"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

2/2 032 UNCLASSIFIED PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0127651

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TRANSVERSE MAGNETORESISTANCE (ANISOTROPY AND FIELD DEPENDENCES) AND HALL EFFECT IN A IRIDIUM SINGLE CRYSTAL ARE INVESTIGATED AT LOW TEMPERATURES AND MAGNETIC FIELDS UP TO 45 KOE. THE MEASUREMENT RESULTS INDICATE THAT IRIDIUM IS A "NONCOMPENSATED" METAL AND APPARENTLY POSSESSES A CLOSED FERMI SURFACE CONSISTING OF ELECTRON AND HOLE SHEETS. THE RESULTS ARE COMPARED WITH THE THEORETICAL MODEL OF THE FERMI SURFACE FOR THIS METAL.

FACILITY: INSTITUT FIZIKI METALLOV, AKADEMII NAUK SSSR.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

1/2 040 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--RADIAL DISTRIBUTION OF THE PARAMETERS OF THE PLASMA IN A PLANE THERMIONIC ENERGY CONVERTER -U-

AUTHOR-(03)-DYUZHEV, G.A., STARTSEV, YE.A., YURYEV, V.G.

COUNTRY OF INFO--USSR

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SOURCE--ZHURNAL TEKHNICHESKOI FIZIKI, VOL 40, FEB 1970, P 426-428

DATE PUBLISHED----FEB70

SUBJECT AREAS--PHYSICS, ENERGY CONVERSION (NON-PROPULSIVE)

TOPIC TAGS--DISTRIBUTION THEORY, THERMIONIC ENERGY CONVERSION, RADICAL FLOW, PLASMA DYNAMICS, ELECTRONIC SHIELDING, CURRENT DENSITY, CATHODE, CESIUM PLASMA

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1979/1555 STEP NO--UR/0057/70/040/000/0426/0428

CIRC ACCESSION NO--AP0047883

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

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UNCLASSIFIED

CIRC ACCESSION NO--AP0047883 PROCESSING DATE--13NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. INVESTIGATION OF THE RADIAL DISTRIBUTION OF PLASMA PARAMETERS FOR THERMIONIC CONVERTERS WITH AND WITHOUT ELECTRODE (CATHODE AND ANODE) SHIELDING BY PLANE SAPPHIRE RINGS. IT IS SHOWN THAT FOR CURRENTS RANGING FROM 2 TO 15 A-SQ CM, THE BOLTZMANN FORMULA HOLDS FOR LOW AND HIGH CESIUM PRESSURES. ELECTRODE SHIELDING DOES NOT EFFECT THE RADIAL DISTRIBUTION OF THE PLASMA PARAMETERS, AND DOES NOT DIMINISH THE EDGE EFFECT ASSOCIATED WITH THE RADIAL DIFFUSION OF CARRIERS FROM THE GAP. HOWEVER, SHIELDING HAS THE EFFECT OF APPRECIABLY REDUCING THE INFLUENCE OF THE LATERAL SURFACE OF THE CATHODE, WHICH OTHERWISE WOULD EMIT ELECTRONS INTO THE PLASMA. THIS MEANS THAT THE TRUE ELECTRON CURRENT DENSITY CANNOT BE RELIABLY DETERMINED WITHOUT ELECTRODE SHIELDING.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

USSR

UDC 535.37

KAS'KOV, B. N., KATIBNIKOV, M. A. and STARTSEV, YU. V.

"Spectral-Luminescence Study of the Interaction of Compounds of High Molecular Weight With Dyes. 1. Interaction of Acridine Orange and Acridine Yellow with Polymethacrylic Acid"

Vestn. Belorus. un-ta (Herald of Belorussian University), 1971, Series 1, No 1, pp 30-33 (from RZh-Fizika, No 7, Jul 71, Abstract No 7D758)

Translation: The effect of additions of various concentrations of polymethacrylic acid on the absorption and fluorescence spectra and also on the degree of polarization of the fluorescence of aqueous solutions of acridine orange and acridine yellow were studied. A comparative study of the spectral characteristics and vector characteristics of the emission showed the role of individual centers in the mechanism for the complex formation of dyes with a polyelectrolyte. It was shown that the optical effects observed in the adsorption and fluorescence spectra and the degrees of polarization of the fluorescence are associated with the formation of joint aggregates of the dye with polymers of various structures. 12 ref. Authors abstract.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

USSR

MAGZUMOV, B. Kh., SAIYANTS, T. I., TYUTINA, V. A., STARTSEVA, L. I., and GILMANOVA, G. A., Chair of Social Hygiene and Public Health Organization, Tashkent Medical Institute

"Study of Basic Cardiovascular Diseases in Tashkent From a Sociosanitary Aspect"

Tashkent, Meditsinskiy Zhurnal Uzbekistana, No 10, Oct 70, pp 39-44

Abstract: The voluminous statistical data on the death rate due to cardiovascular diseases in the Soviet Union indicate that these diseases are the number-one killers. Not only medical but also sociohygienic and socioeconomic measures must be taken to combat this set of diseases; however, the etiology, pathogenesis, and treatment have not yet been studied in detail. A study was made of the characteristics of cardiovascular diseases in relation to work and living conditions, characteristics of the spread of cardiovascular pathology in nosological forms, and analysis of cardiovascular diseases with time loss in work capacity, disability, and death. Data from the medical-prophylactic records in Tashkent were used. Data on workers from various Tashkent industries were included. Among this group

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

USSR

MAGZUMOV, B. Kh., et al, Meditsinskiy Zhurnal Uzbekistana, No 10, Oct 70, pp 39-44

7.8% had cardiovascular diseases. Hypertension was found most frequently in women. Those in sedentary occupations requiring little physical exercise were more susceptible to hypertension than those engaged in physical work. As a result of this study, it was recommended that steps be taken to combat rheumatic fever, influenza, and other infectious diseases, to specifically treat those who live and work under conditions which promote cardiovascular disease, and to carry out sanitary-educational work in the field of cardiovascular diseases.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

1/2 014 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--P,HYDROXY SUBSTITUTED BENZENES. X. ULTRAVIOLET SPECTRA OF SOME P,HYDROXYAZOBENZENE DERIVATIVES -U-

AUTHOR-(02)-STARTSEVA, N.V., FRANKOVSKIY, CH.S.

COUNTRY OF INFO--USSR

SOURCE--ZH. ORG. KHIM. 1970, 6 (5), 1032-5

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--BENZENE DERIVATIVE, ORGANIC AZO COMPOUND, HYDROXY RADICAL, UV SPECTRUM, CHLORINATED ORGANIC COMPOUND, AMINE DERIVATIVE, AROMATIC AMINE, AROMATIC CARBOXYLIC ACID, PHENOL, BROMINATED ORGANIC COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/1280 STEP NO--UR/0366/70/006/005/1032/1035

CIRC ACCESSION NO--AP0134954

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

2/2 014 UNCLASSIFIED

CIRC ACCESSION NO--AP0134954 PROCESSING DATE--13NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. UV SPECTRA WERE REPORTED OR 2,4,RR PRIME1 C SUB6-H SUB3 N: NC SUB6 H SUB4 R PRIME2 -4 (I) (R, R PRIME1, AND R PRIME2 GIVEN): H, H, OH; H, NO SUB2, OH; H, CL, OH; H, CO SUB2 ET, OH; CL, H, OH; CL, NO USB2, OH; CL, CO SUB2 ET, OH; CL, CN, OH; CL, SCN, OH; H, H, NO SUB2; H, H, CN; H, H, AC; H, H, H; H, H, NH SUB2; H, H, NME SUB2; H, NH SUB2, NO SUB2; H, OH, NO SUB2; H, NME SUB2, NO SUB2; CL, OME, OH; CL, ME, OH; CL, CL, OH; CL, BR, OH; CL, NHAC, OH; CL, I, OH; AND CL, CO SUB2 H, OH. THE TRANSFER OF ELECTRONIC CHARGE THROUGH I CHROMOPHORE IS 3-5 TIMES WEAKER THAN THROUGH THE CORRESPONDING PHENOL SYSTEM. THE WAVE NOS. OF THE UV MAX. WERE CORRELATED WITH HAMMETT SIGMA CONTS.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

009

UNCLASSIFIED

TITLE--SYNTHESIS AND PYROLYSIS OF CYCLOBUTYLMETHYL TRIMETHYLSILANE -U-

PROCESSING DATE--30OCT70

AUTHOR-(05)-NAMETKIN, N.S., GUSELNIKOV, L.YE., USHAKAVA, R.L., STARTSEVA, O.M., VDOVIN, V.M.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (2), 494-6

19

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL SYNTHESIS, PYROLYSIS, ORGANIC SILANE, PLATINUM COMPOUND, CATALYST

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0847

STEP NO--UR/0062/70/000/002/0494/0496

CIRC ACCESSION NO--AP0119751

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

2/2 009 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0119751

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ADDING 15.5 G METHYLENECYCLOBUTANE OVER 2 HR TO 23 G ME SUB2 SIHCI AND 0.2 ML H SUB2 PTCI SUB6 CATALYST IN THF, AND HEATING THE MIXT. 8 HR AT 110DEGREES GAVE 51PERCENT DIMETHYL(CYCLOBUTYLMETHYL) CHLOROSILANE, B. 167-8DEGREES, N PRIME20 SUBD 1.4465, D PRIME20 0.9296. THIS WITH MEMGI GAVE 55.4PERCENT (CYCLOBUTYLMETHYL) TRIMETHYLSILANE, B. 145DEGREES, 1.4310, 0.7816. PYROLYSIS IN A STATIC SYSTEM AT 430DEGREES GAVE 51PERCENT CH SUB2:CHCH SUB2 SIME SUB3 IN 30 MIN. IN AN IMPULSE PYROLYSIS AT 575DEGREES WITH 12 SEC CONTACT TIME, 61PERCENT CONVERISON WAS ATTAINED; THE AMT. OF SAMPLE DID NOT AFFECT THE CONVERSION, SHOWING THAT THE REACTION IS TRULY HONOMOL. AND FORMS THE ABOVE PRODUCT AND C SUB2 H SUB4.

FACILITY: INST. NEFTEKHIM.SIN. IM. TOPCHIEVA, MOSCOW, USSR.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

Refractory Materials

USSR

UDC 669.01:666.76.001.5

KHARCHENKO, I. G., SAZHIN, V. A., STARUN, V. R., RADCHENKO, I. I., TANDURA, I. P., and KOVALENKO, A. N.

"Some Problems of Internal Heat Exchange During Roasting of Magnesian Refractories"

Dnepropetrovsk, Metallurgicheskaya i Gornorudnaya Promyshlennost', No 4, Jul-Aug 70, pp 49-51

Abstract: Experimental material on the effect of the heating rate of the heat-and mass-transfer processes on the thermophysical parameters of roasted refractories is summarized. The material, published for the first time in the Soviet literature, can be used as a basis for further studies for determination of effective methods of heat treatment of magnesian refractories.

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PHYSICS

Acoustics

USSR

SABIROV, L. M., STARUNOV, V. S., and FABELINSKIY, I. L., Physics Institute imeni P. N. Lebedev, USSR Academy of Sciences

"Determining the Velocity and Absorption of Hypersound in Viscous Liquids From Scattered-Light Spectra"

Moscow, Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 60, No 1, 1971, pp 146-159

Abstract: Using gas lasers, either with an Ne-He mixture, lambda = 6328 Å (40 mw), or a He-Cd^{114} mixture, lambda = 4416 Å (20 mw), and working in a multimode operation to excite scattered light, the authors experimentally studied the fine structure of the extremities of the Rayleigh line in salol and benzophenone, with the viscosities varying by many orders of magnitude. The phenomenon of the fine structure of the extremities of the Rayleigh line results from the fact that a doublet is observed in the spectra of depolarized scattered light under specific conditions. The velocity and absorptivity of longitudinal hypersound were determined in salol, benzophenone, and triacetate over a broad viscosity range. Two branches of transverse hypersound oscillations in liquids were observed --- low temperature ("normal"),

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

USSR

SABIROV, L. M., et al, Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 60, No 1, 1971, pp 146-159

in which the transverse components in the scattered-light spectra are shifted with decrease in temperature, and the high-temperature ("anomalous") branch, in which these components draw closer together with temperature decrease. The temperature range used was -65 to +137° C. The theory that the scattering of anisotropy fluctuations is characterized by two relaxation times most fully explains the experimental findings.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

USSR

UDC 621.375.82

STARUNOV, V. S., FABELINSKIY, I. L.

"Thermal and Induced Molecular Scattering of Light"

V sb. Sovrem. probl. fiz. khimii (Modern Problems of Chemical Physics -- Collection of Works), Vol. 5, Moscow, Moscow University, 1970, pp 174-203 (from RZh-Fizika, No 7, Jul 71, Abstract No 7D993)

Translation: A survey is presented covering studies of thermal and induced molecular scattering of light. 79 ref.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

1/2 039 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--INDUCED ENTROPY, TEMPERATURE, SCATTERING OF LIGHT IN LIQUIDS -U-

AUTHOR-(03)-KYZYLASOV, YU.I., STARUNOV, V.S., FABELINSKIY, I.L.

COUNTRY OF INFO--USSR

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SOURCE--PIS'MA ZH. EKSP. TEOR. FIZ. 1970, 11(2), 110-13

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--ENTROPY, LIGHT SCATTERING, BENZENE, ETHANOL, RUBY LASER, FABRY PEROT INTERFEROMETER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1994/0998 STEP NO--UR/0386/70/011/002/0110/0113

CIRC ACCESSION NO--AP0115019

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

UNCLASSIFIED PROCESSING DATE--27NOV70

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CIRC ACCESSION NO--AP0115019

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A STOKES SHIFTED LINE OF INDUCED ENTROPY SCATTERING OF LIGHT WAS OBSD. IN LIQS.; THE SCATTERING WAS CAUSED BY THE ELECTROCALORIC EFFECT. THIS SCATTERING WAS EXCITED IN C SUB6 H SUB6 AND ETOH BY A LIGHT PULSE (10-15 NSEC) OF A RUBY LASER (MAX. OUTPUT SIMILAR TO 180 MW, LINE WIDTH 2-3 TIMES 10 PRIME NEGATIVE2 CM PRIME NEGATIVE1). THE LIGHT, SCATTERED UNDER AN ANGLE OF 90DEGREES, WAS ANALYZED BY A FABRI-PEROT INTERFEROMETER. THE STOKES SHIFTS WERE OF SIMILAR TO 10 PRIME NEGATIVE2 CM PRIME NEGATIVE1. BY ADDING AN ABSORBENT TO THE LIQS., AN ANTI STOKES SHIFTED LINE OF INDUCED TEMP. SCATTERING OCCURRED. AT HIGH ABSORPTIVITIES AND INTENSITIES OF EXCITING RADIATION, THE ANTI STOKES SHIFT WAS SEVERAL TIMES HIGHER THAN THE STOKES ONE. IN THE CASE OF C SUB6 H SUB6, THE STOKES AND ANTI STOKES (OWING TO THE EFFECT OF NONLINEAR LIGHT ABSORPTION) SHIFTS WERE OBSD. AT THE OUTPUTS OF SIMILAR TO 50-80 AND LARGER THAN 80 MW, RESP.

FACILITY: FIZ. INST., IM. LEBEDEVA, MOSCOW, USSR.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

1/2 019 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--STIMULATED ENTROPY TEMPERATURE SCATTERING OF LIGHT IN LIQUIDS -U-

AUTHOR-(04)-KYZYLASOV, YU.P., STARUNOV, V.S., FABELINSKIY, I.L., LEBEDEV, P.N.

COUNTRY OF INFO--USSR

SOURCE--JETP LETTERS (USA), VOL. 11, NO. 2, P. 110-13 (JAN. 1970)

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--LIGHT SCATTERING, ENTROPY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3007/1090 STEP NO--US/0000/70/011/002/0110/0113

CIRC ACCESSION NO--AP0136510

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

2/2 019 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0136510

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. INVESTIGATIONS HAVE SHOWN THAT STIMULATED (ENTROPY) SCATTERING OF LIGHT (STS) CAN BE DUE TO TWO DIFFERENT CAUSES. IT FOLLOWS FROM A GENERAL ANALYSIS OF THE STS PHENOMENON THAT THE STS LINE DUE TO THE ELECTROCALORIC EFFECT SHOULD BE SHIFTED TO THE STOKES SIDE RELATIVE TO THE FREQUENCY OF THE EXCITING RADIATION (STS-I), AND THE STS LINE DUE TO THE DIRECT ABSORPTION OF LIGHT SHOULD HAVE AN ANTI STOKES SHIFT (STS-II). THE AUTHORS REPORT HERE THE FIRST OBSERVATION OF THE STS-I LINE IN LIQUIDS, WITH AN INTENSITY MAXIMUM SHIFTED IN THE STOKES DIRECTION RELATIVE TO THE FREQUENCY OF THE EXCITING RADIATION. THEY HAVE THUS OBSERVED THE STS DUE TO THE ELECTROCALORIC EFFECT. IN THERMAL (SPONTANEOUS) SCATTERING, THIS FORM OF STS CORRESPONDS TO SCATTERING OF LIGHT BY ENTROPY FLUCTUATIONS. FACILITY: USSR ACAD. SCIS.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

USSR

UDC 621.317.8

SPIVAK, N. D., STARUSH, E. G., TSETENS, V. P.

"On the Cold Resistance of Microwire Resistors Made From Nickel-Based Alloy"

V sb. Mikroprovod i pribory soprotivl. (Microwire and Resistance Devices --collection of works), vyp. 7, Kishinev, 1971, pp 147-152 (from RZh--Radiotekhnika, No 8, Aug 71, Abstract No 8V354)

Translation: In order to determine the effect which repeated cold cycles have on resistors made from M94 and M95 nickel-base alloys developed by Ye. Ya. Badinter and A. L. Gadolin, they were cooled to a temperature of -60°C and held at this temperature for 4 hours. It was found from the results of the tests that resistors based on these alloys are 10-20 times as resistant to cold as similar resistors made from manganin microwire, which is extensively used for making microwire resistors. At the same time, the stability of "M" resistors with respect to climatic and mechanical effects is on a level with that of type MVSG resistors made from manganin-based microwire. Bibliography of three titles. Ye. M.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

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UR 9021

TITLE-- CAPTION

NEWSPAPER-- SOVETSKAYA MOLDAVIYA, JANUARY 8, 1970, P 1, COLS 5-6

ABSTRACT-- A PHOTOGRAPH SHOWS I. G. STABUSH, SENIOR ASSOCIATE, AND B. K. ZALEVSKIY, ASSOCIATE, CALIBRATING A VACUUM THERMAL MANOMETER AT THE KISHENEV SCIENTIFIC-RESEARCH INSTITUTE FOR DESIGN OF ELECTRICAL DEVICES /NAUCHNO-ISSLEDOVATEL,SKIY INSTITUT ELEKTRO-PRIBOROSTROYENIYA/.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

USSR

UDC: 621.791.052.011:539.3

YUSHCHENKO, K. A., MAKHNENKO, V. I., and STARUSHCHENKO, Institute of Electric Welding imeni Ye. O. Paton, Academy of Sciences Ukrainian SSR

"Thermal Stresses in the Welded Joints of Invar and Stainless Steel at Cryogenic Temperature"

Kiev, Avtomaticheskaya Svarka, No 10, Oct 73, pp 27-29

Abstract: The authors use computational methods and the Minsk-22 computer to study the distribution of thermal stresses in the welded joints of pipes made from Invar, and Invar and the following types of stainless steel: OKH18N10T and OOOKH2ON16AG6. Increasing the coefficient of thermal expansion of the seam metal up to alpha = $4-5 \times 10^{-6}$ degree^{-1} in the welded joints of Invar results in an insignificant increase in thermal stresses for temperature changes in the 4-293°K interval. Significant stresses arise in the welded joint at alpha = $10-12 \cdot 10^{-6}$ degree^{-1}. The use of the KH18N10T type material as an addition agent is not desirable in the welded joints of pipelines made from 36N grade alloy, where the pipelines operate under conditions of cyclical temperature change within the 4-293°K limits (without taking into consideration the application of external loads). Instead, 36NGMT filler wire should be used. When using 36NGMT for welding the following materials, which have to operate at temperature changes at low

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

USSR

YUSHCHENKO, K. A., et al, Avtomaticheskaya Svarka, No 10, Oct 73, pp 27-29

temperatures, the welding has to be carried out carefully: 36N-KH18N10T, 36N-OOOKH20-N16AG6. The stresses are evoked by differences in the coefficients of thermal expansion during thermal changes within the 4-293°K interval.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

172 022

UNCLASSIFIED

TITLE--DYNAMICS OF THE LIVER TISSUE PROTEINS IN CONNECTION WITH FORMATION OF WATER ELECTROLYTIC BILE FRACTION -U-

PROCESSING DATE--16OCT70

AUTHOR-(03)-ESIPENKO, B.E., STARUSHENKO, L.I., KOSTROMINA, A.P.

COUNTRY OF INFO--USSR

SOURCE--FIZIOLOGICHNIY ZHURNAL, 1970, VOL 16, NR 3, PP 336-340

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--LIVER, BILE, ELECTROPHORESIS, WATER METABOLISM, POTASSIUM COMPOUND, SODIUM COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1994/1360

STEP NO--UR/0238/70/016/003/0336/0340

CIRC ACCESSION NO--AP0115331

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

022

CIRC ACCESSION NO--AP0115331 UNCLASSIFIED PROCESSING DATE--16OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CONTENTS OF PROTEINS AND ELECTROFORETIC FRACTIONS QUANTITIY OF WATER AND ELECTROLYTES WERE STUDIED IN THE LIVER TISSUE AND BILE AT DIFFERENT LEVELS OF BILIFICATION CONDITIONED BY THE STATE OF WATER SALT METABOLISM. A PRONOUNCED DEPENDENCE WAS FOUND OF PROTEIN CONTENT IN THE LIVER TISSUE ON THE STATE OF WATER SALT METABOLISM IN THE ORGANISM. WHEN THE ORGANISM IS OVERSATURATED WITH WATER, THE CONTENT OF TOTAL PROTEIN INCREASE BY 13PERCENT AND THAT OF "B" FRACTIONS OF WATER SOLUBLE PROTEINS IN THE LIVER TISSUE BY 40PERCENT. WITH AN INCREASE OF "B" FRACTION CONTENT IN THE LIVER TISSUE BY 1PERCENT THE AMOUNT OF POTASSIUM IN THE LIVER TISSUE RISES BY 24.6 SODIUM, BY 13.06 MEQ-KG OF RAW TISSUE, THE LEVEL OF BILIATION, BY 2.72 ML-MIN KG, SODIUM IN BILE BY 0.449 MEQ-MIN KG. A MORE CONSIDERABLE EXCRETION OF POTASSIUM WITH BIL CORRESPONDS TO A HIGHER CONTENT OF TOTAL PROTEIN IN THE LIVER TISSUE. THE OBTAINED RESULTS MAKE IT POSSIBLE TO CONSIDER THAT WATER SOLUBLE PROTEINS OF "B" FRACTIONS PLAY AN IMPORTANT ROLE IN THE FORMATION OF WATER ELECTROLYTIC BILE FRACTION. FACILITY: DEPARTMENT OF METABOLISM PHYSIOLOGY, THE A. A. BOGOMOLETZ INSTITUTE OF PHYSIOLOGY, ACADEMY OF SCIENCES, UKRAINIAN SSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

USSR

UDC 621.791:669.245

YUSHCHENKO, K. A., KAKHOVSKIY, N. I., and STARUSHENKO, T. N., Institute of Electric Welding imeni Ye. O. Paton; IL'ICHEV, V. YA., Physicotechnical Institute of Low Temperatures, Academy of Sciences Ukrainian SSR; ZAKHAROV, A.I., Central Scientific Research Institute of Ferrous Metallurgy

"Weldability and Properties of Invar Weld Joints at Low Temperatures"

Kiev, Avtomaticheskaya Svarka, No 9, Sept 72, pp 39-42

Abstract: The purpose of this investigation was to develop the technology of welding Fe-Ni alloys (36N, 36NKh, and 39N) with a thickness up to 5 mm and to evaluate the weldability of Invar with a thickness up to 12 mm in order to obtain a strong and dense joint with the required mechanical and thermophysical properties in the 20 to -253°C interval. Chemical composition of the Fe-Ni alloys was (in %):

	C	Si	Mn	S	P	Ni	Cr
36N	0.032	0.23	0.43	0.009	0.008	36.1	----
36NKh	0.035	0.15	0.52	0.004	0.004	37.0	0.49
36N	0.034	0.19	0.50	0.008	0.009	39.9	----

Samples were submerged-arc welded with a nonconsumable tungsten electrode in argon, both with filler wire and without it, with AN-26 and AnF-5 fluxes.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

YUSHECHENKO, K.A., et al., Avtomaticheskaya Svarka, No 9, Sep 72, pp 39-42

Low-temperature studies of the weld joints were carried out at the physicotechnical Institute of Low Temperatures, Academy of Sciences Ukrainian SSR, the Central Scientific Research Institute of Ferrous Metallurgy, and the Institute of Electric Welding. Analysis of the mechanical and thermophysical properties of weld joints at low temperatures where 36NGT, 36NGTCe, and 36NGCe filler wires were used showed that alloying with Ti and Mn produces a dense joint where the alloy strength is equal to that of the base metal of the seam and possesses high impact strength and ductility at -253°C. Experimental studies of welded Invar (6 and 12 mm thick) showed that the use of 36NGT filler wire yields seams with defects (hot cracks). 6 figures, 2 tables, 8 bibliographic references.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

Acc. Nr.: AP0029105

PRIMARY SOURCE: Zhurnal Nevropatologii i Psikhiatrii, 1970, Vol 70, Nr 1, pp 122-125

Ref. Code: UR 0246

THE MECHANISM OF ACTION AND THERAPEUTIC EFFECT OF ELENIUM AND DUXEN IN DIENCEPHALIC EPILEPSY

Gromov, S. A.; Starykh, N. T.

A pharmacological study of Elenium displayed that this preparation does not posses a peripheral and central adrenoblocking action, as well as a M and N cholinolitic activity. In other words, it does not affect the vegetative nervous system. In treating 117 patients with diencephalic epilepsy by Elenium and Duxen a high therapeutical effectivity was definitely marked. A stable improvement was attained in 83—85% of the cases. Satisfactory results were seen in 7—9% of the cases. In 6—10% there were no changes. A suspension in the use of these drugs brought on a renewal of diencephalic attacks. The authors presume that the therapeutical effect of these preparation is achieved by a possible block of the pathological stimuli on the level of the thalamus, lymbic system and deep areas of the temporal lobe.

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REEL/FRAME

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

USSR

UDC 620.179.118

MOISEYEV, L. M., STARYY, I. B., and KHANOWKIN, A. A., Odessa State Pedagogical Institute

"Method of Studying the Wrinkled Microrelief Occurring on the Surface of a Cyclic-Strained Single Crystal"

Metallofizika, Resp. mezhved. sb. (The Physics of Metals. Republic Interdepartment Collection of Works), 1970, vyp. 29, pp 177-180 (from RZh-Metallurgiya, No 3, Mar 71, Abstract No 3I885 by authors)

Translation: The established fact of the appearance of a wrinkled microrelief on the surface of Al single crystal as a result of its cyclic straining is used as the basis for suggesting a method of studying this microrelief, based on the phenomenon of x-ray automagnification. A loading method is suggested which permits continuous bending of the Al single crystal and, if necessary, its cyclic straining. The x-ray optical scheme of the experiment makes it possible to obtain reflexograms, with which it is possible to study the distribution of wrinkles on the crystal surface and its dynamics in relation to the number of loading cycles. Three illustrations. Bibliography with nine titles.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

USSR

UDC 539.23:539.25

STARYY, I. B., and CHEPOK, O. L., Odessa Pedagogical Institute imeni K. D. Ushinskiy

"Investigation of the Structure of Chromium Silicide Thin Films Condensed on Preheated Substrate"

Kiev, Metallofizika, No 40, 1972, pp 56-59

Abstract: It was established that in the investigated temperature interval of condensation (300-1020° C) there exists a region of temperatures where the condensation mechanism of the vaporamorphous phase system changes by a mechanism of heterogeneous condensation. The activation energies of the processes of Si-Cr film structure formation were determined. It was established that the temperature of film contact with the air after condensation determines the degree of system dispersity. 2 figures, 7 bibliographic references.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

USSR

Waveguides

UDC: 621.372.81

KOROZA, V. I. and STARZHINSKIY, V. M.

"Oscillation Theory Methods in Waveguide System Electrodynamics"

Moscow, Vestnik Moskovskogo Universiteta--Matematika, Mekhanika, No 1, 1971, pp 101-110

Abstract: This article, presented at a seminar of the Moscow State University Department of Applied Mechanics, 19 November 1969, demonstrates how the theory of oscillations can be applied to some problems of wave propagation in a solid medium if these problems can be approximated by systems with a finite number of degrees of freedom. Specific consideration is given to the problem of wave propagation in periodic electromagnetic waveguides. The authors begin their analysis by considering a three-dimensional region containing a section of the rectilinear z axis, with the boundaries of the region as a metallic surface and two planes parallel to the xy plane. The further assumption is made that all possible cross sections of the given region are simply connected with and bounded by the planes z = const. It is stipulated that the field components of the electromagnetic wave vary with time according to the harmonic law, when the problem of computing the field at a given frequency reduces to finding the complex amplitudes of the electric and magnetic fields.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

USSR

SVIRIDENOK, A. I., STARZHINSKIY, V. Ye., and ZHULEGO, V. T., Institute of the Mechanics of Metal-Polymer Systems, Academy of Sciences, Belorussian SSR

UDC 678.01:539.376

"Some Engineering Applications of Contact Problems in the Theory of Visco-elasticity"

Minsk, Izvestiya Akademii Nauk BSSR, Seriya Fiziko-Tekhnicheskikh Nauk, No 1, 1972, pp 57-65

Abstract: In this article, which deals with some engineering applications of contact problems, an effort is made to provide a solution of a contact problem for linear viscoelastic solids of the simplest shape (a sphere, a cylinder). To describe the process of change of the contact parameters with respect to time, there has been selected a law of deformation in differential form with an exponential time function. Calculation relationships are presented for determination of the contact parameters. Satisfactory coincidence of the experimental and calculation data is obtained. 2 figures, 32 bibliographic entries.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

USSR

UDC: 539.1.07

MARKOV, K. P., RYABOV, N. V., STAS', K. N.

"Use of Photographic Films for Individual Radiometry of the Daughter Products of Radon"

Tr. Soyuzn. n.-i. in-ta priborostr. (Works of the Union Scientific Research Institute of Instrument Building), 1970, vyp. 12, pp 184-191 (from RZh-Metrologiya i Izmeritel'naya Tekhnika, No 11, Nov 70, Abstract No 11.32.1471)

Translation: The authors consider the possibility of individual monitoring for the atmospheric content of radon decay products according to the "latent" energy by pumping air through a filtering cloth while simultaneously using a ZnS(Ag) scintillator and a photographic film to register the α-activity of the specimen. The paper gives the results of theoretical and experimental studies on determining the sensitivity of the method and the measurement range.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

1/2 011

UNCLASSIFIED

TITLE--ON THE MECHANISM OF POROUS STRUCTURE FORMATION IN SILICA GELS, EFFECT OF SILICIC ACID HYDROGEL AGEING IN ORGANIC SOLVENST ON THE

PROCESSING DATE--27NOV70

AUTHOR-(03)-SHEYNFAYN, R.YU., STAS, O.P., NEYMARK, I.YE.

COUNTRY OF INFO--USSR

SOURCE--KOLLOIDNYY ZHURNAL, 1970, VOL 32, NR 3, PP 451-453

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--POROSITY, SILICA GEL, ORGANIC SOLVENT, GEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/2139

STEP NO--UR/0069/70/032/003/0451/0453

CIRC ACCESSION NO--AP0125722

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

2/2 011

CIRC ACCESSION NO--AP0125722 UNCLASSIFIED PROCESSING DATE--27NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SOLUTIONS OF WATER SOLUBLE ORGANIC SOLVENTS HINDER THE AGEING OF SILICI ACID HYDROGEL. UNLIKE WATER, ORGANIC MEDIUM INHIBITS THE GROWTH OF HYDROGEL PARTICLES. THIS RESULTS IN XEROGELS WITH HIGHLY DEVELOPED SURFACE AREA CORRESPONDING TO THE SIZE OF FRESHLY PRECIPITATED HYDROGEL PARTICLES. STABILIZATION OF PARTICLES IS ACCOUNTED FOR BY THE FORMATION AROUND THEM OF ADSORPTION SOLVATION SHEATHS FROM ORGANIC MOLECULES WHICH HINDER THEIR GROWTH.

FACILITY: INSTITUT FIZICHESKOY KHIMII AN USSR, KIEV.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

USSR

UDC 541.182.644:541.183.7

SHEYNFAYN, R. YU., STAS', O. P., and NEYMARK, I. YE.

"Synthesis and Adsorption Properties of Mixed Adsorbents of the Type Silica gel -- Zeolite"

Leningrad, Zhurnal Prikladnoy Khimii, Vol 45, No 10, Oct 72, pp 2192-2195

Abstract: In studying the adsorption properties of the zeolite-silica gel type sorbents in relationship to their composition and methods of preparation, it was established that the mutual effect of both components of the mixture results in a deviation from additive value in the area of capillary vapor condensation. Macropores are formed when silica gel is brought in contact with zeolite. The volume of the macropores increases with increased quantity of the zeolite added. A method for the preparation of mixed absorbents with different porous structures was developed based on mixing zeolite with zerosilo gel. The zeolite-silica gel obtained in this manner shows a bidispersive structure.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

Acc. Nr: AP0036536

Ref. Code: UR 0069

PRIMARY SOURCE: Kolloidnyy Zhurnal, 1970, Vol 32, Nr 1, pp 104-108

ON THE MECHANISM OF POROUS STRUCTURE FORMATION IN SILICAGEL

CHANGE IN POROUS STRUCTURE OF SILICA GEL UNDER THE ACTION OF HYDROFLUORIC ACID AT THE HYDROGEL AGEING STAGE

Stas', O. P.; Sheynfayn, R. Yu.; Neymark, I. Ye.

Summary

New possibilities have been found for the porous structure control in silica gels by treating hydrogel with HF. With higher HF concentrations and longer ageing times of hydrogel in it, the pore volume of silica gel increases and its surface area diminishes. A certain similarity has been discovered in the effect of HF and hydroxyl ions concentration on hydrogel ageing, viz. that the porous structure changes in xerogels obtained in the two cases are similar.

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D.M.

REEL/FRAME 19721384

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

172 043

UNCLASSIFIED

TITLE--IRRADIATION AND ANNEALING OF P TYPE GERMANIUM -U-

PROCESSING DATE--27NOV70

AUTHOR-(02)-STAS, V.F., SMIRNOV, L.S.

COUNTRY OF INFO--USSR

SOURCE--FIZ. TEKH. POLUPROV. 1970, 4(2), 276-81

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--SILICON SINGLE CRYSTAL, GERMANIUM, CRYSTAL DEFECT, CRYSTAL VACANCY, PLASTIC DEFORMATION, IRRADIATION EFFECT, ANNEALING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/1866

STEP NO--UR/0449/70/004/002/0276/0281

CIRC ACCESSION NO--AP0118830

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

2/2 048

CIRC ACCESSION NO--AP0118830 UNCLASSIFIED PROCESSING DATE--27NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. GA DOPED P SI CRYSTALS (5 AND 25 OHM CM) WITH A GROWTH DISLOCATION D. SIMILAR TO 10 PRIME3-CM PRIME2 AS WELL AS WITH DISLOCATIONS INTRODUCED BY PLASTIC DEFORMATION WERE INVESTIGATED. THE SAMPLES WERE IRRADIATED IN A PULSE ACCELERATOR BY 3.5 MEV ELECTRONS THEN ANNEALED ISOTHERMALLY OR ISOCHRONOUSLY. THE TEMP. DEPENDENCES OF THE HALL COEFF. AND OF COND. WERE MEASURED AT VARIOUS STAGES OF ANNEALING AND 80-400DEGREESK. THE TEMP. DEPENDENCE OF HOLE CONCN. IN THE 5 OHM CM SAMPLES INDICATES THAT A CENTER WITH A DONOR LEVEL E SUBV PLUS 0.07 EV IS INTRODUCED DURING ANNEALING AT 170DEGREESK. THE 0.07 EV LEVEL IN THE 5 OHM CM SAMPLES CANNOT FULLY DISAPPEAR DURING ANNEALING EVEN AT 400DEGREESK. THE ISOCHRONOUS, ANNEALING OF HIGH PURITY GE AT 340DEGREESK RESULTS IN A CONSIDERABLE REDN. OF HOLE CONCN. DOWN TO 10 PRIME11-CM PRIME3, WHICH IS ASSOCD. WITH A DEEPER LEVEL E SUBV PLUS 0.15 EV APPEARING IN CRYSTALS IRRADIATED AT 78DEGREESK AND ANNEALED AT 300DEGREESK. THE RATE OF DONOR INJECTION WAS 1.6 CM PRIME NEGATIVE1. THE ACTIVAITON ENERGIES OF THE ANNEALING AND THE RECOVERY PROCESSES ARE 1.0 AND 1.4 EV, RESP. THE RESULTS ARE INTERPRETED IN TERMS OF SELF ADJUSTING CENTERS CONSISTING OF INTRINSIC DEFECTS: VACANCIES AND INTERSTITIALS. IT IS ASSUMED THAT THE CENTER ASSOCD. WITH THE E SUBV PLUS 0.15 EV LEVEL IS A VACANCY LEVEL, WHICH ALTERS THE SIGN OF ITS CHARGE AT LOWER TEMPS.

FACILITY: INST. FIZ. POLUPROV., NOVOSIBIRSK, USSR.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

1/2 032

UNCLASSIFIED

TITLE--INFLUENCE OF THE STRUCTURE OF THE TRANSVERSE MODES OF A RADIATION SOURCE ON THE HOLOGRAM GENERATED IMAGE -U-

PROCESSING DATE--04DEC70

AUTHOR-(02)-STASELKO, D.I., DENISYUK, YU.N.

COUNTRY OF INFO--USSR

SOURCE--OPTIKA I SPEKTROSKOPIIA, VOL. 28, FEB. 1970, P. 232-330

DATE PUBLISHED----FEB70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--HOLOGRAM, RADIATION SOURCE, PULSE LASER, RUBY LASER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1992/1483

STEP NO--UR/0051/70/028/000/0323/0330

CIRC ACCESSION NO--AP0112477

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

UNCLASSIFIED PROCESSING DATE--04DEC70

2/2 032

CIRC ACCESSION NO--AP0112477

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DERIVATION OF AN EXPRESSION DESCRIBING THE BRIGHTNESS DISTRIBUTION IN A HOLOGRAM GENERATED IMAGE FOR A LASER EMITTING A SET OF LONGITUDINAL AND TRANSVERSE MODES DURING A LIMITED PERIOD OF TIME. IT IS SHOWN THAT WHEN VIEWING THROUGH SMALL SEGMENTS OF THE HOLOGRAM, THE APPARENT BRIGHTNESS OF THE IMAGE IS MODULATED BY THE SQUARE OF THE TEMPORAL SPATIAL COHERENCE MODULUS OF THE SOURCE. THIS PHENOMENON IS APPLIED TO THE EXPERIMENTAL INVESTIGATION OF THE SPATIAL COHERENCE OF A PULSED RUBY LASER.

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Acc. Nr. AP0046227 Abstracting Service: S/70 INTERNAT. AEROSPACE ABST. Ref. Code: UR0077

A70-23175 # Special features of the behavior of high-resolution emulsions in holography using a pulsed radiation source (Osobennosti povedeniia vysokorazreshaiushchikh emul'sii pri golografirovanii s ispol'zovaniem impul'snogo istochnika izlucheniia). D. I. Stasel'ko and A. G. Smirnov. *Zhurnal Nauchnoi i Prikladnoi Fotografii i Kinematografii*, vol. 15, Jan.-Feb. 1970, p. 66-68. In Russian.

Results of experiments carried out to determine the sensitivity of Soviet Mikrat VR emulsions used to obtain high-quality pulsed holograms. It is found that the Soviet emulsions tested are distinguished by both high sensitivity and small deviations from the reciprocity law. A specially high sensitivity and small deviations from the reciprocity law were noted in the case of laboratory specimens of Mikrat VR emulsion sensitized by dye No. 3912. The sensitivity of these plates during Q-switching was found to exceed the sensitivity of Kodak 649-F plates more than six hundredfold and varied only by a factor of 2 upon switchover to free laser generation, while Kodak 649-F plates varied by a factor of 8 upon switchover to free laser generation. However, industrial specimens of Mikrat VR emulsion were found to be characterized by considerably less sensitivity than laboratory specimens and by large deviations from the reciprocity law. An attempt is made to ascertain the reason for this discrepancy.

A.B.K.

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19781343

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

UDC 536.46+669.715

USSR

BREYTER, A. L., KASHEOROV, L. Ya., MAL'TSEV, V. M., POKHIL, P. F., POPOV, Ye. I., PEPEKIN, V. I., and STASENKO, A. G., Moscow

"Burning of Single Particles of Aluminum-Magnesium Alloys in the Flame of Oxidizer-Fuel Mixture"

Novosibirsk, Fizika Goreniya i Vzryva, Vol 7, No 2, Jun 71, pp 222—227

Abstract : The burning of single particles of aluminum-magnesium alloys in the tongue of the flame of a mixture of ammonium perchlorate and urotropine of stoichiometric composition (88 % ammonium perchlorate and 12 % urotropine) was experimentally investigated. The investigation results are discussed by reference to photographs of typical tracks of burning particles and diagrams showing the dependences of the inflammation time lag and the particle fraction subjected to explosive burning on particle composition. From the viewpoint of complete burning by modified fuel on aluminum base, alloys with 30—45 % aluminum and 55—70 %

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

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BREYTER, A. L., KASHPOROV, L. Ya., el al., Fizika Goreniya i Vzryva, Vol 7, No 2, Jun 71, pp 222-227

magnesium are considered to be effective. The characteristics of burning of the metal component are determined by the nature of included metals: the permeability of its oxidic layers, reaction capability, surface activity, volatility, fusing temperature, density change by fusing, and the burning temperature. Five illustr., one table, 16 biblio. refs.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

USSR

UDC 620.10

STASENKO, I. V., TKACHEV, V. V.

"Restricted Twisting and Bending of Thinwall Pipe of Nonlinearly Elastic Material"

Izvestiya Vysshikh Uchebnykh Zavedeniy, Mashinostroyeniye, No 1, 1972, pp 5-10.

ABSTRACT: The article states the problem of determination of secondary normal stresses in the zone of a rigid flange with combined bending and twisting of a thinwall tube of a nonlinearly elastic material. The solution produced is based on application of basic assumptions accepted for the calculation of stresses involved in restricted twisting of thinwall shapes.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

UNCLASSIFIED

PROCESSING DATE--04DEC70

ACTDS -U- ...EXES OF GERMANIUM TETRACHLORIDE WITH O AND M AMINOBENZOIC

AUTHOR-(03)-BELOUSOVA, YE.M., SEYFULLINA, I.I., STASENKO, I.V.

COUNTRY OF INFO--USSR

SOURCE--ZH. OBSHCH. KHIM. 1970, 40(4), 815-17

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--GERMANIUM COMPOUND, AMINE, BENZOIC ACID, COMPLEX COMPOUND, THERMOGRAPHIC ANALYSIS, POTENTIOMETRIC TITRATION, X RAY DIFFRACTION STUDY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/0822

CIRC ACCESSION NO--AP0134555 STEP NO--UR/0079/70/040/004/0815/0817

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

2/2 017

CIRC ACCESSION NO--AP0134555 UNCLASSIFIED PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THERMOGRAPHIC AND CONDUCTIMETRIC TITRIMETRY WERE USED TO STUDY THE COMPLEXES FORMED BY O AND M H SUB2 NC SUB6 H SUB4 CO SUB2 H WITH GECL SUB4 IN VARIOUS SOLVENTS. THE FOLLOWING WERE ISOLATED: GECL SUB4 TIMES 4(O H SUB2 NC SUB6 H SUB4 CO SUB2 H) TIMES 2ACOH, M. 180DEGREES, WHICH LOST THE ACOH IN SEVERAL MONTHS IN OPEN AIR; IN CCL SUB4 THE PRODUCT WAS GECL SUB4 TIMES 4(O H SUB2 NC SUB6 H SUB4 CO SUB2 H), M. 160DEGREES; GECL SUB4 TIMES 4 (M H SUB2 NC SUB6 H SUB4 CO SUB2 H), M. 270DEGREES. X RAY DIFFRACTION DATA WERE TABULATED FOR THE COMPLEXES. THE COMPLEX OF THE META ISOMER WAS MORE STABLE THERMALLY THAN THAT OF THE ORTHO ISOMER. FACILITY: ODESS. GOS. UNIV. IM. MECHNIKOVA, ODESSA, USSR.

UNCLASSIFIED

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

UNCLASSIFIED

TITLE--BENDING OF A THIN WALLED TUBE CONSISTING OF LINEARLY HARDENING MATERIAL -U-

PROCESSING DATE--18SEP70

AUTHOR--STASENKO, I.V.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, IZVESTIYA VYSSHIKH UCHEBNYKH ZAVEDENIY, MASHINOSTROYENIYE, NO. 1, 1970, PP 8-12

DATE PUBLISHED--------70

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

TOPIC TAGS--METAL BENDING, PLASTIC DEFORMATION, STRESS DISTRIBUTION, THIN WALLED METAL TUBE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1985/0534

STEP NO--UR/0145/70/000/001/0008/0012

CIRC ACCESSION NO--AT0100988

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

2/2 025 UNCLASSIFIED

CIRC ACCESSION NO--AT0100988 PROCESSING DATE--18SEP70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTHOR EXAMINES THE ELASTIC PLASTIC STATE OF A THIN WALLED TUBE UNDER THE COMBINED INFLUENCE OF INTERNAL PRESSURE AND BENDING MOMENT, AND THE PROBLEM OF STRESS DISTRIBUTION IN TUBE CROSS SECTION DURING ELASTIC PLASTIC BENDING IS SOLVED IN TERMS OF THE PLASTIC DEFORMATION THEORY. ALSO CLARIFIED IS THE PROBLEM OF ESTABLISHING A RELATIONSHIP BETWEEN TUBE CURVATURE AND THE MAGNITUDE OF THE INTERNAL FORCES. IT IS DEMONSTRATED THAT, IN THE CASE UNDER CONSIDERATION, AND UNLIKE AN ELASTIC SOLUTION TO THE PROBLEM, PERIPHERAL DEFORMATION OF THE TUBE PROVES TO BE A NONLINEAR FUNCTION OF THE COORDINATE OF A POINT. A FORMULA IS DERIVED FROM WHICH IT IS POSSIBLE TO DETERMINE THE MAXIMUM LOAD ON THE TUBE.

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USSR

UDC: 541.49-547.583.5:543.257-546.289-547.289

BELOUSOVA, YE.M., SEYFULLINA, I.I., and STASENKO, I.V., Odessa State University imeni I.I. Mechnikov, Odessa, Ministry of Higher and Secondary Specialized Education Ukrainian SSR

"Complex Compounds of Germanium Tetrachloride With o- and m-Aminobenzoic Acids"

Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 4, Apr 70, pp 815-817

Abstract: The interaction of germanium tetrachloride with o- and m-aminobenzoic acid (OAB and MAB) from solutions in acetic acid and carbon tetrachloride gives compounds of the composition $GeCl_4 \cdot 4OAB \cdot 2CH_3COOH$, $GeCl_4 \cdot 4MAB$, $GeCl_4 \cdot 6OAB$. The individuality of the compounds was confirmed roentgenographically by comparing the calculated interplanar spacings of the initial and resultant substances. A thermographic study showed that the compound containing six OAB molecules is thermally less stable than the compound with four molecules, but they are more stable than the initial anthranilic acid. The complex compound with MAB is thermally more stable than the compounds with OAB. 7/1

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Molecular Physics

-USSR

UDC 539.182+539.184.01

STASIUKAITIS, V. J., KAMINSKAS, V. A., and JUCYS, A. P., Institute of Physics and Mathematics of the Academy of Sciences Lithuanian SSR, Vil'nyus State Pedagogical Institute

"Application of the Extended Method of Calculation and Multiconfigurational Approximation to the Configuration $3d^3$ of Sc I and V III"

Vil'nyus, Litovskiy Fizicheskiy Sbornik, Vol 12, No 6, 1972, pp 903-909

Abstract: Of the refined atomic theory methods, the easiest to use are the multiconfigurational approximation (MCA) and the extended method of calculation (EMC). The present article combines the two methods in the case of the configuration $1s^2 2s^2 2p^6 3s^2 3p^6 3d^3$. Concrete calculations are performed for Sc I and V III. Since the authors are interested mainly in only the 3d-electron shell, the ordinary method of calculation (OMC) is used for all inner shells, and both EMC and MCA are used for the 3d-electron shell. For the inner electrons Hartree-Fock analytic radial orbitals are used for both the ground configuration and the correction configurations. The results obtained in OMC, EMC, MCA, and EMC plus MCA (EMC MCA) are also given for comparison.

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USSR

STASIUKAITIS, V. J., et al., Litovskiy Fizicheskiy Sbornik, Vol 12, No 6, 1972, pp 903-909

The correction configurations used are $3d^24s$, $3d4p^2$, and $3d4f^2$. In the case of MCA (without EMC) the configuration $3d4d^2$ is also included; it no longer occurs in the case of EMC MCA, since it represents merely the radial correlation which is considered by EMC. Theoretical results are compared with experimental data.

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1/2 017 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--KINETICS OF SODIUM DISSOLUTION IN A SODIUM CHLORIDE MELT DURING DILUTION OF THE METALLIC PHASE WITH LEAD -U-

AUTHOR-(05)-BUSSEMACHUKAS, V.B., KUBASOV, V.L., STATSENKO, S.I., MALANINA, I.B., ZATELSKIY, S.A.

COUNTRY OF INFO--USSR

SOURCE--ZH. PRIKL. KHIM. (LENINGRAD) 1970, 43(2) 280-4

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ELECTROLYSIS, SODIUM CHLORIDE, SOLUBILITY, SODIUM, LEAD, ELECTRIC CURRENT, CHLORIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1983/0918 STEP NO--UR/0080/70/043/002/0280/0284

CIRC ACCESSION NO--AP0053842

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

2/2 017 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0053842

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE DISSOLN. RATE OF NA FROM NA-PB LIQ. MIXTS. OF A 1-10 WT. PERCENT NA CONCN. IN AN AGITATED NACL MELT WAS STUDIED EXPTL. IN THE PRESENCE OF CL AT 850DEGREES. THE DEPENDENCE OF THE CURRENT D. OF NA DISSOLN. (I) IN A-CM PRIME2 ON THE NA CONCN. IN THE NA-PB MIXT. IN WT. PERCENT (C) WAS DETD. AS I EQUALS 0.0095C PRIME2. THE CURRENT EFFICIENCY OF THE ELECTROLYSIS OF THE NACL MELT WITH A PB CATHODE IN PERCENT (A) WAS CALCD. AS A EQUALS 100-0.95C PRIME2-I SUBT, WHERE I SUBT IS THE TOTAL CURRENT D. IN A-CM PRIME2. THE CALCNS. AGREE WITH EXPT. PROVING THE FACT THAT CURRENT LOSSES ARE PRIMARILY DETD. BY THE REVERSE DISSOLN. OF NA IN THE NACL MELT AND BY THE REACTION WITH CL.

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USSR

UDC: 531.74:621.315.431.2

STASEVICH, V. N.

"Effect Which the Alignment of X-Ray Goniometers has on the Accuracy of Measurements of the Angle of a Quartz Crystal Cut"

Elektron. tekhnika. Nauch.-tekhn. sb. Radiokomponenty (Electronic Technology. Scientific and Technical Collection. Radio Components), 1970, vyp. 5, pp 51-68 (from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6V478)

Translation: The author studies the errors in measurement of the angle of cut of a quartz plate due to flaws in alignment of the x-ray goniometer. It is found that the main causes of error in measurement of the angle of cut are instability of alignment and the use of a narrow slit in front of the counter. It is shown that a shift in angle readings for the specimen is due to the intensity ratio when the x-ray beam is split. Measurement errors due to inaccuracy of goniometer alignment are theoretically calculated, and the computation is experimentally verified. Practical recommendations are given on alignment of x-ray goniometers used in measuring the angles of cut of quartz plates. The results of this work can be used in measurements of the orientation of cuts of any single crystals on x-ray goniometers.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

USSR

UDC: 577.4

ZHUKOVSKIY, Yu. V., STASHEVSKAYA, V. V.

"Construction of a 2^n-Valued Logic Algebra"

Sb. nauch. tr. Khar'kov. in-t mekhaniz. i elektrifik. s. kh. (Collected Scientific Works. Khar'kov Institute of Mechanization and Electrification of Agriculture), 1971, vyp. 20, pp 157-166 (from RZh-Kibernetika, No 4, May 72, Abstract No 5V353)

[No abstract]

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

USSR

UDC: 51

STASHEVSKAYA, V. V.

"Concerning a Dynamic Programming Problem for a Nonstationary Stochastic Process"

Sb. nauch. tr. Khar'kov. in-t mekhaniz. i elektrifik. s. kh. (Collected Scientific Works. Khar'kov Institute of Mechanization and Electrification of Agriculture), 1971, vyp. 20, pp 35-41 (from RZh-Kibernetika, No 6, Jun 72, Abstract No 6V444)

[No abstract]

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

Acc. Nr: AP0049506 Abstracting Service: CHEMICAL ABST. 5/70 Ref. Code: GR0079

100453e Bisformazans and bistetrazolium salts, derivatives of quinaldine quaternary salts. Stashkevich, V. V.; Pilyugin, G. T.; Stashkevich, O. M. (Chernovits. Gos. Univ., Chernovtsy, USSR). *Zh. Obshch. Khim.* 1970, 40(1), 195–202 (Russ). Adding 0.28 g benzidine, 2 ml concd. HCl, and 0.2 g $NaNO_2$ in H_2O to 1.34 g 2-formyl-1-phenylquinolinium perchlorate phenylhydrazone in pyridine at −10° gave, after 10 hr in the cold, 77.8% I (Ar = Ph, R = R^1 = R^2 = H), m. 198–9°. Similarly were prepd. the following I (Ar, R, R^1, R^2, and m.p. given): Ph, H, *o*-MeO, H, 209–10°; Ph, H, *p*-MeO, H, 191–2°; *p*-MeC_6H_4, Me, *o*-MeO, H, 217–18°; *p*-$MeOC_6H_4$, MeO, *o*-MeO, H, 197–8°; *p*-BrC_6H_4, Br, *o*-MeO, H, 212–13°; Me, NO_2, *o*-MeO, H, 194–5°; Ph, H, H, Me, 205–6°; *p*-MeC_6H_4, Me, *p*-MeO, Me, 288–9°; *p*-$MeOC_6H_4$, H, *o*-MeO, Me, 188–90°; Me, NO_2, *o*-MeO, Me, 171–2°; Ph, H, *p*-MeO, MeO, 199–200°; *p*-$MeOC_6H_4$, MeO, *o*-MeO, MeO, 215–16°; *p*-BrC_6H_4, Br, *o*-MeO, MeO, 205–6°; and Me, NO_2, *o*-MeO, MeO, — (diiodide m. 215–16°). Treating 0.94 g 2-formyl-1-phenylquinolinium perchlorate phenylhydrazone in pyridine at −10° with the diazonium compd. from 0.24 g. *p,p'*-diaminoazobenzene in aq. HCl-$NaNO_2$ and holding 2 hr gave 77% II (Ar = Ph, R = R^1 = H), m. 193–4°. Similarly were prepd. the following II (Ar, R, R^1, and m.p. given): *p*-MeC_6H_4, Me, *o*-MeO, 199–201°; *p*-$MeOC_6H_4$, H, *o*-MeO, 150–1°; *p*-BrC_6H_4, Br, *o*-MeO, 203–4°; and Me, NO_2, *o*-MeO, 180–1°. Ir, and uv, and electronic spectra data were reported. Heating I in HNO_3 (d. 1.38) to decolorization, gave 35–55% III (Ar,

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REEL/FRAME
19801352

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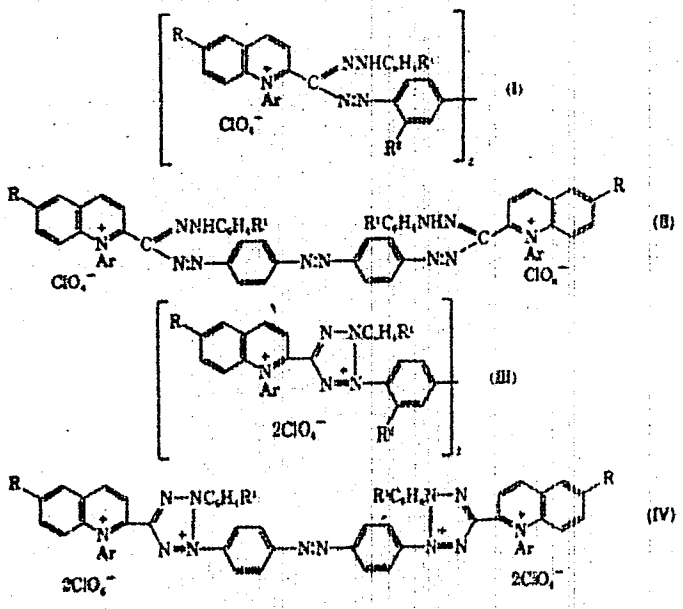

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AP0049506

R, R¹, R², and m.p. given): Ph, H, H, H, 206–7°; Ph, H, *o*-MeO, H, 215–17°; *p*-BrC_6H_4, Br, *o*-MeO, H, 219–20°; Me, NO_2, *o*-MeO, H, 207–9°; Ph, H, H, Me, 207–8°; Me, NO_2, *o*-MeO, Me, 201–2°; Ph, H, *p*-MeO, MeO, 213–14°; *p*-BrC_6H_4, Br, *o*-MeO, MeO, 224–5°; and Me, NO_2, *o*-MeO, MeO, 221–2°. Similarly were prepd. the following IV (Ar, R, R¹, and m.p. given): Ph, H, H, 226–7°; *p*-$MeOC_6H_4$, H, *o*-MeO, 219–20°; and Me, NO_2, *o*-MeO, 204–5°. Uv spectral data for these were reported. The polarographic halfwave potentials of III and IV were tabulated; the 2nd waves had halfwave potentials in the region of −0.43 to −0.63 V. This makes possible the use of these bistetrazolium salts in histochemistry. I possessed internal H bonds, as shown by their ir spectra. G. M. Kosolapoff

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

Acc. Nr: AP0049506 Abstracting Service: CHEMICAL ABST. 5/70 Ref. Code: UR0079

100453e Bisformazans and bistetrazolium salts, derivatives of quinaldine quaternary salts. Stashkevich, V. V.; Pilyugin, G. T.; Stashkevich, O. M. (Chernovitsk. Gos. Univ., Chernovtsy, USSR). *Zh. Obshch. Khim.* 1970, 40(1), 195–202 (Russ). Adding 0.28 g benzidine, 2 ml concd. HCl, and 0.2 g $NaNO_2$ in H_2O to 1.34 g 2-formyl-1-phenylquinolinium perchlorate phenylhydrazone in pyridine at −10° gave, after 10 hr in the cold, 77.8% I (Ar = Ph, R = R^1 = R^2 = H), m. 198–9°. Similarly were prepd. the following I (Ar, R, R^1, R^2, and m.p. given): Ph, H, *o*-MeO, H, 209–10°; Ph, H, *p*-MeO, H, 191–2°; *p*-MeC_6H_4, Me, *o*-MeO, H, 217–18°; *p*-$MeOC_6H_4$, MeO, *o*-MeO, H, 197–8°; *p*-BrC_6H_4, Br, *o*-MeO, H, 212–13°; Me, NO_2, *o*-MeO, H, 194–5°; Ph, H, H, Me, 205–6°; *p*-MeC_6H_4, Me, *p*-MeO, Me, 238–9°; *p*-$MeOC_6H_4$, H, *o*-MeO, Me, 188–90°; Me, NO_2, *o*-MeO, Me, 171–2°; Ph, H, *p*-MeO, MeO, 199–200°; *p*-$MeOC_6H_4$, MeO, *o*-MeO, MeO, 215–16°; *p*-BrC_6H_4, Br, *o*-MeO, MeO, 205–6°; and Me, NO_2, *o*-MeO, MeO, — (diiodide m. 215–16°). Treating 0.94 g 2-formyl-1-phenylquinolinium perchlorate phenylhydrazone in pyridine at −10° with the diazonium compd. from 0.24 g. *p,p'*-diaminoazobenzene in aq. HCl–$NaNO_2$ and holding 2 hr gave 77% II (Ar = Ph, R = R^1 = H), m. 193–4°. Similarly were prepd. the following II (Ar, R, R^1, and m.p. given): *p*-MeC_6H_4, Me, *o*-MeO, 199–201°; *p*-$MeOC_6H_4$, H, *o*-MeO, 180–1°; *p*-BrC_6H_4, Br, *o*-MeO, 203–4°; and Me, NO_2, *o*-MeO, 180–1°. Ir, and uv, and electronic spectra data were reported. Heating I in HNO_3 (d. 1.38) to decolorization, gave 35–85% III (Ar,

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REEL/FRAME 19801352

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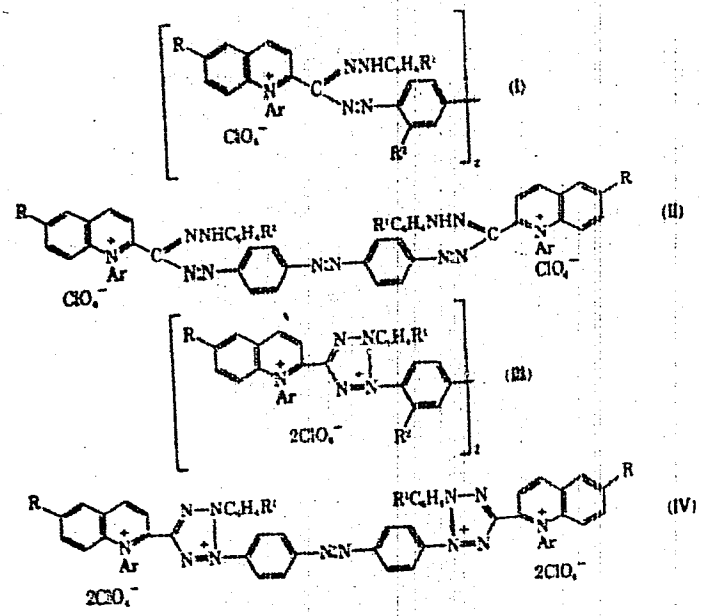

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

AP0049506

R, R¹, R², and m.p. given): Ph, H, H, H, 206–7°; Ph, H, *o*-MeO, H, 215–17°; *p*-BrC_6H_4, Br, *o*-MeO, H, 219–20°; Me, NO_2, *o*-MeO, H, 207–9°; Ph, H, H, Me, 207–8°; Me, NO_2, *o*-MeO, Me, 201–2°; Ph, H, *p*-MeO, MeO, 213–14°; *p*-BrC_6H_4, Br, *o*-MeO, MeO, 224–5°; and Me, NO_2, *o*-MeO, MeO, 221–2°. Similarly were prepd. the following IV (Ar, R, R¹, and m.p. given): Ph, H, H, 226–7°; *p*-$MeOC_6H_4$, H, *o*-MeO, 219–20°; and Me, NO_2, *o*-MeO, 204–5°. Uv spectral data for these were reported. The polarographic halfwave potentials of III and IV were tabulated; the 2nd waves had halfwave potentials in the region of −0.43 to −0.63 V. This makes possible the use of these bistetrazolium salts in histochemistry. I possessed internal H bonds, as shown by their ir spectra.

G. M. Kosolapoff

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

1/2 037 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--SYNTHESIS AND OPTIMAL FILTRATION OF WIDEBAND SIGNALS BY DISPERSIVE ULTRASONIC DELAY LINES AND THE POTENTIAL NOISE STABILITY OF ANALOG DATA

AUTHOR--STASHUK, L.D.

COUNTRY OF INFO--USSR

SOURCE--RADIOELECTRONIKA, VOL. 8, MAR. 1970, P. 299-308, IZY,VUZ

DATE PUBLISHED----MAR70

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR., PHYSICS

TOPIC TAGS--PULSE SIGNAL, SIGNAL PROCESSING, ELECTRIC FILTER, FILTRATION, ACOUSTIC DELAY LINE, PULSE MODULATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/0544 STEP NO--UR/0452/70/008/000/0299/0308

CIRC ACCESSION NO--AP0124239

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

2/2 037 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0124239

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. INVESTIGATION OF GENERAL PROBLEMS CONCERNING THE SYNTHESIS AND OPTIMAL FILTRATION OF WIDEBAND PULSE SIGNALS WITH LINEAR FREQUENCY MODULATION. THE FILTRATION IS ACCOMPLISHED BY A DISPERSIVE ULTRASONIC DELAY LINE TREATED AS A FOUR TERMINAL NETWORK WITH A FREQUENCY DEPENDENT DELAY CHARACTERISTIC. EXPRESSIONS ARE DERIVED FOR EXPANDED AND COMPRESSED SIGNALS AT DIFFERENT WAVEFORMS AND INITIAL PULSE SHAPES. ATTENTION IS GIVEN TO THE POSSIBLITY OF ANALOG TRANSFER OF INFORMATION USING THE WIDEBAND SIGNALS AS CARRIERS; THE POTENTIAL (IN THE SENSE OF KOTELNIKOV) NOISE STABILITY OF CERTAIN MODULATION TYPES IS ESTIMATED.

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USSR S UDC: 621.396:621.374.5

STASHUK, L. D.

"Synthesis and Optimal Filtration of Broad-Band Signals by Dispersion Ultrasonic Delay Lines and the Potential Noise Immunity of Analogous Information Transmission in the Use of Such Signals"

Kiev, Izvestiya Vuzov SSSR--Radioelektronika, Vol. 13, No. 3, 1970, pp 299-308

Abstract: In the synthesis of a broad-band linear frequency modulation signal, the ultrasonic dispersion delay line performs the function of a comjugate filter excited at its input by an ordinary pulse. The synthesis process is analyzed with the delay line excited by pulses with various types of envelope: square, triangular, (sin x)/x, and bell-shaped. A table is given of the results of this analysis; it gives the spectral function corresponding to the different signal types, the expanded linear frequency modulated signal, the spectral function of the expanded linear frequency modulated signal, and the compressed signal expressions.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

USSR

STASHUK, L. D., Izvestiya Vuzov SSSR--Radioelektronika, Vol. 13, No. 3, 1970, pp 299-308

Oscillograms of the broad-band expanded and compressed linear FM signal at the optimal filter output are shown.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

Acc. Nr: AP0038107 S

Ref. Code: UR 0326

PRIMARY SOURCE: Fiziologiya Rasteniy, 1970, Vol 17, Nr 1, pp 71-75

DEPENDENCE OF CONTENT OF GIBBERELLIN-LIKE SUBSTANCES IN SUMMER WHEAT LEAVES ON CONDITIONS OF PLANT NUTRITION AND LEAF AGE

Stasilyunas, O. A.

N. I. Vavilov All-Union Institute of Plant Growing, Leningrad

Summer wheat was grown in field and vegetation conditions with sufficient (addition of NPK in the tillering and shooting phases) or insufficient nutrition (without additional nutrients). Gibberellin-like substances were extracted from 5 and 10 day old leaves of the last tier and also from leaves of the preceding tier by means of paper chromatography. The growth activity of the substances was determined by a biotest (pea shoots). In all leaf samples the amount of gibberellin-like substances was higher in the case of added nutrients than in the case of insufficient nutrition of the plants. Irrespective of level of nutrition there were more gibberellin-like substances in the last leaves when they were 5 days old than when they were 10 days old. Two zones of gibberellin-like activity with R_f 0.10—0.30 and 0.50—0.70 were found. The latter corresponds to GA. The content of gibberellin-like substances did not correlate with the leaf area.

REEL/FRAME

19731157

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

1/2 007 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--INTERLEVEL DIFFERENCES IN IRON GROUP ATOMIC SYSTEMS IN THE EXTENDED METHOD OF CALCULATION -U-

AUTHOR-(02)-JUCYS, A., STASIUKAITIS, V. STASYUKAYTIS
YUTSIS, A.P. STASYUKAYTIS, V.

S V

COUNTRY OF INFO--USSR

SOURCE--INT. J. QUANTUM CHEM. 1970, 4(3), 333-5

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--IRON, ATOMIC PROPERTY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1998/0441 STEP NO--US/0000/70/004/003/0333/0035

CIRC ACCESSION NO--AP0121115

UNCLASSIFIED

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

2/2 007 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0121115

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EXTENDED METHOD OF CALCN. HAS BEEN APPLIED TO CALC. THE INTER LEVEL DIFFERENCES OF THE SHELL OF 3D ELECTRONS IN THE FE GROUP AT. SYSTEMS. THE H LIKE RADIAL ORBITALS HAVE BEEN USED. THE RESULTS ARE COMPARED WITH THOSE OBTAINED BY ORDINARY METHODS OF CALCN. AS WELL AS WITH EXPTL. DATA. FACILITY: DEP. THEOR. PHYS., V. KAPSUKAS STATE UNIV., VILNIUS, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

USSR

UDC 621.372.061

STASYUNAS, A. S., KEMESHIS, P. P.

"Properties of Parametric Filters with Switching Multipliers"

Techn. kibernetika, Tekhn. kibernetika (Technical Cybernetics), Kaunas, 1970, pp 282-290 (from RZh-Radiotekhnika, No 8, Aug 70, Abstract No 8A139)

Translation: This article contains an investigation of the properties of non-inductive parametric filters simultaneously realizing filtration and transposition of signals where periodic (square) multiplier signals are used instead of harmonic reference multiplier signals.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

USSR

UDC 621.391:519.2

STASYUNAS, A. S., KEMESHIS, P. P.

"Synthesis of Parametric Filters Simultaneously Realizing Signal Filtration and Transposition"

Techn. kibernetika, tekhn. kibernetika (Technical Cybernetics), Kaunas, 1970, pp 275-281 (from RZh-Radiotekhnika, No 8, Aug 70, Abstract No 8A109)

Translation: In this article the problem of synthesizing noninductive parametric filters simultaneously realizing signal filtration and transposition to any frequency range is solved.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

USSR

UDC: 621.372.54.061

ZAYEZDNYY, A. M., KEMESHIS, P. P., and STASYUNAS, A. S.

"Theoretical Bases of the Design of Parametric Filters Equivalent to Linear Filters"

Kiev, Izvestiya VUZ USSR--Radioelektronika, No 10, 1972, pp 1195-1203

Abstract: The parametric filters under discussion in this article are RC circuits designed to replace filters using inductances. As defined here, the parametric filter is a circuit consisting of resistors and a single capacitor, with one of the resistors varying in accordance with the control circuit signal. The linear filter consists of elements with constant parameters and can be described by the n-th order linear differential equation

$$\sum_{i=0}^{n} a_i \frac{d^i}{dt^i} x(t) = f(t)$$

with constant coefficients. The problem the authors set themselves is stated in this way: Given the differential equation or transfer

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

USSR

ZAYEZDNYY, A. M., et al, Izvestiya VUZ USSR--Radioelektronika, No 10, 1972, pp 1195-1203

function of a physically realizable circuit, and given an external action f(t) and the circuit reaction x(t); required, to synthesize the circuit realizing the transformation of f(t) into x(t) under the condition that the circuit contain parametric filters and summer circuits of the same type connected in parallel. Three possible methods of solving the problem are offered: use of the Lagrange method of variation of constants, transition to the transfer function, and the recurrent method of finding periodic solutions.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

USSR

UDC 539.5

DOTSENKO, V. I., PUSTOVALOV, V. V., STATINOVA, V. F., Kar'kov.

"Deformation Hardening of Copper at Low Temperatures"

Kiev, Problemy Prochnosti, No. 4, Apr 71, p. 41-46.

Abstract: The temperature dependences of the parameters of the hardening curves of copper monocrystals of various orientation and copper polycrystals of various purity are studied. It is demonstrated that as the temperature drops from 4.2 to 1.4°K, the critical shear stress of copper monocrystals of all three main orientations decreases. Two types of uneveness of the hardening curve of monocrystals are studied, observed at low temperatures. The stress relaxation method is used to produce values of the activation energy and activation volume of the process controlling plastic deformation.

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

Optimization

USSR

1

UDC 518.1

ARTOBOLEVSKIY, I. I., Academician, GENKIN, M. D., GRINKEVICH, V. K., SOBOL', I. M., and STATNIKOV, R. B., State Scientific Research Institute of Mechanical Engineering, Moscow

"Optimization in Machine Theory by LP-Search"

Moscow, Doklady Akademii Nauk SSSR, Vol 200, No 6, 1971, pp 1287-1290

Abstract: The principal types of optimization problems occurring in machine theory are optimal analysis problems, optimal synthesis problems, and best approximation problems. They are all multiparametric and the use of classical methods of the calculus of variations is, as a rule, impossible. A global search is necessary. An "independent" random search (Monte Carlo method) permits the simultaneous optimization of all criteria that are of interest. The selection of the decision or compromise criterion can be made during the "man-machine" dialogue. Further improvement of the model (if it is required) is possible by using local search methods, which usually converge in the neighborhood of the extremum. The authors suggest that, instead of a random search, its deterministic analog -- an LP-search -- be used. It has led to much

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ARTOBOLEVSKIY, I. I., et al., Doklady Akademii Nauk SSSR, Vol 200, No 6, 1971, pp 1287-1290

better results than the random search in a number of complex problems, with the number of samples reduced 2-4 times. The article describes the scheme for the LP-search and considers the example of an oscillatory system with three degrees of freedom, in which it is necessary to find the model with the minimum length and the model with the maximum difference between the first and second natural frequencies subject to restrictions.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

STATNIKOV, R. B.

Machine Control

JPRS 54729
17 Dec 71

UDC 518.1

OPTIMIZATION IN THE THEORY OF MACHINES, USING THE LP-SEARCH METHOD

Article by Academician I. I. Artobolevskiy, M. D. Genkin, V. K. Grinkevich, I. M. Sobol', and R. B. Statnikov, State Scientific Research Institute of Machine Control, Moscow,
Doklady Akademii Nauk SSSR, Vol 200, No 6, 1971, pp 1287-1290

The problems of optimum planning are particularly pressing under series production conditions and in the designing of expensive experiments.

Optimum planning includes both a search for a design plan (and its corresponding parameters) according to the given quality criteria and the creation of new mathematical methods that consider the specifics of complex multiparametric and multicriteria problems [1].

I. Instead of the concepts machine, mechanism, design, and so forth, we will introduce a nondimensional analog -- the model. For a given kinematic structure and n degrees of freedom, the model is determined by the point $\alpha = (\alpha_1, \ldots, \alpha_r)$ of the r-dimensional parallelepiped $(r \geq n)$

$$\alpha_j' \leq \alpha_j \leq \alpha_j'', \quad 1 \leq j \leq r, \tag{1}$$

where α_j', α_j'' are the limits of the permissible variations of the model's parameters. Various additional limitations on the system's behavior isolates some closed section G in parallelepiped (1); we consider G's volume to be positive.

If the quality of the model is determined by a function $\Phi(\alpha)$ (the quality criterion), which is defined in G, then we call that model α', such that $\Phi(\alpha') = \sup_{\alpha \in G} \Phi(\alpha)$, an optimum model.

Let us agree to write $\Phi(\alpha|G)$, if $\Phi(\alpha)$ is defined in G.

Let us examine the basic types of optimization problems that arise in the theory of machines.

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USSR UDC 621.774.35.001.4

PLYATSKOVSKIY, O. A., Doctor of Technical Sciences, PORONHNIKOV, YU. Z., SULADZE, O. N., STATNIKOV, V. M., UBIRIYA, A. YE., Candidate of Technical Sciences, and TSERETELI, P. A.

Principal Parameters of the Deformation Process by High-Temperature Thermomechanical Treatment of Pipes"

Dnepropetrovsk Metallurgicheskaya i Gornorudnaya Promyshlennost', No 4, (70), Jul-Aug 71, pp 34-37

Abstract: At many active pipe rolling plants, reduction mills can be utilized for high-temperature thermomechanical treatment (HTMT) of pipes. Workers of the All-Union Scientific Research Institute of Pipes and specialists of the Rustavsk Metallurgical Plant have developed the technology of HTMT of hot-rolled compressor pump pipes (73 x 5.5 mm) of carbon steels (brands 20 and 35) and low-alloyed steel (36G2S) by rolling on a 20-cage reduction mill with rolls 350-400 mm in diameter. The HTMT technology is discussed by reference to diagrams showing the general arrangement and the change of the metal pressure on rolls under different rolling conditions. In HTMT the metal pressure on the rolls of pipes with precooling in deforming cases is approximately twice as high as in the standard process of hot reduction. Investigation data were used for planning an industrial experimental produc-

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

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PLYATSKOVSKIY, O. A., et al., Metallurgicheskaya i Gornorudnaya Promyshlennost', No 4 (70), Jul-Aug 71, pp 34-37

tion sector of high-quality compressor pump pipes. Two illustrations, one table, three bibliographic references.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

USSR

UDC 546.289+546.23

KARBANOV, S. G., STATNOVA, YE. A., ZLOMANOV, V. P., and NOVOSELOVA, A. V., Chair of Inorganic Chemistry

"Study of the System Germanium-Selenium in the Proximity of Germanium Monoselenide and the Growth of Its Monocrystals"

Moscow, Vestnik Moskovskogo Universiteta, Vol 13, No 5, Sep-Oct 72, pp 531-534

Abstract: The system Ge-Se has been studied by directed crystallization in the composition range 49.99-51.00% Se. Germanium monoselenide has been found to melt incongruently:

$$GeSe\ (solid) \rightleftharpoons Ge\ (Solid) + L\ (Melt).$$

Monocrystals of germanium selenide were grown by the sublimation method in a closed system with movement of the ampule and under static conditions. Following parameters were obtained for the elementary nucleus by x-ray analysis: $a = 4.42 \pm 0.02$, $b = 3.87 \pm 0.02$, and $c = 10.85 \pm 0.05$ Å.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

1/2 032 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--THERMODYNAMIC PROPERTIES OF MOLTEN ALLOYS OF THE LEAD,SODIUM,BISMUTH SYSTEM -U-

AUTHOR-(03)-MORACHEVSKY, A.G., STATSENKO, S.I., BUSSEMACHUKAS, V.B.

COUNTRY OF INFO--USSR

SOURCE--IZVEST. V.U.Z. TSVETNAYA MET., 1970, (2), 97-101

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--THERMODYNAMIC PROPERTY, ORDERED ALLOY, ELECTROMOTIVE FORCE, LEAD ALLOY, SODIUM ALLOY, BISMUTH ALLOY, SODIUM CHLORIDE, CALCIUM CHLORIDE, BARIUM CHLORIDE, ENTROPY, GLASS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3003/1498

STEP NO--UR/0149/70/000/002/0097/0101

CIRC ACCESSION NO--AT0130427

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

2/2 032 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AT0130427

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE THERMODYNAMIC PROPERTIES OF A NUMBER OF ALLOYS OF THE PB,NA,BI SYSTEM WERE STUDIED BY MEASURING THE E.M.F OF (MINUS)NA, GLASS, (NACL-CACL SUB2 -BACL SUB2) SUBEUT, GLASS, PB(N SUBPB), NA (N SUBNA), BI(N SUBBI) (PLUS) CONCENTRATION CELLS BETWEEN THE TEMP. OF THE LIQUIDUS LINE AND 910DEGREESC. THE NEGATIVE VALUES OF THE ENTROPY OF MIXING OBTAINED FOR THE SYSTEM WERE ATTRIBUTED TO THE EXISTENCE OF ORDERING IN THE ALLOYS, SIMILAR TO THAT CHARACTERIZING SUCH COMPOUNDS AS NA SUB3 BI.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

1/2 037 UNCLASSIFIED

TITLE--ACCEPTOR ROLE OF MOLYBDENUM IN AN ALLOY WITH NICKEL -U- PROCESSING DATE--20NOV70

AUTHOR-(04)-KALINOVICH, D.F., KOVENSKIY, I.I., SMOLIN, M.D., STATSENKO, V.M.

COUNTRY OF INFO--USSR

SOURCE--FIZ. METAL METALLOVED. 1970, 29(3), 653-5

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, PHYSICS

TOPIC TAGS--MOLYBDENUM CONTAINING ALLOY, NICKEL ALLOY, IONIZATION, ELECTRON ACCEPTOR, ELECTRON DONOR, NICKEL ISOTOPE, MOLYBDENUM ISOTOPE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/0341 STEP NO--UR/0126/70/029/003/0653/0655

CIRC ACCESSION NO--AP0126097

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

2/2 037 UNCLASSIFIED

CIRC ACCESSION NO--AP0126097 PROCESSING DATE--20NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. BY USING RADIOACTIVE PRIME63 NI AND PRIME99 MO AND THE METHOD OF ELECTRON TRANSFER, THE SIGN AND IONIZATION DEGREE OF MO ATOMS IN THE ALLOY NI,MO 20 AT. PERCENT AT 950-1300DEGREES WERE DETD. EQUATIONS WERE OBTAINED FROM THE TEMP. DEPENDENCE OF MO AND NI DIFFUSION COEFFS. THE FOLLOWING VALUES WERE DETD. FOR THE EFFECTIVE CHARGE OF THE MIGRATING IONS, TAKING INTO CONSIDERATION ALL FORCES WHICH MAY ACT ON THE IONS DURING ELECTRON TRANSFER FOR NI AND MO (1ST AND 2ND FIGURES, RESP.): AT 950DEGREES 38.8, NEGATIVE 9.90 ESU, 2.95 TIMES 10 PRIME NEGATIVE10 CM PRIME2-SEC; AT 1050DEGREES 37.5, NEGATIVE 9.45 ESU, 1.29 TIMES 10 PRIME NEGATIVE10, 4.05 TIMES 10 PRIME NEGATIVE9, 1.86 TIMES 10 PRIME NEGATIVE9 CM PRIME2-SEC; AT 1150DEGREES 36.3, NEGATIVE 8.96 ESU, 5.30 TIMES 10 PRIME NEGATIVE9, 6.83 TIMES 10 PRIME NEGATIVE9 CM PRIME2-SEC; AT 1300DEGREES 33.5, NEGATIVE 8.23 ESU, 2.86 TIMES 10 PRIME NEGATIVE8, 3.47 TIMES 10 PRIME NEGATIVE8 CM PRIME2-SEC. THE VALUES OF THE EFFECTIVE CHARGE FOR NI AND MO INDICATE A DONOR ACCEPTOR INTERACTION. FACILITY: INST. PROBL. MATERIALOVED., KIEV, USSR.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

USSR

UDC: 519.24

STATULYAVICHUS, V.

"On Limit Theorems for Random Functions. 1"

Lit. mat. sb. (Lithuanian Mathematics Collection), 1970, 10, No 3, pp 583-592 (from RZh-Kibernetika, No 7, Jul 71, Abstract No 7V63)

Translation: An investigation is made into the asymptotic behavior of probabilities $1-F_{Z(0,T)}(x)$, $F_{Z(0,T)}(-x)$ of large deviations, and the rate of convergence of the functions $F_{Z(0,T)}(x)$ to $\Phi(x)$ for the random quantity $Z(0,T)=\frac{\zeta(0,T)-M\zeta(0,T)}{\sqrt{D\zeta(0,T)}}$ as $T\to\infty$, where $\zeta(s,t)$ is a function which is additively dependent on the interval $[s,t)$ such that its corresponding σ-algebras $\mathcal{F}_{s,t}=\sigma\{\zeta(u,v),\ [u,v]\subset[s,t]\}$ satisfy conditions of weak dependence of "near-Markovian" type (the RM condition):

$$\sup_{C\in\mathcal{F}_{t,T}} |P(C\mid AB)-P(C\mid B)|\leq e^{-\alpha_T(t-s)}$$

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

STATULYAVICHUS, V., Lit. mat. sb., 1970, 10, No 3, pp 583-592

for all $A \in \mathcal{F}_{0,s}$, $B \in \mathcal{F}_{s,t}$, $0 < s < t < T$, where the coefficient of regularity $\alpha_T > 0$. An investigation is also made of semi-invariant conditions for mixed semi-invariants $\Gamma_k(\xi(t_1), \ldots, \xi(t_k))$ of the process $\xi(t)$ for the investigation of $\xi(s, t) = \int_s^t \xi(t)\,dt$. An estimate is obtained for $\Gamma_k(\xi(t_1), \ldots, \xi(t_k))$, when $\xi(t)$ satisfies a regularity condition of type RM, or behavior of the mixed moments

$$M\widetilde{\xi(t_1)\xi(t_2)\ldots\xi(t_k)},$$

is known, where the sign ~ indicates that the random quantities are centered:

$$\widetilde{\xi} = \xi - M\xi.$$

Author's abstract.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

1/2 045

UNCLASSIFIED

TITLE--CALORIMETRIC FLOW METER FOR CORROSIVE LIQUIDS -U-

PROCESSING DATE--16OCT70

AUTHOR--STATVUKHA, G.A.

COUNTRY OF INFO--USSR

S

SOURCE--KHIM. PROM. UKR. 1970, (1), 44-5

DATE PUBLISHED--------70

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

TOPIC TAGS--CORROSION, METAL TUBE, STRUCTURAL PLASTIC, FLUID FLOW, FLOW METER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/1667

STEP NO--UR/0436/70/000/001/0044/0045

CIRC ACCESSION NO--AP0118645

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

2/2 045

UNCLASSIFIED

CIRC ACCESSION NO--AP0118645 PROCESSING DATE--16OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE DIAGRAM AND PARAMETERS ARE GIVEN OF A CALORIMETRIC FLOW METER WITH FLUOROPLAST TUBE INSTEAD OF A METAL ONE. STATIC AND DYNAMIC CHARACTERISTICS OF THE METER ARE DISCUSSED. THE TIME CONST. OF THE FLUOROPLAST TUBE IS TWICE THAT OF THE METAL TUBE OF IDENTICAL DIMENSIONS. THE PROPOSED METER MAKES IT POSSIBLE TO MEASURE FLOWS SMALLER THAN OR EQUAL TO 200 L.-HR. THE ERROR OF THE MEASUREMENT IS SMALLER THAN OR EQUAL TO 2PERCENT.

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APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

USSR

UDC 547.62.24

DOKUNIKHIN, N. S., SOLODAR', S. L., and STAVINCHUK, V. G., Scientific Research Institute of Organic Intermediate Products and Dyes, Moscow

"Conversions of Polycyclic Ketones. The Action of Phosphorus Oxychloride on Phenalenone and 1,3(2H)-Phenalendione"

Leningrad, Zhurnal Organicheskoy Khimii, Vol 9, No 2, Feb 73, pp 375-377

Abstract: On heating with phosphorus oxychloride phenalenone and 1,3(2H)--phenalendione form 1-chloroperopyrene, m.p. 327-329°, and 1,3,7-trichloroperopyrene, m.p. 336-337°, respectively which can then be reduced to peropyrene. Oxidation of 1-chloroperopyrene with dilute nitric acid gave perylene-3,4,9,10-tetracarboxylic acid. The structure of 1,3,7-trichloroperopyrene was established by oxidizing it to 2-chloroperylene-3,4,9,10--tetracarboxylic acid, followed by conversion to the known 2-hydroxyperylene-3,4,9,10-tetracarboxylic acid.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

USSR

UDC 612.111.31.015.426

KHOLODNYY, A. Ya., STAVINSKAYA, L. I., and CHESNOKOV, F. T., Blood and Tissue Center, Military Medical Academy imeni S. M. Kirov, Leningrad

"Change in Viability of Erythrocytes Irradiated With Microwaves"

Moscow, Problemy Gematologii i Perelivaniya Krovi, Vol 15, No 7, Jul 70, pp 39-41

Abstract: A study was made of the effect of microwaves on peripheral blood erythrocytes under conditions of extracorporeal circulation. The acid stability of erythrocytes in the blood of irradiated dogs, was determined prior to and after irradiation. The time of stay of Cr^{51} labeled erythrocytes in the vessels was also studied. It was found that irradiation (λ = 12.5 cm) of the dogs decreased the lifetime of erythrocytes, as evidenced by a reduction in acid stability and a decrease in time of stay in the vessels.

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

1/2 026 UNCLASSIFIED

TITLE--ON BIOLOGICAL ADEQUACY OF BLOOD USED FOR REINFUSION -U- PROCESSING DATE--09OCT70

AUTHOR-(02)-ZHURAVLEV, YU.N., STAVINSKAYA, L.I.

COUNTRY OF INFO--USSR

SOURCE--VESTNIK KHIRURGII IMENI I. I. GREKOVA, 1970, VOL 104, NR 5, PP 110-113

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--STORED BLOOD, BLOOD TRANSFUSION, ERYTHROCYTE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1990/0578 STEP NO--UR/0589/70/104/005/0110/0113

CIRC ACCESSION NO--AP0108793

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

2/2 026 UNCLASSIFIED

CIRC ACCESSION NO--AP0108793 PROCESSING DATE--09OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. USING A RADIOACTIVE METHOD THE AUTHORS HAVE STUDIED THE POSTTRANSFUSION INTAKE AND DURATION OF SEMIPERIOD OF ERYTHROCYTES LIFE IN AUTOBLOOD TAKEN FROM THE OPERATIVE WOUND AND WASHED ERYTHROCYTES IN DRAINAGE BLOOD. THE CONCLUSION IS DRAWN ON HIGH BIOLOGICAL ADEQUACY OF BLOOD TAKEN FROM THE OPERATIVE WOUND AND WASHED ERYTHROCYTES OF DRAINAGE BLOOD IN ITS PROMTP ENTERING A RESERVOIR. STORAGE OF THE COLLECTED DRAINAGE BLOOD IN A REFRIGERATOR DOES NOT EFFECT THE DURATION OF ERYTHROCYTES LIFE. FACILITY: KHIRURGICHESKOY KLINIKI USOVERSHENSTVOVANIYA VRACHEY IM. P. A. KUPRIYANOVA AND N I LABORATORII, TSENTRA KROVI I TKANEY VOYENNO MEDITSINSKOY ORDENA LENINA KRASNOZNAMENNOY AKADEMII IM. S. M. KIROVA.

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USSR UDC:621.313.12:539.172.12

BOL'SHOV, V. I., DUBININ, A. A., DMITRIYEV, V. M., KAPCHIGASHEV, S. P., KON'SHIN, V. A., MATUSEVICH, YE. S., POLIVANSKIY, V. P., PUPKO, V. Ya., REGUSHEVSKIY, V. I., STAVISSKIY, Yu. Ya., and YUR'YEV, Yu. S.

"Physical Investigation of the Target in an Electronuclear Neutron Flux Generator"

Moscow, Atomnaya Energiya, Vol 28, No 5, May 70, pp 388-392

Abstract: Fluxes of thermal neutrons on the order of 10^{17}-10^{18} n/cm^2·sec open new possibilities for investigations in many areas of science and technology. There is great interest in the study of the possibility for increasing neutron fluxes by using the process of multiple neutron birth upon interaction of nucleons with energies in the hundreds of MeV with heavy nuclei. This article presents the results of experiments and calculations concerning the neutron-physical characteristics

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"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203130006-4

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BOL'SHOV, V. I., DUBININ, A. A., DMITRIYEV, V. M., KAPCHIGASHEV, S. P., KON'SHIN, V. A., MATUSEVICH, Y. E. S., TOLIVANSKIY, V. P., TUPKO, V. Ya., REGUSHEVSKIY, V. I., STAVISSKIY, Yu. Ya., YUR'YEV, Yu. S., Moscow, Atomnaya Energiya, Vol 28, No 5, May 70, pp 388-392

of the target in an electronuclear device for the generation of neutron fluxes. The yield of neutrons and distribution of the number of reactions in a heavy target and moderator are measured. The space-energy distribution of neutron flux in the moderator is calculated and the accumulation of transuranium elements in a system with high neutron flux is computed.

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USSR

UDC:621.313.12:539.172.12

BOL'SHOV, V. I., DUBININ, A. A., DMITRIYEV, V. M., KAPCHIGASHEV, S. P., KON'SHIN, V. A., MATUSEVICH, YE. S., POLIVANSKIY, V. I., TUPKO, V. Ya., REGUSHEVSKIY, V. I., STAVISSKIY, Yu. Ya., and YUR'YEV, Yu. S.

"Physical Investigation of the Target in an Electronuclear Neutron Flux Generator"

Moscow, Atomnaya Energiya, Vol 28, No 5, May 70, pp 388-392

Abstract: Fluxes of thermal neutrons on the order of 10^{17}-10^{18} n/cm^2·sec open new possibilities for investigations in many areas of science and technology. There is great interest in the study of the possibility for increasing neutron fluxes by using the process of multiple neutron birth upon interaction of nucleons with energies in the hundreds of MeV with heavy nuclei. This article presents the results of experiments and calculations concerning the neutron-physical characteristics

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USSR

UDC 621.372.837(088.8)

KOZLOV, V. I., STAVITSKAYA, G. S., KHOTENOVSKAYA, T. S., DVORKIN, O. E.

"Fast Superhigh Frequency Switch"

USSR Author's Certificate No 253880, Filed 23 Jul 69, Published 3 Mar 70 (from RZh-Radiotekhnika, No 9, Sep 70, Abstract No 9B150P)

Translation: The proposed superhigh frequency switch is executed in the form of a T-junction on two arms of which varactor diodes with tuning loops are installed. In order to expand the operating frequency band, the external voltage is fed out of phase to two groups of diodes installed on each arm of the switch. The diodes of the first group are tuned to series resonance with a negative bias on the lower frequencies of the operating range, and the diodes of the second group, with positive bias on the upper frequencies of the operating range. There is one illustration.

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UDC 624.131.551.1+624.154

STAVNITSER, L. R., SHEKHTER, O. YA.

"Forced Horizontal Oscillations of Piles Under Seismic Wave Action"

Moscow, Osnovaniya, fundamenty i mekhanika gruntov, No. 5, 1971, pp 19-23

Abstract: Bending oscillations of a cylindrical pile bearing a mass on the upper end is investigated for the case when stationary longitudinal waves are propagating in a horizontal direction. It is assumed that oscillations of piles placed in the same group occur with the same phase since the distances between them are small as compared with the seismic wavelengths. To obtain an approximate solution, the authors therefore investigate the motion of one pile together with the part of the load imparted to it from the foundation structures. This load is assumed to be concentrated on the upper end of the pile. An approximate discrete scheme in the form of a multimass system with elastic bonds is used for a common solution to the equations for wave action and the transverse vibrations of the pile. This makes it possible to obtain particular solutions of the plane dynamic problem of elasticity theory for each horizontal cross section of the pile with subsequent determination of the matrix of the coefficients from the solution of the equations of the transverse vibrations of the pile. Amplitudes and phases

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STAVNITSER, L. R., SHEKHTER, O. YA., Osnovaniya, fundamenty i mekhanika gruntov, No. 5, 1971, pp 19-23

of the vibrations of the pile, the dynamic pressure of the ground, and diagrams of the dynamic bending moments and transverse forces are then determined as functions of the depth, time, diameter and length of the pile, static vertical load, elastic properties of the ground and the parameters of the seismic waves. Analysis of computer calculations showed that the greatest values of the dynamic pressure of the ground on the pile and of transverse forces and bending moments occur on the upper end of a pile rigidly embedded into grillage. These values drop off sharply with depth and become practically insignificant for the lower two-thirds of the length. Analysis also showed that only the first mode of the oscillations of the pile is achieved under wave action and that resonance relationships are characterized by a single maximum in the region of very low frequencies.

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