"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

SMIRNOVA, V.I., kand.sel'skokhozyaystvennykh nauk

Effect of herbicides on the development of microflora in the corn rhizosphere. Agrobiologiiz no.1:88-91 Ja-F '63. (MIRA 16:5)

1. Vsesoyuznyy institut kormov, st. Lugovaya, Moskovskaya oblast'.
(Rhizosphere microbiology) (Corn (Maize)) (Herbicides)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

BARKHASH, S.A.; [redacted]IN, V.A.; PROSKURYAKOVA, Ye.I.; SMIRNOVA, V.I.

Causes of blindness; from data of the Ukrainian Scientific Research Institute for Eye Diseases and Tissue Therapy for the period. 1946-1955. Uch. zap. UEIGB 5:21-25 '62.
(MIRA 16:11)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

GUBENKO, T.L. [Hubenko, T.L.]; SMIRNOVA, V.I. [Smyrnova, V.I.]

Improved rivanol-alcohol method for obtaining γ^2-globulin. Ukr. biokhim. zhur. 35 no.5:747-753 '63. (MIRA 17:5)

1. Mechnikov Research Institute for Epidemiology and Microbiology, Odessa.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

SMIRNOVA, V.I.

USSR

Determination of the Surface Tension of Substances at the Melting Point. V. I. Smirnova and B. F. Ormont (*Doklady Akad. Nauk S.S.S.R.*, 1952, 82, (5), 751–753).—[In Russian]. S. and O. have developed the formula: $\gamma = [P_{298}/(ab)^2]gD_e^2(1/H)$ for the surface tension, γ, of a pendent drop at the end of a rod. In this expression, P_{298} is the d of the solid at 298° K.; D_e is the max. dia. of the solidified drop; $1/H = f(s)$, where the shape factor $s = d_x/d_e$ and d_e and d_x are, resp., the max. dia. of the liq. drop and the dia. at a distance d_x from the tip; $a = P_s(T_s)/P_l(T_s)$, and $b = P_{298}/P_s(T_s)$, where $P_s(T_s)$ and $P_l(T_s)$ are the d of the solid and liq. phases, resp., at the m.p. Values of γ calculated from experimental results by using this equation are: Sn 432, Bi 269, Ag 785, Au 754, Cu 1035, Ni 1750, and Fe 1384 dynes/cm. In each case, the solidified drop was photographed in six positions to obtain mean values of D_x and D_e. Although the given expression is more correct than those used by Andreas, Hauser, and Tucker (*J. Phys. Chem.*, 1938, 42, 1001) and by Davis and Bartell (*Analyt. Chem.*, 1948, 20, 1182; *M.A.*, 16, 724), S. and O. do not consider the results to be reliable; viscosity and other factors reduce the rate of flow of the drop, so that the drop shape is not that which would be obtained in true equilibrium. This may be overcome by photographing the solidifying drop by cinematography; the values of γ calculated from the various pictures tend towards a limit; data given for Sn show that at the m.p. the value of γ is 610 dynes/cm.—G. V. E. T.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

SMIRNOVA, V.I., kandidat tekhnicheskikh nauk.

Effect of additions of surface-active agents on the properties of injection mortars. Trudy TSNIS MPS no.9:30-80 '53.(MLRA 8:1)
(Cement) (Surface-active agents)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

Smirnova, V. I.

USSR

Microquantitative determination of carbon, particularly in tantalum carbide. V. I. Smirnova and B. F. Ormont (L. Ya. Karpov Sci. Research Inst. Phys. Chem., Moscow). *Zhur. Anal. Khim.* 9, 359-63(1954).—The purpose was to devise a method for detg. very small quantities of C with sufficient accuracy with ordinary analytical balances. This was attained by resorting to microgravimetric titration (cf. *Zhur. Russ. Fiz.-Khim. Obshchestva* 11, 355(1929)). The CO_2 from burning the C in an analyzed sample was retained in a titrated $Ba(OH)_2$ soln. which was subsequently back-titrated. Combustion was carried out in a stream of O admitted only when the combustion temp. of the analyzed substance was reached. For the absorption of CO_2 specially designed absorption bottles were used (cf. *C.A.* 49, 4338c). To det. very small quantities of C, e.g., free C in Ta carbide, microanalytical app. was used. The procedure for ultramicrogravimetric detn. of C is given. M. Hosch

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

SMIRNOVA, V.I.

4

USSR.

Apparatus for quantitative absorption of gases. B. P. Ormont and V. I. Smirnova. *Zhur. Anal. Khim.* 9, 304-5 (1954).—Two modifications of a new design of a combustion gas absorption app. and one for ultramicrogravimetric analysis were described. The app. was designed primarily for detn. of very small quantities of C. M. Hosch

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

SMIRNOVA, V. I.

*The Structure and Limits of Homogeneity of Tantalum Carbides. V. I. Smirnova and B. F. Ormont (*Doklady Akad. Nauk S.S.S.R.*, 557–560).—[In Russian]. The results of accurate chem. and X-ray analyses of 16 samples of synthetic TaC are discussed. The existence of the following phases was established: (i) α phase—b.c.c. Ta lattice in which C is practically insoluble, compn. Ta_1C_0–$Ta_1C_{0.03}$, $a = 3.306_6$–3.303_5 Å.; (ii) β phase—h.c.p. carbide of compn. $Ta_1C_{0.35}$–$Ta_1C_{0.30}$, $a = 3.101_2$–3.104_2, $c = 4.937_2$–4.941_0 Å.; (iii) γ phase—roc'k-salt lattice carbide of compn. $Ta_1C_{0.58}$–$Ta_1C_{0.81}$, $a = 4.420_6$–4.456_4 Å.; and (iv) δ phase—hexagonal graphite lattice $a = 2.46_5$, $c = 6.69_0$ Å. The variation of a and c with compn. in the two-phase regions is due to kinetic reasons which make it possible for the second phase to appear before the limits of homogeneity of the first phase are reached. —S. K. L.

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

SMIRNOVA, V. I.

USSR/Chemistry - Physical Chemistry

Card : 1/1

Authors : Smirnova, V. I., and Ormont, B. F.

Title : About the possibility of increasing the density of a real crystal by increasing the number of nodes in the crystalline lattice not occupied by atoms

Periodical : Dokl. AN SSSR, 96, Ed. 5, 1017 - 1019, June 1954

Abstract : The number of atoms in an elementary nucleus and the drop in the roentgenographic and pycnometric densities due to reduction in number of atoms is described. The reduction in the structural density with the increase in the number of nodes not occupied by atoms in the elementary nucleus is explained. Four references. Tables.

Institution : The L. Ya. Karpov Physico-Chemical Institute

Presented by : Academician, V. A. Kargin, March 12, 1954

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

SMIRNOVA, V.I.

USSR/ Chemistry - Physical chemistry

Card 1/1 Pub. 22 - 33/50

Authors : Smirnova, V. I., and Ormont, B. F.

Title : The dependence of heats and free energies of TaC formation upon the phase and chemical composition

Periodical : Dok. AN SSSR 100/1, 127-130, Jan. 1, 1955

Abstract : Calorimetric investigation of TaC samples showed that the TaC composition is not stoichiometric and not always monophase. The dependence of the thermal effect of the formation of cubical gamma-carbide upon the chemical composition, was established. The entropy value determining the change in free energy of TaC formation is described. Other physico-chemical properties of TaC are listed. Twenty-one references: 7 USSR, 2 German, 1 English and 11 USA (1924-1954). Tables.

Institution : The L. Ya. Karpov Phys.-Chem. Institute

Presented by: Academician A. N. Frumkin, June 17, 1954

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

GUREVICH, M.A.; KUTSEV, V.S.; ORMONT, B.F.; SMIRNOVA, V.I.; EPEL'BAUM, V.A.

Variable-composition phases in the chemistry of carbides. (MLRA 9:11)
Zhur.neorg.khim. 1 no.7:1578 Jl '56.

(Carbides)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

SMIRNOVA V.I.

I-6

USSR/Chemical Technology - Chemical Products and Their Applications, Mineral Salts. Oxides. Acids. Bases.

Abs Jour : Ref Zhur - Khimiya, No 3, 1957, 8793

Author : Smirnova, V.I., and Ormont, B.F.

Inst :

Title : Preparation of Molten Tantalum Carbide.

Orig Pub : Zh. obshch. khimii, 1956, 26, No 4, 958-960

Abstract : An experimental installation for rapid melting Ta carbide is described. The installation consists of a furnace into which are inserted two copper rods with electride holders. The melting is carried out under an atmosphere of argon with a potential of 13.5 v across the terminals. Rods of Ta carbide of composition $TaC_{0.90}$ are used as the electrodes. When the upper electrode is screwed back, an arc is produced and after a number of seconds of burning a drop of fused carbide is observed to form on the lower electrode. X-ray diffraction studies of the molten

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USSR/Chemical Technology - Chemical Products and Their Applications, Mineral Salts. Oxides. Acids. Bases. I-6

Abs Jour : Ref Zhur - Khimiya, No 3, 1957, 8793

product show the presence of the lines of the -phase of Ta carbide and one graphite line; the lines for metallic Ta are not observed in the diffraction patterns.

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

SMIRNOVA, V. I.

Distr: 4E4J

*The Limits of Homogeneity and the Dependence of Thermodynamic and Some Other Properties of Carbide Phases of Tantalum on Their Composition and Structure. V. I. Smirnova and B. F. Ormont (*Zhur. Fiz. Khim.*, 1956, 30, (6), 1327–1342).—(In Russian). S. and O. critically review the bibliographical data on the system Ta–C. The phase limits were ascertained up to 5·22% C; free graphite (δ phase) is absent, and all the combined C is included in the α, β, or γ phase. With >2·46% of combined C, α phase cannot be detected by X-ray analysis, and with up to 3·71% C, only β + γ phases can be seen. With 3·71–5·22% C, no β phase is seen and δ phase is also absent. With >5·22% C, δ phase appears alongside γ phase and the specimens appear two-phased. It is stressed that for this purpose X-ray analysis is essential. Judging by X-ray diagrams in a two-phase region significant changes in the lattice parameters occur. These are due to kinetic reasons. In this connection it was shown that *d* of γ phase decreases with increase in number of lattice points unoccupied by C and is a max. for $TaC_{0\cdot 44}$ and not for TaC. Heats of combustion of Ta and TaC as well as heats of formation of the latter were determined in accordance with phase and chem. compn. It was established that the change of ΔH°_{298} with compn. in the region of homogeneity varies by ~50% for the f.c.c. and 10% for h.c.p. carbides reaching for f.c.c. the deviation of ~20 k.cal./mole. In the presence of free C the β phase is unstable. The abrasive power of the γ phase is greater than that of the β phase and less than that of corundum when tested on quartz. In the region of homogeneity the abrasive power increases with C content. Crystals with a min. quantity of defects should possess max. abrasive power. 44 ref.—A. W.

4/1

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

ORMONT, B.F.; SMIRNOVA, V.I.

Requirements for modern X ray phase analysis of systems of varying composition. Zhur. fiz. khim. 30 no.11:2588-2592 N '56. (MLRA 10:4)

1. Fiziko-khimicheskiy institut im. L.Ya. Karpova, Moskva.
(X ray--Industrial applications) (Metallography)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

24(7) PHASE I BOOK EXPLOITATION SOV/1700

Lvov. Universitet

Materialy X Vsesoyuznogo soveshchaniya po spektroskopii, 1956. t. II: Atomnaya spektroskopiya (Materials of the 10th All-Union Conference on Spectroscopy, 1956. Vol 2: Atomic Spectroscopy) /Lvov/ Izd-vo L'vovskogo univ., 1958. 568 p. (Series: Its: Fizicheskiy sbornik, vyp.4(9)) 3,000 copies printed.

Additional Sponsoring Agency: Akademiya nauk SSSR. Komissiya po spektroskopii.

Editorial Board: G.S. Landsberg, Academician, (Resp. Ed.); B.S. Neporent, Doctor of Physical and Mathematical Sciences; I.L. Fabelinskiy, Doctor of Physical and Mathematical Sciences; V.A. Fabrikant, Doctor of Physical and Mathematical Sciences; V.G. Koritskiy, Candidate of Technical Sciences; S.M. Rayskiy, Candidate of Physical and Technical Sciences; L.K. Klimovskaya, Candidate of Physical and Mathematical Sciences; V.S. Miliyanchuk (Deceased), Doctor of Physical and Mathematical Sciences; A.Ye. Glauberman, Doctor of Physical and Mathematical Sciences; Ed.: S.L. Gazer; Tech. Ed.: T.V. Saranyuk.

PURPOSE: This book is intended for scientists and researchers in the field of spectroscopy, as well as for technical personnel using spectrum analysis in various industries.

COVERAGE: This volume contains 177 scientific and technical studies of atomic spectrography presented at the 10th All-Union Conference on Spectroscopy in 1956. The studies were carried out by members of scientific and technical institutes and include extensive bibliographies of Soviet and other sources. The studies cover many phases of spectroscopy: spectra of rare earths, electromagnetic radiation, physicochemical methods for controlling uranium production, physics and technology of gas discharge, optics and spectroscopy, abnormal dispersion in metal vapors, spectroscopy and the combustion theory, spectrum analysis of ores and minerals, photographic methods for quantitative spectrum analysis of metals and alloys, spectral determination of the hydrogen content of metals by means of isotopes, tables, and atlases of spectral lines, spark spectrographic analysis, statistical study of variation in the parameters of calibration curves, determination of traces of metals, spectrum analysis in metallurgy, thermochemistry in metallurgy, and principles and practice of spectrochemical analysis.

Card 2/31

... of the 10th All-Union Conference (Cont.) SOV/1700

Shvarts, D.M., and V.V. Portnova. Spectrum Analysis of Lead of High Purity 493

Levitin, R.Z., and V.I. Smirnova. Spectrochemical Analysis of Phase Content of Aluminum in Steel 497

Romanov, L.D., R.B. Rakhman, and A.M. Borbat. Time Relay for Spectrography 501

Vvedenskiy, L.Ye., and V.I. Shekhobalova. Use of an A-C Arc Between the Carbon Electrode and Molten Metal for Determining the Content of Minor Admixtures 504

Sasovskaya, I.I., G.P. Skornyakov, and T.P. Chukina. Effect of Temperature on the Optical Properties of Silver Alloys 505

Zimina, K.I., and L.G. Nashireva. Determination of Barium in Oils With Additives 507

Rykova, T.V., and B.N. Yakovlev. Spectrum Analysis of Electrolyte Baths for Acid Electrolytic Tin and Nickel Plating 510

Card 28/31

Affil: U. U. Sci Res Inst. Min Transport Machine Building USSR

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

5(4) SOV/76-33-4-4/32

AUTHORS: Smirnova, V. I., Ormont, B. F.

TITLE: On the Determination of the Surface Tension at High Temperatures by the Pendant and Creeping-Drop Methods
(Ob opredelenii poverkhnostnogo natyazheniya pri vysokikh temperaturakh metodami visyachey i natekayushchey kapli)

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 4, pp 771-779 (USSR)

ABSTRACT: The surface tension σ of high-melting substances must be determined at high temperatures near the melting point. Therefore, in selecting the devices and the methods of measurement the increased reactivity of the test substance (to the material of the device and the environment) must be taken into consideration. In the present case two methods of determination are discussed. Besides other deficiencies of the measuring method of pendant drop (Ref 5) it is found that the following completions must be made: 1) the error which occurs in the transition from the computation equation (4) into the reduced form (5) (Ref 4) must be eliminated. 2) A special apparatus must be used which eliminates a reaction of the preparation with the environment. 3) The errors which occur due to the formation of the drop which is not completely in equilibrium must

Card 1/3

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SOV/76-33-4-4/32

On the Determination of the Surface Tension at High Temperatures by the Pendant and Creeping-Drop Methods

be avoided. Ad 1) two correction factors are introduced into the equation (4), a new equation is derived and the corresponding data for K, Na, Sn, Mg, Ag, Au, Cu, Fe are given (Table 1). Ad 2) experiments on the thickness of sample were carried out for the determination of σ with Sn, Bi, Ag, Au, Cu, Ni, Fe and the values are tabulated (Table 2). The determinations of σ in Sb and Bi at the melting temperature were carried out in a glass vessel (Fig 2) on heating in a glycerin- (or air-) bath in an argon atmosphere. The measurements of the σ of high-melting metals were conducted in another apparatus (Fig 4) on heating with an electric high frequency furnace. The temperature was determined by means of an optical pyrometer. Data on the behavior of the sample (Ag, Au, Cu, Ni, Fe) as a function of the diameter of the sample are mentioned (Table 3). The experimental results show that the method of the pendant drop may be used also for high-melting metals. Experiments according to the method of the creeping drop were carried out by means of various cameras ("Exacta", "Robot", "Robot-Royal" and "Start"), as well as of motion picture

Card 2/3

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On the Determination of the Surface Tension at High Temperatures by the Pendant and Creeping-Drop Methods

cameras. A combination of this method with that of the creeping drop is further investigated. There are 5 figures, 3 tables, and 9 references, 5 of which are Soviet.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova, Moskva (Physico-chemical Institute imeni L. Ya. Karpov, Moscow)

SUBMITTED: July 26, 1957

Card 3/3

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

S/076/60/034/06/26/040
B015/B061

AUTHORS: Smirnova, V. I., Ormont, B. F. (Moscow)

TITLE: High Vacuum Quartz Furnace With Rotating Membrane for Determining Surface Tension at High Temperatures and Other Investigations

PERIODICAL: Zhurnal fizicheskoy khimii, 1960, Vol. 34, No. 6, pp. 1316-1319

TEXT: A method of investigating the surface tension of solid bodies at the melting point was described previously (Ref. 2). The apparatus then used for determinations up to 2000°C are described here in greater detail. High vacuum furnaces with a rotating quartz membrane which is heated by resistance- or induction-heating elements are concerned. Types of apparatus of this nature are described: a furnace with induction heating elements for determining surface tension of solids up to 2000°C at low vapor pressure (Fig. 1); a furnace with induction heating and a spring balance for determining the reaction rate from the loss of weight, and especially for determining the atomization energy (Fig. 2); and a

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S/020/60/130/06/029/059
B004/B007

AUTHORS: Piskunov, A. K., Shigorin, D. N., Smirnova, V. I., Stepanov, B. I.

TITLE: The Electron Paramagnetic Resonance Spectra of Some Chelate Compounds of Copper

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 130, Nr 6, pp 1284 - 1287 (USSR)

ABSTRACT: The authors investigated the e.p.r. spectra of the chelate compounds of copper with various azo-compounds as well as with the enol-form of acetylacetone and acetoacetic ester. Measurement of the magnetic moments showed that copper forms the compound with two valence electrons. If the initial state of the Cu-atom is d^9sp, it must have an unpaired electron. As, e.g., copper forms four equivalent bonds with acetylacetonate, it is presumed to enter into direct interaction with the π-electrons of the entire system. An investigation was carried out with the purpose of finding out whether the unpaired electron of the metal remains localized on the Cu-atom or whether it is delocalized in the molecule. Table 1 gives the experimental data of the compounds investigated: The width ΔH of the line

Card 1/3

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The Electron Paramagnetic Resonance Spectra of Some Chelate Compounds of Copper

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B004/B007

for 9370 mc, the g-factors, and the magnetic moments. In the acetylacetonate of Cu ΔH decreases considerably when substituents (O=C-CR or Cl) are introduced. In the azo-compounds of copper, which are still richer in π-electrons, ΔH becomes still more contracted. Substitution by chlorine also causes contraction. The increase in π-electrons is found to lead to a contraction of the absorption line. Here, chlorine in ortho position exerts the strongest influence. The authors arrive at the conclusion that the unpaired electron enters into interaction with the π-electrons of the azo group, and by way of this group indirectly with the π-electrons of the entire system. This interaction was confirmed by analysis of the e.p.r. spectra of the compounds dissolved in benzene, chloroform, or dioxane (Fig 1). Their intensity depends on the nature and structure of the complex group. There are 1 figure, 1 table, and 5 references, 2 of which are Soviet.

ASSOCIATION: Nauchno-issledovatel'skiy fiziko-khimicheskiy institut im. L. Ya. Karpova (Scientific Research Institute of Physical Chemistry imeni L. Ya. Karpov). Moskovskiy khimiko-tekhnolo-

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

67098

The Electron Paramagnetic Resonance Spectra of Some Chelate Compounds of Copper

S/020/60/130/06/029/059
B004/B007

gicheskiy institut im. D. I. Mendeleyeva (Moscow Chemical-technological Institute imeni D. I. Mendeleyev)

PRESENTED: August 18, 1959 by V. A. Kargin, Academician

SUBMITTED: August 15, 1959

Card 3/3

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

PROSKURNIN, M.A.; SHARMATYY, V.A.; SMIRNOVA, V.I.; POMERANTSEV, N.M.; KUZ'MINTSEVA, G.N.; SIMONOVA, T.A.

Conversion of the oxidative component of radiolysis in the nitrate - water system. Dokl. AN SSSR 139 no.2:410-413 Jl '61. (MIRA 14:7)

1. Fiziko-khimicheskiy institut im. L.Ya. Karpova. Predstavleno akademikom A.N. Frumkinym.
(Sodium nitrate) (Radiation)

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

28676
S/020/61/140/002/021/023
B130/B110

5.4150

AUTHORS: Smirnov, D. N., Smirnova, V. I., Zhuravleva, G. S., [illegible], Ye. P., and Shostakovskiy, M. F., Corresponding Member AS USSR

TITLE: Epr spectra of γ-irradiated acetylene and its derivatives

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 140, no. 2, 1961, 419-422

TEXT: To determine the relationship between the structure of the initial molecules and the structure of the resulting radical, the authors studied the epr spectra of γ-irradiated acetylene, methyl acetylene, methyl deuteroacetylene, ethyl- and butyl acetylene, as well as phenyl- and methyl phenyl acetylene at 77°K. The compounds were irradiated in special glass ampuls giving no epr spectrum with the used dose of γ-radiation. Before the tests, the ampuls were evacuated to 10^{-3} mm Hg. Irradiation was conducted with Co^{60}. A superheterodyne radiospectroscope was used for taking the epr spectra. The magnetic field was calibrated with the epr spectra of the pyroxylamine disulfone ion, $[NO(SO_3)_2^{2-}]$ in

Card 1/2

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

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B130/B110

Epr spectra of γ-irradiated ...

chlorides. Copper chloride monocrystals were used for determining the concentration of the radicals obtained. The relative error when determining the yield of radicals was ~20%. Test results are given in Tables 1 and 2. The spectrum of deutero methyl acetylene obtained from heavy water and Li-methyl acetylenide suggests an interaction of the unpaired electron in the radical with the protons of the CD and CH_2 groups. The asymmetric triplet of methyl-phenyl acetylene may be explained by (1) the interaction of the unpaired electron with the protons of the methylene group in the radical ⟨⟩ C≡C-$\dot{C}H_2$, or (2) by the fact that the spectrum has to be ascribed to the radical of the phenyl ring. A comparison with the spectra of benzene and methyl-phenyl acetylene with benzene indicates that explication (1) is applicable. An intense epr spectrum of C_2H_2 is only obtained by high-dose irradiation, which results in a considerable redistribution of energy in the system. This is even more distinct with phenyl acetylene which gives no epr spectrum at high-dose irradiation either. The redistribution of the energy which may be explained by the formation of complexes between the molecules. In fact, polymeric compounds were found on the ampul walls

Card 2/3

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

28676

S/020/61/140/002/021/023
B130/B110

Epr spectra of γ-irradiated ...

during the experiments. There are 1 figure, 2 tables, and 4 references: 2 Soviet and 2 non-Soviet. The two references to English-language publications read as follows: C. P. Poole, S. Anderson, J. Chem. Phys., 31, no. 1, 346 (1959); R. West, Ch. Kreinzel, J. Am. Chem. Soc., 84, no. 4, 793 (1961).

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physico-chemical Institute imeni L. Ya. Karpov)

SUBMITTED: May 25, 1961

Table 1. Integral intensity of γ-irradiation $\sim 10^7$ rad.
Legend: (a) initial compounds (boiling point, °C), (b) radical presumed, (c) number of lines, (d) total width, oersteds, (e) the number of lines due to superposition with the spectrum of CH_3-C≡C-H cannot be determined.

Card 3/5

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28676
S/020/61/140/002/021/023
B130/B110

Epr spectra of γ-irradiated ...

Table 1

№№ п.п.	Исходные соединения (т. кип., °C) (a)	Предполагаемый радикал (b)	Число линий (c)	Общая ширина в эр. ст. (d)
1	$H_3C-C\equiv C-H$ (−23,3)	$[H_2C{=}{=}C{\equiv}C-H]^{\cdot}$	4	50,2±1,4
2	$H_3C-C\equiv C-D$	$[H_2C{=}{=}C{\equiv}C-D]^{\cdot}$	(2) [2]	97,5±1,4
3	$C_2H_5-C\equiv C-H$ (8,5)	1. $[H_3C-CH{=}{=}C{\equiv}C-H]^{\cdot}$ 2. $[H_2C{=}{=}C{\equiv}C-H]^{\cdot}$	6 (8)	54,8±1,6
4	$C_4H_9-C\equiv C-H$ (70,0)	1. $[CH_3-CH_2-CH_2-CH{=}C{\equiv}CH]^{\cdot}$ 2. $[H_2C{=}{=}C{\equiv}C-H]^{\cdot}$ 3. C_2H_5	11	104,4±2,4
5	$C_6H_5-C\equiv C-H$ [3]	—	—	—
6	$C_6H_5-C\equiv C-CH_3$ (71−72)	$C_6H_5-C{\equiv}C-CH_2$	3	34±1,1
7	$HC\equiv CH$ (−83,6) [4]	1. $-C{=}CH-CH{=}CH-CH{=}CH-$ 2. $C\equiv C-H$ $\vdots$ $H-C\equiv C-H$ $\vdots$ $H-C\equiv C-H$	10 (12)	112±4

Card 4/5

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28676

S/020/61/140/002/021/023
B130/B110

Epr spectra of γ-irradiated ...

Table [illegible]. Yield of radicals as dependent on the γ-radiation dose.
Legend: (a) initial compounds, (b) rad, (c) g-mole, (d) mole%.

№№ п.п.	Исходные соединения (a)	1·10⁶ рад (b)		10·10⁶ рад (b)		12·10⁶ рад (b)		20·10⁶ рад (b)		40·10⁶ рад (b)	
		г-моль·10⁶ (c)	мол.% (d)	г-моль·10⁶ (c)	мол.% (d)	г-моль·10⁶ (c)	мол.% (d)	г-моль·10⁶ (c)	мол.% (d)	г-моль·10⁶ (c)	мол.% (d)
1	$H_3C-C\equiv C-H$	0,15	0,02	1,1	0,18	2,1	0,34	4,4	0,73	1,8	0,39
2	$H_3C-C\equiv C-D$			2,4	0,42			0,23	0,04		
3	$C_2H_5-C\equiv C-H$	0,5	0,08	1,6	0,26	2,2	0,35	2,9	0,45	2,5	0,41
4	$C_2H_5-C\equiv C-H$			2,2	0,37	0,7	0,12				
5	$C_2H_5-C\equiv C-CH_3$	1,37	0,23			0,47	0,09			0,16	0,03
6	$HC\equiv CH$					0,38*	0,06			0,13	0,02

Card 5/5

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

44946

S/048/63/027/001/026/043
B108/B186

AUTHORS: Smirnova, V. I., Shigorin, D. N., and Zhuravleva, T. S.

TITLE: E.p.r. spectra of gamma-irradiated compounds with multiple bonds

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 27, no. 1, 1963, 78-80

TEXT: To establish a relationship between the structure of a molecule and that of its radical, the e.p.r. spectra of gamma-irradiated acetylenes and of compounds containing heterocyclic atoms were studied at 77°K. The method used is described in a previous paper (Dokl. AN SSSR, 140, no. 2, 419 (1961)). The results on the acetylenes are shown in Table 1. The large number of hyperfine lines is explained by the interaction of the unpaired electron with several protons of the system. Substitution of the CH_2 or CH groups by electronegative atoms in compounds containing O or N atoms changes the e.p.r. spectra of the radicals. The formation of radicals is associated with the breaking of the C-H bond of the methyl or methylene groups of the initial compounds.

Card 1/4

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There are 2 figures and 2 tables.

Table 1. Legend: Integral power of irradiation $\sim 10^7$ rad. $t_{КИП}$ = boiling point (in °C). * width determined from the first derivative of the absorption curve. ** number of lines hard to determine because of superposition of the spectrum of not completely deuterized methyl acetylene, *** spectrum was not found even at a dose of $1\text{-}40 \cdot 10^6$ rad, **** e.p.r. spectrum obtained at a dose of $1.5 \cdot 10^7$ rad. (1) initial compounds, (2) assumed radical, (3) number of lines, (4) overall width of spectrum, oe.

Table 2. Legend: Integral power of irradiation $\sim 1.6 \cdot 10^7$ rad. * width determined from the first derivative of the absorption curve. ** data of the present authors. (1) initial compound, (2) assumed radical, (3) number of lines, (4) overall width of spectrum, oe.

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

Исходные соединения 1	Предполагаемый радикал 2	Число линий 3	Общая ширина спектра, Oe* 4
$H_3C-C\equiv C-H$ ($t_{кип}$=−23,3°C)	$\lvert H_2C=C=CH\rvert^{\bullet}$	4	50,2±1,4
$H_3C-C\equiv C-D$	$\lvert H_2C=C\equiv CD\rvert^{\bullet}$	**	97,5±1,4
$C_2H_5-C\equiv C-H$ ($t_{кип}$=8,5°)	$\lvert H_2C-CH=C\equiv CH\rvert^{\bullet}$ $\lvert H_2C=C\equiv CH\rvert^{\bullet}$	* 6(8)	54,8±1,6
$C_3H_7-C\equiv C-H$ ($t_{кип}$=70,0°)	$\lvert CH_3-CH_2-CH_2-CH=C\equiv CH\rvert^{\bullet}$ $\lvert H_2C=C\equiv CH\rvert^{\bullet}C_3H_7$	11	104,4±2,4
$C_6H_5-C\equiv C-H$***	—	—	—
$C_6H_5-C\equiv C-CH_3$ ($t_{кип}$=71–72°)	$C_6H_5-C\equiv C-\dot{C}H_3$	3	34±1,1
$HC\equiv CH$ **** ($t_{кип}$=−83,6°)	$-\dot{C}=CH-CH=CH-CH=CH-$ $\dot{C}\equiv C-H$ $H-C\equiv C-H$ $H-C\equiv C-H$	10(12)	112±4

Table 1

Card 3/4

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

E.p.r. spectra of gamma-irradiated ... S/048/63/027/001/026/043
B108/B186

Исходные соединения 1	Предполагаемый радикал 2	Число линий 3	Общая ширина* спектра, Ое 4
H—CH=O	—	4	36 ± 1,0
CH_3—CH=O	H_2C=C—O (H)	6(8)	86 ± 2,0
CH_3—CH=CH_2	[H_2C=CH=CH_2]	5	58 ± 1,5 **
CH_3—C≡N	[H_2C=C≡N]*	9	~55,0
C_2H_5—C≡N	[H_2C—CH=C≡N]*	13(15)	~64,0

Table 2

Card 4/4

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

ACCESSION NR: AP4019525 S/0076/64/038/002/0469/0471

AUTHOR: Smirnova, V. I.; Zhuravleva, T. S.; Shigorin, D. N.; Gracheva, Ye. P.; Shostakovskiy, M. F.

TITLE: EPR spectra of some di-substituted acetylenes upon exposure to gamma rays and to light

SOURCE: Zhurnal fizicheskoy khimii, v. 38, no. 2, 1964, 469-471

TOPIC TAGS: methylphenylacetylene structure, ethylphenylacetylene structure, dimethylacetylene structure, electron paramagnetic resonance, acetylene, alkyl radical, acrylic compound, methyl, EPR

ABSTRACT: This is a continuation of a work by the same authors (AN SSSR, Dokl., 140, 149, 1961) where they described how a number of acetylenes of the RC ≡ CH type (where R is an alkyl radical) upon exposure to gamma radiation form radicals where the unpaired electron is delocalized by the triple bond over the whole molecule. The present work transfers the above study to Ar - C ≡ C - R arylic compounds of a different structure. The object of the study were: methylphenylacetylene, its deuterium tagged form, ethylphenylacetylene and dimethylacetylene.

Card 1/2

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

ACCESSION NR: AP4019525

UV radiation was provided by the SVDSh - 1000 lamp. Gamma doses were 2 to 80 m. rad. Using the EPR method, the structure of radicals formed by gamma and light radiation of the above compounds was determined; the radicals are formed by tearing off a hydrogen atom from the methyl or methylene group. In these radicals the free electron is basically localized in the R group, whereas in the R - ≡ C - CH_2 radical (like the propynyl radical CH_2 = C = CH.) the unpaired electron is delocalized by the triple bond over the whole molecule. Orig. art. has: 5 figures, 2 formulas, 1 table.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physics and Chemistry Institute)

SUBMITTED: 08Feb63 DATE ACQ: 31Mar64 ENCL: 00

SUB CODE: GC, GP NO REF SOV: 001 OTHER: 000

Card 2/2

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

BR

ACCESSION NR: AP4033409 S/0076/64/038/003/0742/0745

AUTHORS: Smirnova, V.I.; Zhuravleva, G.S.; Yanova, K.G.; Shigorin, D.N.

TITLE: Electron paramagnetic resonance study of the structure and behavior of radicals formed on γ-, β-, and photolytic irradiation of acetaldehyde and formaldehyde

SOURCE: Zhurnal fizicheskoy khimii, v. 38, no. 3, 1964, 742-745

TOPIC TAGS: electron paramagnetic resonance, free radical, acetaldehyde, formaldehyde, beta irradiation, gamma irradiation, ultraviolet irradiation

ABSTRACT: The structure and behavior of free radicals formed upon β-, γ- and ultraviolet irradiation of acetaldehyde and upon β- and γ- irradiation of formaldehyde were studied by the electron paramagnetic resonance (EPR) method. The studied compounds were condensed from the gaseous phase into special ampules and were irradiated at -190C. Upon irradiation of acetaldehyde with β-ray doses of 3 million rads, a singlet is obtained, which is attributed to the

Card 1/3

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ACCESSION NR: AP4033409

breakage of the C-C bond and formation of CH_3 and $CH\dot{O}$ radicals, where CH_3 radicals rapidly recombine but $CHO^{\cdot}$ radical has a localized unpaired electron and consequently it does not possess nuclear magnetic moment. At doses of 40 to 100 million rads a triplet with 2 additional less intense lines is observed and is attributed to the supposition of the singlet and quartet obtained at doses of 3 million rads. The line width was ΔH = 47.0 oersted. Upon increase of the temperature from -130 to -120C the singlet disappears and the quartet becomes symmetrical. It was assumed that the quartet appears upon the breakage of C-H bond with the formation of CH_3-C = O radicals or upon the breakage of the C-O bond in the polymeric chain with the formation of O-$\dot{C}$(-CH_3)-O radical. The quenching temperature of the quartet was -105 to -50C. On β-irradiation of formaldehyde at doses of 7 million rads the doublet formed is related to the formation of -O-CH-O- type radical. At doses of 70 million rads the spectrum appears as an assymetrical line with shoulders which may be composite of two different spectra of the -O-CH-O- (doublet) and

Card 2/3

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

ACCESSION NR: AP4033409

$-CH_2-O-CH_2$ radicals (triplet). At 7 million rad dose side signals had a separation of 125 oersted with the central doublet of 13 oersted between its components. Beta irradiation of polyformaldehyde produces a triplet which is attributed to $-CH_2-O$ or CH_2-O-CH_2 radicals. It was concluded that the nature of radicals formed on irradication of acetaldehyde does not depend on the aggregate state of the compound and that the temperature of radical quenching apparently depends on the aggregate state of the acetaldehyde monomer. Orig. art. has: 4 figures

ASSOCIATION: Nauchno-issledovatel'skiy fiziko-khimicheskiy institut (Scientific Research Institute of Physical Chemistry)

SUBMITTED: 14Mar63 ENCL: 00

SUB CODE NP NR REF SOV: 004 OTHER: 002

Card 3/3

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

L 46238-66 EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6023921 SOURCE CODE: UR/0363/66/002/007/1261/1268

26 24 B

AUTHOR: Smirnova, V. I.

ORG: Leningrad Technological Institute im. Lensovet (Leningradskiy tekhnologicheskiy universitet)

TITLE: Characteristics of volume defects in certain oxides and the problem of concentration of vacancies

SOURCE: AN SSSR. Izv. Neorg materialy, v. 2, no. 7, 1966, 1261-1268

TOPIC TAGS: calcium oxide, magnesium oxide, nickel compound, crystal lattice vacancy, crystal defect

ABSTRACT: The objectives of the study were: (1) to check the experimental value of the discrepancy between the pycnometric density σ_π and the x-ray density σ_x in oxides of sp elements (MgO, CaO) and in NiO in order to determine whether such oxides can be obtained with a large value of $\Delta\sigma$ ($\Delta\sigma = \sigma_x - \sigma_\pi$), since in this case the theory of stabilization of the lattice by the overlapping of d and s bands does not apply; (2) to attempt to determine the presence of microcavities in such samples; (3) in the light of the results obtained, to return to the problem of the structure of volume defects in TiO. The oxides were synthesized under conditions where skeletal structures were formed from nitrates and carbonates at various temperatures. The pycnometric density of the oxides was measured, and the gram-formula volumes V_π were calculated. X-ray

UDC: 54-31:548.0:531

Card 1/2

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

L 46238-66

ACC NR: AP6023921

studies were conducted, and the theoretical volume V_x was calculated. It was found that for MgO and Ni_{1-x}, the gram-formula volume found pycnometrically exceeds the volume calculated from x-ray data by about 10 to 15%. Hence, the overlapping of 3d and 4s bands does not play any substantial part in the preparation of such samples. The large value of $\Delta\sigma$ may be attributed to the presence of either microcavities or quenched nonequilibrium concentrations of vacancies, or to both. Author thanks Professor B. F. Ormont, Head, Physical Chemistry Department, LETI im. Ul'yanov-Lenin (Kafedra fizicheskoy khimii LETI) for his interest in the work, its discussion, and a brief report on it to the Council on the Chemistry and Technology of Semiconductors, AN SSSR (Sovet po khimii i tekhnologii poluprovodnikov AN SSSR), 4 Mar 65. Orig. art. has: 2 figures and 2 tables.

SUB CODE: 07/ SUBM DATE: 05Jul65/ ORIG REF: 007/ OTH REF: 004

Card 2/2 hs

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

SMIRNOVA, V.I.

"changes in the Microbiological Activity of the Eluvial Level of Sod-Podzol Soils With Cultivation, Dissertation for the Degree of Candidate in Agricultural Sciences, 1950.

Microbiologiya, Voll XX, No. 5, 1951.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

SMIRNOVA, V.I.

ROZIN, M.S.; ORLOVA, Ye.V.; PERVUSHNIN, S.A.; SYROVA, Ye.I.; BORISEVICH, N.V., redaktor; VASYUTIN, V.F., redaktor; SMIRNOVA, V.I., redaktor; SEMENOVA, M.V., redaktor; BORISOV, A.S., tekhnicheskikh redaktor.

[Mineral resources of the United States] Mineral'nye resursy Soedinennykh Shtatov Ameriki. Moskva, Gos. izd-vo geol. lit-ry, 1952. 407 p. (Mineral'nye resursy zarubezhnykh stran, no. 20). (MLRA 9:5)

(United States--Mines and mineral resources)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

SMIRNOVA, V. I.

USSR

Changes in the microbiological activity of the eluvial level of sod-podzolized soils. M. V. Fedorov and V. I. Smirnova. *Izvest. Timiryazev. Sel'skokhoz. Akad.* 1954, No. 1 (Whole No. 5), 169-76.—The activity of the eluvial level is low, as detd by the CO_2 release from cultures aspirated constantly with air. Upon the addn. of org. matter and mineral N the release of CO_2 increases rapidly and a change in the flora takes place. J. S. Joffe

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

SMIRNOVA, V.I.

Students' field experiments with bacterial fertilizers. Politekh. obuch. no.1:58-62 Ja '59. (MIRA 12:2)

1. Institut metodov obucheniya APN RSFSR.
(Agriculture--Study and teaching) (Fertilizers and manures)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

RABINOVICH, R.I. Prinimali uchastiye: ALEGLAN, L.K., kand. sel'khoz. nauk; BARABANOVA, N.N.; BOSENKO, K.S.; VINNIK, V.V.; GRIGORCHUK, Ye.V.; GUMEROV, A.Kh.; DOBROCHASOV, D.F.; ZAMURAYEV, I.V.; ZAYTSEVA, A.G., kand. sel'khoz. nauk; KOL'TSOV, N.A.; LEVITIN, Kh.Z., kand. biol. nauk; LISITSKIY, B.Ya.; MATYASH, G.P.; MENTOV, A.V.; RABINOVICH,R.I.; SAL'NIKOV, V.V.; SVECHNIKOV, I.V.; SIMONOV, P.K.; SMIRNOV, V.V.; SMIRNOV, L.P.; SMIRNOVA, V.I.; STEPANOVA, V.I.; TARASOV, A.A.; FILATOVICH, V.V., kand. sel'khoz. nauk; FEDOROV, N.G., kand. tekhn. nauk; TSAPLIN, M.F.; KHROMOV, L.V.; DAVYDOVA, I., red.; PAL'MINA, N., tekhn. red.

[Sverdlovsk in Agricultural Exhibition of 1959] Sverdlovskaia sel'khoziaistvennaia vystavka. Sverdlovsk, Sverdlovskoe knizhnoe izd-vo, 1960. 131 p. (MIRA 14:10)

1. Sverdlovsk. Sverdlovskaya oblastnaya sel'skokhozyaystvennaya vystavka, 1959.
(Sverdlovsk—Agricultural exhibitions)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

ZHARKOVSKIY, A.G., podpolkovnik, kand. fiziko-matem. nauk; SMIRNOVA, V.I., starshiy inzhener; TROYANOV, G.A., inzh.-kapitan 3-go ranga; CHESNOKOV, Yu.I., inzh. kapitan 2-go ranga.

Stochastic model of the movement of an object in the sea. Mor. sbor. 49 no. 12:26-29 D '65 (MIRA 19:1)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

L 39102-66

ACC NR: AP6015398 (N) SOURCE CODE: UR/0385/65/000/012/0026/0029

AUTHOR: Zharkovskiy, A. G. (Candidate of physico-mathematical sciences, Lieutenant colonel); Smirnova, V. I. (Senior engineer); Troyanov, G. A. (Engineer, Lieutenant commander); Chesnokov, Yu. I. (Commander, Engineer)

ORG: none

TITLE: A stochastic model of the motion of an object at sea

SOURCE: Morskoy sbornik, no. 12, 1965, 26-29

TOPIC TAGS: stochastic process, naval tactic, model theory

ABSTRACT: The problem of predicting the movement of enemy vessels at sea is discussed. Initial data are based upon observations of an enemy vessel for a limited period of time. Trajectories can be computed on the basis of random values for turn angles and the times on various courses. The application of the stochastic method in constructing a model for the zigzag movement of an object at sea is described. A detailed example of the formulation of the problem in ALGOL-60 language is given. Orig. art. has: 7 formulas.

SUB CODE: 09,~~12~~ 15/ SUBM DATE: none/ OTH REF: 001

Card 1/1 mcp

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

ASHBEL', S.I.,prof.; SMIRNOVA, V.K., nauchnyy sotrudnik

Aerosol inhalation therapy using aminophylline and penicillin in bronchial asthma. Vrach.delo supplement '57:9-10 (MIRA 11:3)

1. Klinicheskiy otdel (zav.-prof. S.I.Ashbel') Gor'kovskogo nauchno-issledovatel'skogo instituta gigiyeny truda i professional'nykh zabolevaniy.
(AEROSOL THERAPY) (ASTHMA)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

ASHBEL', S.I., SOKOLOVA, V.G., SMIRNOVA, V.K.,

Changes in the sensitivity of sputum microflora and the development of moniliasis in antibiotic therapy of suppurative lung diseases. [with summary in English]. Antibiotiki, 3 no.3:109-112 My-Je '58 (MIRA 11:7)

1. Gor'kovskiy gosudarstvennyy nauchno-issledovatel'skiy institut gigiyeny truda i professional'nykh bolezney.

(SPUTUM, microbiology,
antibiotic sensitivity in ther. of pulm. suppurative dis. (Rus))
(MONILIASIS, etiology and pathogenesis,
antibiotic ther. of suppurative pulm. dis (Rus))
(LUNG DISEASE, therapy,
suppurative, antibiotics causing moniliasis & changes of sputum bact. sensitivity(Rus))

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

KLINKOVSHTEYN, Georgiy Il'ich; SMIRNOVA, V.K., red.; GALAKTIONOVA, Ye.N., tekhn.red.

[Effect of basic operation factors on the braking of automobiles] Vliianie osnovnykh ekspluatatsionnykh faktorov na tormozhenie avtomobilia. Moskva, Avtotransizdat, 1959. 26 p. (MIRA 12:12)
(Automobiles--Brakes)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

PETROVSKIY, Dmitriy Vladimirovich; GONCHARUK, Yuriy Konstantinovich; SMIRNOVA, V.K., red.; MAL'KOVA, N.V., tekhn. red.

[Operating motor vehicles in the Far North] Ekspluatatsiia avtomobilei na Krainem Severe. Moskva, Nauchno-tekhn. izd-vo M-va avtomobil'nogo transp. i shosseinykh dorog RSFSR, 1960. 55 p. (MIRA 14:6)

(Motor vehicles—Cold weather operation)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

ASTROZHNIKOV, Yu.V., kand.med.nauk; SMIRNOVA, V.K.

Celomic cyst of the pericardium. Kaz. med. zhur. no.2:62-63 Mr-Ap '62. (MIRA 15:6)

1. Khirurgicheskoye otdeleniye (zav. - Yu.V. Astrozhnikov) pervoy Vladimirskoy gorodskoy bol'nitsy (glavnyy vrach - I.A. Yakub).

(PERICARDIUM--TUMORS)
(CYSTS)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

KNOROZ, Vladimir Ivanovich; SMIRNOVA, V.K., red.; DONSKAYA, G.D., tekhn.red.; GALAKTIONOVA, Ye.N., tekhn.red.

[Performance of motor-vehicle tires] Rabota avtomobil'noi shiny. Izd.2., ispr. i dop. Moskva, Nauchno-tekhn.izd-vo M-va avtomobil'-nogo transporta i shosseinykh dorog RSFSR, 1960. 228 p. (MIRA 13:10)

(Motor vehicles--Tires)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

ACCESSION NR: AT4035383 S/2529/63/000/074/0035/0049

AUTHOR: Smirnov, V. K.

TITLE: Belt grinding of titanium alloys by the line method

SOURCE: Kazan. Aviatsionny*y institut. Trudy*, no. 74, 1963. Aviatsionnaya tekhnologiya i organizatsiya proizvodstva (Aeronautical technology and organization of production), 35-49

TOPIC TAGS: titanium, titanium alloy, alloy VT6, alloy VT8, alloy VTZ-1, alloy OT4, grinding, belt grinding, titanium alloy grinding, aviation technology

ABSTRACT: Since both wear resistance and fatigue strength depend to a large degree on the quality of the surface, the machining of high-strength materials such as titanium alloy by abrasive techniques is currently gaining favor. However, grinding with abrasive disks is inefficient, particularly in the case of complex shapes. The authors, under the supervision of G. P. Zhadin, therefore studied the grindability of titanium alloys using abrasive belts. The abrasive material on the belts was silicon carbide with grain sizes of 40 (No. 46) and 25 (No. 60) and hardness SM1. The belts were 1950 mm long and 15 mm wide. Forged, heat-treated specimens of the titanium alloys VT6, VTZ-1, VT8, and OT4 were milled to 140 x 30 x 6 mm and used in the tests.

Card 1/3

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

ACCESSION NR: AT4035383

Data are given on the mechanical properties and composition of these alloys, the effect of the cutting regimen on surface smoothness, and depth and degree of strain-hardening; the dependence of the components of the cutting forces on the cutting conditions; and the productivity and resistivity of abrasive belts during grinding of titanium alloys by the line method. On the basis of the test results, the authors conclude that grinding of titanium alloys by water-resistant belts is more efficient than grinding with abrasive disks because of the lower temperatures produced during belt grinding (200 to 500C); the low temperatures in the cutting zone and the uniformity of deformation during cutting are caused by the elastic properties of the belt; under these circumstances, favorable compressive residual stresses are formed in the surface layers; the productivity and life of abrasive belts are inversely proportional so that productivity varies according to the grinding conditions; there is an optimum ratio between the longitudinal feed (along the axis of work) and belt speed, at which the grinding of titanium alloys proceeds at maximal effectiveness; the cutting force components increase with the rate of metal removal. With a decrease in the cutting ability of the belt, the normal force component sharply increases, and the tangential component decreases. An increase in the longitudinal feed and in the feed along the belt has a great influence on the increase in the cutting forces; the depth and degree of strain-hardening of titanium alloys during belt grinding depend to a large extent on the longitudinal feed and the number of passes. Along the belt, the degree of strain-hardening with counterfeed is considerably greater than with parallel feed; the grindability

Card 2/3

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

ACCESSION NR: AT4035383

of titanium alloys depends on their mechanical properties; in the order of higher to lower grindability, the tested alloys can be listed as: OT4, VT6, VTZ-1, and VT8; both types of belts used exhibit practically the same effectiveness. Orig. art. has: 5 figures and 3 tables.

ASSOCIATION: Kazanskiy aviatsionny*y institut (Kazan Aviation Institute)

SUBMITTED: 26Nov62 DATE ACQ: 22May64 ENCL: 00

SUB CODE: IE, MM NO REF SOV: 001 OTHER: 000

Card 3/3

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

ASTROZHNIKOV, Yu.V., kand. med. nauk; SMIRNOVA, V.K.

Mortality rate in acute surgical diseases of the organs of the abdominal cavity in elderly and senile patients. Sov. med. 27 no.12:103-107 D'63 (MIRA 17:4)

1. Iz khirurgicheskogo otdeleniya (zav. - Yu.V.Strozhnikov) 1-y Vladimirskoy gorodskoy bol'nitsy (glavnyy vrach Yu.A. Khokhlov).

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

IVANOV, V.S.; SMIRNOVA, V.K.; KLEPTSOVA, A.P.; BARABASH, V.I.; TSAREVSKIY, N.Ye.; YEMELIN, Yu.D.; SHIROKOV, N.A.; ZAVALEY, V.M.

Catalytic formation of crotonaldehyde. Part 3: Condensation of acetaldehyde over magnesium, zinc, strontium, cadmium, and barium phosphates. Vest LGU 16 no.22:139-148 '61. (MIRA 14:11)
(Acetaldehyde) (Crotonaldehyde) (Phosphates)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

YAKUBCHIK, A.I.; SMIRNOVA, V.K.

Determining the content of 1, 2 links in piperylene rubber. Zhur.prikl. khim. 35 no.1:159-164 Ja '62. (MIRA 15:1)
(Piperylene) (Rubber, Synthetic)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

34976
S/080/62/035/002/017/022
D258/D302

11.2140
11.2210

AUTHORS: Yakubchik, A. I., Smirnova, V. K. and Zavaley, V. M.

TITLE: Determining structure regularity in lithium-pentadiene rubber by the character of the 1,4-addition

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 2, 1962, 405-408

TEXT: The authors investigated the oxidation-decomposition products of Li-pentadiene rubber ozonide to establish the type of linkages formed during polyaddition. Chloroform solutions of the rubber were ozonized. The ozonides were dissolved in glacial acetic acid, decomposed with CH_3COOOH and yielded, on standing, acids in both crystalline and viscous states. The products were isolated and identified by distributive chromatography as methylsuccinic, dimethylsuccinic, succinic and acetic acids. These first 3 acids accounted for 38.1% of the carbon skeleton of the rubber, while 1,2 additions with propenyl groups were shown earlier to account for another 6.8%. The total of 38.1% breaks down into 23.9% of methyl-

Card 1/2

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

S/080/62/035/008/009/009
D267/D308

AUTHORS: Yakubchik, A.I., and Smirnova, V.K.

TITLE: Structure of an irradiated piperylene polymer

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 8, 1962, 1870

TEXT: Piperylene was irradiated with gamma rays at room temperature at the rate of 0.72 roentgen/sec. The infrared spectrum disclosed that the polymer contained 6.5 % of 3,4 units (with vinyl groups) and 67 % of the trans- (1,4 + 1,2) units. An indirect method yielded the figure of 17.4 % for the 1,2 units (with propenyl groups). The emulsion polymer of piperylene contains nearly as much 1,2 units as the radiation polymer, but no 3,4 units. It is concluded that the polymer formed by irradiating piperylene, with gamma radiation, has an irregular structure.

SUBMITTED: June 1, 1961

Card 1/1

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

S/080/63/036/001/016/026
D226/D307

AUTHORS: Yakubovich, A.I. and Smirnova, V.K.

TITLE: A study of the structure of polypiperylene polymerized in the presence of complex catalysts

PERIODICAL: Zhurnal prikladnoy khimii, v. 36, no. 1, 1963, 156 - 160

TEXT: The present work is a continuation of earlier studies (ZhPKh, 35, 1 (1962); 35, 2 (1962)) in which piperylene polymerized in the presence of metallic Li was considered. Purified piperylene was polymerized under conditions described by L.S. Bresler, (who assisted the authors in this phase of the investigation), using (a) Al (iso-$C_4H_9)_2Cl$ + $CoCl_2$ (complex with EtOH) and (b) Al (iso-$C_4H_9)_3$ + $TiCl_4$ as catalyst. The polymer yields for (a) and (b) were respectively 58.5 and 60 %. Since ir spectroscopy does not give a measure of the separate contents of 1.2 and 1.4 linkages, the proportion of 1.2 links was determined by the propor-

Card 1/2

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

tions of CH_3COOH and CH_4CHO in the products obtained by reductive decomposition of polymer ozonides. Oxidative decomposition of ozonides was also carried out, analyzing the resultant acids chromotographically. It was found that the polymer contained 1.2, 1.4, - 1.4, and 4.1 - 1.4 portions. The percentages of bonds were as follows: Catalyst (a): 1.2 - 17.4, 1.4 - 78.1, (1.2 + 1.4) - 33 cis and 63 trans. Catalyst (b): 1.2 - 10.6, 1.4 - 85.9, (1.2 + 1.4) - 61 cis and 36 trans. There are 2 figures and 4 tables.

SUBMITTED: October 26, 1961

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

L 65028-65 EWT(m)/EPF(c)/EWP(j)/EWA(c) RM

ACCESSION NR: AP5022537 UR/0366/65/001/009/1705/1705

547.462.3

17
B

AUTHOR: Ivanov, V. S.; Smirnova, V. K.; Semenova, A. Ye.; Ts'ao Yung

TITLE: Synthesis of N-hydroxymaleimide

SOURCE: Zhurnal organicheskoy khimii, v. 1, no. 9, 1965, 1705

TOPIC TAGS: maleic anhydride, monomer, hydroxymaleimide, imide, unsaturated imide, imide monomer

ABSTRACT: Recent interest in α,β-unsaturated acids as potential monomers motivated the synthesis of N-hydroxymaleimide which had not been described previously in the literature. Treatment of maleic anhydride with hydroxylamine in dioxane led to the formation of maleic acid N-hydroxymonoamide. The latter was dehydrated with phosphorus pentoxide in dimethylformamide to N-hydroxymaleimide, mp 148—150C (decomp.). The degree of unsaturation of N-hydroxymaleimide was determined with bromine in glacial acetic acid (100.2%); the compound is soluble in dimethylformamide, dioxane, methanol, acetone, tetrahydrofuran, and hot water. Infrared spectra (KBr pellets) show the bands associated with the structural parts of N-hydroxymaleimide. [VS]

ASSOCIATION: Leningradskiy gosudarstvennyy universitet (Leningrad State University)

Card 1/2

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

L 65028-65

ACCESSION NR: AP5022537

SUBMITTED: 25Dec64 ENCL: 00 SUB CODE: OC, GC

NO REF SOV: 000 OTHER: 008 ATD PRESS: 4082

Card 2/2

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

(A) L 11593-66 EWT(m)/EWP(j)/T/EWA(c)/ETC(m) RPL WW/RM

ACC NR: AP6000355 SOURCE CODE: UR/0286/65/000/021/0048/0048

AUTHORS: Ivanov, V. S.; Smirnova, V. K.; Boryaz, V. N.; Migunova, I. I.; Abramova, A. M.; Sidorova, T. I.; Kharitonov, N. P.; Breger, A. Kh.; Gol'din, V.A.

ORG: none

TITLE: Method for obtaining graft copolymers. Class 39, No. 176069

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 21, 1965, 48

TOPIC TAGS: polymer, copolymerization, graft copolymer, radiation polymerization, imide, maleic acid

ABSTRACT: This Author Certificate presents a method for obtaining graft copolymers on the basis of poly-organosiloxanes by the interaction of ionizing radiation with a polyorganosiloxane powder in the presence of modifying additives. To improve the physicochemical properties of the graft copolymers and their thermal stability and solvent stability, imides, e.g., N-substituted imides of maleic acid, are used as modifying additives. The radiation dosage is 0.3--8 Mrad and the intensity of radiation is 0.05--0.7 Mrad per hour.

SUB CODE: 11/ SUBM DATE: 20Jul64

Card 1/1 UDC: 678.84:537.531.547.462.3

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

IVANOV, V.S.; SMIRNOVA, V.K.; SEMENOVA, A.Ye.; TSAO YUN [TS'ao Yung]

Synthesis of N-hydroxy imide of maleic acid. Zhur. org. khim. 1 no.9:1705 S '65. (MIRA 18:12)

1. Leningradskiy gosudarstvennyy universitet. Submitted December 25, 1964.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

ACC NR: AT6036188 SOURCE CODE: UR/3116/66/277/000/0084/0092

AUTHOR: Smirnova, V. N.

ORG: none

TITLE: The graphic representation of information using a two-coordinate electronic plotter

SOURCE: Leningrad. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut. Trudy, v. 277, 1966. Chislennyye metody issledovaniya gidrometeorologicheskikh usloviy v Arktike s ispol'zovaniyem (Numerical methods of studying hydrometeorological conditions in the Arctic with the use of electronic digital computers), 84-92

TOPIC TAGS: atmospheric pressure, computer component, computer output unit, computer, computer application, weather map, synoptic meteorology / Ural 2 computer

ABSTRACT: The Computer Laboratory of the Arctic and Antarctic Scientific Research Institute has developed a plotting device described as a two-coordinate recording attachment for the Ural-2 computer. The plotter uses 920 x 720-mm blank weather charts and operates with the computer or independently. The project discussed in the article is a first attempt at developing a program for a Soviet two-coordinate recorder, intended for the plotting of surface synoptic charts and

Card 1/2

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

ACC NR: AT6036188

pressure patterns. The three sequential programs used by the unit are described. For comparison purposes, three machine produced charts are given along with their corresponding hand-drawn charts. Certain errors produced by machine processing are mentioned and it is concluded that these and other shortcomings will be avoided by improved programming. It is stated that the plotter takes about 15 minutes to produce a chart at a stylus speed of 3 m/min. Orig. art. has: 5 figures and 3 formulas. [WN04] [LB]

SUB CODE: 04, 09/ SUBM DATE: none/ ORIG REF: 003/ OTH REF: 001

Card 2/2

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

SHARPENAK, A.E.; MIKHEYEVA, L.I.; NIKOLAYEVA, N.V.; SLOVOKHOTNOVA, I.A.; BOBIK, G.S.; ALAYEVA, V.N.; STUPNIKOVA, G.A.; GUSAKOVA, I.A.; GUSARSKAYA, V.V.; VOLCHEK, K.Ye.; SMIRNOVA, V.N.; PANOVA, V.V.; KHERSONSKAYA, F.M.;

Connection between enamel, the dentine, and the organism as a whole. Vrach.delo no.2:203-205 F '59. (MIRA 12:6)

1. Kafedra biokhimii (zav. - prof.A.E.Sharpenak) Moskovskogo meditsinskogo stomatologicheskogo instituta.
(TEETH)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

[illegible]RPOVA, I.F.; LEONOVA, T.G.; LOGVINOVA, N.A.; SMIRNOVA, V.N.

Ion exchange properties of membranes and deposits of copper ferrocyanide. Vest. LGU 14 no.22:97-103 '59. (MIRA 12:11)
(Copper ferrocyanide) (Ion exchange)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

DOLGIN, I.M., kand.geograf.nauk; NIKOLAYEVA, T.V., mladshiy nauchnyy sotrudnik; BASOVA, L.G., mladshiy nauchnyy sotrudnik; VORONTSOVA, L.I., mladshiy nauchnyy sotrudnik; DANILOVA, V.M., mladshiy nauchnyy sotrudnik; KOVROVA, A.M., mladshiy nauchnyy sotrudnik; SERGEYEVA, G.G., mladshiy nauchnyy sotrudnik; SMIRNOVA, V.N., mladshiy nauchnyy sotrudnik; KHARITONOVA, L.I., mladshiy nauchnyy sotrudnik; ALEKSANDROV, V.F., aerolog; KUZNETSOV, O.M., aerolog; MAYOROVA, L.A., aerolog; POSTNIKOVA, D.G., aerolog; SMIRNOVA, I.P., aerolog; VASIL'YEVA, R.P., tekhnik; MEDNIS, L.V., tekhnik; KHARITONOVA, V.A., tekhnik; KHRUSTALEVA, N.K., red.; DROZHZHINA, L.P., tekhn.red

[Aerological observations of Arctic stations during the period from June 30 through December 31, 1957] Aerologicheskie nabliudeniia poliarnykh stantsii s 30 iiunia po 31 dekabria 1957 g. Leningrad, Izd-vo "Morskoi transport," 1961. 994 p. (Arkticheskii i antarkticheskii nauchno-issledovatel'skii institut Trudy, vol.243) (MIRA 14:11)

(Arctic regions--Meteorology--Observations)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

KARPOVA, I.F.; SMIRNOVA, V.N.; FRIDRIKHSBERG, D.A.

Electrokinetic properties of copper ferrocyanide precipitates obtained under various conditions. Vest. LGU 19 no.4:99-104 '64. (MIRA 17:3)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

NOVODERZHKINA, Yu.G., kand.med.nauk; [illegible], V.N., mladshiy nauchnyy sotrudnik

Using chemicobacteriological methods for decontaminating and processing refuse. Sbor.nauch.trud.RNII AKKH no.[illegible] '[illegible].

(MIRA 18:10)

1. Ispolnyayushchiy obyazannosti zaveduyushchego khimiko-bakteriologicheskoy laboratoriyey Rostovskogo nauchno-issledovatel'skogo instituta Akademii kommunal'nogo khozyaystva (for Novoderzhkina).

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

ACCESSION NR: AT4034322 S/2753/64/000/003/0192/0207

AUTHOR: Bugakov, I.I.; Smirnova, V.P.; Shikhobalov, S.P.

TITLE: Simulation of creep in the T-tails of turbine blades

SOURCE: Leningrad. Universitet. Matematiko-mekhanicheskiy fakul'tet. Issledovaniya po uprugosti i plastichnosti, no. 3, 1964, 192-207

TOPIC TAGS: turbine blade, turbine blade tail, T-tail design, tail creep characteristic, celluloid tail model, polarization microscopy analysis, tail support method, tail parameter effect, stress concentration pattern, tail stress distribution, stress direction reversal, stress redistribution period, steel creep, austenitic steel

ABSTRACTS: Creep in the T-tails of turbine blades was analyzed on celluloid models (modulus of elasticity 19,000 kg/cm^2, temperature function b = 0.021 cm^2/kg at 18-19C) by means of polarization microscopy. Models (see Fig.1 in the Enclosure) had relative dimensions $\frac{r}{d}$ = 0.07, 0.11 or 0.18, $\frac{D}{d}$ = 1.78, $\frac{h}{d}$ = 0.645, were stressed by applying a constant load (average tensile stress in the neck of a tail was 70 kg/cm^2) and were tested at 18-19C in two variants of tail support placement (see Fig. 2 in the Enclosure) to determine the

Card 1/5

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

ACCESSION NR: AT4034322

effects of various parameters (i.e. $\frac{r}{d}$ and $\frac{f}{d}$, f characterizing the location of tail reactive forces, α as the angular coordinate of an arc of radius r, S^o and t^o as nondimensional magnitudes relating to stress and time) on concentration of stress K. Rate of creep was usually measured 25 hours after application of a load, i.e. $t^o = 0.195$. Results are plotted on several graphs and indicate that the support placement and parameter $\frac{r}{d}$ do not affect stress distribution in the cross section ab (see Fig. 1). Peak tensile stress acts on contour r. Deflection of initial stress directions in the cross section ab does not exceed 20° when creep occurs and it proceeds smoothly. Stress distribution along an arc of radius r at $S^o = 0$ is uneven, the maximal stress acting on the center of the arc, and this distribution becomes uniform at $S^o = 1.47$ and $t^o = 0.195$ (i.e. creep, 25 hours). Dependence of K at the center of the arc on $\frac{r}{d}$ decreases with an increase in S^o and t^o. The redistribution of stresses terminates at about 35 hours. Translation of results obtained for models to practical applications is exemplified for an austenitic steel with elasticity modulus of $1.7 \cdot 10^6$ kg/cm^2 and b = 0.00248 cm^2/kg at 600C. "The authors gratefully acknowledge the participation of V.I. Rozenblyum in the evaluation of the results." Orig. art. has: 12 figures and 13 formulas.

Card 2/5

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

ACCESSION NR: AT4034322

ASSOCIATION: Matematiko-mekhanicheskiy fakul'tet Leningradskogo universiteta (Department of Mathematics and Mechanics, Leningrad University)

SUBMITTED: 00 DATE ACQ: 30Apr64 ENCL: 02

SUB CODE: PR, MM NO REF SOV: 005 OTHER: 005

Card 3/5

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

MEKHTIYEV, S.D.; SHARIFOVA, S.M.; SMIRNOVA, V.P.

Method of separating mixtures of isophthalonitrile and terephthalonitrile. Azerb. khim. zhur. no.1:31-34 '65. (MIRA 18:7)

1. Institut neftekhimicheskikh protsessov AN AzerSSR.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

MEKHTIYEV, S.D.; SHARIFOVA, S.M.; SMIRNOVA, N.P.

Esterification of terephthalic and isophthalic acids by primary aliphatic alcohols. Azerb. khim. zhur. no.3:67-72 '64. (MIRA 19:1)

1. Institut neftekhimicheskikh protsessov AN AzerSSR.

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L 42311-66 EWT(d)/EWT(m)/EWP(w)/EWP(v)/EWP(t)/ETI/EWP(k)/EWP(h)/EWP(1) IJP(c)

ACC NR: AT6014515 (A,N) JD/WW/EM SOURCE CODE: UR/2753/65/000/004/0159/0165

AUTHORS: Bugakov, I. I.; Smirnova, V. P.; Shikhobalov, S. P.

ORG: none

TITLE: A study of stress concentrations in T-shaped shanks of turbine blades in conditions of elasticity and creep

SOURCE: Leningrad. Universitet. Matematiko-mekhanicheskiy fakul'tet. Issledovaniya po uprugosti i plastichnosti, no. 4, 1965, 159-165

TOPIC TAGS: stress analysis, stress distribution, turbine blade, elasticity, creep, polarimeter / KSP-6 polarimeter

ABSTRACT: Results are presented from a study of stress concentrations in T-shaped shanks of turbine blades with relative dimensions D/d = 1.58 and h/d = 0.625 (see Fig. 1). The analysis of stress concentrations was performed by the methods of photoelasticity and photocreep. The study was performed on planar models under constant external loading, which is a simulation of the centrifugal force of the blade. The models were prepared according to a metallic template with relative dimensions of r/d = 0.010, 0.0417, 0.0625, and 0.1250. The models were prepared from a mixture of PN-1 in 30% styrol. Details of the preparation of specimens are given. Instruments used in the testing included a KSP-6 polarimeter, an SKK-2 compensator, and a Martens tensometer. The stress concentration coefficient k was determined

Card 1/3

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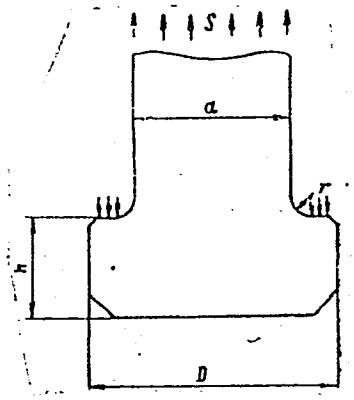
ACC NR: AT6014515

Fig. 1.



according to the formula

$$k = \sigma_{max}/S,$$

where σ_{max} is the measured stress, and S is the nominal stress in shank collar. The creep characteristics were measured according to the equation from the theory of aging

$$\varepsilon_{ij} = \frac{1+\nu}{E}\left(s_{ij} + \frac{1-2\nu}{1+\nu}\sigma\Delta_{ij}\right) + \varphi(t)\exp(bT)s_{ij},$$

$$i, j = 1, 2, 3,$$

where ε_{ij} are components of the deformation tensor, s_{ij} are components of the deviator stress, $\sigma = \frac{1}{3}\sigma_{ii}$ is the mean pressure, T is the intensity of tangential

Card 2/3

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L 00211-66

ACC NR: AT6014515

stresses, t is the time, and ν is Poisson's coefficient. Six plots of the creep and elastic deformation characteristics are shown. Orig. art. has: 3 equations and 7 figures.

SUB CODE: 13,20/ SUBM DATE: 07Apr64/ ORIG REF: 003/ OTH REF: 001

Card 3/3

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

L 11530-66 EWT(m)/EWG(m)/EWP(j)/T WW/DS/RM

ACC NR: AP6005105 SOURCE CODE: UR/0316/65/000/005/0006/0009

AUTHOR: Mekhtiyev, S. D.; Sharifova, S. M.; Smirnova, V. P.; Babayeva, N. L.; Mamedova, Sh. F.

ORG: INKhP AN AzerSSR

TITLE: Investigation of the quantitative isomer composition of mixtures of tere- and isophthalonitriles

SOURCE: Azerbaydzhanskiy khimicheskiy zhurnal, no. 5, 1965, 6-9

TOPIC TAGS: polarography, phthalonitrile, quantitative analysis

ABSTRACT: In connection with the increased production of phthalonitriles, a need exists for convenient methods of determination of tere- and isophthalonitriles. This work deals with the quantitative polarographic determination of the above isomers. In dropping-mercury-electrode experiments conducted against a 0.05 N LiCl background the basic reduction curves of the two isomers were shown to be of the following type (see Fig. 1):

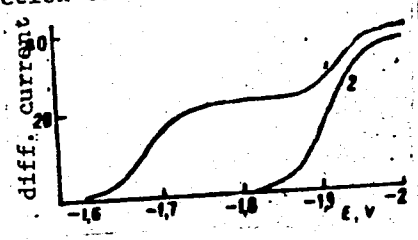

Fig. 1. Polarogram of terephthalonitrile (1) and isophthalonitrile (2) against a background of 0.05 N LiCl, C = 0.26 millimole/liter

Card 1/2

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L 14530-66

ACC NR: AP6005105

The pronounced plateaus facilitate determination of the diffusion current. The calibration curve was based on the first wave of terephtnalonitrile, since its second wave tends to overlap with the first wave of isophthalonitrile. Quantitative determinations by this method differ by only 2—4% from those obtained by melting point determinations. The two methods are thus mutually verifying. Orig. art. has: 4 figures and 1 table.

[VS]

SUB CODE: 07 SUBM DATE: 29Jun65/ ORIG REF: 007/ ATD PRESS: 4198

Card 2/2

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

L 24705-66 EWT(m)/EWP(j) IJP(c) RM

ACC NR: AP6009534 (A) SOURCE CODE: UR/0413/66/000/005/0069/0069

INVENTOR: Kirilova, E. I.; Glagoleva, Yu. A.; Larin, N. A.; Matveyeva, Ye. N.; Lebedeva, Ye. Ya.; Smirnova, V. S.

ORG: none

TITLE: Method for photostabilization of polystyrene. Class 39, No. 179467 [announced by the State Scientific Research Institute of Polymerized Plastics and Experimental Plant (Gosudarstvennyy nauchno-issledovatel'skiy institut polimerizatsionnykh plastmass i eksperimentalnyy zavod)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 5, 1966, 69

TOPIC TAGS: polystyrene, light stabilization, photostabilization, light stabilizer

ABSTRACT: An Author Certificate has been issued describing a method of light stabilization of polystyrene by introducing a light stabilizer into it. To extend the variety of light stabilizers, 2-hydroxy-4-v-butoxy-4'-chlorobenzophenone is suggested for use as the light stabilizer. [NT]

SUB CODE: 11/ SUBM DATE: 10Jun64/

Card 1/1 UDC: 678.048.5:746.22

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

LARIN, N.A.; MATVEYEVA, Ye.N.; SMIRNOVA, V.S.

Synthesis of some 2-hydroxy-4-alkoxybenzophenones. Zhur. khim. 30 no.7:2377-2379 Jl '60. (MIRA 13:7)

1. Nauchno-issledovatel'skiy institut polimerizatsionnykh plastmass.
(Benzophenone)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

SMIRNOVA, V.S.

Pregnancy and labor in Vaquez disease. Akush. i gin. 33 no.6:78-80 N-D '57. (MIRA 11:3)

1. Iz Nauchno-issledovatel'skogo instituta akusherstva i ginekologii (dir.-L.G.Stepanov) Ministerstva zdravookhraneniya RSFSR.
(POLYCYTHEMIA VERA, in preg.
case reports)
(PREGNANCY, in various dis.
polycythemia vera)

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

SMIRNOVA, V.S.

Some problems in the clinical aspects and morphological characteristics of pseudomucinous cyst of the ovary. Akush.i gin. no.6:51-57 '60. (MIRA 14:1)

1. Iz Instituta akusherstva i ginekologii (dir. - prof. O.V. Makeyeva) Ministerstva zdravookhraneniya RSFSR.
(CYSTS) (OVARIES--TUMORS)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

MISHAREV, Daniil Timofeyevich; AMELANDOV, A.S. [deceased]; ZAKHARCHENKO, A.I.; SMIRNOVA, V.S.; MURASHOV, D.F., nauchnyy red.; KELAREV, L.A., vedushchiy i tekhn.red.

[Stratigraphy, tectonics, and pegmatite potential of the northwestern White Sea region] Stratigrafiia, tektonika i pegmatitonosnost' Severo-Zapadnogo Belomor'ia. Leningrad, 1960. 110 p. (Leningrad. Vsesoiuznyi geologicheskii institut. Trudy, vol.31) (MIRA 14:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskiy institut (for Amelandov, Zakharchenko, Smirnova).
(White Sea region--Geology) (Pegmatites)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

SMIRNOVA, V.S.

Genesis of mica-bearing pegmatites. Trudy VSEGEI 108:54-68 '64.
(MIRA 18:2)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

BABOSHIN, V.A.; BOROVIKOV, P.P.; ZAKHARCHENKO, A.I.; IVANOV, A.A.; NIKANOROV, A.S.; NIKITIN, V.D.; RYTSK, Yu.Ye.; SMIRNOVA, V.S.; SOKOLOV, Ya.N.; SOLOV'YEV, A.T.; TSEKHOMSKIY, A.M.

In memory of Daniil Timofeevich Misharev. Trudy VSEGEI 108:189-191 '64. (MIRA 18:2)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

SMIRNOVA, V.V.

" Investigation of the Effect of Steaming and Drying Oats and Millet on the Yield and Quality of Groats." Thesis for degree of Cand. Technical Sci. Sub 4 Mar 49, Moscow Inst of National Economy imeni G. V. Plekhanov.

Summary 82, 18 Dec 52, Dissertations Presented For Degrees in Science and Engineering in Moscow in 1949. From Vechernyaya Moskva, Jan-Dec 1949.

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

SHCHERBATENKO, V.V.; SMIRNOVA, V.V.

Structural changes of some porous colloidal materials in the process of drying. [with English summary in insert] Koll.zhur. 18 no.5:615-620 S-O '56. (MIRA 9:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut khlebopekarnoy promyshlennosti, Moskva.
(Dough--Drying)

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

SUKHAREVA, M.Ye., doktor meditsinskikh nauk.; BLYUMENTAL', K.V., kandidat meditsinskikh nauk.; SMIRNOVA, V.V.

Diagnosis of pharyngeal diphtheria according to materials from the S.P. Botkin Hospital. Pediatriia, no.5:36-41 S-O '55. (MLRA 9:2)

1. Iz infektsionnogo otdeleniya kafedry pediatrii TSIU (zav. - kafedroy deystvitel'nyy chlen AMN SSSR prof. G.N. Speranskiy) i Bol'nitsy imeni S.P. Botkina (glavny vrach-prof. A.N. Shabanov, zav. infektsionnym otdeleniyem A.N. Buznikov)

(DIPHTHERIA, diag.
of pharyneal)

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

KARTSEVA, O.P.; LYCHAK, P.P.; SMIRNOVA, V.V.; STARIKOV, G.M., dotsent, nauchnyy red.:

[Bibliography of scientific works by memebers of the Smolensk State Medical Institute, 1920-1959] Bibliografiia nauchnykh rabot sotrudnikov Smolenskogo Gosudarstvennogo meditsinskogo instituta, 1920-1959 gg. Smolensk, 1960. 310 p. (MIRA 14:4)

1. Smolensk. Smolenskiy Gosudarstvennyy meditsinskiy institut. 2. Sotrudniki biblioteki Smolenskogo Gosudarstvennogo meditsinskogo instituta (for Kartseva, Lychak, Smirnova). 3. Direktor Smolenskogo Gosudarstvennogo meditsinskogo instituta (for Starikov).
(BIBLIOGRAPHY--MEDICINE)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

MALIYEV, A.S., doktor tekhn.nauk, prof.; PUGACH, Ye.P., kand.tekhn.nauk; SMIRNOVA, V.V., inzh.

Theoretical solution of the problem of flexure in the elastic phase of a plate with two supported and two free edges under a concentrated force. Trudy LIIZHT no.178:85-106 '61. (MIRA 15:7)
(Elastic plates and shells) (Bridges)

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6"

"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

SMIRNOVA, V.V.

Triplets of T-congruences. Sib. mat. zhur. 3 no.4:605-617 Jl-Ag '62. (MIRA 15:7)

(Congruences (Geometry))

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

ACC NR: AT7004460 SOURCE CODE: UR/2834/66/051/001/0024/0027

AUTHOR: Smirnyakov, V. V.

ORG: none

TITLE: The effectiveness of replacing double-tracked haulageways of large cross section by two tunnels of smaller cross section (as applied to the Tekeli mine)

SOURCE: Leningrad. Gornyy institut. Zapiski, v. 51, no. 1, 1966, 24-27

TOPIC TAGS: mining engineering, cost estimate, underground facility

ABSTRACT: In considering whether two tunnels of smaller cross section might not be better than a single larger tunnel in mine operations, the author has examined data for the Tekeli lead-zinc mine. The investigation was devoted to cost factors, and the relative requirements for two small tunnels as against one large tunnel were calculated. Comparison was made for different types of timbering, and it was found that the cost for driving two small tunnels, as against one large tunnel, is 78% for wood timbering, 118% for concrete supports, 107% for standard metal supports, and 113% for metal supports rated to withstand 20 tons/m^2. It thus appears that the cost of the two tunnels is actually less when wood timbering is used. The author concludes that the driving of two parallel tunnels in place of larger tunnels in the Tekeli mine appears reasonable and

Card 1/2 UDC: 338.4:622.2

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"APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001651710004-6

ACC NR: AT7004458 SOURCE CODE: UR/2834/66/051/001/0005/0012

AUTHORS: Smirnyakov, V. V.; Mirzayev, G. G.

ORG: none

TITLE: The manifestation of rock pressure in horizontal haulageways of the Tekeli mine, and recommendations for proper types of timbering

SOURCE: Leningrad. Gornyy institut. Zapiski, v. 51, no. 1, 1966, 5-12

TOPIC TAGS: pressure effect, mining engineering, underground facility

ABSTRACT: The Tekeli mine operates on a deposit of thick, steeply dipping lead-zinc ore bodies. The rocks in both hanging and foot walls are badly jointed carbonaceous shales and intercalated dolomitized limestones. The ores are stronger and more stable than the host rocks. The present paper is a survey of the occurrence and cause of rock pressure, the effect on timbering, especially in haulageways, and methods of preventing failure. The principal cause of failure in timbering in mine workings is shown to be the seismic effect of blasting operations in extracting the ore. The maximal static load on the timbering of horizontal workings is 15 tons/m^2 on the sides of the workings and 10 tons/m^2 on the roof. The maximal simultaneous deformation of rocks about the periphery of a working tunnel or chamber due to dynamic loading during large-scale blasting reaches 7.5 mm, and this leads to shattering of the rock

Card 1/2 UDC: 622.83+622.273.9

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ACC NR: AT7004458

and to failure of the timbering. In workings not being actively mined, the stress on timbering increases approximately 2 tons/m^2 for each 50 m of increasing depth. For workings in the zone of active ore extraction, metal supports are most effective. The authors stress the necessity of testing new reinforced concrete supports developed specifically for conditions in the Tekeli mine. Orig. art. has: 5 figures.

SUB CODE: 08/ SUBM DATE: none/ ORIG REF: 003

Card 2/2

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