"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

24(8) PHASE I BOOK EXPLOITATION SOV/2117

Soveshchaniye po eksperimental'noy tekhnike i metodam vysokotemperaturnykh issledovaniy, 1956

Eksperimental'naya tekhnika i metody issledovaniy pri vysokikh temperaturakh; trudy soveshchaniya (Experimental Techniques and Methods of Investigation at High Temperatures; Transactions of the Conference on Experimental Techniques and Methods of Investigation at High Temperatures) Moscow, AN SSSR, 1959. 789 p. (Series: Akademiya nauk SSSR. Institut metallurgii. Komissiya po fiziko-khimicheskim osnovam proizvodstva stali) 2,200 copies printed.

Resp. Ed.: A.M. Samarin, Corresponding Member, USSR Academy of Sciences; Ed. of Publishing House: A.L. Bandvitser.

PURPOSE: This book is intended for metallurgists and metallurgical engineers.

COVERAGE: This collection of scientific papers is divided into six parts: 1) thermodynamic activity and kinetics of high-temperature processes 2) constitution diagram studies 3) physical properties of liquid metals and slags 4) new analytical methods and production of pure metals 5) pyrometry, and 6) general questions. For more specific coverage, see Table of Contents.

Experimental Techniques and Methods (Cont.) SOV/2117

Filippov, S.I. A Study of the Kinetics of the Decarburization of Steel 108
A description is given of methods and equipment for studying the kinetics of slag-metal reactions, especially desulfurization and dephosphorization. Use is made of the isotopes S^{35}, P^{32}, Fe^{59}, and others.

Chou, Yang-shih. Thermodynamics of Liquid Blast-furnace Slags 113

Shikhov, V.N., and O.A. Yesin. Methods of Using Radioactive Isotopes for Studying the Kinetics of Metal-Slag Reactions 123

Shchedrin, V.N. Stand for Studying High-temperature Reduction Processes Under Pressure 131

Ryabov, R.A., and P.V. Gel'd. Rate of Hydrogen Diffusion in Steels at High Temperatures 147
The rate of diffusion at a given temperature was determined on the basis of the quantity of hydrogen diffusing per unit time through a unit section of fixed thickness, as measured by the drop in pressure. The effect of alloying elements (carbon, chromium, vanadium, silicon, manganese, and nickel), decomposition of austenite, and pressure on the rate of diffusion were studied.

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SOV/141-59-2-10/24

18(5)

AUTHORS: Ayalov, R.A., Candidate of Technical Sciences, and Sel'd, P.V., Professor, Doctor of Technical Sciences

TITLE: The Effect of Alloying Elements on Hydrogen Permeability of Steels and Iron-Basis Binary Alloys (Vliyaniye legiruyushchikh elementov na vodorodopronitsayemost' staley i binarnykh splavov na osnove zheleza)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Chernaya metallurgiya, 1959, Nr 2, pp 83-92 (USSR)

ABSTRACT: In order to complete existing data experiments were carried out for the purpose of determining the effect of carbon, chromium, silicon, manganese, and nickel on hydrogen permeability of steels and iron-basis binary alloys. Data obtained were compared with results of investigations carried out by A.A. Shcherbakova, P.L. Gruzin, V.K. Kritskaya, G.V. Kurdyumov, T.I. Stelletskaya, and V.A. Il'ina. The experiments proved that the majority of admixtures (such as C, Si, Cr, Mn and possibly Al), considerably reduced the hydrogen diffusion rate. On the one hand the admixtures

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SOV/145-[illegible]-[illegible]-19/24

The Effect of Alloying Elements on Hydrogen Permeability of Steels and Iron-Basis Binary Alloys

caused changes of interparticle interactions in the ferrite lattice and the local distortions of the energy spectrum of electrons; on the other hand distortion of the crystalline lattice, changes of inter-atomic spaces and of interstitial space dimensions took place. Carbon had a retarding effect on hydrogen diffusion, reducing the solubility and transiti possibilities of hydrogen. Chromium strengthened inter-particle bonds. Silicon caused considerable static distortion of the lattice and of the energy spectrum of electrons. Increased hydrogen permeability, observed in steel with Nb and Ti admixtures, was caused by decarbonization and not by the effect of the admixtures on the ferrite lattice. The alloying element had a negative effect on hydrogen perme-ability if, after having bound the carbon, it formed part of

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The Effect of Alloying Elements on Hydrogen Permeability of Steels and Iron-Basis Binary Alloys SOV/148-59-2-10/24

the solid solution. It was confirmed that in the investigated process the part of inter-granular hydrogen migration was unimportant and that diffusion characteristics were mainly determined by the transcrystalline hydrogen flow. The author presents graphs showing the dependence of hydrogen permeability on different admixtures.
There are 9 graphs and 27 references, 21 of which are Soviet, 4 German and 2 English

ASSOCIATION: Ural'skiy politekhnicheskiy institut (Ural Polytechnical Institute), Kafedra fiziki (Chair of Physics)

SUBMITTED: June 25, 1958

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

SOV/170-59-6-13/20

18(3), 24(6)

AUTHORS: Gel'd, P.V., Ryabov, R.A.

TITLE: Effect of Carbon on Hydrogen Diffusion in Steel

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1959, Nr 6, pp 88-90 (USSR)

ABSTRACT: Experimental data obtained previously by the authors [Refs 1, 2] indicate that the constant of permeability and the coefficient of diffusion of hydrogen in carbon steels decrease rapidly with an increase in carbon content. In the present paper the authors compare these experimental data with an equation of generalized permeability derived by Odelevskiy [Ref 3]. However, the use of his equation, Formula 4 in the text, necessitates the knowledge of permeability of cementite as well as that of ferrite. As the characteristics of cementite are not yet available, only relative permeabilities of steels were compared instead of absolute ones. The results are presented in Figure 1 in which the values of relative permeability Ψ were plotted versus the volume concentrations of ferrite. The results of measurements agree with Odelevskiy's formula under assumption that the permeability of

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Effect of Carbon on Hydrogen Diffusion in Steel SOV/170-59-6-13/20

cementite amounts to 4 or 5% of that for ferrite. The relationship found is characteristical only for the hydrogen permeability through steels of a definite structure, namely those containing lamellar perlite.

There are: 1 graph and 3 Soviet references.

ASSOCIATION: Ural'skiy politekhnicheskiy institut im. S.M. Kirova (Ural Polytechnical Institute imeni S.M. Kirov), Sverdlovsk.

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ACCESSION NR: AR4041601 S/0137/64/000/005/I020/I020

SOURCE: Ref. zh. Metallurgiya, Abs. 5I122

AUTHOR: Gel'd, P. V.; Ryabov, R. A.

TITLE: Kinetics and mechanism of process of diffusion of hydrogen in metals

CITED SOURCE: Sb. Vliyaniye vodoroda na sluzhebn. svoystva stali. Irkutsk, 1963, 116-122

TOPIC TAGS: metal, steel, hydrogen diffusion, kinetics, mechanism

TRANSLATION: In examining the diffusion of H in metals (in steel) the simultaneous existence of different degrees of connection of H with matrix of metals is assumed. The case was investigated, when besides rapidly diffusing H (whose coefficient of diffusion is equal to D_1) and initial content of $B_{0.1}$, there is slowly diffusing H with characteristics D_2 and $B_{0.2}$, respectively. For indicated cases equations were obtained: $B_1/B_{0.1} = C \exp(-kD_1t)$; $B_2/B_{0.2} = C \exp(-kD_2t)$, where B_1 and B_2 are the content of each phase at moment of time t; C and k are constants depending on conditions of experiment. Graphs are given illustrating the com-

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ACCESSION NR: AR4041601

plicated character of degassing. It was shown that quantity of H freed up to any moment of time is increased with increase of share of rapidly diffusing H. Expressed hypotheses are confirmed by dependence of coefficient of diffusion on temperature.

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

GEL'D, P.V.; GOL'TSOV, V.A.; RYABOV, R.A.; SHTEYNBERG, M.M.

Interaction of the parameters of hydrogen absorption by precipitation-hardened austenite. Fiz. met. i metalloved. 16 no.4:610-611 O '63. (MIRA 16:12)

1. Ural'skiy politekhnicheskiy institut imeni Kirova.

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L 10602-63 EWT(1)/BDS AFFTC/ASD/ESD-3 Pi-4 IJP(C)

ACCESSION NR: AP3001050 S/0148/63/000/004/0098/0103

61

AUTHOR: Ryabov, R. A.; Gel'd, P. V.; Gol'tsov, V. A.

TITLE: Influence of crystal lattice defects on hydropermeability of metals

SOURCE: IVUZ. Chernaya metallurgiya, no. 4, 1963, 98-103

TOPIC TAGS: crystal lattice defects, hydropermeability of metals, hydrogen extraction, isotropic steel, saturated cylindrical steel, active hydrogen, hydrogen, Cottrell clouds, diffusion mobility

ABSTRACT: The kinetics of hydrogen extraction from isotropic and saturated cylindrical steel specimens is explained by the complex energy state of active hydrogen. Defects in crystal lattice structure exert an extremely strong influence on hydrogen distribution (Cottrell clouds) and on diffusion mobility. Orig. art. has: 6 equations, 4 figures, 8 references.

ASSOCIATION: Ural'skiy politekhnicheskiy institut (Ural polytechnic institute)

SUBMITTED: 15Jun62 DATE ACQD: 11Jun63 ENCL: 00

SUB CODE: 00 NO REF SOV: 007 OTHER: 001

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APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

RYABOV, R.A.; GEL'D, P.V.

Kinetics of gas removal from steel products. Izv. vys. ucheb. zav.; chern. met. 6 no.2:111-114 '63. (MIRA 16:3)

1. Ural'skiy politekhnicheskiy institut.
(Steel ingots—Hydrogen content)
(Annealing of metals)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

GOL'TSOV, V.A.; RYABOV, R.A.

Heat treatment of steel for the control of flakes. Trudy Ural. politekh.inst. no.14:134-137 '61. (MIRA 16:6)
(Steel--Metallography)
(Metals, Effect of temperature on)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

S/137/61/000/012/090/149
A006/A101

AUTHORS: Gol'tsov, V. A., Ryabov, R. A.

TITLE: On flake-preventing treatment of steels

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 12, 1961, 43, abstract 12D348 ("Tr. Ural'skogo politekhn. in-ta", 1961, v. 114, 134 - 137)

TEXT: On the basis of studies performed on the diffusion rate of H in steel of different structure, the authors explain the positive effect of "oscillation" heating of 30 XH3A (30KhNZA) steel to eliminate flake sensitivity. It is proved that hydrogen permeability for products of the second stage of austenite decomposition is by about 20% higher at 600 - 650°C than for products of the first stage of decomposition; it is also shown that carbide coagulation increases hydrogen permeability. Therefore oscillating heating of 30KhNZA type steel at 300 - 600°C, entails the elimination of H from the steel and removes flake sensitivity.

T. Fedorova

[Abstracter's note: Complete translation]

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RYABOV, A. M.

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PHASE I BOOK EXPLOITATION SOV/5411

Konferentsiya po fiziko-khimicheskim osnovam proizvodstva stali. 5th, Moscow, 1959.

Fiziko-khimicheskiye osnovy proizvodstva stali; trudy konferentsii (Physicochemical Bases of Steel Making; Transactions of the Fifth Conference on the Physicochemical Bases of Steelmaking) Moscow, Metallurgizdat, 1961. 512 p. Errata slip inserted. 3,700 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut metallurgii imeni A. A. Baykova.

Responsible Ed.: A. M. Samarin, Corresponding Member, Academy of Sciences USSR; Ed. of Publishing House: Ya. D. Rozentsveyg. Tech. Ed.: V. V. Mikhaylova.

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Physicochemical Bases of (Cont.) SOV/5411

PURPOSE: This collection of articles is intended for engineers and technicians of metallurgical and machine-building plants, senior students of schools of higher education, staff members of design bureaus and planning institutes, and scientific research workers.

COVERAGE: The collection contains reports presented at the fifth annual convention devoted to the review of the physicochemical bases of the steelmaking process. These reports deal with problems of the mechanism and kinetics of reactions taking place in the molten metal in steelmaking furnaces. The following are also discussed: problems involved in the production of alloyed steel, the structure of the ingot, the mechanism of solidification, and the converter steelmaking process. The articles contain conclusions drawn from the results of experimental studies, and are accompanied by references of which most are Soviet.

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

Karasev, V. P., and P. Ya. Ageyev. Feasible Ways of Accelerating the Deoxidation of Metal 432

PART IV. THE APPLICATION OF VACUUM AND THE GAS CONTENT IN STEEL

Shumilov, M. A., P. V. Gel'd, and F. A. Sidorenko. Some Specific Features of the Process of Ferrosilicon Disintegration 445

Gel'd, P. V., and R. A. Ryabov. Effect of Carbon on the Permeability of Steel to Hydrogen 457

Novik, L. M., A. M. Samarin, M. P. Kuznetsov, A. I. Lukutin, and D. P. Ul'yanov. Improving the Quality of Rails Made of Bessemer-Converter Steel by Applying Vacuum Treatment 461

Oyks, G. N., V. I. Danilin, I. I. Ansheles, G. A. Sokolov, and

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

RYABOV, R.A.; GOL'TSOV, V.A.

Effect of structure and heat treatment on hydrogen penetration in steels. Trudy Ural. politekh. inst. no.92:101-109 '59. (MIRA 13:12)

(Steel--Hydrogen content)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

BAYEV, V.M.; RYABOV, R.A.

Kinetics of the separation of hydrogen from steel. Trudy Ural. politekh. inst. no.92:110-113 '59. (MIRA 13:12)
(Steel--Hydrogen content) (Diffusion)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

Kyabov, K.A.

PHASE I BOOK EXPLOITATION SOV/4117

Akademiya nauk SSSR. Komissiya po analiticheskoy khimii

Analiz gazov v metallakh [Analysis of Gases in Metals] Moscow, 1963. 204 p. (Series: Its: Trudy, tom. 16) Errata slip inserted. 4,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut geokhimii i analiticheskoy khimii imeni V.I. Vernadskogo. Komissiya po analiticheskoy khimii.

Resp. Ed.: A.P. Vinogradov, Academician; Ed. of Publishing House: A.L. Bazavluk; Tech. Ed.: V.V. Bruguel'.

PURPOSE: This book is intended for laboratory personnel [illegible]ned with gas analysis in metals.

COVERAGE: This collection of articles is based on materials of the Commission on Analytical Chemistry AS USSR on problems dealing with gas analysis in metals. The articles present data on: 1) The vacuum-fusion method, developed by European scientists and the Soviet scientists N.F. Chistyakov and Ya.A. Klyachko, for the analysis of gases in steel and aluminum, and now applicable to analysis of gases in other metals. 2) The research of I.M. Turovtseva and associates at the Institute of Geochemistry and Analytical Chemistry imeni V.I. Vernadskiy AS USSR, Moscow, making it possible to evaluate the practicability and fields of application of the different analytical methods. 3) The contributions of Ya.A. Klyachko and associates in their study of thermodynamic methods for the evaluation of suitable conditions for carrying out analysis. 4) The determination of gases in metals by the sulfurous method as developed by A.L. Sabo. 5) The spectrum isotope method for the determination of hydrogen as developed by A.N. Zaydel' and associates. The authors of these articles systematize and review critically the various analytical methods, describe the apparatus used in analysis, and indicate the basic trends of research. References accompany most of the articles.

Sol'd, F.V., and A.A. Yatsko [Ural'skiy politekhnicheskiy institut imeni S.M. Kirova - Ural Polytechnic Institute imeni S.M. Kirov, Sverdlovsk]. Effect of Alloying Elements on the Hydrogen Diffusion Rate in Steel at High Temperatures [illegible]

Yatsko, A.A., and F.V. Sol'd [Ural Polytechnic Institute imeni S.M. Kirov, Sverdlovsk]. Effect of Phase Conversions on the Hydrogen Diffusion Rate in Steel [illegible]

Tsitovich, E.N., V.I. Kunin, and L.M. Zaitsova [Central Scientific Research Institute of Ferrous Metallurgy, Moscow]. Effect of the Structural Factor on Hydrogen Diffusion in the Fe - Ni - Mn Alloy [illegible]

Zhukhovitskiy, A.A., V.I. Kunin, S.F. Fedorov, and L.N. Zaitsova [Central Scientific Research Institute of Ferrous Metallurgy, Moscow]. Study of the Interaction of Gases with Metals [illegible]

Fishbein, L.A. Mass Spectrum Method of Determining the Concentration and Sulfurous Coefficients of Gases in Metals [illegible]

II. METHODS OF GAS ANALYSIS IN METALS

Turovtseva, I.M. [Institut geokhimii i analiticheskoy khimii imeni V.I. Vernadskogo AN SSSR - Institute of Geochemistry and Analytical Chemistry imeni V.I. Vernadskiy AS USSR, Moscow]. Evaluation of the Feasibility of Determining Gases in Metals by the Groups of the Periodic System of Elements [illegible]

Makarov, Ye.D., and I.M. Turovtseva [Institute of Geochemistry and Analytical Chemistry imeni V.I. Vernadskiy AS USSR, Moscow]. Determination of Oxygen in Alkali Metals and in Their Alloys by the Mercury Extraction Method [illegible]

Litvinova, N.P., V.I. Valyshev, and I.M. Turovtseva. Determination of Oxygen in Sodium and in the Na-K Alloy [illegible]

Makarov, Ye.D., and I.M. Turovtseva [Institute of Geochemistry and Analytical Chemistry imeni V.I. Vernadskiy AS USSR, Moscow]. Determination of Oxygen in Alkaline Earth Metals by the Distillation Method [illegible]

Turovtseva, I.M., N.P. Litvinova, N.M. Vasil'yeva, and L.L. Demerzik [Institute of Geochemistry and Analytical Chemistry imeni V.I. Vernadskiy AS USSR, Moscow]. The Vacuum-Fusion Method With the Use of a Platinum Bath for the Determination of Gases in Metals [illegible]

Kyabov, K.A. Methods of Preparing Analytical Samples of Alkali Metals for Vacuum Extraction 117

Kuznetsov, L.M., Ye.D. Makarov, and I.M. Turovtseva [Institute of Geochemistry and Analytical Chemistry imeni V.I. Vernadskiy AS USSR, Moscow]. Use of X-Ray Diffraction Phase Analysis for the Determination of Gases in Metals 122

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

RYABOV, R.A.; GEL'D, P.V.

Effect of phase transformations on the rate of diffusion of hydrogen in steels. Trudy kom.anal.khim. 10:37-45 '60. (MIRA 13:8)

1. Ural'skiy politekhnicheskiy institut im. S.M.Kirova, Sverdlovsk.
(Steel--Hydrogen content)
(Diffusion)

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PHASE I BOOK EXPLOITATION SOV/3450

Termicheskaya obrabotka i svoystva krupnykh pokovok (Heat Treatment and Properties of Large Forgings), Moscow, Mashgiz, 1959. 165 p. 4,000 copies printed.

Reviewers: K.N. Nikolov, Candidate of Technical Sciences; Ed.: P.V. Salyayev, Candidate of Technical Sciences; Tech. Ed.: S.A.Dugina; Exec. Ed.(Ural-Siberian Division, Mashgiz): A.V. Kalatina, Engineer.

PURPOSE: This book is intended for technical personnel working in the shops, laboratories, and design offices of plants manufacturing heavy machinery and electrical equipment. It may also be of some interest to research personnel.

COVERAGE: This collection of articles describes methods employed by Uralmashzavod (Ural Heavy Machinery Plant, Sverdlovsk) for heat-treating heavy forgings. Research conducted at the plant is also discussed. Data for computing cooling rates in the quenching and normalizing of heavy forgings are given. A considerable portion of the book is devoted to information on the mechanical properties of rotors for heavy turbogenerators and one-piece steam-turbine rotors at various points along the body and neck of these parts. The main defects occurring in rotors of these types are described, their causes are analyzed, and methods of handling the problem are explained. Results of a study of heavy forgings made of vacuum-treated steel are given. No personalities are mentioned. References accompany most of the articles.

Calculating the Cooling Rate of Heavy Structural Steel Forgings (P.V. Salyayev) 5

Heat Treatment of Rotor Forgings (P.V. Salyayev, L.I. Kvater, Z.I. Bazarova) 15

Determination of Residual Stresses in Heavy Forgings by the Hole-Drilling Method (G.A. Nikoghosov, V.M. Kokhanovskiy, N.A. Kirsanova) 25

Dependence of Stress Relaxation on the Original Structure and Chemical Composition of Steel (P.V. Salyayev, N.A. Kirsanova) 41

PART II. MECHANICAL PROPERTIES OF ROTORS FOR STEAM TURBINES AND TURBOGENERATORS

Heat Treatment and Mechanical Properties of Rotors for Turbogenerators of [illegible] Capacity (P.V. Salyayev, S.D. Petrov, L.I. Kvater, V.G. [illegible]) 51

Heat Treatment and Mechanical Properties of Rotors for Turbogenerators of 50,000-kw Capacity (P.V. Salyayev, V.N. Kamenskiy) 65

Investigation of Mechanical Properties of One-Piece Forged Rotors of Steam Turbines (P.V. Salyayev, V.N. Kamenskiy) 83

Metal Quality and Mechanical Properties of Steam-Turbine Rotors Made of [illegible] Steel (P.V. Salyayev, V.N. Kamenskiy, A.I. Bogomolyaya) 95

PART III. HYDROGEN IN STEEL. VACUUM MELTING OF STEEL

Hydrogen Permeability of Steel (P.V. [illegible], N.I. [illegible], P.V. Salyayev, L.I. Kvater) 121

Effect of Hydrogen on the Mechanical Properties of Steel (P.V. Salyayev, L.I. Kvater, Ye.P. Parfenokhina) 129

Effect of [illegible] on Steel Properties (N.A. [illegible], P.V. Salyayev, L.I. Kvater, [illegible]) 137

Effect of Vacuum-Treatment of Steel on the Rate of Grain Formation (P.V. Salyayev, L.I. Kvater, N.F. [illegible]) 141

PART IV. METAL DEFECTS AND THEIR CONTROL

Defects in Heavy Rotors for Turbogenerators (P.V. Salyayev, V.N. Kamenskiy) 145

Defects in One-Piece Rotors for Steam Turbines (P.V. Salyayev, V.N. Kamenskiy) 157

Capacity of Internal Defects in Heavy Forgings to Be Welded by Pulsed Pressure (P.V. Salyayev, S.D. Petrov, V.N. Kamenskiy, [illegible]) 163

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RYABOV, R.P., inzh.

Testing a reinforced keramzit-concrete truss. Prom. stroi. 40 no.12:53-55 '62. (MIRA 15:12)
(Trusses—Testing)
(Lightweight concrete—Testing)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

KYAR[illegible], S.A.; LARKIN, D.P.

Devices for checking the precision of the guides of beds and carriages. Mashinostroitel' no.3:11-12 Mr '65. (MIRA 18:4)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

RYABOV, S.I.; KATSEVMAN, A.Ye.

Changes in the quantity of "drumsticks" in mature neutrophils in chronic myelosis in women. Probl. gemat. i perel. krovi 9 no.6:15-18 Je '64. (MIRA 18:2)

1. Kafedra fakul'tetskoy terapii (zav.- prof. T.S. Istamanova) I Leningradskogo meditsinskogo instituta imeni Pavlova.

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

RYABOV, S. I.

Sex determination by the form of the neutrophil nucleus. Probl. endok. i gorm. 8 no.3:93-97 My-Je '62. (MIRA 15:6)

1. Iz kafedry fakul'tetskoy terapii (zav. - prof. T. S. Istamanova) Leningradskogo meditsinskogo instituta imeni akad. I. P. Pavlova.

(SEX--CAUSE AND DETERMINATION) (LEUCOCYTES)
(CELL NUCLEI)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

RYABOV, S.I.

Effect of sex hormones on erythropoiesis. Probl. gemat. i perel. krovi 9 no.10:3-8 O '64. (MIRA 18:3)

1. Kafedra fakul'tetskoy terapii (rav. - prof. T.S. Istamanova) I Leningradskogo meditsinskogo instituta imeni Pavlova.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

RYABOV, S.I.

Importance of sex chromatin in determining the genetic sex. Probl. endok. i gorm. 10 no.6:109-113 N-D '64. (MIRA 18:7)

1. Kafedra fakul'tetskoy terapii (zav. - prof. T.S.Istamanova) I Leningradskogo meditsinskogo instituta imeni Pavlova i endokrinnaya laboratoriya (nauchnyy rukovoditel' - prof. V.C.Baranov) Instituta akusherstva i ginekologii AMN SSSR.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

RYABOV, S.I.

Hemopoiesis in dysfunctional uterine hemorrhage. Sov.med. 26 no.8:126-131 Ag '62. (MIRA 15:10)

1. Iz kafedry fakul'tetskoy terapii (zav. - prof. T.S.Istamanova) i kafedry akusherstva i ginekologii (zav. - zasluzhennyy deyatel' nauki prof. I.I.Yakovlev) I Leningradskogo meditsinskogo instituta imeni Pavlova.

(HEMORRHAGE, UTERINE) (HEMOPOIETIC SYSTEM)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

RYABOV, S. I.

Clinical aspects of Gaucher's disease. Terap. arkh. no.9:105-109 '61. (MIRA 15:2)

1. Iz kafedry fakul'tetskoy terapii (zav. - prof. T. S. Istamanova) I Leningradskogo meditsinskogo instituta imeni I. P. Pavlova.

(LIPIDOSIS)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

RYABOV, S.I. (Leningrad)

Effect of estrogens on hematopoiesis. Usp. sovr. biol. 56 no.2 193-207 S-O '63. (MIRA 17:5)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

RYABOV, S.I.; TALANTOVA, I.V.

Characteristics of hemopoiesis in healthy people of different sexes. Probl. gemat. i perel. krovi 8 no.7:26-29 Jl '63. (MIRA 17:10)

1. Iz kafedry fakul'tetskoy terapii (zav. -prof. T.S.Istamanova) I Leningradskogo meditsinskogo instituta imeni Pavlova.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

ALMAZOV, V.A.; PAVLOV, B.A.; RYABOV, S.I.

Leucocyte histochemistry in leukemia and agranulocytosis. Probl. gemat. i persl. krovi 8 no.4:15-19 Apr'63 (MIRA 17:2)

1. Iz fakul'tetskoy terapevticheskoy kliniki (zav. - prof. T.S. Istamova) I Leningradskogo meditsinskogo instituta imeni akademika I.P.Pavlova.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

RYABOV, S. I., Candidate Med Sci (diss) -- "The effect of the hypophisial-adrenal system on hematopoiesis". Leningrad, 1959. 22 pp (First Leningrad Med Inst im Acad I. P. Pavlov), 200 copies (KL, No 24, 1959, 152)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

RYABOV, S.I.; SHCHERBA, M.M.; ROSHCHINA, G.M.

Pathogenesis of anemia in rheumatoid arthritis. Terap. arkh. 35 no.5:82-86 My'63 (MIRA 16:12)

1. Iz kafedry fakul'tetskoy terapii (zav. - zasluzhennyy deyatel' nauki prof. T.S.Istamanova) i kafedry propedevtiki vnutrennikh bolezney (zav. - prof. M.L.Shcherba) I Leningradskogo meditsindogo instituta imeni akademika I.P.Pavlova.

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

RYABOV, S.I.; ALMAZOV, V.A.; PAVLOV, B.A.; DRUZHIN, I.M.

Effect of ACTH and cortisone on the functional activity of leukocytes. Probl. gemat.i perel. krovi 6 no.1:31-36 '61. (MIRA 14:2)
(ACTH) (CORTISONE) (LEUKOCYTES)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

RYABOV, S.I.

Hemopoietic changes in certain adreno-pituitary diseases.
Terap.arkh. 30 no.6:31-37 Je '58 (MIRA 11:7)

1. Iz kafedry fakul'tetskoy terapii (zav. - prof. T.S. Istamanova) I Leningradskogo meditsinskogo instituta imeni I.P. Pavlova.
(CUSHING DISEASE, blood in,
count (Rus))
(ADDISON DISEASES, blood in,
same (Rus))
(BLOOD CELLS,
count in Addison's & Cushing's dis. (Rus))

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

KVAROV, S.I.

Diagnostic value of examining bone marrow obtained from the ilium by puncture. Lab.delo no.2:16-20 Mr-Ap '55. (MLRA 8:8)

1. Iz fakul'tetskoy terapevticheskoy kliniki (zav.-prof. T.S. Istamanova) I Leningradskogo meditsinskogo instituta imeni I.P. Pavlova)

(ILIUM,
bone marrow, biopsy, diag.value)
(BONE MARROW,
ilium, biopsy, diag.value)
(BIOPSY,
ilium bone marrow, diag.value)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

RYABOV, S.I., aspirant (Leningrad)

Effect of ACTH and cortisone on hemopoiesis [with summary in English] Probl. endok. i gorm 4 no.4:72-76 Jl-Ag '58 (MIRA 11:10)

1. Iz fakul'tetskoy terapevticheskoy kliniki (zav. kafedroy - prof. T.S. Istamanova) 1-go Leningradskogo meditsinskogo instituta imeni akademika I.P. Pavlova.

(ACTH, eff.
on hemopoietic system (Rus))
(CORTISONE, eff.
same (Rus))
(HEMOPOIETIC SYSTEM, eff. of drugs on
ACTH & cortisone (Rus))

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

RYABOV, S.I. (Leningrad)

Hormonal regulation of hematopoiesis. Usp. sovr. biol. 52 no.2: 225-240 S-O '61. (MIRA 14:10)
(HEMOPOIETIC SYSTEM) (HORMONES)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

RYABOV, S.I.

Clinical aspects of myelomatosis. Terap.arkh. 28 no.7:79-83 '56.

1. Iz fakul'tetskoy terapevticheskoy kliniki (zav. - prof. T.S. Istomanova) I Leningradskogo meditsinskogo instituta imeni I.P. Pavlova.

(MYELOMA, PLASMA CELL, case reports
clin. aspects & ther.)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

ALMAZOV, V.A.; RYABOV, S.I.

Use of ACTH in the treatment of some blood diseases. Sov. med. 24 no.4:30-34 Ap '60. (MIRA 13:8)

1. Iz fakul'tetskoy terapevticheskoy kliniki (zav. kafedroy - prof. T.S. Istamanova) I Leningradskogo meditsinskogo instituta im. akad. I.P. Pavlova.
(BLOOD—DISEASES) (ACTH)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

ALMAZOV, V. A.; RYABOV, S. I.; TUSHINSKAYA, M. M.

Bone marrow transplantation in some hypoplastic conditions of the blood. Terap. arkh. 33 no.5:89-94 My '61. (MIRA 14:12)

1. Iz kafedry fakul'tetskoy terapii (zav. - prof. T. S. Istamanova) I Leningradskogo meditsinskogo instituta.

(MARROW—TRANSPLANTATION) (BLOOD—DISEASES)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

RYABOV, Sergey Ivanovich; LUR'YE, N.A., red.; BUGROVA, T.I., tekhn. red.

[Anemia and its prevention]Malokrovie i ego profilaktika. Moskva, Medgiz, 1962. 35 p. (MIRA 16:4)
(ANEMIA)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

ALMAZOV, Vladimir Andreyevich; RYABOV, Sergey Ivanovich; DYGIN, V.P., red.; KHARASH, G.A., tekhn. red.

[Methods of functional study of the blood system] Metody funktsional'nogo issledovaniia sistemy krovi. Leningrad, Medgiz, 1963. 130 p. (MIRA 16:5)
(BLOOD--ANALYSIS AND CHEMISTRY)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

RYABOV, T., starshiy shturman.

Let's put an end to irresponsibility in radio direction finding stations. Grazhd. av.13 no.3:14 Mr '56. (MLRA 9:7)
(Radio direction finders)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

IL'CHENKO, V., polkovnik; RYABOV, N., podpolkovnik; SERGIYENKO, A., mayor

In a complex with tactics. Voen. vest. 44 no.6:60-63 Je '64.
(MIRA 17:6)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

MARKOV-KARASEV, V. (Omsk); RYABOV, V. (Omsk)

People with initiative. Pozh. delo 9 no.6:2-3 Je '63. (MIRA 16:8)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

MURACHEV, A., komandir korablya Il-18; RYABOV, V., starshiy shturman

Following the orthodromic line. Grazhd.av. 17 no.6:13-16 Je '60. (MIRA 13:7)

(Navigation(Aeronautics))

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

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84112
S/084/60/000/006/010/020
A104/A029

AUTHORS: Murachev, A., Captain of Il - 18 and Ryabov, V., Senior Navigator

TITLE: On Orthodromy

PERIODICAL: Grazhdanskaya Aviatsiya, 1960, No. 6, pp. 13 - 16.

TEXT: The authors discuss respective merits of orthodromic and laxodromic courses and point out numerous advantages of the former with respect to jet aircraft. Their own group covers long-distance flights by Il-18 (Il-18) with the aid of directional gyro. This method shortens the airline and increases the accuracy and safety of the flight, influencing favorably the performance of НИ-50 (NI-50) navigational indicators. The following instruments are used: gyromagnetic or gyroinduction distant reading compass ДГМК (DGMK) or ГИК (GIK); distant-reading astro-compass ДАК (DAK); distant-reading directional gyro ГПК-52 (GPK-52) and АРК (ARK). Magnetic course, true course, radio-set course angle КУР (KUR) and magnetic azimuth МПР (MPR), true luminary and gyroscopic courses are determined by this system. Orthodromic longdistance flights with GPK were introduced by GosNII FVF scien

Card 1/2

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34112
S/084/60/000/006/010/020
A104/A029

On Ortnodromy

tists T. Asatur'yan and S. Fedchin. A number of new navigational terms has been established for calculation purposes: orthodromic route or the line connecting starting and destination points as shown in Figure 1; assigned course (ZLP); basic meridian (OM) and orthodromic course angle (OPU) shown in Figures 2 and 3, the latter also including orthodromic aircraft course (OK). [illegible] (UShM) meridian indicator scale facilitates the orthodromic course calculation at any desired point. Detailed instructions on course calculation, charts and flying performance are given. Figure 4 shows east and west flight courses and Figure 5 corrections on bending courses. A marked orthodromic course chart is shown in Figure 6 and the distribution of aircraft location azimuths in Figure 7. Best results were achieved by flying along orthodromic magnetic angle courses. It is suggested that switching to magnetic or astronomical corrections to match the subsequent GPK regime is best performed just before reaching a basic meridian. Particular emphasis is placed upon a well-organized cooperation of all crew members. There are 7 figures.

Card 2/2

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

RYABOV, V., polkovnik

The glory of those days will not fade; the 40th anniversary of the end of the civil war in the U.S.S.R. Komm.Vooruzh.Sil 1 no.3:30-36 N '60. (MIRA 14:8)

(Russia--Revolution, 1917-1921)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

RYABOV, V., polkovnik

Immortal feat of the people and army; on the publication of the "Brief history of the civil war in the U.S.S.R." Tyl i snab. Sov. Voor. Sil 21 no.2:92-96 F '61. (MIRA 14:6)
(Russia—Revolution, 1917-1921)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

KANTOV, A.A.; RYABOV, V., veterinarnyy vrach

Organization of veterinary prophylactic measures against calf diseases. Veterinariia 41 no.1:68-69 Ja '65. (MIRA 18:2)

1. Oblastnaya veterinarnaya poliklinika, Vladimirskaya obl. (for Ryabov).

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

RYABOV, V., polkovnik

Words which call us to great achievements. Komm.Vooruzh.Sil 2 no.8:26-32 Ap '62. (MIRA 15:3)

1. Nachal'nik otdela pechati Glavnogo politicheskogo upravleniya Sovetskoy Armii i Voyenno-Morskogo Flota.
(Russian newspapers) (Journalism, Military)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

RYABOV, V.

New design of removable compressor bearing. Khol.tekh. 36 no.1:63-64 Ja-F '59. (MIRA 12:3)

(Compressors)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

SOV/66-59-1-21/32

AUTHOR: Ryabov, V.

TITLE: Reconstruction of an Extension Compressor Bearing (Rekonstruktsiya vynosnogo podshipnika kompressora)

PERIODICAL: Kholodil'naya tekhnika, 1959, Nr 1, pp 63-64 (USSR)

ABSTRACT: The author tells of his experience with a 2-stage compressor VN-224 supplied by "Nagema" Maschinenfabrik. The machine was installed in the cold storage house of the port of Odessa. The failure of the compressor is ascribed by the author to poor workmanship. The badly machined connecting rods had to be replaced by steel ones; the design of the by-passes needed to be altered, as well as the preliminary cooling of the oil. Most faulty was the design of the assembly of the crankshaft, which rests on 3 friction bearings and 1 extension ball bearing. The variety of supports of the crankshaft leads to uneven wear of parts and to subsequent deformation of the crankshaft. As shown on the diagram, the ball bearing had been replaced by a friction bearing. The diameter of the shaft journal has been increased to 165 mm by mounting a bushing in hot condition. At its end, a thr[illegible] bearing was placed to

Card 1/2

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

Reconstruction of an Extension Compressor Bearing SOV/66-59-1-21/32

prevent shifting of the shaft. This alteration is recommended to all proprietors of similar VN-224 compressors. There are 2 diagrams.

Card 2/2

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

RYABOV, V.; VLASIKHIN, A.V., podpolkovnik, redaktor; SOROKIN, V.V., tekhnicheskiy redaktor

[The Soviet soldier enjoys the full rights of a citizen of the U.S.S.R.] Sovetskii voin - polnopravnyy grazhdanin SSSR. Moskva, Voen. izd-vo Ministerstva oborony Soiuza SSR, 1955. 60 p.(MLRA 8:7)
(Soldiers--Civil status)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

RYABOV, V. A.

Dissertation: "Bending of a Welded Double-T Beam With Rigid Flanges." Cand Tech Sci, Leningrad Inst of Railroad Transport Engineers, Leningrad, 1954. Referativnyy Zhurnal--Mekhanika, Moscow, Jul 54.

SO: SUM No. 356, 25 Jan 1955

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

RYABOV, V.A., kand.tekhn.nauk, starshiy prepodavatel'.

Flexure of welded I-beams with rigid booms. Sbor. LIIZHT no.156: 172-188 '58. (MIRA 11:9)

(Girders)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

RYABOV, V.A., inzh.

Modernizing the drive for the PRD-05 roller conveyer. Der. prom. 8 no.5:24 My '59. (MIRA 12:7)
(Conveying machinery)

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

137-1957-12-23487

Translation from: Referativnyy zhurnal. Metallurgiya, 1957, Nr 12, p 93 (USSR)

AUTHORS: Ryabov, V. A., Zviadadze, G. N., Alitchuler, O. V., Chizhikov, D. M.

TITLE: The Reaction of Titanium With Its Tetrachloride (Vzaimodeystviye titana s yego tetrakhloridom)

PERIODICAL: Tr. In-ta metallurgii AN SSSR, 1957, Nr 1, pp 85-93

ABSTRACT: A study of the conditions necessary for the formation of the lowest chlorides produced by the reaction of Ti with $TiCl_4$. Twice-distilled $TiCl_4$ was employed in the experiments. The powdered Ti, a metal obtained by means of magnesium-thermal process followed by vacuum distillation, contained 99.7 percent Ti. The partial pressure of the $TiCl_4$ was computed from its loss in the vessel and from the volume of Ar passed in the course of the experiment. The purification of Ar was accomplished by passing it through a layer of Ti-sponge heated to a temperature of 700°-800°. Prior to the introduction of the $TiCl_4$ vapors, Ar was blown through the cold reaction tube. The furnace was then turned on and the $TiCl_4$ was introduced into the tube after the necessary experimental temperature was reached. After the

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

137-1957-12-23487

The Reaction of Titanium With Its Tetrachloride

completion of the reaction, the reaction products were extracted from the tube in an Ar stream and were then investigated. It was established that the reaction of Ti with $TiCl_4$ is affected by the temperature and by the partial pressure of $TiCl_4$. At temperatures between 300 and 500° the reaction produces $TiCl_2$, whereas higher temperatures produce $TiCl_3$ along with $TiCl_2$. The most likely reaction between Ti and $TiCl_4$ in the range investigated (300 - 900°) is described by the formula:

$$Ti + TiCl_4 = TiCl_2$$

G. S.

1. Titanium reaction 2. Tetrachloride-Applications

Card 2/2

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

ACCESSION NR: AT4026281 S/2563/63/000/223/0115/0124

AUTHOR: Batashev, K. P.; Patrova, G. I.; Ryabov, V. A.; Ry*tvinskiy, A. I.

TITLE: Electrolytic chromium plating of titanium-alloy parts

SOURCE: Leningrad. Politekhnicheskiy institut. Trudy*, no. 223, 1963. Metallurgiya tsvetny*kh metallov (Metallurgy of nonferrous metals), 115-124

TOPIC TAGS: chromium plating, electrolytic plating, electroplating, titanium, titanium alloy, titanium electroplating, corrosion, titanium corrosion, chromium

ABSTRACT: Chromium plating of titanium and titanium alloys makes possible the elimination of one of their main disadvantages, the tendency to seizing, thus widening their field of application. However, chromium plating of Ti encounters the difficulty of poor adhesion between the Cr and the underlying surface, owing to the presence of TiO_2 film. The preliminary treatment of the Ti surface to remove this film is therefore important and has been attempted with a variety of reagents (HF, NaOH, KOH, HNO_3 + HF, dichromate + HF + $CuSO_4$, and acetic acid + HF + alternating current). In the present paper the authors discuss the preliminary pickling of the surface of Ti and VT-5 Ti alloy in some detail, as well as working out the optimal conditions for chromium plating and the heat treatment of the plated surface. Pickling with HF, HCl, or H_2SO_4 was found to be

Card 1/2

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

S/065/63/000/001/004/005
E075/E436

AUTHORS: Morozov, V.I., Agafonov, A.V., Abayeva, B.T., Ryabov, V.A., Karpenko, L.P., Gilyazetdinov, L.P.

TITLE: The preparation of feedstock carbon black in thermal cracking units

PERIODICAL: Khimiya i tekhnologiya topliv i masel, no.1, 1963, 39-42

TEXT: A threefold increase in the production of carbon black is scheduled in the current 7-year plan. New feedstocks suitable for conversion into carbon black are therefore required to supplement green and anthracene oils used at present. Catalytic gas oils and lubricating oil extracts (phenol extracts) were subjected to thermal cracking to produce oils suitable for the production of carbon black. The cracked oils (43.5, 36.0 and 54.4% yields of the feedstock for light gas oil, heavy gas oil and phenol extract respectively) contained from 70 to 80% of aromatic hydrocarbons, of which at least 50% were heavy aromatics. The cost of these oils was about half that of green oil and a quarter of anthracene oil. The yields of carbon black from the oils ranged from 47 to

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56.7%, which compares well with the yields from green oils. The carbon blacks satisfy the ГОСТ 7885-56 (GOST 7885-56) specification. There are 1 figure and 4 tables.

ASSOCIATION: Omskiy Neftepererabatyvayushchiy zavod VNII NP (Omsk Refinery VNII NP)

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BATASHEV, K.P.; PATROVA, G.I.; RYABOV, V.A.; RYTVINSKIY, A.I.

Electrolytic chromizing of titanium alloy products. Trudy LPI no.223:115-124 '63. (MIRA 17:11)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

BOTVINKIN, G.P., doktor tekhn. nauk; KULIKOVA, Ye.N., inzh.; RYABOV, V.A., kand. tekhn. nauk; FEDOSEYEV, D.V., kand. tekhn. nauk

Using the statistical theory to estimate the strength of window glass. Stek. i ker. 22 no.9:14-17 S '65. (MIRA 18:9)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut stekla (for Botvinkin, Kulikova). 2. Institut fizicheskoy khimii AN SSSR (for Ryabov, Fedoseyev).

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

Ryabov, V.A.

Physical-chemical bases for silver plating glass. V. A. Ryabov. *Trudy Volzhsk. Kompleks. Nauch.-Issledovatel. Inst. Sooruzhen, Streitel. Materialov i Sanit. Tekh.* 1953, No. 33, 100-26; *Referat. Zhur., Khim.* 1953, No. 9372.— An excess of NH_3 in a silvering bath lengthens the inductive relaxation period in silver plating glass. It is necessary to calc. the concn. of Ag ions, and not the concn. of $AgNO_3$. The coeff. for effective utilization of Ag in the silvering bath depends on the relaxation rate, vol. of the silvering bath, surface of the glass, and also upon the compn. and quality of the glass surface subjected to the silver plating. M. K.

MT

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RYABOV, V. A.

USSR/Chemical Technology - Chemical Products and Their Application. Silicates. Glass. Ceramics. Binders, I-9

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 62272

Author: Solomin, N. V., Barbarina, T. M., Ryabov, V. A.

Institution: None

Title: Increase in the Stability of Glass Felting on Exposure to Humid Atmosphere

Original Periodical: Tr. Vses. n.-i. in-ta stekla, 1956, No 36, 95-105

Abstract: Study of the action of water vapor on glass fibers of a layer of glass felting (GF), depending on the composition of the glass and diameter of the fibers. In 5 glass compositions the Na_2O:CaO ratio was varied while maintaining constant the contents of other ingredients (in %): SiO_2 72.5; (Al_2O_3 + Fe_2O_3 + TiO_2) 2.5; MgO 3.5. Average diameter of fibers 12-34.5 μ. GF mats were placed on screens over water in closed containers and kept for 7, 30, 75 and 180 days. Chemical stability of fibers was determined from the

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72-58-3-14/15

AUTHORS: Ryabov, V. A., Barbarina, T. M., Steshenko, M. I., Kireyev, P. S., Sukhov, M. P.

TITLE: Rubberoid and Hydro-Insulating-Tapes Based on Glass Fiber (Ruberoyd i gidroizolyatsionnyye lenty na osnove steklovolokna)

PERIODICAL: Steklo i Keramika, 1958, [illegible] Nr 3, pp. 43-47 (USSR).

ABSTRACT: The increased chemical stability, as well as the greater mechanical strength of glass fiber in comparison with organic fiber, makes it possible to use the former successfully as reinforcement for a series of products as rubberoid and other special tissues. Glass-fiber can also partly be used in concrete constructions in lieu of metal reinforcements, as referred to in the works by V. A. Ryabov, T. M. Barbarina, N. A. Sheludyakov and A. K. Burov, G. D. Andriyevskaya (reference 1). The manufacture of rubberoid and hydro-insulating tapes based upon glass fiber is worth noting in Czechoslovakia. This manufacture

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is further fully described and explained by means of 4 figures. A matting which is used as semiproduct for the manufacture of rubberoid and other special, variously composed materials, is manufactured from agglutinated layers of oriented glass-fiber. The manufacture of layers of oriented glass-fibers with a movable glass-melting furnace (920 mm of length and 250 mm of diameter) is shown in figure 1, in which case the glass-raw-material is given, too. It is driven by an electric motor of 3 kW. The process of manufacturing a mat of glass-fibers is carried out in continuous production (figures 2 and 3) in which case the glass-fibers are both impregnated and dryed in a solution. The composition of the solution is given. The drying out is carried out in air at 100°. Impregnated mats of 115 to 125 m of length, 1 m of width and approximately 500 mm of diameter which are subsequently used for the manufacture of rubberoid and hydro-insulating-tapes, are manufactured. This operation is carried out in progressive manufacture (figure 4) and consists again of impregnation with asphalt, the composition and preparation of which is fully described. The length of rubberoid and other tapes amounts to 20 m. No complicated equipment is required for the manufacture of these articles which are a cheap material of high quality for

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Rubberoid and Hydro-Insulating-Tapes Based on Glass Fiber 72-58-3-14/15

roofing and hydro-insulation. The authors recommend to introduce such a manufacture in the USSR.
There are 4 figures, and 2 references, 2 of which are Soviet.

1. Glass textiles--Applications 2. Insulation--Test results

Card 3/3

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

AUTHORS: Kovalev, L. K., Ryabov, V. A. SOV/72-58-7-3/19

TITLE: Lubrication by Glass in Metallurgy (Steklosnazka v metallurgii)

PERIODICAL: Steklo i keramika, 1958, Nr 7, pp. 8-12 (USSR)

ABSTRACT: The French Scientists I. Peyshes and Zh. Sezhurne found out after 10-years' experiments that silicate glass may be used as lubricant. The influence of the glass lubrication is shown in figure 1. It is applied in the hot pressing of silicon- and aluminumbronze, light metal alloys, high-speed steel, heat- and corrosion resistant steels, as well as titanium alloys. The thickness of the surface layer of glass on the metal may attain 20 to 100 μ. Sezhurne describes the thermal conductivity and the viscosity of the glass lubricant to be its most substantial properties. Tests carried out by the authors at the Glass Institute, show that other physical-mechanical properties of glass also play an important rôle. 2 rods manufactured of heat resistant steel, the left of which was manufactured on the basis of nickel and chromium, and the right with substantial additions of molybdenum and tungsten, are given in figure 2. When immersing the rods into molten glass of the same composi-

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tion at a temperature of 1300°, during a period of 15 minutes, the first rod is entirely covered with glass, whereas the second remained untouched. The compositions of glass used in Swedish works in the manufacture of metal tubes are given in table 1. L.V. Prozorov used glass-compositions shown in table 2 for pressing steel and other refractory alloys. A.T. Bundin gives glass compositions for the lubrication in the hot-pressing of steel parts as shown in tables 3 and 4. The Institute of Glass recommended to the Ivot Glass Works the following composition of the glass fiber for the lubrication of tools in the processing of steel parts: 56% SiO_2; 21% Na_2O; 0,5% Al_2O_3; 15% CaO; 3% K_2O; 2% BaO; 2,2% CaF_2; 0,3% Fe_2O_3. The glass lubricants may be applied by immersing the raw working pieces into molten glass, as well as by other methods which are further described. A mechanized furnace for the heating of steel slugs in the molten glass mass, as it is used in the Italian Works Mazzager, is shown in figure 3. Glass coats which are laid on the pressing tool, may also be manufactured. Concluding, the authors find that there are still

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Lubrication by Glass in Metallurgy

SOV/72-58-7-3/19

too few data available for determining the technological and physical-chemical rules governing the interaction between glass lubricant and metal. The lubrication by glass is to be applied on a large scale in the hot pressing of metals, the punching, boring, drilling, and forming, as is the case in France, the USA, Italy, the German Federal Republic and Sweden. There are 3 figures, and 4 tables.

1. Metals--Lubrication 2. Glass--Applications 3. Glass--Properties

Card 3/3

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

RYABOV, V.A., kand. tekhn. nauk; BARBARINA, T.M., kand. tekhn. nauk

Soundproofing properties of fibre glass products. Stroi. prom. 36 no. 7:44-46 Jl '58. (MIRA 11:8)
(Glass fibers)
(Acoustical materials)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

RYABOV, V.A., kand.tekhn.nauk

Glass-fiber plastics. Stroi.mat. 6 no.5:10-12 My '60. (MIRA 13:7)

(Glass reinforced plastics)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

BORISOVA, I.I.; RYABOV, V.A.

Basic physicochemical processes in modern methods of silvering glass. Stek. i ker. 18 no.12:8-12 D '61. (MIRA 16:8)

(Mirrors)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

S/058/63/000/001/067/120
A160/A101

AUTHORS: Ryabov, Y. A., Nayman, I. M., Borisova, I. I., Grinevetskaya, S. N., Viktorova, Yu. N., Gayevaya, L. A.

TITLE: New light filters for the protection of the eyes during production

PERIODICAL: Referativnyy zhurnal, Fizika, no. 1, 1963, 83, abstract 1D602 ("Steklo. Byul. Gos. n.-i. in-ta stekla", no. 1 (110), 1961, 72 - 81)

TEXT: A description is given of the technological process of producing neutral and selective light filters designed mainly for controlling metallurgical processes. The light filters are made by applying oxide films from metal salts of the 4, 5 and 6th period of the periodic system of elements by the aerosols method. Presented are the characteristics of the light filters with oxide layers from cobalt, iron, lead + antimony and lead + antimony + iron.

Yu. Kutov

[Abstracter's note: Complete translation]

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L 15690-63 EWP(q)/EWT(m)/BDS AFFTC/ASD Pq-4 WE

ACCESSION NR: AR3003595 S/0081/63/000/008/0503/0503

SOURCE: RZh. Khimiya, Abs. 8M103 60

AUTHOR: Ryabov, V. A., Tsaritsyn, M. A.

TITLE: Transparent glass sheets for structural purposes from glass foil

CITED SOURCE: Steklo. Byul. Gos. n.-i. in-ta stekla, no. 2(115), 1962, 23-26

TOPIC TAGS: glass foil, laminated glass sheet

TRANSLATION OF ABSTRACT: The production of transparent glass sheet from glass foil of a thickness of 100 microns and polyester resin was proposed. With this goal, work was carried out to find the optimum method of drawing out glass foil. The expediency was shown of industrial introduction of the process of drawing out glass foil from a melt of glass matter through a slotted die. A general view is shown of the unit for drawing out foil. The strength of individual samples of foil was 1000-4000 kg/sq cm. From the glass sheets, samples of glass plates were produced which were tested for strength and showed high results.
I. Mikhaylova

DATE ACQ: 12Jun63 SUB CODE: CH,MA ENCL: 00

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

S/072/63/000/004/004/005
A051/A126

AUTHORS: Krasovskaya, I. M., Kulikova, Ye. N., Engineers, Ryabov, V. A., Candidate of Technical Sciences

TITLE: The effect of the composition of hydrofluoric (HF) acid baths on the hardening of silicate glass

PERIODICAL: Steklo i keramika, 20 no. 4, 1963, 13 - 15

TEXT: A detailed study was made of the effects of HF acid concentration, temperature, the presence of salts of fluorsilicic and other acids, on the hardening of silicate glass, with main emphasis placed on the study of the concentration of the HF acid. The purpose of the study was to clarify the nature of the glass hardening process in acid baths, the chemical process taking place on the glass surface and the effect of the quality of the glass surface itself. Obtained experimental data coincide with those of Guzhavin who had found that the strength of glass depends on the concentration of the HF acid. It is concluded that the hardening of glass by processing it in a HF bath is accomplished not only by removing the defective surface layer; when studying the effect of

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hardening, one has to consider the role played by the topochemical processes on the glass-acid interface. At present, no direct proof is available on the structural change of the glass surface, but the rather high increase of the strength of the silicate glass when processed in a 7.4 n solution of HF acid is attributed to it. It is recommended that this subject be studied in more detail including the effect of the pH and pF of acid baths on the degree of glass hardening. There are 3 figures.

ASSOCIATION: Institut Stekla (Glass Institute)

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

ACC NR: AM6019923 Monograph UR/

Dimentova, Anna Aleksandrovna; Rekstin, Feliks Sergeyevich; Ryabov, Valentin Alekseyevich

Tables of gasodynamic functions (k = 1.05÷1.70); a handbook (Tablitsy gazodinamicheskikh funktsiy (k = 1.05÷1.70); spravochnoye posobiye) Moscow, Izd-vo "Mashinostroyeniye," 1966. 135 p. illus., biblio., tables. 5500 copies printed.

TOPIC TAGS: gas dynamics, mathematic table, function analysis, pipe flow, gas flow

PURPOSE AND COVERAGE: This reference manual contains tables of the values of the gas-dynamic functions over a wide range of values of the isentropic exponent (k = 1.05—1.70), which includes all real gases used at present, for values of the reduced velocity (the ratio of the velocity of the gas to the critical velocity) λ = 0.01—1.8. The functions tabulated here are: ζ—the ratio of velocities (the velocity of a gas to the maximum discharge velocity); $\pi(\lambda)$—function of the ratio of pressures; $\tau(\lambda)$—function of the ratio of temperatures; $\varepsilon(\lambda)$—function of the ratio of densities; $q(\lambda)$—function of the reduced density of mass flow; $y(\lambda)$—function of the static impulse of gas flow; $r(\lambda)$—function of the relative static impulse; $j^*(\lambda)$—function of the relative velocity head; M—the Mach number; φ—the ratio of speeds of sound; and $z(\lambda)$—function of the total reduced impulse. The values of

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ACC NR: AM6019923

these functions were computed on a Ural digital computer. Formulas are given to illustrate the application of the tables in calculating the parameters of flows in pipes and open channels, in elements of ducts in turbines operating on various gases and gas mixtures. This book can be used in designing and studying power turbines and apparatus, and also in different fields of subsonic, sonic, and supersonic aerodynamics. As a reference manual, it is intended for workers in scientific research institutes and design bureaus who are engaged in gas-dynamic calculations and research; it may also be useful to university students studying the corresponding specialties.

TABLE OF CONTENTS [abridged]:

Foreword -- 3
Notation -- 5
Description of the functions and their basic properties -- 7
Transformation of the fundamental equations of gas dynamics by the gas-dynamic functions -- 17
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L37149-66 EWP(e)/EWT(m) WH

ACC NR: AP6018057 (A) SOURCE CODE: UR/0020/66/168/003/0567/0568

AUTHOR: Ryabov, V. A.; Fedoseyev, D. V.

ORG: Institute of Physical Chemistry, Academy of Sciences, SSSR (Institut fizicheskoy khimii Akademii nauk SSSR)

TITLE: Statistical theory of the strength of glass 15

21
26
B

SOURCE: AN SSSR. Doklady, v. 168, no. 3, 1966, 567-568

TOPIC TAGS: glass property, statistic analysis, DURABILITY, HARDNESS

ABSTRACT: The authors report the results of tests of approximately 11,000 samples of composition SiO_2 ~72%, Na_2O ~15%, MgO ~3%, CaO ~8%, and Al_2O_3 ~1.5%. Some samples were hardened by removing the defect layer from the surface with foamed hydrofluoric acid. The samples were in the form of squares 60 mm on each side of varying thicknesses. The test procedure is briefly described. The results show that the hardened glass has two maxima, one at approximately the same value as the unhardened glass (30 kg/mm^2), and the other at approximately 300 kg/mm^2. The authors state that an earlier explanation (J. Cornelissen et al., Technical Papers Sixth Intern. Congr. on Glass, Washington, July, 1962) attributing the two maxima to the presence of two types of surface defects, disagrees with published results and with their own results, since the surface treatment with acid, which removes the surface defects, actually strengthens the glass. It is concluded that by producing glass without surface defects and by keeping the interior of the glass in the liquid state it would be possible to in-

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crease greatly the strength of glass. The authors thank AN SSSR Corresponding Member B. V. Deryagin for important remarks. This report was presented by Academician S. A. Khristianovich 24 July 1965. Orig. art. has: 1 figure and 3 formulas.

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L 06233-67 EWP(e)/EWT(m) WH

ACC NR: AP6030007 SOURCE CODE: UR/0020/66/169/005/1034/1036

AUTHOR: Galin, L. A. (Corresponding member AN SSSR); Ryabov, V. A.; Fedoseyev, D. V.; Cherepanov, G. P.

ORG: Institute of Problems of Mechanics, Academy of Sciences SSSR (Institut problem mekhaniki Akademii nauk SSSR); Institute of Physical Chemistry, Academy of Sciences SSSR (Institut fizicheskoy khimii Akademii nauk SSSR)

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B

TITLE: Failure in high strength glass

SOURCE: AN SSSR. Doklady, v. 169, no. 5, 1966, 1034-1036

TOPIC TAGS: glass property, Young modulus, hydrofluoric acid

ABSTRACT: The failure of glass due to internal defects was investigated using test samples of window glass with dimensions 60 × 60 mm and a thickness of 1.7-3.2 mm. The glass had approximately the following chemical composition: SiO_2--72%, Na_2O--15%, MgO--3%, CaO--8%, Al_2O_3--1.5-2%. Surface defects to a depth of 100 microns were removed by treating the glass in foaming hydrofluoric acid. The samples were tested for symmetric flexural strength using a maximum load of 10,000 kg-wt. The test samples were supported in a square frame covered with soft insulation. Typical parameters of the glass samples were as follows: Young's modulus of $6 \cdot 10^7$ kg-wt/cm^2, thickness of 0.2 cm, a breaking force of approximately 500 kg-wt, and a characteristic transverse

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ACC NR: AP6030007

dimension of approximately $5 \cdot 10^{-3}$ cm for the needle fragments. The experiments showed that the development of cracks leading to the failure of high strength glass samples was nonstationary and corresponded to the initial stage of the nonstationary development of cracks from the original defects. Orig. art. has: 4 figures.

SUB CODE: 11/ SUBM DATE: 22Apr66/ ORIG REF: 006/ OTH REF: 002

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APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

ACC NR: AP7005416 SOURCE CODE: UR/0072/66/000/011/0017/0018

AUTHORS: Fedoseyev, D. V. (Candidate of technical sciences); Ryabov, V. A. (Candidate of technical sciences); Kireyev, P. S. (Engineer)

ORG: [Fedoseyev, Ryabov] Institute of Physical Chemistry, AN SSSR (Institut fizicheskoy khimii AN SSSR); [Kireyev] State Scientific Research Institute for Glass (Gosudarstvennyy nauchno-issledovatel'skiy institut stekla)

TITLE: Dependence of the diameter of glass fibers on the manufacturing method

SOURCE: Steklo i keramika, no. 11, 1966, 17-18

TOPIC TAGS: glass, fiber glass, mathematic analysis, PRODUCTION ENGINEERING, GLASS FIBER

ABSTRACT: An equation, expressing the dependence of the diameter of glass fibers on the properties of the glass and on the manufacturing method was derived as

$$d = \frac{1}{4\sqrt{2}}\sqrt{\frac{(L+l)\,g\rho D^4}{l\eta\mu}}.$$

Here L is the level of the glass reservoir, l - length of die, g - acceleration of gravity, ρ - density of glass, D - diameter of die, η - viscosity of glass, and μ - rate of drawing. The derivation is based on the work of Ya. A. Shkol'nikov (Steklo i keramika, 1964, No. 7). The equation was tested on the experimental results of M. G. Chernyak et al. (Steklo i keramika, 1966, No. 1) and of V. A. Ryabov et al. (Steklo

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ACC NR: AP7005416

(byulleten' GIS) 1961, No. 3), as well as on experimental data obtained by the present authors. The results of the tests are shown graphically (see Fig. 1).

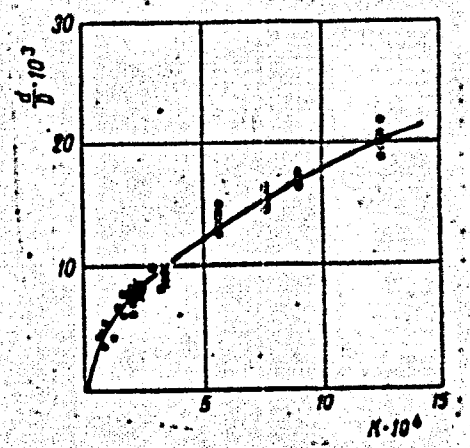

Fig. 1. Dependence of the ratio of glass fiber diameter to the die diameter on the dimensionless criterion $K = \frac{L \rho g D^2}{L \eta \mu}$; solid circles - data of Chernyak et al; open circles - data of Ryabov et al; crosses - data of present authors

It was found that the experimental data were in good agreement with the proposed theoretical relationship. Orig. art. has: 1 graph, 1 table, and 4 equations.

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 006

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Ryabov, V. D.

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The reaction of phenol with acetylene in the presence of acid catalysts. V. D. Ryabov and V. L. Yakov. *Nauch.-Tekh. Konferentsiia Nauch. Studenchesk. Obshchestva Moskov. Neft. Inst. 1954* (Moscow: Goondarst. Tekh. Izdatel'). *Sbornik* 1955, 137-50; *Referat. Zhur., Khim.* 1956, No. 780.—By treating phenol with C_2H_2 at atm. pressure in H_2O or alc. media in the presence of H_3PO_4-BF_3 + HgO (I), H_2O-BF_3 + HgO (II), Et_2O-BF_3 + HgO (III), and H_2SO_4 + HgO (IV), $MeCl(C_6H_4OH\text{-}p)_2$ (V) is obtained with the following yields (in H_2O): I, 40%; II, 32%; III, 19.5%; IV, 20%. In alc., I, 60%; II, 37%; III, 26.6%; IV, 37.6%. V b. 251-60°, m. 121-22.5°. V di-Me ether m. 61°. In acid media, V condenses with resinification. The reactor is loaded with 20 ml. catalyst, 2 g. HgO, 50 g. phenol, and 50 ml. H_2O or alc. The yield is highest in alc., lower in alkylates. C_2H_2 is passed in at 2 l./hr.; the time of the reaction is 3 hrs. N. Vasileff.

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RYABOV, V.D.

USSR/Chemistry - Catalytic reaction

Card 1/2 Pub. 22 - 20/52

Authors : Vayser, V. L., and Ryabov, V. D.

Title : The mechanism of alkylation reaction of phenol with acetylene in the presence of $H_3PO_4 \cdot BF_3$ and H_2O catalysts

Periodical : Dok. AN SSSR 100/2, 271-274, Jan 11, 1955

Abstract : Experiments were conducted to determine the mechanism of phenol alkylation with acetylene in an aqueous acid solution of an $H_3PO_4 \cdot BF_3$ and H_2O catalyst. It was found that $H_3PO_4 \cdot BF_3$ loses none of its activity and in spite of the fact that the molar water/catalyst ration was only 12 the yield of the reaction product - 4,4'-dioxydiphenylethane - was approximately 40% of the oretical.

Institution : .....

Presented by: Academician A. V. Topchiev, July 7, 1954

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

Periodical : Dok. AN SSSR 100/2, 271-274, Jan 11, 1955

Card 2/2 Pub. 22 - 20/52

Abstract : The structure of the reaction product was determined by oxidation of its dimethyl ether. The role of water in the reaction is explained. Thirteen references: 2 USA; 2 German; 1 English and 8 USSR (1881-1953). Drawing

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Ryabov, V. D.

USSR/ Chemistry

Card 1/2 Pub. 22 - 26/54

Authors : Vayser, V. L.; Ryabov, V. D.; Sokolina, S. Sh.

Title : Derivation of p-methylstyrene from asymmetrical p,p-ditolylethane

Periodical : Dok. AN SSSR 106/2, 271-274, Jan 11, 1956

Abstract : Experiments were conducted for the purpose of obtaining p-methylstyrene from asymmetrical p,p-ditolylethane and to investigate some catalysts under conditions of cracking. The basic constants (boiling point, density and viscosity) of p,p-ditolylethane, after several vacuum distillations, were established. The results obtained during the application of a synthetic aluminum silicate catalyst (Al_2O_3 : SiO_2 = 1 : 1) are listed. The effect of temperature on the cracking characteristics is analyzed. Seven references: 2 USSR, 1 Germ., 3 USA and 1 Canad. (1923-1954). Table; graphs; drawing.

Institution : Moscow Petroleum Institute im. I. M. Gubkin

Presented by: Academician A. V. Topchiyev, July 11, 1955

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"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R001446310012-9

Ryabov, V. D.

Chem

Preparation of p-methylstyrene from unsym-p,p-ditolyl-ethane. V. L. Valser, V. D. Ryabov, and S. Sh. Sokolina. *Proc. Acad. Sci. U.S.S.R., Sci. Chem.* 106, 43-6(1956) (Engl. translation).—See *C.A.* 50, 13832g. B. M. R.

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1 cm
2 mm

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Ryabov, V. D.

Preparation of *p*-methylstyrene from *unsym-p,p*-dicolylethane. V. L. Valger, V. D. Ryabov, and S. Sh. Sokolina (I. M. Gubkin Petrol. Inst., Moscow). *Doklady Akad. Nauk S.S.S.R.* 105, 271-4(1956).—Passage of H_2O and $(p\text{-}MeC_6H_4)_2CHMe$ at 500° over various aluminosilicate clays gave 45-9% fraction, b. 110-200°, which contained 38-49% methylstyrene. The use of aluminosilicate catalyst (Al_2O_3-SiO_2 1:1) gave 50% and 43%, resp., while the use of com. catalyst (Al_2O_3-SiO_2 1:7) gave 70% and 26.9%, resp. A rise in temp. to about 600° with the best catalyst gave 72% and 46%, resp. Above that temp. the yield of low-boiling material rises, but the percent yield of methylstyrene becomes stationary. Decrease of feed rate from space velocity 0.9 to 0.2 reduces the conversion drastically and gives much lower yields of methylstyrene; appreciable amts. of *p,p'*-dimethylstilbene are then formed, which also forms at operating temp. above 600°. The crude methylstyrene can be polymerized directly; careful fractionation showed that the product formed was the *p*-isomer, b_{10} 50°, d_4^{20} 0.8973, n_D^{20} 1.5396.

O. M. Kosolapoff

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RYABOV, V. D.

Catalytic cracking of ethylidenediisopropylbenzene. V. L. Vaiser, V. D. Ryabov, and B. I. Kryvelev (I. M. Gubkin Petroleum Inst., Moscow). *Doklady Akad. Nauk S.S.S.R.* 112, 655-8(1957); cf. *C.A.* 50, 13832g.—Ethylidenediisopropylbenzene, b_{10} 180-90°, d_{20} 0.9655, n_D^{20} 1.5465, was prepd. by alkylation of iso-PrPh with C_2H_5 and H_3PO_4.BF_3 catalyst, and cracked by passage through a quartz tube at 600° (optimum temp.) in the presence of steam over an aluminosilicate Houdry catalyst, as well as over 3 natural activated clays. The 1st catalyst was the most effective, giving max. conversion (6.5 l. of gaseous products and 71% conversion to light products) with 0.064 sec. contact time. The gaseous products contained 2-6% CO_2, 1-3% O, 3-8% CO, 2-4% C_2H_4, 40-60% C_3H_6, and 30-40% H, N, and higher olefins. The identified products included EtPh, PhCH:CH_2, PhCMe:CH_2, $Et_4C_6H_4$; EtC_6H_4CH:CH_2, and iso-PrC_6H_4CH:CH_2. The possible paths of cracking are briefly discussed. G. M. Kosolapoff

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AUTHORS: Ryabov, V. D., Vayner, V. L. 20-118-5-32/59

TITLE: Catalytic Cracking of Some Asymmetric Diarylethanes (Kataliticheskiy kreking nekotorykh nesimmetrichnykh diariletanov)

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol. 118, Nr 5, pp. 964-966 (USSR)

ABSTRACT: This cracking makes it possible to produce vinyl-aromatic compounds with a high yield, this method being superior to other methods. It consists of two stages: a) the synthesis of diarylethanes, and b) their cracking by way of aluminum silicate catalysts. Besides the aromatic compound and acetylene no other reagents are needed. In previous publications the authors investigated the catalytic cracking of 1,1-(4,4'-dimethyl)diphenylethane and of 1,1-(4,4'-di--isopropyl)diphenylethane (references 1,2). The present paper shows the results of this reaction of further asymmetric diarylethanes. The following compounds with their constants, yields and methods of production are treated here: 1,1-(4,4'--diethyl)-diphenylethane. It was produced from the alkylation

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reaction of ethylbenzene by acetylene and had a melting point of 164 - 167°C/1o mm after a double distillation. The 133 - 134°C/748 mm fraction consisted of ethylbenzene. The 93 - 95°C/38 mm fraction was 4-ethylstyrene with 12,5% diethylbenzene. For the perfect identification of the first substance its dibromide was produced as white acicular crystals with a melting point of 65,5°C. 1,1(3,3! 4,4'--tetraphenyl)diphenylethane (ethylidene-di-o-xylene) was produced by the alkylation of o-xylene with acetylene. The cracking took place at 55o°C. The 55-55,5°C/36 mm fraction was o-xylene, the 94-1o4°C/36 mm fraction was a mixture of vinyl xylene and ethyl xylene, the 1o5-1o6°C/36 mm fraction was 3,4-dimethylstyrene.

1,1-di-(2-naphtyl)ethane (ethylene-dinaphtyl) was produced by alkylation of naphtalene with acetylene in a solution of carbon tetrachloride. It is a highly viscous transparent substance, fluorescent green, boiling point 236-238°C at 3 mm. The cracking temperature was 55o°C. For the identification of the β-vinylnaphtalene the filtrate was brominated at -2o°C after crystallization. White acicular crystals with a melting point of 86-86,5°C were obtained. Thus the chemism of the cracking of the respective diarylethanes is analogous to that

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