

USSR

SHVETSKIY, et al., USSR Author's Certificate No 347909 K1h 03 K 13/20, filed 9 Aug 68, published 4 Sep 72 .

The outputs of the discharge and transfer instruction shaper are connected respectively to the apparatus memory discharge bus and the apparatus transfer bus; the sign flipflop is connected to the output of the high-order position of the counter, and its output is connected to one of the inputs of the phase-sensitive detector and to the control input of the transfer apparatus.

To reduce conversion error, the discharge and transfer instruction shaper contains flipflops, an inverter, and coincidence circuit. One set of flipflop inputs is connected to the output of the frequency divider; the other flipflop inputs (except for the first) are connected to the output of the cyclic pulse generator.

The input of the first flipflop is connected to the output of the zero unit; the direct output of the second and the inverted output of the third flipflop are connected to one coincidence circuit, to which the direct output of the sign flipflop and the output of the cyclic pulse generator are also connected. The direct output of the third and the inverted output of the fourth flipflops are connected to the other coincidence circuit, to which the inverted output of the sign flipflop and the output of the cyclic pulse generator are also connected; the outputs of the coincidence circuits are connected through an inverter to the transfer bus. Three illustrations.

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USSR

UDC: 517.949.2

~~CHEBECOVY, Yu. N.~~

"Some Problems in the Theory of Stability of Discrete Automatic Systems"

Kibernet. i vychisl. tekhn. Resb. mezhved. sb. (Cybernetics and Computer Techniques, Republic Interdepartmental Collection) 1970, No. 6, pp 56-60 (from RZh-Matematika, No. 3, March 71, Abstract No. 3B188)

Translation: For discrete automatic systems whose movements are described by difference equations, theorems are proved on the (asymptotic) stability of invariant sets and limiting boundedness (dissipativeness). A series of corollaries, important in application, are formulated. Author's abstract

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1/2 009 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--UREA PHOSPHATES AND THEIR POSSIBLE USE IN ANIMAL HUSBANDRY -U-
AUTHOR--(03)-VOLFKOVICH, S.I., CHEKHOVSKIKH, A.I., MIKHALEVA, T.K.
COUNTRY OF INFO--USSR
SOURCE--KFIH. SEL. KHGZ. 1970, 8(3), 217-18
DATE PUBLISHED-----70

SUBJECT AREAS--AGRICULTURE, BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--UREA, PHOSPHATE, ANIMAL HUSBANDRY, DIET, COMMERCIAL ANIMAL

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3001/0514 STEP NO--UR/0394/70/008/003/0217/0218
CIRC ACCESSION NO--AP0126262
UNCLASSIFIED

2/2 009

UNCLASSIFIED

PROCESSING DATE--20NGV70

CIRC ACCESSION NO--AP0120262

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE UTILIZATION OF CO(NH SUB2) SUB2.H SUB3 PD SUB4 (I), CO(NH SUB2) SUB2.H SUB4 P SUB2 O SUB7 (II), AND CO(NH SUB2) SUB2.(HCP SUB3) SUBN (III) IN RUMINANT FEED WAS STUDIED. THE USE OF I, II, AND III IN SHEEP FEEDING TRIALS PRODUCED BETTER RESULTS THAN UREA. THE HANDLING OF I, II, AND III WAS SIMILAR TO UREA HANDLING, BUT THEIR TENDENCY FOR CAKING IN STORAGE WAS CONSIDERABLY LOWER. THE WATER SOLN. OF I HAD A PH OF 1.5-3.15, A GOOD PROPERTY FOR USE IN THE PRESERVATION OF SILAGE.

UNCLASSIFIED

USSR

UDC 547.26.118.07

CHEKHOVSKIKH, M. I., TARASOVA, R. I., and ABRAMOV, V. S.

"A Method of Synthesizing Ethyl Ether of β -Aminoethylphosphoric Acid"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obrazttsy, Tovarnyye Znaki, No 14, 1970, Author's Certificate No 268422, filed 22 Jul 68, p 24

Abstract: This Author's Certificate introduces: 1. A method of synthesizing ethyl ether of β -aminoethylphosphoric acid. As a distinguishing feature of the method, the process is simplified by interacting 0,0-diethyl-o, β -chloroethyl phosphate with ammonia in an autoclave with the application of heat. 2. The method described in (1) is distinguished by the fact that the temperature reaches 65-70°C.

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Catalysis

USSR

UDC 541.128

LAVRENKO, V. A., CHEKHOVSKIY, A. A., and DATSENKO, L. I.

"Effect of Crystallographic Orientation of the Surface of Single Crystals of Silicon Dioxide and Magnesium Oxide on the Recombination Rate of Hydrogen Atoms"

Moscow, Zhurnal Fizicheskoy Khimii, Vol XLV, No 5, 1971, pp 1124-1127

Abstract: An experimental study was made of the recombination rate coefficients of hydrogen atoms on the [100], [111], and [110] faces of single crystals of MgO and [0001], 1120], and [1010] faces of single crystals of SiO₂. The experimental procedure is described, and the data for the probability of recombination of hydrogen atoms on the given surfaces are tabulated. The surface activity depends on the crystallographic orientation and is determined by the crystal chemical characteristics of the surfaces. Admixtures contained in a single crystal of MgO can have no significant effect on the recombination reaction rate.

Good agreement between the data presented here and those obtained by other authors is noted and the results are generalized as proof that not only in 1/2.

USSR

LAVRENKO, V. A., et al., Zhurnal Fizicheskoy Khimii, Vol XLV, No 5, 1971,
pp 1124-1127

the case of crystals of standard semiconductors, but also in the case of
nonconducting oxides the surface orientation can play a significant role in
adsorption and heterogeneous catalysis.

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USSR

UDC 536.722.001.2

CHEKHOVSKIY, V. YA., TARASOV, V. D., and RESHETOV, L. A.

"Experimental Research in the Enthalpy of Al_2O_3 in the 1,400-2,313 K Range"

Khar'kov, Ukr. resp. nauch.-tekhn. konf., posvyashch. 50-letiya metrol. sluzhby USSR, 1972, -- sb. (Ukrainian Republic Scientific and Technological Conference Honoring the 50th Anniversary of the Ukrainian SSR's Metrological Service, 1972 -- Collection of Works), 1972, pp 68-69 (from Referativnyy Zhurnal -- Metrologiya i Izmeritel'naya Tekhnika, No 2, 1973, Abstract No 2.32.972 by V.S.K.)

Translation: The authors present the results of an experimental determination of the enthalpy of aluminum oxide at high temperatures (on the order of 1,400-2,313 K) right up to its melting point. The measurements were made by the mixing method, using large calorimeters with a copper block and an isothermal casing. Sapphire (with an α - Al_2O_3 content of 99.9 percent) and corundum (with an α - Al_2O_3 content of 99.99 percent) were used in the investigation. Fourteen enthalpy values were obtained in the 1,400-2,313 K range, and the experimental data were compared with the results of research described in the literature.

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USSR

UDC: 536.212.2:535.345.1

VERMOGRADSKIY, V. A., CHEKHOVSKOY, V. Ya.

"Heat-Physical Properties of Rhenium at High Temperatures" .

Moscow, Teplofizika Vysokikh Temperatur, Vol 11, No 1, Jan-Feb 73, pp 84-87.

Abstract: The electrical resistivity, heat conductivity and integral hemispheric degree of blackness of polycrystalline rhenium are measured in the 1200-3000° K temperature interval. Purity of the specimens used was 99.98%. They were produced by methods of powder metallurgy in the form of wires 0.3 mm in diameter. The differences between the data produced in this work and the data of other authors is discussed. Causes for variations in data include faulty techniques used in some earlier works, differences in densities of materials tested, and anisotropy of the properties of rhenium single crystals, in combination with preferential orientation of crystals in polycrystalline specimens.

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USSR

UDC: 536.2:536.63

PELETSKIY, V. E., CHEKHOVSKOY, V. Ya., SOVITSKIY, Ye. M., TYLKINA, M. A.,
AMASOVICH, Ye. S., ARSKAYA, Ye. P., ZAYCHENKO, V. M., PETUKHOV, V. A.,
Institute of High Temperatures of the Academy of Sciences of the USSR,
Institute of Metallurgy imeni A. A. Baykov of the Academy of Sciences of
the USSR

"Some Physical Properties of a New Alloy in the Nickel-Rhenium-Molybdenum
System"

Moscow, Teplofizika Vysokikh Temperatur, Vol 11, No 2, Mar/Apr 73, pp
435-436

Abstract: The authors study the heat conduction, coefficient of thermal
expansion and resistivity of an alloy in the nickel-rhenium-molybdenum
system containing 10 wt.% Re and 15 wt.% Mo. Curves are given showing the
temperature dependence of the measured parameters between 100 and 1000°C.
The results indicate structural transformation of the alloy in the solid
state. Analysis points to the possibility of formation of the so-called
K-state observed in the region of solid solutions of the nickel-chromium
system with more than 16% chromium. However, a final explanation of the
observed anomalies will require further research.
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USSR

UDC 536.421.1

BEREZIN, B. YA., KENISARIN, M. M., and CHEKHOVSKOY, V. YA., Institute of High Temperatures, Acad. Sc. USSR

"Melting Point of Niobium"

Moscow, Teplofizika Vysokikh Temperatur, Vol 10, No 6, Nov-Dec 72, pp 1214-1217

Abstract: 21 determinations of the melting point of niobium were carried out on a material containing 99.7% niobium, 0.18% Ta, 0.005% W, 0.01% Ti, 0.04% Si, 0.005% Fe, 0.005% O₂, 0.001% H₂, 0.01% C, and 0.001% N₂. The temperature was determined by means of two optical monochromatic pyrometers of the EOP type and a model of absolute black body. The average melting point is 2469 ± 1.3° C.

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Powder Metallurgy

USSR

UDC 536.33+546.3-19

VERTOGRADSKIY, V. A. and CHEKHOVSKOY, V. YA., All-Union Institute of Aviation Materials and Institute of High Temperatures, Academy of Sciences USSR

"Electrical Resistance of Powder Metal Tungsten-Rhenium Alloys"

Kiev, Poroshkovaya Metallurgiya, No 10, Oct 72, pp 68-70

Abstract: The concentration and temperature relationships of electrical resistance were investigated for W-Re alloys within the limits of the tungsten solid solution. Powder metal alloys containing 5, 10, 19, 20, 21, and 27% Re were used in the 1200-3000°C temperature interval. Analysis of measurement data shows that the relationship of electrical resistance for W-Re alloys in the investigated range of compositions basically conforms to the Nordheim law, i.e., electrical resistance has a linear function to the product of atomic concentrations. Alloys with 20 and 21% Re deviate from the general principle, starting at approximately 1700°C. The formation of intermediate phases is assumed to be the cause of this anomaly.

The authors thank V. M. AMOSOV and Ye. I. PAVLOVA for useful observations during the discussion of the results obtained. 3 figures, 12 bibliographic references.

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USSR

UDC 536.3

LATYEV, L. N., CHEKHOVSKOY, V. Ya., and SHESTAKOV, Ye. N.,
Institute of High Temperatures of the Academy of Sciences USSR

"On a Methodical Characteristic in the Investigation of the
Spectral Emissivity of Metal by High Temperatures"

Moscow, Teplofizika Vysokikh Temperatur, Vol 10, No 2,
Mar-Apr 72, pp 423--425

Abstract: By measurements of the spectral emissivity of metals $\varepsilon(\lambda, T)$, an additional reflected emission flux (a), resulting from repeated reflections in the system specimen-sight glass, is considered, applicably to the most prevailing tube method. From formulas of the incident and reflected fluxes, a function for a is derived, showing that a increases with decreasing spatial angle Ω , increasing reflectiveness of the specimen, and approaching of the sight glass. As a limiting value, a can be equal to the reflection coefficient of the sight glass, which is 8--12%. Strictly speaking, the derived expression for a holds true only for flat specimens, but it is also satisfied with practically sufficient exactness for cylindrical specimens. Two illustr., twelve formulas, five biblio. refs.

USSR

UDC 621.317.331:536.45

PETROV, V. A., PETROVA, I. I., CHEKHOVSKOY, V. Ya., LYUKSHIN, Ye. N.

"Specific Electric Resistivity of Pyrographite"

Moscow, *Teplofizika Vysokikh Temperatur*, Vol. 9, No. 2, Mar-Apr, 71, p. 302-305.

Abstract: Results are presented from an experimental determination of the specific electric resistivity of pyrographite. The specific resistivity in the direction parallel to the precipitation surface is determined in the 300-2200°K temperature interval, the resistivity in the direction perpendicular to this surface -- in the 300-1800°K temperature interval. The data produced are compared with the data of other authors.

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USSR

UDC 536.621-536.63

CHEKHOVSKOY, V. Ya., GERASINA, G. Z.

"True Heat Capacity of Copper and Type 1Kh18N9T Steel in the 300-900°K Temperature Interval"

Teplofizika Vysokikh Temperatur, Vol 9, No 5, 1971, pp 938-942.

Abstract: An experimental installation is described with automatic maintenance of the adiabatic mode. Data are produced on the true heat capacity of copper (99.99%) and Type 1Kh18N9T stainless steel in the 300-900°K temperature interval. An empirical equation is calculated for the heat capacity of copper in the 300-900°K interval. Experimental and literature data are compared.

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Thermodynamics

USSR

UDC: 536.421+536.421.1

CHEKHOVSKOY, V. Ya., BEREZIN, B. Ya.

"Experimental Study of the Heat of Fusion of Refractory Metals"

Tr. Vses. nauchno-tekhn. konferentsii po termodinamike. Leningr. tekhnol. in-t kholodil'n. prom-sti (Works of the All-Union Scientific and Technical Conference on Thermodynamics. Leningrad Technological Institute of the Refrigeration Industry), Leningrad, 1970, pp 379-382 (from RZh-Fizika, No 9, Sep 70, Abstract No 9Ye491)

Translation: The blending method in combination with levitation melting was used to determine the melting point T of the refractory metals W, Ta, Mo, Ru, Nb, V, and Cr. The values 3380, 2996, 2620, 2500, 2470, 1920, and 1890°C respectively were found.

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USSR

UDC 536.2

~~CHEKHOVSKOY, V. Ya.~~, PETROV, V. A., PETROVA, I. I., and LYUKSHIN, E. N.

"Heat Conductivity of Pyrographite at High Temperatures"

Moscow, Teplofizika Vysokih Temperatur, Akademiya Nauk SSSR, Vol 9, No 1, Jan-Feb 1971, pp 80-81

Abstract: The specimens of pyrographite used to determine its heat conductivity were of tubular form, they were obtained by precipitation from methane at 2100°C temperature. The outside diameter of the tubes was 12 millimeter, wall thickness 1 and 2 millimeter. The specimen was heated by electric current passing through it, the heat generated was determined by measuring the current and the voltage drop.

The coefficient of heat conductivity in the radial direction was determined in the range of 1200 to 2500°K.

The results are compared with those obtained by other authors. The discrepancies are quite high. This is apparently due to differences in micro and macro structure of pyrographite, which depends on precipitation temperature, heat treatment, specimen geometry and other factors. The discrepancies
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CHEKHOVSKOY, V. Ya., et al., *Teplofizika Vysokih Temperatur*, Akademiya Nauk SSSR, Vol 9, No 1, Jan-Feb 1971, pp 80-81

are also caused by systematic errors connected with different experimental methods.

The error analysis of the obtained results shows that the maximum relative systematic error in determining the coefficient of heat conductivity is 15 to 16%.

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1/2 018 UNCLASSIFIED PROCESSING DATE--02OCT70
TITLE--THERMAL CONDUCTIVITY OF CERIU DIOXIDE -U-
AUTHOR--(02)-CHEKHOVSKOY, V.YA., STAVROVSKIY, G.I. 
COUNTRY OF INFO--USSR
SOURCE--(CONF-691002, PP 295-8) THERMAL CONDUCTIVITY OF CERIU DIOXIDE.
(AKADEMIYA NAUK SSSR, MOSCOW. INSTITUT. VYSOKIKH TEMPERATUR)
DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS, CHEMISTRY
TOPIC TAGS--THERMAL CONDUCTIVITY, CERIU OXIDE, HEAT MEASUREMENT,
TEMPERATURE DEPENDENCE

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1989/2022 STEP NO--UR/0000/70/000/000/0295/0298
CIRC ACCESSION NO--AT0108348
UNCLASSIFIED

2/2 018

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AT0108348

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE THERMAL CONDUCTIVITY OF CERIUM DIOXIDE WAS MEASURED IN THE 300 TO 1200DEGREESC TEMPERATURE RANGE USING AN INTERNALLY HEATED CYLINDER. THE EXPERIMENTS WERE CONDUCTED IN ARGON ATMOSPHERE. THE BULK WEIGHT OF THE MATERIAL TO BE STUDIED AND HEATED TO 1700DEGREESC TEMPERATURE WAS 6.7 G-CM PRIME3. NO EXPERIMENTAL DATA ON CERIUM DIOXIDE THERMAL CONDUCTIVITY IN THIS TEMPERATURE RANGE HAS BEEN AVAILABLE IN LITERATURE.

UNCLASSIFIED

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AUTHOR-- AKHMATOV, S., CORRESPONDENT

NEWSPAPER-- PRAVDA UKRAINY, JANUARY 10, 1970, P 1, COLS 1-4, AND P 2, COLS 2-4

ABSTRACT-- THE ARTICLE IS A BRIEF BIOGRAPHICAL PROFILE OF ZOT IL, ICH NEKRASOV, DIRECTOR OF THE DNEPROPETROVSK INSTITUTE OF FERROUS METALLURGY /APPOINTED IN 1952/, LAUREATE OF THE LENIN AND STATE PRIZES, HERO OF THE SOVIET UNION AND MEMBER OF THE UKRAINIAN ACADEMY OF SCIENCES. HE WAS ELECTED CORRESPONDING MEMBER OF THE UKRAINIAN ACADEMY OF SCIENCES IN 1951. IT WAS ON HIS SUGGESTION THAT THE INSTITUTE OF FERROUS METALLURGY WAS RELOCATED FROM KIYEV TO DNEPROPETROVSK WHERE ITS STAFF GREW TO 1,200 PEOPLE. IN ADDITION TO BEING DIRECTOR OF THE INSTITUTE, NEKRASOV HEADS THE DEPARTMENT OF IRON METALLURGY. A. P. CHEKMAREV, K. F. STARODUBOV, V. D. CHEKHRANOV, I. G. UZLOV, A. V. PRAZDNIKOV, AND YU. N. TARAN ARE MENTIONED AS HIS COLLEAGUES.

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End

USSR

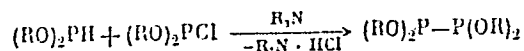
UDC 547.26'118

PROSKURNINA, M. V., CHEKHUN, A. L., LUTSENKO, I. F.

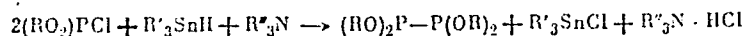
"Bis-hypophosphites (Tetraalkoxydiphosphines)"

Leningrad, Zhurnal Obshechey Khimii, Vol XLIII (CV), No 1, 1973, pp 66-69

Abstract: A report was made recently on the synthesis of tetraalkoxy diphosphines [A. L. Chekhun, et al., ZhOKh, No 40, 2516, 1970]. More detailed data are now presented on the methods of synthesizing this class of compounds and some of their properties. Two methods of synthesizing the tetraalkoxy diphosphines based on dialkoxyphosphines. The first method involves the interaction of dialkoxy phosphines with dialkylchloro phosphites:



This method does not permit tetraalkoxy diphosphines with the lowest radicals to be obtained. Thus, the reaction of dialkylchloro phosphites with tin hydrides in the presence of an organic base is proposed.:



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PROSKURNINA, M. V., et al., Zhurnal Obshchey Khimii, Vol XLIII (CV), No 1, 1973, pp 66-69

Some reactions of the tetraalkoxy diphosphines are also investigated (the reaction with sulfur, sulfuryl chloride, mercury bisacetaldehyde).

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USSR

UDC: 547.26'118

CHEKHUN, A. L., PROSKURNINA, M. V., LUTSENKO, I. F., Moscow State University
imeni M. V. Lomonosov

"Tetraalkoxydiphosphines"

Leningrad, Zhurnal Obshchey Khimii, Vol 40 (102), No 11, Nov 70, pp 2516-2517

Abstract: Two methods are developed for synthesizing a new class of organo-phosphorus compounds -- tetraalkoxydiphosphines: a) by condensing dialkylchlorophosphites with dialkoxyphosphines in the presence of triethylamine; b) by organotin hydride reduction of dialkylchlorophosphites with subsequent condensation of the resultant dialkoxyphosphine with dialkylchlorophosphite in the presence of an organic base. The first method produced both symmetric and asymmetric tetraalkoxydiphosphines. The second method can be used to produce tetraalkoxydiphosphines with lower radicals as well.

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Organophosphorous Compounds

USSR

UDC 547.538.2'341.3:543.422.62'4'6

CHEKUNINA, L. I., BOKANOV, A. I., and STEPANOV, B. I., Moscow Institute of
Chemical Technology imeni D. I. Mendeleev

"Spectral Properties of Phenylethynylphosphines and Phosphine Oxides"

Leningrad, Zhurnal Obshchey Khimii, Vol 42 (104), No 5, May 72, pp 995-999

Abstract: The authors' study revealed that phosphorus blocks the conjugated π systems of phenylethynyl groups in tertiary phenyl(phenylethynyl)phosphines and phosphine oxides. The spectral indications of conjugation in the oxide of p-dimethylaminophenyl-bis(phenylethynyl)phosphine are, probably, a result of the interaction of the π^* orbitals of the triple bond and the p-dimethylaminophenyl through the d orbitals of phosphorus. The article contains two illustrations of ultraviolet spectra and two tables. One table gives the physical properties of phosphorus-containing derivatives of phenylacetylene, and the other describes the dependence of the properties of the main band of dimethylanilines $p\text{-Xc}_6\text{H}_4\text{N}(\text{CH}_3)_2$ on the nature of the substituent X.

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USSR

UDC: 538.4

POVKH, I. L., CHEKIN, B. V., SHCHELUKHIN, Ye. M.

"Determination of Fluid Pressure in a Rectangular Mold in the Presence of Crossed Electric and Magnetic Fields"

Tr. Donetsk. NII chern. metallurgii (Works of the Donetsk Scientific Research Institute of Ferrous Metallurgy), 1970, No 20 (4), pp 131-136 (from RZh-Mekhanika, No 7, Jul 71, Abstract No 7B10)

Translation: The authors consider distribution of electric current and Lorenz force in a rectangular parallelepiped all of whose walls are non-conductive with the exception of two identical electrodes of rectangular shape located opposite each other on parallel vertical walls. Constant current density is preassigned on the electrodes. An external magnetic field (the induced field is disregarded) which is uniform is horizontally directed across the main current. The solution is presented in the form of infinite series. Assuming that the parallelepiped contains a quiescent heavy fluid, and disregarding the horizontal component of the Lorenz force, the authors calculate the pressure in the fluid. A comparison with an experiment shows satisfactory accuracy of the calculation. S. A. Rejirer.

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USSR

UDC:669.714

POVKH, I. L., CHEKIN, B. V., SMIRNOV, V. A., BAZILEVSKIY, V. M., OKUNEV, V. M. and POPOV, V. A., Donets State University, Donets Scientific Research Institute for Ferrous Metals, State Scientific Research and Planning Institute of Alloys and Nonferrous Metal Processing

"Extraction of Aluminum and Oxides From Salt Slags Using Electromagnetic Forces"

Ordzhonikidze, Izvestiya Vysshikh Uchevnykh Zavedeniy, Tsvetnaya Metallurgiya, No 1, 1971, pp 65-68

Abstract: The possibility in principle of the process of extraction of aluminum buttons and oxides from melted salt slags using electromagnetic forces is demonstrated. The basis of the phenomenon is the fact that when a weakly conducting liquid in which conducting droplets and non-conducting particles are suspended is placed in crossed electrical and magnetic fields, the specific gravity of the conducting phases increases.

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USSR

POVKH, I. L., et al., Izvestiya Vysshikh Uchevnykh Zavedeniy,
Tsvetnaya Metallurgiya, No 1, 1971, pp 65-68

This causes the droplets to precipitate to the bottom and the non-
conducting particles to rise to the top.

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USSR

UDC 669.71.48

POVKH, I. L., CHEKIN, D.V., SMIRNOV, V. A., BAZILEVSKIY, V. M., OKUNEV, V. M.,
POPOV, V. A.

"Study of the Possibility of the Impoverishment of Fused Salt Slags From Aluminum Production by Electromagnetic Weighting"

Tr. Donetsk. NII Chern. Metallurgii [Works of Donetsk Scientific Research Institute for Ferrous Metallurgy], 1970, No. 20(4), pp. 21-25. (Translated from Referativnyy Zhurnal Metallurgiya, No. 5, 1971, Abstract No. 5 G177 by the authors).

Translation: Studies performed on the electromagnetic weighting of salt slags produced in melting Al showed that it can be used to extract up to 98% of the Al and 83% of the oxides. 3 figs; 2 tables.

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USSR

UDC: 681.3:519.2

3
PETROV, I. Ye., BYCHEV, N. P., SABAYEV, L. V., CHEKIN, S. G., PAVLENKO, L. V., ZHARKIN, V. V.

"A Device for Digital Processing of Radio Signals"

Moscow, Otkrytiya, izobreteniya, promyshlenmye obraztsy, tovarnyye znaki, 1970, No 25, Soviet Patent No 278228, class 42, filed 6 Jan 69, published 5 Aug 70, pp 134-135

Translation: This Author's Certificate introduces a device for digital processing of radio signals which contains an analog-to-code converter and an arithmetic device. As a distinguishing feature of the patent, the device is designed for realizing the operation of digital detection. For this purpose the unit contains digital weight coefficient generators; and the arithmetic unit contains a multiplier, squarer, adder, and a device for extracting the square root. The output of the analog-to-code converter and the outputs of the digital weight coefficient generators are connected to the inputs of the multiplier. The multiplier output is connected to an accumulator, which is connected, in turn, through the squarer to the adder input. The outputs of the adder are connected to the device for extracting the square root.

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1/2 009 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--MECHANICALLY DRIVEN MOESSBAUER SPECTROMETER -U-
AUTHOR-(04)-CHEKIN, V.V., BALKASHIN, O.P., NAUMOV, V.G., SEMIKIN, V.A.
COUNTRY OF INFO--USSR
SOURCE--ZAVOD. LAB. 1970, 36(1), 103-6
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--SPECTROMETER, PHYSICS LABORATORY INSTRUMENT/(U)MOESSBAUER
SPECTROMETER
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1989/0917 STEP NO--UR/0032/70/036/001/0103/0106
CIRC ACCESSION NO--AP0107446
UNCLASSIFIED

2/2 009

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0107446

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE MECH. DRIVE SPECTROMETER WAS CAREFULLY DESIGNED WITH A CONST. SPEED SYNCHRONOUS MOTOR WITH A WORM GEAR EXHIBITING A GEAR RATIO OF 1:80, A SINGLE CHANNEL GAMMA SPECTROMETER, AN ELECTRONIC NETWORK REGULATOR, AND SPECIAL REINFORCING TO IMPROVE THE DRIVE RIGIDITY. WHILE COSTING ONLY A FRACTION OF THAT FOR THE BASIC ELECTRODYNAMIC VIBRATOR SET UP, THE RESULTS WITH THE PRIME57 FE NUCLEUS WHEN BOTH SET UPS WERE COMPARED WERE EQUIV. WITHIN THE LIMITS OF EXPTL. ERROR. FACILITY: FIZ.-TEKH. INST. NIZKIKH TEMP., KHARKOV, USSR.

UNCLASSIFIED

1/2 023 UNCLASSIFIED PROCESSING DATE--3000170
TITLE--MOSSBAUER EFFECT AT IMPURITY NUCLEI OF PRIMARILY TIN IN MERCURY
IN THE ALPHA PHASES OF SILVER, CADMIUM AND SILVER, ZINC ALLOYS: INTERNAL
AUTHOR--(03)-CHEKIN, V.V., NAUMOV, V.G., PONASHKIN, L.I.
COUNTRY OF INFO--USSR
SOURCE--FIZIKA METALLOV I METALLOVEDENIE, MAR. 1970, 29, (3), 524-529
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS, MATERIALS
TOPIC TAGS--MOSSBAUER EFFECT, TIN ISOTOPE, MERCURY, ALPHA PHASE, SILVER
BASE ALLOY, METAL OXIDATION, ZINC CONTAINING ALLOY, CADMIUM CONTAINING
ALLOY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3003/0452 STEP NO--UR/0126/70/029/003/0524/0529
CIRC ACCESSION NO--AP0129677
UNCLASSIFIED

2/2 023

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0129677

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE MOSSBAUER PROBABILITY AND THE ISOMERIC SHIFT ASSOCIATED WITH PRIME119 SN IMPURITY NUCLEI IN THE ALPHA PHASES OF THE AG-CO AND AG-ZN SYSTEMS WERE STUDIED. IN CONTRAST TO EXISTING VIEWS, THERE WAS NO MARKED CORRELATION BETWEEN THE ISOMERIC SHIFT AND THE M. PROBABILITY IN ALLOYS OF DIFFERENT COMPOSITIONS. THIS LACK OF AGREEMENT IS TENTATIVELY EXPLAINED BY MEANS OF A MODEL ACCORDING TO WHICH THE PROBABILITY IS DETERMINED BY THE VALENCE ELECTRONS OF THE IMPURITY ATOMS WHILE THE ISOMERIC SHIFT IS INSENSITIVE TO THE CONDUCTION BAND CHARACTERISTICS. A POSSIBLE APPLICATION OF THESE EFFECTS TO THE STUDY OF INTERNAL OXIDATION IN ALLOYS IS CONSIDERED.

UNCLASSIFIED

USSR

UDC: 621.372.832

VECHKANOVA, R. A., CHEKINA, A. S.

"Waveguide Directional Couplers With Strong Coupling at the Wide Wall"

Tr. Kuybyshev. aviats. in-t (Works of the Kuybyshev Aviation Institute),
1970, vyp. 44, pp 65-68 (from RZh-Radiotekhnika, No 6, Jun 71, Abstract
No 6B168)

Translation: Various versions of couplers with coupling at the wide wall are considered. Cross-coupling attenuation is analyzed as a function of displacement of the coupling aperture relative to the wide wall and the dimensions of the aperture. It is noted that computational results agree satisfactorily with experimental data. Three illustrations, bibliography of four titles. N. S.

1/1

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CHEKIRDA, I. F.

space physiology

BRIEF COMMUNICATIONS

UDC 612.76.014.47:531.113

SOI JPRS 54396
03 NOV 71

COORDINATION STRUCTURE OF HUMAN VOLUNTARY MOVEMENTS ACCOMPANYING STIMULATION OF THE HORIZONTAL SEMICIRCULAR CANALS BY ANGULAR ACCELERATIONS

(Article by I. F. Chekirda and F. A. Solodovnik; Moscow, Kosmicheskaya Biologiya i Meditsina, Russian, Vol 5, No 4, pp 83-86, 1971, submitted for publication 27 May 1970)

As is well known, the activity of a filter and component transpires with exposure of the body, especially the vestibular analyzer, to different accelerations. Accordingly, the individual peculiarities determining the nature of vestibulomotor reflexes, and thus performance as a whole, assume great importance.

The literature contains a rather broad array of materials on the state of the visual and motor analyzers during motion sickness and adequate stimulation of the vestibular apparatus (Ye. H. Belostotskiy, S. A. Il'ina; O. A. Chernikova; D. I. Aronov; A. S. Baryuev; I. Z. Perminov; L. S. Gamberyan, A. A. Gamberyan; V. N. Barnalskiy; V. S. Gurfinkel, et al.; I. Ya. Kalinovsky, Yu. S. Yusevich, and others). Particular attention was devoted to study of the final result of the performed movements, their duration, and the external picture of performed actions.

This paper gives the results of application of the photocyclogrammetry method for studying the coordination structure of voluntary movements of the human arm accompanying stimulation of the vestibular apparatus.

The experiments were made on 10 males and females in the age group 25-38 years (nine of them with good vestibular tolerance and one with satisfactory vestibular tolerance). The subjects were exposed to a negative angular acceleration when the electrically rotated seat was stopped (S. S. Markaryan, et al.) in the plane of the horizontally rotated seat was stopped (S. S. Markaryan, et al.) in the plane of the horizontal semicircular canals (forward inclination of the head by 30°). The following motor skills were performed during the nystagmic reaction: slow flexure and slow extension at the elbow joint for one second with closed and open eyes with the mission of hitting a target (a contrasting circle 8 mm in diameter) on the elbow-rest of the seat. Movements with identical performance of the final result of the action, hitting the target, were analyzed.

CHEKIRDA, I. F.

space physiology

COLEMAN

SO:IPes 55100
4 FEB 72

UDC 612.76:613.693:629.78

COORDINATION STRUCTURE OF WALKING OF SOYUZ-9 CREW MEMBERS BEFORE AND AFTER FLIGHT

Article by I. F. Chekirda, R. B. Bogdashavskiy, A. V. Voronkova and I. A. Golosov Moscow, *Kosmonavtika i Vozdushnyy Transport*, Vol 5, No 6, 1971, submitted for publication 18 November 1970, pp 48-52/

Abstract: The cyclogrammetric method was used in studying the structure of walking of Soyuz-9 crew members after recovery. It is shown that the long-duration flight involved rearrangements in the walking structure which involved changes in the intensity and time of controlling impulses sent to the periphery, increases in the number of movement corrections, and other kinematic and dynamic peculiarities. During early readaptation one can discriminate two stages: a stage of a "stepping" gait, in which the changes are seen visually, and a stage of an "impact" gait in which the foot evidently impacts the support normally but the cyclogrammetric analysis reveals abnormalities in motor skills.

Some Soviet and American cosmonauts have exhibited an unstable gait during the first hours after landing, but no special study of gait peculiarities has been made. However, this is of both theoretical and practical importance because on the basis of the laws of structuring of gait and other locomotions during the readaptation period one can introduce corrections into the formulation of a rational regime for the motor activity of cosmonauts.

The biomechanics of gait in the cosmonauts A. Nikolayev and V. Sevast'yanov was investigated early after landing (up to 5 days). The first period after landing, characterized by distinct changes in gait, lasted about 2 days. Gait was accompanied by clearly expressed automatic reactions (facial reddening, pulse quickening). During walking the cosmonauts spread their legs far apart, the torso was shifted in the direction of the supporting legs, and they deviated from a straight trajectory. They frequently

USSR

UDC 619:616.981.42-07

KONDAUROV, B. I., and CHEKISHEV, V. M., Candidates of Veterinary Sciences,
Siberian Scientific Research Veterinary Institute

"Determination of the Time of Infection With Brucellosis"

Moscow, Veterinariya, No 11, 1971, pp 52-53

Abstract: The blood sera of heifers and sheep vaccinated, experimentally infected and naturally infected with brucellosis were investigated to determine the time of infection by finding antibodies with different physical and chemical properties. Macroglobulin-type antibodies with a 19S sedimentation coefficient disintegrate under the influence of reducing agents into 7S subunits with a loss of specific activity. Investigation of blood serum of vaccinated heifers revealed that predominantly 19S macroglobulin antibodies are synthesized first, then destroyed from the effect of heat and 2-mercaptoethanol. During this 2- to 3-week period, the highest RA and Coomb's test titers were registered in intact samples. Subsequently, as the level of macroglobulin antibodies decreased, the titers of the thermostable 7S antibodies increased. One month after vaccination and infection, the ratio of 19S and 7S antibodies was approximately equal. A higher level of 7S antibodies was registered in 2.5 months. Five months later only macroglobulin antibodies in lower titers
1/2

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USSR

KONDAUROV, B. I., and CHEKISHEV, V. M., Veterinariya, No 11, 1971, pp 52-53

1:25-1:60 were found. The 7S antibodies in lower titers were revealed for 13 months, the level of 19S antibodies being somewhat higher during that entire period. The higher level of 19S antibody content indicates recent infection (1-3 weeks), while finding 7S antibodies reveals an older infection (1-5 months). The low 19S and 7S antibody titers point to a much earlier infection process (6-16 months or more).

2/2

1/2 021 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--STABILITY OF POLYMERIC COMPOUNDS OF ZIRCONIUM IN NITRIC ACID
SOLUTIONS -U-
AUTHOR--(03)-YAGODIN, G.A., CHEKMAREV, A.M., KAZAK, V.G.
COUNTRY OF INFO--USSR
SOURCE--ZH. NEORG. KHIM. 1970, 15(5), 1284-9
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--NITRIC ACID, ZIRCONIUM, POLYMER CHEMICAL
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3007/1218 STEP NO--UR/0078/70/015/005/1284/1289
CIRC ACCESSION NO--AP0136629
UNCLASSIFIED

2/2 021

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0136629

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TWO KINDS OF POLYNUCLEAR SPECIES OF UNDET. FORM OF ZR EXIST IN HNO SUB3 SOLN. IN EQUIL. WITH MONOMERIC AND STABLE "NON EQUIL." SPECIES. ONE FORM IS IN THERMODYNAMIC EQUIL. (DECOMP. ON ACIDIFICATION) AND ONE DOES NOT TEND TO REVERSIBLE DECOMP. AND TO EXTN. BY NEUTRAL EXTN. AGENTS. THE LATTER SPECIES FORM IN THE PRESENCE OF SMALL CONCNS. OF IMPURITIES. THE CONDITIONS AT WHICH HYDROLYTIC FORMS OF ZR, HAVING OH BRIDGES, EXIST IN 2 N HNO SUB3 ARE GIVEN. EFFECT OF SO SUB4 PRIME2NEGATIVE ON DETN. OF ZR ION IN THE PRESENCE OF PYROCATECHOL VIOLET IS DISCUSSED.

UNCLASSIFIED

USSR

UDC 621.762:621.771

CHEKMAREV, A. P., MUSIKHIN, A. M., KLIMENKO, P. L., and LEBEDIK, G. L.,
Dnepropetrovsk Metallurgical Institute; Institute of Problems of Material
Science, Academy of Sciences Ukrainian SSR

"Using Sheet Mills for Rolling Metal Powders"

Kiev, Poroshkovaya metallurgiya, No 2, Feb 72, pp 91-93

Abstract: The objective of this study was the potential use of conventional roll mills for high-speed rolling of metal powders. The experiment involved a 330 mill with a roll diameter of 394 mm and PZh-1M grade of metal powder with a bulk weight of 2.32 and shake-down weight of 2.80 g/cm³. The mill was equipped with a force-feed mechanism. The measurements included: a) the stresses at the contact surface of the metal powder with the roll; b) rolling torque; c) rpm of both the work rolls and the worm roll. The diagram of the force feed mechanism is shown. The study indicates that conventional roll mills are well suited for rolling metal powder into sheets and tape at roll speeds of 2 m/sec and higher on condition that the roll mills are equipped with force feed systems. (2 illustrations, 1 table, 6 biblio. references)

1/1

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Forming

USSR

UDC 621.771.0(06)

CHEKMAREV, A. P., Academician, Academy of Sciences, USSR [Editor]

"Pressure Working of Metals"

Obrabotka Metallov Davleniyem [English Version Above], Moscow, Metallurgiya Press, 1970, 350 pages.

Translation of Annotation: This collection presents the results of studies of processes of working of metals by pressure performed by the workers of the Dnepropetrovsk Metallurgical Institute in cooperation with the engineering and technical workers of various metallurgical plants.

The articles analyze theoretical and experimental problems of the dynamics and kinematics of section, sheet and tube rolling and data from combined studies of continuous mills. Materials are presented from a study of the process of periodic rolling.

Based on the results of the studies, conclusions and recommendations are given for improvement of the technology of plastic working of steel and the operation of rolling mill equipment.

The materials of the collection can be used by engineering and technical workers at metallurgical plants, planning-design organizations and scientific research institutes for the solution of problems involved in the improvement of technologies and equipment, and also to increase the productivity of rolling

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USSR

UDC 621.771.0(06)

CHEKMAREV, A. P., Obrabotka Metallov Davleniyem, Moscow, Metallurgiya Press, 1970, 350 pages.

mills. The collection may also be useful to university students.

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USSR

UDC 621.771.0(06)

CHEKMAREV, A. P., Obrabotka Metallov Davleniyem, Moscow, Metallurgiya Press, 1970, 350 pages.

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USSR

UDC 621.771.0(06)

CHEKMAREV, A. P., Obrabotka Metallov Davleniyem, Moscow, Metallurgiya Press, 1970, 350 pages.

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UDC 621.771.0(06)

CHEKMAREV, A. P., Obrabotka Metallov Davleniyem, Moscow, Metallurgiya Press, 1970, 350 pages.

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UDC 621.771.0(06)

CHEKMAREV, A. P., Obrabotka Metallov Davleniyem, Moscow, Metallurgiya Press, 1970, 350 pages

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UDC 621.771.0(06)

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USSR

UDC 621.771.0(06)

CHEKMAREV, A. P., Obrabotka Metallov Davleniyem, Moscow, Metallurgiya Press, 1970, 350 pages.

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AUTHOR-- AKHMATOV, S., CORRESPONDENT

NEWSPAPER-- PRAVDA UKRAINY, JANUARY 10, 1970, P 1, COLS 1-4, AND P 2, COLS 2-4

ABSTRACT-- THE ARTICLE IS A BRIEF BIOGRAPHICAL PROFILE OF ZOT IL'ICH NEKRASOV, DIRECTOR OF THE DNEPROPETROVSK INSTITUTE OF FERROUS METALLURGY /APPOINTED IN 1952/, LAUREATE OF THE LENIN AND STATE PRIZES, HERO OF THE SOVIET UNION AND MEMBER OF THE UKRAINIAN ACADEMY OF SCIENCES. HE WAS ELECTED CORRESPONDING MEMBER OF THE UKRAINIAN ACADEMY OF SCIENCES IN 1951. IT WAS ON HIS SUGGESTION THAT THE INSTITUTE OF FERROUS METALLURGY WAS RELOCATED FROM KIYEV TO DNEPROPETROVSK WHERE ITS STAFF GREW TO 1,200 PEOPLE. IN ADDITION TO BEING DIRECTOR OF THE INSTITUTE, NEKRASOV HEADS THE DEPARTMENT OF IRON METALLURGY. A. P. CHEKMAREV, K. F. STARODUBOV, V. D. CHEKHRANOV, I. G. UZLOV, A. V. PRAZDNIKOV, AND YU. N. TARAN ARE MENTIONED AS HIS COLLEAGUES.

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And

172 022 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--RAISING THE ACCURACY OF AN EXPERIMENTAL DETERMINATION OF CONTACT
FORCES IN THE CENTRE OF DEFORMATION; AND THEORY OF THE MATHEMATICAL
AUTHOR--(U4)-CHEKMAREV, A.P., CHERNYAVSKY, A.A., MELESHKO, V.I.,
KILIYEVICH, A.P.
COUNTRY OF INFO--USSR
SOURCE--IZVEST. V.U.Z., CHERNAYA MET., 1970(2), 91-96
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR
TOPIC TAGS--METALLURGIC RESEARCH FACILITY, ACCURACY STANDARD, METAL
ROLLING, METAL DEFORMATION, MATHEMATIC ANALYSIS
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/0561 STEP NO--UR/0148/70/000/002/0091/0096
CIRC ACCESSION NO--AP0124256
UNCLASSIFIED

2/2 022

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0124256

ABSTRACT/EXTRACT--(U). GP-0- ABSTRACT. CF. IBID., 1969, (12), 83; EMT. A., 7007-52 0432. THE QUESTION OF THE MATHEMATICAL ANALYSIS OF EXPERIMENTAL DATA RELATING TO CONTACT FORCES ARISING IN THE ROLLING OF METALS, REPRODUCED ELECTRONICALLY IN THE FORM OF A SERIES OF OSCILLOGRAMS, IS CONSIDERED WITH SPECIAL REF. TO THE PROBLEM OF CORRECTING THE END EFFECT OF THESE OSCILLOGRAMS SO AS TO INCREASE THE ACCURACY OF THE EXPERIMENTAL DETERMINATION OF CONTACT FORCES. IN TYPICAL EXISTING EXPERIMENTAL METHODS, THE ACCURACY WITH WHICH THE POSITION OF THE NEUTRAL SECTION MAY BE DETERMINED IS SIMILAR TO 3PERCENT.

UNCLASSIFIED

USSR

UDC 8.74

CHEKMAREV, O. A.

"Comparative Analysis of the Efficiency of Three Groups of Digital Representations of Random Processes"

V sb. Probl. sistemotekhniki. Vyp. 2 (Problems of Systems Engineering, Vyp. 2 —collection of works), Sudostroyeniye, 1972, pp 143-151 (from RZh-Kibernetika, No 12, Dec 72, Abstract No 12V504)

Translation: The message creation rate R and the accuracy of representing Q obtained from the equations

$$R_0 = \frac{1}{2} \int_{-\infty}^{\infty} \log_2 \left(\max \left(\frac{s(f)}{N}, 1 \right) \right) df,$$
$$Q_0 = \int_{-\infty}^{\infty} \min(N, s(f)) df,$$

where $s(f)$ is the spectral density, is used as the indexes of effectiveness of representing the random process in the interval $-\pi/2 \leq t \leq \pi/2$ by a canonical expansion, uniform or nonuniform quantization.

Estimates of the canonical expansions and the Fourier series are presented.

1/1

USSR

UDC: 519.21

CHEKMAREV, O. A.

"Necessary Form of Stationary Representations of Random Processes by Sums of Non-Random Functions With Random Coefficients"

V sb. Metody predstavleniya i apparaturn. analiz sluchayn. protsessov i poley. 3-y Vses. simpozium. Sekts. 2 (Methods of Representation and Instrumental Analysis of Random Processes and Fields. Third All-Union Symposium. Section 2), Leningrad, 1970, pp 18-20 (from RZh-Kibernetika, No 7, Jul 71, Abstract No 7V141)

Translation: The author proves the following fact: to ensure stationarity of the process $x(t) = \sum_{k=1}^N \xi_k f_k(t)$, where the ξ_k are random quantities

with variances D_k , and the $f_k(t)$ are non-random measurable functions, for arbitrary values of the variances D_k , it is necessary and sufficient that ξ_k and ξ_n be uncorrelated when $k \neq n$ and $f_n(t) = \exp(i\lambda_n t)$, where λ_n are some real constants. An analogous theorem assuming differentiability of the function $f_k(x)$ was derived previously by A. M. Yaglom. (Uspekhi mat nauk, 1952, 7, No 5). Yu. Davydov.

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USSR

REBROV, A.K., CHEKMAREV, S.F., SHARAFUDINOV, R.G. (Novosibirsk)

"The Influence of Rarefication Upon the Structure of a Free Jet of Nitrogen"

Moscow, Zhurnal Prikladnoy Mekhaniki i Tekhnicheskoy Fiziki, No 1, 1971, pp 136-141

Abstract: The influence of rarefication upon the structure of a free nitrogen jet is studied systematically on the basis of measurement of the density distribution. A quantitative and qualitative link is discovered between the intensity of the Mach disk in a jet of rarefied gas with density and incalculability. For the construction of a complete qualitative model of the initial sector of the jet behind a sonic nozzle at low density, it is necessary to investigate the conditions of transition from the described viscous flow to such a flow at which the change of density at the shock wave will be subject to the Hugoniot adiabat. 8 figures, 1 table, 4 bibliographic entries.

1/1

USSR

UDC: 517.94

CHEKMAREV, T. V.

"One Representation of the Solutions to the Elliptical System of Equations in the Region Adjoining the Line of Parabolic Degeneration"

Kazan', Izvestiya VUZ--Matematika, No 1(128), 1973, pp 99-109

Abstract: Formulas are derived in this paper for representing the solutions to the system of differential equations

$$(1 - 2\nu)^{-2\nu} y_1^{2\nu} \frac{\partial u}{\partial x_1} - \frac{\partial v}{\partial y_1} = (1 - 2\nu)^{2\nu} y_1^{-2\nu} [a_1(x_1, y_1)u + b_1(x_1, y_1)v + f_1(x_1, y_1)],$$

$$(1 - 2\nu)^{-2\nu} y_1^{2\nu} \frac{\partial u}{\partial y_1} + \frac{\partial v}{\partial x_1} = c_1(x_1, y_1)u + d_1(x_1, y_1)v + f_1(x_1, y_1),$$

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USSR

UDC: 517.94

CHEKMAREV, T. V., Izvestiya VUZ--Matematika, No 1(128), 1973, pp 99-109

which is obtained from the system

$$y^{\kappa} \frac{\partial u}{\partial x} - \frac{\partial v}{\partial y} = a(x,y)u + b(x,y)v + \underline{1}(x,y),$$

$$\frac{\partial u}{\partial y} + \frac{\partial v}{\partial x} = c(x,y)u + d(x,y)v + f(x,y),$$

where $y \geq 0$, $0 < \kappa < 2$, through the use of the following notation:
 $x = x_1$, $y = (1 - 2\nu)^{-1+2\nu} y_1^{1-2\nu}$, $\nu = \kappa (2\kappa + 4)^{-1}$.

2/2

- 4 -

USSR

UDC: 681.32.001

BURTOV, A. I., PETROV, V. A., SAVUTKIN, V. V., SHAGULIN, V. I., VOLKOV, A. F.,
SOROKIN, G. K., TRAPEZNIKOV, V. A., CHEGLAKOV, Ye. A., CHEKHMAREV, Yu. D.

"A Device for Determining the Region of Operability of a Digital Computer
With Respect to Supply Voltages"

USSR Author's Certificate No 291206, filed 7 Aug 68, published 29 Mar 71,
(from RZh-Avtonatika, Telemekhanika i Vychislitel'naya Tekhnika, No 10, Oct
71, Abstract No 10B146 P)

Translation: There is a well-known device which determines the region of operability of a digital computer with respect to supply voltages. This device contains a control unit, voltage commutation module, an element for controlling the sign of the independent voltage increment, and a device for visual display. However, such devices are incapable of monitoring the changes in digital computer elements which occur as a result of various ambient factors while the computer is in operation. To speed up determination of the limits of the region of operability and improve the reliability of measurements, the signal input of the control unit for controlling the sign of the independent voltage increment in the known device, according to this Author's Certificate, is connected to the output of a device for determining the sign of the independent voltage increment, while the control unit, input and the

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ROV, A. I. et al., Soviet Patent No 291206

Output of the sign controller are connected to the control unit, the auxiliary output of the control unit being connected to the device for visual display, which is connected in turn to the voltage computation module. This enables observation of the change in the region of operability of the digital computer with respect to supply voltages during operation, as well as evaluation of various computer characteristics (e.g., the availability factor, operability margin with respect to drift of element parameters, operating stability with respect to variations of the power supply and the ambient medium). One illustration.

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- 7 -

CHEKNEV, B.M.

medical education

SO:JPRS 54514
19 NOV 1991

ENC: 378-661(470)

FIRST RESULTS OF OPERATION OF PREPARATORY DEPARTMENTS AT MEDICAL INSTITUTES OF THE RUSSIAN FEDERATION

(Article by ~~Dr. B.M. Cheknev~~ ^(Medical Education) V.S. Nikhoroshev, A. Bilikov, Sovetskoye Zdravopozastaneniye, Russian, No. 10, 1971, submitted 20 Nary 1971, pp 41-43)

As mentioned in the Decree of the Central Committee of the CPSU and at higher educational establishments" (August 1969), "among VUZ students are still too few for blue collar and collective farm employed young people." For this reason, problems pertaining to involvement of the best prepared young men and women in medical school studies from industry and rural areas have been repeatedly discussed at special meetings of VUZ vice-chancellors as well as secretaries of enrollment commissions. As a result of the vast work done by enrollment commissions, medical institutes have obtained a considerable increase in representation of rural youth in the student body (Table 1). This was aided, in many respects, by the instructions of the USSR Ministry of Higher and Secondary Specialized Education, which allowed medical students in some cases to accept individuals who are permanent residents of rural areas and whose grades at the entrance examination were 1 or 2 points lower than required for competitive enrollment into first-year classes.

However, even with 35-40 percent enrollment of rural residents in the first year classes, only a negligible number are referable to blue collar and farm workers, i.e. to individuals directly engaged in industry or agricultural work. As demonstrated by analysis of the social composition of students at the medical and pharmaceutical institutes of the USSR Ministry of Health from 1964 through 1970, there was no increase in number of workers or their children enrolled in all years and it constituted 30.7 percent of the total student body in 1970, while the number of farmers or their children dropped to 7.4 percent in 1970 (Table 2).

One could hardly consider this situation to be satisfactory, since the social composition of students enrolled in medical institutes does not even approximately correspond to the structure of our society, the vast majority of which consists of blue collar or farm workers. Furthermore, in a number of cases, such a social structure of the student body in the medical schools of

1/2 025

UNCLASSIFIED

PROCESSING DATE--16OCT70

TITLE--EFFECT OF THE MOLECULAR WEIGHT OF POLY(METHYL METHACRYLATE) ON
VISCOS AND DEFORMATION STRENGTH PROPERTIES OF ITS SOLUTIONS IN METHYL
AUTHOR--(05)-RYABOV, A.V., YEMELYANOV, D.N., CHEKNOEYEV, I.V.,
ROSLYAKOVA, V.A., SHABALINA, N.A.

COUNTRY OF INFO--USSR

SOURCE--VYSOKOMOL. SUEVIN., SER. B 1970, 12(3), 192-5

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--MOLECULAR WEIGHT, POLYMETHYLMETHACRYLATE, METHYL METHACRYLATE,
SHEAR STRESS, FLUID VISCOSITY, THIXOTROPE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1995/1202

STEP NO--UR/0460/70/012/003/0192/0195

CIRC ACCESSION NO--AP0116667

UNCLASSIFIED

2/2 025

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0116667

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SHEAR STRESS (P) VS. VISCOSITY (ETA) RELATIONS OF 15PERCENT POLY(ME METHACRYLATE) (I) IN ME METHACRYLATE DEPEND ON THE MOL. WT. (M) OF I. IN 0-80 DYNE-CM PRIME2 P RANGE ETA IS CONST. WHEN M IS 5.6 TIMES 10 PRIME4 OR 1.2 TIMES 10 PRIME5. HOWEVER, WHEN M EQUALS 1.3 TIMES 10 PRIME6 THESE SOLNS. ARE THIXOTROPIC: ETA RAPIDLY DECREASES WHEN P GREATER THAN 8 DYNES-CM PRIME2. FACILITY: NAUCH.-ISSLED. INST. KHIM., GOR'K. GOS. UNIV. IM. LOBACHEVSKOGO, GORKI, USSR.

UNCLASSIFIED

Acc. Nr: AP0044178

Ref. Code: UR 0016

PRIMARY SOURCE: Zhurnal Mikrobiologii, Epidemiologii, i
Immunobiologii, 1970, Nr 2, pp 120-123

FAMILIAL SCLEROMA ACCORDING TO MATERIALS
OF TRANSCARPATIAN REGION

A. M. Chekotilo, A. V. Smerenskaya

The authors present the results of a complex examination of 71 members of 26 families in which scleroma patients were revealed. Fifteen persons proved to be suffering from atrophic-infiltrative and scar changes of the mucous membranes of the upper respiratory tracts. In 7 of the patients scleroma diagnosis was confirmed bacteriologically or serologically. Reactions of complement fixation and of indirect hemagglutination were used for the purpose of serological examination. The results of these two reactions coincided; the advantage of the latter method for examination of the foci was demonstrated.

The necessity of complex clinico-epidemiological examination of the population in the districts with recorded scleroma cases for detection in the foci of patients with unestablished diagnosis was demonstrated.

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USSR

UDC 669.14.018.291:669.781(02)

MEDOVAR, B. I., PINCHUK, N. I., CHEKOTILO, L. V.

Austenitno-boridavve stali i splavy dlya svarnykh konstruktiv (Austenitic Boride Steels and Alloys for Welded Structural Elements), Kiev, Naukova Dumka Press, 1970, 147 pp, ill., 1 r. 8 k. (From RZh-Metallurgiya, No 4, Apr 71, Abstract 4I604k)

Translation: Data are presented on alloying austenitic steels and alloys based on Fe-Cr-Ni, Fe-Cr-Mn, and Cr-Ni with boron. The effect of boron on the structure and properties of the indicated materials is investigated. The effect of boron on weldability, inclination toward local rupture, stress corrosion cracking, high temperature strength, and resistance to scaling of steel and alloys was studied. The structure and properties of new types of austenitic-boron steels and alloys designed for parts of welded structural elements of the power, chemical, and other branches of machine building and the characteristic features of welding austenitic-boride steels and alloys are described.

1/1

Corrosion

USSR

UDC: 621.791.856.3

MEDOVAR, B. I., MARTYN, V. M., CHEKOTILO, L. V., VOSVILOV, N. M., KULEV, G. B., POLTAVETS, A. V., KRAVETS, N. I., and GLOZMAN, L. P.

"Corrosion Resistance of Joints of EP668 Alloy in Nitrogen- and Sulfur-Containing Media"

Kiev, Avtomaticheskaya Svarka, No 11, Nov 70, pp 67-68

Abstract: A study was made of the corrosion resistance of high-chromium alloy Kh50N5V (EP668) and its welded joints in highly aggressive media involved in the production of sulfuric and nitric acids. It was found that EP668 alloy and its welded joints have a high corrosion resistance in media containing nitrogen oxides NO and NO₂, natural gas with air, H₂S, SO₂, CO₂, and HCN gases. In these media the maximum corrosion rate of the parent metal and its welds is 0.019 g/m².hour. For comparison, tests were also conducted on the most extensively employed corrosion-resistant materials, including Kh18N10T, Kh18N12M2T (N1443), OKh21N6M2T (EP54), titanium, aluminum, and St.3 steel. Under similar conditions these materials exhibited intensive corrosion. EP668 alloy is also resistant in ammonium carbonate solutions (43% NH₃, 34% CO₂, 23% H₂O) at 100°C and a maximum pressure of 200 atm.

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USSR

UDC 669.15-194.2.55.621.791

MEDOVAR, B. I., PIRCHUK, N. I., and CHEKOTILO, L. V.

"Austenitic-Boride Steels and Alloys for Welded Structures"

Austenitno-Boridnyye Stali i Splyavy dlya Svarnykh Konstruktsiy [English Version Above], Kiev, Naukova Dumka Press, 1970, 147 pages.

Translation of Annotation: This book presents data on alloying of austenitic steels and iron-chrome-nickel, iron-chrome-manganese, and chrome-nickel-based alloys with boron. The influence of boron on the structure and properties of these materials is studied. Considerable attention is given to investigation of the influence of boron on the weldability, tendency to local rupture, corrosion cracking, heat resistance, and scale resistance of the steels and alloys.

The structures and properties of new types of austenitic-boride steels and alloys designed for welded structures in the power engineering, chemical, and other branches of machine building and the specifics of welding of austenitic-boride steels and alloys are described.

The book is designed for scientific and engineering-technical workers involved in metal science, metallurgy, and the welding of metals.

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USSR

MEDOVAR, B. I., et al., Austenitno-Boridnyye Stali i Splavy dlya Svarnykh Konstruktsiy, Kiev, Naukova Dumka Press, 1970, 147 pages

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| 4. Increasing the Resistance to Local Rupture in the Near-Seam Zone | 41 |
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USSR

MEDOVAR, B. I., et al., *Austenitno-Boridnyye Stali i Spalvy dlya Svarnykh Konstruktsiy*, Kiev, Naukova Dumka Press, 1970, 147 pages

Chapter III. Influence of Boron on Tendency of Austenitic Steels to Corrosion Cracking. Cavitation Resistance of Austenitic Boride Steels 57

1. Nature of Corrosion Cracking of Austenitic Steels and Methods of its Prevention 57
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2. EP381 Heat-Resistant Steel, Corrosion-Resistant in Chloride Solutions 104

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USSR

MEDOVAR, B. I., et al., *Austenitno-Boridnyye Stali i Splavy dlya Svarnykh Konstruktsiy*, Kiev, Naukova Dumka Press, 1970, 147 pages

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| 4. EP532 Scale-Resistant Casting Steel | 113 |
| 5. Heat Resistant Nickel-based Casting Alloys | 118 |
| Bibliography | 124 |
| Chapter VI. Problems of the Technology of Welding Austenitic Boride Steels and Alloys | 125 |
| Bibliography | 144 |

4/4

1/2 013 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--SPECTROGRAPHIC DETERMINATION OF SOME TRACE ELEMENTS IN BIOLOGICAL
MEDIA -U-
AUTHOR-(02)-CHEKOTILO, V.M., TOROKHTIN, M.D.
COUNTRY OF INFO--USSR
SOURCE--LAB. DELO 1970, (5), 284-6
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--SPECTROGRAPHY, TRACE ELEMENT, BIOLOGIC CELL, TISSUE FLUID
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY FICHE NO----FD70/605015/005 STEP NO--UR/9099/70/000/005/0284/0286
CIRC ACCESSION NO--AP0140596
UNCLASSIFIED

2/2 013

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0140596

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE TRACE ELEMENTS ZN, CU, NI, FE, AL, TI, MN, SI, AND MB OF BIOL. FLUIDS AND TISSUES (SAMPLE WT. ABOUT 10 G) WERE EXTD. AND CONCD. BY THE POHL METHOD (1943) AND DETD. SPECTROGRAPHICALLY. THE RELATIVE ERROR WAS 6.7-9.1PERCENT. FACILITY: UZHGOROD. FILIAL, ODESS. NAUCH. ISSLED. INST. KURORTOL., UZHGOROD, USSR.

UNCLASSIFIED

CHEKOTILO, V. M., and TOROKHEIN, M. D., Uzhgorod Branch Odessa Scientific Center
Institute of Balneology

"Spectrographic Assay of Some Trace Elements in Biological Media"

Moscow, Laboratornoye Delo, No 5, 1970, pp 284-286

Abstract: A variant of spectrography is proposed for assaying zinc, copper, nickel, iron, aluminum, titanium, manganese, silicon and molybdenum in biological material (blood, gastric juice, bile, and organ tissues) in batches of 10 grams. This technique, which includes trace element extraction by the Pohl method, permits rapid assays on many samples and can be used in any laboratory that is equipped with an ISP-28 spark spectral unit, and IG-3 spark generator.

1/1

Corrosion

UDC: 621.791.856.3

USSR

MEDOVAR, B. I., MARTYN, V. N., CHEKOTILO, L. V., VOSVILOV, N. M., KULEV, G. B., POLTAVETS, A. V., KRAVETS, K. I., and GLOZMAN, L. P.

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Abstract: A study was made of the corrosion resistance of high-chromium alloy Kh50N5V (EP668) and its welded joints in highly aggressive media involved in the production of sulfuric and nitric acids. It was found that EP668 alloy and its welded joints have a high corrosion resistance in media containing nitrogen oxides NO and NO₂, natural gas with air, H₂S, SO₂, CO₂, and HCN gases. In these media the maximum corrosion rate of the parent metal and its welds is 0.019 g/m².hour. For comparison, tests were also conducted on the most extensively employed corrosion-resistant materials, including Kh18N10T, Kh18N12M2T (RT448), OKh21N6M2T (EP54), titanium, aluminum, and St.3 steel. Under similar conditions these materials exhibited intensive corrosion. EP668 alloy is also resistant in ammonium carbonate solutions (43% NH₃, 34% CO₂, 23% H₂O) at 100°C and a maximum pressure of 200 atm.

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UDC 669.15-194.2.56.621.791

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Austenitno-Boridnyye Stali i Splavy dlya Svarnykh Konstruktsiy [English Version Above], Kiev, Naukova Dumka Press, 1970, 147 pages.

Translation of Annotation: This book presents data on alloying of austenitic steels and iron-chrome-nickel, iron-chrome-manganese, and chrome-nickel-based alloys with boron. The influence of boron on the structure and properties of these materials is studied. Considerable attention is given to investigation of the influence of boron on the weldability, tendency to local rupture, corrosion cracking, heat resistance, and scale resistance of the steels and alloys.

The structures and properties of new types of austenitic-boride steels and alloys designed for welded structures in the power engineering, chemical, and other branches of machine building and the specifics of welding of austenitic-boride steels and alloys are described.

The book is designed for scientific and engineering-technical workers involved in metal science, metallurgy, and the welding of metals.

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| 2. EP381 Heat-Resistant Steel, Corrosion-Resistant in Chloride Solutions | 104 |

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MEDOVAR, B. I., et al., *Austenitno-Boridnyye Stali i Splavy dlya Svarnykh Konstruktsiy*, Kiev, Naukova Dumka Press, 1970, 147 pages

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4/4

1/2 013 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--SPECTROGRAPHIC DETERMINATION OF SOME TRACE ELEMENTS IN BIOLOGICAL
MEDIA -U-
AUTHOR--(02)-CHEKOTILO, V.M., TOROKHTIN, M.D.
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SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--SPECTROGRAPHY, TRACE ELEMENT, BIOLOGIC CELL, TISSUE FLUID

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY FICHE NO----FD70/605015/D05 STEP NO--UR/9099/70/000/005/0284/0286
CIRC ACCESSION NO--AP0140596
UNCLASSIFIED

2/2 013

CIRC ACCESSION NO--AP0140596

UNCLASSIFIED

PROCESSING DATE--04DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TRACE ELEMENTS ZN, CU, NI, FE, AL, TI, MN, SI, AND MB OF BIOL. FLUIDS AND TISSUES (SAMPLE WT. ABOUT 10 G) WERE EXTD. AND CONCD. BY THE POHL METHOD (1943) AND DETD. SPECTROGRAPHICALLY. THE RELATIVE ERROR WAS 6.7-9.1PERCENT. FACILITY: UZHGOROD. FILIAL, ODESS. NAUCH. ISSLED. INST. KURORTOL., UZHGOROD, USSR.

UNCLASSIFIED

USSR

UDC: 616-008.82-074:543.42

CHEKOTILO, V. M. and TOROKHTIN, M. D., Uzhgorod Branch Odessa Scientific Research
Institute of Balneology

"Spectrographic Assay of Some Trace Elements in Biological Media"

Moscow, Laboratornoye Delo, No 5, 1970, pp 284-286

Abstract: A variant of spectrography is proposed for assaying zinc, copper, nickel, iron, aluminum, titanium, manganese, silicon and molybdenum in biological material (blood, gastric juice, bile, and organ tissues) in batches of 10 grams. This technique, which includes trace element extraction by the Pohl method, permits rapid assays on many samples and can be used in any laboratory that is equipped with an IBP-28 spark spectral unit, and IG-3 spark generator.

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USSR

UDC 576.858.2

ZASUKHINA, G. D. and CHEKOVA, V. V., Institute of Poliomyelitis and Viral Encephalitides, Academy of Medical Sciences USSR, and Institute of Chemical Physics, Academy of Sciences USSR, Moscow

"Repair of Some Genetic Injuries in RNA-Containing Virus in Relation to Type of Cell"

Moscow, Doklady Akademii Nauk SSSR, No. 2, 1971, pp 457-459

Translation: Tickborne encephalitis virus treated with ethylenimine (1:10,000) was titrated in chick embryo (CE) and pig embryo kidney (PEK) cells. The survival rate of the virus was found to be one order higher in the PEK cells than in the CE cells, whereas the titers of control, untreated virus differed by no more than 0.1 to 0.2. Apparently some of the sublethal injuries to the virus caused by the mutagen are repaired in the PEK cells but not in the CE cells. The existence of a more active repair system in the PEK cells implies that the original viral characteristics are more stable in these cells or in the presence of

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USSR

ZASUKHINA, G. D. and CHEKOVA, V. V., Doklady Akademii Nauk SSSR,
No 2, 1971, pp 457-459

extracts from these cells. To test this assumption, mice were peripherally infected with a nonpathogenic strain of tickborne encephalitis virus. Spontaneous mutations with respect to the formation of a peripherally active phenotype occurred during 3 passages in CE cells but not in PEK cells or in CE cells in the presence of extracts from PEK cells.

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Acc. Nr:

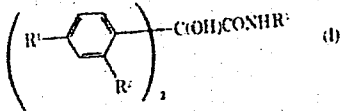
AP0045442

Abstracting Service:
CHEMICAL ABST.

Ref. Code:

4170 UR 3343

89422w Reactivity of compounds containing a diaryloxy-methyl group. I. Transformations of substituted amides of diarylglycolic acids in sulfuric acid solutions. Shklyarov, V. S.; ~~Chernyashkin, Y. I. S.; Koblova, A. Z.; Pautsurskii, V. I.; Kalugina, Z. G. (Perm Pharm. Inst., Perm, USSR). Reaktiv. Sposobnost' Org. Soedin. 1969, 6(3), 650-62 (Russ). Solns. of I (R¹ = OMe, F, Cl, or Br; R² = OMe; R³ = Ph, Ph₂CH, PhCH₂, Ph(CH₂)₂, Ph(CH₂)₃, Et₂NHCH₂CH₂, PhNH⁺EtCH₂CH₂, or 2,4,6-Me₃C₆H₂) in a mixt. of 96% H₂SO₄ and AcOH were investigated spectrophotometrically. With increasing acidity (in the acidity~~



function H₁₁ region -5.73 to -18.0) the following ions were detd.: Ar₂C(OH)C(OH)⁺:NHR, Ar₂C⁺CONHR, and Ar₂C(OH)C⁺:NHR.

P. Carsky

REEL/FRA
19780388

Acc. Nr:

AP0053373

Abstracting Service:
CHEMICAL ABST. 570

Ref. Code:

RU 3343

99704d Reactivity of compounds containing bis(methoxyaryl) groups. II. Influence of N-substituents on the basicity of the alcoholic hydroxyl group in bis(p-anisyl)glycolamides. ~~Shklyayev, V. S.; Chekryshkin, Yu. S.; Kalugina, Z. G.; Panturkin, V. I.; Koolova, A. Z. (Perm Pharm. Inst., Perm, USSR). Reakts. Sposobnost Org. Soedin. 1969, 6(3), 663-8 (Russ). For (p-MeOC₆H₄)₂C(OH)COMHR in a mixt. of 96% H₂SO₄ and AcOH, equimolar concns. of ions (p-MeOC₆H₄)₂C(OH):N⁺HR and (p-MeOC₆H₄)₂C⁺CONHR were found at the following values of the acidity function (R and H_R given): Ph, -5.93; Ph₂CH, -6.033; PhCH₂, -6.288; Ph(CH₂)₂, -6.522; Ph(CH₂)₃, -6.7; Et₂NHCH₂CH₂, -6.423; PhN⁺(Et)CH₂CH₂, -6.486; 2,4,6-Me₃C₆H₂, -7.045.~~ P. Carsky

REEL/FRAME

19830396

di:7

1/2 006 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--REACTIVITY OF COMPOUNDS WITH DIARYLMETHYLOL GROUPS. IV. BASICITY OF
SUBSTITUTED AMIDES OF DIARYLGLYCOLIC ACIDS -U-
AUTHOR--(04)-SHKLYAYEV, V.S., CHEKRYSHKIN, YU.S., KOBLOVA, A.I.,
PANTSURKIN, V.I.
COUNTRY OF INFO--USSR
SOURCE--ZH ORG KHIM. 1970, 6(5), 1055-61
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, CHEMISTRY

TOPIC TAGS--AMIDE, CONDENSATION REACTION, AMINE DERIVATIVE, AROMATIC
CARBOXYLIC ACID, CHLORINATED ORGANIC COMPOUND, BENZENE DERIVATIVE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3006/1270

STEP NO--UR/0366/70/006/005/1055/1061

CIRC ACCESSION NO--AP0134944

UNCLASSIFIED

2/2 008

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0134944

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. CONDENSATION OF MESITYLAMINE WITH (C) SUB2 ET) SUB2 GAVE 2,4,6,ME SUB3 C SUB6 H SUB2 NHCOCO SUB2 ET, WHICH WAS TREATED WITH RC SUB6 H SUB4 MGBR (R IS H, O-ME, M-ME, P-ME, O-MEO, P-MEO, P-F, M-CL, P-CL; OR P-BR) TO GIVE 2,4,6,ME SUB3 C SUB6 H SUB2 NHCOC(OH) (C SUB6 H SUB4 R) SUB2 (I). THE PK VALUES OF I DEPEND ON R. THEY WERE CORRELATED WITH BROWN OKAMOTO SIGMA PRIME POSITIVE CONSTS. FACILITY: PERM. FARM. INST., PERM, USSR.

UNCLASSIFIED

USSR

UDC 669.018.25(075)

ROMANOVA, N. I., CHEKILAYEV, E. G., DUSEV, V. I., LIVSHITS, T. A., and
KURDOV, M. H.,

"Metal Ceramic Hard Alloys"

Metallokeramicheskiye Tverdyye Splavy (English Version Above), Metallurgiya
Press, 1970, 352 pages

Translation of Annotation: This book presents in brief form the basic principles of the production and application of metal ceramic hard alloys. Information is presented on the initial raw material, and methods are described for producing powders of metals and carbides used in the manufacture of hard alloys.

Methods of grinding the initial materials and methods of preparing the mixtures and pressing them are described. Description are given of processes occurring during sintering of alloys, and methods of treating hard alloy products. Areas of their application in the metal working and mining industries are described. Methods of quality testing of products during preparation of hard alloys are discussed.

The book is designed as a teaching aid for professional and technical schools training workers in the production of metal ceramic hard alloys. 94 figs; 51 tables; 19 biblio. refs. 1/10

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ROMANOVA, N. I., et al., *Metallikeranicheskiye Tverdyye Splavy, Metallurgiya Press, 1970, 32 pages*

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extracts from these cells. To test this assumption, mice were peripherally infected with a nonpathogenic strain of tickborne encephalitis virus. Spontaneous mutations with respect to the formation of a peripherally active phenotype occurred during 3 passages in CE cells but not in PEK cells or in CE cells in the presence of extracts from PEK cells.

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99704d Reactivity of compounds containing bis(methoxyaryl) groups. II. Influence of N-substituents on the basicity of the alcoholic hydroxyl group in bis(p-anisyl)glycolamides. Shklyayev, V. S.; Chekryshkin, Yu. S.; Kalugina, Z. G.; Pantsurkin, V. I.; Kooiova, A. Z. (Perm Pharm. Inst., Perm, USSR). *Reakts. Sposobnost Org. Soedin.* 1969, 6(3), 663-8 (Russ). For (p-MeOC₆H₄)₂C(OH)COMHR in a mixt. of 96% H₂SO₄ and AcOH, equimolar concns. of ions (p-MeOC₆H₄)₂C(OH):N⁺HR and (p-MeOC₆H₄)₂C⁺CONHR were found at the following values of the acidity function (R and H_R given): Ph, -5.93; Ph₂CH, -6.033; PhCH₂, -6.288; Ph(CH₂)₂, -6.522; Ph(CH₂)₃, -6.7; Et₂NHCH₂CH₂, -6.422; PhN⁺(Et)CH₂CH₂, -6.486; 2,4,6-Me₃C₆H₃, -7.045.

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ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CONDENSATION OF MESITYLAMINE WITH
(C) SUB2 ET) SUB2 GAVE 2,4,6,ME SUB3 C SUB6 H SUB2 NHCDCO SUB2 ET, WHICH
WAS TREATED WITH RC SUB6 H SUB4 MGBR (R IS H, O-ME, M-ME, P-ME, O-MEO,
P-MEO, P-F, M-CL, P-CL; OR P-BR) TO GIVE 2,4,6,ME SUB3 C SUB6 H SUB2
NHCOC(OH) (C SUB6 H SUB4 R) SUB2 (I). THE PK VALUES OF I DEPEND ON R.
THEY WERE CORRELATED WITH BROWN GKAMOTO SIGMA PRIME POSITIVE CONSTS.
FACILITY: PERM. FARM. INST., PERM, USSR.

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