"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

32630

Determination of sulfur ...

S/137/61/000/011/120/123
A060/A101

of S and the distillation of H_2S proceeds for 2 hrs. The CdS precipitate is dissolved in a mixture of 10 - 15 ml of 0.005 N solution of I_2 and 10 ml of HCl (1:1), and the solution is titrated with a 0.003 N solution of Na thiosulfate. The determination of S in WO_3 and MoO_3 is also carried out by starting out with the process of S reduction in an alcohol medium. The precision of the determination constitutes $3 \cdot 10^{-4}$ g S. There are 5 references.

B. Melent'yev

[Abstracter's note: Complete translation]

Card 2/2

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

S/137/62/000/001/236/237
A154/A101

AUTHORS: Shcherbakov, V. G., Yurkevich, Yu. N., Besproskurnov, G. G.

TITLE: Using the radioactive isotope of phosphorus P^{32} to test the colorimetric method of determining phosphorus in tungstic anhydride

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 1, 1962, 13, abstract 1K84 ("Sb. tr. Vses. n.-i. in-t tverdykh splavov", 1960, no. 3, 37 - 43)

TEXT: The colorimetric method of determining P was tested by introducing the radioactive isotope P^{32} into tungstic anhydride and observing its behavior in the process of chemical analysis. It was established that the losses of P with the insoluble remainder are $<3\%$, and that $\sim 3\%$ of P is also lost with the WO_3. It was shown that the relative error is $<15\%$ when using this method to determine small amounts of P.

L. Vorob'yeva

[Abstracter's note: Complete translation]

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

S/081/62/000/004/031/087
B149/B101

AUTHORS: Shcherbakov, V. G., Anikeyeva, N. P., Ignatova, A. Ya., Magala, T. Z.

TITLE: A method of spectral analysis of impurities in metallic molybdenum of high purity

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 4, 1962, 151, abstract 4D149 (Sb. tr. Vses. n.-i. inst tverdykh splavov, no. 3, 1960, 56 - 63)

TEXT: A method of determining Pb, Sn, Bi, Sb, Cd, As, Ni, Zn, Cu, Fe, Al, Si, and Mg in molybdenum and molybdenum anhydride was worked out. The main feature of the method is fractional evaporation of the elements and excitation of their spectra. Metallic molybdenum is converted into molybdenum oxide MoO_3 by heating it in a muffle furnace at 550 - 600°C, the oxide is mixed with powdered carbon in the ratio 4:1. 130 mg of the mixture are placed in a carbon crucible with a lid. A carbon rod (the receiver) is fixed at a distance of 2 mm above the crucible. The crucible

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is heated in an arc up to 1900°C for one minute (60 sec exposure). This causes evaporation of the impurities, which are deposited on the receiver and are determined afterwards by the usual method with an ИСП-22 (ISP-22) spectrograph. Systematic errors are decreased by the introduction of an internal standard of Ge (GeO_2, 0.15% of the weight of the carbon powder).

A version of the method of determining Fe, Al, Si, and Mg only, provides the choice of the size of the carbons, the type of photoplates, and the conditions of photographing the spectra in a d. c. arc. [Abstracter's note: Complete translation.]

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

SHCHERBAKOV, V.G.; STEGENDO, Z.K.

Determination of titanium, tantalum, and niobium in carbide mixtures. Zav.lab. 26 no.2:139-142 '60. (MIRA 13:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut tverdykh splavov.

(Titanium--Analysis)
(Tantalum--Analysis)
(Niobium--Analysis)
(Carbides)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

35052
S/700/61/000/006/005/018
D217/D304

21240C

AUTHORS: Shcherbakov, V. G., Veytsman, R. M. and Stegendo, Z. K.

TITLE: Analysis of titanium, chromium and zirconium borides

SOURCE: Akademiya nauk Ukrainskoy SSR. Institut metallokeramiki i spetsial'nykh splavov. Seminar po zharostoykim materialam. Kiyev, 1960. Trudy no. 6: Khimicheskiye svoystva i metody analiza tugoplavkikh soyedineniy. Kiyev, Izd-vo AN UkrSSR, 1961, 52-58

TEXT: The purpose of this work was to develop a simpler method for the decomposition of borides and the subsequent determination of their constituent components. The authors found that the borides and diborides of Cr, Ti and Zr are quantitatively decomposed by H_2SO_4 in the presence of H_2O_2. The experiments carried out have shown that for the complete dissolution of Ti and Zr borides in a mixture of H_2SO_4 and H_2O_2, heating until the separation of SO_3 vapors commences is sufficient; Cr borides must be dissolved for a

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further [illegible] minutes after separation of SO_3 vapors and the appearance of Cr^{3+} ion coloration. The volatility of boron was also tested under conditions in which borides were dissolved in a flask provided with a condenser and in another without a condenser. The boron content was determined quantitatively by titrating the solution with alkali in the presence of phenolphthalein and mannite. The experiments showed that in the presence of H_2O_2, no loss of boron occures due to volatilization. Thus dissolution of the borides in a mixture of H_2SO_4 and H_2O_2 can be carried out in an open flask, provided heating is discontinued at the moment at which H_2SO_4 vapors separate. If, however, further heating of the fuming sulphate solution is required for complete dissolution, a flask with a stopper and a condenser must be used, since in that case boron is lost by volatilization. The method developed by the authors for the volumetric estimation of boron in borides which does not require preliminary separation of the elements, is fully described

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Analysis of titanium ....

S/700/61/000/006/005/018
D217/D304

The possibility of volumetric complexometric determination of Zr in a solution of zirconium boride in sulphuric acid has been proved. A method for reducing titanium without amalgamation, and its subsequent determination by a reductometric method, was developed. There are 1 figure, 6 tables and 3 Soviet-bloc references.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut tverdykh splavov (All-Union Scientific Research Institute of Hard Alloys)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

S/700/61/000/006/011/018
D267/D304

AUTHORS: Shcherbakov, V. G. and Stepanov, S. K.

TITLE: Determination of titanium, tantalum and niobium in carbide mixtures

SOURCE: Akademiya nauk Ukrainskoy SSR. Institut metallokeramiki i spetsial'nykh splavov. Seminar po zharostoykim materialam. Kiyev, 1960. Trudy no. 6: Khimicheskiye svoystva i metody analiza tugoplavkikh soyedineniy. Kiyev, Izd-vo AS UkrSSR, 1961, 88-92

TEXT: This research was carried out to fill the existing gap in literature on the separation and determination of Ta, Nb, Ti and W when present simultaneously. (1) Separation of Ta, Ti and Nb from W: The method suggested is based on the different stability of the oxalate complexes of the compounds. It was found that in the presence of $(COOH)_2$, Ti, Ta and Nb are completely precipitated with NH_4 from sulfate solutions, but only if all three elements are pre-

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

S/700/61/000/006/011/018
D267/D304

Determination of titanium ...

sent, whereas about 50% of Nb is precipitated from solutions containing only Nb. When Ta, Ti and Nb were precipitated with NH_3 in the presence of oxalic and tungstic acids, the oxide precipitates contained a certain proportion of W which had to be removed to determine Ta. Consequently, to separate the sum of Ti + Nb + Ta from W it is suggested precipitating hydroxides of Ti, Nb and Ta with NH_3 in a sulfate solution in the presence of oxalic acid, (2) To determine Ti in the presence of Nb and Ta, reduction in the presence of NaF is recommended. It was also found that tartaric acid used as a complex-forming agent for preventing the reduction of Nb can be easily replaced with oxalic or citric acids. The reduced Ti was titrated with iron alum in the presence of NH_4CNS. The method was found to be accurate. (3) Determination of Ta in the presence of Ti was performed by precipitation from a sulfate solution with 8 naphthoquinoline in the presence of H_2O_2 to reduce the co-precipitation of Ti. The carbide mixture is dissolved in a mixture

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

S/799/61/000/000/011/019
D267/D304

Determination of titanium ...

of H_2SO_4 and $(NH_4)_2SO_4$. The solution is cooled, oxalic acid and water are added and Ti and Ta are precipitated with an excess of NH_3. The precipitate is coagulated, filtered, washed, ignited and dissolved in $H_2SO_4/(NH_4)_2SO_4$. The solution is cooled and diluted with water after which alc. β-naphthoquinoline is added. After 3 - 4 minutes H_2O_2 is added, the whole is mixed thoroughly and left for 4 hours. The precipitate is filtered, washed, dried and ignited. It is then dissolved in $H_2SO_4 + (NH_4)_2SO_4$ and diluted with water. Ta is precipitated with NH_3, filtered off, dried, ignited and weighed. The relative error varied from 0 to -2.4%. (4) In determining niobium with β-naphthoquinoline, it was found that Nb is precipitated quantitatively from sulfate solutions which contain no more than 1.5% (by volume) of H_2SO_4. On the other hand, if this reagent is used to precipitate the sum Nb + Ta, then the acidity of the solution should not be less than 2% (with respect to H_2SO_4).

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as otherwise the Ta compound is hydrolyzed. With precipitating Nb + Ta one should not add H_2O_2. Determination of Nb + Ta by means of 8-naphthoquinoline is sufficiently accurate. There are 5 tables and 10 Soviet-bloc references.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut tverdykh splavov (All-Union Scientific Research Institute of Hard Alloys)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

S/700/61/000/006/013/018
D267/D304

AUTHORS: Yurkevich, Yu. N. and Shcherbakov, V. G.

TITLE: Method of determining oxygen in titanium carbide

SOURCE: Akademiya nauk Ukrainskoy SSR. Institut metallokeramiki i spetsial'nykh splavov. Seminar po zharostoykim materialam. Kiyev, 1960. Trudy no. 6: Khimicheskiye svoystva i metody analiza tugoplavkikh soyedineniy. Kiyev. Izd-vo AS UkrSSR. 1961, 101-108

TEXT: The authors studied the reaction $TiO_2 + 3C \rightarrow TiC + 2CO$ with the aim of finding the conditions at which oxygen can be completely separated, by measuring the quantity of CO separated. The apparatus used was that developed and constructed at the TsNIIChERMET. The charge was obtained by ball-milling purified TiO_2 with lampblack for 48 hours. The TiC specimens used were obtained in powder form and were analyzed for Ti, total and free C. The reaction was studied without pumping. To measure the amount of gas separated during

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S/700/61/000/006/013/018
D267/D304

Method of determining ...

the reaction the apparatus was pumped down to 10^{-5} mmHg, the pump was disconnected and the mixture TiO_2 + 3C in a cartridge was put into the furnace heated to the desired temperature, in which it was kept for 60 minutes. It was found that in all cases a constant pressure was established. After cooling, the separated gas was pumped off from the reaction space and analyzed for O_2. The amounts of CO obtained during carbidization at various temperatures between 1180 and 1950°C were determined. The reaction is very slow at 1200°C, but from 1350°C the amount of CO obtained is quite considerable, and only depends little on temperature. When measuring the time-dependence of the pressure developed by the overall reaction, it was found that the time required for establishment of constant pressure increases with the sample weight. Since it is impossible to eliminate the whole of the O_2 in the form of CO by merely raising the temperature of carbonization, it is necessary to remove the CO formed in order to shift the reaction towards the formation of TiC. The reaction virtually does not take place at 1820°C, whereas

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Method of determining ... S/100/61/000/006/013/018
D267/D304

at 1289°C about 300 ml of CO evolves, and at 1800 - 1900°C the difference between experimental and theoretical values does not exceed the experimental error. Consequently, the following conditions were chosen for determining O_2 in TiC: pumping down to 1 - 2 x x 10^{-5} mmHg, and a temperature of 1800 - 1850°C. TiC sample with ~10% lampblack was ground with some EtOH and put into the graphite boat. The furnace was degassed down to 1 - 2 x 10^{-5} mmHg at >2000°C and the temperature was lowered to ~1800°C. The blank correction of the apparatus was determined, and the cartridge with the sample was dropped into the furnace. The evolving gases were collected and analyzed for O_2. The results are discussed. There are 5 figures, 4 tables and 16 references: 10 Soviet-bloc and 6 non-Soviet-bloc. The reference to the English-language publication reads as follows: B. Beckmann, J. Amer. Chem. Soc., 52, 3956, (1930).

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut tverdykh splavov (All-Union Scientific Research Institute of Hard Alloys)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

S/700/61/000/006/015/018
D267/D304

AUTHORS: Shcherbakov, V. G. and Anikeyeva, N. P.

TITLE: Spectrum analysis of high-purity tungsten and molybdenum

SOURCE: Akademiya nauk Ukrainskoy SSR. Institut metallokeramiki i spetsial'nykh splavov. Seminar po zharostoykim materialam. Kiyev, 1960. Trudy no. 6: Khimicheskiye svoystva i metody analiza tugoplavkikh soyedineniy. Kiyev, Izd. vo AN UkrSSR, 1961, 114-120

TEXT: The authors used two methods: 1) The method of fractional distillation in d.c. arc, and 2) the method of physical enrichment of the sample by means of an evaporating apparatus. In the case of W, the first method was used for determining the Fe, Al, Si, As, Mg, Cu, Zn, Ni, Cr impurities in WO_3, H_2WO_4, $(NH_4)_6W_7O_{24}$, and W metal. The second method, developed by Professor Mandel'shtam, was applied to determining admixtures of Pb, Sn, Cd, Bi and Sn in WO_3.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

YURKEVICH, Yu.N.; SHCHERBAKOV, V.G.

Determination of small amounts of sulfur in tungsten and molybdenum. Zhur.anal.khim. 16 no.5:617-619 S-O '61. (MIRA 14:9)

1. All-Union Scientific Research Institute of Hard Alloys, Moscow. (Sulfur--Analysis) (Tungsten--Analysis) (Molybdenum--Analysis)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

S/032/63/029/003/004/020
B117/B186

AUTHORS: Tumanov, V. I., Trukhanova, Z. S., Funke, V. F., and Shcherbakov, V. G.

TITLE: Electrochemical separation and investigation of the cementation and the carbide phases of high tungsten cobalt alloys

PERIODICAL: Zavodskaya laboratoriya, v. 29, no. 3, 1963, 277-280

TEXT: To determine the composition of the binding phase in WC - Co alloys it was suggested to separate electrochemically the binding and the carbide phase, and to analyze chemically the alloying components. Caustic soda and hydrochloric acid solutions were used as electrolytes and spectroscopically pure graphite electrode as cathode for the electrochemical phase separation. The polarization curves plotted for pure WC and Co at 25°C showed: In 3 M HCl solution, Co dissolves intensely at an anode potential of ~0.1 v and a current density of 0.03 a/cm^2. The anode potential of WC is 0.5 v without voltage applied. When the potential increases to 1.1 - 1.2 v, gaseous chlorine is

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separated out and the carbide oxidizes. In 6 M NaCl solution the anode potentials of Co and WC are 0.5 and 0.20 v without voltage being applied. At ~ 0.6 a/cm^2, an intensive discharge of oxygen occurs at the WC anode. WC oxidizes to WO_3, and decomposes to sodium tungstate at ~ 0.8 v. On the Co anode, oxygen is separated out at ~ 0.8 v, and the anode becomes passive. The difference in anode potentials of WC and Co permits the electrochemical separation of the binding and the carbide phase. In electrolytes of different concentrations the WC and Co phases could be dissolved selectively even at high current densities. Optimum conditions for isolating the binding and the carbide phase: for the Co phase, 6 M HCl, 0.03 a/cm^2, electrode voltage 0.8 - 0.9 v; for the WC phase, 6 M NaOH, 0.6 a/cm^2, and 3 v. The method was used to separate the phases mentioned in WC - Co alloys containing molybdenum, chromium, and aluminum. The phase composition and the lattice constant of the Co phase in alloys containing less than 4% by weight of Co could be determined by electrolytic enrichment with Co of the alloy surface. There are 2 figures and 4 tables.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut tverdykh splavov (All-Union Scientific Research Institute of High Alloys)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

AGALINA, M.S., inzh.; AKUTIN, T.K., inzh.; APRESOV, A.M., inzh.; ARISTOV, S.S., kand. tekhn. nauk,; BELOSTOTSKIY, O.B., inzh.; BERLIN, A.Ye,,inzh.; BESSKIY, K.A., inzh.; BLYUM, A.M., inzh.; BRAUN, I.V., inzh.; BRODSKIY, I.A., inzh.; BURAKAS, A.I.,inzh.; VAYNMAN, I.Z., inzh.; VARSHAVSKIY, I.N.,inzh.; VASIL'YEVA, A.A.,inzh.; VORONIN, S.A.,inzh.; VOYTSEKHOVSKIY, L.K., inzh.; VRUBLEVSKIY, A.A.,inzh.; GERSHMAN, S.G., inzh.; GOLUBYATNIKOV, G.A.,inzh.; GORLIN, M.Yu., inzh.; GRAMMATIKOV, A.N., inzh.; DASHEVSKIY, A.P.,inzh.;DIDKOVSKIY, I.L., inzh.; DOBROVOL'SKIY, N.L.,inzh.; DROZDOV, P.F.,kand. tekhn. nauk,; KOZLOVSKIY,A.A.,inzh.; KIRILENKO, V.G.,inzh.; KOPELYANSKIY, G.D.,kand. tekhn. nauk,; KORETSKIY, M.M.,inzh.; KUKHARCHUK, I.N.,inzh.; KUCHER, M.G.,inzh.; MERZLYAK, M.V.,inzh.; MIRONOV, V.V.,inzh.; NOVITSKIY, G.V.,inzh.; PADUN, N.M.,inzh.; PANKRAT'YEV, N.B , inzh.; PARKHOMENKO, V.I.,kand. biol. nauk,; PINSKIY, Ye.A.,inzh.; PODLUBNYY, S.A., inzh.; PORAZHENKO, F.F.,inzh.; PUZANOV, I.G.,inzh.; REDIN, I.P.inzh.; REZNIK, I.S.,kand. tekhn. nauk,; ROGOVSKIY, L.V.,inzh.; RUDERMAN, A.G.,inzh.; RYBAL'SKIY, V.I.,inzh.; SADOVNIKOV, I.S.,inzh.; SEVER'YANOV, N.N.,kand. tekhn. nauk,; SEMESHKO, A.T.,inzh.; SIMKIN, A.Kh., inzh.; SURDUTOVICH, I.N.,inzh.; TROFIMOV, V.I.,inzh.; FEFER, M.M.,inzh.; FIALKOVSKIY, A.M.,inzh.; FRISHMAN, M.S., inzh.; CHERESHNEV, V.A., inzh.; SHESTOV, B.S., inzh.; SHIFMAN, M.I., inzh.; SHUMYATSKIY, A.F.,inzh.; ~~SHCHERBAKOV, V.~~I.,inzh.; STANCHENKO, I.K., otv. red.; LISHIN, G.L.,inzh.,red.; KRAVTSOV,Ye.P., inzh.,red.; GRIGOR'YEV, G.V.,red.; KAMINSKIY, D.N.,red.; KRASOVSKIY, I.P.,red.; LEYTMAN, L.Z., red.[deceased],; GUREVICH, M.S.,inzh.,red.; DANILEVSKIY, A.S.,inzh.,red.; DEMIN, A.M., inzh.,red.; KAGANOV, S.I.,inzh.,red.; KAUFMAN, B.N., kand. tekhn. nauk. red.; LISTOPADOV, N.P.,inzh.,red.; MENDELEVICH, I.R., inzh.,red.[deceased];

(continued on next card)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

AGALINA, M.S.... (continued) Card 2.

PENTKOVSKIY, N.I.,inzh.,red.; ROZENBERG, B.M.,inzh.,red.; SLAVIN, D.S., inzh.,red.; FEDOROV, M.P.,inzh.,red.; TSYMBAL, A.V.,inzh.,red.; SMIRNOV, L.V., red. izd-va.; PROZOROVSKAYA, V.L., tekhn. red.

[Mining ; an encyclopedic handbook] Gornoe delo; entsiklopedicheskii spravochnik. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po ugol'noi' promyshl. Vol. 3.[Organization of planning; Construction of surface buildings and structures] Organizatsiia proektirovaniia; Stroitel'stvo zdanii i sooruzhenii na poverkhnosti shakht. 1958. 497 p. (MIRA 11:12)

(Mining engineering)
(Building)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

SHCHERBAKOV, V.I., gornyy inzh.

Some shortcomings in the construction and use of cableways for waste dumping in Donets Basin mines. Ugol' Ukr. 3 no.8:46-47 Ag '59. (MIRA 12:12)
(Donets Basin--Cableways) (Donets Basin--Mine haulage)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

SHCHERBAKOV, V.I.

Improvement of BDK-TsNII-57 dispatcher control networks. Avtom., telem. i sviaz' 7 no.11:25-27 N '63. (MIRA 16:12)

1. Starshiy elektromekhanik Krasnoyarskoy distantsii signalizatsii i svyazi Vostochno-Sibirskoy dorogi.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

MIROSHNICHENKO, G.K., dots.; VASIL'YEV, A.G., kand.tekhn.nauk;
SHCHERBAKOV, V.I., inzh.; LUR'YE, D.A., inzh.

Automatizing the process of cupola charging and level control by means of radioactive isotopes. Lit.proizv. no.8:14-15 Ag '57. (MIRA 10:10)

(Cupola furnaces)
(Gamma rays--Industrial applications)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

SHCHERBAKOV, V.I.; SHUKHMAN, M.I.

Symbols used for skeleton diagrams of hydraulic and pneumatic drives in the United States. Stan.i instr. 28 no.9:29-34 S '57. (MIRA 10:10)

(United States--Signs and symbols)
(United States--Machine tools--Pneumatic driving)
(United States--Machine tools--Hydraulic driving)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

SHCHERBAKOV, V., inzh.; URYUTIN, L., inzh.

Device for automatic control of compressor lubrication. Khol. tekh. 35 no. 3:57-58 My-Je '58. (MIRA 11:7)
(Compressors)
(Automatic control)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

S/121/59/000/12/001/003

5.1500

AUTHOR: Shcherbakov, V. I.

TITLE: Air Distributors With Pneumatic Control 3

PERIODICAL: Stanki i Instrument, 1959, No 11, pp 8 - 11

TEXT: The author remarks that the remote control by air distributors is effected with the aid of auxiliary valve-type or slide valve-type air devices of relatively small dimensions. Figure 1 shows the mechanism of the most simple pneumatic drive in which an air distributor with a flat slide valve and a pneumatic control with the aid of auxiliary three-way valves is used. The author gives a detailed description of the device and points out that the starting valve plays the role of the control organ "start" and "preliminary stop". The valves in the mechanism effect the travel control of the unit parts and, therefore, they can be called, similarly to the electric motion switches, pneumatic motion controls (PMC). Figure 2 shows an air distributor, the description of which is given, while Figure 3 shows a three-way PMC and Figure 4 a starting valve. In Figure 5 the scheme of a pneumatic drive is depicted, the operation of which is described by the

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Air Distributors With Pneumatic Control S/121/59/000/12/001/003

author. As it is the case with the drive in Figure 1, also here the commands "start" and "stop" are carried out by the starting valve. Figure 6 shows a pneumatic drive scheme which differs from the one shown in Figure 1 in that way that air distributors are employed with air escape into the atmosphere from the control piping, which made it possible to replace the three-way PMC by two-way ones. The author describes the functioning of this drive. Figure 7 shows an air distributor construction which is controlled by compressed air exhaust into the atmosphere, while Figure 8 gives a general view of the two-way PMC. The control of air distributors with the aid of two-way PMC has the advantage of requiring only one pipeline for the connection of these PMC with the pneumatic system, while, on the other hand, they possess the deficiency of calling for a better filtration of the compressed air, in comparison with the three-way PMC. Figure 9 shows a differential air distributor with a three-way PMC control, and Figure 10 the application of this air distributor to impart a reciprocating motion to a piston. The author points out that an efficient operation of air distributors depends on the quality of the compressed air. The supplied compressed air should be purified

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Air Distributors With Pneumatic Control S/121/59/000/12/001/003

from moisture and fine solid particles. Besides, it is necessary to add sprayed oil to the air flow in order to ensure the lubrication of the movable parts of the pneumatic device. The described air distributors with connecting threads of K3/8" and K1/2" were designed at the ENIMS. Ten graphs.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

S/121/60/000/010/[illegible]
A004/A001

AUTHORS: Shcherbakov, V. I., Yudi'skiy, S. A

TITLE: The Designing of Pneumatic Automation Systems With Pneumatic Path Control

PERIODICAL: Stanki i Instrument, 1960, No. 10, pp. 1-5

TEXT: The authors give an account of the method developed by the ENIMS of building schematic pneumatic circuits for pneumatic automation systems. The orders determining the operation of the system are transmitted by the cylinder rods at the end points of their paths (path control). The pneumatic equipment necessary for the cycle, can be divided into order devices, control devices, intermediate and additional devices. In order to effect complex cycles with path control with the aid of pneumatic automation, the following main devices are necessary: path and separating valves, memory valves, controlling air distributors and pneumatic cylinders. Since a universal system of conventional notation of pneumatic devices does not exist, the authors suggest a conventional notation for the described method of building pneumatic circuits, which is somewhat more simplified than the semi-constructive presentation. In pneumatic circuits using

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conventional notations, cylinders, air distributors (controlling their operation) and path valves are laid out together, while order elements and control cavities of the air distributors are mapped separately. Fig. 5 shows a block diagram of such a pneumatic circuit. The authors indicate the following sequence for the designing of a pneumatic automation system: Plotting the cyclogram of cylinder operation, plotting the cyclogram of the path valve position, writing out the control orders for every cycle, inserting into a table the orders given by the path valves, the memory valves necessary, and also the orders which are not to be given at the given cylinder stroke - as well as the maintenance of this position at the end of this stroke. Then the cyclogram of the effects of the control orders has to be plotted. The orders whose execution is withdrawn have to be determined for every cycle by the table and cyclogram, and entered into the corresponding horizontal grain, while the sections of main order abolished have to be marked on the cyclogram. The possibility of abolishing the orders without introducing into the layout additional devices and of marking this on the operation cyclogram of the control orders should be used. Then the compressed-air supply lines for the valves whose orders are to be abolished have to be mapped,

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A004/A001

The Designing of Pneumatic Automation Systems With Pneumatic Pawl Control

and the number of memory valves necessary and orders controlling their switching determined. The abolishment is indicated on the operation cyclogram of the control orders. All devices and their connection should be indicated on the pneumatic circuit and the orders controlling the manifold valves determined and indicated on the circuit. There are 7 figures and 5 references: 4 Soviet and 1 US.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

POTEKUSHIN, Nikolay Vasil'yevich; SHCHERBAKOV, V.I., inzh., retsenzent; KOVALENKO, A.V., inzh., red.; DUGINA, N.A., tekhn.red.

[Economy of sheet metal] Ekonomiia listovogo metalla. Pod red. A.V.Kovalenko. Moskva, Mashgiz, 1961. 28 p. (MIRA 15:2)

(Sheet-metal work)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

ZAYCHENKO, I.Z.; MYSHLEVSKIY, L.M.; ZAYTSEVA, K.V.; KAMENETSKIY, G.I.; MAZYRIN, I.V.[deceased]; SHCHERBAKOV, V.I.; LOZHKIN, O.V.; CHIGAREVA, E.I., red.; KOVAL'SKAYA, I.F., tekhn. red.

[Development of the designs of hydraulic and pneumatic equipment and of lubrication and filtration systems for machine tools abroad] Razvitie konstruktsii gidravlicheskogo i pnevmaticheskogo oborudovaniia, smazochnykh i fil'truiushchikh ustroistv metallorezhushchikh stankov za rubezhom; obzor. Moskva, TSINTIMASH, 1961. 101 p. (MIRA 16:5)

1. Moscow. Eksperimental'nyy nauchno-issledovatel'skiy institut metallorezhushchikh stankov.
(Machine-tools--Design and construction)

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22916
S/121/61/000/007/001/004
D040/D112

281000 1089, 1068

AUTHORS: Pomerantsev, L.M., Shcherbakov, V.I., and Yuditskiy, S.A.

TITLE: Designs of pneumatic counting-memory systems

PERIODICAL: Stanki i instrument, 32 no. 7, 1961, 4-7

TEXT: The discussed pneumatic automatic control systems have been built and tested at the ENIMS pneumatics laboratory. The article presents a detailed discussion of general design principles of these systems, which are suitable for use in machines, machine tools, or automatic transfer lines. They have been described previously (Shcherbakov, V.I., and Yuditskiy, S.A., "Stanki i instrument", no. 10, 1960). A pneumatic memory unit - giving a command for actuating the work element of the machine after it has received a given number of pressure pulses - is included into the control system if the work element has to function periodically after a certain number of cycles. The interaction principle of counting-memory system elements is shown in a block diagram (Fig. 1) where the channels memorizing action pulses are marked 1_n, 2_n, 3_n, ...n_n, and the channels memorizing the return pulses - $\overline{1}_n$, $\overline{2}_n$, $\overline{3}_n$ .. $\overline{n}_n$. Π is the action pulse channel and $\overline{\Pi}$ the return pulse channel. The

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Designs of pneumatic counting-memory systems

top system in (Fig. 1) is symmetric, with only one channel for each received pulse (both action and return), and the bottom one is asymmetric and memorizes action pulses only. The "memorizing valves" are four-way air-distribution valves. Pulse amplifiers (Fig. 3) in the form of three-way valves may be used in the units for compensating pressure drop in the air lines. A weak pulse acts on the membrane (1), the membrane pushes the pusher (2), and the valve (3) opens wider and passes a high-pressure pulse from the line. The duct from the amplifier to the "memorizing valve" is connected to the atmosphere when the amplifier is in the zero position. The article includes descriptions of high-order units built up from simple counting-memory units by means of addition and multiplication operations, and calculations for determining the necessary number of valves for different arrangements. Two practical examples are given - a simple binary unit controlling the switch of a conveyer transporting parts, and a unit in a storage hopper in an automatic transfer machine giving control commands after the passage of every sixth part. There are 10 figures and 1 Soviet-bloc reference.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

S/101/62/0[illegible]/[illegible]/[illegible]
D040/D115

AUTHORS: Shcherbakov, V.I., Pomerantsev, L.M., and Yuditskiy, S.A.

TITLE: Universal pneumatic command units

PERIODICAL: Stanki i instrument, 33, no. 2, 1962, 5-10

TEXT: A new rotor-type command unit developed by ENIMS is described. Also, in connection with system combinations proposed for pneumatically controlled automatic machines which require quick settings for different operational cycles, pneumatic control units with air distributor blocks are discussed. Schematics of different operators and examples of possible control circuits are given. References are made to Soviet and English-language sources dealing with pneumatic control circuits and memory valves controlling logic circuits. One suggested control circuit corresponds to an asymmetric counting-memory unit previously described by the authors (Ref. 3: Stanki i instrument, no. 7, 1961). The new rotor-type command unit, shown in a diagram, includes a camshaft bearing a sprocket, driven by a pneumatic piston, and three-way valves actuated by the cams. It is suggested that auxiliary four-

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D040/D113

"Universal pneumatic command units

[illegible] valves should be modified in design when used in cases where damage may [illegible] caused by an unintended air pressure drop in the system. The [illegible] re-[illegible]tioned motor-type units have been developed for 12 and 24 control [illegible]. [illegible] are [illegible] figures and 10 references: 7 Soviet-bloc and 3 non-Soviet-bloc. [illegible] three English-language references are: W.L. Morrison, Pneumatic Control [illegible] "Automation Progress", no. 5, 1951; Cowherd, Design of Pneumatic [illegible] Circuits, "Product Engineering", October, 1956; Cameron, Valve [illegible] Memory Flip-Flop Logic Circuits, "Product Engineering", May 1958.

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APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

SHCHERBAKOV, V.I.

Design of pneumatic circuits with a path control. Stan.i instr. 33 no.5:3-8 My '62. (MIRA 15:5)

(Pneumatic control)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

S/876/62/000/000/005/007
E191/E481

AUTHORS: Shcherbakov, V.I., Yuditskiy, S.A.

TITLE: The application of pneumatic power to the automation of production processes

SOURCE: Proyektirovaniye i ekspluatatsiya avtomaticheskikh liniy mekhanicheskoy obrabotki. Mosk. dom nauchno-tekhn. prop. Ed. by A.P. Vladziyevskiy. Moscow, Mashgiz. 1962. 205-233

TEXT: The spread of pneumatic power in the automation of engineering production is assisted by the rapid action, simple design for complex cycles, long life, explosion-proof quality, reliable operation in a wide range of temperatures, easy mains distribution and simplicity of design and maintenance inherent in pneumatic equipment. A disadvantage is the low pressure of compressed air systems used in practice. Another disadvantage is the absence of the steady rate of displacement which is overcome by hydro-pneumatic devices. Pneumatic devices are especially useful in modernization projects. Pneumatic components are described and illustrated including pneumatic cylinders, distribution pipelines, moisture separators, pressure regulators,

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oil atomizers, decelerating (snubbing) control valves, selector valves, air operated control valves and others. Examples of pneumatic circuits are given, including a system for continuous reciprocation of a pneumatic cylinder and a pneumatic transmission with 2 cylinders. Pneumatic systems for complex automatic cycles are divided into systems with program controllers and systems with memorizing valve elements. In the first system, a controller containing a programming unit with cams provides the sequence of the cycle. After each stroke of a pneumatic cylinder, the distribution camshaft is turned and issues the subsequent control signal. In the second system, the desired sequence is ensured by pneumatic devices, such as memorizing control valves and selector valves and by the use of limit valves with pneumatic return. Examples are illustrated and described for each of the two systems. A design procedure is given in detail for the two-cylinder pneumatic drive. There are 19 figures and 2 tables.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

PUTYAGO, Yuriy Sergeyevich; SOKOLOV, A.G., retsenzent; SHCHERBAKOV, V.I., retsenzent; KITAYENKO, G.I., nauchn. red.; KVOCHKINA, G.P., red.; KONTOROVICH, A.I., tekhn. red.

[Manual for ship electricians] Spravochnik sudovogo elektromontazhnika. Leningrad, Sudpromgiz, 1963. 672 p. (MIRA 17:1)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

ASHURKOV, Yevstafiy Borisovich; GALIN, A.V., retsenzent; SHCHERBAKOV, V.I., retsenzent; EYDEL', A.S., nauchn. red.;

[Preparation for the installation of electrical equipment on ships] Podgotovka k elektromontazhnym rabotam na sudakh. Leningrad, Sudostroenie, 1964. 66 p. (MIRA 18:1)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

GERTS, Ye.V.; KREYNIN, G.V.; SHCHERBAKOV, V.I., inzh., retsenzent; GORBOV, F.S., inzh., red.

[Dynamics of pneumatic drives in automatic machinery] Dinamika pnevmaticheskikh privodov mashin-avtomatov. Moskva, Izd-vo "Mashinostroenie," 1964. 235 p. (MIRA 17:6)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

TARANOV, F.A.; CHOBERBAKOV, V.I.

IU.G.Bakenko, an outstanding electromechanical technician. Avtom., telem. sviaz 9 no.9:30 S '65. (MIRA 18:9)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

L 18452-66 EWT(m)

ACC NR: AP6002562 (N) SOURCE CODE: UR/0286/65/000/023/0058/0058

AUTHORS: Ivanov, V. I.; Shcherbakov, V. I.; Trakhtenberg, L. I.

ORG: none

TITLE: Ultrasonic method for measuring product thickness. Class 42, No. 176713

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 23, 1965, 58

TOPIC TAGS: ultrasonic equipment, ultrasonic inspection, test method

ABSTRACT: This Author Certificate presents an ultrasonic method for measuring product thickness by determining the resonance frequency of the system which consists of the monitored product, a liquid layer, and an ultrasonic detector. To increase the accuracy of measuring small thicknesses, e.g., less than 0.5 mm, and to decrease the operating frequencies, the system is excited at two fixed frequencies. The liquid layer thickness is varied, obtaining system resonance successively for each of the frequencies. The thickness of the product is determined by the difference of the liquid layer thicknesses corresponding to the resonances.

SUB CODE: 13, 20/ SUBM DATE: 18Jan65

Card 1/1 UDC: 531.717.1:534-8

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L 44276-66 EWT(d)/EWP(v)/EWP(k)/EWP(h)/EWP(1) IJP(c) DJ/GD/BC

ACC NR: AT6021726 SOURCE CODE: UR/0000/66/000/000/0042/0051

48
B+1

AUTHOR: Shcherbakov, V. I.

ORG: none

TITLE: Rotary command systems of pneumatic control

SOURCE: AN SSSR. Institut avtomatiki i telemekhaniki. Pnevmoavtomatika (Pneumatic automation). Moscow, Izd-vo Nauka, 1966, 42-51

TOPIC TAGS: pneumatic servomechanism, pneumatic control system

ABSTRACT: The rotary commend device described in this paper is a mechanical instrument used as a feedback loop in pneumatic control. It consists of a multiposition divider (normally 12 positions), selector and driving gear for periodic turns. The divider and selector are usually coupled together in one shaft with two separate wipers. The function of the command device is to drive the control cylinders in any desired sequence. Examples of several different applications of the command device are presented. Schematic diagrams for each such application together with the logical step-by-step operation are shown. The number of command positions determines the number of possible operations in one cycle. In some cases a position of the command device drives a subsystem which in turn performs more than one operation. The final signal of each operation energizes the gear of the shaft to be turned into the next position.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

SEDYKH, Veniamin Mikhaylovich; BOCHARNIKOV, Mstislav Mikhaylovich; SHUVALOV, Nikolay Grigor'yevich; KONSTROMITINOV, Konstantin Nikolayevich; BURLUTSKIY, Boris Dmitriyevich; SHCHERBAKOVA, Lidiya Maksimovna; SHCHERBAKOV, Valentin Innokent'yevich

[Mining and dressing mica minerals]Razrabotka i obogashchenie sliudianykh rud. Moskva, Nedra, 1965. 247 p. (MIRA 18:12)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

SHCHERBAKOV, V.K.

Conference on polyploidy in plants. Izv. AN SSSR Ser.biol. 24 no.1:151-154 Ja-F '59. (MIRA 12:2)
(POLYPLOIDY)
(PLANT BREEDING)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

SAKHAROV, V.V.; MANSUROVA, V.V.; PLATONOVA, R.N.; SHCHERBAKOV, V.K.

Detection of physiological resistance to ionizing radiation in autotetraploid plants of common buchwheat field. Biofizika 5 no. 5:558-565 '60. (MIRA 13:10)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.
(PLANTS, EFFECT OF RADIATION ON) (POLYPLOIDY)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

SHCHERBAKOV, V.K.

Polyploidy in the breeding of ornamental plants. Biul. MOIP. Otd. biol. 65 no. 4:102-111 Jl-Ag '60. (MIRA 13:10)
(POLYPLOIDY) (PLANTS, ORNAMENTAL)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

SHCHERBAKOV, V.K.

Some cytological characteristics of the formation of club-shaped hairs in Pyrethrum carneum. Trudy Len. khim.-farm. inst. 12:119-121 '61. (MIRA 15:3)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.
(PYRETHRUM)
(LEAVES—MORPHOLOGY)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

SHCHERBAKOV, V.K.

Experimental development of polyploids in asparagus and their detection. Biul. Glav. bot. sada no.42:78-80 '61. (MIRA 17:3)

1. Institut biologicheskoy fiziki AN SSSR.

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

S/747/62/000/000/024/025
D243/D307

AUTHORS: Zakharov, V. V., Mansurova, V. V., Platonova, R. N. and Shcherbakov, V. K.

TITLE: Cytological proofs of the physiological protection of autotetraploids of buckwheat (Fagopyrum esculentum moench) from the effect of ionizing radiation

SOURCE: Radiatsionnaya genetika; sbornik rabot. Otd. biol. nauk AN SSSR. Moscow, Izd-vo AN SSSR, 1962, 346-357

TEXT: The results are summarized of a comparative, cytogenetic study of the effect of different types of radiation on diploid and autotetraploid plants of common buckwheat (Fagopyrum esculentum moench), using dormant seeds kept under identical room conditions for the same period. The higher sensitivity of diploid forms to both γ and x radiation was confirmed, diploids showing depression of growth after 10 kr of γ radiation, and the autotetraploids after 30 kr. Cytological examination showed that the percentage of aberrant cells in nonirradiated controls was equal (2.2%) in both

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Cytological proofs of ... S/747/62/000/000/024/025
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forms and that this situation was unchanged after irradiation. Tetraploids showed a smaller percentage of aberrants after 0.5, 1.0, 5.0 and 10.0 kr of γ radiation. This is discussed in relation to physiological protection and was confirmed by the authors' experiments reported in greater detail elsewhere (Biofizika, 1960, 5, no. 5, 595-599). The 4x forms were shown to be twice as stable as the 2x forms to high speed neutrons. The effect of γ radiation and subsequent storage was examined by storing the seeds for periods of 6 and 12 months after irradiation. After 6 months, the irradiated seeds of both forms showed a regular, steep rise in the percentage of chromosome aberration. This was more marked in the 4x forms. Both forms possess mechanisms which interfere with the conversion of potential into actual chromosome aberrations and these protective mechanisms are particularly effective in tetraploid forms. There are 3 figures and 2 tables.

ASSOCIATION: Institut biologicheskoy fiziki AN SSSR, Moskva (Institute of Biological Physics, AS USSR, Moscow)

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

SHCHERBAKOV, V.K.

Methods for experimental production of polyploid plants. Trudy MOIP. Otd.biol. 5:110-120 '62. (MIRA 16:5)

1. Laboratoriya radiatsionnoy genetiki Instituta biofiziki AN SSSR, Moskva.

(POLYPLOIDY)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

DUBININ, N.P., SHCHEPOTIEV, V.K.

Controlling the natural mutation process with the aid of cystamine and streptomycin. Dokl.AN SSSR 145 no.2 427-429 Jl '62. (MIRA 15:7)

1. Institut [illegible] AN SSSR. Chlen-korrespondent AN SSSR.
(ZOOLOGY--VARIATION) (CYSTAMINE) (STREPTOMYCIN)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

SHCHERBAKOV, V.K.

Types of polyploidization and reduction of chromosome sets.
TSitologiia 5 no.5:477-489 S-O '62.
(MIRA 18:5)

1. Laboratoriya radiatsionnoy genetiki Instituta biofiziki AN SSSR, Moskva.

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ACCESSION NR: AP5000093 S/0205/64/004/006/0862/0864

20
19
B

AUTHOR: Dubinin, N. P.; Shcherbakov, V. K.

TITLE: Antiradiation compounds as mutagens and antimutagens

SOURCE: Radiobiologiya, v. 4, no. 6, 1964, 862-864

TOPIC TAGS: Erlich carcinoma cell, onion cell, radioprotective agent, antiradiation drug, mutagenic property, antimutagenic property, antitumor property, arginine, mutation, mitosis, cystamine, cysteine

ABSTRACT: In the literature certain radioprotective compounds display mutagenic, antimutagenic, and antitumor properties depending on compound concentration and subject. The present study reports on investigation results of arginine activity in Erlich ascitic carcinoma cells and Allium fistulosum onion cells. Mutation frequency in the carcinoma cells was increased from 4.41 to 11.41% with an arginine concentration of 2 mg/ml and was increased to 14.07% with an arginine concentration of 20 mg/ml. In the onion cells mutation frequency increased with an arginine concentration of $2 \cdot 10^{-1}$ mg/ml

Card 1/2

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

L 27843-65
ACCESSION NR: AP5000093

and an antimutagen effect was displayed with a $2 \cdot 10^{-4}$ mg/ml concentration. With the same radioprotective compound producing highly varied cytogenetic effects, research on the properties of various radioprotectors within a wide range of concentrations and under different physiological states of organisms appears of utmost importance. Orig. art. has: 3 tables.

ASSOCIATION: Institut biologicheskoy fiziki AN SSSR, Moscow (Biological Physics Institute AN SSSR)

SUBMITTED: 13Aug64 ENCL: 00 SUB CODE: LS

NR REF SOV: 008 OTHER: 014

Card 2/2

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

SHCHERBAKOV, V.K.

New data on the role of polyploidy and aneuploidy in the evolution and breeding of ornamental plants. Biul.Glav.bot.sad no.52:37-45 '64. (MIRA 17:4)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

SHCHERBAKOV, V.K.

Variability of morphological characters in plants in polyploidy. Dokl. AN SSSR 154 no.2:449-452 Ja'64. (MIRA 17:2)

1. Institut biologicheskoy fiziki AN SSSR. Predstavleno akademikom N.V. TSitsinym.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

DUBININ, N.P.; SHCHERBAKOV, V.K.

Nature of the natural mutation process in Vicia faba and Allium fistulosum L. Dokl. AN SSSR 159 no.3:652-655 N '64 (MIRA 18:1)

1. Institut biologicheskoy fiziki AN SSSR. 2. Chlen-korrespondent AN SSSR (for Dubinin).

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

L 41228-65 EWG(j)/EWT(m)

ACCESSION NR: AP5000922 S/0020/64/159/004/0913/0914

21
20
B

AUTHOR: Dubinin, N. P.; Shcherbakov, V. K.; Surkov, V. V.

TITLE: Antimutagenic and mutagenic effect of amino acids with antiradiation properties 19

SOURCE: AN SSSR. Doklady, v. 159, no. 4, 1964, 913-914

TOPIC TAGS: amino acid, arginine, cysteine, mutagen, antimutagen, radioprotective agent, mutation, Erlich carcinoma cell, Allium fistulosum onion

ABSTRACT: Literature sources indicate that certain antiradiation compounds act as mutagens and antimutagens depending on compound concentration and conditions. The present investigation compares the mutagenic and antimutagenic effects of two highly important amino acids with antiradiation properties, arginine and cysteine. In the first of two experimental series, Allium fistulosum onion seeds and Erlich ascitic carcinoma cell cultures were grown in different concentrations of arginine. Mutation frequency of the sprouting onion seeds increased with an arginine concentration of 2.10-1 mg/ml

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L 41228-65
ACCESSION NR: AP5000922

and antimutagenic effects were displayed with arginine concentrations of 2.10-3 to 2.10-5 mg/ml. Mutation frequency of the Erlich ascitic carcinoma cells increased from 4.41 to 11.41% with an arginine concentration of 2 mg/ml and increased to 14.07% with an arginine concentration of 20 mg/ml. In the second experimental series Allium fistulosum onion seeds were grown in different concentrations of cysteine. Mutation frequency of the sprouting onion seeds increased significantly with a cysteine concentration of 1.10-1% and no antimutagenic effects were observed. Thus, arginine is characterized by a qualitative change acting as a mutagen in high concentrations and as an antimutagen in low concentrations. Cysteine, without displaying any antimutagenic effects, acts as a radioprotector and in high concentrations acts as a mutagen. The nature of the mutagenic, antimutagenic, and antiradiation properties displayed by these two amino acids and certain other compounds is not clear at this time and requires further research. Orig. art. has: 3 tables.

ASSOCIATION: Institut biologicheskoy fiziki Akademii Nauk SSSR (Institute of Biological Physics, Academy of Sciences SSSR)

Card 2/3 SUBMITTED: 12 AUG 64

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

L 54727-65 EWT(1)/EWA(j)/EWA(b)-2 JK

ACCESSION NR: AP5017922 UR/0020/64/159/005/1148/1150

AUTHOR: Dubinin, N. P. (Corresponding member AN SSSR); Shcherbakov, V. K. 18 17 B

TITLE: Cytological analysis of the antimutagenic action of arginine and streptomycin

SOURCE: AN SSSR. Doklady, v. 159, no. 5, 1964, 1148-1150

TOPIC TAGS: cytology, plant genetics, arginine, streptomycin

ABSTRACT: The nature of the antimutagenic effect of arginine was studied by determining in a cytological investigation changes produced in cells of the rootlets of onion plants (Allium fistulosum L.). To determine the nature of the antimutagenic effect produced by streptomycin, changes in the cells of the rootlets of horse bean plants (Vicia faba L.) were studied. In either case, the distribution of chromosome rearrangements according to type did not differ from that observed in control plants of the species used in the

Card 1/2

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

L 54727-65
ACCESSION NR: AP5017922

experiments; only the total number of mutations was reduced. This indicated that the action of the antimutagenic agents studied was unspecific and quantitative rather than qualitative - i.e., it did not affect any particular type of chromosome rearrangement, but all of the normally occurring rearrangements to an equal extent.
Orig. art. has: 2 tables.

ASSOCIATION: Institut biologicheskoy fiziki Akademii nauk SSSR (Institute of Biological Physics, Academy of Sciences SSSR)

SUBMITTED: 12Aug64 ENCL: 00 SUB CODE: LS

NR REF SOV: 008 OTHER:)005 JPRS

Card 2/2

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

L 10243-66 EWT(1)/EWA(h)

ACC NR: AP6002409 SOURCE CODE: UR/0105/64/000/010/0031/0036

AUTHOR: Shcherbakov, V. K. (Novosibirsk); Putilova, A. T. (Novosibirsk); Kopach, Ye.N. (Novosibirsk); Vorob'yev, G. V. (Novosibirsk)

ORG: none

TITLE: Power takeoff from half-wave transmission lines

SOURCE: Elektrichestvo, no. 10, 1964, 31-36

TOPIC TAGS: electric power production, transmission line

ABSTRACT: The half-wave homogeneous lines considered are 1500 to 3000 km. in length, and the problems involved in taking off power in parallel or in series at various points in the line are analyzed in detail. Line voltage stability improves as the pick-off points are moved closer to the ends of a half-wave line. Within 1/5 the line length from the ends, parallel transformer-type power take-off is adapted easily whereas series coupling is better toward the center. The equivalent circuit and voltage distribution curves are shown for the line for parallel-transformer power take-off near the ends of the line and for series transformer take-off toward the center. Experiments and calculations show that when power take-off is 20% of the natural power or less, parallel unified intermediate systems coupled toward the line ends are stable, whereas series take-offs are

Card 1/2 UDC: 621.315.05

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

L 10243-66

ACC NR: AP6002409

stable toward the center of the line under the same conditions. At the line center an intermediate system is practically independent of the line mode and stability. A combined parallel-series transformer take-off may be used over the entire line with stable operation, and by careful selection of parameters, intermediate parallel-series systems can be decoupled from the line modes at the center of the line. Orig. art. has: 16 figures, 1 table, 11 formulas. [JPRS]

SUB CODE: 09 / SUBM DATE: 17Mar64 / ORIG REF: 020

Card 2/2

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

DUBININ, N.P.; SHCHERBAKOV, V.K.; MOKEYEVA, N.P.

Cytogenetic analysis of the mutagenic effect of chemical mutagens of a new group and some characteristics of natural and induced mutation of chromosomes. Genetika no.2:67-72 Ag '65. (MIRA 18:10)

1. Institute of Biological Physics, Academy of Sciences of the U.S.S.R., Moscow.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

DUBININ, N.P.; SHCHERBAKOV, I.K.; KESLER, G.N.

Phases of a cell cycle and the mutagenic effect of [illegible] compounds. Genetika no.3:73-86 [illegible] '65. [illegible]

1. Institute of Biological Physics, Society of Sciences of the U.S.S.R., Moscow.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

SHCHERBAKOV, V.K.

[illegible] meeting, dedicated to the centennial of Gregor Mendel's discovery, held in Moscow on June 25, 1965. Genetika no.2:179-180 Ag '65. (MIRA 18:10)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

[illegible], V.K., [illegible] prof.

Concerning I.I. Syromiatnikov's article "Principal trends in the development of electric power distribution networks." Izv. vys. uchebn. zav.; energ. 8 no.11:100-101 N '65.
(MIRA 18:11)

1. Sibirskiy nauchno-issledovatel'skiy institut energetiki.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

[illegible]

Interaction between natural and chemical mutagens. Dokl. AN SSSR 160 no.1:218-219 Ja '65. (MIRA 18:2)

1. Institut biologicheskoy fiziki AN SSSR. 2. Chlen-korrespondent AN SSSR (for Dubinin).

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

DUBININ, N. [illegible]

Chromosome mutation spectrum at different levels of natural cell mutation. Dokl. AN SSSR 161 no.6:1434-1436 Ap '65. (MIRA 18:5)

1. Institut biologicheskoy fiziki AN SSSR. 2. Chlen-korrespondent AN SSSR (for Dubinin).

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

DUBININ, N.P.; SHCHERBAKOV, V.K.; KESLER, G.N.; [illegible]YKOVA, L.A.

Specificity of the object in induced mutagenesis. Dokl. AN SSSR 165 no.1:210-21[illegible] N '65. (MIRA 18:10)

1. Institut biologicheskoy fiziki AN SSSR. 2. Chlen-korrespondent AN SSSR (for Dubinin).

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

SHCHERBAKOV, V.K.

Role of polyploidy and aneuploidy in the evolution of angiosperms and gymnosperms. Trudy MOIP Otd. biol. 13:238-256 '65. (MIRA 19:1)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

PUHININ, N.P.; [illegible], V.K.; [illegible], P.A.

Natural mutation process with uninhibited cytogenetic effect of natural mutagens. Genetika no.[illegible] [illegible] '65.

(MIRA 18:12)

1. Institut biologicheskoy fiziki AN SSSR, Moskva. Submitted June [illegible], 1965.

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

SHCHERBAKOV, V.K., kand. biolog. nauk (Moskva)

100th anniversary of the discoveries of Gregor Mendel; ceremonial meeting at the House of Scientists in Moscow. Priroda 54 no.8: 113-114 Ag '65. (MIRA 18:8)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

L 38252-66 EWT(1)/T JK

ACC NR: AP6028671 SOURCE CODE: UR/0020/66/166/005/1214/1216

23
B

AUTHOR: Dubinin, N. P. (Corresponding member AN SSSR); Suykova, L. A.; Shcherbakov, V. K.

ORG: Institute of Biological Physics, AN SSSR (Institut biologicheskoy fiziki AN SSSR)

TITLE: Specific modification of mutational variations of chromosomes induced by a chemical mutagen

SOURCE: AN SSSR. Doklady, v. 166, no. 5, 1966, 1214-1216

TOPIC TAGS: plant genetics, plant chemistry, biologic mutation

ABSTRACT: Mutation of cells of wheat plants (Triticum aestivum L.) under the action of β-(β', β"-dichlorethylamino) ethylphosphonic acid diethyl ester (K-32) was studied. Treatment of wheat sprouts with K-32 alone resulted in 7.6% of chromatid dicentrics among the chromosome rearrangements produced. When ATP was applied before K-32 or simultaneously with it, the number of chromatid dicentrics increased up to 27.1%. Application of ATP after K-32 did not alter the number of chromatid dicentrics significantly vs. that observed on treatment with K-32 alone. The results obtained indicated that addition of ATD by reason of the supplementary energy contributed by this compound modified the mutation process induced by the alkylating chemical mutagen K-32 and endowed the chromosome fragments with a capacity for fusion which was otherwise lacking. The mutation process thus became similar to that occurring in cells of Vicia faba and human cells in vivo and in vitro in natural mutation and under the action of mutagenic factors. By using ATP, the type of mutation could be changed and a differential control over the induced mutation process exercised. Orig. art. has: 1 table. [JPRS: 36,932]

SUB CODE: 06 / SUBM DATE: 18Sep65 / ORIG REF: 008 / OTH REF: 009

UDC: [illegible]

Card 1/1 [illegible]

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

SHCHERBAKOV, V. K.

Shcherbakov, V. K. and MAzur, L. D. "Compensation for assymetry in electrical transmission equipment", Izbestiya Tomskogo politekhn. in-ta im. Kirova, Vol. LXVI, Issue 1, 1948, p. 79-82.

SO: U-4631 , 16 Sept. 1953, (Letopis 'Zhurnal 'nykh Statey, No. 24, 1949)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

SHCHERBAKOV, V. K.

36649 Shcherbakov, V. K. Kogo Dolzhny gotovit' politekhnicheskiye Instituty. Vestnik vysshk. s kolv, 1949, No. 11, c. 37-42

SO: Letopis' Zhurnal'nykh Statey, Vol. 50, Moskva, 1949

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

USSR/Electricity - Distribution Systems Apr 51
Books

"Review of A. Ya. Ryabkov's 'Electrical Design of Distribution Systems,'" Prof V. K. Shcherbakov, Dr Tech Sci, Tomsk Polytech Inst

"Elektrichestvo" No 4, pp 94, 95

Reviewer lauds book as one of best texts on this subject for students of higher educ institutions and practical engineers. Book contains 8 chapters: I. Introduction (definitions, history, etc); II. Selection of Wires and Cables According to Heat Conditions; III. General Problems

178T52

USSR/Electricity - Distribution Systems Apr 51
(Contd)

of the Electrical Design of Disbribution Systems; IV., V., VI. and VII. Electrical Design of Disconnected Local Distribution Systems, of Closed Local Distribution Systems, of High-Voltage Transmission Lines and of Rayon Distribution Systems; and VIII. Voltage Regulation in Distribution Systems. Published by "Gosenergoizdat," 400 pp, R 16.20.

178T52

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

SHCHERBAKOV, V.K., doktor tekhnicheskikh nauk, professor; PUTILOVA, A.T., kandidat tekhnicheskikh nauk.

Integrated operation of a.c. and d.c. power systems under normal conditions. Trudy Transp.-energ.inst.Zap.-Sib.fil. AN SSSR no.6:3-13 '56. (MLRA 10:2)

(Electric power distribution)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

SOV/112-57-5-10061

8 (3)

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1957, Nr 5, p 68 (USSR)

AUTHOR: Shcherbakov, V. K., Meshcheryakov, K. P.

TITLE: On the Problem of Using 110-kv Two-Wire Ground-Return Lines (K voprosu ob ispol'zovanii liniy 110 kv po sisteme "dva provoda -- zemlya")

PERIODICAL: Tr. Transp.-energ. in-ta Zap.-Sib. fil. AS USSR, 1956, Nr 6, pp 15-18

ABSTRACT: 110-kv two-wire ground-return lines are expedient to use for supplying power to outlying kolkhozes and sovkhozes from large electric stations. Capacitive currents in the wires of such a line are responsible for the asymmetry of the three-phase system. The total asymmetry in the transmission line, generators, and transformers is determined by the load and capacitive negative-phase-sequence currents. In lines under 150 km long, the line capacitance reduces the overall current asymmetry. With lines over 150 km long, the line capacitance determines the total asymmetry of currents in

Card 1/2

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"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

SHCHERBAKOV, V.K.; VASIL'YEV, A.I.; PUTILOVA, A.T.; ZAYNULLINA, R.S.

Outlook for the development of power resources in Western Siberia and Krasnoyarsk Territory. Izv. vost. fil. AN SSSR no.1:79-87 '57. (MIRA 11:4)

1. Zapadno-Sibirskiy silial AN SSSR.
(Siberia, Western--Electric power)
(Krasnoyarsk Territory--Electric power)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

SOV/163-58-1-3/37

AUTHORS: Antipin, L. N., Vazhenin, S. F., Shcherbakov, V. K.

TITLE: The Electric Conductivity of the System Graphite Electrode - Cryolite Melt - Dissolved Aluminum (Elektroprovodnost sistemy grafitovyy elektrod - kriolitovyy rasplav - rast voremnyy alyuminiy)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Metallurgiya, 1958, Nr 1, pp [illegible] (USSR)

ABSTRACT: The graphite electrode and cryolite melt were investigated in regard to their electric conductivity by the addition of aluminum metal. The electric conductivity of this system was determined in relation to the cryolite ratio $\frac{NaF}{AlF}$

The electric conductivity of the cryolite melt is influenced by the compounds forming in the interaction between aluminum and graphite electrodes. On addition of the metal to the cryolite melt the electric conductivity is changed according to the modification of the cryolite ratio. At the cryolite ratios [illegible] and 2.7 a maximum of the electric conductivity

Card 1/3

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

SOV/163-58-1-3/33

The Electric Conductivity of the System Graphite Electrode - Cryolite Melt Dissolved Aluminum

occurs and at the cryolite ratio $\frac{NaF}{AlF} = 2.3$ a minimum occurs.

The results show that in the electrolysis of the cryolite melts complex compounds are formed which modify their structure and composition at the cryolite ratios 1.9, 2.3 and 2.7.

The presence of minima and maxima in the electric conductivity in the curves proves that the interaction between the cations Na^+ and Al^{+++} and the fluorine anions is very complicated. In the cryolite melt complicated cryolite complexes of the type $Al_nF_m^{-}$ probably exist. The composition of these complexes changes according to the modification of the cryolite ratio. On the addition of the metal to the metal melt a considerable change in the electric conductivity occurs. This change is probably based on the interaction between aluminum and carbon, and is also dependent on the change of the structure, especially in the vicinity of the electrode zone. There are 3 figures and 9 references, 9 of which are Soviet.

Card 2/3

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

SOV/163-58-1-3/53

The Electric Conductivity of the System Graphite Electrode - Cryolite Melt Dissolved Aluminum

ASSOCIATION: Ural'skiy politekhnicheskiy institut (Ural Polytechnical Institute)

SUBMITTED: October 1, 1957

Card 3/3

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

SHCHERBAKOV, V.K.; LUKASHOV, E.S.

Self-excitation of a generator in controlled electric transmissions (possibility of the participation of generator reactivity in the control). Izv.Sib.otd.AN SSSR no.5:36-41 '59. (MIRA 12:10)

1. Transportno-energeticheskiy institut Sibirskogo otdeleniya Akademii nauk SSSR.
(Electric generators)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

OL'SHEVSKIY, O.V.; SHCHERBAKOV, V.K.

Symmetrical short circuits in regulated electric transmission lines. Izv. Sib. otd. AN SSSR no.6:18-26 '59. (MIRA 12:12)

1.Transportno-energeticheskiy institut Sibirskogo otdeleniya Akademii nauk SSSR.
(Short circuits)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

ORNATSKIY, A.P., kand.tekhn.nauk; SHCHERBAKOV, V.K., inzh.

Intensification of heat exchange in the critical region by means of ultrasound [with summary in English]. Teploenergetika 6 no.1:84-85 Ja '59. (MIRA 12:1)

1. Kiyevskiy politekhnicheskiy institut.
(Heat--Transmission) (Ultrasonic waves)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

SHCHERBAKOV, V.K.

Long distance electric power transmission over halfwave lines. Izv. Sib. otd. AN SSSR no.7:3-15 '59. (MIRA 12:12)

1.Transportno-energeticheskiy institut Sibirskogo otdeleniya AN SSSR.

(Electric lines)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

SHCHERBAKOV, V.K., doktor tekhn. nauk prof.; OL'SHEVSKIY, O.V., kand. tekhn. nauk

Problem of the effectiveness of long distance a.c. transmission. Izv. vys. ucheb. zav. energ. 3 no.2:1-10 F '60. (MIRA 13:2)

1.Novosibirskiy elektrotekhnicheskiy institut (for Shcherbakov). 2.Transportno-energeticheskiy institut Sibirskogo otdeleniya AN SSSR (for Ol'shevskiy). Predstavlena kafedroy elektricheskikh stantsiy, setey i sistem.

(Electric power distribution)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1"

"APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001548830001-1

SHCHERBAKOV, V.K., KARYMOV, P.G.

Effect of intermediate taps on the static stability of tuned transmission lines. Izv.Sib.otd.AN SSSR no.7:11-18 '60. (MIRA 13:8)

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Engineering and economic indices of a half-wave tuned three-phase 2,500 km. long electric power transmission line. Trudy Transp.-energ. inst. Sib. otd. AN SSSR no.11:81-90 '60. (MIRA 14:6)
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270. V. I. Borovoy, I. K. Toms, Fusion of Bodies at High Supersonic Gas Flow.

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AUTHOR: Shcherbakov, V.K.

TITLE: Special properties of heat transfer through a wall with longitudinal ribs, with surface boiling of the cooling liquid

SOURCE: Soveshchaniye po teplo- i massoobmenu. Minsk, 1961. Tezisy dokladov i soobshcheniy (Dopolneniye), 43

TEXT: Theoretical and experimental investigations of the properties of heat transfer through a wall with longitudinal ribs, with surface boiling of the cooling liquid, the heat flow exceeding 10^6 kcal/m^2.h, are important for the correct design of heat exchange devices. The general condition of utility of ribs is $1/\alpha_g F_g > (1/\alpha_r F_r) + \Phi_r$, Φ_r being the thermal resistance of the body of the rib. An approximate equation has been obtained for temperature distribution on the smooth surface at the base of a rib: $\theta_g = (\theta_o - q_g/\alpha_g) \exp(- x\sqrt{(\alpha_g/\delta_g\lambda)}) + q_g/\alpha_g$ [Abstracter's note: Indices g

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SHCHERBAKOV, V.K., doktor tekhn.nauk, prof.

Tuned electric power transmission systems. Elektrichestvo no.8:25-30 Ag '61. (MIRA 14:10)

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