"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

1/2 014 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--GRAFT COPOLYMERS OF CELLULOSE AND 1,2,DIMETHYL,5,VINYLPYRIDINIUM METHYL SULFATE -U-

AUTHOR-(03)-ROGOVIN, Z.A., LISHEVSKAYA, M.O., TYUGANOVA, M.A.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 263,C68

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

DATE PUBLISHED--04FEB70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--GRAFT POLYMERIZATION, CELLULOSE, PYRIDINE, SULFATE, VINYL COMPOUND, CHEMICAL PATENT, COPOLYMER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3004/1845 STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0132110

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

2/2 014 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AA0132110

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TITLE COPOLYMERS ARE PREPD. BY INTRODUCING AROMATIC AMINE GROUPS INTO THE CELLULOSE, TREATING WITH A DIAZOTIZING MIXT., AND GRAFTING A MONOMER ON IT. GRAFTING TAKES PLACE IN A NEUTRAL MEDIUM OR IN THE PRESENCE OF NA SUB2 SO SUB4.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

UDC 621.65/.68.621.3.078

SMEL'NITSKIY, S. G., Candidate of Technical Sciences, BULKIN, A. Ye., Candidate of Technical Sciences, PANOV, V. I., Candidate of Technical Sciences, Gusarov, O. P., Engineer, and TYUGANOV, V. A., Engineer, Moscow Power Engineering Institute, Heat and Electric Power Plant-22, Moscow Regional Administration of Power System Management

"Electric Automatic Control and Protection System of OVPT-500-Type Turbopump Feeder Unit"

Moscow, Teploenergetika, No 6, Jun 73, pp 33-36

Abstract: A new electric system of automatic control and protection with complete elimination of hydraulic members was installed on the turbopump feeder unit No1, OVPT-500 type, of the Heat and Electric Power Plant-22 of Moscow Regional Administration of Power System Management. The system is mainly based on typical automation means used in technological processes in electric power plants. The working of the system is discussed by reference to its functional circuit, the diagram of control mechanism, and the power supply diagram of electromagnets of friction drives. The described system considerably simplified the operating conditions of the turbopump feeder unit, in particular its remote control. Five figures, four bibliographic references.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

UDC: 621.317.33

KOL'TSOV, A. A. and TYUKAVIN, A. A.

"Synthesis of Frequency-Independent Measurement T- and 2T-Structure Circuits"

V sb. Novyye izmerit.-inform. ustroystva dlya neft. prom-sti. Ch.2 (New Measurement-Information Devices for the Petroleum Industry -- collection of works. Pt.2), Ufa, 1972, pp 32-49 (from RZh-32.Metrologiya i Izmeritel'naya Tekhnika, No 5, 1973, Abstract No 5.32.108[3])

Translation: On the basis of the conversion factor method, the authors study the synthesis of frequency-independent, matching T and 2T type structure circuits with positive T and 2T bridge properties. The circuits are designated for the measurement of 2- and 3-component complex resistances and conductivities. A condition is formulated for the frequency independence of balancing circuits. A subdivision is made of the conversion factor of measurement converters converting voltage into current. The measurement converters are used for the synthesis of circuits into subtypes according to algebraic designation. The problem of synthesizing possible circuits is solved with the aid of the subtypes. Characteristic values are derived in the conversion factor

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

KOL'TSOV, A. A. and TYUKAVIN, A. A., Novyye izmerit.-inform. ustroystva dlya neft. prom-sti. Ch.2, 1972, pp 32-49

of some measurement converters. The conditions for separate counts and separate balancing are obtained on their basis. Optimal circuits are derived. Methods are developed for the separate balancing of circuits used in measuring two and also three parameters. Original article: three illustrations, five tables, and ten bibliographic entries.

2/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

UDC: 8.74

GALUSHKIN, A. I., VASIL'KOVA, T. F., SLOBODENYUK, V. I., TYUKHOV, B. P.

"Analysis of the Dynamics of Systems for Recognition of Nonstationary Patterns"

Tr. Mosk. in-ta elektron. mashinostr. (Works of the Moscow Institute of Electronic Machine Building), 1971, vyp. 23, pp 210-227 (from RZh-Kibernetika, No 4, Apr 72, Abstract No 4V584)

Translation: The article is devoted to analysis of the dynamics of closed-cycle and open-cycle adaptive systems for recognition of nonstationary patterns. The use of nonstationary pattern recognition systems enables consideration of modes of operation which are fundamentally new for recognition systems, including anticipation of a decision in a recognition system with finite memory. Authors' resumé.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR UDC: 621.372.8.049.75-4.6

TYUKHTIN, M. F.

"Effect of Technological Design Factors on the Parameters of Microstrip Transmission Lines"

Tr. Kazan. aviats. in-ta (Works of the Kazan' Aviation Institute), 1970, vyp. 122, pp 64-71 (from RZh-Radiotekhnika, No 12, Dec 70, Abstract No 12B175)

Translation: An analysis is made of the selection of valid tolerances for the geometric dimensions of microtape lines, as well as the problems of putting together SHF microcircuits. Shielded and unshielded lines are considered. An expression is derived which defines the effect of inaccuracy in making the line on attenuation of an electromagnetic wave. It is shown that scatter in conductor width plays a smaller part than scatter in the height of substrates. A check of the method for unshielded lines gave results differing from the exact solution by no more than 3%. Five illustrations, bibliography of six titles. N. S.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

1/2 035 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--MEASUREMENT OF THE ELECTRON CONCENTRATION OF THE IONOSPHERE BY THE HIGH FREQUENCY IMPEDANCE PROBE METHOD -U-

AUTHOR-(04)-KOMRAKOV, G.P., IVANOV, V.P., POPKOV, I.V., TYUKIN, V.N.

COUNTRY OF INFO--USSR

SOURCE--KOSMICHEKIE ISSLEDOVANIIA, VOL. 8, MAR-APR 1970 P. 278-283

DATE PUBLISHED--------70

SUBJECT AREAS--ATMOSPHERIC SCIENCES

TOPIC TAGS--ELECTRON DENSITY, IONOSPHERE, HIGH FREQUENCY, ANTENNA, VERTICAL SOUNDING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1994/1751 STEP NO--UR/0293/70/008/000/0278/0283

CIRC ACCESSION NO--AP0115580

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

2/2 035 UNCLASSIFIED PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0115580

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. BRIEF DESCRIPTION OF THE EQUIPMENT USED FOR MEASURING THE ELECTRON CONCENTRATION IN THE IONOSPHERE BY THE HIGH FREQUENCY IMPEDANCE PROBE METHOD. USING THE EQUIPMENT DESCRIBED, THE ELECTRON CONCENTRATION IN THE IONOSPHERE IS DETERMINED BY MEASURING CHANGES IN ANTENNA CAPACITANCE AS A FUNCTION OF CHANGES IN THE DIELECTRIC CONSTANT OF THE IONOSPHERE AT TWO FIXED FREQUENCIES. THE ELECTRON CONCENTRATION PROFILE AT ALTITUDES FROM 80 TO 170 KM, OBTAINED WITH THE AID OF THIS EQUIPMENT, IS PRESENTED.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

UDC 617.57/.58-009.86-02:613.646

TYUKINA, A. P., Candidate of Medical Sciences, and P'YANKOV, S. M., Clinic of General Surgery, Arkhangel'sk Medical Institute

"Neurovascular Diseases of the Extremities Caused by Cold and Moisture in Workers in Some Far Northern Regions"

Moscow, Klinicheskaya Meditsina, Vol 48, No 9, Sep 70, pp 128-131

Abstract: Examination of some 2,500 fishermen, sailors, loggers, and others working in the Soviet Far North revealed a high incidence of polyneuritis and endarteritis (22 to 44 cases per 100 examined). The extent and severity of the disease varied with the length of time the individuals had been engaged in the particular work and the amount of exposure to cold and water associated with the job. Prolonged and repeated immersion in water leads at first to temporary vascular spasms in the extremities and then to almost irreversible degenerative changes in the receptors and small blood vessels supplying them. The larger vessels eventually become involved ("ascending neuritis"). Suggestions are given for the treatment and prevention of such disorders.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

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UDC 621.371.332.3:551.463.7:538.3

LOBACH, V.T., GARNAKER'YAN, A.A., POLOZHENTSEV, R.G., TYUKOV, E.S., INKOVSKIY, A.A.

"Experimental Investigation Of The Statistical Characteristics Of Radar Signals Reflected From Disturbed Sea Surface And Small-Sized Surface Objects"

Tr. Taganrog. radiotekhn. in-ta (Works Of The Taganrog Radio Engineering Institute), 1971, No 22, pp 14-23 (from RZh:Radiotekhnika, No 2, Feb 72, Abstract No 2G14)

Translation: The correlation intervals and the variation factor were measured of signals reflected from a disturbed sea surface and small-sized surface objects. A block diagram is presented of a measuring device with use of the "Donets" marine radar station (λ = 3.2 cm). An analysis is given of the results obtained; it is shown that they can be used for measurement of the degree of roughness of the sea and for evaluation of the effectiveness of detection of small-sized objects on a background of reflections from the sea surface. 1 ill. 2 tab. 3 ref. N.S.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

UDC 616.981.455-085.351-039.71-07:616.15-097.5-078.7

KANATOV, Yu. V., AYTKALIYEV, B. A., SHMUTER, and TYULEMBAYEV, M. A., Central Asian Antiplague Institute, Alma-Ata, and Central Institute for the Advanced Training of Physicians, Moscow

"Sensitivity of Reaction With Sensitized Erythrocytes for Detection of Antibodies in Persons Vaccinated Against Tularemia"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 10, 1971, pp 93-97

Abstract: The accumulation of antibodies in persons vaccinated against tularemia was traced using the agglutination, passive hemagglutination, and antigen neutralization tests and the sensitivity of these tests was compared. Specific antibodies were detected from 3 to 15 days after vaccination by all the serological tests used. The antibody titers were somewhat higher in the passive hemagglutination test than in the agglutination test during the first few days after vaccination. The titers were highest in the antigen neutralization test at all the periods checked, mainly due to detection of the total complete and incomplete antibodies.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

UDC 621.771.014

ANDREYUK, L. V., and TYULENEV, G. G.

"Deformation Resistance and Plastic Properties of Steel During Thermomechanical Treatment"

Moscow, Stal', No 11, Nov 72, pp 1015-1016

Abstract: Thermomechanical treatment is one method of producing materials with strengths of up to 300 kg/mm^2: heating to about 1100°C, rapid cooling to 500-600°C rolling at this temperature with significant hardening of the supercooled austenite, quenching, during which the martensite formed inherits the hardening of the austenite, and tempering. The Chelyabinsk Scientific Research Institute for Metallurgy tested specimens of type 30Kh5MVNGS steel on the plastometer. The tests were performed in the supercooled austenitic state and modeled thermomechanical treatment. The studies showed that in the super-cooled austenitic state, the values of σ_u are indepdent of deformation rate u over the range of change 0.001-30 sec^{-1} and are virtually independent of temperature in the 500-600°C range. The mean value of deformation resistance of this steel in the supercooled austenitic state is near constant, at 38.9$\pm$1.8 kg/mm^2 where ε=0.1 with confidence level 0.95. The degree of

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

ANDREYUK, L. V., and TYULENEV, G. G., Stal', No 11, Nov 72, pp 1015-1016

deformation has a significant effect on deformation resistance. The plastic properties of the steel depended little on deformation rate and were significantly higher than for direct heating (ζ>60%).

2/2

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

Forming

USSR

ANDREYUK, L. V., TYULENEV, G. G., PRITSKER, B. S.

"Analytic Dependence of Deformation Resistance of Steels and Alloys on Chemical Composition"

Moscow, Stal', No 6, Jun 72, pp 522-523.

Abstract: Years of study of 54 steels and alloys, from the simplest carbon and low-alloy steels to complex heat-resistant alloys, containing the most important chemical elements in widely varying quantities, are summarized in formulas which can be used to calculate deformation resistance of these steels as a function of deformation rate, degree and temperature if only the chemical compositions of the alloys are known. This reliable and universal analytic dependence of deformation resistance on chemical composition of steels and alloys allows rapid calculation of required rolling modes for various steels and alloys without preliminary testing.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

UDC 539.4

TYULENEV, V. N., and SKIBIN, V. A., Moscow, Central Scientific Research Institute of Aircraft Engines imeni P. I. Baranov

"Experimental Investigation of Oscillations of the Rotor of a Gas Turbine Engine"

Kiev, Problemy Prochnosti, No 9, Sep 73, pp 72-75

Abstract: Occasional oscillations of discs and blades of the rotor of gas turbine engines with frequencies which condiderably differ from partial calculated values and also from test data of single discs or blades indicate that in such cases the coherence of oscillations of rotor elements plays an important role. Experiments, using the EDVS-4000 type electrodynamic vibrator and a TsTS-19 type piezoelectric transducer, are described, which were carried out with a view to explain the character of these oscillations. The results are analyzed by reference to demonstrated longitudinal torsional oscillations of the rotor and oscillograms registered by the vibration transducer and tensometers. Five figures.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

UDC 539.4

TYULENEV, V. N., SKIBIN, V. A., (Moscow)

"The Influence of Adjustable Step Difference in a Guiding Apparatus on the Level of Variable Stresses in Working Blades of a Compressor"

Kiev, Problemy Prochnosti, No 12, Dec. 1972, pp 102-105.

Abstract: A method is studied for reducing the level of variable stresses in the working blades of a compressor when using adjustable step differences in the guiding apparatus. Calculation relationships and experimental tests of the method are presented.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

1/2 008 UNCLASSIFIED

TITLE--SYNTHESIS OF SOME DIARYL KETONES -U- PROCESSING DATE--20NOV70

AUTHOR-(05)-MIRONOV, G.S., CHERNYAKOVSKAYA, K.A., FARBEROV, M.I., TYULENEVA, I.M., RUSAKOVA, M.S.

COUNTRY OF INFO--USSR

SOURCE--ZH. PRIKL. KHIM. (LENINGRAD) 1970, 43(3), 620-7

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ORGANIC SYNTHESIS, AROMATIC KETONE, AROMATIC HYDROCARBON, PHOSGENE, ALUMINUM CHLORIDE, CHLOROMETHANE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3004/1944 STEP NO--UR/0060/70/043/003/0620/0627

CIRC ACCESSION NO--AP0132205

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

2/2 006

UNCLASSIFIED

CIRC ACCESSION NO--AP0132205 PROCESSING DATE--20NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DIARYL KETONES WERE PREPD. EITHER BY THE DIRECT REACTION OF AROMATIC HYDROCARBONS WITH PHOSGENE AND ALCL SUB3, OR BY THE REACTION OF AROMATIC HYDROCARBONS WITH CCL SUB4 FOLLOWED BY HYDROLYSIS OF THE INTERMEDIATE DIARYLDICHLOROMETHANE.

FACILITY: YAROSLAV. TEKHNOL. INST., YAROSLAVL, USSR.

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

1/2 017 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--NMR AND INFRARED SPECTROSCOPIC METHODS FOR STUDYING SILVER HYDROGEN FLUORIDES -U-

AUTHOR-(02)-OPALOVSKIY, A.A., TYULENEVA, N.I.

COUNTRY OF INFO--USSR

SOURCE--ZH. STRUKT. KHIM. 1970, 11(1), 27-30

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, PHYSICS

TOPIC TAGS--IR SPECTROSCOPY, NMR, SILVER COMPOUND, HYDROGEN COMPOUND, FLUORIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1995/0929 STEP NO--UR/0192/70/011/001/0027/0030

CIRC ACCESSION NO--AP0116439

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

2/2 017 UNCLASSIFIED PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0116439

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PRIME1 H AND PRIME19 F NMR SPECTRA AND IR SPECTRA OF AGF, AGF.HF, AGF.2HF, AGF.3HF, AND AGF.5HF WERE MEASURED AT 20 AND MINUS 100DEGREES. THE COMPDS. WERE PREPD. FROM THE TERNARY SYSTEM AGF-HF-H SUB2 O AND BY THE THERMAL DECOMPN. OF AGF.5HF. THE BAND AT 1160-1190 CM PRIME1 WAS ASCRIBED TO A DEFORMATION VIBRATION OF THE HF SUB2 PRIME NEGATIVE ION; ITS POSITION POINTS TO A WEAKER H BOND IN AGF.HF THAN IN KF.HF. THE NARROW CENTRAL SIGNAL PRESNET IN THE BROAD COMPONENT (HALF WIDTH EQUALS 23 OE, 2ND MOMENT EQUALS 56 OE PRIME2) OF THE PRIME19 F NMR SPECTRUM OF AGF.HF WAS DUE TO RESIDUAL MOBILE HF. THIS CENTRAL SIGNAL WAS MORE INTENSE IN THE CASE OF AGF.2HF. ONE MOL. OF HF EITHER ENTERS THE STRUCTURE OF AGF.2HF OR IS MOBILE. THIS CENTRAL SIGNAL DISSAPPEARED AT MINUS 100DEGREES. THE LOW VALUE OF THE DOUBLET SPLITTING PROBABLY RESULTS FROM THE UNSYM. NATURE OF THE F-HF BOND. FROM THE HALF WIDTH (32 OE) AND THE 2ND MOMENT (100 OE PRIME2) OF THE PRIME19 F NMR SIGNAL OF AGF.5HF, THE EXISTENCE OF POLYMERIC BONDS IN THIS COMPD. IS DEDUCED. FACILITY: INST. NEORG. KHIM., NOVOSIBIRSK, USSR.

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

1/2 012 UNCLASSIFIED

TITLE--APPLICATION OF COLORLESS LACQUERS ON SMALL BRASS ARTICLES -U-

PROCESSING DATE--04DEC70

AUTHOR-(04)-GOLUBITSKAYA, M.L., TYULENEVA, N.N., OTOPKOV, G.M., PODGAINYY, I.M.

COUNTRY OF INFO--USSR

SOURCE--LAKOKRASOCH. MATER. IKH PRIMEN. 1970, (2), 51-3

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--LACQUER, BRASS, PHENOLIC RESIN, ALKYD RESIN, EPOXY RESIN, MELAMINE RESIN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605012/D09 STEP NO--UR/0303/70/000/002/0051/0053

CIRC ACCESSION NO--AP0140298

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

2/2 012 UNCLASSIFIED

CIRC ACCESSION NO--AP0140298 PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SMALL BRASS ARTICLES (BUCKLES, HASPS, KNOBS, HINGES, ETC.) ARE USUALLY LACQUERED BY HAND OR IN A ROTATING DRUM, AND THE COATING IN A DRUM IS SATISFACTORY PROVIDED SIMILAR TO 1 G LACQUER IS USED FOR 100 G ARTICLES, THE ROTATION IS 15 RPM AND THE TIME OF RESIDENCE 5-7 MIN. A CENTRIFUGE IS DESCRIBED WHICH GIVES MUCH HIGHER PRODUCTION RATES (LESS THAN OR EQUAL TO 10,000 ARTICLES-HR), ECONOMY, AND BETTER COATING UNIFORMITY. THE LACQUERS USED ARE BASED ON PHENOLIC ALKYD EPOXY RESINS, ACRYLIC RESINS, OR MELAMINE ALKYD RESINS.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

TECHNICAL TRANSLATION

FSTC-HT-23-2015-72

29 Dec 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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- Title Page -

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

UDC 632.954:633.12

TYUL'MENKOV, Ye. L., Gomel'skaya Regional Experimental Station

"Results of Tests of Herbicides on Buckwheat Seedlings"

Moscow, Khimiya v Sel'skom Khozyzystne, No 7, Vol 11, 1973, pp 59-61

Abstract: Field experiments were conducted on buckwheat seedlings to evaluate the effects of potential herbicides: linuron, tropotoks, prefar, 2M-4ClP, kambilen, gerban, patoran, prometrim, daktal (all transliterated) and diphenylamine decreased the germination 9.2 to 73.6% relative to the control. The amine salt 2,4-D (1.5 kg/hectare) and gezaran (transliterated) (3 kg/hectare) induced a slight reduction in germination and meturin and arezin (both transliterated) did not induce a significant reduction in germination. Values for several parameters indicative of plant production and vitality are given for gezaran and 2,4-D using 1 kg/hectare for the latter and 2, 3, or 4 kg/hectare for the former. Only 2,4-D appears to be a prospective herbicide as the other three have an unacceptably high toxicity. The optimum time for treatment is from 1 to 3 days prior to the appearance of the sprouts.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

UDC: 621.396.6:621.318

KONTOROVICH, L. I., TYUL'NIKOVA, V. I., RUKUNOV, L. N.

"Some Parameters of SHF Ferrites as Related to Technological Factors During Hot Pressing"

Elektron. tekhnika. Nauchno-tekhn. sb. Ferrit. tekhn. (Electronic Technology. Scientific and Technical Collection. Ferrite Technology), 1970, vyp. 1 (23), pp 11-16 (from RZh-Radiotekhnika, No 12, Dec 70, Abstract No 12V423)

Translation: An investigation was made of the technological singularities of hot pressing of SHF ferrites grades 4S411, 4S45 and 6S41, as well as the effect which basic technological factors have on density, microstructure and magnetic properties of ferrites. It was found in particular that increasing the pressing temperature from 1050 to 1200°C leads to a sharp increase in density, and also to an increase in the initial permeability and saturation induction, and to a reduction in coercive force. The results of the study gave a basis for selecting optimum conditions for hot pressing. The parameters of Y-circulators with hot-pressed ferrite inserts are given. Three illustrations, one table, bibliography of four titles. N. S.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

UDC 662.217.8+621.43.056

TYUL'PANOV, R. S. and PRITSKER, O. V.

"The Influence of Temperature Upon the Thorough Combustion of a Diffusive Hydrogen Flame in a Supersonic Stream in a Closed Channel"

Novosibirsk, Fizika Goreniya i Vzryva, No 1, 1972, pp 77-82

Abstract: A report is given on an experimental investigation of the influence of the initial temperature upon the thorough combustion of a diffusive jet of hydrogen. The relationship of the degree of combustion thoroughness at a given jet length φ_ℓ to the initial temperature t_0 is presented graphically. There is considerable scattering of the points, due to the change of other parameters such as the hydrogen-oxidant ratio, various rates of hydrogen input, etc; the degree of exactness of the method for calculating the combustion thoroughness does not permit determination of these functional relationships. 5 figures.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

UDC 539.3

VOSTROV, V. K., SEMCHENKOV, L. I., TYUL'PANOVA, G. I.

"Beam on an Elastic Half-Plane Without Friction. Analysis of Stress-Deformation State of a Half-Plane"

V sb. Ustoych. gorn. porod v kamerakh i podgotovit. vyrabotkakh (Stability of Rocks in Chambers and Preliminary Workings -- Collection of Works), Frunze, "Ilium", 1969, pp 67-78 (from RZh-Mekhanika, No 4, Apr 70, Abstract No 4V48)

Translation: The following plane problem in elasticity theory is considered. An infinite band (beam), to one edge of which a concentrated force is attached normally, is held by the other edge in continuous contact with an elastic half-plane. A numerical algorithm for constructing the stress field inside the half-plane is developed in detail on the basis of the device of a Fourier conversion traditionally applied in problems of this type. G. Ya. Popov.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

UDC: 621.396.6

FEL'DMAN, N. B., TYULYAYEVA, N. G., ZIVZAKH, R. M., KUZNETSOVA, G. A.

"Effect Which Grain Orientation has on the Parameters of TsTS-22 Piezoceramic"

Elektron. tekhnika. Nauch.-tekhn. sb. Radiokomponenty (Electronic Technology. Scientific and Technical Collection. Radio Components), 1970, vyp. 5, pp 96-99 (from RZh-Radiotekhnika, No 5, May 71, Abstract No 5V387)

Translation: The authors study the effect of TsTS-22 ceramic grain size on fundamental parameters and the temperature coefficient of the resonance frequency. It is shown that an increase in grain size entails an increase in the permittivity and piezoelectric activity of the ceramic.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

Gyroscopic

USSR

BURDAKOV, S. V., TYUMENEVA, G. V., CHELPANOV, I. B., Leningrad

"Optimal Dynamic Characteristics of a Gyrocompass With Random Perturbations Considering Intercardinal Deviation"

Moscow, Mekhanika Tverdogo Tela, No 5, 1970, pp 5-10

Abstract: The problem of construction of a correcting device which is optimal for the stable mode is formulated and solved for a single-rotor gyrocompass with electromagnetic correction with no stabilization of the sensing element relative to the north-south axis. Random deviating moments acting about the two axes of the gyrocompass, random movement of the ship and random rolling, resulting intercardinal deviation, are considered.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

UDC: 669.25:539.425

TSINENKO, O. V., TYUMENTSEV, A. N., BUSHNEV, L. S. and KOROTAYEV, A. D.,
Siberian Physicotechnical Institute imeni V. D. Kuznetsov

"Study of a Modulated Structure in Co-Ni-Ti Alloys"

Sverdlovsk, Fizika metallov i metallovedeniye, Vol 32, No 4, Oct 71,
pp 758-766

Abstract: The initiation of a modulated structure during the decay of Alnico-, Ticonal- and Nimonic-type alloys determines the shaping of their high physical, mechanical and high-temperature properties governing extensive utilization of these alloys. Some of the properties are related to the finely disperse segregations of the nonmetallic phase. Discussed here are measurements of the kinetic of changes in resistivity, x-ray and electron microscopic patterns (both of replicas and thin foils) applied to the study of the decay pattern of Co-Ni-Ti alloys I comprising 54% Co + 42% Ni + 4% Ti and II -- 53% Co + 40% Ni + 7% Ti, wt. %. The alloys with various Ti contents were selected to determine the effect of the bulk share of finely disperse segregations on the development of a modulated structure at various temperatures. The kinetics of changes in resistivity

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

TSIKENKO, O. V., et al, Fizika metallov i metallovedeniye, Vol 32, No 4, Oct 71, pp 758-766

during aging of Co-Ni-Ti alloys following quenching from 1050°C and the structural patterns at various stages of decay are reflected in curves and radiographs. The early stages of aging reveal a zone-type decay. The coagulation of particles of the new phase results in the development of a three-dimensional periodic modulated structure. The modulation periods at different temperatures are measured. It is shown that the particles of the new phase represent an ordered phase of Co_3Ti. (6 illustrations, 28 bibliographic references).

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

Super alloys

USSR

UDC 669.25:539.292

TSINENKO, O. V., PSHENINA, L. S., TYUMENTSEV, A. N., BUSHNEV, L. S., and KOROTAYEV, A. D., Siberian Physico-Technical Institute imeni V. D. Kuznetsov

"Features of Discontinuous Decomposition in Co-Ni-Ti Alloys"

Sverdlovsk, Fizika Metallov i Metallovedeniye, Vol 32, No 1, Jul 71, pp 58-64

Abstract: From data obtained by conventional and electron microscopy and x-ray analysis of aging, discontinuous decomposition in a Co-Ni-Ti alloy was studied where it was shown that by means of discontinuous decomposition there occurs precipitation of the same ordered gamma-prime phase which is a case of continuous decomposition. Kinetics of discontinuous decomposition depend substantially on the state of the continuous decomposition of the matrix ahead of the front of the growing cell. It was shown that coalescence of the finely dispersed phase after continuous and discontinuous decomposition occurs as a result of secondary discontinuous decomposition so that by means of discontinuous decomposition there occurs not only precipitation of stable and metastable phases but also their coalescence. Five figures, 22 bibliographic references.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

1/2 026 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--INTERMITTENT DECOMPOSITION IN HARDENED AND DEFORMED ALLOYS -U-

AUTHOR-(05)-KOROTAYEV, A.D., BUSHNEV, L.S., PROTASOV, A.T., TYUMENTSEV, A.N., PSHENINA, L.S.

COUNTRY OF INFO--USSR

SOURCE--IZV. VYSSH. UCHEB. ZAVED. FIZ. 1970, 13(1), 108-12

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--CRYSTALLIZATION, COPPER ALLOY, TITANIUM ALLOY, ELECTRON MICROSCOPY, METAL DEFORMATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/0960 STEP NO--UR/0139/70/013/001/0108/0112

CIRC ACCESSION NO--AT0105829

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

2/2. 026 UNCLASSIFIED

CIRC ACCESSION NO--AT0105829 PROCESSING DATE--18SEP70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SPECIMENS OF CU-TI 4.3PERCENT ALLOY WERE HARDENED, DEFORMED, AND THEN STUDIED BY METALLOGRAPHY AND ELECTRON MICROSCOPY. WITH SMALL DEFORMATION DEGREES (LESS THAN OR EQUAL TO 20PERCENT) THE FORMATION OF AN INTERNAL STABLE PHASE WAS NOT OBSD. SINCE THIS FORMATION USUALLY IS PRECEDED BY RECRYSTN., IT WAS ASSUMED THAT THE RECRYSTN. CAUSED DISCONTINUOUS DECOMPN. INSIDE OF GRAINS. AT THE DEFORMATION DEGREE OF 20PERCENT THE DISCONTINUOUS DECOMPN. SHOULD BE EXPECTED AT GREATER THAN OR EQUAL TO 450DEGREES; IN ACTUAL EXPTS. THIS DECOMPN. WAS OBSD. AT 550DEGREES.

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Miscellaneous

USSR UDC 547.495.2+546.185-31'39+546.212/.002.612.3.03

SARBAYEV, A. N., POLYAKOV, TE. V., TYUNINA, M. F., POLYAKOVA, Z. A., and RUCHKOVA, A. KH.

"The Physico-Chemical Properties of Aqueous Solutions of Carboammophos of Grade 1:1"

Moscow, Khimicheskaya Promyshlennost', Vol 48, No 6, Jun 72, pp 437-438

Abstract: The solubilities, density, and vapor pressure in relation to the concentration and temperature in the system $CO(NH_2)_2$-$NH_4H_2PO_4$-H_2O ($N:P_2O_5$ = 1:1) were determined experimentally. On the basis of the data obtained, a diagram was plotted (figure) which represents the physico-chemical properties of aqueous solutions of carboammophos 1:1 at concentrations of 0-97% by weight and pressures of 20-760 mm Hg. The diagram covers the total range of existence of aqueous solutions of this fertilizer. By using it, the solubility, concentration, temperature, vapor tension, boiling point, density, and specific volume of carboammophos 1:1 solutions can be determined and also the relation between the liquid and solid phase in the range of saturated solutions of the fertilizer. Because of the hydrolysis of urea, the proportions of the system do not correspond to equilibrium. However, the diagram applies if determinations of the experimental characteristic that is used are carried out rapidly.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

KORNEYEV, I.A., TYUN'KIN, YU.N., CHERNYSHOHEV, E.A.

UDC 539.234

"Device For Ion Deposition Of A Film"

USSR Author's Certificate No 297709, filed 24 Sept 69, published 18 May 71 (from RZh:Elektronika i yeye primeneniye, No 2, Feb 72, Abstract No 2A446P)

Translation: A device is proposed for ion deposition of a film on a substrate. The anode, which simultaneously also serves as a screen, is made in the form of a hollow body of revolution with a curvilinear generatrix, with which, in the direction of the end with the smaller diameter, a cathode is located, partially entering into this hollow body, and in the direction of the end with the larger diameter a substrate holder is located.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

1/2 011 UNCLASSIFIED

TITLE--PRECALCULATION OF THE DIFFERENCES IN THE BOILING POINTS OF STEREOISOMERIC 1,4,DIALKYLCYCLOHEXANES -U-

PROCESSING DATE--27NOV70

AUTHOR-(03)-LIBERMAN, A.L., TYUNKINA, N.I., VASINA, T.V.

COUNTRY OF INFO--USSR

SOURCE--NEFTEKHIMIYA 1970, 10(1), 158-60

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CALCULATION, CYCLOHEXANE, ALKYL RADICAL, ORGANIC SYNTHESIS, DISTILLATION, ISOMER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/0907

STEP NO--UR/0204/70/010/002/0158/0160

CIRC ACCESSION NO--AP0134636

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

2/2 011 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0134636

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PRECALCN. WAS CARRIED OUT BY A SEMIEMPIRICAL EQUATION BASED ON THE RELATION BETWEEN THE B.P. OF THE COMPDS. AND THEIR INTERNAL MOL. STRAIN, INCREASING WITH EACH SUCCESIVE SUBSTITUTION OF A ALPHA-H ATOM. THE DIFFERENCE AND SUCCESSION WAS CALCD. FOR TITLE COMPDS., CONTG. NO TERT,ALKYL GROUPS. THUS, PRIOR TO SYNTHESIS OF THE COMPDS., IT WAS FORECASTED WHETHER THEY COULD BE SEPD. BY RECTIFICATION AND THE EFFICIENCY OF THE REQUIRED COLUMN.

FACILITY: INST. ORG. KHIM. IM. ZELINSKOGO, MOSCOW, USSR.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

UDC 621.396.669.8

MIKHALEV, V. V., SIMAKOV, B. I., TYUN'KOV, V. S.

"Resistors for Radio Interference Suppression"

Elektron. tekhnika. Nauchno-tekhn. sb. Radiokomponenty (Electronic Engineering. Scientific and Technical Collection. Radio Components), 1970, vyp. 3, pp 31-36 (from RZh-Radiotekhnika, No 4, Apr 71, Abstract No 4A248)

Translation: A brief study of the basic functions and operating conditions of resistors used to suppress radio interference from motor vehicle ignition systems is presented. The designs of the resistor in the spark plug and distributor networks are investigated. Inclusion of resistors in the ignition system reduces the radio interference level significantly and improves the quality of radio and television reception. Application of a microconductor in glass insulation as the resistor insures a high operating voltage of the resistor with minimum size.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

1/2 043 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--OPTIMAL CONDITIONS FOR NARROWING THE SPECTRUM OF A LASER WITH STRONGLY DEGENERATE MODES -U-

AUTHOR-(04)-KORZHENEVICH, I.M., RATNER, A.M., SOLOVYEV, V.S., TYUNOVA, T.I.

COUNTRY OF INFO--USSR

SOURCE--RADIOTEKHNIKA I ELEKTRONIKA, VOL. 15, APR. 1970, P. 821-823

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--LASER RADIATION SPECTRUM, RESONATOR, MULTIMODE LASER, LASER BEAM COHERENCE, LINE WIDTH

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/1471 STEP NO--UR/0104/70/015/000/0821/0823

CIRC ACCESSION NO--AP0118460

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

2/2 043 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0118460

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. INVESTIGATION OF THE INFLUENCE OF THE RESONATOR'S GEOMETRICAL PARAMETERS ON THE NUMBER OF TRANSVERSE MODES IN A SOLID STATE LASER HAVING LENSES WHICH ARE USED TO OBTAIN SUFFICIENT ANGULAR DIVERGENCE FOR TOTAL SPECTRAL OVERLAP OF THE EMITTED LONGITUDINAL MODES (STRONGLY DEGENERATE CASE). IT IS SHOWN THAT THE DEPENDENCE OF THE NUMBER OF TRANSVERSE MODES ON THE RESONATOR PARAMETERS HAS A SHARP MAXIMUM FOR A RESONATOR WHOSE LENGTH IS LARGE IN COMPARISON WITH THE LENGTH OF THE ACTIVE ELEMENT. THIS MAXIMUM CAN BE USED FOR EXPERIMENTAL PRODUCTION OF A STABLE REGULAR KINETIC MODE OF EMISSION WITH A NARROW SPECTRAL LINE.

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USSR

UDC 632.954:635.342

PEN'KOV, L. A., TYUNYAYEVA, G. N., All Union Scientific Research Institute of the Agriculture of Central Regions of Non-Chernozem Zone

"Promising Herbicides for White Head Cabbage"

Moscow, Khimiya v Sel'skom Khozyaystve, Vol 11, No 10 (120), 1973, pp 50-53

Abstract: Ramrod, atsilide, and mesaronyl are promising agents for the control of weeds on white head cabbage fields. On cultured meadow-swampy soils ramrod and atsilide should be applied in doses of 7-8 kg per hectare, one day prior to seedling planting, while the dose of mesaronyl is 1.5-2 kg/hectare, 10 days after the planting. Mesaronyl is longer acting than ramrod towards various weeds. It has been established that the concurrent use of ramrod, mesaronyl and semerone is possible; the first two should be applied before planting, semerone -- 15 days after. When used in optimal doses, ramrod and mesaronyl did not affect the quality of cabbage.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

1/2 024 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--RAPID PYROLYSIS OF IRSHA BORODINO LIGNITE -U-

AUTHOR-(03)-TYUNYUKOV, B.K., LISIN, D.M., LOSKUTOVA, YE.N.

COUNTRY OF INFO--USSR

SOURCE--KHIM. TVERD. TOPL. 1970, (2), 113-19

DATE PUBLISHED--------70

SUBJECT AREAS--PROPULSION AND FUELS, CHEMISTRY

TOPIC TAGS--PYROLYSIS, THERMAL EFFECT, CHEMICAL REACTION RATE, SOLID FUEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/0967 STEP NO--UR/0467/70/000/002/0113/0119

CIRC ACCESSION NO--AP0133053

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

2/2 024 UNCLASSIFIED

CIRC ACCESSION NO--AP0133053 PROCESSING DATE--13NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EFFECT OF CONTACT TIME AND TEMP. ON THE YIELDS AND COMPN. OF THE TITLE PYROLYSIS PRODUCTS WERE STUDIED IN A LAB. APP. LIGNITE OF 0.4-0.1 MM PARTICLE SIZE WAS CONTINUOUSLY HEATED IN A FALLING LIGNITE FLOW WITHOUT A HEAT CARRIER AT 250-700 AND AT 400-800DEGREES AND CONTACT TIMES OF 0.33-1.53 AND 10.1-98.0 SEC, RESP. AT 10-20 SEC OUTPUT TIME AN INCREASE IN TEMP. FROM 550 TO 700DEGREES CAUSED DECREASES IN THE YIELD OF TAR AND H SUB2 O FROM 12 TO 8 AND FROM 8 TO 4PERCENT, RESP.; WITH CONTACT TIMES SMALLER THAN 1 SEC THE DECREASE OF THE YIELDS WITH INCREASING TEMP. WAS SMALLER. AT THE SAME TEMP., THE YIELDS OF TAR AND H SUB2 O INCREASED WITH DECREASING CONTACT TIMES; FOR EXAMPLE, AT 700DEGREES WITH CONTACT TIME DECREASING FROM 10-20 TO SMALLER THAN 1 SEC, THE YIELDS INCREASED BY 1.5 AND 4PERCENT, RESP. THE YIELDS OF GAS INCREASED WITH INCREASING TEMP. AND CONTACT TIME.

FACILITY: INST. FIZ.-KHIM. OSNOV PERERABOT. MINER. SYR'YA, NOVOSIBIRSK, USSR.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

1/2 019 UNCLASSIFIED

TITLE--THE ADIABATIC S MATRIX AND THE QUASIPARTICLES -U- PROCESSING DATE--09OCT70

AUTHOR-(03)-LIKHACHEV, V.N., TYUPKIN, YU.S., SHVARTS, A.S.

COUNTRY OF INFO--USSR

SOURCE--TEORETICHESKAYA I MATEMATICHESKAYA FIZIKA, 1970, VOL 2, NR 1, PP 3-29

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--S MATRIX, HAMILTONIAN, IDEAL GAS, FERMI STATISTICAL THEORY, EXCITED STATE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1978/1230 STEP NO--UR/0646/70/002/001/0003/0029

CIRC ACCESSION NO--AP0046153

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

2/2 019 UNCLASSIFIED PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0046153

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ADIABATIC S MATRIX S SUBALPHA FOR NORMAL FERMI SYSTEMS IS STUDIED. THE EXPRESSIONS ARE OBTAINED FOR ITS ELEMENTS WITH SMALL VALUES OF ALPHA. THE CONNECTION IS ESTABLISHED BETWEEN THE OPERATORS S SUBALPHA AND THE SCATTERING MATRIX FOR PHYSICAL QUASI PARTICLES. THE UNITARY OPERATOR IS CONSTRUCTED WITH TRANSFORMS THE HAMILTONIAN UNDER CONSIDERATION INTO THE HAMILTONIAN OF IDEAL GAS WITH ACCURACY UP TO MEMBERS WHICH ARE NOT ESSENTIAL WHEN WE ANALYZE THE WEAKLY EXCITED STATES.

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USSR

MAKUNIN, M. S., ZHELADNOV, V. I., TYUPOV, G. G., FILIPPOV, A. F., and SUNDYREV, I. A., Moscow

UDC 621.791.85

"Elimination of Nitrogen and Oxygen From Chromium-Nickel Alloys During Electron Beam Smelting"

Moscow, Fizika i Khimiya Obrabotki Materialov, No 1, Jan/Feb 73, pp 39-43

Abstract: Oxygen was removed from Ni-Cr-Ti alloy during a 5-min-long exposure to an electron beam when the surface temperature of the molten metal was 1600-1620°C. The residual concentration of oxygen was 0.001%, regardless of the initial oxygen concentration. Metallographic analysis of the initial and refined metal showed that oxygen was present in this alloy in the form of a complex spinel consisting of Cr_2O_3, Al_2O_3, and TiO_2 (if Ti is present). The refined metal was purer and the inclusions in it were distributed more uniformly. In order to decrease the concentration of nitrogen in Ni-Cr alloy from 0.099-0.047 to 0.02-0.01%, a 20-minute exposure of molten metal to the electron beam was required. For nickel alloys containing 8 and 20% Cr, the elimination of nitrogen amounted to 30-40%. The addition of 1.5% Ti to nickel alloy containing 8% Cr did not change the elimination kinetics of nitrogen. However, the purification rate of the alloy containing 20% Cr and 2% Ti from nitrogen was

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

MAKUNIN, M. S., et al, Moscow, Fizika i Khimiya Obrabotki Materialov, No 1, Jan/Feb 73, pp 39-43

higher compared with the same alloy without Ti. A sharp decrease in the concentration of oxygen and nitrogen during melting of the electrode and a short exposure of molten metal to the electron beam showed that this method of refining of metals has many advantages. The largest amount of gases were removed from the thin layer of molten metal during the fusion of the electrode and from molten metal drops. The rate of elimination of nitrogen from the molten metal is controlled by the mass transfer processes.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

MYSHKIS, A. D., KOPACHEVSKIY, N. D., TYUPTSOV, A. D.

UDC 532.593

"Oscillations of a Liquid Under Conditions of Total or Partial Weightlessness"

Tr. V Mezhdunar. konf. po nelineyn. kolebaniyam. T. 3 (Works of the V International Conference on Nonlinear Oscillations. Vol. 3), Kiev, Institute of Mathematics of the Academy of Sciences UkrSSR, 1970, pp 518-524 (from RZh-Mekhanika, No 12, Dec 71, Abstract No 12B732)

Translation: A survey of the results of mathematical studies of small motions of a liquid that were conducted at the Physicotechnical Institute of Low Temperatures of the Academy of Sciences UkrSSR is presented. This work was concerned with the study of the following problems in the dynamics of an incompressible liquid subjected to forces of surface tension: (1) investigation of the stability of the state of rest; (2) investigation of the reserve of stability; (3) the Cauchy problem and the spectral problem of oscillations of an ideal liquid; (4) the Cauchy problem and the spectral problem of oscillations of a viscous liquid; (5) the asymptotic behavior of the oscillation frequencies of an ideal liquid in an axisymmetric vessel; (6) approximate method for calculating free oscillations. N. N. Moiseyev.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

Acc. Nr: AP0045076 Abstracting Service: 5/70 Ref. Code: UR0198

— INTERNAT. AEROSPACE ABST.

A70-23285 # Propagation of longitudinal waves in a viscoelastic cylinder with allowance for thermomechanical coupling (Rasprostranenie prodol'nykh voln v viazko-uprugom tsilindre s uchetom termomekhanicheskogo sopriazheniia). A. D. Kovalenko (Akademiia Nauk Ukrainskoi SSR, Institut Mekhaniki, Kiev, Ukrainian SSR) and V. I. Tkachenko (Kievskii Gosudarstvennyi Universitet, Kiev, Ukrainian SSR). *Prikladnaia Mekhanika*, vol. 6, Jan. 1970, p. 3-9. 6 refs. In Russian.

Analysis of the influence of the interrelation between the strain and temperature fields on the propagation of harmonic viscoelastic longitudinal waves in an infinite solid cylinder insulated at the surface. The problem is solved in linear formulation without allowance for the temperature dependence of the thermophysical and mechanical characteristics of the medium. Approximate expressions for the phase velocities and attenuation coefficients are obtained for a predominantly viscoelastic wave and a wave similar in nature to a pure thermal wave. Numerical values for these wave characteristics are obtained for a modified viscoelastic longitudinal wave propagating in a polyethylene cylinder.

V.P.

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REEL/FRAME 19771989

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

GRISHIN, B.S., RODINA, M.I., TYURDREYEV, YU. S.

UDC 621.385.632 (088.8)

"Traveling-Wave Tube"

USSR Author's Certificate No 245927, filed 6 Oct 67, published 15 May 70 (from RZh--Elektronika i yeye primeneniye, No 2, February 1971, Abstract No 2A203P)

Translation: A traveling-wave tube is proposed with a spiral delay line and additional sections of the spiral with a decreased pitch, located along the length of the TWT against both sides of the spiral delay line behind the energy inputs. With the object of averting radiation from the ends of the delay line and an increase of the stability of operation of the TWT, periodically-located metal connections which mutually lock the neighboring loops of the spiral are installed in the additional sections of the spiral.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

KASHNIKOV, N.G., POKRYVAYLO, A.B., TYUREMNOV, G.N., NIKOL'SKIY, V.M.

UDC 621.387

"Dual Mechanotron"

USSR Author's Certificate No 217656, filed 18 Feb 66, published 16 Jan 70 (from RZh--Elektronika i yeye primeneniye, No 11, November 1970, Abstract No 11A148P)

Translation: A dual longitudinal control mechanotron is proposed, which differs in the fact that with the object of increasing the sensitivity and precision, the mechanotron container is filled with gas, the anode is made in the form of wire rings, and the cathode in the form of a plate, in order to assure formation of a corona discharge.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

TYURENKOV, V. A.

UDC 681.3.001:518.5

"Some Algorithms for Constructing the Shortest Circuit"

Vychisl. sistemy (Computation Systems), Vyp. 34, Novosibirsk, Nauka Press, 1969, pp 51-63 (from RZh-Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 3, Mar 70, Abstract No 3B74)

Translation: This article contains an investigation of some effective algorithms for construction of the shortest loop between given vertexes a and b of a nonoriented connected graph with sides of positive length. All these algorithms except the algorithm A_2 are valid when the lengths of the sides are expressed by arbitrary positive numbers. When the lengths of the sides are expressed by integers, an evaluation of the memory V(A) is presented. Some recommendations are presented with respect to application of the described method of economy of computer when constructing the shortest loop between given vertexes a and b. The bibliography has five entries.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

UDC 547.269.3+541.49

IL'YASHEVICH, I. I., PODCHAYNOVA, V. N., SEREBRYAKOVA, N. V., YEGOROVA, L. G., and TYURENKOVA, G. N., Ural Polytechnical Institute imeni S. M. Kirov

"Synthesis of Complexing Agents. Ethylenediamine-N,N'-di-ß-ethanesulfonic-N-methylphosphonic Acid and Its Properties"

Leningrad, Zhurnal Obshchey Khimii, Vol 41 (103), No 4, Apr 71, pp 758-761

Abstract: Ethylenediamine-N,N'-di-ß-ethanesulfonic acid was dissolved in water; its pH was brought to 8-9. Chloromethylphosphonic acid was prepared. Both solutions were then combined, kept on water bath until the pH ceased to change, maintaining it at 8-9 during the reaction time. At the completion of the reaction, the solution was cooled, its pH lowered to 1-2 by addition of HCl, the solution was filtered and evaporated. Next it was passed through a KU-1 ion exchange column, evaporated, and the product -- ethylenediamine-N-N'-di-ß-ethanesulfonic-N-methylphosphonic acid (I), m.p. 86-87° is precipitated with methanol. It is more basic than ethylenediamine-N,N'-di-ß-ethanesulfonic acid, but less basic than ethylenediamine-N,N'-tri-ß-ethanesulfonic acid (II). It was shown that presence of the $P(O)(O^-)_2$ group in (I) increases the stability of its complexes with cations, as compared to (II).

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

UDC 547.2.9.3+541.49

SEREBRYAKOVA, N. V., YEGOROVA, L. G., and TYURENKOVA, G. N.

"Synthesis of Complexing Compounds. Ethylenediamine-N,N'-di-β-ethanesulfonyl-N-carboxymethyl-N'-methylphosphonic Acid (EDSUP)."

Leningrad, Zhurnal Obshchey Khimii, Vol 41, No 8, Aug 71, pp 1812-1815

Abstract: Continuing their work on the synthesis of complexing agents and the study of their chemical properties, the authors synthesized ethylenediamine-N,N'-di-β-ethanesulfonyl-N-carboxymethyl-N'-methylphosphonic acid (EDSUP) and determined its dissociation constants by the potentiometric method. It is shown that replacement of a carboxymethyl group in the molecule of ethylenediamine-N,N'-di-β-ethanesulfonyl-N,N'-diacetic acid (EDES) by the methylphosphonic group increases the stability of the resultant complex compounds. EDSUP is superior to EDES in complexing efficiency, but forms complexes less stable than those of EDTA. The authors thank I. YA. POSTOVSKIY for his advice and interest in the work.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

1/2 019 UNCLASSIFIED

TITLE--HYDROGENATION OF METHYLETHYLETHYNYLCARBINOL ON A PALLADIUM CATALYST -U-

PROCESSING DATE--27NOV70

AUTHOR-(02)-TYURENKOVA, O.A., ZHAKIN, V.P.

COUNTRY OF INFO--USSR

SOURCE--ZH. FIZ. KHIM. 1970, 44(2), 379-83

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--PALLADIUM, CATALYTIC HYDROGENATION, UNSATURATED HYDROCARBON, HYDROXYL RADICAL, SOLVENT ACTION, ACTIVATION ENERGY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/0815

STEP NO--UR/0074/70/044/002/0379/0383

CIRC ACCESSION NO--AP0134548

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

2/2 019

CIRC ACCESSION NO--AP0134548 UNCLASSIFIED PROCESSING DATE--27NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE RATE OF HYDROGENATION OF MEETC(OH)C TRIPLE BOND CH OVER A PD CATALYST WAS MEASURED BY H ABSORPTION AND BY A POTENTIOMETRIC METHOD. IT DECREASED WITH THE SOLVENT IN THE ORDER MEOH GREATER THAN ETOH GREATER THAN ME SUB2 CO GREATER THAN H SUB2 O. THE SELECTIVITY FOR THE HYDROGENATION OF C TRIPLE BOND C OVER C:C DECREASED IN THE ORDER MEOH, ETOH GREATER THAN ME SUB2 CO GREATER THAN H SUB2 O. MEOH AND ME SUB2 CO POISONED THE CATALYST, BUT ETOH DID NOT. THE APPARENT ACTIVATION ENERGY IN H SUB2 O AT 10-30DEGREES FOR HYDROGENATION OF C TRIPLE BOND C OR C:C WAS 5.5 OR 1.6 KCAL-MOLE, RESP.

FACILITY: KURGAN. SEL'SKOKHOZ. INST., KURGAN, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

2/2 012 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0116848

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CATALYSTS WERE PREPD. BY DISSOLVING 1 G POLY(VINYL ALC.) IN 45 ML WATER, 50PERCENT GLYCEROL SOLN., DIETHYLENE GLYCOL, OR ETOH CONTG. 10.4 MILLIMOLE PDCL SUB2-L. AND ELECTROLYTICALLY REDUCING PDCL SUB2 TO PD, WHICH IS PPTD. THE MOST ACTIVE CATALYST WAS OBTAINED WHEN 96PERCENT ETOH WAS USED. THE INCREASE OF ELECTROLYTIC REDN. TEMP. FROM SIMILIAR TO 20DEGREES TO 40DEGREES INCREASED THE CATALYST ACTIVITY AS JUDGED BY THE HYDROGENATION OF 4 CONSECUTIVE PORTIONS OF ME SUB2 C(OH)C:CH OVER THE CATALYST. REDN. TEMPS. GREATER THAN 40DEGREES DO NOT INCREASE THE CATALYST ACTIVITY. ALL THE CATALYSTS RETAINED THEIR ACTIVITY AFTER STORAGE FOR SIMILIAR TO 2 MONTHS. FACILITY: KURGAN. SEL'SKOKHOZ. INST., KURGAN, USSR.

1/2 012 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--DEPENDENCE OF THE ACTIVITY AND STABILITY OF A PALLADIUM CATALYST APPLIED TO POLY(VINYL ALCOHOL) (SUBSTRATE) ON PREPARATION CONDITIONS -U-

AUTHOR-(02)-TYURENKOVA, O.A., CHIMAROVA, L.A.

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0"

COUNTRY OF INFO--USSR

SOURCE--ZH. FIZ. KHIM. 1970, 44(1), 88-92

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--POLYVINYL ALCOHOL, ELECTROLYTIC REDUCTION, PALLADIUM COMPOUND, ETHANOL, HYDROGENATION, CATALYST ACTIVITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1995/1401 STEP NO--UR/0076/70/044/001/0088/0092

CIRC ACCESSION NO--AP0116848

UNCLASSIFIED

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

TYURIKOV, G. S.

Gas Analysis

ARM/FSTC /HT-23-830-72

Joyce

DEPARTMENT OF THE ARMY
U.S. ARMY FOREIGN SCIENCE AND TECHNOLOGY CENTER
220 SEVENTH STREET NE.
CHARLOTTESVILLE, VIRGINIA 22901

In Reply Refer to:
FSTC-HT-23-830-72
DIA Task No. T70-23-01

Date: 26 June 1972

B. CR/U

TRANSLATION

ENGLISH TITLE: Use of a High-Temperature Fuel Cell in Gas Analysis

FOREIGN TITLE: Ispol'zovaniye vysokotemperaturnogo toplivnogo elementov v analize gazov

AUTHOR: S. I. Bykov, A. A. Popov, A. V. Silakov, L. A. Mikhaylina, G. S. Tyurikov

LANGUAGE: Russian

SOURCE: Zavodskaya Laboratoriya No. 12, pp 1448-1451, (1970)

TRANSLATOR: Leo Kanner Assocs.

REQUESTOR: ~~ACSTT-GE~~ Mr. Busi

ABSTRACT: Gases may be analyzed in apparatus containing a high-temperature fuel cell. Carbon dioxide, hydrogen, carbon monoxide, and hydrocarbons can be determined under certain conditions.

DESCRIPTORS: Gas Analyzer
Fuel Cell
Gas Analysis
Polarographic Analyzer
Polarographic Analysis

USSR DIVISION/CRS
AUG 31 3 31 PM '72

GRAPHICS NOT REPRODUCIBLE

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

1/2 023

UNCLASSIFIED

TITLE--ELECTROCHEMICAL OXIDATION OF CARBON MONOXIDE IN AQUEOUS SOLUTION. II. OXIDATION OF CARBON MONOXIDE IN ACID, SOLUTIONS ON A PLATINUM

PROCESSING DATE--30OCT70

AUTHOR-(03)-MILLER, N.B., TYURIKOVA, O.G., VESELOVSKIY, V.I.

COUNTRY OF INFO--USSR

SOURCE--ELEKTROKHIMIYA 1970, 6(4), 468-72

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--AQUEOUS SOLUTION, CHEMICAL REACTION RATE, PLATINUM ELECTRODE, CARBON MONOXIDE, ELECTROCHEMISTRY, OXIDATION, CHEMICAL BONDING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1998/1159

STEP NO--UR/0364/70/006/004/0468/0472

CIRC ACCESSION NO--AP0121718

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

2/2 023 UNCLASSIFIED

CIRC ACCESSION NO--AP0121718 PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE OXIDN. OF CO ON A PT ELECTRODE WAS STUDIED BY ANODIC POLARIZATION IN 0.1 N H SUB2 SO SUB4 AT 25DEGREES. AT AND AROUND THE EQUIL. POTENTIAL (0.05 V), THE CO OXIDN. IS SLOW AND PROCEEDS AT THE EXPENSE OF THE CATALYTIC CONVERSION OF WATER. THE ELECTROCHEM. OXIDN. PROPER BEGINS AT 0.85 V AND IS CONTIGENT UPON THE FORMATION OF O AND ITS ADSORPTION ON THE ELECTRODE SURFACE. IN THIS REGION THE REACTION RATE IS GOVERNED BY THE DIFFUSION OF CO. A FURTHER INCREASE IN THE POTENTIAL ABOVE 1.1 V LEADS TO A PRONOUNCED DECREASE IN THE REACTION RATE, DUE TO THE FORMATION OF AN OXIDE BOND BETWEEN THE O AND THE ELECTRODE SURFACE. FACILITY: NAUCH. ISSLED. FIZ. KHIM. INST. IM. KARPOVA, MOSCOW, USSR.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

Veterinary Medicine

USSR UDC 619.616.988.43:547.963.3

KHAZIPOV, N. Z., and TYURIKOVA, R. N., Kazan' Veterinary Institute, Kazen'

"Biosynthesis of Proteins and Ribonucleic Acids in Cells During the Propagation of the Virus of Foot-and-Mouth Disease"

Moscow, Veterinariya, No 5, May 73, pp 65-67

Abstract: The biosynthesis of RNA and proteins during culturing of the virus of foot-and-mouth disease on a culture of PP cells was investigated. Growth of the virus was accompanied by an inhibition of the formation of cell protein. The virus-specific protein that was isolated had no effect on the synthesis of PP cell protein; the inhibiting effect, which also involved suppression of the synthesis of ribonucleic acids in the cells, was associated with the virus genome rather than virion proteins. On infection of a culture of chick embryo fibroblast cells, which are insensitive to the virus, the inhibitor could be isolated from both the cytoplasm and nuclear fractions. The isolated inhibitor had the characteristics of a protein. It suppressed the synthesis of protein in the chick embryo fibroblast cells, while the formation of cell RNA on infection of these cells with the virus was not affected. In the presence of actinomycin D, which inhibited to 96% the synthesis of cell RNA, synthesis of RNA was induced by the virus took

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

KHAZIPOV, N. Z., and TYURIKOVA, R. N., Veterinariya, No 5, May 73, pp 65-67

place. In infected PP cell cultures, emetine fully suppressed the synthesis of virus RNA by acting on the formation of cell protein. Guanidine completely inhibited the synthesis of virus RNA in these cultures by blocking directly its formation.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

Public Health, Hygiene and Sanitation

USSR

UDC 616-057:796

LOMAREV, P. I.; POPOV, S. N.; TYURIN, A. M.; SHAPKAYTS, Yu. M.; Laboratory of Functional Diagnostics, Institute of Physical Culture imeni P. F. Lesgaft

"Effect of Athletic Activity on the Incidence and Duration of Some Diseases"

Moscow, Sovetskaya Meditsina, Vol 34, No 2, Feb 71, pp 100-103

Abstract: The incidence and duration of diseases involving an initial request for medical treatment was determined for employed persons engaged in athletics (group A) and not engaged in athletics (group B). The persons in both groups were otherwise healthy males, most of them young. The study was conducted for three years. The incidence of diseases per 1,000 persons was as follows: simple sore throat A 48, B 135; influenza A 33, B 24; severe colds A 554, B 920; furunculosis and abscesses A 99, B 167; diseases of the locomotor apparatus A 127, B 107; diseases of the peripheral nervous system A 44, B 19; diseases of digestive organs A 29, B 45; eye diseases A 75, B 99. The

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

LOMAREV, P. I., et al, Sovetskaya Meditsina, Vol 34, No 2, Feb 71, pp 100-103

average incidence of all diseases per 1,000 persons was 126 and 189 for group A and B, respectively. The time in days lost from work per case was 4.9 and 7.7 for group A and B, respectively. The higher incidence of diseases of the peripheral nervous system (radiculitis, plexitis, neuritis, etc) and of the locomotor apparatus for persons engaged in athletics can be explained by excessive strain in athletic training due to the injudicious nature of this training. The average number of days lost due to any single type of disease, including diseases of the peripheral nervous system and of the locomotor apparatus, was lower for athletes than non-athletes.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

TYURIN, A. M., SAPRYKIN, V. A., and SHCHEGLOV, G. A.

"Evaluation of the Possibility of Identification of Pure Tonal Signals by the Human Auditory Analysor"

Moscow, Biofizika, Vol 15, No 5, Sep/Oct 70, p 942

Abstract: A study was made of the sensitivity of the auditory analysor with respect to the frequency, duration, and intensity of the signal. On the basis of the experimental data, a relationship is established for the probability of correct identification of signals as a function of each of these three parameters. It was established that the probability characteristics of identification are subject to a logarithmically normal law. Experimental results and calculations showed that the resolving power of the auditory analysor with respect to frequency and time is such that the relationship sought can be obtained only by means of an essentially nonlinear device. A nonlinear mechanism of augmentation of the degree of perception is discussed, on the assumption that the velocity of propagation of excitation is is function of the intensity of the stimulus applied. (The complete text of the article was filed at VINITI [All-Union Institute of Scientific and Technical Information] under No 1786-70 on 4 June 1970.)

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

1/2 021 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--ALTERNATING CURRENT PHOTOCONDUCTIVITY RELAXATION OF COLORED POTASSIUM CHLORIDE CRYSTALS -U-

AUTHOR-(03)-DYACHENKO, N.G., MANDEL, V.E., TYURIN, A.V.

COUNTRY OF INFO--USSR

SOURCE--FIZ. TVERD. TELA 1970, 12(5), 1571-3

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--PHOTOCONDUCTIVITY, POTASSIUM CHLORIDE, SINGLE CRYSTAL, ALTERNATING CURRENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3007/1134 STEP NO--UR/0181/70/012/005/1571/1573

CIRC ACCESSION NO--AP0136554

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

2/2 021 UNCLASSIFIED

CIRC ACCESSION NO--AP0136554 PROCESSING DATE--27NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PHOTOCOND. WAS INVESTIGATED OF ADDITIVELY COLORED KCL SINGLE CRYSTALS. IN SPECIMENS WITH SPUTTERED ELECTRODES, CONVENTIONAL PHOTOCOND. WAS OBSD. FROM ROOM TEMP. TO 150DEGREES. WITHOUT SPUTTERED ELECTRODES, THE PHOTOEFFECT WAS DUE TO INCREASED CAPACITATIVE SUSCEPTANCE. ITS KINETICS IS COMPLEX.

FACILITY: ODESS. GOS. UNIV. IM. MECHNIKOVA, ODESSA, USSR.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

GONCHUKOV, V. V., LEYZER, V. P., SMIRNOV, R. V., TYURIN, A. Ya.

"Development and Study of Small Memory Cubes Based on Thermally Stable Ferrite Cores"

Moscow, Magnitnyye Elementy Pamyati, 1972, pp 67-71.

Abstract: This article studies problems related to the development and investigation of small memory cubes of magnetic cores. As an example, a 1024 16-bit word memory unit designed for matrix-type storage systems is studied. The analysis of designs of small memory sections shows that arrangement of a memory section on a flat plane has definite advantages over other arrangements. A photograph of the memory unit studied is presented.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

UDC 632.95

LISINA-KULIK, Ye. S., TYURIN, B. F.

"Effect of Certain Fungicides on the Fungus Resistance of Paints and Varnishes"

Lakokrasoch. materialy i ikh primeneniye (Paints and Varnishes and Their Application), 1972, No 5, pp 38-41 (from RZh-Khimiya, No 6 (II), 1973, Abstract No 6N673)

Translation: A study was made of the fungus resistance of the paint and varnish systems EP-057+FP-545, AK-070+ML-12+ML-165, AK-70+VL-02+FP-545, EP-057+EP-575 (with respect to steel and aluminum) with copper 8-oxyquinolate, salicylanilide, and α-naphthoquinone. It was discovered that one and the same fungicide which is active in a single system can be inactive in another or even in the same system on another substrate. The fungicide promoting the oxidation of the substrate or reacting with the coating materials with the formation of oxides worsens its fungus resistance. The activity of the fungicides in the coating is affected by the operating conditions, the peculiarities of the vital activity of the forms of microorganisms damaging the coatings, and their capacity for adaptation. The test data are presented which indicate gradual adaptation of the fungi to the fungicide and, finally, the possibility of normal growth of the fungi

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

LISINA-KULIK, Ye. S., TYURIN, B. F., Lakokrasoch. materialy i ikh primeneniye, 1972, No 5, pp 38-41

in media containing the fungicide (after 20-30 passages). All species of the investigated fungicides adapt more quickly to phenol and more slowly to salicylic acid. The Penicillium and then Aspergillus adapt to the fungicides easier than the others, and the Fungi imperfecti Fusarium sambucinum, Trichoderma lignorum and Alternaria tenius have more difficulty adapting.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

UDC: 621.317.727.1(088.8)

BUTS, V. P., SMIRNOV, E. N., TYURIN, I. P.

"A Capacitive Voltage Divider"

USSR Author's Certificate No 260022, filed 24 Jun 68, published 27 Apr 70 (from RZh-Radiotekhnika, No 11, Nov 70, Abstract No 11A286 P)

Translation: The proposed design has the purpose of improving the shielding of a low-potential electrode in a high-voltage vacuum capacitor which is part of a capacitive voltage divider without reducing the electrical strength. For this purpose, the high-potential electrode is made in the form of a cylinder which surrounds the low-potential electrode, and which is flanged toward the shielding cylinder. This cylinder is equipped with a flange directed toward the high-potential electrode, the inner edge of this flange being located inside the solid angle bounded by the lower edge of the low-potential electrode and the outer edge of the flange on the high-potential electrode. E. L.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

UDC: 621.7.073

SEVERDENKO, V. P., SUKHODREV, E. Sh., CHELYSHEV, A. P., TYURIN, L. N., and ORLOV, A. R.

"Stability of Gear Matrices Obtained by Plastic Deformation Methods"

Minsk, Izvestiya Akademii nauk BSSR--Seriya fiziko-tekhnicheskikh nauk, No 4, 1973, pp 5-7

Abstract: Results are given of research on the stability of gear matrices under production conditions in the Borisovskiy Plant for Auto-Tractor Electrical Equipment, in the process of stamping out ST-8 starter gears by the method of hot combination stamping. This method, discussed in an earlier paper (V. P. Severdenko, et al, Promyshlennost' Belorusii, No 4, 1969), was investigated in the present paper at a stamping tempo of 25 sec with the specimens heated to 750-800° C. The stability of matrices made of fast-cutting steels R12 and R18, obtained by closed broaching, was investigated. Matrices made by gear-shaping and by broaching were compared. Three causes of matrix failure were found: the appearance of thermal cracks; abrasive wear of the pattern; warping of the matrix pattern. Methods for improving the stability of the matrices are recommended.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

Acc. Nr. AP0049425 Abstracting Service: CHEMICAL ABST. 5-70 Ref. Code UR 0129

102849n Economical, alloyed tool steel for hot extrusion. Tursunov, A. V.; Tyurin, N. F.; Zubkov, A. P.; Litvinenko, Yu. P.; Sabaev, V. I. (Donets. Nauch.-Issled. Inst. Chern. Met., Donetks, USSR). *Metalloved. Term. Obrab. Metal.* 1970, (1), 32-4 (Russ). As a result of earlier lab. studies a new alloyed steel Cr-Mn-Si, further alloyed by a complex W + Mo + V, was proposed as a construction steel and steel for extrusion instruments. In this work the properties were studied of tool steel 4Kh2GSVMF in comparison with 3Kh2V8F steel. Reason for replacing of high-W steel 3Kh2V8F by low-W steel 4Kh2GSVMF is W deficiency. Steel 4Kh2GSVMF contained C 0.35-0.45, Mn 1.2-1.5, Si 1.3-1.6, Cr 2.0-2.5, W 0.2-0.5, Mo 1.1-1.4, and V 0.2-0.5%. Steel 3Kh2V8F contained C 0.30-0.40, Mn 0.20-0.40, Si 0.35, Cr 2.2-2.7, W 7.5-9.0, and V 0.2-0.5%. Steel 4Kh2GSVMF had following crit. points: Ac_1 and Ac_3 = 754 and 805°, Ar_3 and Ar_1 = 704 and 662°. Max. hardness and absence of overheating in microstructure was obsd.

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REEL/FRAME
19801260

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AP0049425

at 950–1000°. Heat-resistance of 4Kh2GSVMF steel is higher at 600 and 700° than that of std. steel 3Kh2V8F, and somewhat lower at 625 and 650°. Hardenability of 4Kh2GSVMF steel is higher than that of std. steel, esp. after slow cooling in air, or in an oven. Steel 4Kh2GSVMF in comparison with std. steel 3Kh2V8F has higher heat-resistance, plasticity, viscosity, and lower temp. of hardening. Recommended thermal treatment of 4Kh2GSVMF steel is hardening from 970–1000° in oil, tempering at 580–600° to hardness HRC 46-50. Jiri Becvar

pc

H2

19801261

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

1/2 009 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--THE BEHAVIOUR OF HIGH ENERGY FORWARD SCATTERING AMPLITUDE -U-

AUTHOR-(03)-SAVRIN, V.I., TYURIN, N.YE., KHRUSTALEV, O.Z.

COUNTRY OF INFO--USSR

SOURCE--TEORETICHESKAYA I MATEMATICHESKAYA FIZIKA, 1970, VOL 2, NO 3, PP 338-342

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--SCATTERING AMPLITUDE, HIGH ENERGY PARTICLE, ASYMPTOTIC PROPERTY, HEAVY NUCLEUS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1985/1445 STEP NO--UR/0646/70/002/003/0338/0342

CIRC ACCESSION NO--AP0101531

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

2/2 009 UNCLASSIFIED

CIRC ACCESSION NO--AP0101531 PROCESSING DATE--16OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. UNITARITY CONDITION IS USED FOR THE INVESTIGATION OF THE BEHAVIOUR OF FORWARD SCATTERING AMPLITUDE IN MODERATELY HIGH ENERGY REGION AND OF THE CHARACTER OF TOTAL HADRON CROSS SECTION APPROACHING ITS ASYMPTOTIC LIMIT.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

UDC 612.82-089:615.837.3

TYURIN, S. I., BRAZOVSKAYA, F. A., ININ, Yu. S., PAYKIN, D. I., SIROTYUK, M. G., and GAVRILOV, L. R., Institute of Higher Nervous Activity and Neurophysiology, Academy of Sciences USSR, Central Design Bureau, Academy of Medical Sciences USSR, and Acoustic Institute, Academy of Sciences USSR

"Use of Focused Ultrasound for Local Destruction of Brain Structures Through Intact Skull"

Moscow, Byulleten' Eksperimental'noy Biologii i Meditsiny, No 5, 1973, pp 120-121

Abstract: Using a focusing emitter to create an ultrasonic field, the authors irradiated portions of rabbit brains 16 to 20 mm from the surface in the region of the hypothalamus and mesencephalon without preliminary trephination. A single sonication produced a lesion 0.2 to 1 mm in diameter and 1 to 3 mm in length. No pathological changes were noted on the way to the target area in which histological examination of frontal sections revealed a focus of coagulation necrosis.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

UDC: 621.385.633

BESSONOV, V. I., ZHELEZOVSKIY, B. Ye., and TYURIN, S. V.

"Starting Conditions of a Backward Wave Tube With Preliminary Modulation of the Electron Beam"

Kiev, Izvestiya VUZ USSR--Radioelektronika, No 10, 1972, pp 1216-1219

Abstract: This paper considers the operational peculiarities of a backward wave tube oscillator as affected by an external oscillator whose frequency is substantially different; the external signal is propagated in the electron beam in the form of space-charge current waves without coupling with the delay system. The case in which the outside signal is propagated along the beam in the form of a slow space-charge wave is also examined. The theoretical analysis begins with a system of equations describing the process of wave interaction for the case of phase velocity synchronization of the voltage waves in the delay system and the slow waves in the electron beam for a sufficiently large space charge. From this system, equations describing the spatial amplitudes of the waves in the delay system at the tube output are derived, and it is these equations from which the starting conditions of the tube are found.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR/Mil/RU

TYURIN, V., Engr-Capt 2nd Rank, author of article about the following:

GERBENSKIY, Arsen Ivanovich (photo), Michman, has served nine years at the Red Banner Training Detachment for Underwater Cruising imeni Kirov, Honored Rationalizer of the RSFSR.

Starshina serzhant, No. 2, 1971, p 26

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

UDC 669.74':621.73.011

LIVSHITS, B. G., OKHRIMENKO, Ya. M., TYURIN, V. A., and MILYAYEV, I. M., Moscow Institute of Steel and Alloys

"Deformation Characteristics of Low-Plasticity Manganese-Aluminum Alloys"

Moscow, Izvestiya Vysshikh Uchebnykh Zavedeniy -- Chernaya Metallurgiya, No 11, 1970, pp 126-129

Abstract: An experimental investigation was made of the temperature dependence of the plasticity of Mn-Al alloys (71% Mn; 29% Al) in dynamic and quasi-static compression, in the interval of 20-1100°C, and of the effect of the structural condition on strain hardening in the cyclic loading process. Experimental data are discussed by reference to diagrams showing the deformation stress during static upsetting at various temperatures and in relation to the compression degree in highly coercive and monotonic cyclic loading conditions. A sharp increase of plasticity was found in a low rate deformation at 550-850°C, which in this interval combines with phase transformations. An abnormal increase of the elastic modulus, the proportional limit, and the maximum compression stress takes place in a repeated loading after unloading the specimens in a highly coercive condition.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

UDC: 621.652:669.018.95(088.8)

(5)

ARABEY, B. G., BAULIN, Yu. N., ZVEREV, I. I., ZUKHER, M. S., KOKONIN, S. S., MARKOV, Yu. M., PORTNOY, K. I., SKLYAROV, N. M., TYURIN, V. A.

"Metal Ceramic Friction Material"

USSR Author's Certificate Number 346373, Filed 15/12/69, Published 18/08/72 (Translated from Referativnyy Zhurnal Metallurgiya, No 8, 1973, Abstract No 8G422P, by S. Krivonosova).

Translation: A metal ceramic friction material, for example for braking devices, is suggested, containing ZrC and B carbide. In order to increase the stability of the coefficient of friction, B nitride and metals of the Fe group are introduced to the composition, taken in any combination with the following ratio of components (in wt. %): B carbide -- 10-50, Fe-group metals, taken in any combination, 3-35, B nitride 1-5, ZrC -- remainder. The material suggested has the following properties: s. g. 5.52 g/cm^3; coefficient of friction at braking temperature 600° 0.50-0.55, at 800° 0.45-0.50; stability of coefficient of friction with specific braking energies 450 kgm/cm^2 0.75-0.88; at 923 kgm/cm^2 0.80-0.95; wear with specific braking energies of 450 and 923 kgm/cm^2, in μ/tori 2-6 and 6-11 respectively; permissible volumetric

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

Arabey, B. G., Baulin, Yu. N., Zverev, I. I., Zukher, M. S., Kokonin, S. S., Markov, Yu. M., Portnoy, K. I., Sklyarov, N. M., Tyurin, V. A., USSR Author's Certificate Number 346373, Filed 15/12/69, Published 18/08/72.

temperature 800°, heat conductivity factor in t/m·° at 100° 48.1, 200° 44.0, 400° 35.9, 600° 29.5, 800° 27.3, 1000° 26.4; specific heat capacity (in cal/g·°) at 100° 0.134, 200° 0.136, 400° 0.150, 600° 0.161, 800° 0.169, 1000° 0.184; tensile strength at 20° 36 kg/mm^2; bending strength at 20° 62 kg/mm^2; shear strength at 20° 13.8 kg/mm^2; a_H 0.15 kgm/cm^2.

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APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

UDC 539.4.015/019

OKHRIMENKO, Ya. M., and TYURIN, V. A., Moscow

"Surface of the Plastic Properties of a Metal"

Moscow, Izvestiya Akademii Nauk SSSR, Metally, No 3, May-Jun 71, pp 112-116

Abstract: An investigation was made of the plastic properties of a forged shaft 430 mm in diameter and 6000 mm long made from a 10.6-ton 38KhNVA steel ingot. A description is given of the forging process on a 3500-ton press. A disk 220 mm thick was cut from the shaft for the purpose of mechanical tests, from which 16 test samples oriented along 13 different directions were cut in the annular zone of the disk at a certain distance from the center. After two different heat treatments all samples were subjected to tensile strength tests. The results are presented in the form of "hodographs" of the lateral contraction. The graphic method of analysis which was developed makes it possible to interpret the test results by surfaces of plastic properties, such as index of lateral contraction and absolute anisotropy. The effect of repeated hardening with low temperature annealing, resulting in increased plastic properties, is noted. The minimum value of lateral contraction was observed with the sample oriented radially (15%), while the maximum value corresponded to a longitudinal orientation (39.6%). The absolute anisotropy is manifested more in sections of plastic property surfaces with γ parameters constant (0,30,60°).

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

UDC 539.374

PANFEROV, V. M., ISMAGILOV, R. KH., IL'IN, L. M., KOROL', YE. Z., TYURIN, V. F.

"Deformation of a Solid State in the Case of Complex Loading where the Major Axes of the Stress and Strain Tensors Remain Stationary"

Nauch. tr. In-t mekh. Mosk. un-ta (Scientific Works of the Mechanics Institute of Moscow University), 1971, No 8, pp 5-21 (from RZh-Mekhanika, No 11, Nov 71, Abstract No 11V365)

Translation: A version of plasticity theory is proposed which is adapted for the description of the stressed and strained states of a solid state during small elastic-plastic flows in the case where the major stress and strain axes are stationary; the theory is based on the tensor-line relation between the deviators of the stresses, strains and deformation rates. A description of the tested device built at the Mechanics Institute of Moscow State University which permits programmed loading of tubular test pieces under an axial force and internal pressure is presented. Results are presented from experiments performed on this device to check the hypotheses assumed in the proposed version of plasticity theory.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

TYURIN, V. F. (Engineer)

"1971 Moscow Welding Competition"

Moscow, Svarochnoye proizvodstvo, No 2, Feb 72, p 61

Abstract: Cited are the results of the Second Moscow Competition for the best techniques for utilizing the growth potentials in productivity, mechanization, and automation of production processes as well as increasing the economic effectiveness in welding production. The overall yearly savings amounted to more than four million rubles. The first prize was awarded for experimental research on designing electrodes for both welding and surface welding to meet technical specifications of the Volga Automobile Plant. The second award was given for low-temperature soldering-welding of cast iron using brass solders. The third prize was awarded for research and development in strengthening the parts of agricultural machinery by surface welding techniques; design, fabrication, and adoption of suspension tilters for turning heavy beam structures in the process of welding; welding of titanium alloys in chambers designed to evacuate the contaminated argon from the arc zone, reclaim it, and subsequently recycle to the chamber, including over-all control of microimpurities in argon. The names of personnel responsible for executing the projects and their associated organizations are cited.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

UDC 621.791.008.1

TYUREN, V. F.

"Moscow Welders' Conference"

Kiev, Avtomaticheskaya Svarka, No 10, Oct 70, pp 76-77

Abstract: An account is given of the 15th Moscow Scientific-Technical Conference on the results of Scientific and Manufacturing Developments for 1969 in the Area of Welding Production (June 8-10, 1970). The conference opened with several survey reports given by representatives of various organizations developing theories of new processes for welding different metals and nonmetals in the solid state, investigating the technical and operational strength of alloys, perfecting benign control methods, and developing highly efficient laboratory and engineering equipment. Reports read to the conference by the various participants are named and summarized.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

1/2 022 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--ADSORPTION OF VAPOR MIXTURES UNDER DYNAMIC CONDITIONS. IV. ADSORPTION OF VAPOR MIXTURES OF N HEPTANE AND CARBON TETRACHLORIDE ON A

AUTHOR-(02)-BYKOV, V.T., TYURIN, V.M.

COUNTRY OF INFO--USSR

SOURCE--ZH. FIZ. KHIM. 1970, 44(3), 805-7

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ADSORPTION, HEPTANE, CARBON TETRACHLORIDE, ENTROPY, CHEMICAL REACTION RATE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3004/2026 STEP NO--UR/0076/70/044/003/0805/0807

CIRC ACCESSION NO--AP0132284

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

2/2 022 UNCLASSIFIED

CIRC ACCESSION NO--AP0132284 PROCESSING DATE--20NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EXPTS. WERE CARRIED OUT IN 70 MM COLUMN, DIAM. 30 MM, FILLED WITH 48.09 G TRIPOLITE. N SERVED AS CARRIER GAS AT FLOW RATE 80 CM PRIME3-MIN. THE CONCNS. OF HEPTANE AND CCL SUB4 IN N WERE 0.38-1.87 AND 1.56-4.5 MILLIMOLE, RESP.-L. N. THE ADSORPTION OF CCL SUB4 WAS LOWER THAN THAT OF HEPTANE AND THE SLOPE OF THE ADSORPTION CURVE AT ONE HALF COLUMN SATN. WAS ALSO LOWER. THE LOW SORPTION OF CCL SUB4 IS EXPLAINED BY THE FACT THAT CCL SUB4 MOLS. ARE SORBED BY THE NEG. SIDE OF THE DIPOLE, THE HEPTANE MOLS. BY THE POS. SIDE OF THE DIPOLE, AND THE HYDRATED SURFACE OF THE ADSORBENT STIMULATES, THROUGH CH GROUPS, THE ADSORPTION OF HEPTANE. THE THERMODYNAMIC CHARACTERISTICS OF THE SYSTEMS WERE ESTD. FROM THE ISOTHERMS IN THE INTERVAL OF P-P SUB8 LOWER THAN 0.3 AT 25 AND 45DEGREES. THE ISOTERIC HEATS WERE DETD. FOR ONE HALF ADSORBENT SATN. (10.9 AND 9.7 KCAL-MOLE FOR HEPTANE AND CCL SUB4, RESP.). THE DIFFERENTIAL ENTROPIES (LIQ. STATE TAKEN AS STANDARD) WERE PLUS 0.6 AND MINUS 4 CAL-MOLE DEGREE FOR CCL SUB4 AND HEPTANE, RESP. THE MOBILITY IN THE ADSORBED STATE IS HIGHER FOR CCL SUB4 THAN FOR HEPTANE MOLS. A POTENTIAL BARRIER HINDERS THE HEPTANE MOTION. THE ADSORPTION OF CCL SUB4 HEPTANE MIXTS. DEPENDS ON THE STARTING COMPN. OF THE MIXT. THE SLOPE OF THE ADSORPTION CURVE FOR HEPTANE ADSORPTION IN MIXTS. DECREASES IF THE MIXT. ALSO CONTAINS CCL SUB4.

FACILITY: DAL'NEVOST. GOS. UNIV., VLADIVOSTOK, USSR.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

UDC 576.852.211.094

MEN'SHIKOV, D. D., BYKHNO, M. M., KOCHEMASOVA, Z. N., BYKOV, A. S., and TYURIN, V. S., Chair of Microbiology, First Moscow Medical Institute imeni I. M. Sechenov

"Ultrastructure of Drug-Sensitive and Drug-Resistant Mycobacterium Tuberculosis"

Moscow, Problemy Tuberkuleza, No 5, 1971, pp 64-68

Abstract: Electron-microscope study was conducted of five M. tuberculosis strains differing in resistance to such drugs as streptomycin, PAS, cycloserine, etc., to determine whether ultrastructural characteristics are related to drug sensitivity. The strains used were the stock strain 1646 and Nos 686, 946, 827, and 551 isolated from tuberculosis patients treated with tuberculostatic agents. While the strains differed from one another in electron density, thickness of the cell wall, presence of extracellular granules, and number of vacuoles, no correlation could be detected between any of these morphological features and sensitivity or resistance to drugs. For example, heavily vacuolated cells were found in both the sensitive strain 686 and in strain 551, which is particularly resistant to PAS and isoniazid.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

1/2 014 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--EXPERIMENTAL ADOPTION OF A HYDROGEN PRODUCTION PLANT -U-

AUTHOR-(03)-VARFOLOMEYEV, D.F., YEGOROV, YE.A., TYURIN, V.V.

COUNTRY OF INFO--USSR

SOURCE--NEFTEPERERAB. NEFTEKHIM. (MOSCOW) 1970, (5), 28-30

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--HYDROGEN PRODUCTION, CHEMICAL PLANT, CATALYST, CARBON MONOXIDE, CHEMICAL PURIFICATION, HYDROGEN SULFIDE, ORGANIC SULFUR COMPOUND, METHANE, ETHANE, PROPANE/(U)GIAP3 CATALYST

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605012/B09 STEP NO--UR/0318/70/000/005/0028/0030

CIRC ACCESSION NO--AP0140250

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

2/2 014

UNCLASSIFIED

CIRC ACCESSION NO--AP0140250 PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DRY PLATFORMING GAS, CONTG. H 53.3 AND CH SUB4, C SUB2 H SUB6, AND C SUB3 H SUB8 46.7 VOL. PERCENT WAS HEATED TO 400DEGREES AND ITS S CONTENT (60 MG PER M PRIME3 AS H SUB2 S AND ORG. S) WAS REMOVED AT 5 ATM ON A CU-ZN CATALYST, THEN MIXED WITH 1:3.5 STEAM AT 400DEGREES, PASSED THROUGH A CONVERSION FURNACE AND THEN THROUGH TUBES CONTG. CATALYST GIAP-3. THE GAS CONVERTED AT 750DEGREES WAS COOLED TO 412DEGREES AND ENTERED THE CO CONVERTER, WHERE THE REACTION, CO PLUS H SUB2 O FORMS AND IS FORMED FROM CO SUB2 PLUS H SUB2, OCCURS IN 2 STAGES AT 430DEGREES. THE CONVERTER GAS WAS COOLED TO 210DEGREES BY MEANS OF A WASTE HEAT BOILER. CO SUB2 WAS REMOVED BY MONOETHANOLAMINE PURIFICATION.

FACILITY: UFIM. NPZ, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0"

"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

UDC 669.187.2

TYURIN, YE. I., and ZHEMCHUZHNYY, M. V., Candidate of Technical Sciences, FEDAN, A. T., Engineer, and PETROV, B. A., Candidates of Technical Sciences, Krasnyy Oktyabr' Plant

"Improvement of Stainless Steel Production Technology"

Moscow, Stal', No 10, Oct 73, pp 895-898

Abstract: Research was conducted by the Krasnyy Oktyabr' Plant jointly with the Volgograd Scientific Research Institute of Machine Building Technology and the Moscow Institute of Steel and Alloys on improving the engineering properties of a number of stainless steels by adding rare-earth metals and microalloying with boron (0.0015-0.0050%). Studies were also performed on the principles of oxidation of impurities in steels baths of varying composition during deep decarburizing using oxygen, and on the features of reducing chromium and iron from the oxides of the high-chromium slag. As a result of this study, an entire series of stainless steels of the austenitic and austenitic-ferritic class was put into mass production, the technology of smelting many stainless steels by a one-slag process was developed and mastered, and the technology of smelting stainless steels with a carbon content less than 0.03%

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

USSR

TYURIN, YE. I., et al., Stal', No 10, Oct 73, pp 895-898

is being successfully introduced by the method of remelting tailings with oxygen oxidation. The following persons from the Volgograd and Moscow Institutes have participated in the above mentioned research, which started in 1960: B. S. PETROV, A. F. VISHKAREV, K. I., ANTIPOV, M. N., KUL'KOVA, M. P., SIDEL'KOVSKIY (DECEASED), B. V. IVANOV, YU. V. KRYAKOVSKIY, and N. A. PIROGOV, S. A. BLIZNYUKOV, Candidate of Technical Sciences (Moscow Institute of Steel and Alloys), determined that boron is not a surface-active element on steel Kh23N18 and does not affect the grain boundary state. A. P. OKENKO, Candidate of Technical Sciences, and T. B. SABININA, Engineer, conducted electron microscopy studies of grain-boundary strengthening. Four figures, eight bibliographic references.

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"APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R002203410018-0

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UDC 669.018.8:669.183.046.51:669.784

OKENKO, A. P., PIROGOV, N. A., SABININA, T. B., KRYAKOVSKIY, YU. V., and TYURIN, YE. I., Moscow Institute of Steel and Alloys

"The Effect of Boron on the Separation Process of Carbides in Kh23N18 Steel"

Moscow, Izvestiya Vysshikh Uchebnykh Zavedeniy, Chernaya Metallurgiya, No 1, 1973, pp 142-145

Abstract: A study was made of Kh23N18 steel without boron addition and with small boron additions (0.0012%). The VEMV-100A electron microscope was used. Boron was shown to inhibit the separation process of carbides. On cooling, after preliminary heating to 1200°C, the $Me_{23}C_6$ carbide in the steel with boron began to separate at a lower temperature (~1050°C) than in the steel without boron (~1100°C). Boron also affected the character of the distribution of carbide along the boundaries and in the body of the austenite grains. The indicated phenomena explain the improved hot plasticity of Kh23N18 steel in the presence of small addition of boron. Five figures, four bibliographic references.

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USSR UDC 669.046.5

ANSHELES, I. I., FEDOSEYEV, V. V., OYSK, G. N., YEGOROV, A. V., SOROKIN, S. P., TYURIN, Ye. I., DANILIN, V. I., SELIVANOV, V. M., SIVKOV, S. S., ZYRYANOV, Yu. Ye., and BALDAYEV, B. Ya.

"Use of Electromagnetic Stirring in Vacuum Melting of Steel in a Ladle"

Moscow, V sb. "Sovremennyye problemy kachestva stali" (MISiS), (Collection of Works. Modern Problems of Steel Quality) (Moscow Institute of Steel and Alloys), Izd-vo "Metallurgiya," No 61, 1970, pp 222-227

Translation of Abstract: Brief technical characteristics are given of the electromagnetic stirring of steel in a ladle. Data are presented on the effect of electromagnetic metal stirring on the uniform distribution of added deoxidizers and alloying elements, and also on the significant increase in the duration of vacuum smelting. A new production technology for the ShKh15 steel is presented in which complete deoxidation and alloying is conducted in the ladle at the end of vacuum smelting. The suggested method is theoretically substantiated. The results of the first experimental melts are presented. 3 tables.

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KUDRIN, V. A., YELANSKIY, G. N., BABICH, V. K., MOTOV, V. I., TYURIN, Ye. I., and DANILIN, V. I

"Technology of Quality Steelmaking in Basic Martin Furnaces Under Contemporary Conditions"

Moscow, V sb. "Sovremennyye problemy kachestva stali" (MISiS) (Collection of Works. Modern Problems of Steel Quality) (Moscow Institute of Steel and Alloys) Izd-vo "Metallurgiya," No 61, 1970, pp 66-73

Translation of Abstract: Results of investigations on the theoretical development and practical testing of a rational technology for conducting martin steelmaking under contemporary conditions are presented. 6 figures, 23 references.

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PETROV, B. S., VISHKAREV, A. F., TYURIN, Ye. I., DANILIN, V.I., SELIVANOV, V. M., and YAVOYSKIY, V. I.

"Degree of Oxidation of Stainless Steels With Oxygen Blowing"

Moscow, V sb. "Sovremennyye problemy kachestva stali" (MISiS) (Collection of Works. Modern Problems of Steel Quality) (Moscow Institute of Steel and Alloys), Izd-vo "Metallurgiya," No 61, 1970, pp 196-198

Abstract: Results are presented of a study on the degree of bath oxidation with oxygen blowing during decarburization at less than 0.20% C content (nickel-free steels with 6-8 and 14-16% Cr and steels with 14-16% Cr, and 11 and 30% Ni). It is established that the degree of metal oxidation depends strictly on carbon concentration, although the oxidation level is determined by the initial Cr and Ni concentrations. 1 figure, 2 references.

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