V. V., BICHUYA, A. L., ZAMORA, M. F., MIZETSKIY, V. L., SHIL'NIKOVA, G. K., BEREZHKO, B. I., and CHAYEVSKIY, M. I., Institute of Physico Mechanics, Academy of Sciences, UkrSSR, L'vov; L'vov Polytechnical Institute

"Influence of Smelting Method on the Physical and Mechanical Properties of 15KhS1MFB Steel"

Kiev, Fiziko-Khimicheskaya Mekhanika Materialov, Vol 6, No 6, 1970, pp 93-97

Abstract: The corrosion resistance and long-term strength of ordinary and vacuum-smelted 15KhS1MFB steel were studied in a fused lead-bizmuth eutectic. The changes in microstructure, microhardness, coercive force, and electrical resistance of specimens tested for corrosion and long-term strength were studied. It is demonstrated that 15KhS1MFB steel, regardless of the method of smelting, is little influenced by the eutectic Pb-Bi alloy at 470-550°C. The vacuum-smelted steel has practically the same long-term strength as the ordinary steel, but somewhat better plasticity.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

USSR

UDC 620.193.57

SHATINSKIY, V. F., SHTYKALO, I. G., ZAMORA, M. F., BOLOBOSOVA, V. V., and ZBOZHNAYA, O. M., Physicomechanical Institute, Academy of Sciences Ukrainian SSR, Lvov, and Lvov Polytechnical Institute

"Effect of Aging EI437B Alloy on Its Corrosion in Lithium"

Kiev, Fiziko-Khimicheskaya Mekhanika Materialov, Vol 9, No 6, 1973, pp 46-49

Abstract: The effect of the unstable structure of alloy EI437B (775 Ni, 18-20% Cr), produced by normal and vacuum melting, on its corrosion in lithium was studied. After annealing in a vacuum at 1080°C for eight hours, samples of EI437B were aged at 600, 700, and 800° C for aging times ranging from 25 to 2000 hours. Corrosion testing was performed in a convection flow of lithium with a hot-zone temperature of 700° C, temperature drop of 300° C and a test time of 100 hours. Investigation of this alloy from ordinary melts yielded analogous results: corrosion failure depends on the structural changes in the alloy but the total losses are greater than for vacuum-melted samples. Measurements of electrical resistance and microhardness after heat treatment testify that aging processes start in this alloy not much later and develop slower than in a vacuum-melted alloy. Complete stabilization of structure at 700° C

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SHATINSKIY, V. F., et al., Fiziko-Khimicheskaya Mekhanika Materialov, Vol 9, No 6, 1973, pp 46-49

is achieved only after aging for 1000 hours. Maximum corrosion losses are observed later and only after a 1000-hour age at 700° C. Basically, corrosion losses depend on aging time when dehomogenization of the solid solution occurs, which is in the period of secondary phase nucleation. Local corrosion occurs primarily by means of the dissolving of nickel around particles of the secondary phase. Two figures, 10 bibliographic references.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

USSR UDC 669.15

ZAMORA, M. F., and PALASH, V. N., L'vov Polytechnical Institute

"Change in the Thermoelectric and Galvanomagnetic Properties of High-Chromium Steels at Brittleness of 475° C"

Kiev, Metallofizika, No 32, 1970, pp 95-97

Translation: On the basis of the experiments conducted this study describes the change in the microthermoelectromotive force of high-chromium ferrite, and the galvanomagnetic effect Δρ and the Curie point of 17Kh and 25Kh steel as a function of temperature and time of embrittlement at temperatures of 400-540°C. It is shown that the galvanomagnetic effect is more sensitive to the first embrittlement period, which corresponds to a partial order of ferrite primarily in the border grain zones. The change in the microthermoelectromotive force and exchange energy characterized by the Curie point reflects the kinetics of the passage of the second embrittlement period. A considerable effect of intraphase transformations during the aging of high-chromium steels on their electronic properties is noted. Bibliography: 10 entries, 2 illustrations, 1 table.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

1/2 013 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--NATURE OF THE 475DEGREES BRITTLENESS OF HIGH CHROMIUM STEELS -U-

AUTHOR-(04)-SHULGA, N.G., ZAMORA, M.F., PALASH, V.N., ZIMA, YU.V.

COUNTRY OF INFO--USSR

SOURCE--METALLOVED. TERM. OBRAB. METAL. 1970, (2), 51-3

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--HIGH CHROMIUM STEEL, METAL BRITTLENESS, ALLOY DESIGNATION/(U)KH17 HIGH CHROMIUM STEEL, (U)KH25 HIGH CHROMIUM STEEL, (U)KH28 HIGH CHROMIUM STEEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/1289 STEP NO--UR/0129/70/000/002/0051/0053

CIRC ACCESSION NO--AP0106070

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

2/2 013 UNCLASSIFIED PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0106070

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE INVESTIGATION CONFIRMED THA PRESENCE OF 2 TYPES OF PHENOMENA LEADING TO THE 475DEGREES BRITTLENESS IN HIGH CR STEELS KH17 AND KH28 WHICH WAS EARLIER OBSERVED IN KH25. (1) WHILE HOLDING AT BRITTLENESS TEMP. UP TO 1 HR, FORMATION OF AN ORDERED ZONE TAKES PLACE WHICH LOWERS PLASTICITY, MAINLY IN THE LIMITS OF THE CHROME FERRITE SECTION. (2) WITH FURTHER HOLDING TIME, AN INTRAPHASE DECOMPN. OF FERRITE TO 2 SOL. SOLNS. ALL ALONG THE GRAINS WAS OBSD. WHICH WERE DIFFERENT IN COMPN. FROM CR. THE LARGEST EFFECT ON EMBRITTLEMENT WAS HOMOGENEITY OF THE SOL. SOLN. WITH INCREASE IN INHOMOGENEITY OF THE DISTRIBUTION OF CR, THE EMBRITTLEMENT PROCEEDS FOLLOWING ONLY SEVERAL MIN OF HEATING AT 450-520DEGREES.

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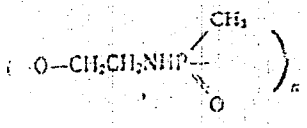
USSR UDC: 547.26'118.07

KHARIT, Ya. A., ZAVLIN, P. M., SHVARTS, A. S., ANDROSOV, V. F., ZAMORA, V. A., KOROTKAYA, L. I., Leningrad Institute of the Textile Industry and Light Industry imeni S. M. Kirov

"A Method of Producing Polyphosphonates".

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 26, 1970, Soviet Patent No 276892, Class 12, filed 23 May 69, p 24

Abstract: This Author's Certificate introduces: 1. A method of producing polyphosphonates of the formula



n ≈ 6. As a distinguishing feature of the patent, diethylamidoanilide of phosphonic acid is interacted with ethanolamine in the presence of heat with subsequent isolation of the final product by conventional methods. 2. A modification of the method distinguished by the fact that the process is carried out at a temperature of [illegible]

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

USSR

UDC 547.241

ZAVLIN, P. M., ZAMORA, V. A., and FEDOSEYEVA, A. S., Leningrad Institute of Cinema Engineers

"Thermal Conversion of Unsymmetric Amides of Methylphosphonic Acid"

Leningrad, Zhurnal Obshchey Khimii, Vol 41 (103), No 2, Feb 71, p 481

Abstract: Investigation of the thermal conversion of unsymmetric amides of methylphosphonic acid showed that a thermal dissociation of the P-N bond takes place with elimination of the group which partakes to a lesser degree in the $p_\pi - d_\pi$ conjugation with vacant d-orbitals of the phosphorus. Heating N-butyl-N'-phenylamide and N-benzyl-N'-phenylamide of phenylphosphonic acid to 250-280° yields aniline and a corresponding phosphorus-containing cyclic diimide. N-p-Chlorophenyl-N'-phenyldiamide of methylphosphonic acid yields p-chloroaniline under similar conditions.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

USSR UDC 621.385.632

ALESKOVSKIY, A.M., ZAMOROZKOV, B.M., MEL'NIKOV, V.F., MURAV'YEV, A.A., RADYUK, O.M.

"Experimental Investigation Of Persistence Of Beam Plasma In TWT"

Elektron. tekhnika. Nauchno-tekhn. sb. Elektron. SVCh (Electronic Technology. Scientific-Technical Collection. Microwave Electronics), 1970, Issue 11, pp 59-63

Translation: The paper investigates the persistence of disintegrating beam plasma in a medium-power traveling-wave tube, with the object of detecting possible distortions of the information on the structure of the beam by use of the photoregistration method. It is established that in the region where glow fills all the flight channel, distortions are possible, caused by the appearance in the beam of slow secondary electrons. 2 ref. Summary.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

1/2 013 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--RAPID AMPEROMETRIC DETERMINATION OF PALLADIUM IN PALLADIUM PLATING BATHS -U-

AUTHOR-(04)-ARISHKEVICH, A.M., PITSYK, O.I., ZAMORSKAYA, T.V., USATENKO, YU.I.

COUNTRY OF INFO--USSR

SOURCE--ZAVOD. LAB. 1970, 36(3), 265-7

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, CHEMISTRY

TOPIC TAGS--PALLADIUM, METAL CHEMICAL ANALYSIS, AMPEROMETRIC TITRATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3008/1215 STEP NO--UR/0032/70/036/003/0265/0267

CIRC ACCESSION NO--AP0138230

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

UNCLASSIFIED PROCESSING DATE--04DEC70

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CIRC ACCESSION NO--AP0138230

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. WITH A SOLN. OF 3,METHYLDIMERCAPTOTHIOPYRONE (I) IN 0.4M ALKALI AS REAGENT AND GRAPHITE INDICATOR ANODE, 20 MUG TO 1.5 MG OF PD WERE TITRATED IN ACID MEDIUM (FROM PH 4 TO 20N H SUB2 SO SUB4 OF 10N HCL) AT 0.4-0.6 V (VS. SCE). THE MOLAR RATIO IS SHOWN ON MICROFICHE. AMPEROMETRIC RESULTS WERE COMPARED WITH GRAVIMETRIC DIMETHYLGLYOXIME VALUES. THE PREPN. OF I IS DESCRIBED. FACILITY: DNEPROPETROVSK. KHIM.-TEKHNOL. INST., DNEPROPETROVSK, USSR.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

1/2 017 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--METHOD OF MONITORING THE MAGNETIC PROPERTIES OF DIAMETRALLY MAGNETIZED IRON ALUMINIUM MAGNETS -U-

AUTHOR-(02)-ZAMOSHKINA, N.P., SERGEYEV, V.V.

COUNTRY OF INFO--USSR

SOURCE--ZAVOD. LAB., 1970, 36, (1), 44-46

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, PHYSICS

TOPIC TAGS--IRON ALUMINUM ALLOY, MAGNETIC METAL, MAGNETIC PROPERTY, PERMENANT MAGNET MATERIAL, MAGNETIZATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/0359 STEP NO--UR/0032/70/036/001/0044/0046

CIRC ACCESSION NO--AP0124116

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

2/2 017 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0124116

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN IMPROVED METHOD OF MONITORING THE MAGNETIC CHARACTERISTICS OF DIAMETRALLY MAGNETIZED PERMANENT MAGNETS MADE OF FE, AL ALLOYS UNDER CONDITIONS CLOSELY APPROXIMATING THOSE ENCOUNTERED IN SERVICE IS PROPOSED AND THE RESULTS OF SOME PRACTICAL TESTS ARE PRESENTED AND ANALYSED. THE INTENSITY OF THE MAGNETIC FLUX, DULY REFERRED TO THE DIMENSIONS OF THE GROUND AND POLISHED MATERIAL AND TAKING ACCOUNT OF LOSSES IN THE MEASURING SYSTEM, CONSTITUTES A CONVENIENT MONITORING CRITERION.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

1/2 026 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--EFFECT OF NON METALLIC INCLUSIONS ON STRESS CONCENTRATIONS ,IN ARMCO IRON, AS DETERMINED FROM ELECTRODE POTENTIAL MEASUREMENTS -U-

AUTHOR-(03)-KUSLITSKIY, A.B., ZAMOSTYANIK, I.E., KARPENKO, G.V.

COUNTRY OF INFO--USSR

SOURCE--FIZ. KHIM. MEKHAN. MAT., 1970, 6, (2), 95-96

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--ELECTRODE POTENTIAL, IRON ALLOY, NONMETALLIC INCLUSION, STRESS CONCENTRATION, ELASTIC DEFORMATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/1814 STEP NO--UR/0369/70/006/002/0095/0096

CIRC ACCESSION NO--AP0129182

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

2/2 026 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0129182

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF NON METALLIC INCLUSIONS, BOTH REAL AND ARTIFIC ALLY STIMULATED, ON STRESS CONCENTRATIONS IN METALS (PARTICULARLY ARMCO FE) WAS STUDIED WITH SPECIAL REF. TO THE RELATION BETWEEN SUCH NON METALLIC INCLUSIONS AND THE ELECTROCHEMICAL CHARACTERISTICS OF THE METAL AS REPRESENTED BY ITS ELECTRODE POTENTIAL. THE ELECTRODE POTENTIAL WAS VERY SENSITIVE TO CHANGES IN ELASTIC STRAINS, SUCH AS ARISE IN THE NEIGHBORHOOD OF INCLUSIONS. HOWEVER, THERE WAS NO PERFECT ANALOGY BETWEEN THE EFFECTS OF INCLUSIONS AND STRESS RAISERS, SUCH AS NOTCHES, ON THE ELECTRODE POTENTIALS.

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USSR

UDC 517.948.32

MIKHAYLOV, L. G., Corresponding Member of the Academy of Sciences Tadzhik SSR, and ZAKOTA, A. V., Department of Mathematics and Computer Center of the Academy of Sciences Tadzhik SSR, Gor'kiy State University imeni N. I. Lobachevskiy

"On Some Integral Equations With Homogeneous Kernels"

Dushanbe, Doklady Akademii Nauk Tadzhikskoy SSR, Vol 14,(3) No 12, 1971, pp 3-7

Abstract: The article describes the equation

$$f(x) = \int_{\Omega} \Theta(x, y) f(y)\, dy + g(x), \quad x \in \Omega;$$

where x and y are points of an m-dimensional Euclidean space R_m, Ω is a unit sphere with the center at the origin of coordinates, g(x) and Θ (x,y) are given functions and f(x) a sought function. The kernel of the equation Θ (x,y) is homogeneous of degree -m; i.e.,

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USSR

MIKHAYLOV, L. G., and ZAMOTA, A. V., Doklady Akademii Nauk Tadzhikskoy SSR, Vol 14, No 12, 1971, pp 3-7

$$\theta(tx, ty) = t^{-m}\theta(x, y), \; x, y \in R_m, \; t > 0;$$

it is invariant under the group SO(m) of any rotations of space R_m; i.e.,

$$\theta(gx, gy) = \theta(x, y)$$

for any $x, y \in R_m$ and any $g \in SO(m)$; for a certain real β it satisfies the summability condition

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

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MIKHAYLOV, L. G., and ZAMOTA, A. V., Doklady Akademii Nauk Tadzhikskoy SSR, Vol 14, No 12, 1971, pp 3-7

$$\int_{R_m} |\theta(j, u)| \, |u|^{-s} \, du < \infty, \text{where } j = (1, 0, \ldots, 0).$$

Equation (1) is considered in one of the following Banach spaces: $C_\beta(\omega)$, $M_\beta(\omega)$, $L^p_{\beta - \frac{m}{p}}(\omega)$, joining them into the series $E_m(\beta; \omega)$.

Equation (1) was previously considered by L. G. MIKHAYLOV for m = 2. In this case equation (1) was reduced to an infinite system of independent equations with homogeneous kernels of degree -1. A normality condition was found for each equation of the system, and an exact theorem was obtained on the number of linearly independent solutions of the homogeneous equation and the number of conditions for the solvability of the nonhomogeneous equation. The present article generalizes these results for the case $m \geqslant 2$. Just as in the two-dimensional case, equation (1) expands into an infinite system of one-dimensional equations with homogeneous kernels.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

1/2 019 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--CULTIVATION OF PLANTS IN CLOSED BIOLOGICAL CYCLES WITH THE USE OF KERAMSIT -U-

AUTHOR-(03)-TSVETKOVA, I.V., ZAMOTA, V.P., MAKSIMOVA, E.V.

COUNTRY OF INFO--USSR

SOURCE--KOSMICHESKAIA BIOLOGIIA I MEDITSINA, VOL 4, JAN. FEB. 1970, P. 11-15

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--CLOSED ECOLOGY SYSTEM, HYDROPONICS, PLANT CHEMISTRY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0066 STEP NO--UR/0453/70/004/000/0011/0015

CIRC ACCESSION NO--AP0119062

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

2/2 019 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0119062

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DESCRIPTION OF EXPERIMENTS IN PLANT GROWING BY THE HYDROPONIC METHOD USING A POROUS ALUMOFERRISILICATE AS THE SOLID SUBSTRATE. IT IS FOUND THAT SUBSTANTIAL CHANGES OCCUR IN THE CHEMICAL COMPOSITION OF THIS MATERIAL AFTER IT HAS BEEN USED FOUR TIMES REPEATEDLY IN BIOLOGICAL CYCLES. IT IS FURTHER FOUND THAT IT UNDERGOES A DECOMPOSITION INVOLVING THE SEPARATION OF ELEMENTS INCLUDING ALUMINUM INTO THE NUTRIENT SOLUTION WHEN IT IS USED REPEATEDLY FOR A LONG PERIOD OF TIME. THIS REDUCES THE YIELD OF THE PLANTS AND CHANGES ADVERSELY THE CHEMICAL COMPOSITION OF THEIR GREEN MASS.

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USSR UDC 615.221.015

VOTCHAL, B. Ye., ZAMOTAYEV, I. P., LOXINSKIY, L. G., SANDOMIRSKIY, B. L., and VOROB'YEVA, Z. V., Central Institute of Postgraduate Medicine, Moscow

"Clinical Pharmacology of the Beta-Adrnergic Blocking Agent Trasicor"

Moscow, Terapevticheskiy Arkhiv, No 8, 1973, pp 10-14

Abstract: The new beta-adrenergic blocking agent trasicor (Ciba) was administered in varying doses for 3 to 30 days to a group of 59 patients suffering from a variety of diseases including coronary insufficiency, hypertension, diabetes mellitus, angina pectoris, combined in some cases with bronchial asthma or other lung pathology. Trasicor was found to have distinct antiarrhythmic, "coronary-active," negative chronotropic, bronchospastic and mild hypotensive effects somewhat less pronounced than those exerted by inderal. It was particularly efficacious in the patients with extrasystoles, sinus tachycardia, angina pectoris, auricular fibrillation and bronchial obstruction. When tekan perorally, the effect of trasicor was manifested within 40 to 60 minutes and persisted for 3 to 6 hours. Side effects (nausea, bitter taste in the mouth) were noted in only two patients.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

Acc. Nr: AP0036810 Ref. Code: UR 0016

PRIMARY SOURCE: Zhurnal Mikrobiologii, Epidemiologii, i Immunobiologii, 1970, Nr 1, pp 18-21

NOSOGEOGRAPHICAL ASPECT OF TYPHOID CARRIER STATE AND OPISTHORCHIASIS

P. Ya. Kravchenko, B. A. Zamotin, V. I. Prokopenko, A. A. Klimshin

Territorial distribution of typhoid carriers and of the extent of affection of the population with opisthorhiasis proved to coincide in graphic map analysis. Among the patients suffering from opisthorhiasis typhoid carrier state proved to be almost 5 times more frequent than among those free of this invasion.

D.H.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

1/2 028 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--STRUCTURE OF EPR SPECTRA OF GLASS CRYSTALLIZATION PRODUCTS AND OF SOME SILICA MODIFICATIONS -U-

AUTHOR--ZAMOTRINSKAYA, YE.A.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(3), 608-9

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, NUCLEAR SCIENCE AND TECHNOLOGY

TOPIC TAGS--EPR SPECTRUM, GAMMA RADIATION, CRYSTALLIZATION, GLASS COMPOSITION, QUARTZ, IR SPECTRUM, SILICA, SODIUM OXIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0630 STEP NO--UR/0363/70/006/003/0608/0609

CIRC ACCESSION NO--AP0119542

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

2/2 028 UNCLASSIFIED

CIRC ACCESSION NO--AP0119542 PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN ANAL. IS PERFORMED OF THE STRUCTURE OF EPR SPECTRA OF GAMMA IRRADIATED PRODUCTS OF THE CRYSTN. OF GLASSES OF THE NA SILICATE SYSTEM BASED ON THEIR COMPARISON WITH THE SPECTRA FOR THE VARIOUS SILICA MODIFICATIONS. GLASSES OF THE FOLLOWING COMPN. WERE INVESTIGATED. 12PERCENT NA SUB2 O PLUS 88PERCENT SIO SUB2 AND 26PERCENT NA SUB2 O PLUS 74PERCENT SIO SUB2, SUBJECTED TO BLANK CRYSTN. AT 600DEGREES (FOR 3 TO 24 DAYS). GLASSES 12PERCENT NA SUB2 O PLUS 88PERCENT SIO SUB2, CYSTD. DURING CASTING. CRISTOBALITES OF VARIOUS TEMP. TREATMENTS, TRIDYMITE, AND FUSED QUARTZ. THE IRRADN. WAS DONE AT ROOM TEMP. USING PRIME60 CO WITH A DOSAGE OF 10 PRIME6 R. THE SPECTRA WERE TAKEN ON RE1301 AT 300 AND 77DEGREESK. THE SPECTRA OF THESE MATERIALS TAKEN AT 77DEGREESK CAN BE DIVIDED INTO 2 PARTS. CERTAIN FEATURES OF THE SPECTRA ARE DISCUSSED. THE 1ST PART OF THE SPECTRUM IS ATTRIBUTED TO THE AL IMPURITY IN THE CRISTOBALITE STRUCTURE, AND IS FOUND TO BE DIFFERENT FROM THE AL SPECTRUM IN CRYST. QUARTZ. THE DIFFERENCE CONSISTS IN THAT IN THE GIVEN CASE THERE IS ONE TYPE OF AL CENTERS, WHEREAS IN QUARTZ THERE ARE 6. IN GLASSES CRYSTD. BY HEATING THE CENTERS CHARACTERISTIC FOR CRYST. CRISTOBALITE FORM PRIMARILY; IN GLASS CRYSTD. DURING CASTING THOSE OF TRIDYMITE FORM PRIMARILY. THE RESULTS ARE IN AGREEMENT WITH THE RESULTS OF THE INVESTIGATION OF THE GIVEN CRYSTN. PRODUCTS BY THE IR SPECTROSCOPY AND THERMOGRAPHY METHODS.

FACILITY: SIB. FIZ. TEKH. INST. IM. KUZNETSOVA, TOMSK, USSR.

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Devices

USSR

UDC 621.394.662

ZAMRIY, A. S., ZAKHAROV, A. I.

"A Device for Transmitting Discrete Information by the Start-Stop Method"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 5, Feb 72, Author's Certificate No 327620, Division H, filed 17 Jul 70, published 26 Jan 72, p 174

Translation: This Author's Certificate introduces a device for transmitting discrete information by the start-stop method. The device contains a cadence frequency generator, a keyboard with contacts and memory cells, a keyboard interlock coding unit and a stop-start distributor, and a flip-flop connected through an output unit to the communications channel. As a distinguishing feature of the patent, interference suppression is improved by connecting the input of the first cell of the preselector through an OR circuit to the outputs of the memory cells of the keyboard. The other cells of the preselector are connected to the output of the coding unit, and the readout inputs of the preselector cells are connected to the outputs of the start-stop distributor. The number of digital places in the start-stop distributor is one digit greater than the number

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USSR

ZAMRIY, A. S., ZAKHAROV, A. I., USSR Author's Certificate No 327620

of information elements in the start-stop cycle. The outputs of the preselector cells are connected through a second OR circuit to the counting input of the flip-flop, and the outputs of the keyboard memory cells are connected to the input of the coding unit directly.

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SPRS 59208
6-73

3

XIV-4. DEGREES OF GROWTH AS THE FACTOR DEFINING THE MORPHOLOGY OF EPITAXIAL LAYERS AND CRYSTALS WITH THE STRUCTURE OF DIAMOND AND SPHALERITE

[Article by V. D. Zamozhskiy, V. N. Vertoprakhov, Yu. M. Rumyantsev, Novosibirsk; Novosibirsk, III Simpozium po Protsessam Rosta I Sinteza Poluprovodnikovykh Kristallov i Plenok, Russian, 12-17 June 1972, p 196]

An analysis was made of the morphology of the crystals (with the structure of diamond and sphalerite) in terms of elementary layers and structural series. It is demonstrated that the density of the elementary layers and the structural series decrease in the series 111-100-110-311-210-331-... and 110-111-100-211-311-... respectively.

The calculation data obtained permit the explanation of the occurrence of certain faces from the point of view of active participation in the growth processes of different structural series (growth stages), use of the latter to set the faces inclined to the layered growth and predict which of them will appear in the growth forms of the crystals and epitaxial layers.

It has been demonstrated that the experimental data on the study of the growth stages in diamond crystals and epitaxial layers of germanium and gallium arsenide agree satisfactorily with the results of the theoretical analysis.

ZAMOZHSKIY, V.D.

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JPRS 59008

6-73

3

XV-3. STUDY OF THE REAL MICROSTRUCTURE OF GROWTH AND SOLUTION SURFACES BY THE LIGHT CONFIGURATION METHOD

[Article by V. N. Vertoprakhov, V. D. Zamozhskiy, V. P. Zinov'yeva; Novosibirsk; Novosibirsk, III Simpozium po Protsessam Rosta i Sintezu Poluprovodnikovykh Kristallov i Plenok, Russian, 17-17 June 1972, p 214]

The method of light configuration used at the present time to orient crystals along the principal crystallographic axes can in reality give richer information about the growth or solution surfaces. The lines and bands on the light configurations are diffraction spectrum systems and bear information about the series of growth and solution steps.

In the case of layered growth of the crystals on the facets frequently vicinal forms occur which are deflected by a fraction of an angular degree from the basic facet. By using a laser beam it is possible to determine the angles of vicinal forms with an accuracy to several seconds. Thus, it is possible to determine the angles of disorientation of individual blocks reaching the surface.

In the case of complex structure of the surface, the light configurations are frequently strongly diffuse, and it is difficult to determine the exact angular value of one facet or another by them. In this case a good result is obtained by the effect of overexposure of the photographic screen known by the name of the solarization phenomenon.

What has been discussed is illustrated in an example of semiconductor crystals with a structure of the type of diamond, sphalerite or garnet.

ZAMOZHSKIY, V. D.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

USSR

UDC 621.394.5

ZAMRIY, LEONID PANOVICH; ZAKHAROV, ANATOLIY IVANOVICH; OKHORZIN, VIKTOR MIKHAYLOVICH

"Elements Of The Theory Of The Transmission Of Discrete Information"

Elementy teorii peredachi diskretnoy informatsii (cf. English above), Moscow, Izd. "Svyaz'," 1972. 232 pp. ill. 79 ref. 1 r. 15 k.

Abstract: In the book an account is given of the basic problems in the transmission of discrete information: the statistical characteristics of communication channels, codes, and systems. An increase of the reliability of transmission of discrete information is considered, based on the statistical characteristics of real communication channels. Methods and devices are described for a statistical study of communication channels intended for data transmission; the principal results are given of studies of cable, radio relay, tropospheric, and shortwave channels. On the basis of the processing and generalization of the results of statistical testing of the channels, methods are presented for evaluation of the effectiveness of groups of error correcting codes and a calculation of the parameters of some systems of transmission of discrete information. The book is intended for development-engineers of apparatus for data transmission, scientific workers, graduate students, and students of advanced courses of corresponding specialities.

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USSR

ZAMRIY, LEONID PANOVICH, et al., Elementy teorii peredachi diskretnoy informatsii, Moscow, Izd. "Svyaz'," 1972. 232 pp. ill. 79 ref. 1 r. 15 k.

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ZAMRIY, LEONID PANOVICH, et al., Elementy teorii peredachi diskretnoy informatsii, Moscow, Izd. "Svyaz'," 1972. 232 pp. ill. 79 ref. 1 r 15 k.

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ZAMRIY, LEONID PANOVICH, et al., Elementy teorii peredachi diskretnoy informatsii, Moscow, Izd. "Svyaz'," 1972. 323 pp. ill. 79 ref. 1 r 15 k.

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ZAMRIY, LEONID PANOVICH, et al., Elementy teorii peredachi diskretnoy informatsii, Moscow, Izd. "Svyaz'," 1972. 232 pp. ill. 79 ref. 1 r 15 k.

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USSR

ZAMRIY, LEONID PANOVICH, et al., Elementy teorii peredachi diskretnoy informatsii, Moscow, Izd. "Svyaz'," 1972. 323 pp. ill. 79 ref. 1 r 15 k.

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ZAMRIY, LEONID PANOVICH, et al., Elementy teorii peredachi diskretnoy informatsii, Moscow, Izd. "Svyaz'," 1972. 323 pp. ill. 79 ref. 1 r 15 k.

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ZAMRIY, LEONID PANOVICH, et al., Elementy teorii peredachi diskretnoy informatsii, Moscow, Izd. "Svyaz'," 1972. 323 pp. ill. 79 ref. 1 r 15 k.

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UDC 533.697

USSR

ZAMTFORT, B. S. and IVANOV, M. YA.

"The Flow Around a Lattice of Symmetrical Profiles by a Transsonic Anisotropic Flow"

Uch. zap. Tsentr. aerogidrodinam. in-ta (Scientific Notes of the Central Aerohydrodynamics Institute), Vol 3, No 6, 1972, pp 107-111 (from Referativnyy Zhurnal -- Mekhanika, No 4, 1973, Abstract No 4B370 by A. G. Plotkina)

Translation: The results are given of calculating the flow of an inviscous nonheat-conducting gas around a lattice of symmetrical profiles formed by arcs of a circle of equal radius with a zero stagger angle and a relative thickness of 13%. In order to solve the system of integral laws of conservation, which are equivalent to differential equations of flow and correlations at strong discontinuities, the scheme proposed by S. K. Godynov is used, as well as the one used for the analysis of stationary and nonstationary flow in nozzles and ducts (Godynov, S. K., Matem. sb., 1959, 47, No 3, 271-306 -- RZHMekh, 1960, No 7, 8595), and also (Ivanov, M. Ya. Krayko, A. N., Izv. AN SSSR. Mekh. zhidkosti i gaza, 1969, No 5, 77-83 -- RZHMekh, 1970, 3B405). Only certain details of this method are presented which are characteristic for the case being considered. The streamline pattern is calculated for both the case of anisotropic free-stream flow and for entropy change in a cross section at the input

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USSR

ZAMTFORT, B. S. and IVANOV, M. YA., Uch. zap. Tsentr. aerogidrodinam. in-ta, Vol 3, No 6, 1972, pp 107-111

to the lattice. Moreover, the change in the function p/ρ^{x} was assumed to follow the rule of $p/\rho^{x}=A+B\cos(2\pi y/T)$. Calculations were conducted for different pressures at the output of the lattice, which made it possible to use both the flow with the local sonic and with supersonic velocities, including the zones of deceleration. In the process of calculation the results were checked against outlay energy, impulse and enthalpy. The error of calculation in the stationary case did not exceed 2-5%. (12 bibliographic entries)

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UDC 539.376:534.1

USSR

ZAMULA, G. N.

"Calculation of the Stability of Circular Cylindrical Shells Under Creep Conditions"

Uch. zap. Tsentr. aerogidrodinam. in-ta (Central Aerohydrodynamic Institute), 1971, Vol. 2, No. 6, pp 87-92 (from RZh-Mekhanika, No 8, Aug 72, Abstract No 8V279)

Translation: The author investigates creep and the stability of isotropic circular cylindrical shells in two stages. The initial axisymmetric stress-deformation state under nonsteady-state creep is first calculated. After this the critical time for loss of stability of the shell is determined in terms of the nonaxisymmetric form by solving the equations of neutral equilibrium. A system of two homogeneous partial differential equations is written for functions of additional nonaxisymmetric forces. The solution is sought in the form of the products of the unknown functions of x (along the generatrix) times $\cos n\phi$, where ϕ is the central angle of the section and n is the unknown number of waves along the circumference. A system of two ordinary differential equations is obtained with the aid of this

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USSR

ZAMULA, G. N., Uch. zap. Tsentr. aerogidrodinam. in-ta, 1971, Vol. 2, No. 6, pp 87-92

representation for each n. The critical time of loss of stability is defined as the least time for different n times (which is present in the equations as a parameter), in the course of which there appears a nonzero solution of the homogeneous problem with null boundary condition. The behavior of a cylindrical shell "instantaneously" compressed by an axial force is considered as an example. The deformation of nonsteady-state creep is represented as the product of a certain time function times the stress power function. Both an ideal shell and a shell with initial faults periodic in terms of x are calculated individually. It is shown that loss of stability over a nonaxisymmetric shape occurs long before the axisymmetric bending goes to infinity. The effect of the dimensionless thickness and length of the shell, the amplitude of the initial faults and other parameters on the magnitude of the critical deformation and the critical time of loss of stability of the shell is discussed. A. M. Lokoshenko.

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ZAMULA, G. N.

TECHNICAL TRANSLATION

FSTC-HT-23-1057-72

ENGLISH TITLE: Certain Inverse Problems of Determining Parameters and Modeling of Heat Exchange

FOREIGN TITLE:

AUTHOR: G. N. Zamula, V. M. Yudin

SOURCE: Teplovyye napryazheniya v elementakh konstruktsiy No. 9, 1970, pp. 59 - 70

Translated for FSTC by Eileen Weppner, Leo Kanner Associates

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1/2 009 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--PRINCIPLES OF THE EXTRACTION OF GOLD OF VARIOUS PARTICLE SIZES FROM SAND ON A CONCENTRATION TABLE -U-

AUTHOR-(02)-ZAMYATIN, G.V., KUNYUKOVA, A.T.

COUNTRY OF INFO--USSR

SOURCE--TSVET, METAL. 1970, 43(2), 78

DATE PUBLISHED--------70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--GOLD, EXTRACTIVE METALLURGY, PARTICLE SIZE, SAND, ORE BENEFICIATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

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UNCLASSIFIED PROCESSING DATE--02OCT70

2/2 009

CIRC ACCESSION NO--AP0108249

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EXTN.OF AU OF PARTICLE SIZE SMALLER THAN OR EQUAL TO 0.25 MM WAS STUDIED AS A FUNCTION OF ITS PARTICLE SIZE. THE AU CONTENT IN THE MIXTS. WAS 80-500 MG-M PRIMEB. IN NATURAL SANDS, THE AU WAS PRESENT IN THE FORM OF FREE PARTICLES, BOTH PLATELETLIKE AND LUMPY. IN A SYNTHETIC MIXT., THE AU WAS PRESENT AS ACICULAR AND MUSHROOMLIKE PARTICLES. THE AMT. OF AU EXTD. INTO THE CONC. WAS DETD. SUCCESSIVELY BY AMALGAMATION AND BY SAMPLE ANAL. ACCORDING TO THE PARTICLE SIZE CLASSES. THERE IS A DEFINITE RELATION BETWEEN THE SIZE OF THE AU PARTICLES AND THEIR EXTN., WHICH WITHIN THE LIMITS TESTED CORRESPONDS TO A LOGNORMAL INTEGRAL FUNCTION. THE PARTICLE SIZE OF AU, WHICH WAS 50PERCENT EXTD. (CRIT. SIZE) DURING ENRICHMENT OF A CONCN. TABLE, WAS CLOSE TO 0.05 MM. THE EXTN. OF COMPACT AU PARTICLES, AS COMPARED WITH ACICULAR AND MUSHROOMLIKE PARTICLES, IS GREATER IN ALL SIZE CLASSES. WITH DECREASING PARTICLE SIZE, THE EFFECT OF THEIR SHAPE ON THE EFFECTIVENESS OF THE EXTN. DECREASES. WHEN EMPLOYING TABLES FOR CONCN. OF SLIME MINERALS, INCLUDING AU, ONE SHOULD TAKE INTO CONSIDERATION THE POSSIBLE AU LOSSES OF PARTICLE SIZE SMALLER THAN 0.1-0.2 MM.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

1/2 014 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--THERMAL TRANSFORAMTIONS DURING THE INTERACTION OF GROG WITH ORTHOPHOSPHORIC ACID -U-

AUTHOR-(03)-ZAMYATIN, S.R., MAMYKIN, P.S., KNYAZEVA, T.P.

COUNTRY OF INFO--USSR

SOURCE--OGNEUPORY 1970, 35(2), 39-43

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--PHOSPHORIC ACID, CERAMIC MATERIAL, THERMAL EFFECT

CONTROL MARKING--NO RESTRICTIONS

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2/2 014

CIRC ACCESSION NO--AP0118060

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FINELY POWD. GROG, CONSISTING OF MULLITE, QUARTZ, AND CRISTOBALITE, WAS MIXED WITH 95PERCENT H SUB3 PO SUB4 IN A MOLAR RATIO AL SUB2 O SUB3:P SUB2 O SUB5 EQUALS 1.1. THE MIXT. WAS HEATED TO 400DEGREES FOR 1 HR AND MILLED. FROM THE POWDER TABLETS WERE PRESSED WHICH WERE HEATED AT 500, 600, 800, 1000, 1200, AND 1400DEGREES FOR 2 HR. THE PHASE COMPN. OF THE HEATED SAMPLES WAS DETD. BY X RAY ANAL. BELOW 300DEGREES, GROG AND H SUB3 PO SUB4 DO NOT INTERRACT. BEGINNING AT 300DEGREES THE LOW TEMP. FORM OF SIO SUB2. P SUB2 O SUB5 IS FORMED, BY INTERACTION OF THE ACID WITH THE GLASSY PHASE OF THE GROG, WHILE ITS OTHER COMPONENTS, QUARTZ AND CRISTOBALITE, REMAIN UNALTERED. AT 300-800DEGREES A CRYSTN. OF PHOSPHOSILICATES OF THE TYPE SIO SUB2. P SUB2 O SUB5 TAKES PLACE. AT TEMP. GREATER THAN 800DEGREES THE PHOSPHOSILICATES DISSOLVE AND AT 1030DEGREES THEY TRANSFORM INTO THE HIGH TEMP. FORM THAT GREATER THAN 1200DEGREES TRANSFERS INTO THE MELT. AT 700-1000DEGREES THE LARGE AMT. OF FLUID PHASE, CAUSED BY DISSOLN. OF CRYST. SIO SUB2. P SUB2 O SUB5 AND MULLITE IN THE GLASSY PHASE, LOWERS THE TEMP. OF BEGINNING DEFORMATION UNDER A LOAD AND INCREASES THE SHRINKAGE. AT 1000DEGREES THE DEFORMATION IS STOPPED BY FORMATION OF THE NEW CRYST. PHASE AIPO SUB4. AT 1200DEGREES AIPO SUB4 CRYSTALLIZES IN THE CRISTOBALITE FORM. AFTER HEATING AT 1400DEGREES THE MIXT. CONTAINS AIPO SUB4, CRISTOBALITE, MULLITE, AND QUARTZ. THE MIXT. CAN BE USED AS MORTAR, THAT CAN BE SINTERED AT LOW TEMP. FACILITY: KUZNETSK. MET. KOMB., KUZNETSK, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

1/2 037 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--FIELD STATISTICS OF A SEGMENTED TRAVELING WAVE ANTENNA -U-

AUTHOR-(02)-KORNIYENKO, L.G., ZAMYATIN, V.I.

COUNTRY OF INFO--USSR

SOURCE--RADIOTEKHNIKA I ELEKTRONIKA, VOL. 15, JUNE 1970, P. 1297-1300

DATE PUBLISHED----JUN70

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR., PHYSICS

TOPIC TAGS--TRAVELING WAVE ANTENNA, FIELD EMISSION, ANTENNA MAIN LOBE, ANTENNA RADIATION PATTERN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/0298 STEP NO--UR/0109/70/015/000/1297/0300

CIRC ACCESSION NO--AP0134102

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

2/2 037 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0134102

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DERIVATION OF GENERAL RELATIONSHIPS FOR CERTAIN STATISTICAL FIELD CHARACTERISTICS OF LINEAR SEGMENTED TRAVELING WAVE ANTENNAS. EQUATIONS ARE GIVEN FOR THE MEAN DIRECTIVITY IN TERMS OF POWER, THE MEAN WIDTH OF THE RADIATION PATTERN, THE MEAN DRIFT OF THE MAIN LOBE, AND THE MEAN DISPERSION IN THE MAIN LOBE DIRECTION FOR UNIFORM AMPLITUDE DISTRIBUTION AND THE ABSENCE OF WAVENUMBER CORRELATION IN CERTAIN INDIVIDUAL SEGMENTS. THE PROPOSED FORMULAS AND GRAPHS MAKE IT POSSIBLE TO ESTIMATE QUANTITATIVELY THE CHANGE IN THE PARAMETERS OF A TRAVELING WAVE ANTENNA DURING SECTIONING AND TO SELECT THE APPROPRIATE ANTENNA STRUCTURE.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

USSR

UDC 622.342:622.732.2

TOMIN, V. S., and ZAMYATIN, O. V.

"On Finishing Coarse-Grained Fractions of Auriferous Concentrates"

Moscow, Tsvetnyye Metally, No 10, Oct 70, pp 82-84

Abstract: A selective granulation method developed by the Irkutsk Scientific-Research Institute of Rare Metals is described. The method is based on the fact that grains of slime minerals and grains of barren rock, when compressed between two surfaces, split up and break down, while gold grains are only deformed, taking a flat shape. This suggests the possibility of subsequent separation of gold grains by screening. Laboratory experiments were conducted on a sample of coarse-grained dredged concentrate: 1.6% magnetite; 46.4% limonite; 3.6% metal scrap; 26.3% FeS_2; 2.6% Au; 19.5% schist. In order to check and refine the laboratory experiments, industrial tests of the method of selective granulation were conducted on one of the dredges of the "Lenzoloto" Combine. These tests showed the feasibility of this method for the extraction of gold from coarse-grained slime concentrates.

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SECTION III SO: SELECTED AEROSPACE [illegible] FACILITIES

PCS-99

SEPT 71

Name: Institute of Biophysics, Pushchino

Description:

(U) During this quarterly reporting period, 25 new articles were identified from the Institute of Biophysics, Pushchino. On the basis of these articles, it was possible to identify 32 new personalities with the institute. These personalities, the subjects of the articles, and the dates are given below:

All-biophysics/physiology

Aliyeva, S. A.	phosphorylation	1971 (34)
Apikayeva, G. F.	radiation effect	1970 (35)
Aripova, D. F.	radiation effect	1971 (36)
Azhipa, Ya. I.	hypoxia	1969 (37)
Bregadze, I. F.	radiation effect	1970 (38)
Busol, Ye. P.	luminescence	1970 (38)
Dmitriyeva, T. I.	radiation effect	1970 (39)
Dmitriyeva, V. A.	blood plasma	1969 (40)
Domareva, O. P.	radiation effect	1970 (39)
Dubrov, A. P.	biochemical analysis	1971 (41)
Gabelova, N. A.	muscle physiology	1971 (42)
Ganassi, Ye. E.	radiation effect	1970 (35)
Ivkova, M. N.	serum albumin	1971 (43)
Kasatkin, V. S.	phosphorylation	1971 (34)
Khokhlova, G. K.	muscle physiology	1971 (44)
Kiselov, A. N.	salivary gland	1970 (45)
Klyagina, V. P.	oligonucleotide	1970 (46)
Korol, B. A.	radiation effect	1971 (44)
Koshcheleva, G. N.	biochemical analysis	1971 (41)

ZAMYATNIN, A. A.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

Kurmina, S. V.	tissue culture	1970 (47)
Markovich, D. S.	lactate dehydrogenase	1971 (48)
Medvedeva, I. F.	radiation effect	1971 (44)
Peshkova, L. V.	phosphorylation	1971 (49)
Pronevich, L. A.	antibiotic	1970 (50)
Rodionova, M. A.	mitochondrion	1971 (51)
Shchipakin, V. N.	phosphorylation	1971 (49)
Skobeyev, Ye. M.	radiation/vibration	1970 (52)
Suyklova, V.	radiation effect	1970 (35)
Tsvetkov, V. D.	blood plasma	1969 (40)
Umrikhina, N. V.	lactate dehydrogenase	1971 (48)
Vilenchik, M. M.	radiation effect	1970 (53)
Zemyatnin, A. A.	muscle physiology	1971 (42)

Dubrov and Kosheleva (41) are associated with the Laboratory of Cell Biophysics at the institute. Reference 52 above is of special interest since it presents an investigation of combined stresses, i.e., radiation and vibration. In addition to the above articles, five of the twenty-five (54-58) were authored by persons already identified with the Institute of Biophysics, Pushchino. Reference 55 associates the authors of the article, L. V. Slozhenikina, V. L. Migushina, and A. M. Kuzin, with the Department of Radiobiology at the institute.

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

1/2 009 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--COMPOSITION OF FATLIKE SUBSTANCES IN THE WATER OF BAROMETRIC, CONDENSER, WELLS -U-

AUTHOR-(03)-ZAMYSHLYAYEVA, A.M., TSYGANKOVA, G.P., GORSHKOVA, E.I.

COUNTRY OF INFO--USSR

SOURCE--MASLO-ZHIR. PROM. 1970, 36(3), 18

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--HYDROGENATION, FATTY ACID, CHEMICAL COMPOSITION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/0970 STEP NO--UR/9085/70/036/003/0018/0018

CIRC ACCESSION NO--AP0133056

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

2/2 009 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0133056

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TITLE FATLIKE WASTES FROM DEODORIZATION OF HYDROGENATED FATS CONTAIN 48.10PERCENT H SUB2 O AND 51.7PERCENT ORG. COMPDS. THE ORG. FRACTION CONTAINED FATTY ACIDS (MYRISTIC 7.1, PALMITIC 18.9, STEARIC 17.2, OLEIC 18.5, AND LINOLEIC 16.2) AND 22.1PERCENT OXIDN. PRODUCTS AND UNDEFINED COMPDS.

FACILITY: KIEV. TEKHNOL. INST. PISHCH. PROM., KIEV, USSR.

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

1/2 020 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--DIFFERENTIAL PHOTOMETRIC DETERMINATION OF TITANIUM WITH DIANTIPYRYLMETHANE IN PRODUCTS FROM THE PREPARATION OF PIGMENT TITANIUM

AUTHOR-(02)-ZAMYSOLV, R.D., PANKOVA, I.A.

COUNTRY OF INFO--USSR

SOURCE--LAKOKRASOCH. MATER. TKH. PRIMEN. 1970, (1), 55-6

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY, MATERIALS, EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--PHOTOMETRIC ANALYSIS, TITANIUM COMPLEX, PIGMENT, IRON, VANADIUM, ORE/(U)FEK M COLORIMETER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0689 STEP NO--UR/0303/70/000/001/0055/0056

CIRC ACCESSION NO--AP0119597

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

2/2 020 UNCLASSIFIED

CIRC ACCESSION NO--AP0119597 PROCESSING DATE--23OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TI PRIME4 POSITIVE COMPLEX WITH DIANTIPYRYLMETHANE HAS AN ABSORBANCE MAX. AT GAMMA SUBMAX 380-400 NM; ITS MOLAR ABSORPTIVITY IS 6.8 TIMES 10 PRIME4. MEASUREMENT AT 485 NM IS PROPOSED FOR HIGHER CONCNS. OF TI. THE INTERFERENCE OF FE PRIME3 POSITIVE AND V PRIME5 POSITIVE IS ELIMINATED BY REDN. WITH ASCORBIC ACID. THE COLOR IS DEVELOPED AFTER 15 MIN HEATING ON A WATER BATH. TO ANALYZE TIO SUB2, DISSOLVE A 0.1 G SAMPLE AND 2.5 G (NH SUB4) SUB2 SO SUB4 IN 5 ML H SUB2 SO SUB4 BY HEATING, DIL. WITH 50-60 ML. 1:1 H SUB2 SO SUB4 WITH H SUB2 O TO 200 ML. HEAT A 10 ML ALIQUOT WITH 10 ML 1:1 HCL FOR 10 MIN ON A BOILING WATER BATH, ADD 15 ML REAGENT (2PERCENT DIANTIPYRYLMETHANE AND 0.2PERCENT ASCORBIC ACID IN 6PERCENT H SUB2 SO SUB4) TO THE HOT SOLN., KEEP 10 MIN AT ROOM TEMP., COOL, ADD H SUB2 O TO 50 ML AND MEASURE THE ABSORBANCE IN A 10 MM CELL BY USING THE FEK-M PHOTOCOLORIMETER WITH LIGHT FILTER NO. 3. THE ABSORBANCE OF THE TEST SOLN. AND THAT OF THE STD. SOLN. WITH 3.5 MG TIO SUB2-50 ML IS MEASURED IN THE DIFFERENTIAL ARRANGEMENT. TI ORES ARE FUSED WITH K SUB2 S SUB2 O SUB7, DISSOLVED IN 10PERCENT H SUB2 SO SUB4, AND THE ALIQUOT IS TREATED IN THE SAME WAY. ANAL. OF PIGMENTS AND ORES WITH 12-99PERCENT GAVE SATISFACTORY RESULTS; THE STD. DEVIATION WAS 0.04-0.15PERCENT.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

(8)

JPRS 62634
27 NOVEMBER 1973

EXPERIMENTAL STUDY OF AN AC LIQUID-METAL CONDUCTION MACHINE

[Abstract of a Paper by Yu. A. Bakanov, L. G. Vlassenko, S. Ya. Dvorchik, Ya. Ya. Zandart, V. K. Makarevich, V. Ye. Strizhak, L. M. Tolmach, S. R. Troitskiy Given at the Magnetohydrodynamic Conference, pp 140-142]

A study was made of a high-temperature single-phase machine with a C-type magnetic excitation system. Four pair-wise connected channels bifilar-arranged in the gap and also a III-type step-up transformer (Figure 1). The channels were executed from KhI8N10T steel 0.5 mm thick; they have a constant cross section with outside dimensions of 16.6 x 6.4 mm^2 and an active length of 250 mm. They are electrically connected to each other and to the sectional primary turn of the transformer (soldering the lateral faces). The flow of metal in each pair of channels is opposite. The machine has electrical insulation with thermal stability to 600°C, measuring turns for determining the magnetic fluxes and several thermocouples.

Depending on the operating mode in the experiment, various switchings of the windings were realized:

1) In the pump mode the excitation winding and the output winding of the transformer were fed from a constant energy source;

2) In the generator mode independently of the excitation, the excitation winding was fed from an outside source, and the transformer winding was connected to the useful load.

3) In the generator mode with self-excitation of the winding, the capacitance and the useful load were included according to the scheme in Figure 1.

The studies were made on a sodium loop with a sodium temperature of 300-500 °C.

The characteristic features of the conduction machines of this type and, in particular, the characteristic features of the parallel hydraulic coupling of pairs of channels leading to spurious currents through the bypass loops of circuit from the sign-variable magnetic field were noted.

ZANDART YA. YA.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

1/2 042 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--EFFECT OF THE ADSORPTION OF VARIOUS SUBSTANCES ON THE SURFACE IONIZATION OF CESIUM CHLORIDE MOLECULES ON IRIDIUM -U-

AUTHOR-(02)-TONTEGODE, A.YA., ZANDBERG, E.YA.

COUNTRY OF INFO--USSR

SOURCE--ZH. TEKH. FIZ. 1970, 40(3), 626-30

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--CESIUM CHLORIDE, IRIDIUM ALLOY, CARBON FILAMENT, SURFACE IONIZATION, METAL FIBER, FIBER METALLURGY, PLATINUM, ADSORPTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/1970 STEP NO--UR/0057/70/040/003/0626/0630

CIRC ACCESSION NO--AP0118929

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

2/2 042 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0118929

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CHEM. COMPN. WAS DETD. OF PARTICLES WHOSE ADSORPTION AFFECTS THE VALUE OF THE ABS. COEFF. OF SURFACE IONIZATION OF MOLS., MX, ON METALS OF THE PT GROUP, AND THE PROPERTIES WERE STUDIED OF THE ADSORBED LAYERS OF SUCH PARTICLES WITH RESPECT TO THE DISSOCN. OF THE MOLS. MX. THE ADSORPTION OF O SUB2, H SUB2 AND CO ON IR HAS NO EFFECT ON THE IONIZATION OF CSCL MOLS. THE IONIZATION CEASES ON THE ADSORPTION OF C WHICH POISONS THE REACTION FOR THE DECOMPN. OF MOLS. IN THE ADSORBED LAYER. THE IONIZATION OF CSCL DIFFERS GREATLY FOR THE L LAYER COVERING OF IR BY C FROM THE IONIZATION ON C FILAMENTS. THE ABS. COEFFS. OF SURFACE IONIZATION WERE MEASURED, AND THEIR TEMP. DEPENDENCE IS GIVEN FOR CSCL ON IR AND C FILAMENTS AS WELL AS ON IR FILAMENTS AS WELL AS ON IR FILAMENTS WITH DIFFERENT TYPES OF C COATINGS. FACILITY: FIZ. TEKH. INST. IM. IOFFE, LENINGRAD, USSR.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

1/2 022 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--DETERMINATION OF THE ENERGY OF THE ELECTRON AFFINITIES OF ANTIMONY AND BISMUTH ATOMS BY MEANS OF THE SURFACE IONIZATION METHOD, APPLICABLE

AUTHOR-(02)-ZANDBERG, E.YA., PALEYEV, V.I.

COUNTRY OF INFO--USSR

SOURCE--DOKL. AKAD. NAUK SSSR 1970, 190(3), 562-4

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--ELECTRON ENERGY, ANTIMONY, BISMUTH, SURFACE IONIZATION, SILVER, VAPOR STATE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1984/0293 STEP NO--UR/0020/70/190/003/0562/0564

CIRC ACCESSION NO--AT0055086

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

UNCLASSIFIED PROCESSING DATE--18SEP70

2/2 022

CIRC ACCESSION NO--AT0055086

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A METHOD IS DESCRIBED FOR DETG. THE ELECTRON AFFINITY ENERGY, S, FOR ELEMENTS WITH A COMPLEX VAPOR COMPN. BY MEANS OF THE SURFACE IONIZATION OF 2 ELEMENTS WHEN S IS KNOWN FOR ONE OF THEM. THE METHOD WAS USED TO DET. S FOR SB AND BI BY USING AG AS THE OTHER ELEMENT (S SUBAG EQUALS 2.0 I. BAKULINA, ET AL. 1951). S VALUES FOR SB, BI, AND IN ARE 1.50, 1.76 AND 0.8-1.1 V, RESP.

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

1/2 034 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--WORK FUNCTION OF THE, III, FACE OF IRIDIUM -U-

AUTHOR-(02)-ZANDBERG, E.YA., TONTEGODE, A.YA.

COUNTRY OF INFO--USSR

SOURCE--FIZIKA RVERDOGO TELA, APR. 1970, 12, (4), 1124-1127

DATE PUBLISHED----APR70

SUBJECT AREAS--PHYSICS, MATERIALS

TOPIC TAGS--WORK FUNCTION, METAL CRYSTAL, CRYSTAL ORIENTATION, IRIDIUM, THERMIONIC EMISSION, SURFACE IONIZATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/1797 STEP NO--UR/0181/70/012/004/1124/1127

CIRC ACCESSION NO--AP0129165

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

2/2 034 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0129165

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TEMP. DEPENDENCE OF THE CURRENTS OF POSITIVE VI AND TL IONS FORMED BY THE SURFACE IONIZATION OF THE CORRESPONDING ATOMS ON THE (111) FACE OF AN IR CRYSTAL WAS STUDIED TOGETHER WITH THAT OF THE THERMIONIC (ELECTRON) CURRENT AND THE RESULTS WERE INTERPRETED IN TERMS OF THE WORK FUNCTION OF THE (111) FACE OF IR. THE WORK FUNCTION WAS SIMILAR TO 5.8 EV, THE HIGHEST OF ALL KNOWN METALLIC SINGLE CRYSTALS; IR THERMIONIC EMITTERS MAY ACCORDINGLY BE RECOMMENDED FOR PRODUCING POSITIVE IONS OF METALS WITH HIGH IONIZATION POTENTIALS BY SURFACE IONIZATION.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

(2)

JPRS 60634
27 NOVEMBER 1973

EVALUATION OF THE BOUNDARY EFFECT IN A MULTICHANNEL MAGNETOHYDRODYNAMIC DEVICE

[Abstract of a Paper by G. E. Grinberg, Yu. K. Zanders Given at the Magnetohydrodynamic Conference, pp 205-207]

In studying magnetohydrodynamic processes in the range of average R_m, a multichannel conduction magnetohydrodynamic device was created [1] (Figure 1).

As a result of movement of the liquid-metal in the hydraulic channels in the presence of an external magnetic field B_0, the currents $\{j_1\}$ occur which create a secondary magnetic field $B_1 = \mu_0 H$ in the adjacent element of the device. As a result of interaction of the latter with the velocity v, the emf E occurs in the direction of the applied magnetic field.

Figure 1.

The operating efficiency of the device is estimated by the ratio of the potential difference of the device without the boundary effect (U/U_∞). It depends to a great extent on B_1, that is, on H^*. With an increase in N, the ratio v/v_∞ decreases [1]. The existence of the boundary effect worsens the operating efficiency of the device for any N.

ZANDERS, Yu. K.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

UNCLASSIFIED PROCESSING DATE--30OCT70

1/2 027

TITLE--THERMOPHYSICAL PROPERTIES OF FILLED EBONITE MIXTURES BASED ON SKMS-50P -U-

AUTHOR-(05)-ZANEMONETS, N.A., YEGOROVA, S.A., NEKRASOVA, E.I., AGAYANTS, I.M., KOCHANOVA, U.M.

COUNTRY OF INFO--USSR

SOURCE--KAUCH. REZINA 1970, 29(2), 27-9

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, PHYSICS

TOPIC TAGS--FILLER, SYNTHETIC RUBBER, HEAT TRANSFER COEFFICIENT, HEAT CAPACITY, EBONITE, STYRENE/(U)SKMS50P SYNTHETIC RUBBER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0457 STEP NO--UR/0138/70/029/002/0027/0029

CIRC ACCESSION NO--AP0119393

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

2/2 027 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0119393

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE HEAT COND. COEFFS. (LAMBDA IN KCAL-M-HR-DEGREESC). HEAT TRANSFER COEFFS. (A IN DEGREES M PRIME2-HR), AND VOL. HEAT CAPACITIES (C EQUALS LAMBDA-A) WERE DETD. FOR EBONITES MADE FROM SYNTHETIC RUBBER SKMS-50P FILLED WITH LESS THAN OR EQUAL TO 300 PARTS OF EBONITE POWDER, KEROGEN, CARBON POWDER, OR KAOLIN IN THE 30-170DEGREES RANGE. THE TEMP. HAD NO EFFECT ON LAMBDA AND A. THE INCREASE OF THE FILLER AMT. INCREASED LAMBDA AND A. TYPICALLY LAMBDA AND A OF THE UNFILLED EBONITE WERE, RESP., 0.181 AND 3.71 TIMES 10 NEGATIVE PRIME4., LAMBDA AND A OF THE EBONITES CONTG. 100 PARTS AND 300 PARTS CARBON POWDER WERE, RESP., 0.203, 4.24 TIMES 10 NEGATIVE PRIME4 AND 0.244, 4.74 TIMES 10 NEGATIVE PRIME4. THESE EBONITES CONFORMED TO THE PHONON THEORY OF HEAT TRANSFER AND THE EQUATION LAMBDA EQUALS CUL-3 (U IS THE AV. PHONON VELOCITY APPROXIMATELY EQUAL TO 2.5 TIMES 10 PRIME5 CM-SEC AND L IS THE AV. FREE PATH OF THE PHONON). FACILITY: MOSK. KHIM. TEKHNOL. INST. IM. LOMONOSOVA, MOSCOW, USSR.

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Acc. Nr: AP0041911 Z

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PRIMARY SOURCE: Voprosy Psikhologii, 1970, Nr. 1, pp 115-120

THE LOCALIZATION OF CEREBRAL DISEASE

Zangvill, O. L.

Summary

The author analyzes psychological changes or deficits in three main spheres of performance (language and speech, action and manipulative skill, memory and learning) which have a localizing sign of cerebral disease. A special emphasis is laid upon psychological tests in the diagnosis of frontal lobe pathology.

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1/2 013 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--DETERMINATION OF CREATINE KINASE IN ANIMAL SERUM -U-

AUTHOR-(03)-NOVIKOVA, N.V., TRANDOFILOVA, G.M., ZANIMONSKIY, YE.M.

COUNTRY OF INFO--USSR

SOURCE--LAB. DELO 1970, (2), 105-7

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--BLOOD SERUM, ENZYME ACTIVITY, COLORMETRIC ANALYSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1998/0020 STEP NO--UR/9099/70/000/002/0105/0107

CIRC ACCESSION NO--AP0120720

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2/2 013 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0120720

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN ADAPTATION OF A COLORIMETER TO BE USED FOR THE DETN. OF CREATINE KINASE IN BLOOD SERUM IS DESCRIBED. THE SENSITIVITY OF THE APP. WAS INCREASED BY INSTALLATION OF A DIAPHARAGM WITH CENTRAL SECTION OF 3.5 MM INTO THE MEASURING CELL OF THE APP. FACILITY: FIZ. KHIM. LAB., KHAR'KOV, INST. ENDOKRINOL. KHIM. GORMON., KHARKOV, USSR.

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1/2 012 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--REACTIONS OF 4,4PRIME DIETHYNYLDIPHENYL SULFIDE -U-

AUTHOR-(02)-ZANINA, A.S., KOTLYAREVSKIY, I.L.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (2), 466-8

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ORGANIC SULFUR COMPOUND, PHOSPHORUS CHLORIDE, SULFIDE, CYCLOHEXANONE, DIETHYLAMINE, CHEMICAL REACTION, ETHYL ETHER, AMINE, MORPHINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0852 STEP NO--UR/0062/70/000/002/0466/0468

CIRC ACCESSION NO--AP0119756

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2/2 012 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0119756

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. HEATING (RHO-ACC SUB6 H SUB4) SUB2 S WITH PCL SUB5 IN C SUB6 H SUB6 I HR GAVE THE MIXED CHLORIDES, WHICH IN ET SUB2 O-C SUB6 H SUB6 WERE ADDED TO NANH SUB2 IN LIQ. NH SUB3, AND HELD 1 HR. TO YIELD 45.4PERCENT (RHO-HC TRIPLE BOND CC SUB6 H SUB4) SUB2 S (I), M. 117-20DEGREES. STIRRING 2 G I IN ET SUB2 O WITH 2.5 G POWD. KOH I HR, AND TREATING THE MIXT. WITH 0.9 G ME SUB2 CO 4 HR GAVE 90.7PERCENT (RHO-HOCME SUB2 C TRIPLE BOND CC SUB6 H SUB4) SUB2 S, M. 163-5DEGREES; SIMILARLY CYCLOHEXAMONE GAVE THE BIS(1,HYDROXYCYCLOHEXYAL) ANALOG, M. 170-3DEGREES. I HEATED WITH PARAFORMALDEHYDE AND ET SUB2 NH IN THE PRESENCE OF CUCL SUB2 IN DIOXANE-ET SUB2 O 0.5 HR AT 100DEGREES GAVE 73PERCENT (RHO-ET SUB2 NCH SUB2 C TRIPLE BOND CC SUB6 H SUB4) SUB2 S, ISOLATED AS THE DIPICRATE, M. 161-5DEGREES; SIMILARLY WAS PREPD. 85PERCENT (RHO-ZCH SUB2 C TRIPLE BOND CC SUB6 H SUB4) SUB2 S (Z EQUALS PIPERIDINO) M. 62-5DEGREES (DI,HCL SALT DECOMPD. 230DEGREES) IN A SIMILAR REACTION WITH PIPERIDINE, WHILE MORPHOLINE GAVE THE DIMORPHOLINO ANALOG,M. 75-7DEGREES; DIPICRATE COMPOUND. 211-15DEGREES. I IN ACOH HEATED WITH 30PERCENT H SUB2 O SUB2 6 HR GAVE 71PERCENT SULFONE, M. 177-8.5DEGREES. ACETYLATION OF PH SUB2 S SUB2 WITH ACCL-ALCA SUB3 GAVE 13PERCENT (RHO-ACC SUB6 H SUB4 S) SUB2, M. 94.5-97DEGREES, WHICH AS ABOVE WAS CONVERTED INTO (RHO-HC TRIPLE BOND CC SUB6 H SUB4 S) SUB2, VERY UNSTABLE (NONISOLABLE) EVEN IN SOLN., IDENTIFIED BY ITS IR SPECTRUM. FACILITY: INST. KHIM. KINET. GOERNIYA, NOVOSIBIRSK, USSR.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203720015-9

1/2 009 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--STRUCTURE OF PRODUCTS OF P,P PRIME,DIALKOXYDIPHENYLALKANE ACETYLATION -U-

AUTHOR-(04)-ZANINA, A.S., ALT, L.YA., SHERGINA, S.I., KOTLVAREVSKIY, I.L.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (2), 459-61

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--NMR SPECTRUM, MOLECULAR STRUCTURE, ALKOXIDE, BENZENE DERIVATIVE, CCYCLOALKANE HYDROCARBON

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0843 STEP NO--UR/0062/70/000/002/0459/0461

CIRC ACCESSION NO--AP0119747

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2/2 009 UNCLASSIFIED PROCESSING DATE--23OCT7(

CIRC ACCESSION NO--AP0119747

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ACETYLATION OF ((RO)C SUB6 H SUB4) SUB2 Z (I) WITH ACCL,ALCL SUB3 RESULTED IN DEALKYLATION OF THE STARTING MATERIAL AND ENTRY OF THE AC GROUP IN THE POSITION ORTHO TO THE HO. ALKYLATION OF I WITH ALKYL HALIDES GAVE DIALKOXY COMPDS. AS WELL AS HYDROXY,ALKOXY ANALOGS. THE CONCLUSIONS WERE MADE FROM AN NMR STUDY OF THE PRODUCTS OF SUCH REACTIONS IN WHICH Z EQUALS CH SUB2 CH SUB2 OR CME SUB2, WHILE R WAS H, ME, ET, OR PR. NMR SPECTRAL CURVES FOR SUCH PRODUCTS AS ME SUB2 C(C SUB6 H SUB3 AC(OH),3,4)(C SUB6 H SUB3 AC(OME),3,4) AND ME SUB2 C(C SUB6 H SUB3 AC(OME),3,4) SUB2 WERE SHOWN.

FACILITY: INST. KHIM. KINET. GORENIVA, NOVOSIBIRSK, USSR.

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USSR UDC 678.06-419:677.521.01:53

SHISHKO, V. I., BARANOVSKIY, V. V., AVRASIN, YA. D., [redacted], V. B., YAROBSON, B. V., ZANKEVICH, V. N., and VALULENKO, YE. G.

"Glasstextolites Based on Non-Woven Fiberglass Reinforced Materials"

Moscow, Plasticheskiye Massy, No 3, 1972, pp 70-73

Abstract: Properties are described of the binding, suturing non-woven fiberglass materials and glasstextolites made from them for structural materials, and electrical insulation. It was established that it is economically feasible to use the nonwoven materials in production of glasstextolites for various purposes. Production of non-woven fiberglass reinforced materials from non-twisted glass thread facilitates the production expansion of the glasstextolites and reinforced plastics, both in regard to the volume and variety of materials. One of the most promising materials, in this area is the VPR-10 reinforcing material consisting of two glass laminated systems, in which 10 layers are overlaid at 95°, stitched with glass thread.

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