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L 1583-66

ACCESSION NR: AP5015441

SUBMITTED: 01Jul64 ENCL: 00 SUB CODE: SS, OP

NR REF SOV: 005 OTHER: 004

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L 15351-66 EWT(1)/EWT(m)/T/EWP(t)/EWP(b) IJP(c) JD/GG
ACC NR: AP5026919 SOURCE CODE: UR/0185/65/010/010/1123/1126

AUTHOR: Zakharko, Ya. M.; Triska, T. Y.--Triska, T. I.

ORG: L'vov State University im. I. Franko (L'vivs'kyy derzhuniversytet)

TITLE: The effect of a constant electric field on the yield of x-ray luminescence of NaI(Tl) single crystals

SOURCE: Ukrayins'kyy fizychnyy zhurnal, v. 10, no. 10, 1965, 1123-1126

TOPIC TAGS: x ray effect, luminescence quenching, luminescent crystal, scintillator, electric field, electron hole, exciton, ionizing radiation, electron density

ABSTRACT: The authors investigate the effect of a constant electric field on the intensity of stationary x-ray luminescence and the luminescence yield [illegible] single crystals in order to obtain additional information on the role and relationships of the electron-hole and exciton components of excitation of the scintillator by hard ionizing radiation. Pound platelets, about [illegible] mm thick, were cut in a dry box from large NaI(Tl) crystals. The x-ray luminescence was recorded with a M-95 microampere meter connected to the anode circuit of a photomultiplier [illegible]. A soft x-ray spectrometer with single-channel pulse-height analyzer was employed. With a negative potential on the electrode on the side upon which the x-rays [illegible] the x-ray output decreases [illegible] the intensity of the exciting radiation and is practically imperceptible at a dose of 50--100 roentgen/min. On changing the

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L 15351-66

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sign of the applied voltage the dependence of the light output on the field intensity [illegible] complex. The observed [illegible] are explained by the [illegible] distribution of [illegible]

[illegible] temperature electron [illegible] recombination [illegible]

SUB CODE: 20/ SUBM DATE: 21Dec64/ SOV REF: 006

Card 2/2

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

L 17[illegible]-66 [illegible] JD

ACC NR: AP5027684 SOURCE CODE: UR/0051/65/019/005/0831/0833

AUTHOR: Zakharko, Ya. M.; Chepelev, V. V.

ORG: none

TITLE: Mechanism of excitation of scintillations in single crystals of sodium iodide activated by thallium

SOURCE: Optika i spektroskopiya, v. 19, no. 5, 1965, 831-833

TOPIC TAGS: single crystal, sodium compound, thallium, exciton, luminescence, oscillograph, heat effect, x ray irradiation, temperature dependence, activation energy

ABSTRACT: The temperature effect on the kinetics of the rise and attenuation of roentgenoluminescence during pulse excitation was studied with NaI crystals in order to separate the exciton from the recombination mechanism of excitation. The X-ray radiation pulses were generated by a Mo anticathode in the tubes of a URS-60 apparatus (duration of pulses, 150 μ sec; rate of rise and attenuation 1 μ sec). The relaxation effects were studied with a [illegible]-8 oscillograph. The data on processing of oscillograms, taken at various temperatures, were used for plotting

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L 17880-66

ACC NR: AP5027684

a diagram on the dependence of the damping time (τ) on the temperature (T) in the log vs 1/T coordinates. The energy level producing the oscillation was determined from the slope of the curve as 0.34 ev. This agreed well with the [illegible] peak at 159K (0.35 ± 0.06 ev) calculated by [illegible] the [illegible]

[illegible]

luminescence nuclei predominated. [illegible]

[illegible] DE: 20/ SUBM DATE: 23Apr65/ ORIG REF: 004/ OTH REF: 002

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

L 28879-66 EWT(m)

ACC NR: AP6016047 SOURCE CODE: UR/0185/66/011/005/0538/0539

AUTHOR: Zakharko, Ya. M.; Chepelyev, V. V.

ORG: L'vov State University im. I. Franko (L'vivs'kyy derzhuniversytet)

TITLE: Influence of x-irradiation on resolution of a NaI(Tl) scintillator

SOURCE: Ukrayins'kyy fizychnyy zhurnal v. 11, no. 5, 1966, 538-539

TOPIC TAGS: x ray effect, scintillator, activated crystal, Gamma spectrometer

ABSTRACT: This is a continuation of earlier work (Izv. AN SSSR ser. fiz. v. 29, 78, 1965) where it was shown that exposure of NaI(Tl) crystals to hard x-irradiation affects adversely the resolution of γ-ray spectrometers. The present article reports [illegible] causes of this effect. Round plates of [illegible] mm diameter and 5 mm thickness cut from crystals grown by the Kiropoulos method were exposed to doses of 300-350 r/min. The resolution was measured with a scintillation spectrometer using an FEU-43 photomultiplier several hours after the irradiation, when the phosphorescence of the crystal completely stopped. Several weeks after a 60-minute irradiation the resolution was still 40-45% below the initial value, and the amplitude of the photopeak was ~15% below the initial value. The small decrease in the average photopeak amplitude, compared with the appreciable deterioration of the resolution, is the consequence of inhomogeneities of the optical yield, due to the different absorption of the x-rays in the scintillator material. This was confirmed by a separate test of the variation of the light yield with the thickness of the scintillating crystal. (Orig. art. has: 1 figure and 1 table. [02]

Card 1/1 SUB CODE: 20/ SUBM DATE: 30Jun65/ ORIG REF: 005/ ATD PRESS: 5055

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROCHKIN, L. D.

Mbr., Moscow Central Inst. Aviation Fuels and Oils, -1942-.

"Contribution to the Problem of the Mechanism of Dissolution of Aluminium in Aqueous or Dry Phenol," Dok. AN, 29, No. 1, 1940; (with S. I. Vaiman)

"On the Effect of Chemical Composition of Alloy Steels upon Pit Corrosion in Aqueous Solution of Phenol," ibid., 34, No. 6, 1942.

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROCHKIN L.

On the Effect of Chemical Composition of Alloy Steels upon Pit Corrosion in Aqueous Solutions of Phenol. P. Mikhalew, L. Zakharotchkin and N. Savitch. (Comptes Rendus (Doklady) de l'Académie des Sciences de l'U.R.S.S., 1942, vol. 34, No. 6, pp. 153-157). A report is presented of an investigation of the pitting corrosion of steels alloyed with: (a) chromium, (b) molybdenum and chromium, and (c) nickel and chromium in aqueous solutions of phenol. The specimens were immersed in the solution in test tubes and sealed, and then examined after periods of 12, 84, 432 and 552 hr. Ordinary carbon steel corroded uniformly over the whole surface. Increasing the chromium content increased the resistance to pitting corrosion. A 16/25 chromium-nickel steel began to show pits after 432 hr.; an 18/8 chromium-nickel steel had only four pits after 552 hr. Steels containing chromium 15% and 25% with molybdenum 2·64% and 3·72%, respectively, were practically immune from attack.

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METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROCHKIN L.D.

93-4-12/20

AUTHOR: Cheskis, Kh. I., Zakharochkin, L. D.

TITLE: Use of Electrically Welded Tubes in the Petroleum Industry (O primenenii elektrosvarnykh trub v neftyanoy promyshlennosti)

PERIODICAL: Neftyanoye Khozyaystvo, Nr 4, April, 1957, pp.47-50 (USSR)

ABSTRACT: The article deals with research on electrically welded (resistance welding method) tubes manufactured by the plant imeni Lenin (tube dimensions - 152 x 5 and 114 x 5 mm) and the Moscow tube plant (tube diameters: 22, 38 and 51 mm). The 152 x 5 mm tubes were made of St.2 steel, the 114 x 5 mm of St. 3 steel and those with 22, 38 and 51 mm diameters of steel "marki 15". The tubes have not been heat treated in the factory. Testing of the macrostructure of the welded seams have revealed no non-fusion. Tensil strength tests were run on 700 mm-long tube samples (some with a transverse welding seam in the middle) which were subjected to pressure high enough to rupture them. Hydraulic tests revealed no

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93-4-12/20

Use of Electrically Welded Tubes in the Petroleum Industry.

failures along the longitudinal seams. Ruptures appeared at a distance of 27-35 mm from the longitudinal seam. Table 1 shows the results of tests performed on 114 x 5 and 152 x 5 mm tubes at room temperature. Table 2 shows the tensil strength and relative elongation of the tubes and the tensil strength of the welded joints at seven different temperatures, ranging from 20 to 450°C. Corrosion tests were conducted on welded tube samples, 22, 28 and 51 mm in diameter and 40 mm in length. Tube samples of larger diameter were 30 x 40 mm. They were cut out at the welding seam and at 90 and 180° angles to the welding seam. The samples were subjected to 1% aqueous hydrochloric acid at 20°C for 400 hours and to 1% aqueous hydrochloric acid saturated with hydrogen sulfide, at 20°C for 100 hours. Test results showed (Table 3 and 4) that in all tubes samples (not heat treated) the welding seam zone had a lower corrosion stability than the basic metal. As a result of corrosion the loss of weight in the case of

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tubes 152 x 5 mm with welding seam was 1.7 - 2.6 greater than the corresponding loss of weight in samples of the basic metal. Tubes with thin walls were eaten through along the welding seam (Fig. 2a). It was assumed that uneven corrosion stability of the metal along the perimeter of the tube was due to structural heterogeneity of the metal and that by equalizing the structure by heat treatment its chemical stability would be improved. To test the validity of this assumption, the tube samples were heat treated at 690-710°C and at 900-920°C and subsequently tested with the above mentioned solutions for corrosion stability. Test results (Tables 3 and 4) showed that heat treatment increased considerably the corrosion stability of the welding seam zone. The character of the corrosion was more uniform without visible impairment of the butt weld (Fig. 2b). A wide application of these tubes depends also on how readily they can be bent. Bending experiments with tubes, 114 x 5 mm and 152 x 5 mm, 1.7-1.8 m long and filled with sand, were conducted at the Moscow refinery. The bending curve was 4-5 times the diameter of the tube. The longitudinal seam was located either on the expanded, compressed or neutral side of the

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Use of Electrically Welded Tubes in the Petroleum Industry. (Contd)

flexed tube. Hydraulic tests revealed no failures in the basic metal or in the seams. Flared, heat treated tubes (25 x 2.5 and 33 x 1.5 mm) were also tested (at 25 atmospheres) at the Moscow refinery. Tests showed no cracks in the welding seam. The author concludes that: 1) electrically welded tubes (resistance method) are as strong as seamless tubes and can be substituted for them; 2) electrically welded tubes, not heat treated, have low corrosion stability which can be greatly improved by heat treatment; 3) in the petroleum industry electrically welded tubes can be used to transport petroleum and can serve in refineries for transfer lines, for heat exchangers and condenser-coolers, provided the temperature does not rise above 375°C; in the equipment 4) electrically welded tubes of large diameter made of St. 2 steel can be used without prior heat treatment, to transport non-sulfurous oil as well as hot and cold water; 5) electrically welded tubes made of St.2 and St.3 steel, when used for corrosion crudes,

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93-4-12/20

Use of Electrically Welded Tubes in the Petroleum Industry. (Contd)

should be heat treated; 6) electrically welded tubes used in heat exchanger and condenser equipment should be heat treated preferably at the manufacturing plants. Since the ends of heat exchanger tubes are flared, they should be either drawn or reamed for a distance of 100 mm from the end.

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L 24532-66 EWT(d)/EWT(m)/EWA(d)/T/EWP(t)/EWP(b)/EWP(1) IJP(c) JD/HW/WW/WE

ACC NR: AP6015855 SOURCE CODE: UR/0314/65/000/008/0004/0005

AUTHOR: D'yakov, V. G. (Candidate of technical sciences); Shreyder, A. V. (Candidate of technical sciences); Zakharochkin, L. D.

ORG: none

TITLE: Basic directions in corrosion control of petroleum refinery equipment

SOURCE: Khimicheskoye i neftyanoye mashinostroyeniye, no. 8, 1965, 4-5

TOPIC TAGS: chromium steel, low alloy steel, carbon steel, steel corrosion resistance, high alloy steel, pipeline, petroleum refinery equipment, heat exchanger, furnace, monel alloy/1Kh8VF steel, Kh5M steel, Kh5VF steel, 16GS low alloy steel, 0Kh13 high alloy steel, 1Kh18N9T high alloy steel, Kh17N13M2T high alloy steel, 18-8 steel, NM2hMtS monel alloy

ABSTRACT: An 8% chromium steel grade Kh8 was created to replace pipelines made of carbon or low-alloy chromium steels (whose service life does not exceed 1-1.5 years). The corrosion resistance of lines made from this steel, in sulfurous media at elevated temperatures, surpasses the corrosion resistance of lines made from 5% chromium steel by 2-2.5 times and lines made from carbon steels by 5-8 times. However, for certain heat exchange equipment the corrosion resistance of steel Kh8 tubes is still insufficient; in this case steel 0Kh13 tubes should be used.

Steel 1Kh8VF (containing 7-9% chromium), which is 2-2.5 times more corrosion resistant than steels Kh5M and Kh5VF, is being widely used for furnaces and

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ACC NR: AP6015855

hot-processing lines in petroleum refineries. However the corrosion resistance of steel 1Kh8VF is unsatisfactory in some cases. Additionally, the strength properties of these steels sometimes do not satisfy operating conditions at high temperatures.

The parts of equipment used in processing sulfurous and highly sulfurous crudes, in many instances, should be made from a clad sheet with the base layer made of carbon or low-alloy (type 60S) steels and the cladding layer made of high-alloy (Type 0Kh13, 1Kh18N9T, Kh17N13M2T) steels or monel (NMZhMts 28-2.5-1.5). Trilayered sheet, such as brass-carbon steel-brass, or steel 18-8-carbon steel-steel 18-8, can be effectively used for separate items of the equipment. [JPRS]

SUB CODE: 13, 11, 20 / SUBM DATE: none

Card 3/2

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROCHKIN, L.D.

Corrosion of metals in processes of the hydrodesulfuration of petroleum products. Nefteper. i neftekhim. no. 4:38-41 '64. (MIRA 17:5)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut neftyanogo mashinostroyeniya.

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROCHKIN, L.D.; VOL'FSON, S.I.

High temperature gas corrosion in media containing hydrogen sulfide. Khim.sera-i azotorg.soed.sod.v neft.i nefteprod. 3:411-418 '60. (MIRA 14:6)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut neftyanogo mashinostroyeniya.
(Metals—Corrosion)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROCHKIN, L.D.; D'YAKOV, V.G.

Present status of the corrosion protection of the equipment of refineries processing sulfur-bearing crudes. Khim.i tekh.topl.i masel 5 no. 11:46-49 N '60. (MIRA 13:11)
(Petroleum refineries--Equipment and supplies)
(Corrosion and anticorrosives)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROCHKIN, L. D.

11(4) PHASE I BOOK EXPLOITATION SOV/2075

Akademiya nauk SSSR. Bashkirskiy filial, Ufa

Khimiya sereorganicheskikh soyedineniy, soderzhashchikhsya v neftyakh i nefteproduktakh; [materialy III nauchnoy sessii] (Chemistry of Sulphur Organic Compounds Contained in Petroleum and Petroleum Products; [Papers of the Third Scientific Session]) Moscow, Izd-vo AN SSSR, 1959. 376 p. 2,000 copies printed. Errata slip inserted.

Editorial Board: E.D. Obolentsev (Resp. Ed.) Doctor of Chemical Sciences; G.D. Gal'pern, Doctor of Chemical Sciences; Ya. B. Chertkov, Doctor of Technical Sciences; V.V. Panov, Candidate of Technical Sciences; and V.P. Rozhdestvenskiy, Candidate of Chemical Sciences; Ed. of Publishing House: I.I. Brusov; Tech. Ed.: T.P. Polenova.

PURPOSE: This book is intended for chemists, chemical engineers, and technicians specializing in the chemistry of petroleum.

COVERAGE: The book is a collection of papers presented at the Third Scientific Session on the Chemistry of Organic Sulfur- and Nitrogen Compounds Contained in Petroleum and Petroleum Products. The scientific session was held in Ufa, June 3-8, 1957. The book consists of six sections: 1) Synthesis, characterization, and analysis of organic sulfur compounds; 2) Separation and composition of organic sulfur compounds contained in petroleum and petroleum products; 3) Transformation of organic sulfur compounds by thermal catalysis; 4) Corrosive properties of and tar formation in sulfur-containing petroleum and petroleum products; 5) Uses of organic sulfur compounds and hydrogen sulfide; 6) Physiological properties of organic sulfur compounds. No personalities are mentioned. There are 315 references, of which 179 are Soviet, 118 English, 5 French, 12 German, and 1 Czech.

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Chemistry of Sulphur Organic Compounds (Cont.) SOV/2075

PART IV. CORROSIVE ACTIVITY AND TAR FORMATION OF SULFUR-CONTAINING PETROLEUM AND PETROLEUM PRODUCTS

Zakharochkin, L.D., S.M. Vol'fson. Corrosive Properties of Sulfur-containing Petroleum 269

Bazyolov, I.Ye., O.V. Pletneva, Ye.V. Kolotushkina, G.P. Belyayeva, N.S. Malyshevа. Corrosive Effect of Fuels Derived from Sulfur-containing Petroleum 276

Chertkov, Ya.B., V.V. Evelov, V.M. Shchagin. Organic Sulfur Compounds in Fuels as Inhibitors in the Corrosion of Copper and Its Alloys [illegible]

Puchkov, R.G., V.M. Gavryukhin. Methods of Controlling the Wear of Engines Due to Corrosion Caused by Use of Diesel Fuels With a High Sulfur Content 293

Card 8/10

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROCHKIN, L.D.; VOL'FSON, S.I.; KLOCHKOVA, L.G.

Chemical and technological control of the corrosion of low-temperature equipment of AVT units. Khim. i tekh.topl. i masel 4 no.3:46-52 Mr '59. (MIRA 12:4)

1. Giproneftemash.
(Petroleum refineries--Equipment and supplies)
(Corrosion and anticorrosives)

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROCHKIN L. D.

11(4)

PHASE I BOOK EXPLOITATION SOV/1319

Akademiya nauk SSSR. Bashkirskiy filial

Khimiya sera-organicheskikh soyedineniy, sodershashchikhsya v neftyakh i neftepredukhtakh; materialy II soveshchaniya sovsii (Chemistry of Sulfur-Organic Compounds Contained in Petroleum Products; Papers of the 2nd Scientific Session) v. 1. Ufa, Izd. Bashkirskogo filiala AN SSSR, 1958. 225 p. 1,500 copies printed.

Ed.: Sudarikov, K.I.; Editorial Board: Ayvazov, B.B., Mashkina, A.V., Cholentsov, S.D. (Resp. Ed.), Rozhdestvenskiy, V.P., and Shamin, L.L.; Tech. Ed.: Baldinov, N. Sh.

PURPOSE: This book is intended for petroleum specialists of scientific research establishments, educational institutions, and petroleum refining plants.

COVERAGE: This collection is the first of a multivolume publication on the results of scientific research work carried out in the Soviet Union on the chemistry and technology of sulfur- and nitrogen-organic compounds during the period 1954-1957; and according to a coordinated research project outlined in 1956 by the engineering agency (Bashkir Branch, AN USSR).

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Chemistry of Sulfur-Organic Compounds (Cont.) SOV/1319

Two types of petroleum (from Carboniferous and Devonian deposits) were heated (150 - 350° C) and graphs, tables and equations are given for the separation of petroleum compounds with respect to heating time and temperature.

Zakharochkin, L.D., and S.T. Meshcheryakov, (Gosudarstvennyy nauchno-issledovatel'skiy i proektnyy institut neftyanogo mashinostroyeniya--State Scientific Research and Planning Institute for Petroleum Machinery Building). On the Problem of Evaluating the Corrosive Properties of Sulfurous Petroleum.

Oil from various horizons (Devonian, Carboniferous, Upper Permian, etc.) of Ural-Volga deposits was tested for free sulfur content, yield of H_2S on distillation, and speed of corrosion of steel (the latter two factors were determined at temperatures up to 350° C). The purpose of the investigation was to establish criteria for selecting, storing, transporting and refining sulfurous petroleum from different fields. N.V. Tokareva, O.V. Kalpatina and G.G. Kuzkova assisted in the experimental work.

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROCHKIN, L.L.

Corrosion of metals in the hydrogenation process of the desulfuration of petroleum products. Nefteper. i neftekhim. no. 3:34-37 '64. (MIRA 17:5)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut neftyanogo mashinostroyeniya.

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROV, A.

Advocates of the new and progressive. Sov.profsoiuz 7 no.24:45-46 D '59. (MIRA 12:12)

1. Predsedatel' rabochkoma profsoyuza TSentral'nogo telegrafa. (Telegraph)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROV, A. PA 42/49T101

USSR/Radio Receivers
Radio Operation

Apr 49

"A Rural Short-Wave Operator's Receiver," A. Zakharov, 2 pp

"Radio" No 4

Receiver for rural short-wave operators is only slightly different from the "Battery O-V-1" [see 42/49T99]. Plate voltage in the short-wave receiver is slightly higher than in the long-wave receiver. An outside antenna 12-20 meters long is necessary for good operation.

42/49T101

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROV, A., gvardii podpolkovnik

Powerful weapon in the education of soldiers. Komm. Vooruzh. Sil 3 no.18:59-62 S '63. (MIRA 16:10)

(Communism and literature) (Military education)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROV, A.

ZAKHAROV, A., inzh.-mayor.

[redacted]

How the problem of building artificial satellites is being solved in the United States. Voen. vest. 37 no.11:65-68 N '57. (MIRA 11:1)
(United States--Artificial satellites)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

BARDIN, I.; BELAN, R.; BEKHTIN, N.; BOYKO, V.; BORISOV, A.; BUCHKOV, V.; VASILENKO, S.; VINOGRADOV, V.; VISHNEVSKIY, A.; VODNEV, G.; DVORIN, S.; DZHAPARIDZE, Ye.; DIDENKO, V.; D'YAKONOV, N.; ZHUBAVLEV, S.; ZAKHAROV, A.; IVANOV, I.; KIESANOV, M.; KOLYADA, G.; KOROBOV, P.; LESKOV, A.; LUKICH, L.; LYUBIMOV, A.; MELESHKIN, S.; MIRTSYMOV, A.; PERTSEV, M.; PETRUSHA, F.; PITERSKIY, A.; POPOV, I.; RAYZER, D.; ROZHKOV, A.; SAPOZHNIKOV, L.; SEDOV, P.; SOKOLOV, P.; TEVOSYAN, I.; TIKHONOV, N.; TISHCHENKO, S.; FILIPPOV, B.; FOMENKO, N.; SHELKOV, A.; SHEREMET'YEV, A.

Fedor Aleksandrovich Merkulov. Koks i khim.no.7:62 '56. (MLRA 9:12)
(Merkulov, Fedor Aleksandrovich, 1900-1956)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROV, A.

"Mechanization" of development. Sov. foto 18 no.9:45-46 S '58. (MIRA 11:10)

(Photography--Developing and developers)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROV, A., professor

Sergei Romanovich Mirotvortsev; on the fifth anniversary of his death. Vest.khir. 75 no.3:157-158 Ap '55. (MLRA 8:7)
(BIOGRAPHIES,
Mirotvortsev, Sergei R.)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROV, A.

New technique improved the quality of labor. Mast.ugl.3 no.5:7 My '54. (MIRA 7:6)

1. Nachal'nik uchastka shakhty No.5 kombinata Vostsibugol'.
(Coal-mining machinery)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROV, A.

22580. ZAKHAROV, A. Sadovod. (Michurinets S. I. Ustinov. Ocherk). Na. Berecakh velikoy, No 2, 1949, S. 110-21.

SO: LETOPIS' No. 30, 1949

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

1. ZAKHAROV, A.

2. USSR (600)

4. Conveying Machinery

7. Conveyor for processing two kinds of livestock, Mias.ind.SSSR 24 no. 2, 1953.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Uncl.

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROV, A.; NIKITIN, N.

The people of Serpukhov are building. Sov. profsoiuzy 5 no.9:47-49 S '57. (MLRA 10:9)

(Serpukhov--Construction industry)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROV, A. A.

Zakharov, A. A.

"Problems of Automatic Repeated Switching-In of Lines with Bilateral Supply under the Conditions of Local Power Systems." Min Higher Education USSR. Moscow Inst of the Mechanization and Electrification of Agriculture imeni V. M. Molotov. Moscow, 1955. (Dissertation for the Degree of Candidate in Technical Sciences).

SO: Knizhnaya Letopis', No 27, 2 July 1955.

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROV, A.

Lowering the cost of labor per centner of grain on state farms. Sots.trud 4 no.7:75-78 Jl '59. (MIRA 13:4)
(State farms) (Grain)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

SOLOD'KO, D., prokhodchik; ZAKHAROV, A., rabochiy ochistnogo zaboya; ZADOROZHNYY, M., vzryvnik; NOVIKOV, V., rabochiy ochistnogo zaboya; MASLIKOV, D., buril'shchik; YURCHENKO, I., gornyy master; ZARETSKIY, P., brigadir elektrikov; RASSKAZOV, L., litsotrudnik shakhtnoy gazety; VIZEN, I.; DOKUCHAYEV, A.

Our inspection raid. Mast.ugl. no.10:11-13 O '59. (MIRA 13:3)

1. Reydovaya brigada zhurnala "Master uglya." 2. Literaturnyy sotrudnik zhurnala "Master uglya." (for Vizen, Dokuchayev).
(Donetz Basin--Coal mines and mining)
(Mine management)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

KAPITONOV, B.; ZAKHAROV, A.

"Rates and proportions of socialist reproduction of the means of production" by A.I. Notkin. Reviewed by B.Kapitonov. Vop. ekon. no. 5:118-122 My '62. (MIRA 15:6)
(Economics) (Notkin, A.I.)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROV, Yevgeniy Illarionovich, prof.; ZAKHAROV, Aleksandr Yevgen'yevich; BEREZOV, Yu.Ye., red.; BEL'CHIKOVA, Yu.S., tekhn. red.

[Use of the small intestine in plastic surgery in gastrectomy and resection of the stomach] Tonkokishechnaia plastika pri gastrektomii i rezektsii zheludka. Moskva, Medgiz, 1962. 166 p. (MIRA 15:8)

(INTESTINES—TRANSPLANTATION)
(STOMACH—SURGERY)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

GRANOVSKIY; DILL', A.; ORLOVSKIY, U.; GARIN, L.; VASIL'YEV, S.; BUDLYANSKIYL; BALDAYEV, V.; ZAKHAROV, A.; SMETANIN, I. (Kirov); STEPANOV (Barnaul); KHOMKA, Yuriy

News from everywhere. Sov.foto 22 no.11:44-45 N '62. (MIRA 16:1)

1. Fotokorrespondent TASS (for Granovskiy).
(Photography)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROV, A.

Find new potentialities for industrial production. NTO 4 no.12:17-18 D '62. (MIRA 16:1)

1. Predsedatel' byuro sektsii ekonomiki Dorozhnogo nauchno-tekhnicheskogo obshchestva Sverdlovskoy zheleznoy dorogi.
(Sverdlovsk Province--Railroads)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROV, A., inzh. (Shankhor)

Regulated power supply. Radio no.6:50 Je '65.

(MIRA 18:10)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROV, A., inzh.

Transmission of building noises in large-panel buildings.
Zhil. stroi. no.10:22-23 '65. (MIRA 18:11)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROV A.R.

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROV, A.A.

AID P - 2873

Subject : USSR/Engineering

Card 1/1 Pub. 110-a - 6/16

Author : Zakharov, A. A., Kand. Tech. Sci.

Title : On comparing experimental and theoretical data on the strength of pipes and cylindrical containers submitted to internal pressure

Periodical : Teploenergetika, 10, 34-38, O 1955

Abstract : The comparison analysis of estimated strength as accepted in various countries for various makes of steel is made. A table shows the ultimate strength and breaking load. Five diagrams. Three Russian references, 1953-1954; 2 German, 1953-1954; 5 English, 1942-1954.

Institution : Central Boiler and Turbine Institute

Submitted : No date

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

GUREVICH, David Feyvushev, kandidat tekhnicheskikh nauk; ZAKHAROV, A.A., kandidat tekhnicheskikh nauk, retsenzent; IUR'YE, N.S., inzhener, redaktor; POL'SKAYA, R.G., tekhnicheskiy redaktor; SUCHKEVA, O.V., tekhnicheskiy redaktor

[Principles of calculations for pipe fittings] Osnovy rascheta truboprovodnoi armatury. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1956. 279 p. (MLRA 9:12)
(Pipe fittings)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

SOV/96-58-6-10/24

AUTHOR: Zakharov, A.A., Cand.Tech.Sci. and Kats Sh.N., Engineer.

TITLE: The long-term strength of cylindrical chambers weakened by holes. (Dlitel'naya prochnost' tsilindricheskikh kamer,oslablennykh otverstiyami)

PERIODICAL: Teploenergetika, 1958, No.6. pp. 52-55 (USSR)

ABSTRACT: The article describes the results of an experimental study of the long-term strength of drums and superheater chambers weakened by rows of holes. The tests were made on tubular models with blind holes drilled in the walls, as shown in fig.1.; with this arrangement leakage was, of course, easily prevented. The models were made of austenitic steel 1Kh18N9T and of carbon steel St 20. The former were of 54 mm outside diameter, with a wall thickness of 9 mm, and were made in three forms: without holes, with two longitudinal parallel rows each of five holes, and with two rows of holes arranged diagonally. The hole diameter was about 10 mm and the depth 2.5 mm. The models of steel St 20 were 46 mm outside diameter, with a wall thickness of 8mm and were variously made without holes, with two rows of five holes each and with other arrangements of holes, as indicated in fig.2. Using a suitable test rig, the long-term strength of tubes under internal pressure was evaluated, and concurrent tests were made on specimens in tension. Tests on the models of austenitic steel were made at a temperature of 700°C and on those of carbon steel at 500°C. The formulas used for determining are given for the various

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SOV/96-58-6-10/24

The long-term strength of cylindrical chambers weakened by holes.

arrangements of holes. The results, for tubes with and without holes, are given in table.1., the strength factors and stresses being calculated by means of the formulae given. Further test results appear in table.2. and the various data are plotted in figs.3. and 4. for steels 1Kh18N9T and St 20 respectively. The straight lines correspond to test data for both tension and internal pressure and correspond to the usual relationship between stress and time to failure; it will be seen that the points for the weakened tubes are in line with the rest. The experimental and calculated strength factors for tubes weakened by holes are given in fig.5. and a formula is written for the strength factor. A photograph of an austenitic steel tube after failure appears in fig.6; the mode of failure is described, noting that for tubes weakened by holes there is more or less uniform stress-distribution over the load-carrying section. Thus, the tests show that when designing cylindrical chambers weakened by holes, the procedure established for low temperatures can be applied at high temperatures, even when quite brittle steel is used. There are 2 tables, 6 figures and 4 literature references (Soviet).

ASSOCIATION: Central Boiler Turbine Institute. (Tsentral'nyy kotloturbinnyy institut) 1. Cylindrical shells--Model test results 2. Cylindrical shells--Mechanical properties 3. Heat exchangers--Test results

Card 2/2

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

AUTHORS: Zakharov, A.A., Kats, Sh.H. 32-24-4-45/67

TITLE: The Simultaneous Investigation of Two Samples With Respect to Creeping- and Stretching Resistivity (Odnovremennoye ispytaniye dvukh obraztsov na polzuchest' i dlitel'nuyu prochnost')

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol. 24, Nr 4, pp. 476-477 (USSR)

ABSTRACT: The assembly scheme of the "chains" on the IR-2 machine is used, so that two samples can be tested simultaneously. It may be seen from a schematical drawing that the two samples under investigation are connected at their central ends by way of a cylindrical disk, whereas the outer ends are fastened to the machine holders by way of tensometers. The tensometers can be adjusted to 0.001 or 0.01 mm according to the tests carried out. Equality of temperature of the two samples was easily obtained, and this test system has been in use for more than three years, the efficiency of the testing machines being doubled. It is recommended to use different heavy gages for two samples in order to obtain different tensions in the case of equal stress. When investigating samples of larger heavy gages interruptions are necessary in order to

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

The Simultaneous Investigation of Two Samples With Respect to Creeping- and Stretching Resistivity 32-24-4-45/67

exchange the destroyed samples, in which case practice showed that, in the case of noticeable tensile stresses 3-5 interruptions take up to 12 hours. In investigations of lower tensile stresses, which cause no destruction, no interruption is necessary. There is 1 figure.

ASSOCIATION: Tsentral'nyy kotloturbinnyy institut im. I.I. Polzunova (Central Institute imeni I.I. Polzunov for Boiler Turbines)

1. Metals--Mechanical properties 2. Metals--Test methods
3. Metals--Testing equipment

Card 2/2

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROV, A.A., kand.tekhn.nauk; MOCHAN, S.I., kand.tekhn.nauk; SHCHERBAKOV, V.A., kand.tekhn.nauk; BRAUDE, I.Ye., inzh.; IVYANSKIY, S.I., inzh.; MODEL', Z.G., inzh.

Reliability of steam superheaters. Elek.sta. 30 no.1:91-94 Ja '59. (MIRA 12:3)

(Superheaters)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROV, A. A.

PA 9T89

USSR/Petroleum - Prospecting
Echometers

Jun 1947

"The Utilization of the Echometer for Determining the Various Factors Necessary in the Study of Oil Wells," A. A. Zakharov, 5 pp

"Neftyanoye Khozyaystvo" Vol 25, No 6

Mathematical discussion with formulas and graph.

9T89

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROV, A. A. and GOEBOVSKAYA, Ye. A.

"Studying bitumens by means of the Infra-Red absorption spectra method", (Issledovaniye bitumov metodom infrakrasnykh spektrov pogloshcheniya), DAN SSSR [Reports of the Academy of Sciences, USSR], Vol. 63, No 5, 1953.

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

[illegible] 13203d.—Various fractions of bitumens were investigated via infrared absorption for constituent groups and group types. John A. Kryn[illegible]

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

VEBER, V.V., professor; GINZBURG-KARAGICHEVA, T.L.; GLEBOVSKAYA, Ye.A.; GORSKAYA, A.I.; ZAKHAROV, A.A.; MANUCHAROVA, Ye.A.[deceased]; MEKHTIYEVA, V.L.; ROMM, I.I.; SAVICH, V.G.; TALDYKINA, N.N., FOKINA, N.I.; YURKEVICH, I.A.; MIRCHINK, M.F., professor, redaktor; L'VOVA, L.A., redaktor; TROFIMOV, A.V., tekhnicheskiy redaktor.

[Accumulation and transformation of organic substances in recent sea sediments; in the light of the problem of oil origin] Nakoplenie i preobrazovanie organicheskogo veshchestva v sovremennykh morskikh osadkakh; v aspekte problemy proiskhozhdeniia nefti. Sbornik statei pod red. M.F.Mirchink. Moskva, Gos. nauchno-tekhn. izd-vo neftianoi i gorno-toplivnoi lit-ry, 1956. 342 p. (MLRA 9:6)

1.Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy institut.
2. Chlen korrespondent AN SSSR (for Mirchink)
(Sapropelites) (Marine biology) (Petroleum geology)

All Union Sci Res Geological Prospecting Inst.

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

GLEBOVSKAYA, Ye.A.; ZAKHAROV, A.A.; LAPINA, I.K.; KAPLAN, Z.G.

Absorption spectra of benzene in 5 - 6 region. VNIGRI no.105: 23-36 '57. (MIRA 11:9)

(Benzene--Spectra)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROV, A.A.

SOCHIVKO, L.F., DERNOVSKAYA-ZELENTSOVA, G.L., ZAKHAROV, A.A.

A reflex oxyhemometer with a cuvette [with summary in English]
Vop.med.khim. 4 no.3:225-229 My-Je '58 (MIRA 11:6)

1. Konstruktorsko-tekhnologicheskoye byuro "Biofizpribor," Leningrad.

(OXYGEN, in blood
determ. with reflex oxyhemometer with cuvette (Rus))

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

AUTHOR: Zakharov, A. A. Engineer SOV/119-58-10-11/19

TITLE: Radiation Thermometer for the Medium Range (Radiatsionnyy termometr srednego diapazona)

PERIODICAL: Priborostroyeniye, 1958, Nr 10, pp 25-26 (USSR)

ABSTRACT: First the principle of the operation of a radiation thermometer is explained, and the formulae holding for it are derived. The radiation thermometer RT-01 described serves for measuring the surface temperature of living tissue. The measurement of the radiation coefficient of the body is carried out by comparing it with the radiation coefficient of a body similar to the absolutely black one. The modulation principle is used in comparing the radiation of the two bodies and the zero reading. A low-inertia heat transducer is moved by means of a vibrator. On this occasion it is hit consecutively by the radiations to be compared. If the two radiations are different an a.c. signal is generated which is amplified. This signal is rectified and causes a deflection of the measuring instrument. At the same time a relay system is connected which changes the temperature of the body to be compared until

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a zero reading is achieved. The microthermoresistance MT-54 is used as a heat transducer. The whole apparatus consits of two parts which are mounted on a mobile tube frame. On top is the measuring instrument and below is the feed of the apparatus. The most important technical data are:

measuring range	15 - 45°C
measuring error for the comparison with the "black" body	± 0.3°C
measuring error on a change of the room temperature by 10°C	∠ 0.3°C
inertia of apparatus	< 30 s
aperture angle	15 degrees

There are 4 figures and 4 references, 3 of which are Soviet.

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

RATUSHKOV, M.I.; ZAKHAROV, A.B.

Prevention of endogenous fires in Kuznetsk Basin mines. Bezop. truda v prom. 4 no.2:4-5 F '60. (MIRA 13:5)

1. Vostochnyy nauchno-issledovatel'skiy institut po bezopasnosti rabot v gornoy promyshlennosti.
(Kuznetsk Basin--Coal mines and mining--Fires and fire prevention)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROV, A.A.

2

37775
S/661/61/000/006/068/081
D247/D302

15.8170

AUTHORS: Konstantinova, N. G., Zhdanov, A. A., Andrianov, K. A., Sharov, M. Ya., Kyutner, M. A. and Zakharov, A. A.

TITLE: Thermostable lacquer coatings based on silico-organic polymers

SOURCE: Khimiya i prakticheskoye primeneniye kremneorganicheskikh soyedineniy; trudy konferentsii, no. 6: Doklady, diskussii, resheniye. II Vses. konfer. po khimii i prakt. prim. kremneorg. soyed., Len. 1958. Leningrad, Izd-vo AN SSSR, 1961, 296-299

TEXT: A study was made of the thermostability of several lacquer-painted materials on the basis of different film-forming substances. The silico-organic resin K-47 was modified by the use of organic polymers to give a hard, cold-drying coat of increased thermostability. The metallic surface and its preparation was found to have a great influence on the adhesion, the protective properties and the thermostability of the coatings. In the discussion, the

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

2

Thermostable lacquer coatings ... S/661/61/000/006/069/081
D247/D302

registration and technical specifications of some of the silico-organic varnishes are given. Elasticity and hardness data are also given. Coatings withstanding radioactive irradiation are mentioned. Comparison of the properties of silico-organic and other enamels are made, and methods of preparing surfaces before application of the enamels are mentioned. The best thermostability recorded was for a duration of 150 hours at 500°C. A discussion followed in which P. A. Filippov (Leningrad) took part.

X

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

S/096/62/000/006/002/011
E193/E383

AUTHORS: Zakharov, A.A., Candidate of Technical Sciences and Kolodkina, T.A., Engineer

TITLE: The effect of geometrical imperfections on creep resistance of tubes subjected to internal pressure

PERIODICAL: Teploenergetika, no. 6, 1962, 16 - 20

TEXT: The object of the present investigation was to study the effect of the variation of the wall thickness and degree of ovality of boiler tubes on their resistance to fracture under stresses due to internally applied pressure. The experimental materials included: pearlitic steel 12 (12M) (12KhMF (12MKhF)) and austenitic steels 1X13 16 (694)(1Kh13N16B(EI694)) and 1 18 9 (1Kh18N9T). The tubular test pieces were prepared by machining (drilling), various degrees of wall-thickness variation being attained by shifting the centre of the bore in relation to the centre of the outer circumference. The outside diameter of the tube varied between 28 and 16 mm, the wall thickness varying between 6 and 1.5 mm. The relative degree of wall-thickness

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nonuniformity b was calculated from:

$$b = \frac{s_{max} - s_{min}}{2s_{av}} \cdot 100\% \qquad (1)$$

where s_{max} is the greatest wall thickness,
s_{min} is the smallest wall thickness and
s_{av} average wall thickness.

Oval test pieces were prepared by compressing round tubes; the relative (initial) degree of ovality a_o was obtained from:

$$a_o = \frac{D_{max} - D_{min}}{D} \qquad (2)$$

where D_{max}, D_{min} and D denote, respectively, the greatest, smallest and average outer diameters of the oval tube.

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The creep tests were carried out at 600 and 700 °C, nitrogen being used to exert the internal pressure on the test pieces. After fracture the final degree of ovality a and the elongation on the circumference ε were calculated from the measured dimensions of fractured test pieces. In the case of round tubes with nonuniform wall thickness, the stress (σ_{np}) acting on the tube subjected to internal pressure p was calculated from three different formulae, namely: for a given outside diameter and average wall thickness:

$$\sigma_{np} = \frac{p(D - S_{av})}{200s_{av}} \quad (3);$$

for a given outside diameter and minimum wall thickness:

$$\sigma_{np} = \frac{p(D - s_{min})}{200s_{min}} \quad (4);$$

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for a given internal diameter and minimum wall thickness:

$$\sigma_{\min} = \frac{p(d + s_{\min})}{200 s_{\min}} \quad (5) .$$

The stress, acting on oval tubes, was calculated from:

$$\sigma_{\max} = \frac{p(D - s)}{200 s} \quad (6) ,$$

where D is the average outside diameter and
s is the nominal wall thickness.

The results of the first series of experiments, conducted on tubular specimens both with and without geometrical imperfections and on cylindrical test pieces showed that the effect of variation of wall thickness (within the investigation range of $\delta \leq 35\%$) on the resistance of tubes to creep under a stress

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due to internal pressure can be satisfactorily revealed if formula (5) is used to calculate the applied stress. The effect of the degree of ovality is demonstrated in Fig. 2, where σ_{OB}/σ_{kp} ratio (σ_{OB} is the breaking stress for an oval tube, σ_{kp} is the stress under which a round tube fractured in the same time) is plotted against the degree of ovality (a_o, %), the upper and lower curves relating to steels 12KhMF and 1Kh18N9T, respectively. It was found that oval tubes of steel 1Kh18N9T always fractured along lines joining the ends of the small axis of the oval (i.e. in the region of smallest curvature), whereas the location of fracture of the pearlitic-steel specimens was distributed at random and the initially oval test pieces of this steel became almost perfectly round prior to fracture. Formulae are derived in the last paragraph of the present paper for corrections which should be applied in design calculations of boiler tubes. It is shown that when the variation in wall thickness only is taken into account, the correction λ to be added to the minimum wall thickness of the

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tube can be calculated from the formula:

$$\frac{c}{s_o} = \frac{\Delta/s}{\beta\left(1 - \frac{\Delta}{s}\right)} \qquad (10)$$

where s_o is the minimum wall thickness,
s the nominal wall thickness,
Δ the wall-thickness tolerance ($\pm$) and
$\beta = D/(D - 2s)$.

The correction c , allowing for the effect of both the variation in wall thickness and the degree of ovality, can be calculated from:

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$$\frac{c_o}{s_o} = \frac{(\beta + 1)(1 - z)}{2\beta z} \qquad (13)$$

where

$$z = \frac{\sigma_{OB}}{\sigma_{kp}} = f(a_o)$$

can be found from experimental data (e.g. Fig. 2). The values of c, calculated for pearlitic-steel tubes from the results of the present investigation for $\beta \geq 1.3$, were found to be lower than those quoted in the Soviet Standard Specifications. There are 2 figures and 6 tables.

ASSOCIATION: Tsentral'nyy kotloturbinnyy institut (Central Boiler-turbine Institute)

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L 47131-66 EWT(1)/EWT(m)/EWP(j) WW/JW/GG/RM

ACC NR: AR6013648 SOURCE CODE: UR/0058/65/000/010/E005/E005

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B

AUTHOR: Zakharov, A. A.; Yakovlev, V. F.

REF SOURCE: Uch. zap. Mosk. obl. ped. in-ta, v. 147, 1964, 45-54

TITLE: An attempt to establish an approximation theory for the liquid state. II

SOURCE: Ref. zh. Fizika, Abs. 10E28

TOPIC TAGS: liquid state, approximation method

TRANSLATION: The values of C_i, C_{pi}, γ_i, C_v, $\gamma=C_p/C_v$ for mercury and a number of organic liquids (benzene, chlorobenzene, bromobenzene, toluene, p-xylene, cyclohexane, carbon tetrachloride, chloroform and n-hexane) were obtained using a model of the ideal thermal state of liquids and known tabulated values of C_p (C_p is the heat capacity at constant pressure). Here, C_i is heat capacity at constant internal volume, $\gamma_i=C_{pi}/C_i$ is the adiabatic change of internal volume, and C_{pi} is heat capacity at constant internal pressure. For organic liquids, γ_i does not differ appreciably from unity. Calculations made for toluene showed that γ_i decreases slightly with an increase in temperature. Theoretical equations are obtained which enable one to calcu-

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late the heat capacities of mono- and polyatomic liquids. The heat capacity of mercury calculated from these equations is in satisfactory agreement with known experimental data in the broad temperature range of 0-500°C. The agreement is somewhat worse for liquid metals (sodium, lead, bismuth, tin and potassium), but nevertheless quite satisfactory. For polyatomic organic liquids (carbon tetrachloride, toleune and benzene) the agreement with experimentally obtained heat capacity data is very good. Ye. Prokop'yev.

SUB CODE: 20/ ~~SUBM DATE: none~~

Card 2/2 afs

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROV, A.A., kand.tekhn.nauk; IVANOV, A.A., inzh.

Effect of ovality on the long-term strength of bent pipes. Energomashinostroenie 9 no.6:33-34 Je '63. (MIRA 16:9)

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CHERNYSHEV, M.A., prof.; BASILOV, V.V., inzh., retsenzent; ZAKHAROV, A.A., inzh., retsenzent; PAL'CHUN, P.S., inzh., retsenzent; SERGEYEVA, A.I., inzh., red.; USENKO, L.A., tekhn.red.

[Arrangement, maintenance and repair of tracks] Ustroistvo, soderzhanie i remont puti. 2. perer. izd. Moskva, Transzheldorizdat, 1963. 466 p. (MIRA 17:2)

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ZAKHAROV, A.A.

New type of shoe machinery manufactured in the German Democratic Republic. Kozh.-obuv. prom. 5 no.6:42-43 Je '63.
(MIRA 16:6)

(Germany, East--Shoe machinery)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

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ZAKHAROV, A.A.; ZVER'KOV, B.V.; PLATONOVA, N.G.

Device for testing specimens for long-period strength in bending in tensile-testing machines. Zav.lab. 28 no.8:1005-1006 '62. (MIRA 15:11)

1. TSentral'nyy kotloturbinnyy institut imeni I.I.Polzunova.
(Testing machines)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROV, A.N., Cand Tech Sci -- (diss) "Investigation of the effectiveness of the applicable method for the safety filling of depleted, steep, sharply-falling strata of the Kuzbas," Moscow, 1960, 18 pp (Institute of Mining Activity, AS USSR) (KL, 26-60, 114)

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROV, A.B.; MILLER, Yu.A.; BELYY, K.A.

Improving measures of fire prevention in Kuznetsk Basin mines. Ugol' 33 no.2:11-16 F '58. (MIRA 11:2)

1. Vostochnyy nauchno-issledovatel'skiy institut.
(Kuznetsk Basin--Coal mines and mining--Fire and fire prevention)

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ZAKHAROV, A.B.; MOISEYEV, V.A.

Fire hazards of the shield mining method. Ugol' 36 no.3:11-14 Mr '61. (MIRA 14:5)

(Coal mines and mining--Fires and fire protection)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROV, A.B., gornyy inzh.

Duration of preventive silting in mines of the Prokop'yevsk-Kiselevsk region. Vop. bezop. v ugol'. shakh. 1:14-30 '59. (MIRA 17:12)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

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ZAKHAROV, A.B., inzh.; MOISEYEV, V.A.

Fire hazard in the shield mining system in relation to the area of its use. Nauch. soob. VostNII no.1:68-73 '61.
(MIRA 18:5)

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ZAKHAROV, A.B.; TOMSHEV, V.G.

Causes of endogene fires in the use of a new technology for coal drawing in the Prokop'yevsk-Kiselevsk region of the Kuznetsk Basin. Ugol' 40 no.8:68-69 Ag '65. (MIRA 18:8)

1. Vostochnyy nauchno-issledovatel'skiy institut po bezopasnosti rabot v gornoy promyshlennosti.

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ZAKHAROV, A. D.

"A Method of Inscribing Glass and Porcelain," Zavodskaya Laboratoriya, Vol. 18, No. 5, p 636, 1952.

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AKHLYNOV, I.Ya.; BASALAYEV, V.N.; DANILENKO, O.T.; ZAKHAROV, A.D.; OL'KHOVSKIY, V.Ye.; YAKOVLEV, V.I.; KUZ'MINA, V.S., red.

[Manual for navigators of fishing fleets; navigation of fishing boats and sea fishery practices] Spravochnik rudoveditelia rybolovnogo flota; promyslovaia navigatsiia i morskaia promyslovaia praktika. Moskva, Pishchevaia promyshlennost', 1965. 194 p. (MIRA 18:9)

1. Glavnoye upravleniye rybnoy promyshlennosti Azovo-Chernomorskogo basseyna (for Basalayev). 2. Polyarnyy nauchno-issledovatel'skiy institut rybnogo khozyaystva i okeanografii (for Danilenko). 3. Murmanskoye vysshiye morekhodnoye uchilishche (for Yakovlev). 4. Gosudarstvennaya inspektsiya bezopasnosti mareplavaniya i portovogo nadzora flota rybnoy promyshlennosti SSSR (for Zakharov).

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ZAKHAROV, A.F.

Comparative study on the effectiveness of vaccinating rabbits with living and killed tissue of Brown-Pearce tumor. [with summary in English]. Biul.eksp.biol. i med. 45 no.2:105-107 F'58. (MIRA 11:5)

1. Iz otdela immunobiologii (zav.- deystvitel'nyy chlen AMN SSSR prof. N.N. Zhukov-Verezhinkov) Instituta eksperimental'noy biologii (dir.- prof. I.N. Mayskiy) AMN SSSR, Moskva.
(NEOPLASMS, immunology.
Brown-Pearce tumor, immunol. reactions in rabbits to living & killed tissue vacc. (Rus))

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ZAKHAROV, A. F.: Master Med Sci (diss) -- "A study of immunity developing in the resorption of experimental tumors". Moscow, 1958. 13 pp (Acad Med Sci USSR), 200 copies (KL, No 7, 1959, 129)

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2515. **The effect of specific vaccination on metastasis of Brown-Pearce tumour (Russian text)** ZAKHAROV A. F. Inst. of Exp. Biol., USSR Acad. of Med. Scis, Moscow *Byull. Eksper. Biol. i Med.* 1958, 46/10 (78–83) Graphs 3 Tables 1

Rabbits were vaccinated by living tumour cells inoculated s.c. into the pinna. This was done at different stages of development of the main tumour, which had been transplanted into the testicle. Vaccination carried out simultaneously with the transplantation of the tumour prevented the development of postoperative metastases in the majority of the rabbits. Vaccination on the 8th day of the development of the tumour (after the removal of the testicle inoculated with the tumour) had almost no effect.

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZHUKOV-VEREZHINIKOV, N.N.; ZAKHAROV, A.F.

Agammaglobulinemia, its practical and theoretical significance. Pediatriia 38 no. 7:6-11 Jl '60. (MIRA 14:1)
(GAMMA GLOBULIN)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROV, A.F.

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AUTHORS: Zhukov-Verezhnikov, N.N., Mayskiy, I.N., Yazdovskiy, V.I., Pokhov, A.P., Gyurdzhian, A.A. Nefed'yeva, N.P., Kapichnikov, M.M., Podoplelov, I.I., Rybakov, N.I., Klemparskaya, N.N., Klimov, V.Yu., Novikov, S.N., Novikova, I.S., Petrov, R.V., Sushko, N.G., Ugryumov, Ye.P., Fedorova, G.I., Zakharov, A.F., Vinogradova, I.N., Chamova, K.G. and Buyko, Ye.A.

TITLE: The results of the first microbiological and cytological experiments in Space in Earth satellites

SOURCE: Akademiya nauk SSSR. Iskusstvennyye sputniki Zemli. no. 11. Moscow, 1961. Rezul'taty nauchnykh issledovaniy, provedennykh vo vremya poletov vtorogo i tret'yego kosmicheskikh korabley-sputnikov, 44 - 67

TEXT: The authors report the results of their investigations of biological objects which had been exposed to space conditions in satellite vehicles. The first part of the work was devoted to a study of the survival of cells of differing levels of organisation under the influence of radiation and other

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unfavourable factors, in comparison with control materials which remained in the laboratory over the same period. In experiments with bacteria 2ml. samples of suspensions of Escherichia coli, Aerobacter aerogenes, Staphylococcus aureus and Clostridium butyricum containing 500 million organisms or spores per ml., were sealed in ampoules, and exposed to a space flight of unstated duration; the number of viable individuals after the exposure did not differ significantly from the values for the control samples. A similar experiment was carried out with the T2 phage of E. coli and the 1321 phage of A. aerogenes, which were sent in the second satellite; again, no sigificant reduction in the titre of the phage preparations could be detected after return from space. Similar results were obtained with preparations of phage sent into space in the fourth and fifth satellites. Two bottles and six tubes of HeLa cells, some of which were saturated with oxygen, were exposed to space flight

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conditions, after it had first been shown that vibration and acceleration did not detach the cells from the glass. The cultures without oxygen appeared normal on return, whereas in those exposed to oxygen most of the cells had degenerated. Subculture showed that 90% of the cells, whether detached from or remaining on the glass, were dead; however, two tubes gave good growth, and the cells which grew up showed no abnormalities of morphology. No antigenic differences could be detected in the cells in anaphylaxis and desensitization experiments in guinea-pigs. In subsequent space flights fibroblast and human amnion cell cultures were studied, with similar results. Pieces of human and rabbit skin were also used. On August 12th 1960 two pieces of skin 2.5 x 3.5 cm. in size and 0.5 mm. thick were taken from a human donor, placed in Hanks solution and sent into space in the second satellite. On recovery they were regrafted on the original site in the donor and became firmly attached after seven days.

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Similar results were obtained with two other donors. An apparatus was devised for making a subculture in space, in order to study the ability of bacteria to multiply under space conditions. In experiments with Glostridium butylicum no deviations from the controls were observed. The second part of the work was devoted to a study of possible genetic effects brought about by exposure to space conditions, mainly by looking for the production of auxotrophic mutants and lysogeny in bacteria. The former were detected by inoculation on a layer of minimal medium which was then covered with an overlay of the same medium in order to fix the colonies. When the latter had grown up their position was noted and an overlay of complete medium was then put on, and the colonies which then grew up as a result of the diffusion of essentialnutrients were selected as auxotrophic mutants. No such mutants could be found in suspensions of Escherichia coli recovered from the second satellite. The experiments on the induction of lysogenic bacteria were carried out on a strain of E. coli lysogenized by a λ phage which had been exposed to cosmic

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radiation in the fifth satellite. Free phage particles were removed by adding phage antiserum; after the end of the latent period the action of the antiserum was cut short by diluting 1:100, streptomycin was added to inhibit the host organisms, and the mixture was plated out on the indicator strain in order to count the phage particles produced. The results obtained, considered in comparison with control experiments, provided no evidence of induction by cosmic radiation during a space flight of ninety minutes. No difference was observed in the plaque morphology. No changes could be detected in the chemical and physical properties of calf thymus deoxyribonucleic acid recovered after a space flight. The results as a whole indicate that no damage was suffered by isolated cells during a brief exposure to space conditions. There are 6 figures and 10 tables.

SUBMITTED: May 23, 1961

Card 5/5

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROV, A.F.

Role of the lymph nodes in acquired antitumorous immunity. Report No.1: Changes in regional lymph nodes following homotransplantation of Brown-Pearce tumors. Biul. eksp. biol. i med. 52 no.7:89-95 Jl '61. (MIRA 15:3)

1. Iz otdela immunobiologii (zaveduyushchiy - deystvitel'nyy chlen AMN SSSR N.N. Zhukov-Verezhnikov) Instituta eksperimental'noy biologii (direktor - prof. I.N. Mayskiy) AMN SSSR, Moskva. Predstavlena deystvitel'nym chlenom AMN SSSR N.N. Zhukovym-Verezhnikovym.

(CANCER) (LYMPHATICS)

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROV, A.F. (Moskva)

Some problems of cultivation in vitro in connection with the development of the genetics of the somatic cells of mammals and man. Usp. sovr. biol. 56 no.[illegible] [illegible] (MIRA [illegible])

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROV, A.F.; UGRYUMOV, Ye.P.; PODOPLELOV, I.I.

Conditions for the growth of cells cultured in vitro in the form of isolated colonies. Biul. eksp. biol. i med. 55 no.3:91-96 Mr '63. (MIRA 18:2)

1. Iz otdela immunobiologii (zav. - deystvitel'nyy chlen AMN SSSR N.N. Zhukov-Verezhnikov) Instituta eksperimental'noy biologii (direktor - prof. I.N. Mayskiy) AMN SSSR, Moskva. Submitted June 11, 1962.

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PODOPIEJOV, I.I.; UGRYUMOV, Ye.P.; ZAKHAROV, A.F.; ROSLYAKOVA, N.A.

Experiments on immunization of horses by HeLa strain cell cultures. Biul. eksp. biol. i med. 58 no.8:85-87 Ag '64. (MIRA 18:3)

1. Otdel immunobiologii (rukoveditel' - deystvitel'nyy chlen AMN SSSR prof. N.N. Zhukov-Verezhnikov) Instituta eksperimental'noy biologii (dir. - prof. I.N. Mayskiy) AMN SSSR, Moskva. Submitted July 8, 1963.

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ZAKHAROV, A.F.

Pumping action of rotating turbine disks. Trudy KAI 26:89-103 '52.
(Gas turbines) (Disks, Rotating) (MLRA 10:6)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROV, A. F.

Dissertation: "Investigation of the Pumping Effect of Rotating Disks." Cand Tech Sci, Kazan' Aviation Inst, Kazan', 1954. Referativnyy Zhurnal--Mekhanika, Moscow, May 54

SO: SUM 284, 26 Nov 1954

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001963520004-1

ZAKHAROV, A.F.

133-8-1/28

AUTHORS: Bardin, I.P. (Academician), Trekalo, S.K. (Cand.Tech.Sci.), Zakharov, A.F. (Eng.), Khil'kevich, F.A. (Eng.), and Lazarev, B.L. (Eng.)

TITLE: Smelting of basic pig iron with oxygen enriched blast. (Vyplavka peredel'nogo chuguna na dut'ye, obogashchennom kislorodom).

PERIODICAL: "Stal'" (Steel), No.8, 1957, pp.673-684 (USSR).

ABSTRACT: The influence of oxygen enriched blast on the operation of a large blast furnace with a normal profile operating on a prepared burden was investigated. The profile of the furnace is given in Fig.1. The preparation of burden materials is described, their chemical composition during the individual operating periods and physical properties of coke used are given in Tables 1 and 2 respectively. The mean composition of the burden, furnace lining (Fig.2), the composition of pig and top pressure during the individual operating periods was practically the same.

The following operating periods are considered:

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Smelting of basic pig iron with oxygen enriched blast. (Cont)

Period	Date	Oxygen content in blast, %
I	1.4-30.6	21.0
II	25.7-30.7	22.19
III	31.7-10.8	23.30
	20. -22.8	
IV	11.8-19.8	24. 0
V	1.9-28.9	21. 0

The operating results obtained during the individual periods are given in Table 3. Operating conditions during the last period V deteriorated due to the formation of a scaffold and deterioration in the state of charging equipment, therefore this period was excluded from further comparison. Daily variations of basic operating factors during the smelting of iron with normal and oxygen enriched blast are shown in Figs.3 and 4 respectively. The influence of oxygen enrichment on the amounts of blast and gas made, CO content in gas and gas made to blast ratio is shown in Fig.5. The comparison of the intensification of the smelting process when using oxygen enrichment under conditions of (a) constant amount of blast and (b) constant amount of gas made per unit time is shown in Fig.6. Material balances

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