"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

USSR

UDC 669.245'26

KISHKIN, ST., POLYAK, E. V., and SOROKINA, L. P., Moscow

"Fine Structures of Ni-Cr-Based Alloys and Their Heat Resistance"

Moscow, Izvestiya Akademii Nauk SSSR, Metally, No 1, Jan 71, pp 142-143

Abstract: Some results of electron microscope studies of changes in the fine structure of heat-resistant alloys under conditions of simultaneous long-term application of high temperature (over 0.5 m. p.) and tensile stresses are described, as well as methods of stabilization of the structure. The studies were performed by the method of thin sections in transmitted light with specimens of type ZhS6KP and ZhS6K alloys. During the first stage of creep, dislocations split, forming subtraction and intrusion packing defects. This causes a decrease in the creep rate. During the second stage of creep, in connection with diffusion processes, disruption of the coherent bonding between the γ' and γ phases occurs, along with oriented coagulation of particles

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KISHKIN, S. T., et al., Izvestiya Akademii Nauk SSSR, Metally, No 1, Jan 71, pp 142-143

of the γ′ phase and formation of networks of dislocations on the phase division boundary surface and in the solid solution. The addition of small amounts of magnesium and oxides of the rare earth elements causes stabilization of the structure and retards the movement of dislocations.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

1/2 023

UNCLASSIFIED

TITLE--EFFECT OF HEAT TREATMENT ON THE PHYSICAL PROPERTIES OF HIGH SPEED STEEL R12 -U-

PROCESSING DATE--02OCT70

AUTHOR--SOROKINA, L.V.

S

COUNTRY OF INFO--USSR

SOURCE--METALLOVED. TERM. OBRAB. METAL. 1970, (2), 73-4

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--METAL HEAT TREATMENT, PHYSICAL PROPERTY, HIGH SPEED STEEL, MECHANICAL PROPERTY, CARBIDE/(U)R12 HIGH SPEED STEEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/1284

STEP NO--UR/0129/70/000/002/0073/0074

CIRC ACCESSION NO--AP0106065

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

2/2 023 UNCLASSIFIED

CIRC ACCESSION NO--AP0106065 PROCESSING DATE--02OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF QUENCHING TEMP. ON THE PHYS. MECH. PROPERTIES AND THE AMT. OF THE CARBIDE PHASE WERE STUDIED IN R12 STEEL. THE SPECIMENS, CONTG. C 0.84, W 12.1, V 1.8, CR 3.4, MN 0.25, SI 0.26 AND S AND P SMALLER THAN 0.03PERCENT, WERE QUENCHED FROM 1220, 1240, 1250, 1280, AND 1300DEGREES, HELD 80 SEC IN A SALT BATH AND GIVEN A QUADRUPEL ANNEAL AT 560DEGREES. R12, IN THE ANNEALED STATE, HAS A FINE GRAINED PEARLITE STRUCTURE WITH 18PERCENT CARBIDE PHASE WHEN MAGENTIC SATN. IS 16,000 G AND A COERCIVE FORCE OF 12.7 OE, AND RESIDUAL INDUCTION OF 7700. INCREASE IN RESIDUAL AUSTENITE WITH INCREASE IN QUENCHING TEMP. LOWERS THE MAGNETIC SATN., THE MAX. MAGNETIC SUSCEPTIBILITY AND THE RESIDUAL INDUCTION. INCREASE IN QUENCHING TEMP. IN THE INTERVAL 1260-1300DEGREES INCREASES THE COERCIVE FORCE. INCREASE IN ELECTRORESISTIVITY WAS OBSD. WITH RISE IN QUENCHING TEMP. 1220-60DEGREES. THE AMT. OF CARBIDE PHASE DETD. AFTER VARIOUS QUENCHING TEMPS. SHOWED A MORE INTENSIVE SOLY. OF CARBIDES AT 1260-1300DEGREES.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

USSR

UDC: 51

ROMANOVSKIY, I. V., SOROKINA, M. G.

"Unilateral Circuit of a Tree of Variants in the Land and Doyg Method"

Zh. vychisl. mat. i mat. fiz., 1973, 13, No 1, pp 221-227 (from RZh-Kibernetika, No 5, May 73, abstract No 5V659 by the authors)

Translation: The paper proposes a computational realization of the Land and Doyg method for solving problems in linear integer programming. The realization is based on a unilateral circuit of a tree of variants. For storing information on the process of solution, a magazine list is used in which each entry corresponds to one of the vertices of the tree and consists of two integers. When solving a series of generated problems in linear programming, the results of the preceding problem are used each time, which makes it possible to restrict storage in the machine memory to a single simplex table.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

1/2 011 UNCLASSIFIED

TITLE--PRINTING OF COTTON LAVSAN FABRIC WITH A MIXTURE OF DISPERSED AND ACTIVE DYES -U-

PROCESSING DATE--04DEC70

AUTHOR-(03)-SADOV, F.I., SOKOLOVA, N.M., SOROKINA, M.G.

COUNTRY OF INFO--USSR

SOURCE--TEKST. PROM. (MOSCOW) 1970, 30(2), 47-50

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--DYE, NATURAL FIBER, POLYESTER RESIN, FABRIC, POLYETHYLENE TEREPHTHALATE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3008/0915

STEP NO--UR/0342/70/030/002/0047/0050

CIRC ACCESSION NO--AP0137943

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

2/2 011

CIRC ACCESSION NO--AP0137943 UNCLASSIFIED PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE OPTIMUM HEAT STABILIZATION TIME AND TEMP. ARE, RESP. 1-2 MIN AND 200DEGREES FOR COTTON POLY(ETHYLENE TEREPHTHALATE BLENDS PRINTED WITHDISPERSE BORDEAU 2S, REMAZOL RED VIOLET F, DISPERSE YELLOW Z, PROCIN BLUE ASH BS, OR PROCION YELLOW RS. IN THE CASE OF DISPERSE BLUE K THE OPTIMUM TEMP. WAS 180DEGREES. THE OPTIMUM PRINTING INK COMPN. WAS: DYE 10, UREA 50, NAHCO SUB3 15 G-KG, AND ALGINATE THICKENER. THE ADDN. OF 20 G-KG MONOALKANOLAMINE TO THE FORMULATION REDUCED THE ANNEALING TEMP. BY 10-20DEGREES. REACTIVE DYES DID NOT AFFECT DISPERSE DYE RETANTION BY THE FABRIC. HIGH RETENTION COEFFS. (LARGER THAN 0.67) INDICATE DYE MIGRATION FROM COTTON TO POLYESTER FIBERS. FACILITY: MTI, MOSCOW, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

1/2 016 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--ACUTE RENAL INSUFFICIENCY DURING ACUTE GLOMERULONEPHRITIS IN CHILDREN AND ITS TREATMENT WITH HEMODIALYSIS -U-

AUTHOR-(05)-SOROKINA, M.I., BAYANDINA, S.A., DANILINA, Z.A., LOKSHIN, A.M., VERKHOVSKIY, B.D.

COUNTRY OF INFO--USSR

SOURCE--PEDIATRIYA 49(2): 26-30. 1970.

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--KIDNEY FUNCTION, DIALYSIS, BLOOD, NEPHRITIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605015/B10 STEP NO--UR/0546/70/049/002/0026/0030

CIRC ACCESSION NO--AP0140558

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

2/2 016

UNCLASSIFIED

CIRC ACCESSION NO--AP0140558 PROCESSING DATE--04DEC

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TO FIND OUT THE MAIN CRITERIA OF ACUTE RENAL INSUFFICIENCY IN ACUTE GLOMERULONEPHRITIS IN CHILDREN, AN ANALYSIS WAS MADE OF THE TREATMENT OF 10 PATIENTS, 7 OF WHOM WERE SUBJECTED TO 15 COURSES OF HEMODIALYSIS. SIX PATIENTS RECOVERED, IN 1 CASE THE DISEASE BECAME CHRONIC, 3 PATIENTS DIED. ACUTE RENAL INSUFFICIENCY IN ACUTE GLOMERULONEPHRITIS WAS CHARACTERIZED BY OLIGO-ANURIA WITH HYPOSISTENURIA, THREATENING HYPERPOTASSEMIA AND AZOTEMIA, DECOMPENSATED METABOLIC ACIDOSIS AND HYPERHYDRATION. WHEN DETECTING THE SYMPTOMATICS OF ACUTE RENAL INSUFFICIENCY, PATIENTS SHOULD BE TRANSFERRED TO SPECIALIZED NEPHROLOGICAL DEPARTMENTS WHERE HEMODIALYSIS CAN BE DONE IF REQUIRED.

FACILITY: I. M. SECHENOV 1ST MOSCOW MED. INST., MOSCOW, USSR.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

USSR

UDC 621.355.8.035.2

SOROKINA, M. N., and RYVHKOV, YE. M.

"Chemical Method for Determining the Phase Composition of Metallo-Ceramic Nickel Electrodes"

Sb. rabot no khim. istochnikam toka. Vses n.-n akkumulyator. in-t (Collection of Works on the Chemical Source of Current. All-Union Scientific Study Institute for Storage Batteries) Vyp 7, 1972, pp 129-133 (from Referativnyy Zhurnal -- Khimiya No 8(II) 1973, Abstract No 8L236 by V. S. Levinson)

Translation: The results of studies on the examination of the possibility of applying the chromate method to determine the degree of oxidation of the active part of a metallo-ceramic nickel electrode in an alkali battery were examined. In constrast to the iodometric method, the chromate method gives very satisfactory results for an error in determining the degree of oxidation of the active area to less than or equal to 3% and the amount of oxidized nickel to less than or equal to 1%. A system was developed for the phase analysis of the metallo-ceramic electrode from one aliquot.

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VI-6a. CHARACTERISTICS OF THE DISTRIBUTION OF IMPURITIES IN WEAKLY ALLOYED InSb SINGLE CRYSTALS

[Article by M. S. Mirgalovskaya, Ye. B. Korob, M. R. Raukhman, N. G. Sorokina, Moscow; Novosibirsk, III Simpozium po Protsessam Rosta i Sinteza Poluprovodnikovykh Kristallov i Plenok, Russian, 12-17 June, 1972, p 22]

A study was made of weakly alloyed InSb single crystals with commensurate concentrations of impurities of the donor and acceptor types. The methods of raster electron microscopy and measuring the relative values of the thermal emf (α_{rel}) were used to discover the macroinhomogeneities arising on growth of such single crystals by the Czochralski method: the growth strata, the face effect and also the circular transitions, the appearance of which is connected with the specific nature of the admixture distribution and the degree of compensation of the material.

The methods of raster electron microscopy were used to demonstrate for the first time that the region of annular transition comprises a series of microtransitions formed in the growth strata at the conjugation points of the n-type material (on the face) and the p-type material (outside the face).

In the investigated single crystals with extended p-n-junctions in certain cases additional p-n-junctions were detected (the arrangement was parallel to the basic arrangement) arising in the growth strata as a result of overcompensation of the basic carriers for the formation of the extended p-n-junction.

The method of taking curves of the current-diode signal was used to reveal the differences in distribution gradients of the impurity near the p-n-junctions by which it is possible to judge the sharpness of the junction.

The method of raster electron microscopy was used in the InSb p and n-type single crystals to define the diffusion lengths of the minority carriers the values of which are in good agreement with the calculated data.

SOROKINA, N.G.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

UDC 669-937:669.24

USSR

SOROKINA, N. A., UL'YANIN, YE. A., TASHCHILOV, V. S., RASTORGUYEVA, I. A., KUBORSKIY, B. N.

"Structure and Properties of Nickel Alloys for Cryogenic Temperatures"

Moscow, Metallovedeniye, No 10, 1971, pp 20-23

Abstract: The use of dispersion-hardening alloys based on iron and nickel for operation at cryogenic temperatures was experimentally investigated. The results are discussed by reference to diagrams showing 1) the effect of test temperature on plasticity of the experimental nickel alloys with different iron contents alloyed with 2.5% Nb and 3% Ti, 2) the plasticity and ductility of nickel alloys (18% Cr, 9% Mo, 2.5% Nb) as a function of iron content, 3) the aging kinetics of nickel alloys, and the effect of introduction of Nb on the strength. Nickel alloys containing 1.5% Al and 5-15% Fe were found to meet the required demands of strength, plasticity, ductility, and welding properties. The KhN63M9B2Yu alloy has been developed for welded structures operating at temperatures from -253°C to 750°C. This alloy has

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USSR

SOROKINA, N. A., et al, Metallovedeniye, No 10, 1971, pp 20-23

sufficiently high resistance to crack development in welding and subsequent heat treatment. 6 illustrations, 1 table, 2 bibliographic references

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

USSR

UDC 539.4

SOROKINA, N. A., LEBEDEV, D. V., UL'YANIN, Ye. A., ANTROPOV, N. P., (Moscow)

"Strength and Ductility of Chrome-Nickel-Manganese Steel as Functions of Carbon and Nitrogen Content in the 20-253°C Temperature Interval"

Kiev, Problemy Prochnosti, No 8, 1972, pp 89-93.

Abstract: The influence of carbon and nitrogen on the strength and ductility of chrome-nickel-manganese steel at low temperatures is studied considering stress concentrations. An increase in the content of carbon from 0.008 to 0.1% in the steel studied (hardened state) has little influence on strength and ductility determined on smoothed specimens and specimens with circular notches in the temperature interval studied. Test data from tensile testing of specimens with cracks at -253°C indicate a tendency of the steel studied toward increased strength with increasing carbon content from 0.008 to 0.03%. Increasing the nitrogen content in the hardened steel from 0.043 to 0.285% increases the strength significantly (by about 50%) in the 20-253°C interval, as determined on smoothed specimens, specimens with circular notches and cracks; ductility decreases, but even with 0.285% nitrogen, ductility is rather high. The sensitivity of the steel to stress concentration in the temperature interval studied at $K_t = 3.03$ is practically independent of carbon content between 0.008 and 0.1% and nitrogen content between 0.043 and 0.285%.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

USSR

UDC 539.4

SOROKINA, N. A., LEBEDEV, D. V., UL'YANIN, Ye. A., ANTROPOV, N. P., Kiev, Problemy Prochnosti, No 8, 1972, pp 89-93.

The impact toughness of the steel studied following tempering at 600-900°C is determined by the content of carbon and nitrogen and is significantly dependent on test temperature. In the hardened state, the toughness is high and little dependence on carbon and nitrogen content.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

USSR

UDC 615.31:547.75

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PREOBRAZHENSKAYA, M. N., ORLOVA, L. M., LIBERMAN, S. S., MOSINA, G. S., AVRAMENKO, V. G., SOROKINA, N. P., and SUVOROV, N. N., All Union Scientific Chemical-Pharmaceutical Research Institute imeni S. Ordzhonikidze, Moscow

"Synthesis and Investigation of Pharmacological Activity of the Indole Series Hydroxyketones"

Moscow, Khimiko-Farmatsevticheskiy Zhurnal, Vol 6, No 1, Jan 72, pp 32-38

Abstract: 10 g of 3-chloroacetylindole (I) in 300 ml dimethylformamide is added to 18.3 g molten potassium acetate, the mixture is stirred at 60-70°, filtered, and evaporated. The residue is recrystallized from water yielding 44% of 3-acetoxyacetylindole (II), m.p. 139-140°. Analogously a series of other 3 α-acetoxyacylindoles is obtained. To synthesize 3-benzoylhydroxyacetylindole (III), m.p. 187-189°, an analogous procedure was used employing potassium benzoate instead of the acetate. When (II) was heated with 2% NaOH solution, it hydrolyzed easily yielding 3-hydroxyacetylindole (IV), m.p. 167-169°. 5-Acetoxyacetylindole, m.p. 123-124.5° was obtained similarly to (II) starting from 5-hydroxyacetylindole, m.p. 177-179°. In each group several representative compounds were synthesized using reported reactions. 3-Hydroxyacetylindole was found to have neurotropic activity; modifications in its structure as a rule led to a lower biological activity.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

1/2 020 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--PROPERTIES OF COMBINED POLYAMIDE AND PHENOL FORMALDEHYDE RESINS. 2. WATER RESISTANCE OF BONDS FORMED BY MELTS OF COMBINED RESINS -U-

AUTHOR-(04)-MARCHENKO, L.N., GRINYUK, M.A., SOROKINA, N.S., KOTOV, M.P.

COUNTRY OF INFO--USSR

SOURCE--IZV. VYSSH. UCHEB. ZAVED., TEKHNOL. LEGK. PROM. 1970, (1), 64-8

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--POLYAMIDE RESIN, PHENOL FORMALDEHYDE RESIN, WATERPROOFING, ADHESIVE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/1107 STEP NO--UR/0323/70/000/001/0064/0068

CIRC ACCESSION NO--AT0134793

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

2/2 020 UNCLASSIFIED

CIRC ACCESSION NO--AT0134793 PROCESSING DATE--13NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. RESISTANCE TO WATER OF THE TITLE ADHESIVES OBTAINED BY THE COMBINATION (AT 200DEGREES IN N) OF POLYAMIDE AND PHENOL HCHO RESINS VARIES NONMONOTONICALLY WITH THE RATIO OF THE RESINS, PASSING THROUGH A MAX. AND A MIN. THE COMPNS. CONTG. 8-15PERCENT PHENOL HCHO RESIN ARE THE MOST STABLE AND RESISTANT TO WATER. THE OPTIMUM BONDING TEMPS. ARE TABULATED. THE PROBABLE MECHANISM OF IMPROVING STABILITY OF ADHESIVES IS DISCUSSED.

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

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

1/2 019 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--EFFECT OF ORGANOSILICON COMPOUNDS ON THE PROPERTIES OF POLY,METHYL ACRYLATE, COATING FILM -U-

AUTHOR-(04)-IVASHKEVICH, S.L., OLEYNIK, A.N., SOROKINA, N.S., KOTOV, M.P.

COUNTRY OF INFO--USSR

SOURCE--IZV. VYSSH. UCHEB. ZAVED., TEKHNOL. LEGK. PROM. 1970, (1), 94-7

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS, MILITARY SCIENCES

TOPIC TAGS--ORGANOSILICON COMPOUND, POLYMETHYLMETHACRYLATE, LEATHER, FOOTGEAR, SPECIALIZED COATING, PROTECTIVE COATING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/1108 STEP NO--UR/0323/70/000/001/0094/0097

CIRC ACCESSION NO--AT0134794

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

2/2 019 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AT0134794

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TITLE ORGANOSILICON COMPOS. USED HAD THE STRUCTURE (NEGATIVE SIMRO NEGATIVE) SUBN, WHERE R EQUALS ME OR ET. THEY WERE USED IN CONJUNCTION WITH AQ. EMULSIONS OF POLY(ME ACRYLATE) FOR APPLYING A PROTECTIVE COVERING TO THE UPPERS OF LEATHER WORK BOOTS. THEY GAVE IMPROVED RESISTANCE TO WATER AND TO HEAT THAN WAS OBTAINED WITH POLY(ME ACRYLATE) ALONE. COLOR FASTNESS OF THE LEATHER WAS IMPROVED AND SO WAS RESISTANCE TO ABRASION AND TO REPEATED FLEXING.

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

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

1/2 013 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--GLUEING COMPOSITION -U-

AUTHOR-(05)-SOROKINA, N.S., KOTOV, M.P., MARCHENKO, L.N., KOVALENKO, R.V., BAKHAREVA, L.I.

COUNTRY OF INFO--USSR

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SOURCE--USSR 265,346

REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,

DATE PUBLISHED--09MAR70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--GLUE, CHEMICAL PATENT, ADHESION STRENGTH, LEATHER, POLYAMIDE RESIN, ADIPIC ACID, HEXAMETHYLENE DIAMINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/1460 STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0128859

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

2/2 013 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AA0128859

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A GLUE WITH INCREASED ADHESION TOWARD MOISTENED LEATHER HAS THE FOLLOWING COMPN. (IN WT.PERCENT). POLYAMIDE RESIN 55-60, PLASTICIZER 1-6, STEARIC ACID 3.5-5.3 OR ADIPIC ACID 3.5-10.5, CONDENSATION PRODUCT OF HEXAMETHYLENEDIAMINE AND ADIPIC ACID 5-15, ROSIN 15-30, AND A STABILIZER 0.2-0.5. FACILITY: KIEV TECHNOLOGICAL INSTITUTE OF LIGHT INDUSTRY.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

1/2 019 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--THERMOPLASTIC ADHESIVES -U-

AUTHOR-(05)-SOROKINA, N.S., KOTOV, M.P., KOVALENKO, R.V., MARCHENKO, L.N., BAKHAREVA, L.T.

COUNTRY OF INFO--USSR

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SOURCE--KOZH. OBUV. PROM. 1970, 12(2), 52-4

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--THERMOPLASTIC MATERIAL, ADHESIVE, FOOTGEAR, LEATHER, POLYESTER RESIN, POLYAMIDE COMPOUND/(U)KTILOL POLYESTER GLUE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1731 STEP NO--UR/0498/70/012/002/0052/0054

CIRC ACCESSION NO--AP0125352

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

2/2 019 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0125352

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE FOOTWEAR INDUSTRY LEATHER GLUES, WITH VISCOSITIES OF 300-1500 P AND HARDENING TIMES OF 3-4 SEC, WERE PREPD. BY MODIFYING POLYMERS WITH LOW MOL. WT. COMPDS., E.G. BY THE ADDN. OF HEXAMETHYLENEDIADIPAMIDE TO POLYAMIDES. MODIFIED POLYESTER GLUES (KTILOLS) WERE ALSO PREPD.

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

JPRS 69203

6-73

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X-3. PROBLEM OF THE MECHANISM OF SPARK ALLOYING IN THE PRESENCE OF EPITAXIAL GROWTH OF SEMICONDUCTOR MATERIALS

[Article by A. S. Adonin, L. N. Mikhaylov, V. V. Bondarenko, O. M. Sorokina, Moscow; Novosibirsk, III Simposium po Protsessam Rosta i Sintyza Poluprovodnikovykh Kristallov i Plenok, Russian, 12-17 June 1972, p 132]

Using the spark method of alloying, epitaxial structures were obtained with a distribution of the alloying admixture according to the required law which insures given dependence of the capacitance on the voltage in varicaps.

The mechanism of spark alloying was investigated. The hypothesis of erosion of the electrodes by the mechanism of electrical explosion of wires was confirmed. The presence of aerosol particles in the gas-carrier flow was detected, and their distribution with respect to dimensions was investigated. It was established that the basic mass of alloying material is transported in the form of particles < 0.1 microns. A study was made of the effect of the gas medium and the discharge parameters on the fractional composition of the aerosols. The effect of the aerosols on the alloying level of the epitaxial layers was discovered.

SOROKINA, O.M.

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Organophosphorous Compounds

USSR

UDC 542.91+661.718.1

ARBUZOV, B. A., SOROKINA, R. D., and VINOGRADOVA, V. S., Chemical Institute imeni A. M. Butlerov, Kazan' State University imeni V. I. Ul'yanov-Lenin Kazan'

"The Reactions of 5-Benzalbarbituric Acid with Trimethyl Phosphite and Tris(dimethylamino)phosphine"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 3, Mar 71, pp 573-577

Abstract: At minus 14° trimethyl phosphite (I) added to 5-benzalbarbituric acid (II) with the formation of a 1:1 addition product (m.p. 80-5°) that had a bipolar structure. This product isomerized to the methyl ester of the enol form of the dimethyl ester of barbituryl-5-benzylphosphonic acid (III; m.p. 220-2°). The latter compound formed directly when the reaction was carried out at room temperature. On treatment of III with HCl, the dimethyl ester of barbituryl-5-benzylphosphonic acid (IV; m.p. 244°) was obtained. Dimethyl phosphite reacted with II to form a product which on recrystallization from dioxan yielded the dioxanate of the enol form of the dimethyl ester of barbituryl-5-benzylphosphonic acid (m.p. 154-5°). Treatment of the dioxanate with HCl resulted in the formation of a product that proved to be

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ARBUZOB, B. A., et al., Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 3, Mar 71, pp 573-577

identical with IV. In the presence of glacial acetic acid, I and II reacted with the formation of IV, which was isolated in the form of the enol dioxanate. The reaction of tri(dimethylamino)phosphine with II yielded a 1:1 addition product (m.p. 150-2°) which had the structure of a bipolar ion with a P-C bond. The product was stable in the form of a bipolar ion in the crystalline state.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

USSR

UDC 547.26'118

NIFANT'YEV, E. YE., ZAVALISHINA, A. I., [redacted] and CHERNYSH, S. M.
Moscow State University imeni M. V. Lomonosov

"The 1,3-Alkylenedithiolophosphites"

Moscow, Doklady Akademii Nauk SSSR, Vol 203, No 3, 1972, pp 593-595

Abstract: Double-substituted phosphorus acid esters comprise an important and widely studied class of organophosphorus compounds. Their dithiole analogs -- not to mention being the source of information on the electron effects in the —S—P—O triad--are valuable raw materials for synthesis of many useful organophosphorus-sulfur compounds. But unfortunately the acid dithiolophosphites are virtually unstudied, either as regards synthesis or properties. To a benzene solution of 1,3-alkylenedithiolochlorophosphite were added equimolecular amounts of water and triethylamine, in tetrahydrofuran solution. This yielded six different 1-3-alkylenedithiophosphites, these being crystalline substances with unexpectedly high melting points which were weakly soluble in organic solvents. Yields, melting points, compositions, formulas, and, in the case of 1,3-propylenedithiolophosphite, some additional information, were determined.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

1/2 009 UNCLASSIFIED

TITLE--MAGNETOMETRIC STUDIES OF THE IRON ELECTRODE OF AN ALKALINE BATTERY. II. MAGNETOMETRIC DETERMINATION OF CURRENT EFFCIENCY DURING THE CHARGING PROCESSING DATE--11SEP70

AUTHOR--KUKOZ, F.I., MAKAROV, V.I., SOROKINA, S.F.

COUNTRY OF INFO--USSR

SOURCE--ELEKTROKHIMIYA 1970, 6(2), 195-8

DATE PUBLISHED--------70

SUBJECT AREAS--ENERGY CONVERSION (NON-PROPULSIVE)

TOPIC TAGS--BATTERY ELECTRODE, IRON

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/0254 STEP NO--UR/0364/70/006/002/0195/0198

CIRC ACCESSION NO--AP0105328

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

2/2 009 UNCLASSIFIED PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0105328

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. LAMINAR FE ELECTRODES (CONTG. TOTAL FE EQUALS 83.7 AND METALLIC FE EQUALS 46.9PERCENT AND CONTG. THE STD. ADDITIVES OF S AND NI) WERE CYCLED AT 100 MA DISCHARGE TO 0.75 V RELATIVE TO THE HGO REFERENCE ELECTRODE AND 125 MA CHARGE FOR PERIODS SMALLER THAN OR EQUAL TO 8 HR. THE MAGNETIC SUSCEPTIBILITY (X) WAS FOLLOWED. RESULTS FOR THE 25TH AND 26TH RECHARGE CYCLE SHOWED THAT THE VALUE OF X BECAME CONST. WHEN THE CURRENT EFFICIENCY BEGAN TO DECREASE SIGNIFICANTLY FROM THE PRIMARY CHARGING REACTION. THUS, THE END OF THE RECHARGE PERIOD COULD BE DETD. BY DETG. X.

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USSR

UDC 547.26'118

SOROKINA, S. F., ZAVALISHINA, A. I., and NIFANT'YEV, E. Ye., Moscow State University Imeni M. V. Lomonosov

"Dialkyldithiolophosphites"

Leningrad, Zhurnal Obshchey Khimii, Vol 43 (105), No 4, Apr 73, pp 750-753

Abstract: The novel dialkyldithiolophosphites (I) were synthesized by controlled hydrolysis of dialkyldithiochlorophosphites in presence of hydrogen chloride acceptors. Upon distillation in high vacuum at 95-100°, (I) disproportionated into trialkyltrithiophosphites. These new compounds were found to be quite reactive: diisopropyldithiolophosphite undergoes alcoholysis at 80-90° yielding marcaptan and dialkylphosphites. Acid dithiolophosphites add to the double bond of butyl acrylate in presence of sodium mercaptide yielding dithiolophosphonates. Reaction of acid esters of dithiolophosphorous acid with sulfuryl chloride gave dialkyldithiolochlorophosphates.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

USSR

DUBSON, M. S., SOROKINA, S. G., TYURIN, Yu. N.

"The Best Selection of Factors in a Prediction Problem"

Mat. Metody Resheniya Ekon. Zadach [Mathematical Methods of Solution of Economics Problems -- Collection of Works], No 3, Moscow, Nauka Press, 1972, pp 152-157 (Translated from Referativnyy Zhurnal Kibernetika, No 6, 1973, Abstract No 6V176, by the authors).

Translation: Suppose $y=\sum_{i=1}^{\infty} a_i x_i$, where x_1, x_2,... are independent normal random quantities with parameters (0, 1), a_1, a_2,... are constants. It is assumed that n independent observations of the x's and y's are made. Using the method of least squares, they can be used to produce $m < n$ estimates $\hat{a}_i$. Suppose, furthermore, one more sequence of x's x_1^*, x_2^*,... is observed, from which we construct the y prediction $y_m^* = \sum_{i=1}^{m} \hat{a}_i x_i^*$. The question is, with what number m of selected prediction factors is $D(y - y_m^*)$ best in the sense of the minimum? This dispersion is calculated. The optimal sample m depends

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Dubson, M. S., Sorokina, S. G., Tyurin, Yu. N., Mat. Metody Resheniya Ekon. Zadach, No 3, Moscow, Nauka Press, 1972, pp 152-157.

on the structure of sequence a_i, for which m may take on any value. Similar calculations are performed as to minimization of losses made up of the dispersion of the prognosis and the payment for observations of the x's.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

USSR

UDC 542.91:547.772.2:547.1'118

ARBUZOV, B. A., SOROKINA, T. D., FUZHENKOVA, A. V., VINOGRADOVA, V. S.

"Interaction of 1,2-diphenyl-4-benzalpyrazolidine-3,5-dione with Trimethylphosphite and Tri(dimethylamino)phosphine"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 11, 1973, pp 2577-2580

Abstract: A study was made of the affect of trimethylphosphite and tri(dimethylamino)phosphine on 1,2-diphenyl-4-benzalpyrazolidine-3,5-dione (I). The study was made using thermography and infrared spectroscopy.

Trimethylphosphite interacts with 1,2-diphenyl-4-benzalpyrazolidine-3,5-dione via the bipolar ion stage with the formation of the methyl ether of the enol form of the dimethyl ester of 1,2-diphenylpyrazolidine-3-5-dione-4-benzylphosphonic acid. On interaction of tri(dimenthylamino)phosphine with 1,2-diphenyl-4-benzalpyrazolidine-3,5-dione, a stable adduct (1:1) was obtained having the structure of the bipolar ion with the P-C bond.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

USSR

UDC 541.6:547.1'118

ARBUZOV, B. A., SOROKINA, T. D., VINOGRADOVA, V. S., and SERGEYEVA, G. N., Chemical Institute Imeni A. M. Butlerov, Kazan State Universith Imeni V. I. Ul'yanov-Lenin

"Structures of the Reaction Products of Some α,β-Unsaturated Carbonyl Compounds With Trimethylphosphite and Tri(dimethylamino)-Phosphine"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No 4, Apr 72, pp 865-871

Abstract: Trimethylphosphite reacts with 1,3-diphenyl-5-benzalbarbituric acid at -14° yielding a 1:1 addition product with bipolar structure which isomerizes easily to a methyl ester of the enol form of α-(1,3-diphenylbarbituryl-5)-benzylphosphonic acid dimethyl ester (I). The latter forms when the reaction is carried out at room temperature. Hydrolysis of (I) yields an enol form of a dimethylester of α-(1,3-diphenylbarbituryl-5)-benzylphosphonic acid. Reaction of tri(dimethylamino)phosphine with 1,3-diphenyl-5-benzalbarbituric acid yields a 1:1 crystalline addition product with a bipolar ionic structure. Dipole moment values and UV spectral parameters of a series of bipolar ions obtained from tri(dimethylamino)phosphine are reported.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

USSR

UDC 669.14.018.85

TIMOFEYEV, M. M., Candidate of Technical Sciences, FANTAYEVA, M. I., Candidate of Technical Sciences, YEREMINA, V. P., Candidate of Technical Sciences, and SOROKINA, T. M., Engineer, Central Scientific Research Institute of Machinery Manufacture and Metalworking

"The Kh16N9M2 Steel for Steam Pipes With Ultra-High Parameters"

Moscow, Teploenergetika, No 10, Oct 73, pp 9-11

Abstract: The strength properties of steam pipes, 194x28 mm, 133x20 mm, and 76x10 mm in diam., of Kh16N9M2 brand austenitic Cr-Ni-Mo steel, used for a block of the Chelyabinsk Heat and Electric Power Plant, were investigated. The fatigue strength of the base metal of the investigated pipes, at 585, 600, and 650°C, was in accordance with the recommended strength for Kh16N9M2 steel: 14 kg/mm^2, 12 kg/mm^2, and 7 kg/mm^2, respectively. The metal of the pipes is characterized by high plasticity under prolonged tear conditions; the relative elongation of specimens, which desintegrated after 4-5 thousand hrs., was 14-40 %. The

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TIMOFEYEV, M. M., et al., Teploenergetika, No 10, Oct 73, pp 9-11

strength properties were found sufficiently stable during up to 10 thousand hrs. aging at 600 and 650°C. An established order is recommended for the local electro-austenization of Kh16N9M2 steel steam pipes in the zone of welded joints. The changes of mechanical properties of the pipe metal during aging and of welded joints after thermal treatment are shown. Seven figures, three tables, five bibliographic references.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

cc. Nr.: AP0028764

Ref. Code: UR 0050

PRIMARY SOURCE: Meteorologiya i Gidrologiya, 1970, Nr 1, pp 62-68

FEATURES OF AIR-MASS TRANSPORT AND ASSOCIATED TYPES OF WEATHER IN WINTER IN BATUMI

W. N. Sorokina

The most important in practical life (for needs of agriculture, building, health services) types of weather during winter period in the south of the Black Sea coast of the Caucasus are considered in the paper. Sinoptic conditions of their generation are cleared up and probable meteorological characteristics are given.

REEL/FRAME

19680201

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

1/2 011 UNCLASSIFIED PROCESSING DATE-- EP70

TITLE--RUBIDIUM AND CESIUM CHLOROCALCITES -U-

AUTHOR--SOROKINA, V.V., SMIRNOVA, YE.K., VASILKOVA, I.V.

COUNTRY OF INFO--USSR

SOURCE--ZH. NEORG. KHIM. 1970, 15(2), 577-8

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--X RAY DIFFRACTION PATTERN, RUBIDIUM COMPOUND, CESIUM COMPOUND, TRICHLORIDE, CALCIUM COMPOUND, MELTING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1983/0948 STEP NO--UR/0078/70/015/002/0577/0578

CIRC ACCESSION NO--AR0053871

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

2/2 011

UNCLASSIFIED

CIRC ACCESSION NO--AR0053871 PROCESSING DATE--11SEP70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CONGRUENTLY MELTING RBCACL SUB3 AND CSCACL SUB3 WERE PREPD. IN AN AUTOCLAVE. THE X RAY POWDER DIFFRACTION PATTERN OF RBCACL SUB3 IS GIVEN. DELTA H OF FORMATION OF MCACL SUB3 FROM THE CORRESPONDING CHLORIDES IS 5.9 AND 8.7 AND FROM ELEMENTS 298.8 AND 302.2 KCAL-MOLE FOR M EQUALS RB AND CS, RESP. DELTA H OF DISSOLN. OF EQUIMOLAR CONCNS. OF RBCL AND CACL SUB2 IS MINUS 15.61 AND OF CSCL AND CACL SUB2 MINUS 15.31 KCAL-MOLE.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

USSR UDC 578.085.23

BENYUMOVICH, M. S., and SOROKINA, YE. V., Group of the Biology of Cultured Tumor Cells, Institute of Experimental and Clinical Oncology, Academy of Medical Sciences USSR, Moscow

"A Method for Stationary Suspended Cultivation of Cells of Established Lines Previously Maintained in Monolayer"

Leningrad, Tsitologiya, No 4, 1971, pp 536-540

Abstract: HeLa and DAPT cells can be grown indefinitely in a medium containing medium 199 (90%), bovine serum (10%), and antibiotics (streptomycin and colimycin). The cells are not transferred after covering the bottom of the culture vessel, but continue to be incubated at 36° to 37° C with fresh medium added every 4 to 10 days. The bottom of the vessel gradually becomes unsuitable for multiplication of the attached cells, so that many of them peel off and float freely in the culture liquid. About 4% of the HeLa cells and 20 to 70% of the DAPT cells remain attached to the glass. Blowing of oxygen through the culture periodically lossens the attachment of the cells and increases their viability in the suspension. Gently shaking the vessel from

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USSR

BENYUMOVICH, M. S., and SOROKINA, YE. V., Tsitologiya, No 4, 1971, pp 536-540

time to time prevents the cells from remaining settled on the bottom. The culture can be maintained indefinitely in the same vessel by extracting a suspension with cells and adding fresh medium. This also reduces the danger of infection of the culture to a minimum.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

1/2 031 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--KINETICS OF THE GROWTH OF GAMMA PHASE PARTICLES IN NICKEL, CHROMIUM, TUNGSTEN AND MOLYBDENUM ALLOYS WITH VARIOUS ALUMINUM TITANIUM

AUTHOR-(02)-SOROKINA, YU.G, YUGANOVA, S.A.

COUNTRY OF INFO--USSR

S

SOURCE--METALLOVED. TERM. OBRAB. METAL. 1970, (3), 8-12

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--GRAIN GROWTH, ALLOY PHASE TRANSFORMATION, ALLOY COMPOSITION, METAL AGING, NICKEL BASE ALLOY, METAL DIFFUSION, TUNGSTEN CONTAINING ALLOY, MOLYBDEUM CONTAINING ALLOY, HARDNESS, PARTICLE SIZE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/1937 STEP NO--UR/0129/70/000/003/0008/0012

CIRC ACCESSION NO--AP0103266

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

2/2 031 UNCLASSIFIED PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0108266

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE GROWTH OF THE LINEAR DIMENSIONS OF GAMMA PRIME PHASE PARTICLES DURING AGING OF ALLOYS OF NI BASE AND CONTG. W AND MO IS DESCRIBED BY THE SAME EQUATIONS AS THE GROWTH IN ALLOYS WITHOUT THESE ELEMENTS. THE INTRODUCTION OF W AND MO INCREASES THE NO. OF GAMMA PRIME PHASE PARTICLES ON THE SURFACE AND SLOWS DOWN THE GROWTH RATE. A SIMILAR EFFECT IS OBSD. WHEN ALLOYING WITH TI. THIS EFFECT IS ASSOCD. WITH THE DIFFUSIONAL MOBILITY OF THE INTRODUCED ELEMENTS AND WITH THE DEGREE AND SIGN OF THE DEFECTS ON THE GAMMA PHASE, GAMMA PRIME PHASE BOUNDARY. AT EQUAL AGING TIMES THE NO. OF GAMMA PRIME PHASE PARTICLES DECREASES WITH THE INCREASE OF THE AL-TI RATIO. AN INCREASE IN THE HARDNESS OF THE ALLOYS DURING AGING AT 750DEGREES IS OBSD. WHEN THE GAMMA PRIME PHASE PARTICLES ARE SMALLER THAN 2 TIMES 10 PRIME NEGATIVE6 CM AND THEIR NO. IS SMALLER THAN 10 PRIME9-CM PRIME2.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

USSR

UDC 669.14.018.44:620.18

SOROKINA, YU. G., and YUGANOVA, S. A. and TSNIITMASH, S. A.

"Kinetics of γ'-Phase Particle Growth in Ni-Cr-W-Mo Alloys with Different Al/Ti Ratios"

Moscow, Metallovedeniye i termicheskaya obrabotka metallov, No 3, 1970, pp 8-12

Abstract: The kinetics of the formation and growth of γ'-phase particles in Ni-Cr-Al-Ti-W-Mo alloys was investigated and the results compared with available data on similar alloys not containing W and Mo. Tests were conducted on three nickel-based cast alloys with the same chrome, tungsten, and molybdenum content and different aluminum and titanium content. The chemical composition of the alloys is given in a table. The experimental technique and procedure are described. The size, shape, and quantity of phase particles were evaluated by the electron microscope method. The linear dimensions and quantity of phase particles were measured after alloy aging at 750°C with intervals of 100, 1000, and 5000 hours. The growth of γ'-phase particle size during the aging process of nickel-based alloys containg W and Mo is described by the same equation which describes the growth in alloys without these elements. The addition of W and Mo increases the quantity of γ'-phase particles on the surface unit and decreases their growth rate. At the same duration of aging the quantity of γ'-phase particle decreases

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

USSR

SOROKINA, YU. G. and YUGANOVA, S. A., Metallovedeniye i termicheskaya obrabotka metallov, No 3, 1970, pp 8-12

with increasing Al/Ti ratio. An increase in hardness in the aging process at 750° C is observed when the γ'-phase particle size does not exceed 2×10^{-6} cm and their quantity on the surface unit is higher than 1×10^{9}. 4 figures, 4 tables, and 2 references.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

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USSR UDC 621.762

BRYNZA, A. P., OGNEV, R. K., RYNSKAYA, Ye. S., PATRUSHEVA, A. G., KOLOMOYETS, G. G., SOROKINA, Z. Ye., and TER-POGOSYAN, E. D.

"Corrosion of Powder Metallurgy Titanium in a Damp Atmosphere Containing Hydrogen Chloride and in Solutions of Hydrochloric Acid"

Moscow, Metallurgiya i Khimiya Titana (Institut Titana), Metallurgiya Publishing House, Vol 6, 1970, pp 105-111

Translation: The corrosion behavior of powder metallurgy titanium in gases and solutions of hydrochloric acid within the temperature interval 20-80°C is investigated. It is established that at a temperature of 20°C, atmospheric corrosion of powder metallurgy titanium above 3 and 7% solutions of hydrochloric acid is not observed, and in a solution of hydrochloric acid with a concentration up to 10%, slight corrosion is observed after a certain induction period. At 80°C, powder metallurgy titanium corrodes with all concentrations of hydrochloric acid that were studied. The effective energy for activating the process of dissolving titanium specimens is 62.8-71.2 kilojoules per mole. Seven illustrations, one table, and 11 bibliographic entries.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

1/2 080 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--PROGRESS OF HOLOGRAPHY -U-

AUTHOR-(02)-SMORODINSKIY, YA.A., SOROKO, L.M.

COUNTRY OF INFO--USSR

SOURCE--PROGRESS OF HOLOGRAPHY (USPEKHI GOLOGRAFII) MOSCOW, ZNANIYE, 1970, 46 PP

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS, METHODS AND EQUIPMENT

TOPIC TAGS--HOLOGRAPHY, PHOTOGRAPHIC IMAGE, CAMERA COMPONENT, PHOTOGRAPHIC LENS, OPTIC PROPERTY, OPTIC GLASS, RADAR PULSE, STEREOSCOPIC PHOTOGRAPHY, STEREOSCOPIC DISPLAY SYSTEM, HOLOGRAM, LIGHT INTERFERENCE, COHERENT LIGHT, LASER APPLICATION, LASER BEAM, LASER RADIATION INTERFEROMETER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/0008 STEP NO--UR/0000/70/000/000/0001/0046

CIRC ACCESSION NO--AM0133903

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

2/2 080 UNCLASSIFIED

CIRC ACCESSION NO--AM0133903 PROCESSING DATE--27NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FORMATION OF A PHOTOGRAPHIC IMAGE 5. CAMERA LENSE AND CAMERA OBSCURA 6. A LENS PHOTOGRAPH CAN'T REPLACE THE LENS 7. PLANE EQUIVALENT OF THE LENS 8. PHOTOGRAPHY THROUGH FROSTED GLASS 10. RADAR DETERMINES THE DISTANCE OF THE TARGET 11. STEREOSCOPIC PHOTOGRAPHY 12. SCREEN STEREOSCOPIC POSTCARDS 12. INTEGRAL SCREEN PHOTOGRAPHY 14. PSEUDOSCOPY 15. THE HOLOGRAM 16. LIGHT INTERFERENCE 17. LIGHT COHERENCE 18. SPACE COHERENCE 19. TIME COHERENCE 21. THREE DIMENSIONAL INTERFEROGRAM OF A DUST PARTICLE 23. HOLOGRAM OF A DUST PARTICLE 25. RESTORATION STAGE. A TRUE OR A VIRTUAL IMAGE? 26. DIMENSIONALITY IN A PLANE HOLOGRAM 26. SINUSOIDAL DIFFRACTION GRID 27. AMPLITUDE AND PHASE INFORMATION 28. THE POSSIBILITY OF A COMPLETE TEST IN OPTICS 28. PROPERTIES OF A HOLOGRAM 29. COLOR HOLOGRAM 30. AGAIN ABOUT COHERENCE 31. LASER BEAM 32. AN OPTICAL RADIO STATION 34. ARTIFICIAL HOLOGRAM 36. INTENSITY INTERFEROMETER 37. ADHESION OF PHOTONS 39. VOLUME OF AN ELEMENTARY CELL OF A BEAM OF LIGHT 40. LASER BEAM AND THERMAL RADIATION 41. THEORY OF THE INTENSITY INTERFEROMETER 42. INTERFERENCE OF RADIO QUANTA ON A MAGNETIC TAPE 42. INTERFERENCE OF SINGLE QUANTA 43. LASER HOLOGRAPHY THROUGH FROSTED GLASS 44. HOLOGRAPHIC THREE DIMENSIONAL TELEVISION 45. MAGIC GRAININESS OF LASER ILLUMINATION 46.

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SOROKO, L. M.

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TECHNICAL TRANSLATION

FSTC-HT-23-2015-72

ENGLISH TITLE: PROBLEMS OF LASER BEAM DATA TRANSMISSION
PROCEEDINGS OF THE FIRST ALL-UNION CONFERENCE, KIEV, SEPTEMBER 1968

FOREIGN TITLE: PROBLEMY PEREDACHI INFORMATSII LAZERNYM IZLUCHENIYEM

AUTHOR: I. A. DERYUGIN, ET AL.

SOURCE: KIEV ORDER OF LENIN STATE UNIVERSITY IMENI T.G. SCHEVCHENKO

Translated for FSTC by ACSI

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The contents of this publication have been translated as presented in the original text. No attempt has been made to verify the accuracy of any statement contained herein. This translation is published with a minimum of copy editing and graphics preparation in order to expedite the dissemination of information.

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SOROKOLETOV, L. A.

Automatic Control

28 Apr 72 105 FPD: CYBERNETICS

91. USSR UDC 62-50

SOROKOLETOV, L. A.

"On the Optimal Control of Statistical Processes in Machine Building"

Adaptivnyye Sistemy. Bol'shiye Sistemy. (Adaptive Systems. Large Systems), Moscow, Nauka, 1971, pp 196-206

Translation of abstract: This report covers general questions of automatic control over the fine adjustments of given parameters of statistical production processes in machine building. The design of an optimal algorithm is described. An example of its simulation is given.

1/1

92. USSR UDC 62-50

LISENKOV, A. N., KRUG, G. K., ALTMAN, S. I. and DEMIDOV, V. I.

"Application of Statistical Methods for the Control and Analysis of Technological Processes of Semiconductor Device Production"

Adaptivnyye Sistemy. Bol'shiye Sistemy. (Adaptive Systems. Large Systems), Moscow, Nauka, 1971, pp 168-177

Translation of abstract: The problems discussed are related to the practical use of statistical methods for controlling and analyzing technological processes in the production of semi-conductor devices. The results of an investigation of the production of silicon devices (diodes and stabilitrons) are given; contemporary methods of extremal experiment planning were used and a system of statistical control was developed for this production.

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1/2 020 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--APPARATUS FOR MEASURING THE LIFETIMES OF MINORITY CARRIERS IN SEMICONDUCTORS -U-

AUTHOR-(05)-VLASOV, A.N., KABANOV, A.N., KURBATOV, L.N., PETROVA, I.YU., SOROKONOVITSKIY, N.V.

COUNTRY OF INFO--USSR

SOURCE--PRIB. TEKH. EKSP. 1970, 1, 222-3

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--CADMIUM SULFIDE, ZINC TELLURIDE, MINORITY CARRIER, SEMICONDUCTOR MATERIAL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1994/1008 STEP NO--UR/0120/70/001/000/0222/0223

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2/2 020 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0115029

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN APP. IS DESCRIBED FOR MEASURING THE LIFETIMES OF MINORITY CARRIERS ACCORDING TO THE DROP IN CATHODOLUMINESCENCE OF SEMICONDUCTORS IN THE VISIBLE AND NEAR IR REGIONS. VALUES ARE GIVEN FOR CDS AND ZNTE.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

USSR

UDC 612.812.2

KRAUZ, V. A., SOROKOUMOV, V. A., and SKOROMETS, A. A., Institute of Experimental Medicine, Academy of Medical Sciences USSR, and First Medical Institute imeni I. P. Pavlov, Leningrad

"Effect of Ethimizole on Short-Term Memory and Mental Performance"

Moscow, Zhurnal Vysshey Nervnoy Deyatel'nosti, No 5, 1972, pp 907-911

Abstract: Experiments on dogs showed that ethimizole, an iminazole dicarboxylic acid derivative, significantly improved short-term memory compared with the control. The degree of improvement varied with the amount of previous training. The less trained the memory of an animal, the more pronounced the stimulatory effect of ethimizole. The drug also improved the ability of human subjects with a poor memory to recall numbers and words, but it had no effect of those with a high capacity for quick memorization. The stimulating action of ethimizole is attributed to its facilitating the conduction of excitation in the synapses, possibly because of the increased accumulation of acetylcholine.

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USSR

UDC 621.372.8.049.75-416

SOROKOVOY, P. I.

"Analyzing Methods of Computing Miniature Ribbon Lines for UHF"

Vestn. Kiyev. politekhn. in-ta. Ser. radiotekhn. i elektroakust. Kiev Polytechnical Institute Herald, Electronics and Electroacoustical Series) No 9, 1972, pp 74-76 (from RZh--Radiotekhnika, No 10 1972, Abstract No 10B103)

Translation: The dependence of the characteristic impedance of an asymmetrical miniature ribbon line on its structural parameters is discussed. Presently known methods of computing miniature ribbon lines are compared with the purpose of choosing reliable methods for their engineering calculation on digital computers. Curves are presented for the most widely used characteristic impedance values. Two illustrations, bibliography of five. Resume

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

USSR

UDC 547.962

KLEBANOV, G. I., SOROKOVOY, V. I., and VLADIMIROV, YU. A., Chair of Biophysics of the Second Moscow State Medical Institute imeni N. I. Pirogov

"An Investigation of the Conformational Properties of Biological Membranes by the Protein Luminescence Method"

Moscow, Molekulyarnaya Biologiya, Vol 6, No 2, Mar/Apr 72, pp 189-195

Abstract: This article is a study of the changes which occur in the luminescence spectrum of proteins in a biological membrane when the conformation of the proteins is modified as a result of changes in the Ph and temperature of the surrounding medium.

In acid media (pH $\leqslant$ 3) and alkaline media (pH $\geqslant$ 10), when the surfaces of the membranes were positively and negatively charged, respectively, it was discovered that diffusion of light by the membranes decreased, indicating a reduction in their clustering properties. Eventually, the static repulsion of like charges caused the membranes to disintegrate. In the extreme pH ranges, a long-wave shift in the maximum of the luminescence spectrum was also observed.

When the pH of the suspensions was lowered from 7 to 4.5, the diffusion of light increased steadily, reaching a maximum at pH 4.5-5.0; this was the result of a greater clustering of the membrane particles due

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USSR

KLEBANOV, G. I., et al., Molekulyarnaya Biologiya, Vol 6, No 2, Mar/Apr 72, pp 189-198

to the equal number of positive and negative charges. This change in light diffusion was not accompanied by any change in the position of the maximum of the luminescence spectrum, indicating that the conformation of the proteins in the membranes did not change.

Suspensions of all three types of membranes used in the experiment (mitochondria and stroma of erythrocytes from rats and the membranes from the fat globules found in milk) were heated from 10° to 95°. In all cases there was a gradual long-wave shift in the maximum of luminescence, which was most pronounced in the 50°-80° interval.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

USSR

PATRASHKU, F. I., SOROKSKAYA, L. B., REKHTER, B. A.

UDC 632.95

"Analysis of Figon in Plants by Thin-Layer Chromatography and Photometric Methods"

Tr. 2-go Vses. soveshch. po issled. ostatkov pestitsidov i profilakt. zagryaz-neniya imi produktov pitaniya, kormov i vnesh. sredy (Works of the Second All-Union Conference on the Investigation of Pesticide Residues and Preventive Contamination of Food Products, Feeds and Environment), Tallin, 1971, pp 181-183 (from RZh-Khimiya, No 12, Jun 72, Abstract No 12N479)

Translation: For extraction of figon (I) from grape leaves, grapes or apples, C_6H_6 or $CHCl_3$ is used. The extract is purified by microsublimation at 100° and 1 mm Hg; it is dissolved in acetone or $CHCl_3$ and analyzed by the method of thin-layer chromatography, colorimetric or spectrophotometric methods at 340 nm. The thin-layer chromatographic analysis is performed in silicic acid reinforced with gypsum, in the cyclohexane-$CHCl_3$ system (7:3), and it is developed by Et_2NH. The sensitivity of the method is 0.05-0.01 mg/kg. The sensitivity of the colorimetric method with Et_2NH is 0.25 mg/kg, the degree of detection of I is ~70%, the relative error in the analysis is ±4%. The sensitivity of the spectrophotometric method was 50 γ of I in the sample.

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USSR

UDC 632.95

VAYNTRAUB, F. P., and SOROKSKAYA, L. B.

"Phthalophos Determination in Apples by Thin Layer Chromatography and Photocolorimetry Methods"

Tr. 2-go Vses. soveshch. po issled. ostatkov pestitsidov i profilakt. zagryazneniya imi produktov pitaniya, kormov i vnesh. sredy (Transaction of the Second All-Union Conference on the Study of Pesticide Residues and Prevention of Their Contamination of Food Products, Fodder and the External Environment), Tallinn, 1971, pp 139-142 (from RZh-Khimiya, No 13, 10 Jul 72, Abstract No 13N477 by T. A. Belyayeva)

Translation: Phthalophos (I) is extracted from 100-100 g of apples with C_6H_6 for 30 min. and for 15 min. with shaking, and the extracts are treated with 0.1 N HCl and boiled down at 50°. The residue is dissolved in 15 ml of ethyl alcohol with heating, 75 ml 0.1 HCl (45°) is added, filtered, the filtrate is washed with 5 ml HCl, the solution is extracted with $CHCl_3$ (100 and 50 ml), the extract is dried over Na_2SO_4 and concentrated. I is determined by TLC on silicic acid fixed with plaster of Paris in a cyclohexane-$CHCl_3$ acetone

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USSR

VAYNTRAUB, F. P., et al., Tr. 2-go Vses. soveshch. po issled. ostatkov i profilakt. zagryaznenia imi produktov pitaniya, kormov i vnesh. sredy, Tallinn, 1971, pp 139-142

system (50:10:5). Determination of I according to phosphorus is done with to phosphomolybdic blue after wet combustion of I. The colorimetric method is based on alkaline hydrolysis of I and determination of a yellow-stained complex obtained by the reaction of dimethyldithiophosphoric acid with $CuSO_4$.

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SORVACHEVA, Z. L.

Biology

SO: JPRS 53801
12 Aug 91

UDC 599-181.085.23

CULTIVATION OF MAMMAL CELLS AT 'SUBOPTIMUM' TEMPERATURES

[Article by P. V. Sushkov, Z. L. Sorvacheva and V. V. Portugalov; Moscow, Kosmicheskaya biologiya i meditsina, Russian, Vol 5, No 3, 1971, pp 20-23, submitted 20 July 1970]

Abstract: Cultures of L, HeLa, and VNK-21 cells, A-1, FL, RH human amnion and kidney cells, and Chinese hamster cells of sublines 257 and 431 were cultivated at temperatures of 37 and 36-28°C with an interval of 2±0.5°C. L, A-1, BHK-21 cells and Chinese hamster cells were found to be capable of mitotic division at 30 and 28°C. Proliferation of L cells was maintained for 19 months (42 subinoculations); other cell lines tolerated two or three subinoculations (20-30 days) under these conditions. The adaptation of L cells involved substantial cytophysiological changes which reflected the adaptation process, which is obviously phenotypical.

Mammal cells are usually cultivated outside the body at 35-38°. These conditions are considered optimum for tissue cultures of warm-blooded animals, although the lower temperature limit at which normal karyokinetic division is possible has not yet been clarified. Contradictory opinions on this subject are given in the literature (Ya. A. Vinnikov; V. V. Portugalov, et al.; Holeckova, et al.; Makino and Nakahara; Rao and Engelberg). This paper gives the results of experiments for study of the multiplication of some lines of cells at different temperatures and the possibility of adapting them to suboptimum temperature conditions.

Cell cultivation at suboptimum temperatures can be used extensively in studying the effect of weightlessness on individual cell cycle phases and mitotic mechanisms. Under suboptimal temperature conditions the duration of active cell growth is increased (in particular, this applies to the logarithmic and stationary phases); in other words, the experimenter can "extend in time" the course of the cell cycle, both as

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UNCLASSIFIED

TITLE--MAKING COMMERCIAL SILICOMANGANESE [illegible] USING BRIQUETS OR SINTER -U-

PROCESSING DATE--13NOV70

AUTHOR-(03)-SUKHORUKOV, A.I., SOSEDKO, P.M., KHITRIK, S.I.

COUNTRY OF INFO--USSR

SOURCE--STAL' 1970, 30(2), 135-6

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--INDUSTRIAL FURNACE, REFRACTORY MATERIAL, CARBON, MANGANESE, STOICHIOMETRIC MIXTURE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1994/1946

STEP NO--UR/0133/70/030/002/0135/0136

CIRC ACCESSION NO--AP0115754

UNCLASSIFIED

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CIRC ACCESSION NO--AP0115754 UNCLASSIFIED PROCESSING DATE--13NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. HEATS MADE BY USING RAW BRIQUETS COMPOSED OF MN CONC., OTHER INGREDIENTS OF THE FURNACE CHARGE, AND A STOICHIOMETRIC MAT. OF C WERE COMPARED WITH THOSE IN WHICH MN CONC. SINTER WAS USED AS A CONSTITUENT OF A CONVENTIONAL CHARGE. RECOVERY OF MN WAS 10PERCENT HIGHER AND FURNACE OPERATIONS BETTER IN THE 1ST CASE.

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USSR

UDC 621.791.793.052.01:669.017.3:669.14.013.298.3

KHAKIMOV, A. N., Candidate of Technical Sciences, YEFIMENKO, L. A., Engineer, and PRYGAYEV, A. K., Engineer, Moscow Institute of the National Economy imeni G. V. Plekhanov and GP (abbreviation unknown) imeni I. M. Gubkina; SMIRNOV, B. A., Candidate of Technical Sciences, IVOCHKIN, I. I., Candidate of Technical Sciences, SOSEDOV, A. F., Engineer, and ROSHCHUPKIN, N. P., Engineer, All-Union Scientific Research Institute Montazhspetsstroy

"Regulation of the Structure and Properties of Welded Joints of 10G2FR Heat-Treated Steel in Electroslag Welding"

Moscow, Svarochnoye Proizvodstvo, No 1(471), Jan 74, pp 24-26

Abstract: A study was made of the conditions for the regulation of the structure and properties of electroslag-welded joints of 10G2FR heat-treated low-alloy sheet steel, 40 mm thick, with a view to increase the structural--mechanical homogeneity of welded joints. The introduction of a powerlike additive metal into the slag bath favors a reduction of the stay period over the temperature of the critical point Ac_3 of the near-seam metal at heating from 45-50 to 10-12 sec., an increase of the heating rate from 8-10 to 35-40°C/sec, and nearly two-fold increase of the welding rate. The application of

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KHAKIMOV, A. N., et al., Svarochnoye Proizvodstvo, No 1(471), Jan 74, pp 24-26

accompanying cooling makes it possible to decrease the stay period over the Ac_3 temperature of the near-seam metal on cooling from 140-170 to 80-95 sec and to increase the cooling rate from 0.7-1 to 13.5-14° C/sec. At 12.5-14° C/sec cooling rate, the impact ductility of the seam and the near-seam zone of welded joints of 10G2FR heat-treated steel increases up to a level exceeding the norm values within the temperature interval of 20 to -60° C, and a loss of strength is practically prevented. Six figures, three tables, two bibliographic references.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

USSR

UDC: 621.791.793

SMIRNOV, B. A., MALYSHEV, B. D., IVOCHKIN, I. I., Candidates of Technical Sciences, ROSHUPKIN, N. P., SOSEDOV, A. F., Engineers, VNIImontazhspetsstroy, and YEFIMENKO, L. A., Engineer, Moscow Institute of the Petrochemical and Gas Industry imeni Academician I. M. Gubkin

"Particulars Associated With the Structure and Mechanical Properties of Joints Made by Electro-Slag Welding Using Powdered Filler Metal"

Kiev, Avtomaticheskaya Svarka, No 9, Sep 73, pp 46-50

Abstract: It is shown that the use of powdered filler metal reduces significantly the amount of thermal energy expended on joint formation and sharply changes the thermal and technological characteristics of the electro-slag welding process. The operating energy is reduced by 1.7 times. The time of the weld zone metal at above Ac_3 temperatures is reduced by a factor of two and the volume of the metal bath and its duration time in a molten state is also reduced by a factor greater than two. Varying the thermal conditions and the nature of crystallization implies improvement of the primary and secondary structure of the seam metal and weld zone. This raises the impact strength of the metal at low temperatures by a factor of two. In welding heat hardened steel, the extent of the weakening zone is significantly reduced.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

USSR

UDC 621.791.79.046.003.13

IVOCHKIN, I. I., ALEKSEYEV, A. I. (Candidates of Techn. Sciences), SOSEDOV, A. F. (Engineer), /VNIImontazhspetsstroy/, LEBEDEV, B. F. (Doctor of Techn. Sciences), AVRAMENKO, V. I. (Engineer) /Electric Welding Institute imeni Ye. O. Paton/, and IVOCHKIN, I. M., /Sokolovskiy Plant of Metal Structures/

"Electroslag Welding With the Use of Powdered Filler Metal"

Moscow, Svarochnoye proizvodstvo, No 5, May 72, pp 17-19

Abstract: The article describes an electroslag process involving the feed of powdered filler metal (PFM) to the slag bath. The use of PFM enables more effective utilization of the welding heat, doubles the welding efficiency, and yields a weld with better properties. In addition, the article discusses equipment designed for electroslag welding of low-carbon and low-alloy steels, 25-60 mm thick, with PFM and a consumable electrode of continuous cross sections. A block diagram of a unit for proportioning and feeding PFM to the slag bath is shown. Various PFM compositions for low-carbon and low-alloy steels are cited and test data on the strength properties of the welds are given. (2 illustrations, 4 tables, 4 bibliographic references)

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

USSR

UDC: 661.66+677

DERGUNOV, N. N., FROLOV, V. I., RIPP, N. Ye., SOSEDOV, V. P., BARABANOV, V. N.

"Toughening of Carbon Fiber Under Cyclic Loading"

Moscow, Doklady Akademii Nauk SSSR, Vol 210, No 1, 1 May 73, pp 70-71

Abstract: It was found that carbon fibers obtained by heat treating polyacrylonitrile filaments are toughened by cyclic stressing. The maximum toughening effect is observed when the maximum stress in a cycle is 60% of the ultimate strength of the fiber and 1000 cycles are used. The results are attributed to localized plastic deformation with resultant stress relaxation, as well as the crushing of fibrils. Increasing the number of stress cycles to 10,000 and the maximum stress in a cycle to 80% of the ultimate strength of a fiber brings the toughness of carbon filaments back to the original level. This is explained by an increase in cracks and pores.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

USSR

UDC 678.029+661.66

ANDRIANOV, K. A., SOSEDOV, V. P., PATALAKH, I. I., KROTOV, A. I., RAZUMOV, L. L., and KAVEROV, A. T.

"Some Features of the Formation of Novel Thermally Stable Reinforced Plastics"

Moscow, Doklady Akademii Nauk SSSR, Vol200, No 6, Oct 71, pp 1343-1344

Abstract: One of the most important problems in the area of chemistry and physics of solid bodies concerns development of mechanically strong thermally stable materials. The reinforced materials currently available are either not sufficiently strong or thermally instable. With this in mind, experiments were carried out in which glass fiber KN-11 and a hydrocarbon fiber were treated with siliconorganic polymer (polymethyloxydiphenylpropanesiloxane) followed by thermal activation in a reducing medium and in hydrocarbon medium. In this fashion materials with high specific strength at elevated temperatures were obtained, exceeding considerably the properties of known construction materials.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

USSR

UDC 621.352.5

VOL'FKOVICH, YU. M., and SOSENKIN, V. YE., Institute of Electrochemistry, Academy of Sciences USSR, Moscow

"Distribution of Electrolyte Concentration Across the Electrochemical Group of a Hydrogen-Oxygen Fuel Cell With a Capillary Membrane"

Moscow, Elektrokhimiya, Vol 8, No 7, Jul 72, pp 1034-1037

Abstract: Calculations were carried out of the distribution of electrolyte concentration across the electrode as a function of two most common work regimens: intrakinetic and internally accellerated-ohmic regimees. Within the membrane this function, under the first regimen, bends slightly towards lower c_y values. At the border points of the membrane the slope of $c_y(y)$ curve increases sharply and finally at the ecge of the electrochemical group the increase in $(c_y)_{O_2}$ decreases gradually, and the decrease of $(c_y)_{H_2}$ becomes slower, because in contrast to the membrane, the integral current in electrodes drops to zero with the approach toward the external surface. In case of the internally accellerated-ohmic work regimen, the intraohmic energy losses result in an irregular distribution of the differential current density across the porous electrode.
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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

1/2 018 UNCLASSIFIED

TITLE--RATE OF SHAPING DURING DUPLICATING BROACHING WORK -U- PROCESSING DATE--30OCT70

AUTHOR--SOSENKO, A.B.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, STANKI I INSTRUMENT, NO 2, 1970, PP 23-25

DATE PUBLISHED--------70

SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--METAL MACHINING, BIBLIOGRAPHY, METAL BROACHING, SURFACE ROUGHNESS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1999/1336 STEP NO--UR/0121/70/000/002/0023/0025

CIRC ACCESSION NO--AP0123294

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

2/2 018 UNCLASSIFIED

CIRC ACCESSION NO--AP0123294 PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. RESULTS ARE GIVEN FROM AN INVESTIGATION OF THE SHAPING PROCESS DURING DUPLICATING BROACHING WORK. POSSIBILITIES FOR INTENSIFYING SHAPING ARE INVESTIGATED (USING ROUGHING REGIMES) BY RAISING CURRENT DENSITY IN THE WORKING ZONE.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

Ref. Code: UR 0660

Acc. Nr: AP0044102

PRIMARY SOURCE: Neyrofiziologiya, 1970, Vol 2, Nr 1, pp 59-63

THE ELECTRICAL ACTIVITY OF NEURONS IN CATS CORTEX UNDER ITS COOLING

V. A. Sosenkov, V. D. Chirkov

The S. M. Kirov Medical Institute, Gorky

Summary

Experiments were made on 7 cats immobilized by procuran. Changes in cell activity were investigated in the posterior crucial and middle parts of suprasylvian and ectosylvian gyri under their cooling up to +18°. In acute experiments cooling up to 18°.8—21.8° leads to complete cessation of the neuronal activity. The dynamics of the change in the spike activity of neurons under cooling has a definite succession: a frequency increase (31°—28°), then a decrease in amplitude (23°—22°) and complete disappearance of activity (21.8°—18.8°). The cessation of cooling results in restoration of the cell

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AP0044102

activity in the reverse order: the appearance of low-amplitude high-frequency discharges (23°—26°), an amplitude increase of spikes (29°—31°) and the reduction of the initial activity (31°—32°). The drop in the neuronal activity depends on the rate of the temperature decrease in the cortex. The quicker is the cortex cooled, the lower temperature is needed for the cessation of the neuronal activity. Slow cooling leads to inactivation of the spike potentials at a higher temperature.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

UNCLASSIFIED

TITLE--INFLUENCE OF REVERSIBLE, COLD, FUNCTIONAL ELIMINATION OF THE NEOCORTEX ON UNCONDITIONED AND CONDITIONED REFLEXES IN CATS -U-

PROCESSING DATE--23OCT70

AUTHOR-(02)-BELENKOV, N.YU., SOSENKOV, V.A.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL VYSSHEY NERVNOY DEYATEL'NOSTI, 1970, VOL 20, NR 3, PP 512-518

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, BEHAVIORAL AND SOCIAL SCIENCES

TOPIC TAGS--CEREBRAL CORTEX, COOLING, CONDITIONED REFLEX

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/1904

STEP NO--UR/0247/70/020/003/0512/0518

CIRC ACCESSION NO--AP0120563

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

2/2 028 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0120563

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CHANGES IN UNCONDITIONED AND CONDITIONED ACTIVITY WERE STUDIED IN CATS BY MEANS OF REVERSIBLE COLD FUNCTIONAL ELIMINATION OF THE GREATER PART OF THE NEOCORTEX. FUNCTIONAL DECORTICATION LED TO CONSIDERABLE DISTURBANCE OF COMPLEX UNCONDITIONED REFLEXES (POSTURAL, LOCOMOTION, ORIENTING REFLEXES, ALIMENTARY AND DEFENSIVE REACTIONS). CONDITIONED REFLEXES COMPLETELY DISAPPEARED. THE DISTURBANCES WERE OBSERVED DURING THE FIRST COLD APPLICATIONS. AFTER FIVE TO SIX FUNCTIONAL DECORTICATONS, THE UNCONDITIONED AND CONDITIONED REFLEXES WERE GRADUALLY RESTORED, ALTHOUGH NOT COMPLETELY. THE EXPERIMENTS REVEAL THE MAJOR ROLE PLAYED BY THE NEOCORTEX IN THE TOTAL FUNCTION OF THE BRAIN, WHICH FORMS ANIMAL BEHAVIOUR UNDER NORMAL CONDITIONS, AS WELL AS THE POSSIBLITY OF REORGANIZATION OF THE BRAIN ACTIVITY UPON SYSTEMATIC FUNCTIONAL ELIMINATIONS OF THE CEREBRAL CORTEX. FACILITY: CHAIR OF PHYSIOLOGY, KIROV MEDICAL INSTITUTE. GORKY.

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

1/2 019 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--KINETIC DETERMINATION OF COPPER -U-

AUTHOR-(05)-KREINGOLD, S.U., BOZHEVOLNOV, YE.A., ANTONOV, V.N.,
PANTELEIMONOVA, A.A., SOSENKOVA, L.I.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 260,952
REFERENCE--OTKRY, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970 47(4) 95
DATE PUBLISHED--06JAN70

SUBJECT AREAS--MATERIALS, CHEMISTRY

TOPIC TAGS--COPPER, CHEMICAL PATENT, OXIDATION, HYDROGEN PEROXIDE,
FLUORIDE, CHEMICAL ANALYSIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1994/1994 STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0115793

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

UNCLASSIFIED PROCESSING DATE--16OCT70

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CIRC ACCESSION NO--AA0115793

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. COPPER WAS DETD. KINETICALLY BY THE OXION. OF AMIDOL BY H SUB2 O SUB2 IN A FLUORIDE BUFFER SOLN. AT PH 2.5-4.5.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

USSR UDC 621.383.292.8

SOSFENOV, N. I., FEYGIN, L. A.

"Detector of Soft Roentgen Radiation Based on FEU-85 Photomultiplier"

V sb. Apparatura i metody rentgenovsk. analiza (Apparatus and Methods of Roentgen Analysis--Collection of Works), Issue 7, Leningrad 1970, pp 66-71 (from RZh--Elektronika i yeye primeneniye, No 5, May 1971, Abstract No 5A189)

Translation: A scintillation detector based on an improved model of the FEU-85 is described. The new photomultiplier (FEU) differs from the FEU-35 (sic) by a more rugged construction and a higher amplification factor (10^7 instead of 10^5) thanks to the addition of two dynodes. The possibility is mentioned of registration of Roentgen radiation of high intensity by use of a small load resistance. 3 ill. 3 ref. N. S.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

1/2 023 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--X RAY METHOD FOR DETERMINING THE GAPS BETWEEN HEAVY ATOMS IN MACROMOLECULES IN SOLUTION AND ITS USE FOR STUDYING GRAMICIDIN S

AUTHOR-(03)-VAYNSHTEYN, B.K., SOSFENOV, N.I., FEYGIN, L.A.

COUNTRY OF INFO--USSR

SOURCE--DOKL. AKAD. NAUK SSSR 1970, 190(3) 574-7

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--MACROMOLECULE, X RAY STUDY, MOLECULAR STRUCTURE, IODINATED ORGANIC COMPOUND, ORGANOMERCUTY COMPOUND, ANTIBIOTIC, CRYSTALLOGRAPHY/(U)GRAMICIDIN S ANTIBIOTIC

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1987/0179 STEP NO--UR/0020/70/190/003/0574/0577

CIRC ACCESSION NO--AT0113858

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

2/2 023 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AT0103858

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IT IS POSSIBLE TO DET. THE MUTUAL POSITION OF HEAVY ATOMS FOR LIMITING DISORDERED SYSTEMS SUCH AS SOLNS. OF MACROMOLS. WHEN THE DIFFRACTION PICTURE IS POOR AND CENTERED IN THE REGION OF SMALL ANGLES. THE METHOD WAS CHECKED EXPTL. FOR SOLNS. OF DIIODOANTHRAQUINONE IN H SUB2 SO SUB4, AND THE DISTANCE BETWEEN THE HEAVY MOLS., CALCD. FROM THE POSITION OF THE MAX., IS 9.4 ANGSTROM WHICH AGREES WITH CRYSTALLOGRAPHIC DATA. FURTHER, THE METHOD WAS USED FOR GRAMICIDIN S DERIVS.: IODOGRAMICIDIN HYDROCHLORIDE AND MERCURIOGRAMICIDIN HYDROCHLORIDE. THE DISTANCES OBTAINED FROM THE MAX. ARE 9.7 AND 10.4 ANGSTROM, RESP.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

JPRS 56288

16 June 1972

UDC: 621.1 8.152

PURIFICATION OF CONDENSATE WITH SEPARATELY FUNCTIONING ION-EXCHANGER FILTERS AT THE VK-50 ATOMIC ELECTRIC POWER PLANT

[Article by Candidates of Technical Sciences A.M. Nudel', B.F. Neshkov, and Yu. V. Cherkatkin, Engineer L.P. Soshina, Candidate of Chemical Sciences A.I. Zabelin, and engineers Yu. P. Barenkin, L.N. Roshdestvenskaya, and L.N. Masnaya; Moscow, Teploenergetika, Russian, No 3, May 1972, pp 13-15]

Soshina, L. P.

Experience in the operation of thermal and atomic electric power plants has shown that purification of the entire stream of condensate of dissolved and mechanical impurities is a necessary condition for reliable functioning of the plant [1,2].

To investigate the functioning of ion-exchange resins in the purification of the condensate of an atomic electric power plant from dissolved and suspended impurities, and also to verify the design of individual elements of an ion-exchanger filter, a semi-works installation with separately functioning ion-exchanger filters (two meters in diameter), with H-cation-exchanger and OH-anion-exchanger resins, connected in series, was installed and tested on the bypass of the condensate loop of the VK-50 Atomic Electric Power Plant.

The filters were identical in their design. The drainage and distribution systems of the filters were of the slit-tube type. The slits on the radii of the system were formed of a coil of circular wire with a diameter of 0.8 mm. The coil was so made that the width of the gap was 0.1 mm on the radii of the lower system and 0.4 mm on those of the upper system.

During the time the filters functioned the following thermodynamic indicators were monitored (the flow rate of the condensate, the total resistance of the filters, and the resistance of the drainage systems) and also the physicochemical composition of the condensate (the pH value, electrical conductivity, hardness, the content of elements of corrosion products and the total beta-activity). The chemical composition of the condensate was stable during the entire course of functioning of the filters, except during the start-up period of the reactor (0.02-0.04 mg/liter of Fe (total),

[I - USSR - K]

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

Coatings

USSR UDC 620.171.3:678.744.743

TKACHEV, V. I., BEYDER, E. YA., LITVIN, A. K., GUDIMOV, M. M., AND SOSHKO, A. I., All Union Scientific Research Institute of Aviation Materials, Moscow, Physico-Mechanical Institute Academy of Sciences UkrSSR, L'vov

Kiev, Fiziko-Khimicheskaya Mekhanika Materialov, Vol 9, No 5, 1973, pp 102-103

Abstract: The optimum conditions for the heat treatment of steel, before applying a polyethylene coating to increase its fatigue strength in an aggressive corrosive medium, were investigated on 30KhGSNA steel specimens, one part of which was coated with polyethylene. The composition of the coated specimens was selected so as to eliminate the effect of the coating, i.e., that the lasting quality of coated and uncoated specimens in air was the same. The investigation results are analyzed by reference to tabulated data, showing the longevity of coated and uncoated specimens in air, 30% NaCl, and in normal H_2SO_4, at low and high tempering temperatures, and diagrams of the effects of tempering temperatures on two coefficients characterizing the influence of the medium on the longevity relation in cycles of coated and uncoated specimens. The investigations demonstrated that poly-

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

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USSR

TKACHEV, V. I., et al., Fiziko-Khimicheskaya Mekhanika Materialov, Vol 9, No 5, 1973, pp 102-103

ethylene coatings of high density increase the corrosion-fatigue strength of 30KhGSNA steel specimens in aggressive media; this increase is most effective in acid media. The most protective effect of polyethylene coating was found on hardened and low-temperature annealed specimens. Two figures, one table, eight bibliographic references.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

1/2 047 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--SETUP FOR FATIGUE STRENGTH TESTING OF POLYMER MATERIALS IN VACUUM AT LOW AND HIGH TEMPERATURES -U-

AUTHOR-(04)-SOSHKO, A.I., SPAS, YA.M., KALININ, N.G., TYNNY, A.N.

COUNTRY OF INFO--USSR

SOURCE--FIZIKOKHIMICHESKAIA MEKHANIKA MATERIALOV, VOL. 6, NO. 1, 1970, P. 84-86

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, CHEMISTRY, PHYSICS

TOPIC TAGS--FATIGUE STRENGTH, PLASTIC DEFORMATION, LOW TEMPERATURE EFFECT, HIGH TEMPERATURE EFFECT, VACUUM, CRYOGENIC EFFECT, POLYMER, FATIGUE TEST, CYCLIC LOAD TEST

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1995/1246 STEP NO--UR/0369/70/006/001/0084/0086

CIRC ACCESSION NO--AP0116708

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

2/2 047 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0116708

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DEVELOPMENT OF A SETUP FOR STUDYING THE FATIGUE STRENGTH AND DEFORMABILITY OF POLYMER MATERIALS IN VACUUM, AIR, AND GAS ATMOSPHERES AT LOW AND HIGH TEMPERATURES. A STRUCTURAL DIAGRAM AND DETAILED DESCRIPTION OF THIS SETUP ARE PRESENTED. SAMPLES CAN BE SUBJECTED TO CYCLIC LOADING AT FREQUENCIES RANGING FROM 500 TO 1400 CPM AND TEMPERATURES RANGING FROM MINUS160 TO PLUS300 C. FACILITY: AKADEMIIA NAUK UKRAINSKOI SSR, FIZIKO-MEKHANICHESKII INSTITUT, LVOV, UKRAINIAN SSR.

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

1/2 026 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--EFFECT OF THE RATE OF DEFORMATION ON THE STRENGTH OF POLYMER MATERIALS IN LIQUID MEDIA -U-

AUTHOR-(04)-TYNNVY, A.N., KOLEVATOV, YU.A., SOSHKO, A.I., KALININ, N.G.

COUNTRY OF INFO--USSR

SOURCE--FIZ.-KHIM. MEKH. MATER. 1970, 5(6), 677-9

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--DEFORMATION RATE, POLYMETHYLMETHACRYLATE, POLYTETRAFLUOROETHYLENE, MECHANICAL STRENGTH

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0836 STEP NO--UR/0369/70/005/006/0677/0679

CIRC ACCESSION NO--AP0119740

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

2/2 026 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0119740

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE RELATION BETWEEN DEFORMATION RATE OF POLY(ME METHACRYLATE) AND THAT OF FTOROPLAST-4 (POLY(TETRAFLUOROETHYLENE) AND THE EFFECTS OF ENVIRONMENT (AIR, OLEIC ACID, PETROLATUM, H SUB2 O, GASOLINE, ETOH, AND ACETONE) WERE INVESTIGATED. THE ADVERSE EFFECT OF LIQS. ON THE STRENGTH OF POLYMERS DECREASED WITH INCREASING DEFORMATION RATE. THIS RELATION IS EXPLAINED IN TERMS OF TIME COMPETITION BETWEEN MECH. DEFORMATION AND PHYSICOCHEM. PROCESSES LIKE ADSORPTION OR WETTING. FACILITY: FIZ,-MEKH. INST., LVOV, USSR.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

1/2 039 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--CRACKING OF FLJOROPLASTIC TUBING -U-

AUTHOR-(05)-SYTYY, YU.V., GUDIMOV, M.M., SOSHKO, A.I., TYNNYY, A.N., KALININ, N.G.

COUNTRY OF INFO--USSR

SOURCE--FIZ.-KHIM. MEKH. MATER 1970, 6(2), 87-90

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--FLUOROCARBON RESIN, HYDRAULIC FLUID, POLYMER HEAT EFFECT, LOW TEMPERATURE EFFECT, RUBBER, ANISOTROPY, STRESS ANALYSIS, CRACK PROPAGATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605012/E09 STEP NO--UR/0369/70/006/002/0087/0090

CIRC ACCESSION NO--AP0140317

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

2/2 039 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0140317

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF THE TEMP. IN THE MINUS 60 TO PLUS 230DEGREES RANGE, TIME, AND CONTACT WITH AVIATION HYDRAULIC FLUID WAS STUDIED ON THE DEVELOPMENT OF CRACKS ON THE SURFACE OF TUBING MADE OF FLUORINATED RUBBER. MOST CRACKS ARE ALIGNED ALONG THE TUBE AXIS INDICATING THAT RADIAL RATHER THAN LONGITUDINAL STRESSES PRODUCE THEM. THE PLASTICIZING OF THE RUBBER WITH THE HYDRAULIC FLUID AND THE ANISOTROPY OF THE RUBBER STOCK INDUCED BY EXTRUSION ARE CONTRIBUTING FACTORS. FACILITY: FIZ.-MEKH. INST., LVOV, USSR.

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

USSR

UDC: 531.383

PLATONOV, V. K., SOSHNEV, S. I., and SHAYDENKO, A. Ya.

"Double-Gyroscopic, Triaxial Stabilizer With Gyrocompass Effect"

Leningrad, Priborostroyeniye, No 1, 1972, pp 89-93

Abstract: The description is given of a device designed to solve the problem of stabilizing gravimetric and magnetometric geophysical instruments relative to a horizontal coordinate system with geographically oriented axes. These instruments are for use in a gondola towed by a ship for the purpose of investigating the gravitational and magnetic fields of the earth. The device was developed by the Hydrological Instrument Department of the Tula Polytechnical Institute, with which the authors are associated, in collaboration with the Institute of Terrestrial Magnetism, Ionosphere, and Radio Propagation, of the USSR Academy of Sciences (IZMIR AN SSSR) and the Naval Gravimetry Division of the All-Union Scientific Research Institute of Land and Sea (VNIIMORGEO). The gyrostabilizer consists of a basic Cardan suspension with two astatic gyroscopes in its frame; these gyroscopes are the sensing elements of the stabilizer indicator system. There is also a small Cardan suspension for the instrument to be stabilized. A diagram of the system is given and its theory of operation worked out.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

1/2 018 UNCLASSIFIED PROCESSING DATE--11SEP70

TITLE--MICROBIOLOGICAL PRODUCTION OF CALCIUM GLUCONATE -U-

AUTHOR--SOSHNIKOV, D.YA., PETUNINA, A.G., MALYSHEVA, YE.A.

COUNTRY OF INFO--USSR

SOURCE--PRIKL. BIOKHIM. MIKROBIOL. 1970, 6(1), 83-5

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--CALCIUM COMPOUND, GLUCOSE, FERMENTATION, YEAST, CULTURE MEDIUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/1705 STEP NO--UR/0411/70/006/001/0083/0085

CIRC ACCESSION NO--AP0103471

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

2/2 018 UNCLASSIFIED

CIRC ACCESSION NO--AP0103471 PROCESSING DATE--11SEP70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CA GLUCONATE WAS PRODUCED BY OXIDN. OF GLUCOSE WITH GLUCONOBACTER (ACETOBACTER) SUBOXYDANS. THE MEDIUM WAS SUPPLEMENTED WITH A YEAST EXT. AS A STIMULATOR AND CHALK AS A NEUTRALIZING AGENT FOR THE GLUCONIC ACID FORMED. THE FERMENTATION WAS PERFORMED AT 30-32DEGREES FOR 42-46 HR WITH CONTINUOUS AERATION. DURING THIS PERIOD OVER 95PERCENT OF THE GLUCOSE WAS OXIDIZED. THE CONTENT OF CA GLUCONATE IN THE CULTURE LIQ. AMOUNTED TO 71PERCENT OF THE GLUCOSE CONSUMED.

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

1/2 019 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--PHYSICAL PROPERTIES OF TIN ANTIMONIDE SINGLE CRYSTALS -U-

AUTHOR-(04)-YURKOV, V.A., YEPISHIN, I.G., TUGUSHEV, S.YR., SOSHNIKOV, V.A.

COUNTRY OF INFO--USSR

SOURCE--FIZ. METAL. METALLOVED. 1970, 29(1), 108-12

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--ELECTROMOTIVE FORCE, SINGLE CRYSTAL, TIN COMPOUND, ANTIMONIDE, HARDNESS, ELECTRICAL CONDUCTIVITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/0706 STEP NO--UR/0126/70/029/001/0108/0112

CIRC ACCESSION NO--AP0105679

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203120015-5

2/2 019 UNCLASSIFIED PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0105679

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE RESULTS OF THE D., MICROHARDNESS, ELEC. COND., AND THERMAL EMF. MEASUREMENTS OF SNSB SINGLE CRYSTALS ARE PRESENTED. THE AV. D. OF THESE CRYSTALS, DETD. BY THE HYDROSTATIC WEIGHING METHOD, IS 6.81 G-CM PRIME3, WHICH IS SOMEWHERE BETWEEN THE D. OF SN AND THAT OF SB. THE MICROHARDNESS WAS MEASURED ON FRESHLY CLEAVED SINGLE CRYSTAL PLATELETS. THE MEASUREMENTS WERE TAKEN WITH THE INDENTOR PARALLEL AND PERPENDICULAR TO THE CLEAVAGE PLANE OF THE SAMPLES. VALUES RANGING FROM 130-140 AND 80-90 KG-MM PRIME2 WERE OBTAINED. AT 60-G LOADS, THE MICROHARDNESS VALUES IN BOTH ORIENTATIONS WERE ABOUT THE SAME. ELEC. RESISTIVITY WAS MEASURED BY THE CONVENTIONAL COMPENSATION METHOD AT 20-200DEGREES. THE RESISTIVITY OF ALL THE SAMPLES HAD A TYPICALLY METALLIC CHARACTER. THE RESISTIVITY PARALLEL TO THE CLEAVAGE PLANE AT 20DEGREES WAS 26.6 TIMES 10 PRIME NEGATIVE6 OHM-CM; AT THE SAME TEMP. THE RESISTIVITY PERPENDICULAR TO THE CLEAVAGE PLANE WAS 65.6 TIMES 10 PRIME NEGATIVE6 OHM-CM. THIS MEANS THAT THE RESISTIVITY PERPENDICULAR TO THE CLEAVAGE PLANE IS BY 2.4 TIMES LARGER THAN THAT PARALLEL TO THE CLEAVAGE PLANE. WITH INCREASING TEMP. THE RESISTIVITY ANISOTROPHY SOMEWHAT DECREASES. THE RESISTIVITY OF POLYCRYST. SAMPLES HAD AN INTERMEDIARY VALUE, AND WAS 36.8 TIMES 10 PRIME NEGATIVE6 OHM-CM AT 20DEGREES. IT WAS DIFFICULT TO OBTAIN ACCURATE THERMAL EMF VALUES, AND THE RESULTS OBTAINED VARIED BY 10-15PERCENT. IT IS CONCLUDED THAT AT CONSIDERABLE ANISOTROPY IN THE RESISTIVITY (IS GREATER THAN 200PERCENT), THE THERMOELEC. PROPERTIES OF THE SINGLE CRYSTALS ARE PRACTICALLY ISOTROPIC.

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YURKOV, V. A., YEFISHIN, I. G., TUGUSHEV, S. YU., and SOSHNIKOV, V. A., Penza Polytechnic Institute

"Physical Properties of SnSb Single Crystals"

Sverdlovsk, Akademiya Nauk SSSR, Fizika Metallov i Metallovedeniye, Vol 29, No 1, Jan 70, pp 108-112

Abstract: The results of an experimental investigation of certain physical properties of SnSb crystals are presented. The procedure for producing samples is described in detail. Density, microhardness, electric conductivity, and thermoelectric force were measured. Density was determined by hydrostatic weighing at room temperature. The average density of SnSb plates was 6.81 g/cm^3. The microhardness was measured with a PMT-3 instrument for two indentor positions, one normal and one parallel to the surface. The results are presented graphically. The electric resistance was measured by the usual compensation method, with currents parallel and normal to the cleavage surface. The thermoelectric properties were determined by clamping the sample between two copper blocks.

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YURKOV, V. A., et al, Akademiya Nauk SSSR, Fizika Metallov i Metallovedeniye, Vol 29, No 1, Jan 70, pp 108-112

The temperature of one was maintained at 16°C, while that of the other was varied between 16 and 200°C. The ΔT was measured by a thermocouple with $\pm$ 0.5° accuracy. The thermoelectric force was measured for two directions of the temperature gradient, one parallel and the other normal to the cleavage surface. The results show that the thermoelectric properties of single crystals are practically isotropic. Orig. art. has: 5 figures and 1 formula.

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/2 028 UNCLASSIFIED PROCESSING DATE--13NOV70

ITLE--ELECTROOPTICAL PROPERTIES OF CUBIC ZINC SULFIDE CRYSTALS GROWN BY A HYDROTHERMAL METHOD -U-

UTHOR-(05)-SHAMSUROV, V.A., KUZNETSOV, V.A., LOBACHEV, A.N., KHARITONOVA, I.V., SOSHNIKOV, V.G.

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ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CRYSTN. OF CUBIC ZNS BY THE HYDROTHERMAL METHOD WAS STUDIED UNDER THE CONDITIONS USED BY R. LAUDISE, ET AL. (1965), AND THE SPECTRAL DEPENDENCE WAS STUDIED FOR THE LIGHT TRANSMISSION, THE HALF WAVE POTENTIAL, AND ELECTROOPTICAL COEFFS. OF THE CRYSTALS. THE DEVIATIONS WERE DETD. FROM OPTICAL ISOTROPY. CRYSTALS PREPD. IN THIS WAY CAN BE ORIENTED AS REQUIRED IN THE FORM OF RECTANGULAR PARALLELPIPEDS OF SUFFICIENT SIZE TO CARRY OUT ELECTROOPTICAL STUDIES. THE CRYSTALS THAT WERE OBTAINED ARE SUITABLE FOR PRACTICAL USE IN LIGHT MODULATION OVER THE RANGE OF WAVELENGTHS OF 0.4-13 MU. FACILITY: INST. KRISTALLOGR., MOSCOW, USSR.

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