KUZNETSOV, P.V.

Improvement of MGG-229 circuit breakers. Energetik 8 no.6: 35-36 Je '60. (MIRA 13:7)
(Electric circuit breakers)

KUZNETSOV, P.V.: GUREYEV, I.A.; SMIRNOV, A.D., inzh., red.; SOLOV'YEV, P.F., inzh., red.; LEPLINSKIY, M.P., red.; BORUNOV, N.I., tekhn. red.

[Installation of electric power distribution systems] Montazh raspredelitel'nykh ustroistv. Izd.2., perer. i dop. Moskva, Gos. energ. izd-vo, 1961. (Spravochnik elektromontera, no.3) (MIRA 15:2)

(Electric power distribution--Handbooks, manuals, etc.)

AVINOVITSKIY, I.Ya.: ALEKSEYEV, S.V.; BARANOV, B.M.; GEL'MAN, R.Ye.; DVOSKIN, L.I.; DOLGINOV, A.I.; YERMILOV, A.A.; ZALESSKIY, Yu.Ye.; KAMENEVA, V.V.; KLIMIKSEYEV, V.M.; KNYAZEVSKIY, B.A.; KUZNETSOV, P.V.; RIVKIN, G.A.; FEDOROV, A.A.; SERBINOVSKIY, G.V., red.; BOL'SHAM, Ya.M., red.; BRANDENBURGSKAYA, E.Ya., red.; VORONIN, K.P., tekhn. red.

[Manual for power engineers of industrial enterprises in four volumes] Spravochnik energetika promyshlennykh predpriiatii v chetyrekh tomakh. Moskva, Gosenergoizdat. Vol.1. [Electric power supply] Elektrosnabzhenie. Pod obshchei red. A.A.Fedorova, G.V. Serbinovskogo i IA.M.Bol'shama. 1961. 840 p. (MIRA 15:6)
(Electric engineering)

KUZNETSOV, P.V., inzh.

Increase in the reliability of MKP-160 cutouts. Elek. sta. 32 no.2:44-47 F '61. (MIRA 16:7)
(Electric cutouts)

KUZNETSOV, P.V., inzh.

Increase in the power rating of the MIP-160 cutout. Elek. sta. 32 no.11:56-60 N '61. (MIRA 14:11)
(Electric cutouts)

GREYSUKH, M.V.; YERMILOV, A.A.; ZALESSKIY, Yu.Ye.; KAZYMOV, A.A.; KATSEVICH, L.S.; KIRPA, I.I.; KIREYEV, M.I.; KNYAZEVSKIY, B.A.; KOFMAN, K.D.; KRZHAVANIK, L.V.; KUZNETSOV, P.V.; MOROZOV, K.S.; RAKOVICH, I.I.; RYABOV, M.S.; SVENCHANSKIY, A.D.; SOKOLOV, M.M.; SYCHEV, L.I.; TVERDIN, L.M.; KHEYFITS, M.E.; SHULIMOV, Ye.V.; EPSHTEYN, L.M.; SHCHEGOL'KOV, Ye.I.; TSAPENKO, Ye.F.; FEDOROV, A.A., glav. red.; SERBINOVSKIY, G.V., red.; BOL'SHAM, Ya.M., red.; BRANDENBURGSKAYA, E.Ya., red.; TVERDIN, L.M., red.; FRIDKIN, L.M., tekhn. red.

[Handbook for power engineers of industrial enterprises in four volumes] Spravochnik energetika promyshlennykh predpriiatii v chetyrekh tomakh. Moskva, Gosenergoizdat. Vol.2. [Electric-power supply (conclusion), use of electric power and electrical equipment in some branches of industry] Elektrosnabzhenie (okonchanie), priemniki elektroenergii i elektrooborudovanie nekotorykh otraslei promyshlennosti. Pod obshchei red. A.A.Fedorova (glav. red.), G.V.Serbinovskogo i IA.M.Bol'shama. 1963. 880 p. (MIRA 16:7)

(Power engineering—Handbooks, manuals, etc.)
(Electric power distribution)

KRIKUNCHIK, A.B., inzh.; KUZNETSOV, P.V., inzh.

Engineering and economic comparison of the use of 110 kv. oil-filled switches and air switches. Elek. sta. 34 no.9:77-78 S '63. (MIRA 16:10)

1. Vsesoyuznyy gosudarstvennyy proyektnyy institut stroitel'stva elektrostantsiy (for Krikunchik).

KUZNETSOV, Petr Vasil'yevich; ZHAVORONKOV, M.A., red.

[Increase in the nominal disconnecting power of oil-filled switches] Uvelichenie nominal'noi moshchnosti otkliuchenila masliianykh vykliuchatelei. Izd.2., perer. i dop. Moskva, Izd-vo "Energiia," 1964. 319 p. (MIRA 18:1)

KUZNETSOV, P. Ye.

Radishes

Chinese radish in the Maritime territory. Sad i og. no. 1, 1952.

9. Monthly List of Russian Accessions, Library of Congress, May 1952, Uncl.

KUZNETSOV, R.A.

Shortcomings of the IM0h-30 hydraulic universal testing machine.
Zav.lab. 21 no.2:254 '55. (MLRA 8:6)

1. Zaveduyushchiy mekhanicheskoy laboratoriyey Irkutskogo zavoda imeni Kuybysheva.
(Testing machines)

22676

S/200/61/000/001/002/005
D223/D305

1.1800 also 4016, 1087

AUTHORS: Chernyak, S. S., Tolstikova, Ye. A., and Kuznetsov, R.A.

TITLE: Increase in resistance to wear of steels and cast irons by the method of electrolytical sulphidation

PERIODICAL: Akademiya nauk SSSR. Sibirskoye otdeleniye. Izvestiya, no. 1, 1961, 25-30

TEXT: The sulphidation processing of metallic surfaces is widely used in order to increase the resistance to wear and "gripping" ability of machine parts and cutting tools. In a previous work S. S. Chernyak and R. A. Kuznetsov (Ref. 1: Issledovaniye metodov sul'fidirovaniya dlya uprochneniya rezhushchego instrumenta i detaley mashin (Investigation of Sulphidation Methods for Hardening Cutting Tools and Machine Parts), TsBNTI, TsNIITMASh, M, 1959) give the results of work on the chemical-thermal sulphidation of cutting tools and the experimental data on the structure of sulphide film on the metal. Chemical-thermal sulphidation although giving satisfactory results in most cases suffers from: 1) Long sulphidation

Card 1/6

Increase in resistance...

of parts in salt solution; 2) Need to use costly salts in appreciable quantities and their careful preparation; (dehydration, special feeding conditions etc); 3) Specific conditions of treatment with salt solution. The study of electrolytic sulphidation was principally concerned with the effect of optimum current density and the duration of electrolysis. The effect of these factors on the resistance to wear was compared to the chemically nickel-treated parts. The sulphur content of sulphided parts, and the anti-scratch properties and microstructure were determined also. Sulphidation was done in an electrolytic bath with a capacity of 4 liters at a temperature of 90 - 98°C. The electrolyte was an aqueous solution of potassium thiocyanide with a concentration of 42.5 g/l or 85% and sodium hyposulphite of 7.5 g/l or 15% strength. The cathode was made of lead sheet and the anode consisted of the sulphided sample. The voltage used varied within the range of 10-12 volts. The investigation confirmed that the electrolytical sulphidation produces a dense and deep (up to 0.3 mm) sulphide layer on the metallic surface. The sulphur concentration is plotted against the distance from the metallic surface by the authors. The microstructure of

Card 2/6

Increase in resistance...

electrolytically sulphided samples was studied after etching by an aqueous solution of acetic acid. The depth of the sulphide layer for the constant current density varies with the time of electrolytical treatment of the samples, examples being given in tabulated form in the article. Microphotography has shown that the structure of electrically formed sulphide layers on the steel and cast iron are identical. The electrolytically sulphided samples were checked for scratching by the method described in Ref. 1 (Op. cit.) and results are given in Table 3. Legend: (1) Sample material; (2) Sample No; (3) Sample hardness after heat treatment. Hv.; (4) Condition of sulphidation; (5) Current density I, amp/dm^2; (6) Time of processing; (7) Testing time mins.; (8) Results; (9) Modified cast iron; (10) Steel 40; (11) Steel 40X; (12) Not sulphided; (13) Does not scratch; (14) After 10 sec. catastrophic wear; (15) Does not scratch; (16) Negligible markings. As can be seen from Table 3 the samples subjected to electrolytical sulphidation possess increased anti-scratching properties. The frictional wear was tested using friction mixture M1. For steel samples a pressure of 100 kg was used and for cast iron 38 kg. The testing was done in 23 minute periods

Card 3/6

Increase in resistance...

(0) Материал образца	(2) № образца	(3) Твердость образца после термич. обработки, H_B	Режим сульфидирован. (4) плотность тока, I, а/дм²	(5) длительность процесса, мин.	(1) Длительность испытания, мин.	(8) Результаты
(9) Чугун модифицированный	117	461	0,5	30	1,5	(13) задира нет
	104	477	0,5	60	1,5	"
	106	417	0,5	90	1,5	"
	114	241	не сульфидирован. (12)		1,0	через 10 сек. (14) начался катастрофич. износ
	101	241	0,5	180	1,5	(7) задира нет
(10) Сталь 40	15	407	0,5	60	1,5	(15) задира нет
	5	395	1,0	60	1,5	"
	18	425	1,5	60	1,5	"
(11) Сталь 40Х	35	385	0,5	120	1,15	(16) задира нет
	36	400	1,0	60	1,25	"
	39	410	1,5	60	1,15	(6) незначит. риски

Card 4/6

Table 3

Increase in resistance...

which corresponds to 5000 revolutions of the roller. The products of wear were submitted for chemical analysis and the results are given in Table 4. Legend: (1) Sulphidation conditions; (2) Roller revolutions; (3) Current density a/dm^2; (4) Time hours; (5) to 5000; (6) from 5000 to 10000; (7) from 10000 to 15000; (8) Sulphur content %.

плотность тока, I, $a/дм^2$ (3)	время, час. (4)	до 5000 (5)	до 10000 (6)	до 15000 (7)
		содержание серы, % (8)		
1,5	1,5	2,775	0,488	—
1,0	1,5	0,701	0,061	0,053
0,5	1,5	0,213	0,91	0,061

Card 5/6

Table 4

Increase in resistance...

The results obtained indicate the effect of current density on the properties of sulphided samples, i.e. the change from 0.5 to 1.5 amp/dm^2 affects greatly the wear resistance. The samples treated by chemico-thermal sulphidation, by chemical nickel plating and by gaseous cyanide treatment all show inferior properties compared with the electrolytical sulphidation. Before treatment, samples were degreased by benzene or an alkaline solution, containing 45 g/l NaOH, 95 g/l Na_2CO_3 and 10 g/l of Na_2SIO_3 then rinsed with water and dried. After sulphidation, they were washed with hot water, and then kept in hot oil at 100 - 110°C. After electrolytical sulphidation, the life of various tools tested increased 1.5 - 3 times. There are 4 tables, 5 figures and 3 Soviet-bloc references.

ASSOCIATION: Irkutskiy zavod tyazhelogo mashinostroyeniya (Irkutsk Plant of Heavy Machine Construction)

SUBMITTED: June 27, 1960

Card 6/6

KUZNETSOV, R. A.

KUTZETSOV, R. A., MOISTEYEV, V. V., MURIN, A. N., and KALININ, A. I.

"Determination of tracer elements in silicon dioxide through activation analysis by means of using ion-exchange chromatography"

report to be submitted for the Intl. Symposium on Pure Substances in Science and Technology, E. German Chem. Society, Dresden, E. Germany 30 Nov. - 2 Dec. 1961

L 19371-66 EWT(m) DIAAP GS/RM

ACCESSION NR: AT5013654 UR/0000/65/000/000/0176/0179
543.53 + 66.074.7:546.284

AUTHOR: Kalinin, A. I.; Kuznetsov, R. A.; Moiseyev, V. V. 10 BH

TITLE: Radioactivation analysis of silicon dioxide by means of ion exchange chromatography. Part 4. Separation of elements on an anion exchanger from solution of hydrofluoric acid and a mixture of hydrofluoric and hydrochloric acid

SOURCE: AN SSSR. Otdeleniye obshchey i tekhnicheskoy khimii. Radiokhimicheskiye metody opredeleniya mikroelementov (Radiochemical methods for determining trace elements); sbornik statey. Moscow, Izd-vo Nauka, 1965, 176-179

TOPIC TAGS: column chromatography, anion exchange resin, radioactivation analysis, silica analysis, halide separation

ABSTRACT: The salts of arsenic, phosphorus, tungsten, antimony, molybdenum, tin, and tantalum are characterized by a complex chromatographic behavior due to their tendency to hydrolyze and to the existence of these ions in several stable oxidation states. In order to minimize the hydrolysis, solutions of HF and HF-HCl mixtures were used for the ion-exchange separation on the AV-17 resin (see Figs. 1 and 2 of the Enclosure). The procedure employed is described. To determine the extent of separation of the elements, radioactive

Card 1/4

L 19371-66
ACCESSION NR: AT5013654 0

tracers in artificial mixtures were employed. A complete separation was achieved if the activity of the separated fractions did not exceed 10^5 counts per min. The time required for the separation of P, As, W, Sb, Sn, Mo, and Ta was 1.5 to 2 hours. Orig. art. has: 2 figures and 1 table.

ASSOCIATION: None

SUBMITTED: 07Apr64 ENCL: 02 SUB CODE: IC, GC

NO REF SOV: 002 OTHER: 003

Card 2/4

L 19371-66
ACCESSION NR: AT6013654

ENCL: 01

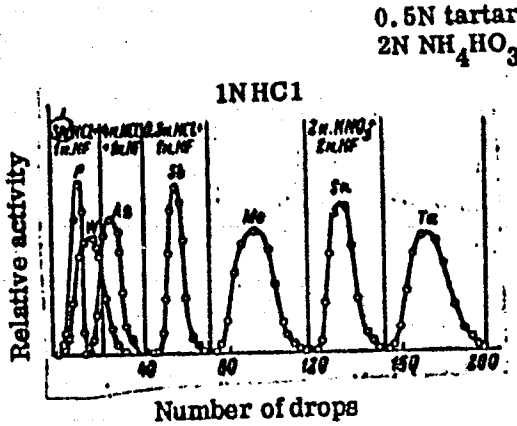


Fig. 1. - Separation of antimony, molybdenum, tin, and tantalum on an anion exchanger in Cl^- form (AV-17 resin, column diameter 2 mm, height of resin layer, 60 mm).

Card 3/4

L 19371-66
ACCESSION NR: AT5013654

ENCL: 02

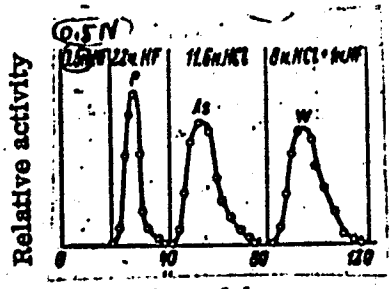


Fig. 2. - Separation of phosphorus, arsenic, and tungsten on an anion exchanger in F^- form (resin AV-17, column diameter 2mm, height of resin layer 60 mm).

Card 4/4

L 19352-66 EWT(m)/ETC(f)/EWG(m)/EWP(t) IJP(c) DS/JD/JG/GS/RM

ACCESSION NR: AT5013655 UR/0000/65/000/000/0180/0181
543.53 + 66.074.7:546.284

AUTHOR: Kalinin, A. I.; Kuznetsov, R. A.; Moiseyev, V. V.; Sokolova, M. N.

TITLE: Radioactivation analysis of silicon dioxide by means of ion-exchange chromatography. Part 5. Separation and determination of alkaline earth metals

SOURCE: AN SSSR. Otdeleniye obshchey i tekhnicheskoy khimii. Radiokhimicheskiye metody opredeleniya mikroelementov (Radiochemical methods for determining trace elements); sbornik statey. Moscow, Izd-vo Nauka, 1965, 180-181

TOPIC TAGS: column chromatography, cation exchange resin, alkaline earth metal, radioactivation analysis, neutron bombardment, silica analysis, calcium sepraration, strontium separation, barium separation

ABSTRACT: A chromatographic method was used to separate calcium, strontium, and barium isolated from samples of silica bombarded with neutrons. The procedure involved the successive elution of the elements sdsorbed on a KU-2 cation exchanger (in the NH_4^+ form) with solutions of trilon B of various pH values. The elution curves are shown in Fig. 1 of the Enclosure. The degree of separation was checked on artificial mixtures containing radioactive tracers. A practically complete separation of Ca, Sr, and Ba and

Card 1/3

L 19352-66
ACCESSION NR: AT5013655

their separation from a large amount of sodium was achieved. The sensitivity of the radioactivation determination of Ca, Sr, and Ba (involving the use of an end-window counter) is: 10^{-7} g for Ca, 9×10^{-8} g for Sr, and 2×10^{-8} for Ba (the samples had been subjected to a flux of 10^{14} neutrons/cm^2.sec for 24 hrs.). Although this sensitivity is not very high, the determination has important practical applications. Orig. art. has: 1 figure and 1 table.

ASSOCIATION: None

SUBMITTED: 07Apr64 ENCL: 01 SUB CODE: IC,GC

NO REF SOV: 003 OTHER: 004

Card 2/3

L 19352-66

ACCESSION NR: AT5013655

ENCL: 01

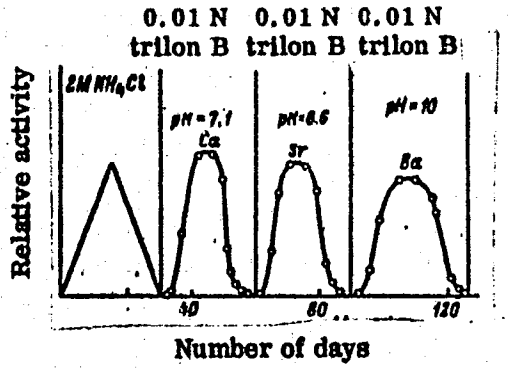


Fig. 1. - Separation of calcium, strontium, and barium on KU-2x15 cation exchange resin in NH_4^+ form (column diameter 2 mm, height of resin layer 100 mm).

Card 3/3

S/020/61/141/001/011/021
B103/B147

AUTHORS: Kalinin, A. I., Kuznetsov, R. A., Moiseyev, V. V., and Murin, A. N.

TITLE: Use of ion exchange chromatography for the activation analysis of microimpurities in silica

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 141, no. 1, 1961, 98 - 100

TEXT: The authors state that the two usual methods of determining micro-impurities in highly pure substances (in this case SiO_2) have several shortcomings. Therefore, they used ion exchange chromatography for separating activated impurities in SiO_2. Advantages of this method over the usual analytical methods: the elements to be determined can be quickly and reliably isolated in radiochemically pure state from a complex mixture. A quantitative separation is achieved by choosing the proper absorption and elution conditions in ionites. The use of microcolumns (diameter 2 mm) accelerates the separation of microquantities and saves reagents. The amounts of the elements to be separated were determined from the

Card 1/4

Use of ion exchange chromatography...

consumption of carriers added. The sample to be analyzed was fused in a quartz ampul. The standard solution was dried in a polyethylene ampul in a vacuum exsiccator, and the ampul was sealed. Both sample and standards together were irradiated in an atomic reactor. The surface impurities were rinsed from the sample with aqua regia under heating. A carrier solution containing 10 μg of each element to be determined was added to the sample, which was then decomposed with HF + HNO_3 mixture, evaporated together with HF, and diluted with water. The solution was conducted through a polyethylene column filled with strongly basic anionite AB-17 (AV-17) in F^- form (content of divinyl benzene 8 - 10%, grain size 30-40μ, layer thickness 5 cm). Elements forming negative fluoride complexes are absorbed: Sn^{IV}, Mo^{VI}, W^{VI}, As^{V}, Ta^{V}, Sb^{V}, and Au^{III}. Sn, Mo, W, and As can be successively eluted with a 17 N HF solution. This, however, requires long columns and much time. Therefore, the elements are eluted together and separated on a 50 mm long column containing AV-17 anionite in Cl^- form. Differently strong HCl + HF solutions serve as eluants. The slow elution of the tantalum fluoride complex is accelerated by addition of the NO_3^- ion. Antimony can be eluted only with 3 N $HClO_4$,

Card 2/4

Use of ion exchange chromatography...

gold only with thiourea. The mixture of elements which were not absorbed in the HF medium is evaporated several times together with HCl and introduced in 90 mm long columns with AV-17 anionite in Cl^- form. Elements forming negative chloride complexes are absorbed: Cu^{II}, Co^{II}, In^{III}, Ca^{III}, Zn^{II}, Cd^{II}, and Hg^{II}. Differently strong HCl is primarily used as eluant. To improve the separation of Co from Cu, these elements are eluted immediately after removing the non-absorbed elements with 4 N HCl. Next, indium is eluted with 11.6 N HCl. Fe is eluted together with gallium. Iron irradiated for a short time does not disturb the Ga determination. If necessary, Ga and Fe are separated on a cationite. The entire separation cycle for determining microimpurities in SiO_2 took about 4 hr (without the time necessary for decomposing the sample). The radiochemical purity of the elements isolated was checked by γ-spectrophotometry and determination of the half-life period. The study was suggested by Yu. V. Morachevskiy. There are 3 figures, 1 table, and 5 references: 3 Soviet and 2 non-Soviet. The two references to English-language publications read as follows: J. P. Faris, Anal. Chem. 32, No. 4, 520 (1960); K. A. Kraus, F. Nelson, Am. Soc. Testing Materials, Spec. Techn.

Card 3/4

Use of ion exchange chromatography...

Publ., No. 195, 27 (1958).

ASSOCIATION: Institut khimii silikatov Akademii nauk SSSR (Institute of Silicate Chemistry of the Academy of Sciences USSR). Leningradskiy gosudarstvennyy universitet im. A. A. Zhdanova (Leningrad State University imeni A. A. Zhdanov)

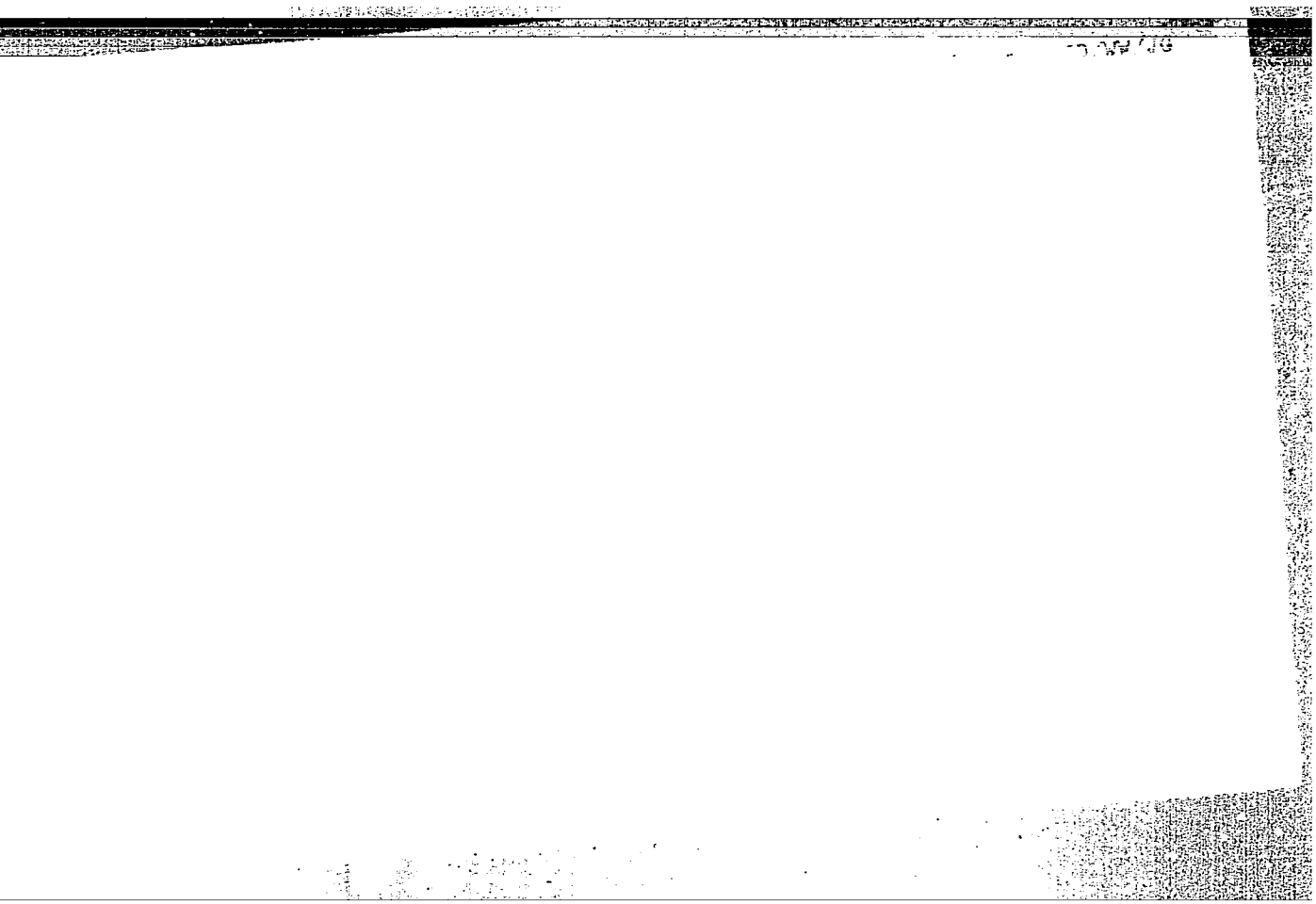
PRESENTED: June 5, 1961, by I. V. Tananayev, Academician

SUBMITTED: June 2, 1961

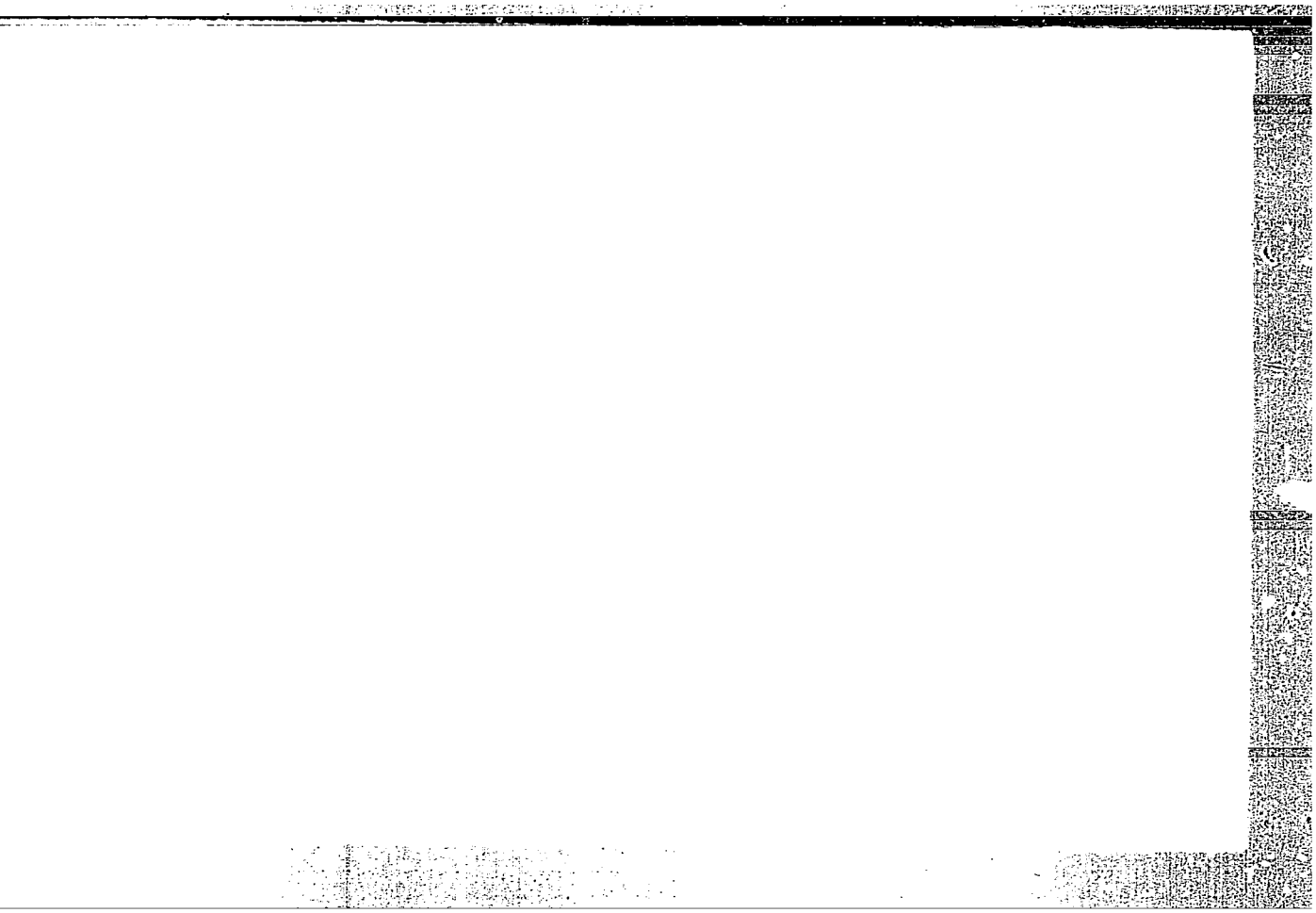
ARTEM'YEV, V.I.; KUZNETSOV, R.A.

Methods for determining the solubility of metals in various melts. Zav. lab. 30 no.9:1105-1106 '64. (MIRA 18:3)

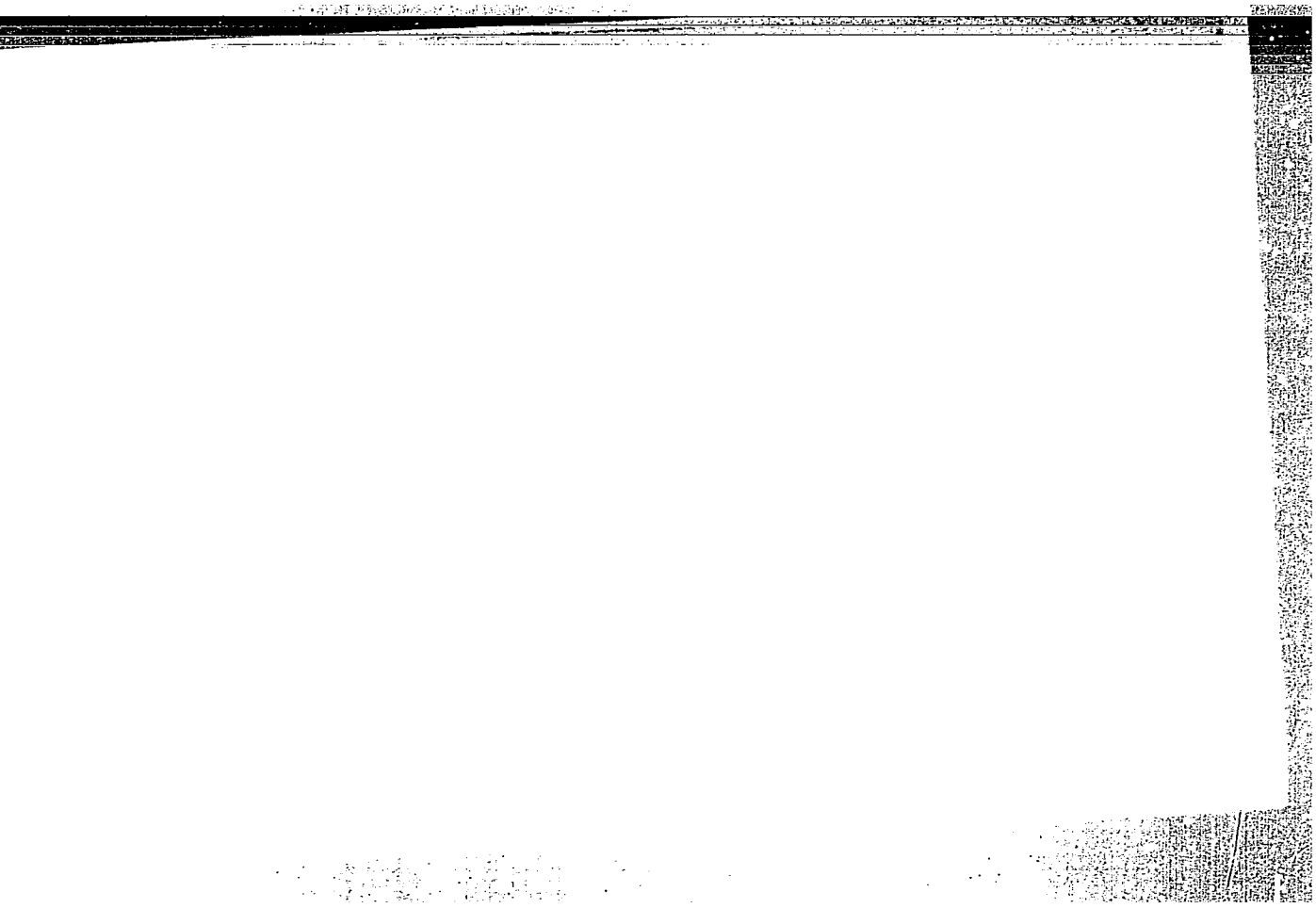
1. Institut khimii silikatov imeni Grebenshchikova.



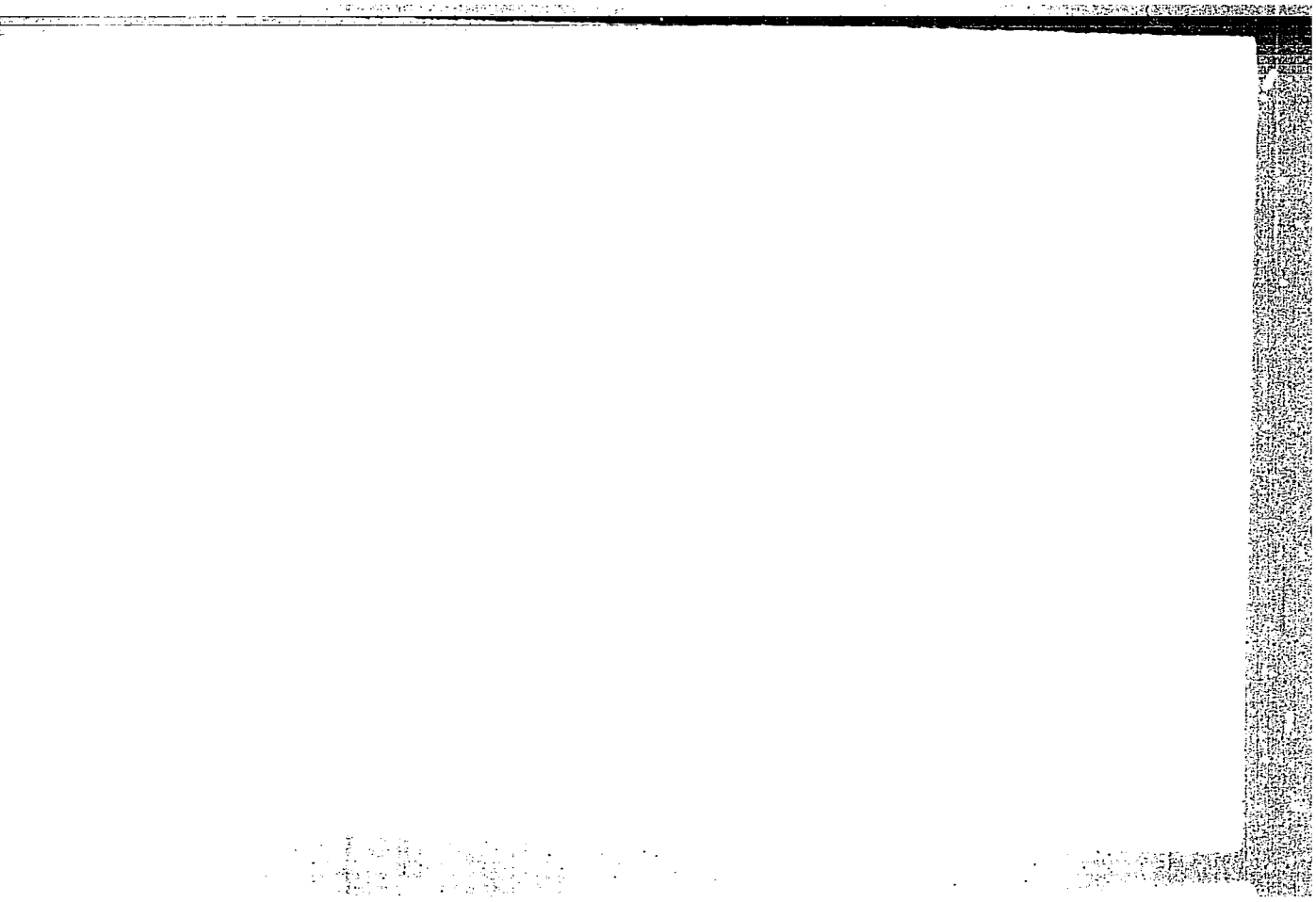
APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000928130005-3"



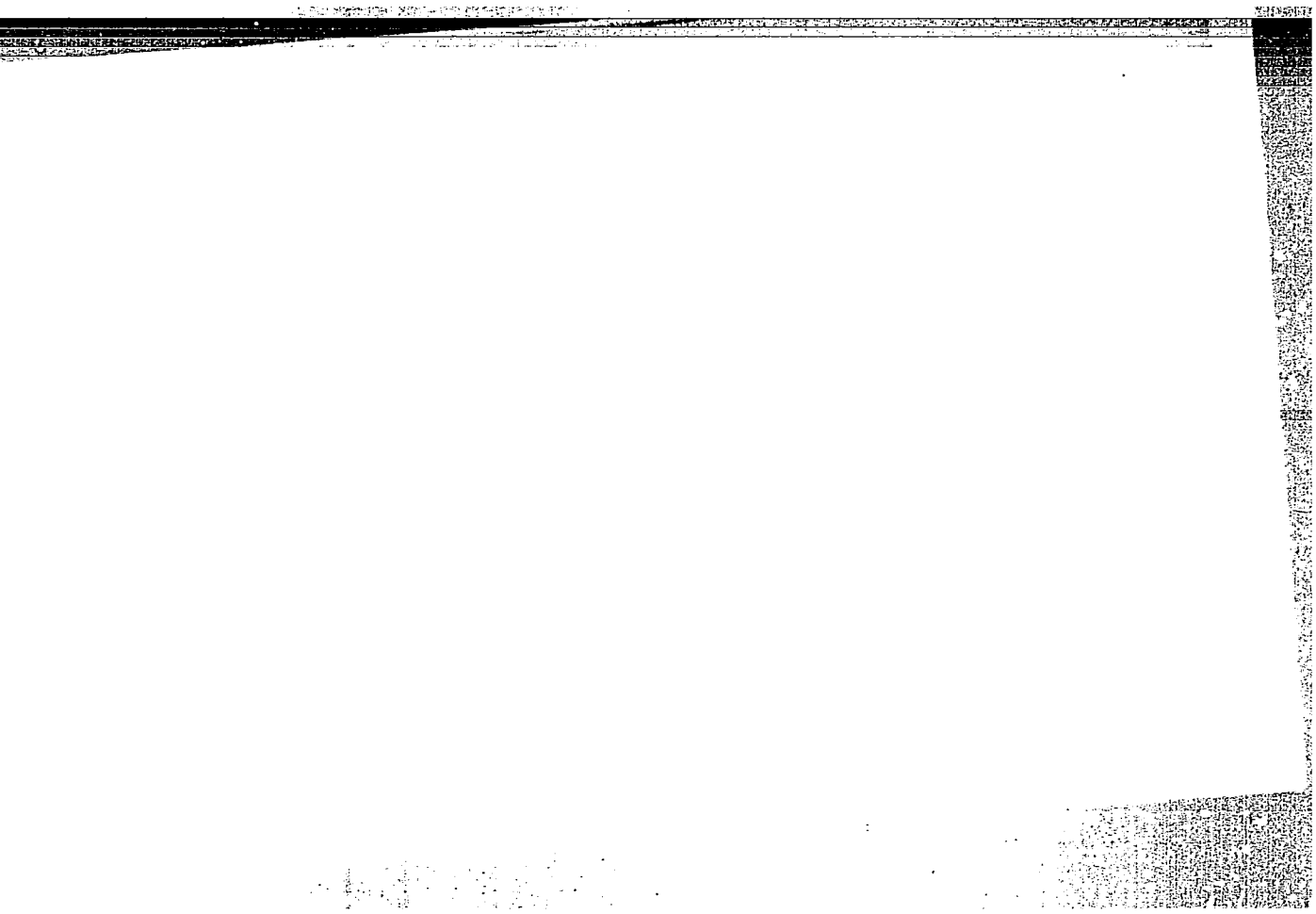
APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000928130005-3"



APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000928130005-3"

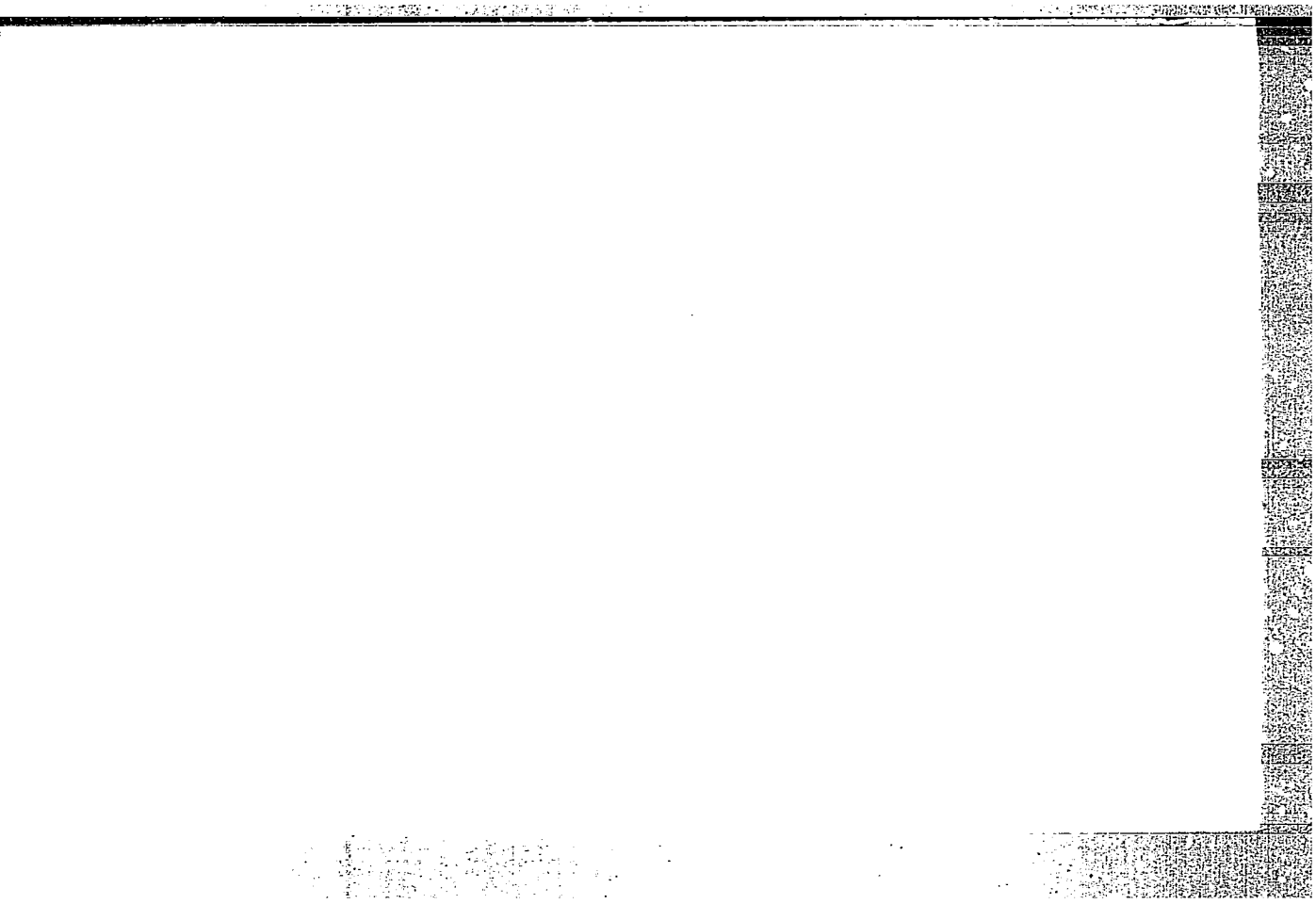


APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000928130005-3"

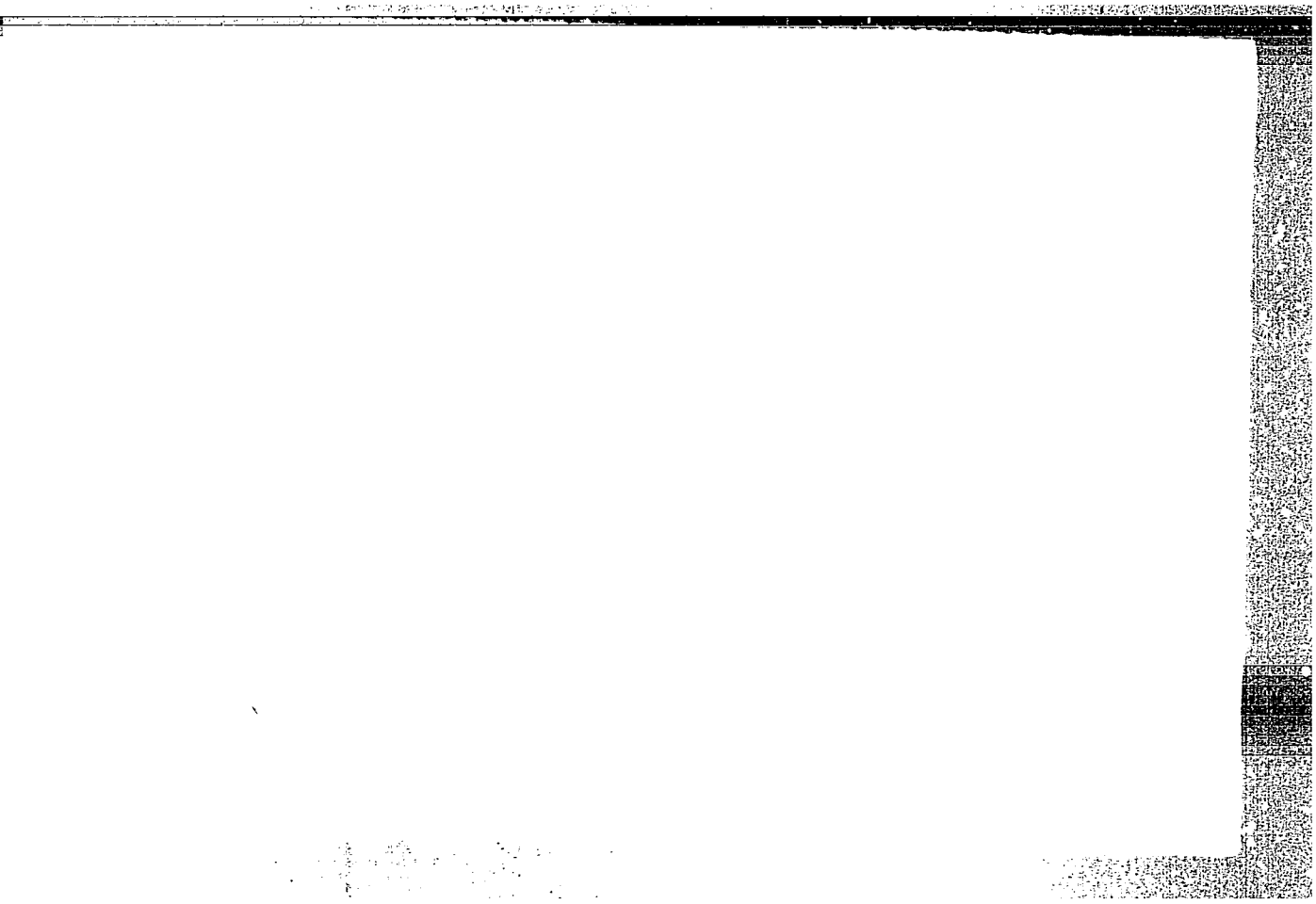


APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000928130005-3"

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000928130005-3"



APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000928130005-3"



APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000928130005-3"

KHOKHLOV, D.G., kand. tekhn. nauk; PRIVALOV, S.I., kand. tekhn. nauk; GROMILIN, F.M., inzh.; KUZNETSOV, R.F., inzh.

Investigating the process of roasting fluxed pellets in shaft furnaces. Stal' 23 no.10:879-883 O '63. (MIRA 16:11)

1. Ural'skoye otdeleniye Vsesoyuznogo nauchno-issledovatel'skogo instituta mekhanicheskoy obrabotki poleznykh iskopayemykh i Vsesoyuznyy nauchno-issledovatel'skiy institut metallurgicheskoy teplotekhniki.

KUZNITSOV, R.G.

SOV/124-58-5-5359

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 5, p 56 (USSR)

AUTHORS: Kuznetsov, R.G., Butovskiy, G.K., Raskin, A.M.

TITLE: On the Calculation of a Hydraulic Torque Converter of the Type Used in Automobiles (K raschetu gidrodinamicheskogo transformatora avtomobil'nogo tipa)

PERIODICAL: Sb. stud. nauchn. rabot. Saratovsk. avtomob.-dor. in-t, 1957, Nr 3, pp 33-45

ABSTRACT: A generalized account is given of the methods used for calculating hydraulic torque converters of the type used in automobiles. The authors explain how to determine the optimum dimensions of a hydraulic torque converter, i.e., those assuring maximum efficiency, and they include formulae for determining the required circulation, hydraulic drag losses, capacity for overcoming impacts, and efficiency. Bibliography; 7 references.

V.D. Sokolov

1. Automatic transmissions--Mathematical analysis

Card 1/1

SMIRNOV, L.Ye.; NATAL'INA, V.N.; KUZNETSOV, R.I.

Rapid method for the determination of potassium in soil.
Zhur. anal. khim. 18 no.9:1051-1053 S '63. (MIRA 16:11)

S/126/61/012/006/021/023
E073/E535

AUTHORS: Kuznetsov, R.I. and Pavlov, V.A.

TITLE: Position of jumps on the extension diagram of polycrystalline tin

PERIODICAL: Fizika metallov i metallovedeniye, v.12, no.6, 1961, 919-921

TEXT: The authors investigated polycrystalline specimens of 99.999% purity tin of 2 mm diameter, 50 mm long with a grain size of 0.1 mm in the range from room temperature to -100°C and for deformation rates at $8 \cdot 10^{-2}$ to $2 \cdot 10^{-5}$ %/sec. A characteristic feature of the diagrams is the presence of jumps, the location of which depends on the speed and temperature during the tests. With a lowering of the temperature the region of the jumps shifts towards the initial point of the diagram if the deformation rate remains constant. At a constant temperature, the displacement is in the same direction as the increase in the speed of deformation. Thereby, the nature of the jumps does not change. It was found that the deformation ε, which corresponds to the first jump on the extension diagram, the deformation speed $\dot{\varepsilon}$ and the test

Card 1/3

temperature T are linked with the following relation:

$\dot{\varepsilon} = C \exp\{-Q/kT\}$, where C and Q are constants. Plotting this relation in the coordinates $\ln\dot{\varepsilon} - 1/T$, a linear relation is obtained and from the inclination of the straight line expressing this relation the activation energy Q can be calculated which is approximately equal to 10 kcal/mol, which coincides with the activation energy of self-diffusion for tin. In view of the fact that the material was of very high purity, it is difficult to visualize that these jumps are associated with the presence of impurities in the metal. It can rather be assumed that their appearance is due either to twining during deformation or to polymorphous transformation of the tin from the β into α-modification during the process of deformation at a temperature which is below the transformation temperature, i.e. below 18°C. There are 2 figures and 12 references: 7 Soviet-bloc and 5 non-Soviet-bloc. The four latest English-language references read as follows: Ref.1: Ichü K., J.Phys.Soc., Japan, 1959, 14, 12, 1822; Ref.2: Basinski Z.S. Proc. Roy.Soc., 1957, A240, 1221, 229; Ref.9: Zener C., Hollmon S.H.

Position of jumps on the ... S/126/61/012/006/021/023
E073/E535

J.Appl.Phys., 1944, 15, 22; Ref.10: Thomson N. and Millard D.S. Phil.Mag., 1952, 7, 43, 422.

ASSOCIATION: Institut fiziki metallov AN SSSR
(Institute of Physics of Metals AS USSR)

SUBMITTED: July 28, 1961

Card 3/3

KUZNETSOV, R.I.; PAVLOV, V.A.

Position of jumps on the tension curve of polycrystalline tin.
Fiz. met. i metalloved. 12 no.6:919-921 D '61. (MIRA 16:11)

1. Institut fiziki metallov AN SSSR.

GOZODOVA, G.Ye.; KUZNETSOV, R.L.

Public health and nosogeography in the United Arab Republic.
Vop geog. no.68:99-112 '65. (MIRA 18:12)

KUZNETSOV, R. L.

Organization of epidemiological inspection and of the verification of the liquidation of malaria at the Boradygya Medical Center in the Masally District of the Azerbaijan S.S.R. Med. paraz. i paraz. bol. no.2:181-186 '62. (MIRA 15:7)

1. Iz otdela epidemiologii (i. o. zav. - doktor meditsinskikh nauk N. N. Dukhanina) Instituta meditsinskoy parazitologii i tropicheskoy meditsiny imeni Ye. I. Martsinovskogo (dir. - prof. P. G. Sergiyev) Ministerstva zdravookhraneniya SSSR.

(MASALLY DISTRICT—MALARIA—PREVENTION)

KUZNETSOV, Rostislav Mikhaylovich; SOKOLOV, Andrey Georgiyevich; ASHURKOV, Ye.B., nauchnyy red.; SHAURAK, Ye.N., red.; KAMOLOVA, V.M., tekhn.red.; LEVOCHKINA, L.I., tekhn.red.

[Electric engineering for ships and the assembling of electric equipment of ships] Sudovaia elektrotekhnika i montazh sudovogo elektrooborudovaniia. Leningrad, Gos.soiuznoe izd-vo sudostroit. promyshl., 1957. 269 p. (MIRA 11:1)
(Electricity on ships)

BARSHCHEVSKIY, S.V., inzhener; KUZNETSOV, R.M., inzhener.

Mechanical fixing of cable shoes and connecting sleeves. Vest.elektroprom. 18 no.6:20-23 Je '47. (MLRA 6:12)

1. Leningradskiy elektrotekhnicheskiy institut im. V.I.Ul'yanova (Lenina).
(Electric cables)

GAKEL', R.A., kand.tekhn.nauk; Prinimali uchastiye: KOVYAZINA, L.Ye., mladshiy nauchnyy sotrudnik; BELYAYEV, N.N., inzh.; KUZNETSOV, R.N.; RYSEVA, S.N., mladshiy nauchnyy sotrudnik

Development of the technology for the manufacture of bulk yarn with the method of tow converting of synthetic fibers. Nauch.-issl.trudy TSNIISherati no.18:75-93 '63.

(MIRA 18:1)

KUZNETSOV, R.S., kandidat tekhnicheskikh nauk; YERMOLAYEV, I.N., kandidat tekhnicheskikh nauk; GAMLITSKAYA, S.V., inzhener.

Increasing the wear of starter contacts. Elektrichestvo no.5: 43-45 My '56. (MLRA 9:8)

1. Nauchno-issledovatel'skiy institut Ministerstva elektropromyshlennosti.

(Electric contactors)

Kuznetsov, R.S.

AUTHOR: Kuznetsov, R.S., Candidate of Technical Sciences 28-3-14/33

TITLE: Soviet Standards for Low-Voltage Electric Devices (sovetskiye standarty na niskovol'tnyye elektricheskiye apparaty)

PERIODICAL: Standartizatsiya, 1957, No 3, May-June, pp 54-56 (USSR)

ABSTRACT: The existing Soviet standards cover, as the author states, a considerable part of low-voltage switches, fuses, contactors, relays etc. There are standards for test methods and for permissible temperature of device portions, separate rules for special - as explosion-proof or marine devices. It is planned to work out in 1957, a new standard (technical conditions) for d.c.devices for rolling stock, and to revise the standard for a.c. contactors. For 1958 it is planned to prepare standards for automatic 15 amp. to 600 amp. switches and universal commutators for control circuits, to revise the standards for secondary protection relays and tumbler switches as well as for test methods; by 1960 the standards have to be revised for contactors, starters, for permissible temperature of device portions, while new standards for packet switches, carbon voltage controllers, collecting equipment, primary control relays (also time relays and thermal relays) and secondary relays of various categories must be developed. The author states that

Card 1/2

the existing standards do not always meet the needs of industry, and makes general suggestions, as to developing a standard, like ГОСТ 183-55 (for electrical machines) for general characteristics of low-voltage devices, to combine some standards into one, to more completely standardize the dimensions of devices and their spare parts, etc. Comparisons with foreign practice are made and the work of the International Electrotechnical Commission ("MEK") is referred to. The statement is made that the Soviet standards for contactors do not contain conditions for electrical wear resistance and their mechanical life is limited by one million in-out switchings for a.c. and ten million for d.c.; some foreign firms recommend a mechanical life of ten million switchings for a.c. This latter figure was found to be unrealistic after Soviet tests. The test methods for contactors laid down in the international standard project will have to be further discussed at the coming session of the International Commission.

ASSOCIATION: Research Institute for Electrical Industry (Nauchno-issledovatel'skiy institut elektropromyshlennosti)

AVAILABLE: Library of Congress

SOTSKOV, B.S.; USOV, V.V.; KUZHETSOV, R.S.; DEKABRUN, I.Ye.; KIRILLOVA, Z.S.; VORONIN, K.P., tekhn.red.

[Electric contacts; proceedings of the conference, November 26-28, 1956] Elektricheskie kontakty; trudy soveshchaniia, 26-28 noiabria 1956 g. Red. kollegiia: B.S. Sotskov i dr. Moskva, Gos. energ. izd-vo, 1958. 303 p. (MIRA 12:2)

1. Soveshchaniye po elektricheskim kontaktam. Moscow, 1956. (Electric contactors)

AUTHOR: Kuznetsov, R.S., Candidate of Technical Sciences SOV/110-59-5-1/25

TITLE: Wear on the Contacts of Low-Voltage Electrical Apparatus (Ob iznose kontaktov nizkovol'tnykh elektricheskikh apparatov)

PERIODICAL: Vestnik elektropromyshlennosti, 1959, Nr 5, pp 1-8 (USSR)

ABSTRACT: The results of wear tests on contacts are very variable and, therefore, it is necessary to test a large number of contacts. The object of this article is to collect together and analyse available data on contact wear. The material considered is derived from the Soviet and foreign technical press and includes data from factories, laboratories and various organisations in Czechoslovakia. Altogether an analysis was made of the results of 465 tests on various contacts under various conditions. Most of the tests were made on regular production electromagnetic equipment. Wear was estimated by loss of weight. At the start of the tests, when the contacts are but little worn, the reduction in weight is approximately proportional to the number of switching operations. Deviations from this general rule occur when the point of contact becomes displaced as wear occurs; the nearer

Card 1/7

the point of contact is to the edge of the metal the greater the wear. Heavily-worn contacts with a rough surface lose much more weight per operation than do smooth ones. Therefore, after a certain number of switching operations, wear begins to increase progressively and the contact soon fails. In the analysis an attempt was made to determine the wear after a number of operations such that the wear per unit operation was constant. Because of the progressively increasing rate of wear after a certain number of operations the data obtained here cannot be used accurately to determine the total service life of contacts. Available data about the wear of contacts was quite inadequate to establish its dependence on all the various factors that influence it. Therefore, wear was determined qualitatively as a function of five main factors, namely current, surrounding medium (air or oil), nature of the switching operation (making or breaking), contact material and kind of current. Factors that were not taken into account are briefly

discussed. In this work, the formula used to evaluate wear is

$$Q = 10^{-9} kNI^2 \qquad (2)$$

where k is the wear coefficient; Q is the mean total loss of weight of the two contacts; N is the number of switching operations and I is the current. A graph of the relationship between the loss of weight of contacts in electro-magnetic apparatus and the current is given in Fig 1, which shows the maximum and minimum rates of wear in air and also a mean value of wear. The factor k from expression (2) was chosen to assess wear rather than contact weight loss because it changes much less as a function of current. The method of analysing the test results is then briefly described. The value of the wear coefficient was determined for various main conditions, as defined above, and curves of the kind seen in Fig 2 to 5 were plotted. These curves indicate respectively the coefficients under the following conditions: interrupting alternating current in air; making and breaking a given value of alternating current in air; making and

breaking a given value of direct current in air. The voltage was kept the same at making as at breaking and was found to have little influence on the wear coefficient. Accordingly tests at different voltages are plotted together and the voltage is marked on the graph near the experimental point. The graphs in Fig 6 refer to the wear coefficient for various materials when making and breaking current in air and in oil. Results for a.c. and d.c. are plotted together as there was little difference between them. This was probably because the d.c. equipment used had effective arc-suppression equipment and may not be a generally valid circumstance. With both copper and silver in oil the wear was the same on make as on break. The limitations of the data given in Fig 6 are discussed and some conclusions are drawn. The variability of wear is then considered for, in addition to knowing the wear coefficient, it is necessary to know the maximum wear which is to be expected. This maximum

Wear on the Contacts of Low-Voltage Electrical Apparatus

wear must be defined in different ways for different types of contact. Moreover, knowledge of the maximum change in weight is still not enough because the contact surface wears irregularly. The physical processes that cause uneven wear are different for d.c. and a.c. duty, which must accordingly be considered separately. For alternating current, an analysis was made of the results of 32 tests on various three-pole contactors. The distribution of the total wear between individual groups of contacts of a three-pole contactor is given in Table 1. For direct current, Fig 8 plots, as a function of the current, the ratio of wear on the electrode that wears most to the half-sum of the wear of the anode and cathode. For currents below 4A, wear is greater at the cathode than at the anode. For currents greater than 4-12A the reverse is true. It is concluded that the mean loss of weight of two contacts on low-voltage electro-magnetic equipment which make or break rated voltages of 100 to 500 V can be determined approximately from expression (2). The wear coefficient k may be derived from the data given

in Fig 6 and it is of the order of magnitude given in Table 2 for currents between 1-500 A. The weight loss may be much less than indicated if the recovery voltage is low. Mechanical wear of copper contacts of contactors involving friction can be determined from Fig 6. In a multi-pole contact assembly, the contacts of one pole fail first: to determine the wear on this contact the mean wear must be multiplied by the variability coefficient. For three-pole equipment in which the wear is defined as the total loss in weight of the contacts of one pole, the variability coefficient may be taken as 1.5 (or 2.5 at the outside). For direct current, if wear of the contact member is governed by wear of one of its contact surface, the value of the variability coefficient may be determined from Fig 8 for currents greater than 20 A. As the radius of curvature of the contact surface increases, wear on breaking increases. Data are given in

Wear on the Contacts of Low-Voltage Electrical Apparatus

support of this finding. The resistance to wear of various types of contact materials is discussed. In the current range 10-100A, wear of contacts when breaking in oil is considerably greater than in air. For currents of the order of 10000 A, wear in oil and in air is about the same because in both cases the arc burns in a gaseous medium. There are 8 figures, 2 tables and 10 references, 5 of which are English, 4 German and 1 Soviet.

SUBMITTED: 5th November 1958

SOTSKOV, B.S., otv.red.; USOV, V.V., red.; KUZNETSOV, R.S., red.; ZOLOTYKH, B.N., red.; DEKABRUN, I.Ye., red.; KIRILLOVA, Z.S., red.; VORONIN, K.P., tekhn.red.

[Electrical contacts; transactions of the All-Union Conference on Electrical Contacts and Materials for them] Elektricheskie kontakty. Trudy Vsesoiuznogo soveshchaniia po elektricheskim kontaktam i kontaktnym materialam. Red.kollegiia: B.S.Sotskov i dr. Moskva, Gos.energ.izd-vo, 1960. 423 p. (MIRA 13:10)

1. Vsesoyuznoye soveshchaniye po elektricheskim kontaktam i kontaktnym materialam. 2d, Moscow, 1959.
(Electric contactors)

KUZNETSOV, Rostislav Sergeyevich; YERMOLAYEV, I.N., red.; KHROMCHENKO, G.Ye., red.; SHIROKOVA, M.M., tekhn. red.

[Apparatus of low-voltage power distribution systems] Apparaty raspredelitel'nykh ustroistv nizkogo napriazheniia. Izd.2., perer. i dop. Moskva, Gosenergoizdat, 1962. 447 p. (MIRA 15:7)
(Electric power distribution--Equipment and supplies)

KUZNETSOV, R.S., kand.tekhn.nauk

Evaluation of the operating life of low-voltage switchgear using the test results of some samples. Elektrotekhnika 35 no.4:19-24 Ap '64. (MIRA 17:4)

SOTSKOV, B.S., otv. red.; DEKABRUN, I.Ye., red.; ZOLOTYKH, B.N., red.; KUZNETSOV, R.S., red.; KIRILLOVA, Z.S., red.; SHUROVA, Yu.P., red.

[Electric contactors; transactions] Elektricheskie kontakty; trudy. Red. koll. B.S.Sotskov i dr. Moskva, Energiia, 1964. 502 p. (MIRA 17:8)

1. Vsesoyuznoye soveshchaniye po elektricheskim kontaktam i kontaktnym materialam. 3d, Moscow, 1962.

KUZNETSOV, R.V., kand. med. nauk (Saratov, ul. Chernyshevskogo, 141, kv.12)

Spontaneous closure of a bronchobiliary fistula. Vest. khir. 92 no.6:123-124 Je '64. (MIRA 18:5)

1. Iz kafedry obshchey khirurgii (zav. - dotsent N.V. Gerasimov) Saratovskogo meditsinskogo instituta (rektor - dotsent N.R. Ivanov).

KUZNETSOV, S.

A necessary, worthwhile matter. Zhil.-kom. khoz. 12 no.10:6 O '62.
(MIRA 16:2)

1. Nachal'nik Volgogradskoy kontory "Goroformleniye".
(City planning)

KUZNETSOV, S., kand.tekhn.nauk; KUROCHKIN, A., inzh.

Recent developments in the design of silos for grain and flour. Muk.-elev.prom. 30 no.1:10-11 Ja '64. (MIRA 17:3)

1. Gosudarstvennyy proyektnyy institut po proyektirovaniyu predpriyatiy i sooruzheniy zernovoy i mukomol'noy promyshlennosti.

KUZNETSOV, S.

Let's conduct shipping in the north in an exemplary manner.
Mor.flot 25 no.6:8-9 Jl '65.

(MIRA 19:1)

1. Nachal'nik Severnogo parokhodstva.

KUZNETSOV, S. A.

26368 Avtomaticheskiy signalizator poyavleniya shugi. Zlektr. Stantsii, 1949, No. 8 s. 32-33.

SO: LETOPIS' NO. 35, 1949

VYATSKIN, B.Ya., inzhener; KUZNETSOV, S.A., inzhener; MIKHAYLOVA, A.P., inzhener.

AST-4 automatic synchronizer with fixed advance. Elek.sta.27 no.6:29-31 Je '56. (Electric controllers) (MLRA 9:9)

KUZNETSOV, S.A.

KUZNTSOV, S.A.; EPSHTEYN, A.M.

[Electrolytic aluminum production; textbook for masters of electrolytic workshops in aluminum plants] Elektroliticheskoe proizvodstvo aliuminiia; posobie dlia masterov elektroliznykh tsekhov aliuminevykh zavodov. Sverdlovsk, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1953. 304 p.
(Aluminum--Electrometallurgy) (MLRA 7:6)

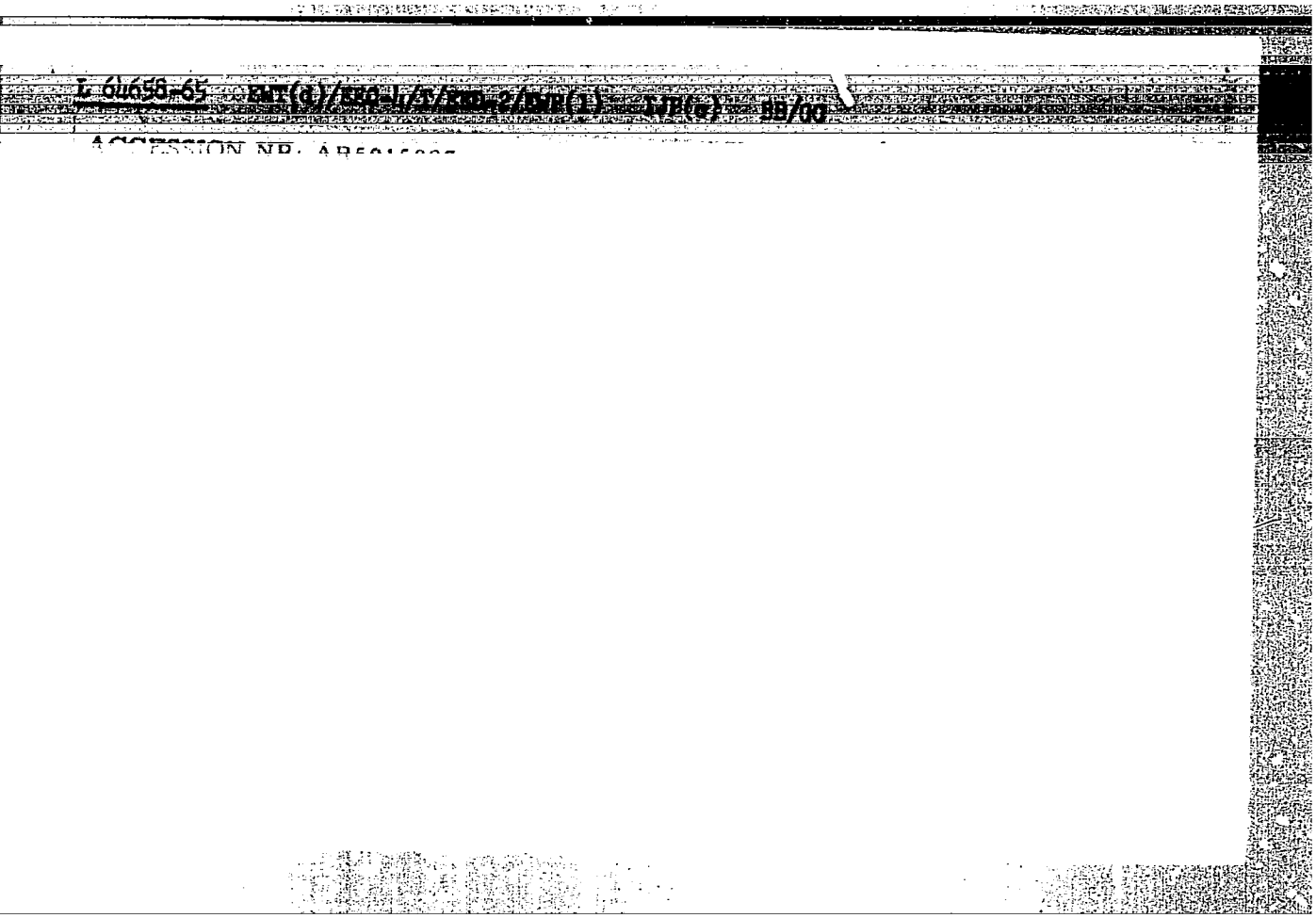
KUZ'MINOV, S.A., inzhener.

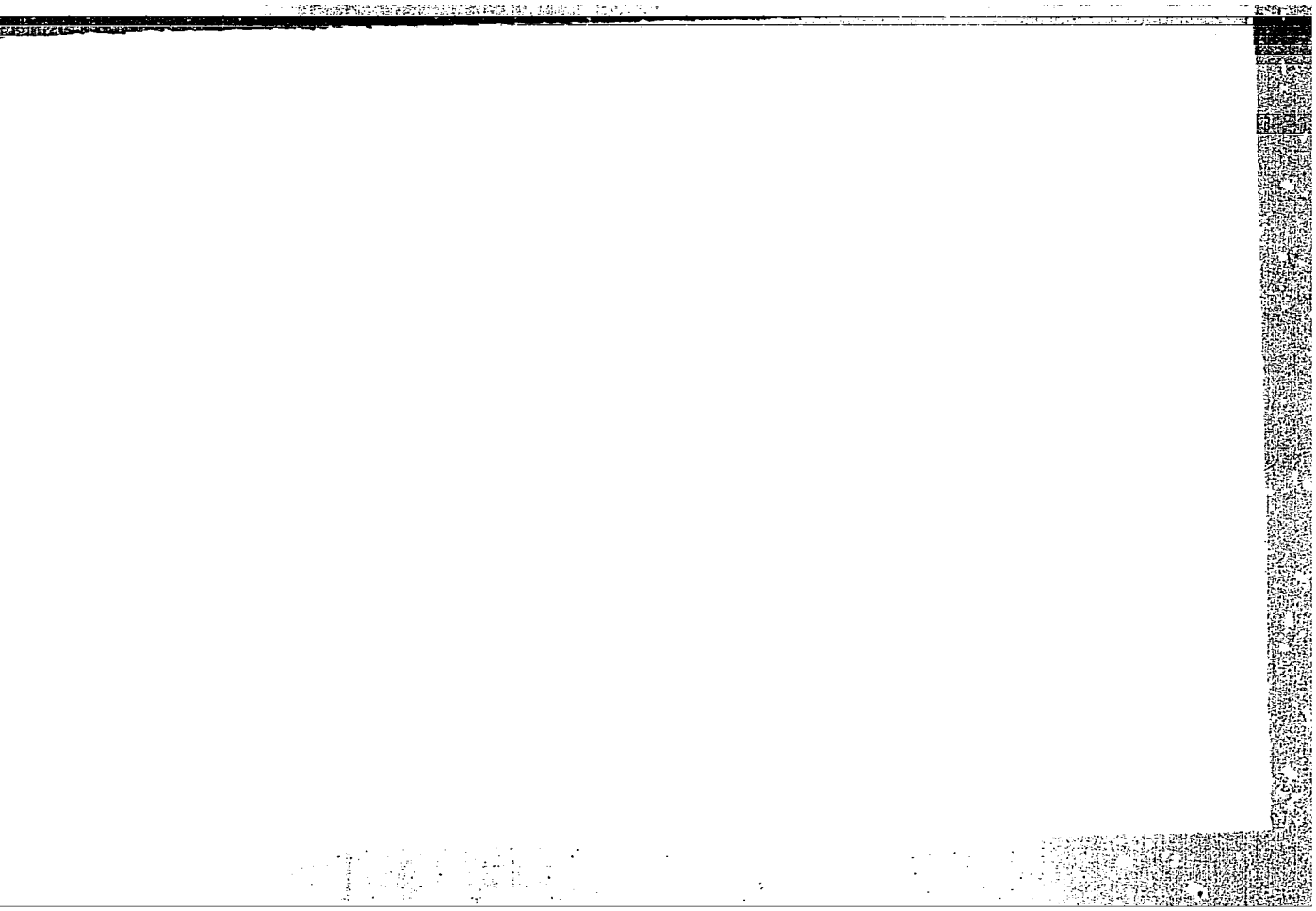
Method of calculating general deformations of construction parts through welding. Vest.mash. 34 no.9:70-75 S '54. (MLRA 7:9)

(Welding) (Deformations (Mechanics))

KUZNETSOV, S.A.

The MR39-type semiautomatic copying lathe. Biul.tekh.-ekon. inform. no.6:15-17 '58. (MIRA 11:8)
(Lathes)





APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000928130005-3"

KVACHEVA, A.I.; KUZNETSOV, S.D.; TUROVSKIY, E.M.

Measuring the roughness of curvilinear surfaces. Izm. tekh. no.8:23-24 Ag '63. (MIRA 16:10)

ZAYCHENKO, G.N.; KUZNETSOV, S.F.

Forcing reverse current in electrolytic baths operating on alternating polarity. Sbor. nauch. trud. GINTSVETMET no.33: 377-387 '60. (MIRA 15:3)

(Electroplating)

J-4

USSR/Soil Science. Organic Fertilizers.

Abs Jour: Ref Zhur-Biol., No 6, 1958, 24779.

Author : Kuznetsov, S.F.
Inst :
Title : Results of Tests of Land-Enriching Legume Crops.

Orig Pub: S. kh. Tadzhikistana, 1956, No 10, 46-49.

Abstract: The studies of arid subtropics by the All-Union Scientific Research Institute have shown that in the conditions of the Gissar valley that, according to the crop capacity (41.9 t/ha.) and according to the quantity of the humus accumulated in the soil (8.8 t./ha.), early-ripening clover takes first place among the winter legumes, while the winter pea is in the second rank. Of summer legumes, cow pea gave the largest yield (up to 50 t. for two

Card : 1/2

USSR/Soil Science. Organic Fertilizers.

J-4

Abs Jour: Ref Zhur-Biol., No 6, 1958, 24779.

harvests). The first harvest of the cow pea, the rattlebox and the black-eyed pea can be utilized for fertilization of the other field, and the second one - for tillage.

Card : 2/2

SOMIN, I.N.; KUZNETSOV, S.G.

Ultraviolet spectra of hydroxy-and dihydroxybenzils. Zhur. ob. khim. 31 no.4:1083-1085 Ap '61. (MIRA 14:4)

1. Institut toksikologii Akademii meditsinskikh nauk SSSR.
(Benzil—Spectra)

LIEMAN, N.M.; KUZNETSOV, S.G.

Amino alcohols of the acetylene series. Part 2: XX 1,1-disubstituted 5-dialkylaminopentinols with different position of their trible bond. Zhur.ob.khim. 31 no.7:2283-2289 Jl '61. (MIRA 14:7)

1. Institut toksikologii Akademii meditsinskikh nauk SSSR.
(Alcohols)

KUZNETSOV, S.G.; IOFFE, D.V.

Formation of polymethyleneammonium rings. Part 1: Synthesis and transformations of some esters of diphenylacetic acid. Zhur. ob.khim. 31 no.7:2289-2297 Jl '61. (MIRA 14:7)

1. Institut toksikologii Akademii meditsinskikh nauk SSSR.
(Acetic acid) (Ammonium compounds) (Ring formation)

KUZNETSOV, S.G.

Alkylaminoethyl esters of benzilic and diphenylacetic acids.
Zhur.ob.khim. 31 no.8:2623-2629 Ag '61. (MIRA 14:8)

1. Institut toksikologii Akademii meditsinskikh nauk SSSR.
(Benzilic acid) (Acetic acid)

IOFFE, D.V.; KUZNETSOV, S.G.

Preparation of aminoalkyl esters of benzilic acid. Zhur.ob.khim. 31 no.9:3051-3056 S '61. (MIRA 14:9)

1. Institut toksikologii Akademii meditsinskikh nauk, Leningrad.
(Benzilic acid)

KUZNETSOV, S.G.

Study of the hydrogen bond in cholinergic substances by means of infrared absorption spectra. Part 2. Zhur.ob.khim. 31 no.10:3353-3360 O '61. (MIRA 14:10)

1. Institut toksikologii Akademii meditsinskikh nauk SSSR, Leningrad.
(Parasympanthomimetic substances--Spectra)
(Hydrogen bonding)

KUZNETSOV, S.G.; ROGINSKAYA, Ye.V.

Rate of acetylation of some cholinergic substances containing a hydroxyl group. Zhur.ob.khim. 31 no.10:3360-3366 O '61.
(MIRA 14:10)

1. Institut toksikologii Akademii meditsinskikh nauk SSSR, Leningrad.
(Parasympanthomimetic substances) (Acetylation)

KUZNETSOV, S.G.; FEDOROVA, L.V.

Molecular association of cholinergic substances. Part 1.
Zhur.ob.khim. 31 no.10:3366-3368 O '61. (MIRA 14:10)

1. Institut toksikologii Akademii meditsinskikh nauk SSSR, Leningrad.
(Parasympanthomimetic substances) (Molecular association)

KUZNETSOV, S.G.; FEDOROVA, L.V.

Molecular association of cholinergic substances. Part 2. Zhur.ob. khim. 31 no.10:3368-3375 O '61. (MIRA 14:10)

1. Institut toksikologii Akademii meditsinskikh nauk SSSR, Leningrad.
(Parasympanthomimetic substances) (Molecular association)

KUZNETSOV, Sergey Georgiyevich; GOLIKOV, Sergey Nikolayevich; VINOGRADOV, V.M., red.; KHARASH, G.A., tekhn. red.

[Synthetic atropinelike substances]Sinteticheskie atropinopodobnye veshchestva. Leningrad, Medgiz, 1962. 223 p. (MIRA 15:8)

(Parasympatholytics)

KUZNETSOV, S.G.; YEL'TSOV, A.V.

Some new aminoalkyl esters of benzilic acid. Zhur.ob.khim. 32 no.2:511-515 F '62. (MIRA 15:2)

1. Institut toksikologii AMN SSSR, Leningrad.
(Benzilic acid)

KUZNETSOV, S.G.; ROGINSKAYA, Ye.V.

Comparative investigation of the rates of hydrolysis of cholinergic aminoalkyl esters and thioesters. Zhur.ob.khim. 32 no.6:2026-2029 Je '62. (MIRA 15:6)

1. Institut toksikologii Akademii meditsinskikh nauk SSSR.
(Esters) (Choline) (Hydrolysis)

KUZNETSOV, S.G.; FEDOROVA, L.V.

Molecular association of cholinergic substances. Part 3. Zhur.ob. khim. 32 no.7:2354-2357 Jl '62. (MIRA 15:7)

1. Institut toksikologii Ministerstva zdravookhraneniya SSSR, Leningrad.
(Parasympatholytics) (Molecular association)

IOFFE, D.V.; KUZNETSOV, S.G.

Formation of polymethylene ammonium cycles. Part 2: Synthesis and conversions of some benzilic acid esters. Zhur.ob.khim. 32 no.10:3237-3244 O '62. (MIRA 15:11)

1. Institut toksikologii Ministerstva zdravookhraneniya SSSR, Leningrad.

(Benzilic acid)
(Ethylamine)

KUZNETSOV, S.G.; FEDOROVA, L.V.

Molecular association of cholinergic substances. Part 4. Zhur.ob.khim. 32 no.11:3775-3778 N '62. (MIRA 15:11)
(Parasympathomimetic substances)
(Molecular association)

KUZNETSOV, S.G. (Leningrad); BOBYSHEVA, Z.I. (Leningrad)

Optical isomers of some cholinergic substances. Zhur.ob.khim. 32 no.11:3779-3783 N '62. (MIRA 15:11)
(Parasympathominetic substances)
(Isomers)

KUZNETSOV, S.G.; SOMIN, I.N.

Diethylaminoethyl esters of hydroxy- and methoxybenzilic acid. Zhur.ob.khim. 32 no.11:3783-3788 N '62. (MIRA 15:11)
(Benzilic acid)

S/079/63/033/001/003/023
D205/D307

AUTHORS: Libman, N. M. and Kuznetsov, S. G.

TITLE: Aminoalcohols of the acetylenic series. III. Reduction of the triple bond

PERIODICAL: Zhurnal obshchey khimii, v. 33, no. 1, 1963, 28-35

TEXT: The present work describes the reduction of 1-diethylamino-3-(9'-hydroxyfluorenyl-9')propyne-2, 1,1-diphenyl-4-dimethylaminobutyn-2-ol-1, 1,1-diphenyl-4-piperidinobutyn-2-ol-1, 1-diethylamino-4-(9'-hydroxyfluorenyl-9')butyne-3, 1,1-diphenyl-5-dimethylaminopentyn-2-ol-1, 1,1-diphenyl-5-diethylaminopentyn-2-ol-1, 1-diethylamino-4-(9'-hydroxyfluorenyl-9')butyne-2, and 1,1-diphenyl-5-dimethylaminopentyn-3-ol-1- Hydrogenation over Adams' Pt, generally in EtOH, gave 1-diethylamino-3-(9'-hydroxyfluorenyl-9')propane, 1,1-diphenyl-4-dimethylaminobutanol-1, 1,1-diphenyl-4-piperidinobutanol-1, 1-diethylamino-4-(9'-hydroxyfluorenyl-9')butane, 1,1-diphenyl-5-dimethylaminopentanol-1, and 1,1-diphenyl-5-diethylami-

Card 1/ 2

nopentanol-1. Hydrogenation of the acetylenic alcohols over Lindlar's catalyst allowed reduction to the olefinic alcohols, interrupting the reaction at this stage. The following cis-alcohols were obtained in this way: 1-diethylamino-3-(9'-hydroxyfluorenyl-9')propene-2, 1,1-diphenyl-4-dimethylaminobuten-2-ol-1, 1,1-diphenyl-4-piperidinobuten-2-ol-1, 1-diethylamino-4-(9'-hydroxyfluorenyl-9')butene-3, 1,1-diphenyl-5-dimethylaminopenten-2-ol-1, 1-diethylamino-4-(9'-hydroxyfluorenyl-9')butene-2, and 1,1-diphenyl-5-dimethylaminopenten-3-ol-1. The following trans-olefinic alcohols were obtained by reduction of the triple bonds with $LiAlH_4$ or $Na/liq.NH_3$: 1-diethylamino-3-(9'-hydroxyfluorenyl-9')propene-2, 1,1-diphenyl-4-dimethylaminobutene-2-ol-1, 1,1-diphenyl-4-piperidinobutene-2-ol-1, 1-diethylamino-4-(9'-hydroxyfluorenyl-9')butene-3, 1,1-diphenyl-5-dimethylaminopenten-2-ol-1, and 1,1-diphenyl-5-dimethylaminopenten-3-ol-1. Most of the reduced or semi-reduced alcohols were converted to their hydrochlorides by treatment with alcoholic HCl. There are 1 figure and 3 tables.

SUBMITTED: February 3, 1962

Card 2/2

IOFFE, D.V.; KUZNETSOV, S.G.

Migration of the acyl group in N-acyl derivatives of 1,4-amino alcohols. Zhur.ob.khim. 33 no.3:991-994 Mr '63. (MIRA 16:3)

(Acyl groups)
(Alcohols)

IOFFE, D.V.; KUZNETSOV, S.G.

On 2-bromoethyl ester of benzilic acid. Zhur.ob.khim. 33 no.3:1041 Mr '63. (MIRA 16:3)
(Benzilic acid)
(Ethanol)

KUZNETSOV, S.G.; ROGINSKAYA, Ye.V.

Rate of N-alkylation of some cholinergic substances containing a tertiary amino group. Zhur. ob. khim. 33 no.5:1570-1573 My '63. (MIRA 16:6)

(Parasympathomimetic substances)
(Amino group) (Alkylation)