"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

SERBIN N.M.

3(2), 3(4) SOV/6-59-7-4/25

AUTHOR: Sokolova, O. I.

TITLE: Results of the Competition for the Best Improving Suggestion (Itogi konkursa na luchshiye ratsionalizatorskiye predlozheniya)

PERIODICAL: Geodeziya i kartografiya, 1959, Nr 7, pp 17-21 (USSR)

ABSTRACT: In May 1959, the ordinary competition for the best improving suggestion in the field of topographic-geodetic and cartographic production was concluded at the Glavnoye upravleniye geodezii i kartografii MVD SSSR (Main Administration of Geodesy and Cartography of the Ministry of Internal Affairs of the USSR). 7 aerogeodetic services, 8 cartographic institutes and NRKCh took part. A total of 30 topographic-geodetic, and 31 cartographic, suggestions were submitted. The 1st prize of 1,000 rubles was awarded to V. A. Morozov and V. V. Urusov (Minskaya kartograficheskaya fabrika (Minsk Cartographic Plant) for the "Seamless Fastening of Atlas Blocks". The 2nd prizes of 750 rubles were awarded to: 1) Ya. L. Bratslavskiy, V. M. Varzugin, Yu. N. Galitskiy, O. P. Sheiler and V. P. Stepanov (NRKCh) for "Technology of the Use of Standard Bases (Tipovaya osnova)". 2) I. V. Gurevich, V. M. Varzugin, N. O. Radovil'skaya, O. P. Sheiker, L. V. Chaykova for "Technology of the Manufacture of Combined Diapositives" (NRKCh). 3) D. A. Larin (Moskovskoye AGP (Moscow AGP)) for "Reduction of Work in Evaluating the Accuracy of Symmetric Geodetic Nets Formed by Figures of Regular Shape". 4) M. V. Shreyber (Novosibirskoye AGP (Novosibirsk AGP)) for "Light Collapsible Ladder of Dural for Prospecting". - The 3rd prizes of 500 rubles each were awarded to : 1) I. V. Shevaldin (Yakutskoye AGP (Yakutsk AGP)) for "Establishment of Fixed Points by the Method of Thawing by Means of Vapor". 2) V. D. Ol'shanskiy (Yakutskoye AGP (Yakutsk AGP)) for "Construction of an Overhead Trolley for Timber Transport". 3) I. A. Kyzin (Moskovskoye AGP (Moscow AGP)) for "Variation in the Attachment of Photographs on the STD-2". 4) V. F. Zarubin (Moskovskoye AGP (Moscow AGP)) for "Raising of Geodetic Signs by 5-7 Meters". 5) D. I. Smirnov, I. V. Gurevich, Z. I. Aleksandrova, V. M. Varzugin, V. K. Kirillov and I. Ye. Kislyakov (NRKCh) for "Technology of the Completion and Edition of Topographic Maps by the Photorelief Method". 6) M. F. Glushanin (Minskaya kartograficheskaya fabrika (Minsk Cartographic Institute)) for "Vertical Piling Machine for Brochures". 7) A. A. Vnukov (Tashkentskaya kartograficheskaya fabrika (Tashkent Cartographic Institute)) for "Mechanism for the Loading of Trucks With Paper Rolls". 8) A. N. Tsokolenko (Ukrainskoye AGP (Ukrainian AGP)) for "Replacement of the Arc Lamp for the Heliographic-printing Machine KP-1 by an Illuminating Device With Luminescent Lamps DS-40". 9) G. K. Grigor'yev (Sverdlovskoye AGP (Sverdlovsk AGP)) for "Ruler for Drawing in the Preparation of Map Compilations and Final Compilations". 10) L. G. Israilev (Severo-Zapadnoye AGP (North-west AGP)) for "Improvement of the Contact Mechanism in the Micrometer by Yodar". 11) G. M. Andreyev (Moskovskoye AGP (Moscow AGP)) for "Formulas and Form for a More Rational Computation of Superelevations From the Trigonometric Leveling". 12) D. G. Vil'ner (Sverdlovskoye AGP (Sverdlovsk AGP)) for "New Numbering and Painting of Leveling Staffs". 13) G. M. Grinberg (Moskovskoye AGP (Moscow AGP)) for "Formulas and Table for Extreme Divergences Between the Free Terms of Polar and Base Conditions Computed on a Plane and on a Ball". - Besides, the following suggestions were approved by the jury: 1) V. T. Trykov (Sverdlovskoye AGP (Sverdlovsk AGP)), "Underframe for Observations From the Telescopic Tower". 2) B. V. Osinskiy

Card 1/6

Card 2/6

Card 3/6

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

SOV/6-59-7-4/25

Results of the Competition for the Best Improving Suggestion

(Severo-Zapadnoye AGP (North-west AGP)) "Tables (plates) for Determining the Corrections of Centering and Reducing With an Auxiliary Scale for Determining the Corrections of the Curvature of the Image of the Geodetic Line and of the Spheric Excess". 5) V. G. Mauverer (Moskovskoye AGP (Moscow AGP)) , "Variation of the Construction of the Heliotrope". 4) G. M. Shlefendorf (Moskovskoye AGP (Moscow AGP)), "Zero Thermostat for the Gravimeters of the GAK-ZM-type". 5) P. I. Popov (Moskovskoye AGP (Moscow AGP)), "Device for Cutting Aluminum". 6) A. I. Pikhman and G. M. Grinberg (Moskovskoye AGP (Moscow AGP)), "Prospecting Mast". 7) Ya. I. Negnevitskiy, N. A. Pashukevich and M. P. Glushanin (Minskaya kartograficheskaya fabrika (Minsk Cartographic Institute)), " A Workbench Device for Mixing Offset Colors". 8) I. L. Gintsberg (Tashkentskaya kartograficheskaya fabrika (Tashkent Cartographic Institute)), "Device for Grinding the Edges of Plate Glass". 9) A. A. Vnukov (Tashkentskaya kartograficheskaya fabrika (Tashkent Cartographic Institute)), a) "Mechanism for Inclining the Grinding Case". b) "Mechanism for Lifting the Trough With the Balls". 10) V. I. Yurchenko and S. A. Lonshteyn (Tashkentskaya kartograficheskaya fabrika (Tashkent Cartographic Institute)), "Automatic Switch-off of Arc Lamps". 11) I. V. Vasil'yeva (Tashkentskaya kartograficheskaya fabrika (Tashkent Cartographic Plant), "Increase in the Durability of Light-sensitive Rubber Solution (Adhesive)". 12) V. M. Sher (Kiyevskaya kartograficheskaya fabrika (Kiyev Cartographic Plant), "Correspondence of the Stroke-elements on Topographic Maps With the Letters on the Machine Printing Forms". 13) V. V. Bozrikov, S. P. Yakunin (Rizhskaya kartograficheskaya fabrika (Riga Cartographic Plant), "On the Improvement in the Construction of Mechanisms for Pressing-on the Inking Rollers and Friction Drums on the Offset Machines 'Planeta-Super-Kvinta'". 14) A. Ya. Simanovskiy (Rizhskaya kartograficheskaya fabrika (Riga Cartographic Plant), "A Rational Method of Making Positives of Printing Forms of Relief Printing on Tracing Paper for Printing Books on Offset Machines". 15) O. M. Yankovskiy (Rizhskaya kartograficheskaya fabrika (Riga Cartographic Plant), "Synchronization and Automatization of the Switching on and off of Arc Lamps and of the Suction Fan in the Copying Department". 16) V. F. Alaspiyev (Rizhskaya kartograficheskaya fabrika (Riga Cartographic Plant), "Variation in the Technology of Making Sets of Outline Maps of the Fifth Classes" 17) V. V. Il'yushin (Rizhskaya kartograficheskaya fabrika (Riga Cartographic Plant), "Preparation of Collecting- and Corresponding Positives by the Method of the Washed-out Relief on 'viniproz'". 18) V. M. Dudochkin (Tbilisskaya kartograficheskaya fabrika (Tbilisi Cartographic Plant), "Switching off the Motor of the Compressor on the Copying Frame by Means of the Change Lever for Lifting the Glass and by Means of the Vacuum". 19) D. I. Matkava (Tbilisskaya kartograficheskaya fabrika (Tbilisi Cartographic Plant), "Device for Laying on the Negatives in Copying". 20) N. M. Serbin (Tbilisskaya kartograficheskaya fabrika (Tbilisi Cartographic Plant), "Device for Drying Paper on Offset Machines". 21) S. M. Konstantinova (Tbilisskaya kartograficheskaya fabrika (Tbilisi Cartographic Plant), "Progressive Method and Procedure for the Preparatory Work in Calculating and Plotting the Geographic Network on Maps to Be Compiled". 22) K. I. Mironov (NRKCh) "A Workbench for Repairing the Guides of the Offset Machine". 23) Yu. P. Tarasov (NRKCh) "Device for Regulating the "taler" of the Offset Machine". 24) Ye. N. Klyuchanskaya and S. V. Nesterova (NRKCh) "Improving the Method of Precipitating the Silver Nitrate in Used Solutions".

Card 4/6

Card 5/6

Card 6/6

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

SUPIN, S. I.

Beets and Beet Sugar.

Reaction of sugar beets of varied vigor to a high nutrition supply. Sel. i. sem. 19, No. 2, 1952.

9. MONTHLY LIST OF RUSSIAN ACCESSIONS, Library of Congress, June 1952. Uncl.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

SERBIN, S. S.

U.S.S.R.

Physiological influence of foliar feeding of sugar beets, S. S. Serbin (All-Union Sci. Research Inst. Sugar Beets, Kiev). *Agrobiologiya* 1954, No. 5(Whole No. 80), 89-95.—In sand cultures foliar feeding versus standard application of nutrients failed to produce results. In soil cultures spraying with water or with 1.0-1.5% NPK gave slight increases. A 10% soln. of NPK reduced the yield. Field trials with a 5% soln. of salts (800 l./ha.) sprayed on 3 times during the growing season show that NPK gave the best results. Spraying with salts increased the photosynthetic activity of the plants. Spraying with KCl gave a higher sugar content than when sprayed with superphosphate or with NH_4NO_3. Respiration was increased by spraying with NPK, NH_4NO_3, and KCl, the latter stimulating it more than the other salts.

J. S. Joffe

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

SERBIN, S.S.

Extra-radical nutrition of plants of the sugar beet. S. S. Serbin (All-Union Sci. Research Sugar Beet Inst., Kiev). *Doklady Akad. Nauk S.S.S.R.* 96, 133-5(1954).—Expts. with sand cultures of sugar-beet plants in which the nutrient soln. was deposited on the leaves showed that while such nutrition can be used as the sole food supply, it yields midget plants. When part of the nutrient is supplied by natural root routes, the effects of the leaf route are readily apparent in plant growth and development, with higher sugar content in the roots. Spraying the leaves with KCl-K_2HPO_4 or NaCl-K_2HPO_4 some 15 days before harvesting gave higher sugar content in the roots than in controls.

G. M. Kosolapoff

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

L 27517-66 EWT(m)/EWP(e)/EWP(j)/T/EWP(v) IJP(c) WW/RM/WH

ACC NR: AP6005846 (N) SOURCE CODE: UR/0403/65/000/003/0008/0011

AUTHOR: Biryukovich, Yu. (Director of laboratory); Serbin, V. (Senior engineer); Biryukovich, D. (Team leader, Member of technical help bureau)

ORG: (Biryukovich, Yu.) VNIINSM, Kiev; (Serbin, V.) Institute of Mechanics AN UkrSSR (Institut mekhaniki AN UkrSSR); (Biryukovich, D.) VNIINSM.

TITLE: Glass-wool cements in the national economy

SOURCE: VDNKh SSSR. Informatsionnyy byulleten', no. 3, 1965, 8-11

TOPIC TAGS: general construction, structural mineral product, shipbuilding

ABSTRACT: The authors describe a new anisotropic construction material of glass-wool fibrous aggregates bound together by cement (or polymer-cement) glue. Its unit weight varies between 0.80 and 1.85 g/cu cm and its specific elongation is 0.9%. The material has good resistance against formation of cracks and fissures. The formation of micro-fissures starts at stresses in the range of 80 to 90% of tensile strength. The new material based on latex-cement glue has high dielectric properties. Its volume resistivity attains a value of 10^{14} ohm-cm

Card 1/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

L 27517-66

ACC NR: AP6005846

0

and its surface resistivity goes up to 10^{13} ohm-cm. Puncture voltage is about 8 kv/mm. Thermal conductivity is about 0.1 to 0.9 kcal/m.hr. degree. The material is fireproof, waterproof, frostproof and resistant to the action of mineralized water. It can readily be machined, riveted bolted, glued and assembled. It can be colored by addition of pigments to its binding mineral glue. The glass-wool cement is about 30 times cheaper than structural glass-plastics. It is more expensive than reinforced concrete. However, its higher cost is compensated by a lesser weight needed for construction because the tensile and bending strengths of glass-wool cement exceed many times the strengths of reinforced concrete. The glass-wool cement is especially suitable for construction of window frames, thin walls, tanks, pipes, boat hulls, etc. Some examples of developing, testing and using this material for various constructions (mostly in the Kiev area) were presented, including apartment buildings, irrigation installations and shipbuilding. The motor-yacht "Novinka" built of glass-wool cement was shown in a photo. Its hull walls were only 1 cm thick for a yacht size 18 cu m. The yacht covered 3000 km during the 1963 navigation season (Dnepr River and Black Sea). Orig. art has: 2 photos.

SUB CODE: 11,13 / SUBM DATE: None / ORIG REF: 000 / OTH REF: 000

Card 2/2 BLG

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

[redacted]'YEV, A.; PASHCHENKO, A.; SERBIN, V.

Glass reinforced cement roofs. Sel'.stroi. 18 no.11:21 N '63. (MIRA 17:3)

1. Sotrudniki kafedry silikatov Kiyevskogo politekhnicheskogo instituta.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

U

ALEKSEYEV, F.K.; ANDRIYUTS, G.L.; ARSENT'YEV, A.I.; ASTAF'YEV, Yu.P.; BEVZ, N.D.; BEREZOVSKIY, A.I.; GENERALOV, G.S.; DOROSHENKO, V.I.; YESHCHENKO, A.A.; ZAPARA, S.A.; KALINICHENKO, V.F.; KARNAUSHENKO, I.K.; KIKOVKA, Ye.I.; KOBOZEV, V.N.; KUPIN, V.Ye.; LOTOUS, V.K.; LYAKHOV, N.I.; MALYUTA, D.I.; METS, Yu.S.; OVODENKO, B.K.; OKSANICH, I.F.; PANOV, V.A.; POVZNER, Z.B.; PODORVANOV, A.Z.; POLISHCHUK, A.K.; POLYAKOV, V.G.; POTAPOV, A.I.; SAVITSKIY, I.I.; SERBIN, V.I.; SERGEYEV, N.N.; SOVETOV, G.A.; STATKEVICH, A.A.; TERESHCHENKO, A.A.; TITOV, D.S.; FEDIN, A.F.; KHOMYAKOV, N.P.; SHEYKO, V.G.; SHEKUN, O.G.; SESTAKOV, M.M.; SHTAN'KO, V.I.

Practice of construction and exploitation of open pits of Krivoy Rog Basin mining and ore dressing combines. Gor. zhur. no.6: 8-56 Je '63. (MIRA 16:7)

(Krivoy Rog Basin--Strip mining)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

SERBIN, V.I.; BERESNEVICH, P.V.; ANDRYUSHCHENKO, A.V.; SAZONOV, V.A.; SHESTOKOV, M.M.

Experience in waste stacking in the zones of caving of operating mines. Gor. zhur. no.10:41-45 O '65. (MIRA 18:11)

1. Institut Krivbassproyekt (for Serbin, Beresnevich, Andryushchenko).
2. TSentral'nyy gornoobogatitel'nyy kombinat (for Sazonov, Shestakov).

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

POVZNER, Z.B., gornyy inzh.; SERBIN, V.I., gornyy inzh.;
CHERKONOS, A.I., gornyy inzh.; TKACHUK, K.N., gornyy inzh.

Dolomite strip mine in Krivoy Rog Basin. Sbor. nauch. trud.
KGRI no.15:86-89 '63. (MIRA 17:8)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

SELYANIN, V.G., kand.tekhn nauk; PCHELKIN, G.D., inzh.; SERBIN, V.I., inzh.

Effect of various forms of transportation in open pit mines on the volume of overburden along the periphery of the pit. Gor.zhur. no.4:20-21 Ap '64. (MIRA 17:4)

1. Dnepropetrovskiy gornyy institut (for Pchelkin. 2. Trest po proyektirovaniyu zhelezorudnykh predpriyatiy Krivorozhskogo basseyna (for Serbin).

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

SERBIN, V.I.

Treatment of pruritus ani. Vrach. delo no.2:152-153 F'64

1. Kafedra dermatologii (zav. - prof. I.S. Popov) Khar'kovskogo meditsinskogo instituta.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

SERBIN, V.I.; BERESNEVICH, [illegible]; [illegible], [illegible]; [illegible], [illegible].

Using transloading points at Krivoy [illegible] basin strip mines. Met. i gornorud. prom. no.6:60-61 N-D '64. (MIRA 18:3)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

L 41678-65 EWP(e)/EPA(s)-2/EWT(m)/EPF(c)/EWG(s)-2/EWP(i)/EWP(v)/EPR/T/EWP(b)
ACCESSION NR: AT5006147 Pq-4/Pr-4/Ps-4/Pw-4 S/3140/63/043/000/0036/0041
WW/WH

40
B+1

AUTHOR: Serbin, V. P. (Aspirant of chemico-technological faculty)

TITLE: Investigation of the physical and chemical properties of glass cement

SOURCE: Kiyev. Politekhnicheskiy institut. Trudy, v. 43, 1963. Sbornik nauchnykh rabot aspirantov khimiko-tekhnologicheskogo fakul'teta, 36-41

TOPIC TAGS: glass, glass cement, glass fiber, cement, mechanical property

ABSTRACT: Glass cement is a new material which combines the high physical and mechanical properties of glass fiber and cement. The author has studied glass cement with respect to its water-tightness, stability in aggressive media, and frost resistance. Glass cement which uses fiber and non-fiber materials for the body and Portland cement, slag Portland cement, alumina cement, and gypsous alumina cement as binders proves to be water-tight. The stability of glass cement in aggressive media depends on the type of binder and does not depend on the presence of a glass fiber network. The presence of glass fiber does not significantly affect frost resistance. Variations in frost-resistance occurred with the different binders. Orig. art. has: 4 tables.

Card 1/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

L 41678-65

ACCESSION NR: AT5006147

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: MT

NO REF SOV: 000 OTHER: 000

Card 2/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

BIRYUKOVICH, K.L., kand. tekhn. nauk; BIRYUKOVICH, D.L., inzh.; BIRYUKOVICH, Yu.L., inzh.; SERBIN, V.P., inzh.

Glass-reinforced cement yachts. Sudostroenie 30 no.12:29-33 D '64. (MIRA 18:6)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

BIRYUKOVICH, K.L.; BURYUKOVICH, Yu.L.; SERBIN, V.P.; BIRYUKOVICH, D.L.

Structural elements of glass cement. Prom. stroi. 41 no.4:36-37 Ap '64. (MIRA 17:9)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

L 52220-65 EWP(e)/EWT(m)/EPF(c)/EWP(i)/EWP(v)/EPR/T/EWP(b) Pq-4/Pr-4/Ps-4
WW/WH
ACCESSION NR: AP5017074 UR/0198/64/010/006/0623/0627

AUTHOR: Biryukovych, Yu. L. (Biryukovich, Yu. L.) (Kiev); Serbin, V. P. (Kiev); Biryukovych, D. L. (Biryukovich, D. L.) (Kiev)

31
30
B

TITLE: Prolonged strength and creep in glass cement

SOURCE: Prykladna mekhanika, v. 10, no. 6, 1964, 623-627

TOPIC TAGS: glass product, nonmetal strength, nonmetal elasticity, nonmetal creep

ABSTRACT: Results are given of a study on the change in the strength of glass-cement as a function of age, and also of the strength and creep of glass-cement in the case of prolonged action of a constant load. It is found that the strength of glass-cement based on alumina cement increases with age. As a result of protracted tests, six basic resistance and deformation parameters are obtained for glass-cement as an elastic, ductile and plastic material. The reduction in the breaking point of glass-cement under the protracted action of a constant load is comparatively small; the permanent tensile, compression and bending strength limits are 82, 75-76

Card 1/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

L 52220-65

ACCESSION NR: AP5017074

and 68% of the breaking point respectively. The protracted modulus of elasticity for glass-cement in the case of tension, compression and bending are 59, 42-46 and 55% of the momentary modulus of elasticity respectively.

Orig. art. has: 10 graphs, 1 table.

ASSOCIATION: Institut mekhaniky AN URSR (Institute of Mechanics, AN URSR)

SUBMITTED: 06Dec63 ENCL: 00 SUB CODE: MT, ME

NO REF SOV: 004 OTHER: 000 JPRS

Card 2/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

BIRYUKOVICH, Yu.L. (Kiyev); SERBIN, V.P. (Kiyev)

Strength and deformability of glass-cements with various glass fiber fillers. Prikl. mekh. 1 no.12:75-81 '65. (MIRA 19:1)

1. Institut mekhaniki AN UkrSSR. Submitted Nov. 25, 1964.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

SOV/44-58-4-3196

Translation from: Referativnyy zhurnal, Matematika, 1958, Nr 4, p 120 (USSR)

AUTHOR: Serbina, A.I.

TITLE: Certain Properties of the Configurations of Straight Lines (Nekotoryye svoystva konfiguratsiy iz pryamykh liniy)

PERIODICAL: Uch. zap. Groznensk. gos. ped. in-ta, 1956, Nr 7, pp 66-68

ABSTRACT: A generalization is given for the complex triangle of the theorem of A. Tsvoydzinskiy: From the vertices of a triangle perpendiculars AA', BB', CC' are drawn to an arbitrary straight line; A', B', C' are the bases of the perpendiculars. Perpendiculars drawn from the points A', B', C' to the corresponding sides of the triangle intersect at one point. An analog of the theorem for complex triangles allows a further generalization. Theorems of a complete quadrilateral are not generalized for complex quadrangles.

S.I. Zetel'

Card 1/1

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

SEBBINA, A. I.

Some relationships between the rays of a brush. Uch. zap. GGPI no.8:36-41 '58. (MIRA 13:8)

(Topology)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

L 42067-66 EWT(m) IJP(c)

ACC NR: AP6005332 SOURCE CODE: UR/0413/66/000/001/0070/0070

AUTHORS: Serbinov, A. N.; Romanov, V. A.

ORG: none

36
B

TITLE: Accelerating tube with oblique fields for an electrostatic accelerator. Class 21, No. 177569

19

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 1, 1966, 70

TOPIC TAGS: ion accelerator, electrostatic accelerator

ABSTRACT: This Author Certificate presents an accelerating tube with oblique fields for an electrostatic accelerator. To insure a constant trajectory of the ion beam with variation of the accelerating voltage, the tube has a preliminary acceleration section with flat electrodes and a compensating section with oblique electrodes (see Fig. 1). An electrostatic corrector connected to the high voltage divider of the tube is placed at the output of the tube.

UDC: 621:384.6

Card 1/2

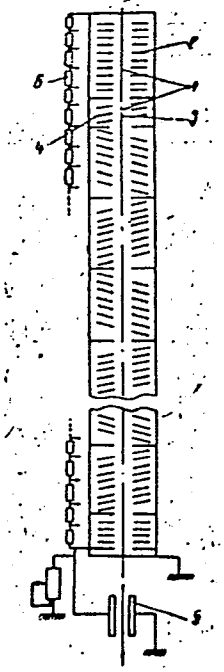
APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

L 42067-66

ACC NR: AP6005332

Fig. 1. 1 - preliminary acceleration section; 2 - flat electrodes; 3 - compensating section; 4 - oblique electrodes; 5 - electrostatic corrector; 6 - high voltage divider



Orig. art. has: 1 figure.

SUB CODE: 20/ SUBM DATE: 20Jul64

Card 2/2 af

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

SERBINA, G.P.

Veterinary services to livestock on collective farms. Veterinariia 34 no.3:25-26 Mr '57. (MLRA 10:4)

1. Zaveduyushchaya veterinarnym punktom kolkhoza Stalina, Oktyabr'skogo rayona, Nikolayevskoy oblasti.
(Veterinary medicine)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

SERBINA N. N.

Thixotropic and structure-mechanical properties of askangel suspensions in their dependence on the composition of the exchange complex. B. I. Kobakhidze, M. E. Shishniashvili, and N. N. Serbina (P. G. Melikishvili Inst. Chem., Acad. Sci. Georgian S.S.R., Tbilisi). *Kolloid. Zhur.* 19, 299-306(1957); cf. *C.A.* 51, 10188a.—Swelling in H_2O was greatest in Na-substituted askangel (I) and smaller in high-dispersed fraction of natural askangel > natural askangel (II) > a bentonite > Ca substituted askangel (III) > electrodialyzed askangel (IV) in which Al was the main mobile cation. I gave stable and nonthixotropic suspensions in H_2O, but III and IV formed unstable suspensions. In dil. NaOH at pH 10.5 both I and III were thixotropic, as was IV after addnl. treatment with NaOH. After this treatment the exchange capacity of IV was 82 mg. equiv./100 g., of which 4 mg. equiv. were due to Al.* Electron microscopy showed that II consisted of isometric particles partly connected with each other, I of swollen single particles, III and IV of coagulates of 2.5 μ diam., and IV treated with NaOH contained a network of particles of 0.05-0.1 μ.

J. J. Bikerman

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

L 13762-65 EWP(e)/EWT(m)/EPF(n)-2/EPR/EWP(b) Ps-4/Pu-4 ASD(d)/ASD(m)-3 JD/
ACCESSION NR: AP4045190 JG/AT/WH S/0080/64/037/009/1872/1878

AUTHOR: Samsonov, G. V.; Obolonchik, V. A.; Paderno, Yu. B.; Serbina, R. V.; Fomenko, V. S.; Ogorodnikov, V. V.

TITLE: Synthesis and some physical and chemical properties of the binary lanthanum-sodium boride

SOURCE: Zhurnal prikladnoy khimii, v. 37, no. 9, 1964, 1872-1878

TOPIC TAGS: boride, lanthanum boride, lanthanum sodium boride, lanthanum sodium boride synthesis, boride synthesis, lanthanum sodium boride property

ABSTRACT: The binary lanthanum-sodium boride was obtained by electrolysis of a fused salt electrolyte consisting of 160 g borax, 30 g sodium fluoride, and 15 g lanthanum oxide. The electrolysis was performed at 900—950C with a current density of 0.5 amp/cm^2. The cathode deposits obtained under the above conditions contained 55.6% lanthanum, 6.8% sodium, 36.8% boron, 0.4% free carbon, and no free boron. The composition could be varied by changing the amount of

Card 1/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

L 13762-65
ACCESSION NR: AP4045190

borax in the electrolyte. X-ray diffraction patterns of three binary borides of different compositions contained only the lanthanum hexaboride lines. The increase of the lattice constant with increasing sodium content indicates that sodium atoms first replace lanthanum atoms in the lanthanum hexaboride lattice and then gradually replace octahedral boron complexes. Hot compacted binary boride has a uniform structure consisting of square-shaped crystals with a microhardness of 2200—2300 kg/mm^2. At a porosity of 2%, the hot-compacted boride has a resistivity of 113.4 μohm·cm at room temperature, which increases linearly to 275 μohm·cm at 900C. The work function also increases linearly from 2.6 ev at 1000C to 4.05 ev at 1770C. The work function has a tendency to increase with the time. The emission current of binary boride is two orders lower than that of lanthanum hexaboride. Orig. art. has: 7 figures and 6 tables.

ASSOCIATION: none

SUBMITTED: 07Jan63 ATD PRESS: 3131 ENCL: 00

SUB CODE: IC, GC NO REF SOV: 005 OTHER: 005

Card 2/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

SERBINA, V.I.

Effect of agropyrene and dehydroagropyrene on some protozoans and micro-organisms. Uch. zap. Stavr. gos. med. inst. 12:167 '63. (MIRA 17:9)

1. Kafedra biokhimii (zav. dotsent L.K. Khor'kov) Stavropol'skogo gosudarstvennogo meditsinskogo instituta.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

PASHCHENKO, A.A. [Pashchenko, O.O.], kand. tekhn. nauk; [illegible], R.V.

Hydrophobic powders for the filling of polyester and epoxy resins. Khim. prom. no.4:7-8 O-D '64. (MIRA 18:3)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

PASHCHENKO, A.A., [Pashchenko, O.O.], kand. tekhn. nauk; SERBINA, R.V.

Use of HKZh-94 polyethylenehydroxysiloxane fluid. Khim. prom. [Ukr] no.1:17-18 Ja-Mr '65. (MIRA 18:4)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

KANDEL', E.; SERBINENKO, F.

Plenum of the Board of the All-Union Scientific Society of Neurosurgeons. Vop. neirokhir. 27 no.4:59-60 Jl-Ag'63 (MIRA 17:2)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

SERBINENKO, F.A.

Sectional puncture carotid angiography by means of a catheter.
Vop.neirokhir. 24 no.4:35-38 Je-Ag '60. (MIRA 13:12)
(ANGIOGRAPHY)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

YEGOROV, B.G.; SHLYKOV, A.A.; KONVALOV, A.N.; SERBINENKO, F.A.

Diagnosis and method of surgical treatment of aneurysm of the brain. Vest. AMN SSSR 16 no.10:11-25 '61. (MIRA 14:11)
(INTRACRANIAL ANEURYSMS) (ANGIOGRAPHY)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

YEGOROV, B.G., prof.; SHLYKOV, A.A.; KONOVALOV, A.N.; SERBINENKO, F.A.
(Moskva)

Diagnosis and method of surgical treatment of cerebral aneurysm.
Vop.neirokhir. no.5:1-10 '61. (MIRA 14:11)

1. Nauchno-issledovatel'skiy ordena trudovogo Krasnogo Znameni institut neyrokhirurgii imeni akad. N.N. Burdenko AMN SSSR.
(INTRACRANIAL ANEURYSMS)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

SERBINENKO, F.A. (Moskva)

Role of the orbital artery in the retrograde blood supply for a carotid-cavernous anastomosis. Vop.neirokhir. no.2:1-6 '62. (MIRA 15:3)

1. Nauchno-issledovatel'skiy ordena Trudovogo Krasnogo Znameni institut neyrokhirurgii imeni akad. N.N. Burdenko AMN SSSR.
(ORBIT—BLOOD SUPPLY)
(CAROTID ARTERY—ABNORMITIES AND DEFORMITIES)
(CAVERNOUS SINUS—ABNORMITIES AND DEFORMITIES)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

SERBINENKO, F.A. (Moskva)

Therapeutic results in carotid-cavernous anastomoses. Vop. neirokhir. 25 no.2:28-34 Mr-Ap '61. (MIRA 14:6)

1. Nauchno-issledovatel'skiy ordena Trudovogo Krasnogo Znameni institut neyrokhirurgii imeni akad. N.N. Burdenko AMN SSSR.
(CAROTID ARTERIES--DISEASES) (BRAIN--DISEASES)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

DMITROVSKAYA, I.P.; SERBINENKO, F.A.

Retinal, arterial, and intraocular pressure in carotid cavernous anastomoses. Probl.sovr.neirokhir. 4:203-211 '62. (MIRA 16:2)

(CAROTID ARTERY) (INTRAOCULAR PRESSURE) (RETINA--BLOOD SUPPLY)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

SERBINENKO, F.A. (Moskva)

Carotid angiography. Vop. neirokhir. 26 no.5:28-33 S-O'62

1. Nauchno-issledovatel'skiy ordena Trudovogo Krasnogo Znameni institut neyrokhirurgii imeni akademika N.N. Burdenko AMN SSSR.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

SERBINENKO, F.A.

Hemispheric arterial blood circulation of the brain and some compensatory vascular reactions in carotid-cavernous anastomoses. Zhur. nevr. i psikh. 64 no.2:205-211 '64.
(MIRA 17:5)

1. Nauchno-issledovatel'skiy ordena Trudovogo Krasnogo Znameni institut neyrokhirurgii im. akademika N.N. Burdenko AMN SSSR, Moskva.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

SERBINENKO, F.A.

New set of angiographic instruments. Vop. neirokhir. 28 no.2: 49-52 Mr-Ap '64. (MIRA 18:2)

1. Nauchno-issledovatel'skiy ordena Trudovogo Krasnogo Znameni institut neyrokhirurgii imeni N.N. Burdenko (direktor - prof. B.G. Yegorov) AMN SSSR, Moskva.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

YEVLAKHOVA, V.F.,; SERBINENKO, G.A.,; POTAPOV, N.I.

Blood-sucking Diptera in the construction area of the future Kakhovka Reservoir and their control. Med. paraz. 25 no.1:42-48 Ja-M '56

(MLRA 9:6)

1. Iz Ukrainskogo nauchno-issledovatel'skogo instituta malyarii i meditsinskoy parazitologii imeni prof. I.Ya . Rubashkina (dir. instituta I.A. Demchenko) i Zaporozhskoy oblastnoy protivomalyariynoy stantsii (zav. stantsiyey Ya. M. Belyy)

(INSECTS

Diptera, blood-sucking types, fauna & control in reservoir construction region in Russia)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

SERBINENKO, G.A.

YEVLAKHOVA, V.F.; BELYY, Ya.M.; POTAPOV, N.I.; SERBINENKO, G.A.

The effect of removal of trees in marshlands along the lower Dnieper on the number and species of blood-sucking insects. Med.paraz. i paraz.bol. 27 no.1:100-101 Ja-F '58. (MIRA 11:4)

1. Iz Ukrainskogo instituta malyarii i meditsinskoy parazitologii i parazitologicheskogo otdela Zaporozhskoy oblastnoy sanitarno-epidemiologicheskoy stantsii.
(INSECTS,
blood-sucking species in lower Dnieper region, eff. of removal of trees (Rus))

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

T

COUNTRY : USSR
CATEGORY : Human and Animal Physiology, The Nervous System

ABS. JOUR. : RZhBiol., No. 5 1959, No. 22431

AUTHOR : Serbinenko, M.V.
INST. : ---
TITLE : Physiological Features of the Descending Influences of the Brainstem Reticular Formation.

ORIG. PUB. : Vestn. Akad. med. nauk SSSR, 1958, No. 7, 74--78

ABSTRACT : Intravenous injection of 0.5 to 1.5 mg/kg of aminazine into decerebrate cats produced in 16 cases a weakening of all components of antagonistic reflexes (the ipsilateral and contralateral sciatic nerves were stimulated, and the contractions of the semitendinosus muscle were recorded), and deviations from the standard course of antagonistic reactions in 4 cases. In all of the cases muscle tone was weakened, and decerebrate rigidity was diminished. Transection of the spinal cord at the level of T_8 led to a restoration of the spinal reflexes and their disco-

Card: 1/2

T-98

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

EXCERPTA MEDICA Sec 2 Vol 12/1 Physiology Jan 59

337. PHYSIOLOGICAL PROPERTIES OF THE BRAIN STEM RETICULAR FORMATION (Russian text) - Serbinenko M. V. Dept. of Physiol., I. M. Setchenov Med. Inst., Moscow - FIZIOL. ZH. SSSR 1958, 44/4 (281-285) Illus. 2

Aminazine, injected i. v. in doses from 0.5 to 1.5 mg. per kg. body weight, depressed reflex contractions produced by stimulation of the sciatic nerve in cats for 2 to 4 hr. The depressed reflex activity was restored, and repeated injection of aminazine was ineffective after section of the spinal cord at any level. It is concluded that aminazine acts upon the reticular formation of the brain stem.

Simonson - Minneapolis, Minn.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

SERBINENKO, M. V., Cand Med Sci (diss) -- "The physiological analysis of the descending influences of the reticular formation under aminazine conditions". Moscow, 1959. 12 pp (First Moscow Order of Lenin Med Inst im I. M. Sechenov), 200 copies (KL, No 9, 1960, 129)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

SERBINENKO, M.V.

Localization and possible mechanism of the action of aminazine on the descending reticular formation of the brain stem. Fiziol. zhur. SSSR 46 no. 9:1105-1111 S '60. (MIRA 13:10)

1. From the Chair of Normal Physiology, Sechenov First Medical Institute, Moscow.
(CHLORPROMAZINE) (BRAIN)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

SERBINENKO, M.V.

Role of the brain stem in reflex correlations with the spinal cord (under aminazine action). Nauch. rab. asp. i klin. ord. no.6:283-285 '60. (MIRA 14:12)

1. Kafedra fiziologii i patologii vysshey nervnoy deyatel'nosti (zav. prof. P.K.Anokhin) TSentral'nogo instituta usovershenstvovaniya vrachey.

(CHLORPROMAZINE--PHYSIOLOGICAL EFFECT) (REFLEXES)
(BRAIN) (SPINAL CORD)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

SERBINENKO, M.V.; BELOVA, T.I.

Role of the thalamic nuclei in the activation of the cerebral cortex by pain. Fiziol. zhur. 50 no.2:138-144 F '64. (MIRA 18:2)

1. Kafedra normal'noy fiziologii 1-go Meditsinskogo instituta imeni I.M. Sechenova, Moskva.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

SERBINOV, A.

Fast repairing of ships in docks. Mor. flot 25 no.7:32-33 Jl '65. (MIRA 18:7)

1. Starshiy inzh. Glavnogo upravleniya tekhnicheskoy ekspluatatsii flota i sudoremontnykh zavodov Ministerstva morskogo flota SSSR.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

A

2

The region of thermal ignition of a mixture of methane and oxygen. M. B. NEUMANN AND A. I. SERBINOV. *Physik. Z. Sowjetunion* 1, 536-45(1932). Two pressure ranges in which stoichiometric mixts. of CH_4 and O will explode have been found to exist between 630° and 670°. For example, at 650°, at pressures below about 4 cm. of Hg no explosion occurs, at pressures between 4 and 9 cm., the mixt. is explosive; between 9 and 33 cm. no explosions occur; and finally above 33 cm. the O_2 CH_4 mixt. is again explosive. Possible qual. explanations of the 3 explosive limits are discussed.

P. H. EMMETT

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

PROCESSES AND PROPERTIES INDEX

Effect of the change of composition on ignition region of methane-oxygen mixtures. M. B. Neumann and A. I. Serbinov. *Physik. Z. Sowjetunion* **4**, 433–42(1933); cf. *C. A.* **26**, 6139.—Between compns. of 3 and 37% CH_4 in O_2 there exist 3 ignition limits at temps. between 635° and 680°. Argon added to CH_4-O_2 mixts. does not change the time lag of ignition but extends the compn. of the lower and the higher limits at 650°. The change of the lower limit by such addns. follows Semenoff's law.

Howard A. Smith

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

PROCESSES AND PROPERTIES INDEX

Effect of nitrogen peroxide on the kinetics of ethane oxidation. A. I. Serbinov and M. B. Neiman. *Compt. rend. acad. sci.* (U.R.S.S.) 2, 297-8(in English 299-300) (1934). The oxidation of ethane by O_2 is accelerated several-fold by the addn. of small amts. of NO_2 and at the same time the autocatalytic character of the oxidation ceases. This is not due to a direct reaction between NO_2 and C_2H_6. A selective transfer of energy from NO_2 to O_2 is postulated and discussed. The empirical results are expressible by $w = d\Delta p/dt = [C_2H_6][O_2][NO_2]/(0.13[O_2] + 0.48[C_2H_6])$ (units mm./sec.). This equation is obtained theoretically, also. A chain length of 100 is possible for the reaction of activated O_2 with C_2H_6.
William E. Vaughan

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

SERBINOV, A. I. Cand. Tech. Sci.

Dissertation: "Ignition Lag in Diesel Engines." Inst of Chemical Physics, Acad Sci USSR, 29 Dec 47.

SO: Vecherniaya Moskva, Dec, 1947 (Project #17836)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

SERBINOV, A. I.

paper submitted [illegible] September, 1960.

4. Following is a list of the Soviet papers submitted to the combustion symposium:

L A Lovachev	The Dependence of Laminar Flame Properties on the Mechanism of Chain Reactions
L A Lovachev	The Theory of Flame Propagation in Systems Involving Branched Chain Reactions
NIKITIN, Ye.Ye	On the Mechanism of Non-Adiabatic Relaxation in Molecular Collisions
I N Denisov K I Shchelkin Ya K Troshin	Some Questions of Analogy Between Combustion in a Thrust Chamber and in a Detonation Wave
K I Shchelkin	On the Criterion of High-Frequency (screaming) Vibrations Generation in a Turbulent Combustion Chamber
A I Serbinov	A Simple Method for Determining Effective Activation Energies for Thermal Decomposition and Spontaneous Ignition of Certain Complex Molecules
L G Bolkhovitinov	On the Theory of Detonation Initiation by Impact
P A Tesner	The Energy of Activation of Gaseous Reactions with Solid Carbon
P A Tesner	Formation of Dispersed Carbon by Explosion and Thermal Decomposition of Acetylene
TESNER, P.A. RAFAIKES, I.S. ROBINOVICH, Ye. Ya.	Formation of Dispersed Carbon in Hydrocarbon Diffusion Flames
BAZHANOVA, T.V. LAYTSEV, S.C.	Effect of Dissociation on the Parameters of Reflected Shock Waves in Carbon Dioxide
LAYTSEV, S.C. SOLOUKHIN, R.I.	Study of Combustion of Adiabatically Heated Gas Mixture
I N Sundukov N K Chekalin	Some Methods for Studying Two-Phase Fuel-Air Mixtures in a Flow
N K Chekalin	Propagation of Flame in Turbulent Flow of Two-Phase Fuel-Air Mixture
STUPOCHENKO, Ye. V. SAMUYLOV, Ye. V. PLESHANOV, A.S. ROZHDESTVENSKIY, I.B. STACHENOV, I.P.	Thermodynamic Properties of Air at High Temperatures
A S Predvoditelev	Conditions of Regular Movement of Strong Shocks and Detonation
A S Predvoditelev	Some Remarks on the Regular Movement of Shocks with Spherical and Cylindrical Symmetry
A S Predvoditelev	Regular Motion of Shocks and of Detonation from the Viewpoint of Maxwell's Transfer Equations

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

KOGARKO, S.M., doktor tekhn.nauk; NOVIKOV, A.S., inzh.; SERBINOV, A.I., kand.tekhn.nauk; SKACHKOV, G.I., inzh.

Ignition of methane-air mixtures by the hot products of combustion. Vzryv.delo no.44/1:122-132 '60. (MIRA 13:7)
(Mine gases) (Blasting)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

SERBINOV, A.I.; TROSHIN, Ya.K.; SHCHELKIN, K.I.

Kinetic parameters of the processes of detonation, spontaneous ignition, and isothermal oxidation of benzene. Dokl.AN SSSR 145 no.6:1314-1317 Ag '62. (MIRA 15:8)

1. Institut khimicheskoy fiziki AN SSSR. 2. Chlen-korrespondent AN SSSR (for Shchelkin).
(Benzene) (Combustion)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

GORDEYEV, V.Ye.; KOMOV, V.F.; SERBINOV, A.I.; TROSHIN, Ya.K.

Explosions in piston-type air compressors and main lines.
Prom. energ. 19 no.12:24-29 D '64. (MIRA 18:3)

1. Institut khimicheskoy fiziki AN SSSR.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

L 9555-66 FSS-2/EWT(1)/EWP(m)/EWT(m)/EWP(j)/T/FCS(k)/EWA(c)/ETC(m)/EWA(h)
ACC NR: AP5026062 RPL WW/JW/WE/RM SOURCE CODE: UR/0405/65/000/002/0012/0021

AUTHOR: Gordeyev, V. Ye.; Serbinov, A. I.; Troshin, Ya. K.; Filatov, G. I. (Deceased)

ORG: none

TITLE: Initiation of the explosive conversion of condensed explosives by gaseous detonation

SOURCE: Nauchno-tekhnicheskiye problemy goreniya i vzryva, no. 2, 1965, 12-21

TOPIC TAGS: gaseous detonation, liquid explosive, tetranitromethane, benzene, methane, oxygen, ignition delay, detonation wave, detonation velocity

ABSTRACT: Initiation of the detonation of a tetranitromethane-benzene mixture (1.5:1 by volume) by detonating a stoichiometric methane-oxygen mixture was studied photographically using an experimental setup consisting of a thick-wall steel pipe with a 76-mm external diameter and a 10-mm internal diameter and a plexiglass tube with a 30-mm external diameter and a 10-mm internal diameter. The steel pipe was equipped with an electric detonator and was filled with the gaseous mixture. The plexiglas tube was filled with the liquid (or solid) explosive. The initial gas mixture pressure varied between 0.1 and 60 atm abs. Detonation of the liquid explosive by the reflected wave of the gaseous detonation occurred only at the initial gaseous mixture pressure of $p_0 \geqslant 2$ atm abs. The liquid explosion delay time τ decreased from 350 to 10 μsec as the initial pressure in the gaseous mixture increased from 2 to 12 atm

Card 1/2 UDC: 532.595.2+534.222.2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

L 9555-66

ACC NR: AP5026062

abs. At pressures of 24 atm abs., the ignition delay practically disappears, i.e., the explosive ignites instantly on contact with the gaseous detonation wave. Transition of accelerating combustion into detonation of the explosive occurred within 30 μsec after ignition. A stoichiometric tetranitromethane-benzene mixture (4:1) is even more sensitive to the gaseous detonation; it is detonated at $p_0 \geqslant 0.66$ atm abs. with a delay time of 70 μsec. The change in the ignition delay is attributed to the difference in the surface temperature of the explosive T_s. The delay time was measured at various temperatures and the experimental data were used to calculate T_s, which vary between 712 and 841K, depending on τ. The same values of T_s (about 800K) were also obtained by a different method, which takes into account thermal conductivity, specific heats, and densities of the components of the gaseous mixture and of the combustion products. At the initial gas mixture pressure below 60 atm abs., the detonation velocities in both gases (about 2300 m/sec) and in the liquid explosive (6850 m/sec) are practically independent of pressure. Orig. art. has: 5 tables, 2 figures, and 4 formulas. [PS]

SUB CODE: FP/ SUBM DATE: 30Nov64/ ORIG REF: 016/ OTH REF: 001/ ATD PRESS: 4157

Card 2/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

L 08578-67 EWP(m)/EWT(1)/EWT(m) WW/JW/JWD/WE

ACC NR: AP6033492 SOURCE CODE: UR/0413/66/000/018/0115/0115

INVENTOR: Grishin, S. D.; Gusev, V. I.; Denisov, Yu. N.; Mironov, S. G.; Serbinov, A. I.; Troshin, Ya. K.

52
B

ORG: none

TITLE: Shock tube for determining the ignition induction period of combustible mixtures. Class 42, No. 186166

SOURCE: Izobret prom obraz tov zn, no. 18, 1966, 115

TOPIC TAGS: shock tube, fuel ignition, fuel ignition induction period, air fuel combustion

ABSTRACT: The proposed shock tube for determining the ignition induction period of combustible mixtures contains a test section and a section separated by a membrane for initiating the detonation. In order to decrease the size of the shock tube, the section for initiating the shock is made in the form of a helix (see Fig. 1). Orig. art. has: 1 figure. [WA No. 68]

Card 1/2 UDC: 534.222.2.002.51

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

L 08578-67

ACC NR: AP6033492

0

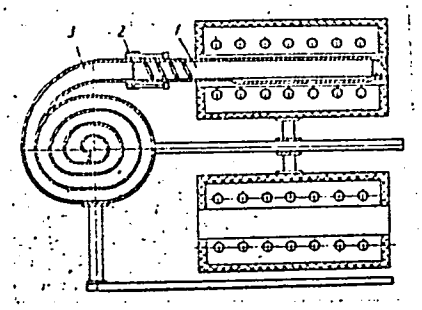


Fig. 1. Shock tube

1 - Test section; 2 - membrane; 3 - section for initiating detonation.

SUB CODE: 21/ SUBM DATE: 08Jun65

Card 2/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

SOV-120-58-3-8/33

AUTHOR: Serbinov, A. N.

TITLE: An Investigation of the Focussing Properties of the Ion Extraction System in a High Frequency Ion Source (Issledovaniye fokusiruyushchikh svoystv sistemy vytyagivaniya ionov v vysokochastotnom ionnom istochnike)

PERIODICAL: Pribory i Tekhnika Eksperimenta, 1958, Nr 3, pp 39-45 (USSR)

ABSTRACT: An experimental study has been made of the effect of the relation between the geometrical dimensions of the ion extraction system in a high frequency ion source on the focussing of the beam in the channel of the extracting electrode. Optimum dimensions have been found. An experiment on three similar systems with optimum dimensions and differing only in the diameter of the channel in the extracting electrode gave the following results. In the case when the power introduced into the discharge was 130 watts and the gas consumption was 4, 8.5 and 13 cm^3/hour the ion currents obtained were 0.88, 0.95 and 1.35 mA respectively. The percentage of atomic ions was 80% approx. It was found experimentally that the length of the cathode channel should not be greater than 4/6ths of its diameter. The ratio of the diameter of the isolating cylinder D to the diameter of the

Card 1/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

SOV-120-58-3-8/33

An Investigation of the Focussing Properties of the Ion Extraction System in a High Frequency Ion Source

channel d (cf. Fig.1) determines the degree of focussing, and the extraction voltage corresponding to maximum focussing. The greatest degree of focussing is obtained for D/d = 2. The value of the parameter ℓ (the distance from the top of the cathode to the edge of the isolating cylinder (Fig.1) should lie in the range 0.6-0.8D). The following persons assisted the author in this work: V. N. Glazanov, A. D. Aleksandrova, V. M. Morozov and V. A. Romanov. There are 11 figures, 1 table and 9 references, of which 2 are German, 1 French, 1 Soviet and 5 English.

SUBMITTED: August 5, 1957.

1. Ion beams--Focusing 2. Electrodes--Properties
3. Electrodes--Test results

Card 2/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

SOV/120-58-5-1/32

AUTHORS: Serbinov, A. N., Petrov, V. I.

TITLE: High Frequency Discharge Ion Sources (A Review) (Ionnyye istochniki s vysokochastotnym razryadom)(Obzor)

PERIODICAL: Pribory i tekhnika eksperimenta, 1958, Nr 5, pp 3-17 (USSR)

ABSTRACT: This review is based on 46 papers, most of which are of Western origin. Most of the references are pre-1954. The review is divided into the following sub-sections: 1) Processes which take place in the discharge chamber of a high frequency ion source. 2) Methods of obtaining an ion beam from the plasma of a high frequency discharge. 3) Constructional details of high frequency ion sources. The two Soviet sources described in the paper are illustrated in Figs. 14 and 16. Fig.14 shows an ion source for an electrostatic generator (Ref.17). The discharge chamber, 1, and the insulating cylinder, 2, are made in one piece from quartz and may be displaced relative to the cathode, 3. The discharge in a transverse magnetic field is excited by the generator, 4, having a frequency of 50 Mc/s and a transverse magnetic field is produced by a permanent magnet, 5. The beam is focussed by the lens, 6. The total power required is 300 W and the gas consumption is low (1 to 1.5 cm^3/hour).

Card 1/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

SOV/120-58-5-1/32

High Frequency Discharge Ion Sources (A Review)

The source shown in Fig.15 was developed for Soviet 2.5 MeV electrostatic generators (Ref.37). The discharge in a transverse magnetic field is excited at a frequency of 40 Mc/s in a Pyrex discharge chamber. The isolating cylinder is made of quartz. A fuller description of this source will be given in Ref.37 (in press). There are 16 figures, 2 tables and 46 references, of which 4 are Soviet and the rest are Western.

SUBMITTED: April 3, 1958.

Card 2/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

SERBINOV, A. N.

9(314) PHASE I BOOK EXPLOITATION SOV/2746

Akademiya nauk USSR. Fiziko-tekhnicheskiy institut

Elektrostaticheskiye generatory; sbornik statey (Electrostatic Generators; Collection of Articles) Moscow, Atomizdat, 1959. 255 p. 4,100 copies printed.

Ed. (Title page): A. K. Val'ter, Member, Academy of Sciences, USSR; Ed. (Inside book): Z. D. Andreyenko; Tech. Ed.: N. A. Vlasova.

PURPOSE: This collection of articles may be useful to scientists and engineers working with high-voltage electrostatic generators.

COVERAGE: The authors discuss the construction and operation of a number of electrostatic generators developed in the USSR and describe methods of generating negative hydrogen ions. They discuss the operation of accelerating tubes and present methods of stabilizing accelerator voltages. No personalities are mentioned. References appear at the end of some articles.

Serbinov, A. N. High-frequency Sources for Electrostatic Generators 77
The author presents the results of study, conducted by FTI AN UkrSSR in 1953-1955, of factors affecting the ring discharge in hydrogen in a transverse magnetic field and those affecting the percentage of ions in a 10-50-mc frequency range and initial pressure in the discharge chamber of 1 through 4x10^{-4} mmHg. He also discusses the construction and operation of a high-frequency ion source. There are 3 references: 2 English and 1 German.

Belyayev, V. Kh., A. K. Val'ter, K. K. Chernyavskiy and S. P. Tsytko. High-voltage Vertical-Horizontal Electrostatic Generator 90
The authors discuss the construction and operation of an electrostatic generator with a cross-shaped steel boiler and two horizontal tubes and describe the advantages of such a design over horizontal and vertical types of generators. There are 25 references: 8 Soviet, 13 English, 1 French and 1 Danish.

Osetinskiy, G. M. Magnetic Analyzer as an Instrument for Measuring Voltages of an Electrostatic Generator 99
The author discusses the use of a magnetic analyzer for measuring voltages of an electrostatic generator. He briefly explains the construction of the analyzer and describes the procedure used in measurement. There are 3 references, all English.

Osetinskiy, G. M., and I. A. Chepurchenko. Voltage Stabilization of an Electrostatic Generator. 106
The authors discuss the construction and operation of a voltage stabilization circuit and its elements such as a differential amplifier and a corona triode and describe the method of experimentally determining the degree of stabilization. There are no references.

Fogel', Ya. M., A. M. Markuz, V. T. Tolok and Ya. I. Shwarts. Ion Sources for Electrostatic Generators in a Compressed Gas 113
The authors discuss the requirements of ion sources for electrostatic generators and describe the construction of a magnetic ion source with a cold cathode and a high-frequency source. They also discuss the experimental study of these sources conducted by FTI AN UkrSSR and describe the experimental results. There are 29 references: 9 Soviet, 18 English and 2 German.

Fogel', Ya. M., L. I. Krupnik, A. G. Koval' and A. D. Timofeyev. Source of Negative Hydrogen Ions for an Overcharging Electrostatic Generator 141
The authors describe the construction and operation of three models of negative hydrogen-ion sources developed by FTI AN UkrSSR and present the analysis of their characteristics. The first and the second models were developed in 1955 and 1956 respectively. The third model, built later, is essentially a copy of that developed by Weinman, J. A., and Cameron, J. K., of the University of Wisconsin, U. S. A. In the analysis of characteristics of these models the authors discuss the negative ion spectrum, methods of determining the coefficient of transformation of positive ions into negative, focusing of ion beams, and loss of ion energy. There are 9 references: 3 Soviet, 4 English and 2 German.

Pivovar, L. I. Accelerating Tube of an Electrostatic Generator 183
The author briefly discusses factors affecting electric strength of an accelerating tube and describes processes taking place on tube walls and intermediate electrodes. He also explains the effect of residual gases and vapors in a tube on its operation. There are 11 references: 3 Soviet, 7 English and 1 French.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

85337

S/120/60/000/005/005/051
E032/E314

26.2312

AUTHORS: Serbinov, A.N. and Moroka, V.I.

TITLE: A High-frequency Ion Source with a Honeycomb Extraction System

PERIODICAL: Pribory i tekhnika eksperimenta, 1960, No. 5, pp. 27 - 32

TEXT: The high-frequency ion source extraction systems which have been described in the literature (Thonemann et al - Ref. 1 and 2, Bayly and Fard, Ref. 3) suffer from the disadvantage that it is difficult to use them when currents greater than about 1 mA are required. In order to obtain a large ion current it is necessary to increase the dimensions of the extraction system. When this is done the gas flow through the cathode channel increases, the gas pressure in the extraction region is lowered, and the plasma density becomes smaller. These and other disadvantages can be removed if a honeycomb extraction system is employed. Each cell in the honeycomb structure should have certain optimum linear dimensions. This was discussed in the previous paper by the present author (Ref. 5). The honeycomb system described in

Card 1/3

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

85337

S/120/60/000/005/005/051
E032/E314

A High-frequency Ion Source with a Honeycomb Extraction System

the present paper is illustrated schematically in Fig. 5. The honeycomb configuration is shown in the top righthand corner of Fig. 5 and consists of a metal diaphragm (0.2 mm thick) containing seven holes 1.8 mm in diameter each. This diaphragm is made of molybdenum and serves as the anode. In Fig. 5 this diaphragm is at 3 . The cathode lies at the distance of 1.8 mm below the molybdenum diaphragm and is made of dural. It contains seven holes 0.8 mm in diameter and 4 mm long. In Fig. 5 the cathode is at 5 . The conductance of the system to a molecular stream of gas is equivalent to a channel 2.1 mm in diameter and 10.5 mm long. The honeycomb system is thus similar to that described by Bayly and Fard in Ref. 3. The high-frequency discharge was excited in a transverse magnetic field in the quartz discharge chamber 1 . The constant magnetic field was directed along the axis of the discharge chamber and the high-frequency oscillator was operated at 80 Mc/s. The extraction system and the ion source

Card 2/3

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

85337

S/120/60/000/005/005/051
E032/E314

A High-frequency Ion Source with a Honeycomb Extraction System

have the following characteristics: ion current 16 mA; power consumed by the discharge 300 W; gas consumption 25 cm^3/h; extraction voltage 4.5 kV.

Acknowledgments are expressed to V.N. Glazanov for his interest and to E.G.V. Aleksandrovich, V.S. Ishchukov and V.M. Matveyev for their assistance.

There are 7 figures, 1 table and 13 references: 7 English, 1 French and 5 Soviet.

SUBMITTED: August 1, 1959

Card 3/3

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

S/120/63/000/001/004/072
E194/E455

AUTHORS: Romanov, V.A., Serbinov, A.N.

TITLE: A high-frequency ionic source for an electrostatic generator

PERIODICAL: Pribory i tekhnika eksperimenta, no.1, 1963, 27-30

TEXT: An improved ion source, easily made and with simple current adjustment, is described (Fig.1). It is for use on continuously-operating accelerators with electrostatic generators. The extraction voltage is applied between the cathode holder 4 and the frame of the source 5, so that no terminal is needed within the discharge chamber. The beam is focused with a two-pole lens. Special fixtures are used to ensure accurate centering of the parts. The diaphragm 1 is pressed from pyrex glass which is accurately located relative to the cathode 2. The diaphragm insulates the discharge plasma from the cathode and also screens the metal surface of the anode, which reduces the recombination of atomic hydrogen upon it. Constructional features and assembly are explained. The length of the cathode duct is 3 mm and the diameter 0.6 mm; the diameter of the extraction aperture is 1.2 mm

Card 1/4

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

S/120/63/000/001/004/072
E194/E455

A high-frequency ionic ...

and the plane of the cathode is 1.00 to 0.85 mm from the upper surface of the diaphragm. After checking the characteristics of the source on a rig, it was operated with accelerators types ЭГ-1 (EG-1) and ЭГ-2.5 (EG-2.5). The gas flow was assessed from the flow capacity of the extraction system. When exciting an annular discharge in a transverse magnetic field at frequencies of 40 to 80 Mc/s, the operating pressure in the discharge chamber was 1.5 to 2 x 10^{-2} mm Hg, which corresponds to a hydrogen consumption of 1.2 to 1.6 cm^3/hour under normal conditions. In the rig, discharge in the source was excited by generators based on tube ГУ-29 (GU-29) and tubes ГУ-50 (GU-50) respectively. In the first case the power absorbed by the discharge was about 40 W and in the second about 100 W. The anode current of the source was measured on the rig by means of a Faraday cylinder which is described; ionic current and degree of focusing are plotted as functions of extraction voltage, and with a power absorption of 40 W the ionic current was 90 μA and the degree of focusing was very small. With the 100 W discharge, the ionic current was 240 μA and the focusing effect was more marked. Sources of this

Card 2/4

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

design have worked on accelerators type EG-1 and EG-2.5, under normal operating conditions, for more than 500 hours on the first and for more than 250 hours on the second, and continue to operate fully satisfactorily. These operating times exclude the time of adjustment of the accelerators during which the sources are more heavily loaded. Under comparable conditions, sources of the old construction operated on average for 300 hours. The comparatively low energy of the ion beam after the extraction system and also the small diameter of the duct in the cathode of the new design of source provide greatly improved focusing in the accelerator. In the new source the extraction voltage ranges from 0.5 to 1 kV, whilst in the old one it was 1.2 to 2.5 kV. The low hydrogen consumption of the source increases the ageing time of the discharge chamber. There are 3 figures.

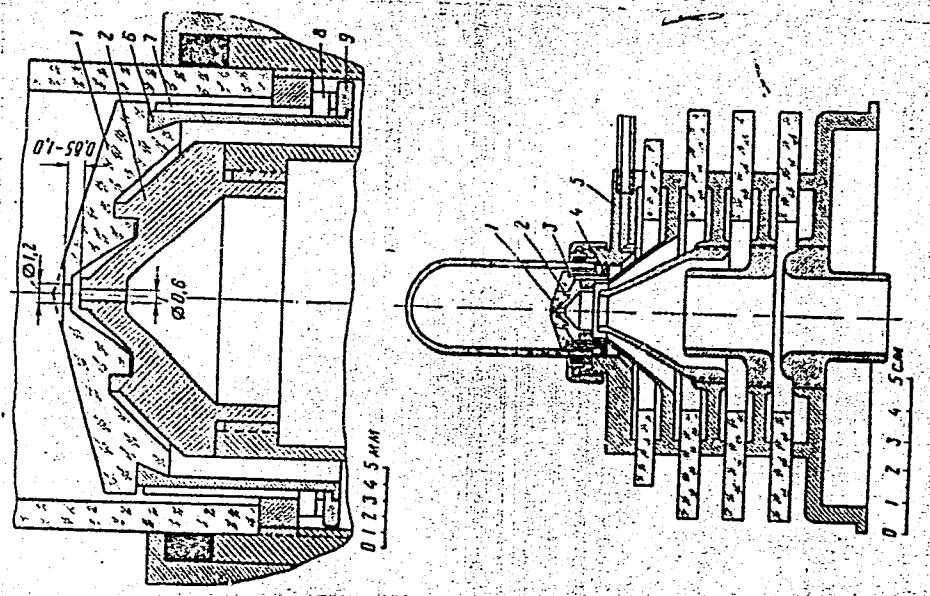
SUBMITTED: April 10, 1962

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

A high-frequency ionic ...

S/120/63/000/001/004/027
E194/E455



Card 4/4

Fig.1.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

PHASE I BOOK EXPLOITATION SOV/6536

Val'ter, A. K., F. G. Zheleznikov, I. F. Malyshev, G. Ya. Roshal', A. N. Serbinov, A. A. Tsygikalo, and S. P. Tsytko

Elektrostaticheskiye uskoriteli zaryazhennykh chastits (Electrostatic Accelerators of Charged Particles) Moscow, Gosatomizdat, 1963. 301 p. 4700 copies printed.

Ed. (Title page): A. K. Val'ter, Academician, Academy of Sciences of the UkrSSR.

Ed.: A. V. Gorokhovskiy; Tech. Ed.: N. A. Vlasova.

PURPOSE: This book is intended for scientists, students, engineers, and technicians developing, utilizing, or studying high-potential engineering and acceleration of charged particles.

COVERAGE: This textbook on electrostatic generators is devoted chiefly to electrostatic accelerators intended for nuclear research.

Card 1/8

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

Sections 1—3 of Ch. I are written by A. K. Val'ter; Section 4 of Ch. I and Chs. II, V, and VII are written by A. A. Tsygikalo; Ch. III, by A. N. Serbinov; Ch. IV, by S. P. Tsytko; and Ch. VI, by I. F. Malyshev, F. G. Zheleznikov, and G. Ya. Roshal'. There are 182 references: 73 Soviet and 109 non-Soviet.

TABLE OF CONTENTS [Abridged]

Foreword 3

Ch. I. Introduction
1. Short outline of the development of electrostatic generators 5
2. Application of accelerated particles for the investigation of atomic nuclei 8
3. Comparative evaluation of linear, cyclic, and electrostatic accelerators within the range of moderate energies 21
4. Application of electrostatic generators and accelerators in industry 31

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

Ch. II. Physical Elements of Operation of an Electrostatic Accelerator
1. Principle of operation and diagram of installation 37
2. Electric fields in the generator column 47
3. Electric field in the accelerating tube 57
4. Insulating medium 64
5. Electroinsulating properties of the vacuum 75

Ch. III. Sources of Charged Particles
1. Introduction 91
2. Ionization of rarified gases 94
3. Design of ion sources employed in electrostatic accelerators 105

Ch. IV. Measurement and Stabilization of Accelerating Voltage
1. Accelerated particles, distribution according to energy, and monoenergy or degree of precision 141
2. Requirements with regard to a beam of accelerated particles 143

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

3. Sources causing inhomogeneity of energy in the accelerated beam 146
4. Stabilization of accelerating voltage 148
5. Difficulties encountered while utilizing magnetic and electrostatic analyzers as sensing elements 151
6. Selection of a method for measuring the energy of accelerated particles and a system for stabilization of accelerating voltage 152
7. Stabilization system of the electrostatic accelerator of the FTI AN USSR 156
8. Calibration of the energy scale of the electrostatic accelerator 161
9. Experimental determination of the monoenergetic property of an accelerated particle beam 163

Ch. V. Modern Accelerators
1. Electrostatic accelerators for laboratory investigations in the field of nuclear physics 169

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

2. Accelerators employed in industry 191

Ch. VI. Electrostatic Accelerators Manufactured by Domestic Industry

General Information 200
1. Main characteristics 200
2. Construction of electrostatic accelerating installations 204

Design of Accelerator's Main Assembly 206
3. Charge transporter 206
4. Insulating supports and high-voltage electrodes 217
5. Voltage divider 222
6. High-voltage electrodes and equipotential rings 223
7. Inner equipment of a high-voltage electrode 224
8. Sources of charged particles 224
9. Accelerating tubes 237
10. Tanks 240
11. Tank equipment 242

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

Design of Ion Guide Equipment Assembly 245
12. Preliminary remarks 245
13. Magnetic analyzers 245
14. Distributing magnets 248
15. Focusing lenses 250
16. Devices for measuring the current and observing the situation of a beam 252
17. Slit devices 255

Vacuum System 256
18. Vacuum aggregates and forevacuum system 256
19. Vacuum locks 257

Feed, Control, and Signal Systems 258
20. Preliminary remarks 258
21. Feed and control system of ESA electrostatic accelerator of EG-2.5 type 259
22. Feeding installation of ion and electron sources 259
23. Control of charged particle source circuits 264

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

Electrostatic Accelerators (Cont.)

24. Feeding installation and stabilization system of a belt-charging current 265
25. Belt-transporter motor power supply 267
26. Power supply and current regulator for the analyzing magnet 268
27. Measurement of the field potential in the slit of the analyzing magnet 271
28. Accelerator high-voltage meters and regulators 275
29. Measurement of beam current 281
30. Installation of vacuum system feed and measurement of vacuum 282
31. Signaling and shielding installation 287
32. Gas system establishment 289

Ch. VII. Testing and Utilization of Electrostatic Accelerator 293
1. Preliminary remarks

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

Electrostatic Accelerators (Cont.) SOV/6536

2. Testing during assemblage 293
3. Prestarting testing 296
4. Accelerator utilization 298

AVAILABLE: Library of Congress

SUBJECT: Nuclear Engineering

Card 8/8

SK/zp/ef
4/15/64

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

L 47988-65 EWT(m)/EPA(w)-2/EWA(m)-2 Pab-10/Pt-7 IJP(c)

ACCESSION NR: AP5007021 S/0120/65/000/001/0043/0049

36
B

AUTHOR: Romanov, V. A.; Serbinov, A. N.; Dudkin, N. I.

TITLE: Operating experience with an EG-2,5 electrostatic accelerator

19

SOURCE: Pribory i tekhnika eksperimenta, no. 1, 1965, 43-49

TOPIC TAGS: electrostatic accelerator / EG-2,5 accelerator

ABSTRACT: The EG-2,5 accelerator (installed in the same h-v room with an older EG-1 accelerator) was in operation for 375 hrs in Sep-Dec 1961 (debugging period), 2283 hrs in 1962, and 2850 hrs in 1963. Various faults (29 in 1962 and 30 in 1963) are tabulated; the ion source and its supply system gave the most trouble. Changes introduced into the vacuum system, electron gun, and ion source in the course of operation are briefly described. The present (Jan 1964) characteristics of the accelerator are: working voltage 1—2.5 Mv; gas-mixture pressure, 10—12 atm; the mixture components, 75—80% N_2, 25—20% CO_2, 1.5%

Card 1/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

L 47088-65

ACCESSION NR: AP5007021

or less oxygen; mixture relative humidity, 0.5%; target current, up to 100 μa at 2 Mev or less or up to 50 μa at 2 Mev or more; energy spread of ions, 0.2%; no secondary-electron suppression was used in measuring the target currents. Orig. art. has: 5 figures and 2 tables.

ASSOCIATION: none

SUBMITTED: 10Jan64 ENCL: 00 SUB CODE: NP, EC

NO REF SOV: 002 OTHER: 000

TP

Card 2/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

ROMANOV, V.A.; SERBINOV, A.N.; DUDKIN, N.I.

Working experience with an E G-2.5 electrostatic accelerator. Frib. i tekh. eksp. 10 no.1:43-49 Ja-F '65. (MIRA 18:7)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

ROMANOV, V.A.; BERBINOV, A.N.

Some characteristics of an accelerating tube with sloping fields. Atom. energ. 19 no.2:176- Ag '65. (MIRA 18:9)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

L 28039-66 EWT(1)/EWT(m) IJP(c) AT

ACC NR: AP5027004 SOURCE CODE: UR/0120/65/000/005/0034/0037

44
41
B

AUTHOR: Romanov, V. A.; Serbinov, A. N.

ORIG: Institute of Physics and Power of GKAE, Obninsk (Fiziko-energeticheskiy institut)

TITLE: Ion source with automatic focusing for electrostatic accelerators

19 10

SOURCE: Pribory i tekhnika eksperimenta, no. 5, 1965, 34-37

TOPIC TAGS: electrostatic accelerator, ion accelerator, ion beam focusing

ABSTRACT: The methods of calculation of ion-beam focusing in accelerator tubes are discussed and the design of the ion source with an automatic focusing at N = const is proposed. (N denotes the ratio of the ion energy at the exit to the ion energy at the entrance). The method of calculation described by Mortimer M. Elkind (The Review of Scientific Instruments, 1953, v. 24, p. 129) was used by the authors for determining the ion-optical properties of a three-element tube. The results of calculation for EG-1 tube were presented including the N ratio, the distance from the ion source cathode to the first tube electrode and the potential of the first electrode. A variable resistor was used for

2

Card 1/2 UDC: 621.384.66:621.384.659

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

L 28039-66

ACC NR: AP5027004

adjusting the needed ion-beam focusing. The selection of the resistance was discussed and graphically presented. A cross-section of the ion source designed for EG-1 tube was shown in a figure. The tests showed no changes in focusing at 30 microamp and for the voltage variations from 0.5 to 5 Mv. In conclusion, it was stressed that M. M. Elkind's method of calculation (at N = const) makes possible a selection of an ion source without a complex system of focusing electrodes and with an adequate initial accelerating voltage. The authors expressed their gratitude to A. V. Mazhulin, I. S. Belomyttsev and V. S. Ishchukov for their assistance and participation. Orig. art. has: 3 figures, 1 table and 4 formulas.

SUB CODE: 18 / SUBM DATE: 1Aug64 / ORIG REF: 003 / OTH REF: 003

Card 2/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

L 15961-66 EWT(m)/EWP(1) IJP(c)

ACC NR: AP6001567 SOURCE CODE: UR/0120/65/000/006/0038/0043

30
B

AUTHOR: Romanov, V. A.; Serbinov, A. N.

ORG: Physics-Power Institute GKAE, Obninsk (Fiziko-energeticheskiy institut GKAE)

TITLE: The design of accelerator tubes with inclined fields

SOURCE: Pribory i tekhnika eksperimenta, no. 6, 1965, 38-43

TOPIC TAGS: particle accelerator, particle trajectory, electrostatic field

ABSTRACT: Accelerator tubes with inclined fields can maintain high voltage gradients, produce only a low amount of x-rays, and can be switched quickly from low energy to maximum energy operating conditions. Consequently, the authors study the motion of charged particles through various combinations of inclined fields. A general theoretical discussion of inclined field tube characteristics is extended to include the effects of prismatic fields which must be taken into account in evaluating possible alternatives. Various relationships and graphs obtained may prove useful in the design of new accelerators; they describe the effect of the initial conditions on the trajectory of the particle and make possible a selection among the possible alternatives. Orig. art. has: 24 formulas and 7 figures.

Card 1/2 UDC: 621.384.6.01

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

L 15961-66

ACC NR: AP6001567

SUB CODE: 20 / SUBM DATE: 30Mar65 / OTH REF: 003

bvk

Card 2/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

L 23128-66 EWT(m) DIAAP
ACC NR: AP6001568 (A) SOURCE CODE: UR/0120/65/000/006/0051/0057

AUTHOR: Serbinov, A. N.; Yakushev, V. P.; Rezvykh, K. A.; Marin, N. I.; Povsten', V. A.; Lutikov, V. K.; Doktorova, T. V.

ORG: Institute of Physics and Power Engineering, GKAE, Obninsk (Fiziko-energeticheskiy institut GKAE)

85
68
B

TITLE: Pulsed neutron generator 19,44,55

SOURCE: Pribory i tekhnika eksperimenta, no. 6, 1965, 51-57

TOPIC TAGS: neutron generator, pulsed neutron generator, pulse generator, deuteron, ion source, neutron

ABSTRACT: A new pulsed neutron generator constructed for physical studies is described in detail. Deuteron pulses are generated by a h-f type ion source which has a honeycomb extraction system. Both the source and its power supply are placed under an accelerating potential of 300 kv. Vacuum in the accelerating tube, 5×10^{-6} to 2×10^{-5} torr; for an average ion current of 14 μa at the target, the h-v source load current was 250 μa; repetition frequency, 3—1000 cps; neutron yield intensity, 10^{12} neutrons/sec in dT reaction; the highest observed target temperature, 100C.

UDC: 621.039.555:539.125.5

Card 1/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

L 23128-66

ACC NR: AP6001568

17

A pulse ion current of 21 ma was obtained under the following conditions: accelerating voltage, 270 kv; repetition frequency, 1000 cps; h-f generator consumption, about 100 w; extracting-pulse amplitude, 11—13 kv; extraction delay, 6 μsec; discharge-pulse time, 8 μsec; extraction-pulse time, 1.4 μsec; target-current time, 1 μsec. "M. V. Sokolov took part in development and alignment; L. A. Kiseleva, L. I. Pashchenko, G. I. Abakumov, N. I. Ushakova, Ye. M. Avilova, Yu. P. Basov, and N. V. Volkov took part in designing. The authors wish to thank B. S. Novikovskiy and V. A. Romanov for their advice; and V. I. Maroke, I. S. Belomyttsev, M. V. Krivenkov, A. I. Malygin, Ye. F. Semenov, V. I. Burlaka, and L. A. Shimkevich for their help in alignment." Orig. art. has: 5 figures.

SUB CODE: 18 / SUBM DATE: 02Nov64 / ORIG REF: 002 / OTH REF: 001

Card 2/2 PB

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

SERBINOV, Anatoliy Petrovich; TOMPAKOV, S.L., red.; FEDOROV, V.P., red.izd-va; LAVRENOVA, N.B., tekhn.red.

[Packing and stuffing materials for protecting machinery on ships] Prokladochnye i nabivochnye materialy dlia sudovykh mekhanizmov. Moskva, Izd-vo "Morskoi transport," 1959. 83 p. (MIRA 12:4)
(Packing (Mechanical engineering))
(Ships--Equipment and supplies)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

SERBINOV, A. P.

MINKO, Vladimir Viktorovich; YAMBURENKO, Vladimir Sergeyevich; YACHIN, Vadim Aleksandrovich; SERBINOV, A.P., red.; YAROVA, L.V., red. izd-va; TIKHONOVA, Ye.A., tekhn.red.

[Handling of "Donbass"-type ships] Opyt tekhnicheskoi ekspluatatsii sudov tipa "Donbass." Moskva, Izd-vo "Morskoi transport," 1959. 104 p. (MIRA 13:2)
(Ship handling) (Marine engineering)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

SERBINOV, M.G.

Reconditioning the journal of a washer air distributor. Gidroliz. i lesokhim.prom. 8 no.7:25 '55. (MLRA 9:4)

1.Mekhanik drozhzhevogo tsekha Lobvinskogo gidroliznogo zavoda.
(Machine-shop practice)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

SERBINOV, P. P.

21900. SERBINOV, P. P.
Sozdat' urozhaynuyu formirovku kusta Vinodeliye i vinogradarstvoMoldavii, 1949, NO 3, s. 44-45

SO: Letopis' Zhurnal'nykh Statey, No. 29, Moskva, 1949.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

PROCESSES AND PROPERTIES INDEX

SERBINOFF (V. I.). Наблюдения над болезнью Виноградной лозы „церкоспора". [Observations on the '*Cercospora*' disease of the Vine.]—*За реконструкцию Сельского Хозяйства* [*Agricultural Reconstruction*], *1929*, Samarkand, 8, pp. 87–98, 1929.

This is a brief preliminary report of the investigation of the '*Cercospora*' disease of the vine in Russian Central Asia [*R.A.M.*, vii, p. 617; viii, p. 11], which is steadily increasing in severity. The two species mainly involved are *C. roesleri* and *C. vitiphylla* [a brief historical account of both of which is given], while *C. vitis* occurs rarely and is not dealt with.

Observations and experiments indicate that both *C. roesleri* and *C. vitiphylla* are facultative parasites which attack vines debilitated by some other cause, such as mechanical or insect injury, poor cultivation, excess of shade and air moisture, and the like. The main damage is done to the foliage, which dries up and falls off long before that of healthy plants, while the grapes are never attacked, and mycelium of *C. roesleri* was found in the cortical tissues of shoots in one case only.

ASB SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

Cultural studies of the organisms [details of which are given] confirmed their separation as distinct species, although they have many features in common. Thus, the germination of the conidia of both occurred by budding on all the media tested, and a large number of involution forms (small, rounded or ellipsoidal conidia) were produced. The optimum temperature for germination was 30° to 32° C., but the maximum and minimum temperatures were not determined. Further experiments proved that the conidia may overwinter on dry vine leaves exposed under natural conditions to winter temperatures as low as −20° C.

In a small range of tests the disease was best controlled by lime-sulphur and Bordeaux sprays (normal concentrations), neither of which injured the foliage; the polysulphide plus zulphate of zinc recommended by Zaprometoff [loc. cit.] was somewhat less effective. The preventive measures should consist in the removal before winter of all fallen vine leaves and their destruction by fire, good tillage, and the avoidance of all causes which may weaken the vines. In Russian Central Asia all European varieties of the vine have so far proved immune from the disease. There was some evidence of variations in the relative susceptibility of the local varieties, but further work is needed in this respect.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8

SERBINOV, V. I.

Pests and Diseases of Cotton, Association of State Publishers, Middle Asian Division, Moscow, 1934, 189 pp. 464.042 R11
RADZYEVSKAYA, S. B., SERBINOV, V. I. and TSYGANKOV, S. K.

SO: SIRA SI-90-53, 15 Decl 1953

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548010004-8"