MAZAYEV, P.N., prof.; KRAKOVSKIY, N.I., prof.; SHISHKIN, V.P., kand.med.nauk; SAVCHENKOV, I.I., kand.med.nauk.

X-ray and phonographic diagnosis of coarctation of the aorta [with summary in English]. Vest.khir. 79 no.11:96-102 N '57. (MIRA 11:3)

1. Iz Instituta khirurgii im. A.V.Vishnevskogo AMN SSSR (dir.-prof. A.A.Vishnevskiy) i Instituta terapii AMN SSSR (dir.-prof. A.L. Myasnikov). Adres avtorov: Moskva, B.Serpukhovskaya, d.27, Institut khirurgii im. A.V.Vishnevskogo AMN SSSR.

(COARCTATION OF AORTA, diag.
aortography & phonocardiography (Rus)
(CARDIAC MURMURS AND SOUNDS
phonocardiography in diag. of coarctation of aorta (Rus)
(ANGIOGRAPHY
aortography in diag. of coarctation of aorta (Rus)

SHISHKIN, V.P.; AVRUTSKIY, M.Ya.

Significance of intrasplenic pressure in the clinical picture of portal hypertension [with summary in English]. Vest. khir. 80 no.2:53-58 F '58. (MIRA 11:3)

1. Iz 1-go khirurgicheskogo otdeleniya (zav.-prof. N.I.Krakovskiy) i rentgenovskogo otdeleniya (zav.-prof. P.N.Mazayev) Instituta khirurgii im. A.V.Vishnevskogo AMN SSSR. Adres avtorov: Moskva, B. Serpukhovskaya, d.27, korp.5, Institut khirurgii im. A.V.Vishnevskogo.

(HYPERTENSION, PORTAL, exper.
intrasplenic pressure determ. by phlebotonometry in dogs (Rus)
(SPLEEN, blood supply
intrasplenic pressure determ. by phlebotonometry in portal hypertension in dogs (Rus)

?

SHISHKIN, Vasiliy Petrovich, for Doctor of Medical Sciences on the basis of dissertation defended 23 Oct 59 in the Council of the Department of Clinical Medicine of the Acad of Med Sci USSR, entitled: "

Splenoportography in the Diagnosis of Portal Hypertonia, Clinical and Experimental Study. (HYPERTENSION)

(MVisso USSR, 2-61, 20)

24 pgs

(KL, No. 21, 1959, 119)

SHISHKIN, V.P., kand.med.nauk; PYL'TSOV, I.M., klinicheskiy ordinator

Diagnosis of thrombosis of the branches of the portal vein using a splenoportographic method. Vest.rent.i rad. 34 no.6:73-75 N-D '59. (MIRA 13:5)

(THROMBOSIS radiogr.)
(ANGIOGRAPHY)
(PORTAL VEINS dis.)

KRAKOVSKIY, N.I., prof.; MAZAYEV, P.N., prof.; SHISHKIN, V.P., kand.med.nauk; PYL'TSOV, I.M.

Significance of translumbar aortography in the diagnosis of diseases of the abdominal aorta and of the pelvic vessels. Vest.khir. 82 no.4:122-125 Ap '59. (MIRA 12:6)

1. Iz 1-go khirurgicheskogo otdeleniya (zav. - prof.N.I.Krakovskiy) i rentgenologicheskogo otdeleniya (zav. - prof.P.N. Mazayev) Instituta khirurgii im. A.V.Vishnevskogo AMN SSSR (dir. - prof.A.A.Vishnevskiy). Adres avtorov: Moskva, B. Serpukhovskaya, 27, Institut khirurgii im. Vishnevskogo AMN SSSR.

(ABDOMEN--BLOOD VESSELS--RADIOGRAPHY)

SHISHKIN, V.P.

Portacaval anastomosis in the treatment of Chiari's disease. Eksper. khir. 5 no. 3:54-56 My-Je '60. (MIRA 14:1)
(HEPATIC VEIN--DISEASES) (PORTACAVAL ANASTOMOSIS)

SHISHKIN, V.P., kand.med.nauk; SMELOVSKIY, S.I., kand.med.nauk

Surgical treatment of constrictive pericarditis. Vest.khir. 85 no.10:47-54 O '60. (MIRA 13:12)

1. Iz 1-go khirurgicheskogo otdeleniya (zav. - prof. N.I. Krakovskiy) Instituta khirurgii im. A.V. Vishnevskogo (dir. - A.A. Vishnevskiy) AMN SSSR.
(PERICARDITIS)

SHISHKIN, V.P.

Aneurysm of the heart following partial pericardectomy. Eksp. khir. i anest. 6 no.3:59-60 '61. (MIRA 14:10)
(PERICARDIUM--SURGERY) (ANEURYSMS)

SHISHKIN, V. P.; SARKISOV, D. S.

Diagnosis and treatment of endophlebitis obliterans hepatica (Chiari's disease). Khirurgiia 37 no.7:90-93 Jl '61. (MIRA 15:4)

1. Iz Instituta khirurgii imeni A. V. Vishnevskogo (dir. - deystvitel'nyy chlen AMN SSSR prof. A. A. Vishnevskiy) AMN SSSR.

(HEPATIC VEINS—DISEASES)

VISHNEVSKIY, A. A., prof.; DONETSKY, D. A., starshiy nauchnyy sotrudnik; SHISHKIN, V. P., starshiy nauchnyy sotrudnik

Technique for applying a direct portocaval anastomosis. Khirurgiia 38 no.7:22-25 Jl '62. (MIRA 15:7)

1. Iz Instituta khirurgii imeni A. V. Vishnevskogo (dir. - deystvitel'nyy chlen AMN SSSR prof. A. A. Vishnevskiy) AMN SSSR.

(PORTOCAVAL ANASTOMOSIS)

SHISHKIN, Vasiliy Petrovich; MAZAYEV, Pavel Nikolayevich; OSTROVSKAYA, L.S., red.; LYUDKOVSKAYA, N.I., tekhn. red.

[Splenoportography] Splenoportografiia. Moskva, Medgiz, 1962. 186 p. (MIRA 15:4)
(SPLEEN—RADIOGRAPHY) (PORTAL VEIN—RADIOGRAPHY)

SHISHKIN, V.P., doktor med.nauk; KOMAROV, I.A., kand.med.nauk

Results of the treatment of varicose veins of the lower extremities by Teprover and Nesterov's new method. Trudy KGMI no.10:330-334 '63. (MIRA 18:1)

1. Iz kafedry obshchey khirurgii (zav. kafedroy - prof. V.P. Shishkin) Kalininskogo gosudarstvennogo meditsinskogo instituta.

ARBUZOV, A.Ye.; SHISHKIN, V.Ye., TYUMENEV, S.S.

Imido ethers. Part 1: First haloalkylates of imido thio ethers. Zhur. org. khim. 1 no.8:1442-1444 Ag '65. (MIRA 18:11)

1. Kazanskiy khimiko-tekhnologicheskiy institut imeni Kirova.

SHISHKIN, V.Ye.; SVENTSITSKIY, G.V., kandidat tekhnicheskikh nauk; NESOV, V.D., inzhener, redaktor; ROSTOVTSEVA, M.P., redaktor; MEDVEDEV, L.Ya., tekhnicheskiy redaktor.

[Woodsn construction elements] Dereviannye konstruktsii. Izd. 2-e, perer. Moskva, Gos. izd-vo lit-ry po stroit. i arkhitekture, 1954. 350 p. (MLRA 8:2)
(Joinery) (Building materials)

CHIZHIKH, V. Ya.

CHIZHIKH, V. Ya. -- "The Effect of Cross-Sectional Dimensions and Shape on the Resistance to Transverse Bending of Plywood Beams." Min Construction of Metallurgical and Chemical-Industry Enterprises USSR. Technical Administration. Central Sci Res Inst of Industrial Structures (TsNIPs). Moscow, 1955. (Dissertation for the Degree of Candidate in Technical Sciences)

SO: Knizhnaya Letopis', No 1, 1956

SHISHKIN, V.Ye., dots.; ARTEMENKO, Z.N., red.; SHCHUKINA, M.G., tekhn. red.

[Bending of beams with broken and curvilinear outline] Izgib brus'ev lomanogo i krivolineinogo ochertaniia; posobie po kursu "Soprotivlenie materialov" dlia studentov inzhenernogo fakul'teta. Moskva, (Balashikha), 1963. 36 p. (MIRA 17:1)

1. Vsesoyuznyy sel'skokhozyaystvennyy institut zaochnogo obrazovaniya.

ARBUZOV, B.A., akademik; [illegible], V.Yu.

Some new imidoether derivatives. Dokl. AN SSSR 141 no.1:81-83 N '61. (MIRA 14:11)

1. Kazanskiy khimiko-tekhnologicheskiy institut im. S.M. Kirova.
(Ethers)
(Chemistry)

ARBUZOV, A.Ye., akademik; SHISHKIN, V.Ye.

Interaction of imidoethers with alkyl halides. Dokl. AN SSSR 141 no.2:349-352 N '61. (MIRA 14:11)

1. Kazanskiy khimiko-tekhnologicheskiy institut im. S.M.Kirova.
(Ethers) (Halides)

ARBUZOV, A.Ye., akademik; SHISHKIN, V.Ye.

Rearrangement mechanism of imido ethers. Dokl. AN SSSR 141 no.3:611-612 N '61. (MIRA 14:11)

1. Kazanskiy khimiko-tekhnologicheskiy institut im. S.M. Kirova.

(Imides) (Ethers)

SHISHKIN, V.Ye., dots., kand. tekhn.nauk; ARTEMENKO, Z.N., red.

[Displacements caused by bending. Statically indeterminate beams; lecture with examples of calculations for correspondence students of the engineering department] Peremeshcheniia pri izgibe. Staticheski neopredelimye balki; lektsiia s primerami raschetov dlia studentov-zaochnikov inzhenernogo fakul'teta. Moskva, Vses. sel'khoz. in-t zaochnogo obrazovaniia, 1962. 45 p. (Lektsii po soprotivleniiu materialov, no.6) (MIRA 17:5)

L 38576-65
ACCESSION NR: AP5011023 UR/0079/64/034/011/3579/3582

AUTHOR: Arbuzov, A. Ye.; Shishkin, V. Ye.

TITLE: Alcoholysis of haloalkylates of imido esters

SOURCE: Zhurnal obshchey khimii, v. 34, no. 11, 1964, 3579-3582

TOPIC TAGS: ester, iodide, iodinated organic compound, alcohol, organic imine compound, chemical reaction

Abstract: The authors studied the alcoholysis with ethanol of nine methiodides and ethiodides of benzimido esters containing various radicals in the ester group and on the nitrogen atom, as well as the alcoholysis of the methiodide of N-phenylbenzimidophenyl ester by various alcohols (methyl, ethyl, propyl, isopropyl, butyl, and isobutyl). The alcoholysis of alkiodides of imido esters led to the formation of N-alkylbenzanilides, phenols, and alkyl iodides. It was shown that the methiodide of N-phenylbenzimidophenyl ester is unstable at temperature no higher than 64°. The previously undescribed N-beta-naphthyl- and N-p-ethoxyphenylbenzimido chlorides and the corresponding phenylimido esters were synthesized. In the alcoholysis of the methiodide of N-phenylbenzimidophenyl ester of various alcohols, the corresponding alkyl iodides were obtained in high yields (76-92%). Orig. art. has 4 formulas and 3 tables.

Card 1/2

L 38576-65
ACCESSION NR: AP5011023

ASSOCIATION: Kazanskiy khimiko-tekhnologicheskiy institut imeni S. M. Kirova (Kazan Chemicotechnological Institute)

SUBMITTED: 16Jul63 ENCL: 00 SUB CODE: GC, GC

NO REF SOV: 002 OTHER: 003 JPRS

Card 2/2

SHIS[illegible]; [illegible]NKO, [illegible].N., red.

[illegible] longitudinal-lateral bending; manual on the course "Strength of materials" for students of the Engineering Department] Prodol'nyi i prodol'no-poperechnyi izgib; [illegible] po kursu "Soprotivlenie materialov" dlia studentov [illegible] fakul'teta. Balashikha, Vses. [illegible] zaochnogo obrazovaniia, 1964. 31 p. (MIRA 18:4)

SHISHKIN, V. Yu.

USSR/Engineering - Welding

Card : 1/1

Authors : Shishkin, V. Yu., Cand. Tech. Sc.; Novozhilova, N. I., Engineer

Title : Durability of welded joints.

Periodical : Vest. Mash. 34, Ed. 6, 73 - 75, June 1954

Abstract : Experiments were conducted to determine the effect of welding on the original material of the seam. The points of breaking were noted and the limits of breaking strength were compared with those in samples of the original material. Drawings; table; illustration.

Institution : ...

Submitted : ...

SHISHKIN, V.Yu.

USSR/Engineering - Welding

Card 1/1 Pub. 11 - 7/11

Authors : Shishkin, V. Yu., and Manilova, R. Z.

Title : Welding compression ribs to beams

Periodical : Avtom svar. 3, 70-81, May-June 1955

Abstract : Compilation of results regarding vibration tests of welded beams having a different compression rib arrangement is given, together with technical data on tension and stresses occuring during various forms of welding. Twelve references : 11 USSR, and 1 USA; (1887-1953). Diagrams; illustrations; graphs; tables.

Institution: Scientific-Research Institute for Bridge Constructions located at the Leningrad Railroad Engineers Institute

Submitted : .....

SHISHKIN, V.Yu., kandidat tekhnicheskikh nauk; SATAYEV, Yu.P., inzhener

Conferences on welding problems in bridge building. Svar. proizv. no.7:26-27 Jl '55. (MIRA 8:9)
(Bridges, Iron and steel--Welding--Congresses)

SHISHKIN,V.Yu.; MANILOVA,R.Z.

Welding stiffeners to girder stretched-out chords. Avtom.svar. 8 no.3:70-81 My-Je '55. (MLRA 8:10)

1. Nauchno-issledovatel'skiy institut mostov pri Leningradskom Institute zheleznodorozhnogo transporta
(Girders--Welding) (Welding--Testing)

Shishkin, V. Yu.

AID P - 5418

Subject : USSR/Engineering

Card 1/1 Pub. 11 - 8/13

Authors : Shishkin, V. Yu., Yu. D. Guzevich and R. Z. Manilova

Title : On static and dynamic strength of welded I-beams at normal and low temperatures.

Periodical : Avtom. svar., 5, 61-65, My 1956

Abstract : The bending tests of I-beams of three different steel types, with various stiffeners and at variable temperatures are described. Results and practical suggestions are given. Three photos, 2 drawings, 1 table and GOST standard.

Institution : Scientific Research Institute of Bridges at the Leningrad Railroad Engineers' Institute (NII mostov pri LIIZhT).

Submitted : 10 Ap 1956

Shishkin, V. Yu.

L 11874 A Study of T-Connections Under Action of a Variable Load Issledovanie tavrovykh soedinenii pri deistvii peremennykh nagruzok. (Russian.) V. Yu. Shishkin, V. A. Makurin, and R. Z. Mankova. *Svarochnoe Proizvodstvo*, 1956, no. 6, June 1956, pp. 11-13.

In welded T-connections, the tensile strength of the joint can be made equal to that of the base metal even if the butted ends have not been fused completely. Investigates the permissible extent of non-fusion in the joints as well as the effect of an eccentricity in welded parts on the strength of the connection. Diagrams, table, photographs. 6 ref.

AID P - 5271

Subject : USSR/Engineering

Card 1/2 Pub. 107-a - 7/18

Authors : Navrotskiy, D. I., Kand.of Tech. Sci. and V. YU. Shishkin, Kand. of Tech. Sci. (Leningrad Polytechnic Institute im. Kalinin).

Title : Surface metal-structure in butt welding

Periodical : Svar. proizv., 9, 22-23, S 1956

Abstract : The authors describe the automatic butt welding procedure from the view point of the constantly vibrating load or vibrating loading faced by the welded joints. The importance of the surface metal structure on the base metal, and the sharp transitions from surface of the seam to base metal while butt welding is done are particularly underlined. Two formulae, 1 drawing, 1 table and 1 GOST standard.

SOV/137-58-11-22610

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 11, p 113 (USSR)

AUTHORS: Savel'yev, V. N., Navrotskiy, D. I., Makurin, V. A., Shishkin, V. Yu.

TITLE: An Investigation of the Vibrational Strength of Welded Connections in Low-alloyed Steel of the NL-2 Type (Issledovaniye vibratsionnoy prochnosti svarnykh soyedineniy iz nizkolegirovannoy stali marki NL-2)

PERIODICAL: Soobshch. N.-i. in-t mostov pri LIIZhT, 1957, Nr 55, 28 pp, ill.

ABSTRACT: In order to obtain more accurate parameters for technological processes of welding of steel NL-2 and to establish the conditions necessary to obtain welded connections (WC) which, under operational conditions involving alternating loading, are equivalent in strength to the parent metal, the effect of the rate of cooling (RC) on the R_C and a_k values of the weld and of the adjoining zone was investigated together with the effect of various welding-rod materials on the mechanical properties of the WC. Preliminary to testing, metal plates (600x400-x20-30 mm), which had been welded with UONI-13/45 electrodes in an automatic welding machine as well as manually (seven combinations of flux and welding rods were employed), were subjected to an X-ray examination. It was established that butt-welded connections made of

Card 1/2

An Investigation of the Vibrational Strength of Welded Connections (cont.)

NL-2 steel can be as strong as the parent metal both under static and vibrational loads. By appropriate selection of welding procedures the shape of the weld may be controlled so as to produce a connection which is equivalent in strength to the parent metal without requiring any additional mechanical treatment [machining]. If the above condition is not observed, or if the welding conditions are not carefully observed, local mechanical treatment [machining] of the connection becomes mandatory. The NL-2 steel lends itself to welding at conditions ranging from q_n/V=7000 cal/cm to q_n/V=13500 cal/cm, i.e., conditions which produce cooling rates in the weld zone ranging from 5.6 to 18.3°C/sec. WC equivalent in strength to the parent metal may be obtained by employing the following welding materials: a) AN-10 flux in conjunction with welding rods of the Sv-08A, Sv-08GA, and Sv-12M types; b) fluxes OSTs-45 and AN-348 in conjunction with welding rods of the Sv-08GA type. Since the NL-2 steel is sensitive to stress concentration, it is essential that in the course of future investigations the effect of residual stresses on the strength of the WC be verified, the technological and strength characteristics of WC of 30-mm thick sheets be determined more precisely, and that additional TUPIM-sv-55 technical welding specifications be developed for the design and fabrication of welded-bridge structures.

V. S.

SHISHKIN, V. Yu.

125-58-5-5/13

AUTHORS: Manilova, R.Z., Navrotskiy, D.I., Shishkin, V.Yu.

TITLE: Investigation of the Vibration Endurance of Welded T-Joints. (Issledovaniye vibratsionnoy prochnosti svarnykh tavrovykh soyedineniy)

PERIODICAL: Avtomaticheskaya Svarka, 1958, Nr 5, pp 32-40 (USSR)

ABSTRACT: T-joint specimens (automatically welded under flux) in the form of the standard joints used in welded bridge beams, were tested under vibration load. Detailed information is given on the shape and preparation of specimens, the tested metal, and the results of tests. The optimum fusion depth of joints was determined, and the effective coefficient of stress concentration - β - was experimentally established. It was concluded that the vibration endurance of automatically-welded-under-flux T-joints considerably exceeds the strength of corresponding riveted joints. The obtained data is recommended for use to calculate the endurance of automatically-welded joints. It was found that the vibration resistance of unchamfered T-joints is insufficient for work under tear

Card 1/2

Investigation of the Vibration Endurance of Welded T-Joints. 125-58-5-5/13

stress, and that they should only be used in light stressed bridge joints. Chamfering must be used for joints in critical sections. The main trusses of the experimental all-welded span across the river Bolva, is mentioned as an example of such critical applications. The features of joints in this bridge are briefly described. The specimens for the tests were prepared at the Voronezhskiy mostovoy zavod (Voronezh Bridge Plant).
There are 5 figures and 4 tables.

ASSOCIATION: NII mostov pri LIIZhTe (Bridge Research Institute at LIIZhT)

SUBMITTED: December 30, 1957

AVAILABLE: Library of Congress

Card 2/2

135-58-8-4/20

AUTHORS: Savel'yev, V. N., Navrotskiy, D. I; Shishkin, V. Yu., Candidates of Technical Sciences, and Makurin, V. A., Engineer.

TITLE: Vibration Resistance of Butt-Welded Joints of "NL-2"-Steel (Vibratsionnaya prochnost' svarnykh stykovykh soyedineniy iz stali NL2)

PERIODICAL: Svarochnoye proizvodstvo, 1958, Nr 8, pp 14 - 18 (USSR)

ABSTRACT: The article gives results of investigations into the vibration resistance of butt and T-welded joints in "NL-2"-steel (composition given in table 1). A detailed description of the technology of the tests is given. The following conclusions are made: equal resistance of butt-welded joints in "NL-2" steel under static and vibration load can be ensured by the use of "AN-10" flux with "SV-08", "Sv-08GA", "Sv-12M", electrodes and "OSTs-45" and "AN-348" fluxes with "Sv-08GA" electrodes. It was possible to obtain the required seam surface by proper selection of the welding process parameters without additional machanical treatment (only necessary in case of violation of this

Card 1/2

Vibration Resistance of Butt-Welded Joints of "NL-2"-Steel

technology). The cooling rates for zones adjacent to seams are recommended to be from 5.6 to 18.3 degrees per second. There is 1 diagram, 4 graphs and 8 tables.

ASSOCIATION: NII mostov (Scientific Research Institute of Bridges)

1. Welded joints--Vibration resistance

SOV/135-59-3-8/24

25(1)

AUTHORS: Shishkin, V.Yu., Navrotskiy, D.I., Savel'yev, V.N., Candidates of Technical Sciences, and Makurin, V.A., Engineer

TITLE: The Mechanical Properties of Welded Joints of "10G2SD (MK) Steel" (Mekhanicheskiye svoystva svarnykh soyedineniy stali 10G2SD(MK))

PERIODICAL: Svarochnoye proizvodstvo, 1959, Nr 3, pp 12-15 (USSR)

ABSTRACT: The described experimental investigation of the base metal and welded joints of the low-alloy steel "10G2SD(MK)" ("GOST 5058-57"-standard) proved its good weldability, and its suitability for steel frame structures including railway bridges. The cold-brittleness point of this steel is below - 60° C. The composition of the specimens (Table 1) was the following (in %): 0.12-0.14 C, 1.36-1.58 Mn, 0.72-1.0 Si, 0.024-0.032 P, 0.027-0.042 S, 0.10-0.30 Cr, 0.17-0.23 Ni, 0.12-0.33 Cu. The mechanical properties and the details of the welding technology applied in the experiments are given. Recommendations are made as to the combinations of the electrode

Card 1/2

SHISHKIN, V.Yu.

Interconnection of edging parameters with the shape and size of the weld joint cross section. Avtom. svar. 15 no.12:41-46 D '62. (MIRA 16:2)

1. Nauchno-issledovatel'skiy institut mostostroyeniya.
(Electric welding)

GUZEVICH, Yu.D.; SHISHKIN, V. Yu.

Improving welded structures in locomotive and car manufacture.
Avtom. svar. 17 no.6:73-77 Je '64 (MIRA 18:1)

1. Nauchno-issledovatel'skiy institut mostov, Leningrad.

ACC NR: AR6035275 SOURCE CODE: UR/0169/66/000/009/D016/D016

AUTHOR: Vasil'yev, A. V.; Shishkin, Ya. Ya.; Pechenkin, Ye. S.; Zenkin, Yu. S.

TITLE: Controlled directional reception in the study of the rim zone of the Caspian depression

SOURCE: Ref. zh. Geofizika, Abs. 9D105

REF SOURCE: Tr. Nizhne-Volzhsk. n.-i. in-t geol. i geofiz. vyp. 3, 1965, 131-136

TOPIC TAGS: seismic observation, controlled directional reception, profiling, disjunctive dislocation, geologic exploration/Caspian depression

ABSTRACT: Seismic observations were made using controlled directional reception in one and one-and-half stage continuous profiling. Distances between short points were 200—800 m, the magnitude of the summation base wase 160—200 m, and groups of five seismographs per 12—25 m base were used. Results obtained at the Ural and Yeruslan area sections (northern part of the rim area) and at the Lamyshinskaya section are given. The high effectiveness of

Card 1/2 UDC: 550.834.5

ACC NR: AR6035275

the controlled directional reception in plotting salt and subsalt deposits and in identifying disjunctive dislocations is demonstrated. For complex areas, it is recommended that a system of double profiling be incorporated when using the controlled directional method and that parametric wells be drilled in the inside part of the rim zone. A. Titkov. [Translation of abstract] [SP]

SUB CODE: 08/

Card 2/2

PHASE I BOOK EXPLOITATION 1045

Ural'skiy zavod tyazhelogo mashinostroyeniya, Sverdlovsk

Modernizatsiya metallorezhushchego oborudovaniya (Modernization of Metal-cutting Equipment) Moscow, Mashgiz, 1958. 117 p. (Series: Its: Sbornik statey, vyp. 8) 8,000 copies printed.

Ed.: Shishkin, Ye.I., Engineer; Tech. Ed.: Dugina, N.A.; Executive Ed. (Ural-Siberian Division, Mashgiz): Somova, T.M., Engineer.

PURPOSE: This book is intended for engineers and technicians working in the field of metal cutting.

COVERAGE: The book was written in connection with the 25th anniversary of the Uralmashzavod (Ural Heavy Machine-building Plant imeni S. Ordzhonikidze), and presents an account of experience in the field of modernization of metal-cutting machine tools. It contains articles dealing with various problems of modernization of lathes and milling machines through design alterations or substitution of individual parts or units. The author states that such modernization will improve utilization and productivity of machine tools.

Card 1/3

TABLE OF CONTENTS:

Modernization of Metal-cutting Equipment 1045

Krayzinger, F.B., Reconditioning of Parts by Hard-Facing by Means of Electrovibratory Arc Welding 115

AVAILABLE: Library of Congress

GO/sfm
1-7-59

Card 3/3

SHISHKIN, Ye.I.

Basic trends in the modernization of metal-cutting equipment at the Ural Machinery Plant. Sbor.st.UZTM no.8:3-14 '58. (MIRA 11:12)
(Sverdlovsk--Metal-cutting tools)

KUROCHKIN, V.M.; SHISHKIN, Ye.I.

Modernizing and expanding the technological possibilities of large and unique lathes. Sbor.st.UZTM no.8:15-51 '58. (MIRA 11:12)

(Lathes)

SHISHKIN, Ye.I.; KOROLEV, M.A.

Modernization of planing machines. Sbor.st.UZTM no.8:72-89 '58. (MIRA 11:12)

(Planing machines)

SOV/121-58-9-8/21

AUTHORS: Shishkin, Ye.I. and Korolev, M.A.

TITLE: The Modernisation of Longitudinal Planing Machines (Modernizatsiya prodol'no-strogal'nykh stankov)

PERIODICAL: Stanki i Instrument, 1958, Nr 9, pp 24 - 28 + 4 plates (USSR)

ABSTRACT: The modernisation carried out by Uralmashzavod on a "Waldrich" planer is described. Comparing the 1932 "Waldrich" model with a modern machine, namely, Model 7A256 of the Novosibirskiy stankostroitel'nyy zavod im. Yefremova (Novosibirsk Machine Tool Works imeni Yefremov.) the main drive power has been increased from 37 to 100 hp whilst the speed range has been widened from 9-27 to 6-75 m/min. The modernised drive has a Ward-Leonard set permitting control down to low cutting speeds (4.5 m/min). A reversible magnetic amplifier with a DC output is arranged in the generator excitation circuit (Figure 2). The feed mechanism, nominally attaining 17 mm/(double stroke) always suffered from jerky motion beyond 10 mm. A new electromechanical feed mechanism (Figure 3) has now been installed. The feed step is determined by the number of revolutions performed by the motor before it is disconnected by a contact drum. The feed adjustment takes

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place by an infinitely variable speed transmission to the contact drum and attains the range of 0.5 - 30 mm/(double stroke). Performance on test has shown a scatter not exceeding 5%. The slideways have been lined with a cover of zinc alloy (TsAM-10-5) to increase the endurance of the machine. Precise fitting instructions are given. A pneumatic mechanism for the withdrawal of the tool during the return stroke of the machine table has been installed. The design of the hinged tool plates with the pneumatic pusher is shown in Figure 6b. The pneumatic control valve is shown in Figure 7 and the complete pneumatic circuit in Figure 8. This includes the pneumatic cylinders to mechanise the clamping of the main cross-beam of the machine. The kinematic schemes of the machine before and after the modernisation are shown in Figures 1 and 10, respectively. There are 10 figures.

SHISHKIN, Ye.I.

(11)

PHASE I BOOK EXPLOITATION SOV/5660

Nauchno-tekhnicheskoye obshchestvo mashinostroitel'noy promyshlennosti. Tsentral'noye pravleniye. Sektsiya remonta i modernizatsii oborudovaniya

Modernizatsiya i remont oborudovaniya mashinostroitel'nykh zavodov (Modernization and Repair of Machine-Building Plant Equipment) Moscow, Mashgiz, 1959. 261 p. Errata slip inserted. 6,100 copies printed.

Ed. (Title page): R.A. Noskin, Candidate of Technical Sciences; Ed. (Inside book): A.T. Popov, Engineer; Tech. Ed.: V.D. El'kind; Managing Ed. for Literature on Metalworking and Machine-Tool Construction (Mashgiz): R.D. Beyzel'man, Engineer; Editorial Board: R.A. Noskin (Chairman), Candidate of Technical Sciences; Yu.S. Borisov, Engineer; V.D. Pletnev, Engineer; V.I. Mikhaylovskiy, Engineer; and V.F. Golov, Engineer.

PURPOSE: This collection of articles is intended for technical personnel dealing with modernization and overhaul of equipment.

COVERAGE: The articles in this collection deal with the basic trends and a number of specific problems in the modernization of the machine industry. Modernization of foundry, forging-shop, and crane equipment and problems in the automation of equipment repair are discussed. Information is given on the use of unitized subassemblies in the modernization of metal-cutting machine tools, on measures for prolonging the life of forging hammers, on methods of automatic vibro- electric hard facing of worn parts, on sulfidation, and on vibroisolation of forging-hammer foundations. No personalities are mentioned. References follow several of the articles.

TABLE OF CONTENTS:

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SHISHKIN, Ye.S., inzh. (Kuybyshev)

Replacement of the lower vats of the first stage of the air preheater of the TP-80 boiler during general overhaul. Energetik 14 no.1:18-20 Ja '66. (MIRA 19:1)

S/136/63/000/003/002/004
E193/E383

AUTHORS: Kirpa, I.G., Kolesnikov, N.P., Pankin, V.A. and Shishkin, Yu.A.

TITLE: Investigation of the energy and force parameters in the rolling of aluminum-clad copper

PERIODICAL: Tsvetnyye metally, no. 3, 1963, 60 - 65

TEXT: The experimental specimens consisted of copper plates, 320 - 570 mm wide and 414 - 560 mm long, enclosed between two slightly larger aluminum plates, the whole assembly being held together by two rivets. Four types of the sandwich were used in the tests with an Al-Cu-Al thickness ratio of 2.56:9.7:2.56 mm, 1.4:9.7:1.4 mm, 2.56:5.75:2.56.mm and 1.4:5.75:1.4 mm. The cold-rolling experimnents were conducted on a four-high reversible stand 2840 with working and backing rolls of 620 and 1 370 mm in diameter, respectively. Formation of bond between the sandwich components was ensured by giving it a reduction of 65 - 75% in one pass. In a few cases the same reduction was attained in two passes. The following parameters were determined in each experiment: roll pressure; current in the main motor; voltage in the main motor;

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Investigation of ....

driving current; main motor speed; temperature of the metal after rolling. The strength of the bond between the Cu core and Al cladding was determined by bending tests; in addition, tensile tests were conducted on test pieces cut from each specimen. Conclusions: 1) the maximum roll force recorded was 1 140 tons, i.e. 33% of the force permissible for the stand 2840. 2) The roll force under conditions of steady rolling was 950 tons. 3) The average roll pressure varied between 25.4 and 48.1 kg/mm^2. 4) Comparison of the experimental data with values calculated from several known formulas showed that the formula due to Rokotyan gave results in closest agreement with the experiment. 5) The strength of bond and the mechanical properties of the final product were not significantly changed by effecting the required reduction in thickness in two instead of in one pass. This means that a wider range of the existing rolling equipment can be used for the fabrication of Al-clad Cu. There are 3 figures and 4 tables.

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S/089/61/010/002/[illegible]
B102/B209

26.2211

AUTHORS: Protopopov, N. A., Shishkin, Yu. B., Kul'gavchuk, V. M., Sobolev, V. I.

TITLE: The technique of investigating the processes of slowing down fission fragments in metals and alloys

PERIODICAL: Atomnaya energiya, v. 10, no. 2, 1961, 166-168

TEXT: The problems of slowing down fission fragments which are important for the production of fuel elements have so far not been investigated sufficiently, and, above all, data for metals and alloys that are used in the production of fuel elements are not available. But just this case is free from difficulties of identifying the fragments. The specific energy losses and ranges of the fragments may be determined immediately by experiments. In order to solve this open problem it is sufficient to know the specific energy losses of the fragments as depending on their range. Fig. 1A shows a schematic diagram of the experimental arrangement for the investigation of U^{235} fission fragment penetration into metals and alloys. The principal

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The technique of ...

with the results of other authors. Agreement with Ref. 2 is not good; it is good, however, with Ref. 4. There are 4 figures and 5 references: 3 Soviet-bloc and 2 non-Soviet-bloc.

SUBMITTED: November 21, 1959

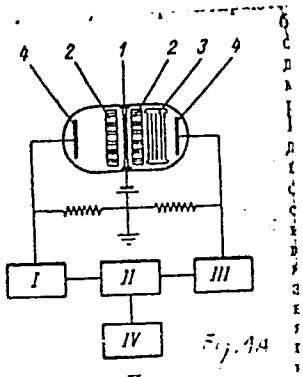

Fig. 4

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L 35869-66 EWT(d)/EWT(l)/EWP(m)/EWT(m)/EWP(t)/ETI/EWP(k) IJP(c) JD/

ACC NR: AP6021218 SOURCE CODE: UR/0294/66/004/003/0419/0423

AUTHOR: Kul'gavchuk, V. M.; Shishkin, Yu. B.; Berezin, I. A. (Moscow)

(Moscow) (Moscow)

ORG: none

TITLE: Measurement of the temperature in the first stage of the electrical explosion of wires

SOURCE: Teplofizika vysokikh temperatur, v. 4, no. 3, 1966, 419-423

TOPIC TAGS: silver, copper, constantan, exploding wire, electric inductance, temperature measurement

ABSTRACT: The purpose of the present article is to determine the temperature in the first state of an electrical explosion as a function of the energy input into copper, silver, and constantan wires at different warm-up times. The experimental set-up consisted of a current-pulse condenser oscillator (condenser capacity, 1 μf; discharge circuit inductance without the inductance wire, 0.058 μh; and with an additional coil, 1.7 μh), two UM-2 monochromators with FEU-27 photomultipliers at their outputs, cathode followers, amplifiers (with 0.1-μsec rise time), and two OK-21 oscillographs, one of which recorded the discharge circuit current and the wire voltage, and the other, the intensity of the continuous spectrum in selected sectors. The oscillator lagged 0.2 μsec behind the start of the oscillograph sweep. A panel

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and the silver wires increases by an order of 3 — 3.5 and that of constantan by an order of 1.6 when the discharge circuit inductance is changed from 0.058 to 1.7 μh. Such warm-up behavior is attributed to the fact that the resistance of the copper and the silver specimens is lower than the internal resistance of the oscillator, whereas the resistance of the constantan wires is greater. The dependence of the color temperature on the energy input is given in Fig. 1. It is shown that during a fast warm-up (0.25 — 0.50 μsec) the temperature rises

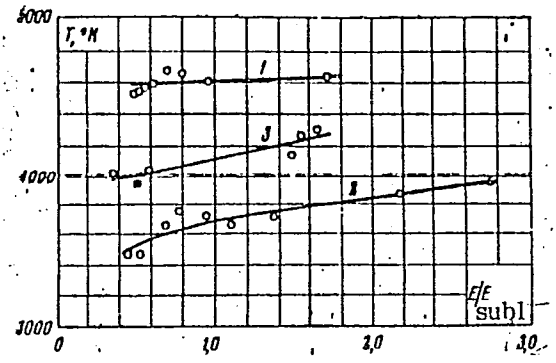

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Figure 1. The color temperature of exploding wires at the peak ignition point of emission as a function of energy input.

1, 2, 3 — copper, silver, and constantan wires 0.1, 0.1, and 0.07 mm in diameter, respectively; 1a - L_d (discharge circuit inductance) = 0.058 μh; l = 11 mm; 1b - L_d = 1.7 μh, l = 44 mm.

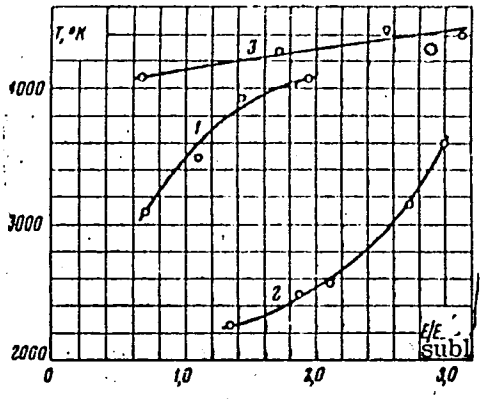

Figure 1. (b)

with an increase in the energy and reaches 4000—4700K when the input energy is equal to 1.7—3 sublimation energy. With an increase in the warm-up time (to 0.8—1 μsec) copper and silver show a faster rise in temperature with rising energy, the absolute values of the temperature, however, are lower than during a faster warm-up. Orig. art. has: 4 figures and 1 table. [26]

SUB CODE: 19,20/ SUBM DATE: 24Feb65/ ORIG REF: 007/ OTH REF: 006/
ATD PRESS: 5136

Card 4/4

83003

S/181/60/002/008/022/045
B006/B063

24.2130

AUTHORS: Pavlovskaya, E. D., Sokol'skaya, I. L., Shishkin, Yu. G.

TITLE: Determination of the Activation Energy of the Process of Stabilization of the Work Function of the Gold - Barium System

PERIODICAL: Fizika tverdoga tela, 1960, Vol. 2, No. 8, pp. 1849 - 1850

TEXT: A preceding paper (Ref. 1) has shown that the work function of Au - Ba layers on tungsten backings can be stabilized by heating. This indicated that a metallic Au - Ba compound was formed. The purpose of this work was to estimate the amount of activation energy required for the formation of such a compound. For this purpose the authors devised a special method of measuring the temperature of the tungsten film between 20 and 1000°C. Higher temperatures were measured with an optical pyrometer. The current dependence of the resistance of the tungsten film was determined first, and then its temperature dependence. Fig. 1 shows R(I) and R(T) of this film. From these two curves, T = f(I) was

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Determination of the Activation Energy of the Process of Stabilization of the Work Function of the Gold - Barium System

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determined for the range 20 - 500°C. Moreover, the authors determined the temperature coefficient of the resistance, and extrapolated the function $\alpha(T)$ up to 1000°C. Thus, it was possible to replace the temperature measurement by a current measurement. Fig. 3 shows the T(I) curves. The measurement of the temperature of the central part of the film was accurate to within ± 5°C. The activation energy was determined in the following way: For each temperature between 300 and 450°C the authors determined the time necessary to stabilize the work function. The stable value was 3.3 ev. Results:

Temperature [°C]	Duration of Heating [min]
300	40
325	20
350	11
375	5.5
400	2.5
450	1.5

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26.1632
9,3120 (1002, 1137, 1140)

S/109/60/005/008/004/024
E140/E555

AUTHORS Shishkin, Yu. G. and Sokol'skaya, I. L.

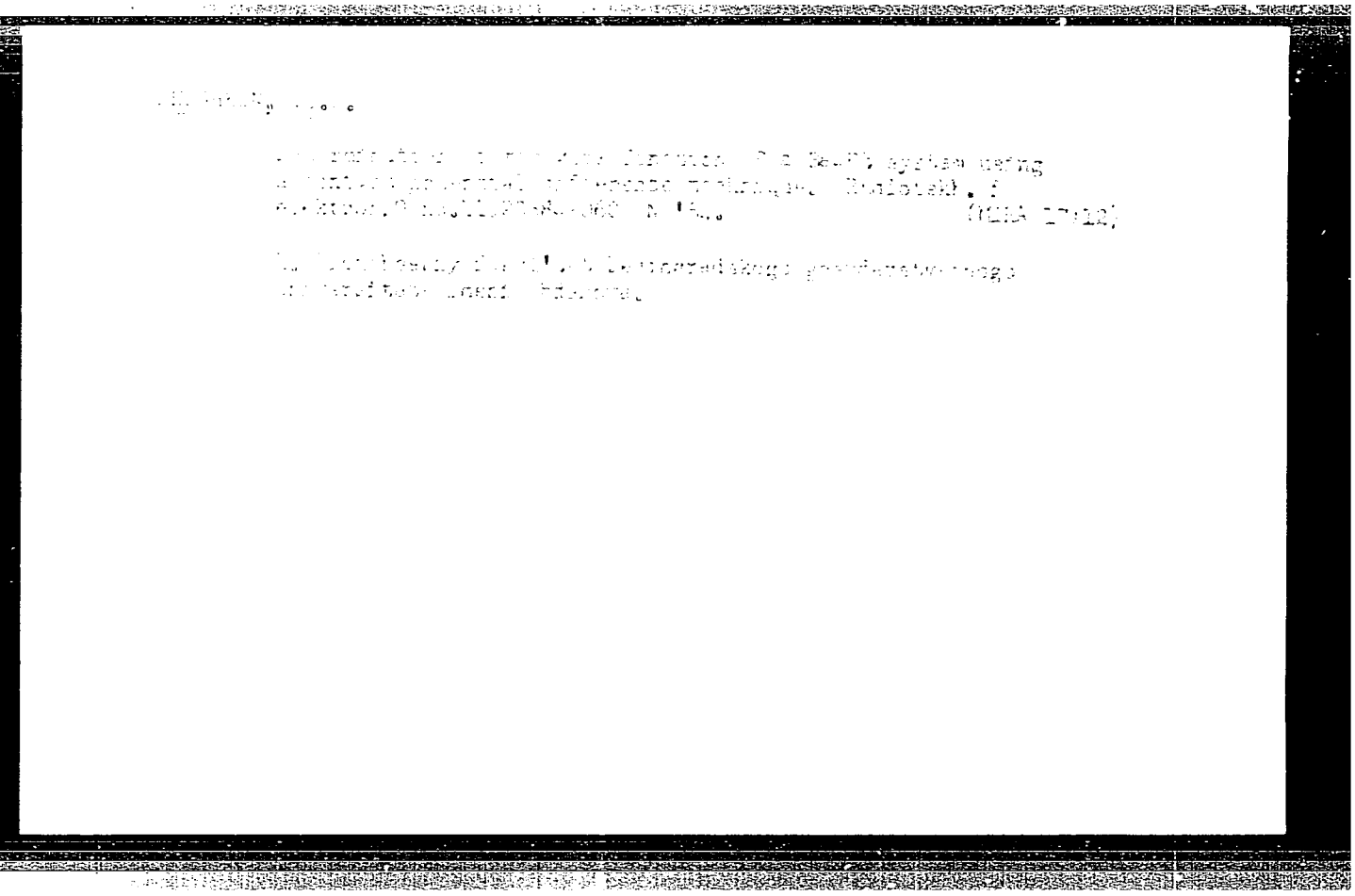
TITLE Work Function of Au-Ba and Cu-Ba Systems

PERIODICAL Radiotekhnika i elektronika, 1960, Vol.5, No.8, pp.1218-1224

TEXT It was postulated in a previous work (Ref.5) that the effect of gold in reducing the thermionic emission of grids is due to the formation of a non-metallic Au-Ba compound. The present paper describes experimental tests of this theory. The work function of the system was investigated by the contact difference of potentials method. Vacuum of the order of 10^{-8} - 10^{-9} mm Hg was maintained. The stabilizing effects of gold were observed for film thicknesses down to 0.3 μ. The behaviour of Cu-Ba is similar, but continued deposition of barium leads to the formation of islands of pure barium with reduced work function. This is attributed to an insufficient rate of barium diffusion in the Cu-Ba lattice in comparison with Au-Ba and accounts for the inferiority of Cu in reducing grid emission. There are 6 figures, 1 table and 15 references, 9 Soviet and 6 non-Soviet

SUBMITTED December 21, 1959

Card 1/1



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EWT(l)/EWT(m)/EPF(c)/EWP(i)/ETC/EPF(n)-2/EWG(m)/EPA(w)-2/EWG(r)/T/EWP(t)
ACCESSION NR: AP5019838 UR/0181/65/007/008/2286/2291

AUTHOR: Shishkin, Yu. G. 44,55

TITLE: Work function of the system BaO-Au

SOURCE: Fizika tverdogo tela, v. 7, no. 8, 1965, 2286-2291

TOPIC TAGS: barium oxide, barium, gold, work function, thermionic emission, temperature dependence

ABSTRACT: This is a continuation of earlier work by the author (with I. L. Sokol'skaya, sb. st. FTT, v. 2, 276, 1959) where it was shown that the work function of the intermetallic compound reduced after heating layers of barium sputtered on gold assumes a stable value of 3.35 ± 0.05 ev. The present study is devoted to investigation of the influence of heating on the work function of the Ba-Au system, in view of the fact that none of the earlier studies by the author and by others explained the effect of the gold anti-emission coating. The work function was measured by a method in which the contact potential difference is determined from the shift of the volt-ampere character-

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ACCESSION NR: AP5019838

3

istic. The apparatus, procedure, and measurement circuits were similar to that in the earlier investigation. It is shown that after heating to T = 923K, the work function of such a system becomes stabilized, regardless of the amount of BaO sputtered. The stable work function is 2.93 ± 0.08 ev. The dependence of the rate of stabilization of the work function of the system on the temperature was also investigated, and the activation energy of the process was estimated. It is deduced that the barium oxide sputtered on the gold results in a new compound. When the barium oxide was sputtered over gold, the activation energy was 1.8 eV, when the gold was sputtered on the barium oxide, the activation energy was close to 0.7 eV. The stabilization is different in the case of two procedures because the gold molecules are small enough to diffuse in the barium oxide, but the barium oxide molecules are too large to diffuse in the gold. The reduction in the work function of the BaO is due to the release of oxygen upon heating. 'The author thanks G. S. Gavlina for help with the work.' Orig. art. has: 3 figures and 1 table. 44,55

Card 2/3

L 4881-66
ACCESSION NR: AP5019838

ASSOCIATION: Leningradskiy gosudarstvennyy universitet (Leningrad State University)

SUBMITTED: 04Feb65 ENCL: 00 SUB CODE: SS

NR REF SOV: 014 OTHER: 005

PC
Card 3/3

L 9675-66 EWT(m)/EWP(t)/EWP(b) IJP(c) JD

ACC NR: AP5027454 SOURCE CODE: UR/0181/65/007/011/3470/3472

AUTHOR: Shishkin, Yu. G.; Sokol'skaya, I. L.

ORG: Leningrad State University (Leningradskiy gosudarstvennyy universitet)

TITLE: Feasibility of producing a gold-barium semiconductor

SOURCE: Fizika tverdogo tela, v. 7, no. 11, 1965, 3470-3472

TOPIC TAGS: gold alloy, barium alloy, semiconductor research, semiconducting material

ABSTRACT: Of the three known compounds of barium with gold, Au_2Ba is the only one with a closed valence band, which makes it a possible prospect for use as a semiconductor. In a brief survey of the literature, the authors establish criteria for the existence of semiconductor properties in a substance and build a case for possible application of Au_2Ba as a semiconductor.

SUB CODE: 20/ SUBM DATE: 01Jul65/ ORIG REF: 007/ OTH REF: 007

Card 1/1

ACC NR: AP7005006 SOURCE CODE: UR/0054/66/000/003/0058/0065

AUTHOR: Shishkin, Yu. G.

ORG: none

TITLE: Study of the photoemissive effect in thin layers of intermetallic compounds of barium and gold

SOURCE: Leningrad. Universitet. Vestnik. Seriya fiziki i khimii, no. 3, 1966, 58-65

TOPIC TAGS: photoelectric effect, barium compound, gold compound, metal film

ABSTRACT: A photoemissive study of barium and gold layers deposited on each other was undertaken in order to confirm the metallic properties of the compound Au_5Ba and semiconducting properties of the compound Au_2Ba. Spectral dependences of the quantum yield (Fowler's curves), current-voltage characteristics of the photoelectric emission, and electron diffraction analysis of Au-Ba layers showed that the compound Au_5Ba is formed as a result of the abundance of gold in the Au-Ba system when the latter is heated to 573°K. This compound has metallic properties and a work function of 3.3 eV. When excess barium is present in the Au-Ba system, a strong deviation of the spectral distribution of the photoelectric yield is observed. This is associated with the formation of the semiconducting compound Au_2Ba, whose photoelectric function is equal to 4 eV. In conclusion, author expresses his deep gratitude to M. A. Rumsh for advice on some aspects of electron diffraction, and also to A. N. Arsen'yeva-Geyl' for allowing him to use the optical apparatus. Orig. art. has: 4 figures and 1 table.

SUB CODE: 20/ SUBM DATE: 15Jul65/ ORIG REF: 008/ OTH REF: 003

Card 1/1 UDC: 535.215.1

S/133/61/000/004/013/015
A054/A127

AUTHOR: Shishkin, Yu. M., Engineer

TITLE: Conference on the coordination of most important scientific research work in the ferrous metal industry for 1961

PERIODICAL: Stal', no. 4, 1961, 382-383

TEXT: In December 1960, at the TsNIIChM Institute a conference on the coordination of most important scientific research and experimental work carried out in the ferrous metal industry was convened. Great emphasis was put on a master plan for coordination of major activities and operations. Seven major agenda have been included in this master plan of coordination to outline future development and technological process in ferrous metallurgy: 1) Ore dressing and preparation of ores. Major research work in this field will comprise: economical and efficient dressing methods for enrichment of oxygenated iron ores, flotation and magnetic calcination dressing, improvement of dehydration processes of fine-powder concentrates, finishing technologies for low-grade manganese concentrates, dressing of man-

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Conference on the coordination of ...

ganese ores in heavy suspensions, concentration of sludges by chemical methods to enrich their finely-dispersed parts, intensification of present pelletization methods of fine-powder concentrates and pulverized ores, especially of an efficient clotting method. 2) Blast furnace processes. Special emphasis is put in this field on the application of reducing gases, liquid fuel and oxygen. Large-capacity blast furnaces are to be designed and refractories with a longer life and improved metal structures are to be developed to prolong blast furnace process cycles. Direct steel-making processes are to be investigated, e.g. production of sponge iron for the converter process to obtain steel directly from ore and ore pellets, reduction of rich iron ores and concentrates in the fluidized bed, development of methods for obtaining liquid metal from ores without the blast furnace process, conversion of natural gas into highly efficient reducing gas for direct reduction. 3) In steelmaking, the application of oxygen, compressed air blasts and steam blasts will be studied to intensify open-hearth melting processes. Large-capacity open-hearth furnaces should be designed, production of semi-killed steel should be adopted and improved

Conference on the coordination of ...

refractories should be developed for open-hearth processes. Since the production of oxygen converter steel is increasing oxygen blast technologies with blasting from the top should be developed and converter processes should be elaborated to obtain converter steel from phosphorous pig iron with the help of air blasts from the top and by adding pulverized material. In connection with rapid demand for steel and alloys of great purity, and distinguished by high mechanical properties, the following studies should be made: optimum conditions should be established for melting of steel and alloys in vacuum furnaces, the electroslag remelting process should be investigated and adopted to making of alloy steel and alloys, vacuum treatment of steel directly in the ladle and refining of metal with synthetic liquid slags should be tried out. Continuous steel melting and pouring (inclined and horizontal variants) should be studied carefully to meet the increasing requirements for the manufacture of an increased and expanded nomenclature of slabs and ingots for sheet, shape and tube rolling, including studies on possible automation of melting and pouring processes. In this connection, the master plan recommends intensified utilization of complex ores from the following areas: from Kerch' deposits (including

Conference on the coordination of ...

studies on the effect of arsenic on the quality of steel); from Orsk-Khalilovo deposits (including studies on optimum converter process technology to make economical use of nickel and chromium); from Kachkanar and Atasu deposits (including the development of industrial complex ore processing technologies and extraction of concomitant elements). In the ferro-alloy production closed furnaces should be adopted. Obtaining of manganese and its alloys from poor ores should be investigated and new methods should be devised for producing pure metallic chromium. 4) In the rolling sector, continuous and infinite rolling processes should be studies, the fabrication technology for curved shapes should be improved, the service life of rolling mill rolls should be expanded by devising rolls of greater strength and production of sheets and zinc-coated sheets should be improved. The same holds for tube manufacture. 5) The main topics of metallography and heat treatment sectors are the development of new steel grades and alloys, including precision alloys and the making of electrosteel. Heat treatment of mass-produced rolled products and improvement of the quality of metals used in transport is postulated. Manufacturing processes of metalware, in-

Conference on the coordination of ...

cluding high-strength valves, steel ropes with longer life, coated wires and various types of sieves for the ore-mining, coal-mining and metallurgical industries should be studied. 6) In the metallurgical heat and power engineering sectors the coordination plan included studies on non-oxidizing heating, decrease of the oxidizing rate, decarbonization and intensification of heating of metals. Devices for decontamination of flue gases and utilization of liberated heat should be considered. The economic features of the coordination plan for 1961 lay emphasis on sound economical ore dressing methods, on the economical effect of the utilization of natural gas, on the economic efficiency of continuous steel melting and pouring; the metal resources of the USSR should be recorded and the productivity of labor in the ferrous metal industry should be made public by publishing the corresponding data. Finally, recommendations for the establishment of special experimental stations were accepted and the convening of special All-Union conferences on vital and complicated problems which need further discussions has been agreed upon.

ASSOCIATION: TsNIIChM

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S/133/60/000/004/010/010
A054/A026

AUTHOR: Shishkin, Yu.M., Engineer

TITLE: Session of the Council at the TsNIIChM for Co-Ordinating the Most Important Scientific-Research Activities in the Field of Iron and Steel Metallurgy for 1960

PERIODICAL: Stal', 1960, No. 4, pp. 383 - 384

TEXT: In October 1959, the scientific-technical council of the TsNIIChM convened a meeting for the co-ordination of scientific-research work in the field of iron and steel metallurgy for 1960. Representatives of the Gosplan USSR, Gosplan RSFSR, GNTK USSR, etc., also attended. The main items of the co-ordination plan are given below: 1) For blast furnaces: the development of the concentration of oxidized iron ores, magnetite ores in heavy medium; the briquetting of finely-ground concentrates and dust; designing new high-capacity equipment for concentrating and agglomerizing plants. 2) For high-quality steels: the technology of smelting iron of low sulfur content in magnesium slag; the application of natural gas and compressed air in open-hearth furnaces; the treatment of iron

Session of the Council at the TsNIIChM for Co-Ordinating the Most Important Scientific-Research Activities in the Field of Iron and Steel Metallurgy for 1960

in mixers and ladles; furnaces of high capacity; new steel-melting equipment; increasing the life of refractory furnace lining; new materials for refractory linings; improvement of the heating and heat-insulation of the useful parts of castings; application of oxygen in converters. 3) In the field of electro-smelting: steels and alloys of high purity and plasticity. For continuous casting: pouring and crystallization of the castings, new technology for the smelting of electrotechnical steel for cold-rolled sheets and carbon steels for hot-rolled sheets; refractory material for continuous-casting equipment; automation. 4) In the field of ferro-alloys: new alloys, also with the application of rare metals and with pure chrome; production of manganese and manganese alloys of low-grade ores; new equipment for smelting ferro-alloys. 5) In the field of complex ores: expanding the application of the iron ores of the Kerch' deposit; investigation of the effect of arsenic on the properties of steel; improving the metallurgical technology of the Orsk-Khalilovo combine; new technology for the

Session of the Council at the TsNIIChM for Co-Ordinating the Most Important Scientific-Research Activities in the Field of Iron and Steel Metallurgy for 1960

production of vanadium-containing iron from the ores of the Kachkanarsk deposit and for processing the ores of the Atasuysk deposit. Research on methods for direct iron production (producing iron directly from the rimming bed); methods for the production of a high-quality iron-charge for electro-smelting from rich iron ores by hydrogen or natural gas, also in rimming bed; the reduction of ores by gases in cupola furnaces; tests on an industrial scale on the technology of sponge iron and ore pellets. 6) In the field of rolling: general research, economical profiles for rolled goods; thin sheets and foils; multi-layer sheets; extending the life of rollers; cleaning metals by heat treatment. 7) In the field of tube rolling: new types of tubes, new technology and equipment. In the field of iron-products: high-strength reinforcement for pre-stressed concrete and cables of longer life; wear-resistant screens for ore- and coal mining; wires. 8) In the field of heat treatment: new furnaces, heating of metals without oxidizing in air furnaces and decreasing the decarbonization of the

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Session of the Council at the TsNIIChM for Co-Ordinating the Most Important Scientific-Research Activities in the Field of Iron and Steel Metallurgy for 1960

metal; high-temperature air heating; more efficient use of natural gas in heating furnaces. 9) In the field of physics: theoretical investigation of the strength of metals and alloys; new steels and alloys; (mainly precision steel); new technology for cold-rolled dynamo and transformer steels; increasing the life of rails; heat treatment of rolled goods. In the field of radioactive isotopes: thermodynamics, kinetics and metallurgical processes; physical-chemical properties of metallurgical slags; control of metallurgical processes; the process of diffusion and distribution of elements in metals and alloys; neutron-graphical research of metals and alloys; the economical aspects and problems of iron-metallurgy.

ASSOCIATION: TsNIIChM

Card 4/4

27066
S/057/62/032/004/012/017
B139/B102

96 2532

AUTHORS: Moyzhes, B. Ya., Petrov, A. V., Shishkin, Yu. P., and Kolomoyets, L. A.

TITLE: Choice of the optimum design of a cascade thermocouple

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 32, no. 4, 1962, 461-472

TEXT: A method was developed for calculating the efficiency of a thermocouple consisting of several sections made of different alloys to ensure the best thermoelectrical properties for each temperature range in question. If the optimum current is expressed by

$I_{opt} = \frac{\varkappa S}{\rho T}\frac{dT}{dx}(M-1) = \frac{Q_\varkappa (M-1)}{\alpha T}$ (4), one finds $\eta_{max} = \frac{dT}{T}\frac{M-1}{M+1}$ (5)

for one section. dT is the temperature gradient, ρ is the resistivity of the section, dx is its length, S is the wire cross section,

$M = \sqrt{1+zT}$, $Q_\varkappa$ is the heat flux, $z = \frac{\alpha^2\sigma}{\varkappa}$, α is the thermo-emf,

Card 1/3

Choice of the optimum design of ...

σ is the electrical conductivity, and $\varkappa$ is the thermal conductivity. The differential equations are solved, and the part of Joulean, Thomson, and Peltier heat returning to the hot junction is calculated. Each section is assumed to have equal thermal conductivity. As the efficiency cannot be separately determined for each section, the ratio between $d\eta$ and the maximum efficiency, $d\eta_{max}$, of the material used for the section in question is calculated, and an approximate condition is derived from (4) at $zT \lesssim 1$: $\frac{\alpha}{\varkappa\varrho} = \text{const}$. Then, j_{opt} is determined, and the actual efficiency of the entire thermocouple is calculated. The complete calculation of a thermocouple is presented for purposes of illustration. Bi_2Te_3 alloys are used for low temperatures, and PbSe alloys for high temperatures. The thermocouple consists of 4 sections in the negative branch, and of 3 sections in the positive one. The temperature range is 20-700°C, and η_t = 12.7%. For the negative branch, the $d\eta/d\eta_{max} = f(T)$ curves are better than for the positive branch, where $d\eta/d\eta_{max}$ near 700°C becomes negative and thus reduces the total emf.

Card 2/3

SHISHKIN, Zakhar Nesterovich; KARELIN, Yakov Aleksandrovich, dotsent; KOLOBANOV, Sergey Konstantinovich, dotsent, kand.tekhn.nauk; YAKOVLEV, Sergey Vasil'yevich, doktor tekhn.nauk; ZHUKOV, A.I., prof.; GULYAYEV, N.F., kand.tekhn.nauk; SUKHIY, P.A., inzh., retsenzent; POPOVA, N.M., kand.tekhn.nauk, retsenzent; SMIRNOVA, A.P., red.izd-va; GILENSON, P.G., tekhn.red.; TEMKINA, Ye.L., tekhn.red.

[Sewerage] Kanalizatsiia. Izd.2., ispr. Pod red. A.I.Zhukova. Moskva, Gos.izd-vo lit-ry po stroit., arkhit. i stroit.materialam, 1960. 592 p. (MIRA 14:4)

(Sewerage)

SHISHKINA, A., inzhener.

In close cooperation with industrial shops. Stroi.mat.3 no.1:23-24 Ja '57. (MLRA 10:3)
(Kilns, Rotary)

CHISHKINA, A.

Kirovsk - Lace and Lacemaking

Kirovsk Lacemakers. Sov. zhen.
No. 5, 1952.

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

SHISHKINA, A.G.

Effect of the length of the photoperiod on the anatomical and morphological structure of the radish root. Agrobiologiia no.6: 136-137 N-D '58. (MIRA 12:1)

1.Rostovskiy pedagogicheskiy institut.
(Radishis) (Plants, Effect of light on)

KOZHEVNIKOVA, Mariya Vladimirovna; SHISHKINA, A.G., red.

[Analysis of economic activities on collective farms]Analiz khoziaistvennoi deiatel'nosti kolkhozov. Pod red. A.G. SHishkina, Saratov, 1960. 165 p. (MIRA 15:10)
(Collective farms)

STRONGIN, G.M.; PISAREV, K.Ye.; ABREIMOV, P.G.; GRISHIN, N.T.; SHISHKINA, A.I.

Zinc phosphide. Patent U.S.S.R. 78, 450, Dec. 31, 1949.
(CA 47 no.20:10816 '53)

VOL'FKOVICH, S.I., STRONGIN, G.M., REMEN, P.Ye., PISAREV, K.Ye.; SHISHKINA, A.I.

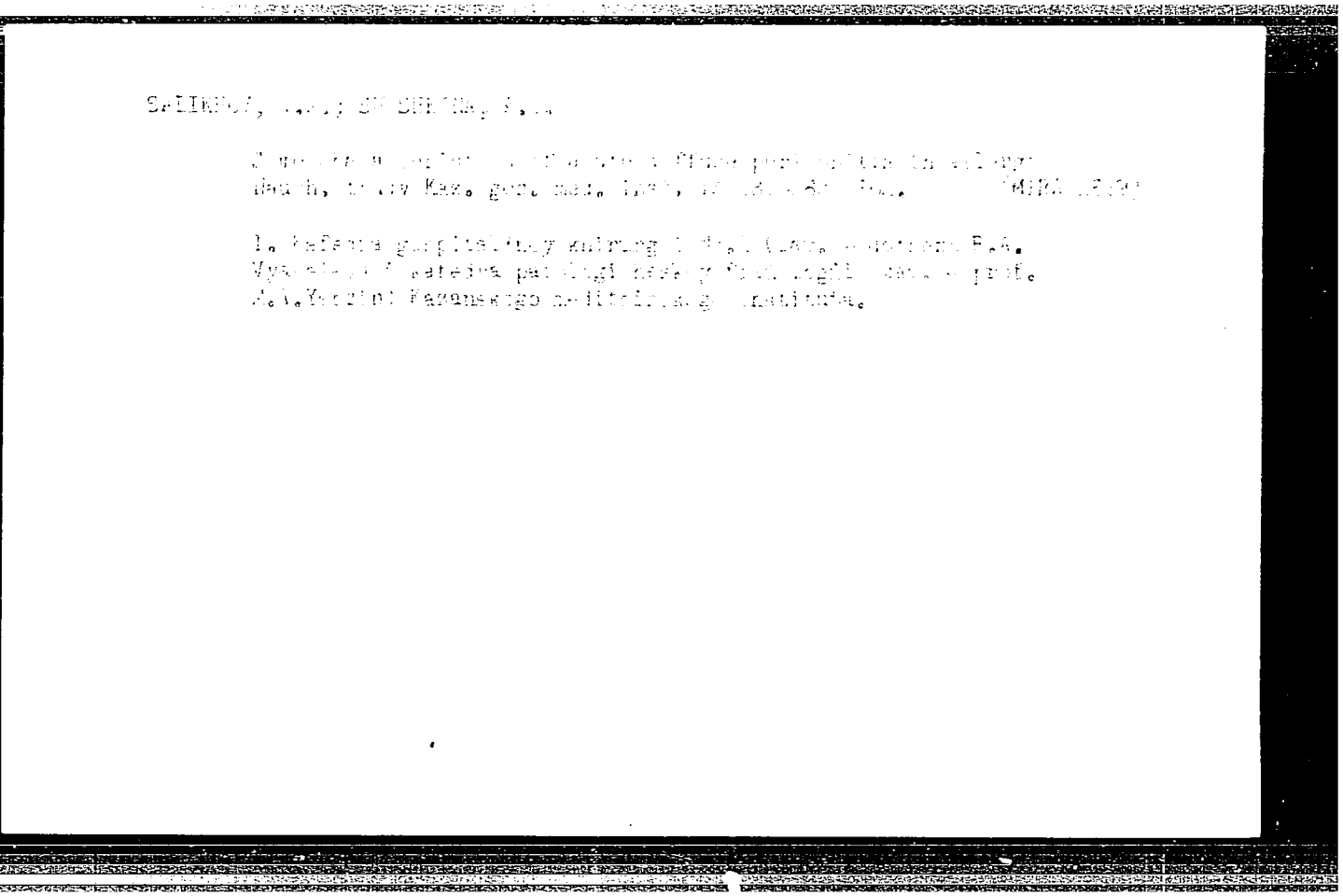
Methods for the producting of zinc phosphide and its use in the control of murine rodents. [Trudy] NIUIF no.167:5-31 '60. (MIRA 13:8)

(Zinc phosphide)
(Rodent baits and repellents)

SHISHKINA, A.I., assistent; MEDVEDOVSKAYA, G.D.

Clinical aspects of obliterating atherosclerosis of the vessels of the extremities. Kaz.med.zhur. no.3:14-15 My-Je '62.
(MIRA 15:9)

1. Klinika gospital'noy khirurgii No.1 (zav. - prof. N.V.Sokolov) Kazanskogo meditsinskogo instituta.
(EXTREMITIES (ANATOMY)--BLOOD SUPPLY) (ARTERIOSCLEROSIS)



SHISHKINA, A. K.

Shishkina, A. K.- "Phytofluorination of the walnut seedlings in Georgia," Trudy In-ta geshchity rasteniy (Akad. nauk Gruz. SSR), Vol. V, 19[illegible], p. 127-36, - (In Georgian, resume in Russian), - Bibliog: 11 items

SO: U-4032, 29 Oct 53, (Letopis 'Zhurnal 'nykh Statey, No. 16, 1959).

1. SHISHKINA, A. K.

2. USSR (600)

7. "Concerning the Study of Diseases of Ornamental Plants in Georgia", Trudy In-ta Zashchity Rasteniy, AN Gruz. SSR (Works of the Institute of Plant Protection, Acad Sci Georgian SSR), Vol 7, 1950, pp 201-219.

9. Mikrobiologiya, Vol XXI, Issue 1, Moscow, Jan-Feb 1952, pp 121-132. Unclassified.

LOZOVOY, D.I.; SHISHKINA, A.K.; ZAYTSEV, F.A., deystvitel'nyy chlen.

Injuries of trees caused by insects and fungi, connected with sun burns, in conditions prevailing in Tiflis. Soob.AN Gruz.SSR 13 no.9:533-537 '52. (MLRA 6:5)

1. Akademiya Nauk Gruzinskoy SSR (for Zaytsev). 2. Akademiya Nauk Gruzinskoy SSR. Tbilisskiy botanicheskiy sad (for Lozovoy, Shishkina).
(Tiflis--Trees--Diseases and pests)

SHISHKINA, A.K.

Study of the biology of the fungus Hypodermella sulcigena (Link) Tub. Trudy Inst. zashch.rast. AN Gruz. SSR 9:225-231 '53. (MIRA 8:2)
(Georgia--Fungi, Pathogenic)(Pine--Diseases and pests)

SHISHKINA, A.K.

Note on the death of roses caused by the fungus Coniothyrium fuckelii Sacc. Vest. Ibil. bot. sada no.69:143-144 '63.

(MIRA 17:10)

SHISHKINA, A.K.

More on the ink disease of the cork oak; reply to D.IA.Girgidov's article. Bot.zhur. 50 no.2:265 F '65. (MIRA 18:12)

1. Institut zashchity rasteniy Gruzinskoy SSR, Tbilisi.
Submitted January 20, 1964.

SHISHKINA, A.P.

Basic industrial methods of the production of fiberboards by the dry and semidry methods. Nauch. trudy LTA no.98:19-26 '62. (MIRA 15:12)

(Hardboard)

SOLECHNIK, N.Ya.; SHISHKINA, A.P.

Theoretical basis and studies of the factors of semidry molding. Nauch. trudy LTA no.98:11-18 '62. (MIRA 15:12)
(Hardboard)

SOLECHNIK, N.Ya.; TSAREV, G.I.; SHISHKINA, A.P.

Characteristics of fibertoard prepared by the method of dry molding. Der. prom. 13 no.6:6-7 Je '64. (MIRA 17:6)

M.

USSR/Cultivated Plants - Fodder.

Abs Jour : Ref Zhur - Biol., No 4, 1958, 15661

Author : V.I. Budnikova, Z.P. Gorbunova, A.S. Shishkina

Inst : Stavropol'skiy Agricultural Institute.

Title : The Carotene Content in Annual and Perennial Grasses from Various Harvestings.
(Soderzhaniye karotina v odnoletnikh i mnogoletnikh travakh razlichnikh ukosov).

Orig Pub : Sb. nauchn. -issled. rabot stud. Stavropol'sk. s.-kh. in-t, 1956, vyp. 4, 84-86.

Abstract : The carotene content was determined in the hay of rye-grass, sainfoin, alfalfa, winter and perennial rye during the 1, 2, 3 harvesting. The highest carotene content was in the sainfoin hay from all harvestings: 83.1-101.8 milligrams per 1 kilogram, and in the

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KOVALEV, Ye.N.; SHISHKINA, A.V.

Clinical aspects of smallpox vaccinal encephalitis. Zhur.nevr.i psikh. 61 no.3:368-371 '61. (MIRA 14:7)

1. Klinika nervnykh bolezney (zav. - kafedroy - dotsent Ye.N. Kovalev) Ryazanskogo meditsinskogo instituta imeni I.P.Pavlova.
(ENCEPHALITIS) (SMALLPOX)

SHISHKINA, A.V.; KUVSHINOVA, R.L.

Clinical aspects of craniospinal tumors. Zhur. nevr. i psikh. 61 no.4:501-503 '61. (MIRA 14:7)

1. Klinika nervnykh bolezney (zav. kafedroy - dotsent Ye.N.Kovalev) Ryazanskogo meditsinskogo instituta imeni I.P.Pavlova i oblastnaya bol'nitsa imeni N.A.Semashko (glavnyy vrach B.N.Shirokov).
(NERVOUS SYSTEM--TUMORS)

SHISHKINA, A.V.

Clinical aspects of diseases of the lumbosacral region of the peripheral nervous system based on materials of the province fangotherapeutic center for the 6 years, 1957 - 1962. Nauch. trudy Riaz.med.inst. 18 no.2:310-321 '62.

Lumbosacral radiculitis in congenital anomalies of the spine. Ibid.:322-326

Clinical aspects of lumbosacral radiculitis in spondylitis deformans of the lumbar vertebrae. Ibid.:327-338

(MIRA 19:1)

1. Kafedra nervnykh bolezney (zav. - dotsent Ye.N.Kovalev) Ryazanskogo meditsinskogo instituta.