RYAZANOVSKIY, Serafim Konstantinovich; POGODIN-ALEKSEYEV, G.I., prof., obshchiy red.; RODIMOV, A.V., red.

[Reading drawings; a textbook] Chtenie chertezhei; uchebnoe posobie. Moskva, Izd-vo VPSh i AON pri TsK KPSS, 1959. 60 p.

1. Rukovoditel' kafedry osnov promyshlennogo proizvodstva i stroitel'stva Vysshey partiynoy shkoly pri TSentral'nom komitete Kommunisticheskoy partii Sovetskogo Soyuza (for Pogodin-Alekseyev).
(Mechanical drawing)

KUZNETSOV, Vasiliy Ivanovich, prof., doktor tekhn. nauk; NIKITIN, Boris Vladimirovich, inzh.-mekhanik; POGODIN-ALEKSEYEV, G.I., prof., doktor tekhn. nauk, red.; KOKOSHKO, A.G., red.

[Plastics and their main physical and mechanical properties] Plasticheskie massy i ikh osnovnye fiziko-mekhanicheskie svoistva. Pod red. G.I.Pogodina-Alekseeva. Moskva, Izd-vo VPSh i Aon pri TsK KPSS, 1959. 91 p. (MIRA 14:5)
(Plastics)

25(2) PHASE I BOOK EXPLOITATION SOV/1947

Moscow. Vyssheye tekhnicheskoye uchilishche im. N. E. Baumana.

Povysheniye dolgovechnosti detaley mashin; sbornik statey (Extending the Service Life of Machine Parts; Collection of Articles) Moscow, Mashgiz, 1959. 161 p. (Series: Its: [Trudy] 91) Errata slip inserted. 6,000 copies printed.

Eds. (Title page): E. A. Satel', Honored Worker in Science and Technology, Doctor of Technical Sciences, Professor and D. N. Reshetov, Doctor of Technical Sciences, Professor; Ed. (Inside book): R. M. Korableva, Engineer; Tech. Ed.: V. D. El'kind; Managing Ed. for Literature on General Technical and Transport Machine Building (Mashgiz): K. A. Ponomareva, Engineer.

PURPOSE: This collection of articles is intended for mechanical and metallurgical engineers and technicians.

COVERAGE: Articles included in this collection were presented to the Scientific and Technical Convention held at the Moscow Higher Technical School in 1957. The Convention met to explore the possibilities of extending the service life of machines and their parts. The articles cover problems pertaining to machine

Card 1/4

building, engineering, and the thermal and chemical treatment of the materials used for machine parts. Pretreatment and processing of machine parts and the materials from which they are made are reviewed, and ways of extending their service life explored. Causes of material corrosion, fatigue, and deterioration are investigated. Problems of extending the service life of automobiles, lowering their weight, improving the wear resistance of brake linings, and eliminating overheating are discussed. In addition, low temperature cyanidation of structural steel is described, and the durability of tractor transmissions and ways of improving it dealt with. The book contains numerous graphs, tables, illustrations and formulas. Individual articles are accompanced by references.

TABLE OF CONTENTS:

Extending the Service Life of Machine Parts (Cont.) SOV/1947

Card 3/4

POGODIN-ALEKSEYEV, G.I.

25(1) PHASE I BOOK EXPLOITATION SOV/1933

Nikiforov, Vikentiy Markianovich, Georgiy Ivanovich Pogodin-Alekseyev, Doctor of Technical Sciences, Professor, Vasiliy Alekseyevich Proskuryakov, Vladimir Aleksandrovich Proskuryakov, and Konstantin Ivanovich Tkachev

Tekhnologiya vazhneyshikh otrasley promyshlennosti. Ch. I: Metallurgiya i metallovedeniye; uchebnoye posobiye dlya vysshikh partiynykh shkol (Technology of the Most Important Industries. Pt. 1: Metallurgy and the Science of Metals; a Textbook for Higher Party Schools) Moscow, Izd-vo VPSh i AON pri TsK KPSS, 1959. 271 p. Errata slip inserted. 25,000 copies printed.

Sponsoring Agency: Kommunisticheskaya partiya Sovetskogo Soyuza. Tsentral'nyi komitet. Vysshaya partiynaya shkola. Kafedra promyshlennogo proizvodstva i stroitel'stva.

Ed. (Title page): G. I. Pogodina-Alekseyeva, Doctor of Technical Sciences, Professor; Eds. (Inside book): S. Ya. Golovin, and D. O. Slavin; Tech. Ed.: K. M. Naumov.

Card 1/ 4

PURPOSE: This book is intended to serve as a manual in higher Party schools, and may also be used by general readers interested in widening their knowledge of the given branch of industry.

COVERAGE: This manual was written in accordance with the curriculum of the four-year course entitled "Technology of the Most Important Branches of Industry" given at higher Party schools. The book is divided into two parts: "Metallurgy and Mining of Raw Materials and Fuels" and "Physical Metallurgy and Heat Treatment of Metals." The authors present the fundamentals of the mining and exploitation of the basic raw materials and fuels and the basic principles of metallurgy. There are numerous diagrams and illustrations explaining the basic underground and open pit mining methods. Cross-sections of oil wells show the principles of oil production. The authors trace the flow in the metallurgical industry from the smelting of ores to the final heat treatment of the metals. Special features in producing nonferrous metals and the most commonly used alloys are explained. Problems of corrosion and corrosion prevention are discussed. In the introduction the authors give a brief outline of the new Seven-Year Plan 1959-1965, mentioning the production targets in metallurgy for those years and the new establishments under construction. No references are listed.

Card 3/4

PHASE I BOOK EXPLOITATION SOV/3389

Spravochnik po mashinostroitel'nym materialam, tom 3: Chugun (Handbook on Materials for Machine Construction, Vol 3: Cast Iron) Moscow, Mashgiz 1959. 359 p. Errata slip inserted. 26,000 copies printed.

Ed.: G.I. Pogodin-Alekseyev, Doctor of Technical Sciences, Professor; Eds. of this vol: N.F. Bolkhovitinov, Doctor of Technical Sciences, Professor, and A.F. Landa, Doctor of Technical Sciences, Professor; Ed. of Publishing House: V.I. Rybakova, Engineer; Tech. Ed.: T.F. Sokolova; Managing Ed. for Handbook Literature: I.M. Monastyrskiy, Engineer.

PURPOSE: This book is intended for engineers and metallurgists working with cast iron and the techniques used in the design and production of cast-iron parts.

COVERAGE: This book deals with the technology of cast iron, including the classification, metallurgy, physical properties and foundry techniques associated with types of cast iron as well as the engineering design of cast-iron parts and the molds for producing

Card 1/12 2

them. No personalities are mentioned. References follow each chapter.

TABLE OF CONTENTS:

POGODIN-ALEKSEYEV G.I.

25(1, 7) PHASE I BOOK EXPLOITATION SOV/3281

Berezin, Boris Prokop'yevich, Aron Abramovich Mosyak, Vikentiy Markianovich Nikiforov, Georgiy Ivanovich Pogodin-Alekseyev, Nikolay Dmitriyevich Titov, Boris Gavrilovich Shpital'nyy, and Nikolay Aksent'yevich Shcherbina

Tekhnologiya vazhneyshikh otrasley promyshlennosti, chast' 2: Mashinostroyeniye; uchebnoye posobiye dlya vysshikh partiynykh shkol (Manufacturing Processes of the More Important Branches of Industry, Part 2: Machinery Manufacture; Manual for Higher Party Schools) Moscow, Izd-vo VPSh i AON pri TsK KPSS, 1959. 376 p. 15,600 copies printed.

Sponsoring Agency: Kommunisticheskaya partiya Sovetskogo Soyuza. Vysshaya partiynaya shkola. Kafedra promyshlennogo proizvodstva i stroitel'stva.

Eds.: G.I. Pogodin-Alekseyev, A.G. Kokoshko, and D.R. Beyzel'man; Tech. Ed.: K. M. Naumov.

PURPOSE: This textbook is intended for students of higher party schools.

COVERAGE: The book deals with manufacturing processes in the machine industry. Rolling, drawing, pressing, forging, and stamping of metals are discussed in Part I, founding in Part II, welding and gas cutting in Part III, and metal cutting in Part IV. No personalities are mentioned. There are no references.

Card 1/8 3

Manufacturing Processes of the More (Cont.) SOV/3281

Card 5/0 3

POGODIN-ALEKSEYEV, G.I.

UKHOV, B.S., prof., doktor tekhn.nauk [deceased]; VOROB'YEV, V.A., prof., doktor tekhn.nauk, zasluzhennyy deyatel' nauki i tekhniki; YEGOROV, Yu.A., prof., doktor iskusstvovedcheskikh nauk; STRAMENTOV, A.Ye., prof., doktor tekhn.nauk; SIROTKIN, V.P., prof., doktor tekhn.nauk; TOROPOV, A.S., dotsent, kand.tekhn.nauk; KRYLOV, B.A., kand.tekhn. nauk; SHREYBER, A.K., kand.tekhn.nauk; OSMOLOVSKIY, M.S., dotsent, kand.arkhitertury, inzh.-arkhitektor; POGODIN-ALEKSEYEV, G.I., prof., doktor tekhn.nauk, obshchiy red.; NAYMOV, N.A., dotsent, kand.tekhn. nauk, nauchnyy red.; KOKOSHKO, A.G., red.; NAUMOV, K.M., tekhn.red.

[Industrial and residential construction; textbook for higher party schools] Promyshlennoe i grazhdanskoe stroitel'stvo; uchebnoe posobie dlia vysshikh partiinykh shkol. Moskva, 1959. 434 p.
(MIRA 13:2)

1. Kommunisticheskaya partiya Sovetskogo soyuza. Vysshaya partiynaya shkola. 2. Chlen-korrespondent Akademii stroitel'stva i arkhitektury (for Stramentov). 3. Rukovoditel' kafedry promyshlennogo proizvodstva i stroitel'stva Vysshey partiynoy shkoly pri TSentral'nom komitete Kommunisticheskoy partii Sovetskogo soyuza (for Pogodin-Alekseyev.)
(Construction industry) (City planning)

ZOLOTAREV, T.L., prof., doktor tekhn.nauk, red.; POGODIN-ALEKSEYEV, G.I., prof., doktor tekhn.nauk, obshchiy red.; NIKOLAYEV, V.V., red.; VORONIN, K.P., tekhn.red.

[Industrial power engineering; a textbook for higher party schools] Energetika promyshlennosti; uchebnoe posobie dlia vysshikh partiinykh shkol. Pod red. T.L.Zolotareva. Moskva, Izd-vo VPSh i AON pri TsK KPSS, 1959. 455 p. (MIRA 12:5)

1. Kommunisticheskaya partiya Sovetskogo Soyuza. Vysshaya partiynaya shkola. 2. Rukovoditel' kafedry osnov promyshlennogo proizvodstva i stroitel'stva Vysshey partiynoy shkoly pri TsK KPSS (for Pogodin-Alekseyev).
(Electric engineering) (Power resources)

POGODIN-ALEKSEYEV

BAL'SHIN, M.Yu., kand.tekhn.nauk; VINOGRADOV, S.V., inzh.; GLAZUNOV, S.G., kand.tekhn.nauk; ZELIKMAN, A.N., kand.khim.nauk; KISLYAKOV, I.P., kand.tekhn.nauk; KURITSYNA, A.D., kand.tekhn.nauk; LEBEDEV, A.A., A.A., inzh.; LUZHNIKOV, L.P., kand.tekhn.nauk; POMERANTSEV, S.N., inzh.; RUDNITSKIY, A.A., doktor khim.nauk; SMIRYAGIN, A.P., kand. tekhn.nauk; TRET'YAKOV, V.I., kand.tekhn.nauk; CHURSIN, V.M., kand.tekhn.nauk; CHUKHROV, M.V., kand.tekhn.nauk; SHAROV, M.V., kand.tekhn.nauk, SHPAGIN, A.I., kand.tekhn.nauk; SHPICHINETSKIY, Ye.S., kand.tekhn.nauk; POGODIN-ALEKSEYEV, prof., doktor tekhn. nauk, red.; BOCHVAR, M.A., inzh., red.toma; RYBAKOVA, V.I., inzh., red.izd-va; SOKOLOVA, T.F., tekhn.red.; MODEL', B.I., tekhn.red.

[Handbook of materials used in the machinery industry; in four volumes] Spravochnik po mashinostroitel'nym materialam; v chetyrekh tomakh. Pod red. G.I.Pogodina-Alekseeva. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry. Vol.2. [Nonferrous metals and alloys] TSvetnye metally i ikh splavy. Red.toma M.A.Bochvar. 1959. 639 p. (MIRA 13:1)

(Nonferrous metals) (Nonferrous alloys)
(Machinery industry)

S/124/61/000/003/028/028
A005/A105

10.9200

AUTHORS: Pogodin-Alekseyev, G. I., and Zhuravlev, S. V.

TITLE: The effect of preparatory strain on the ductility of steel 20 at various speeds and test temperatures

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 3, 1961, 53, abstract 3V430 (Tr. Nauchno-tekhn. o-va chern. metallurgii, 1959, v. 15, 131-143)

TEXT: The authors report on experimental investigations of steel 20 specimens turned from round rods which were subjected to cold hardening. A portion of specimens were tempered at 750°C during 2 hours, the other portion of specimens were tempered at 400°C. The relative variation of the residual relative stretch was taken as a measure of initial cold-hardening. The obtained three groups of specimens, distinct by initial cold-hardening, were subjected to tensile tests with variable deformation speed as well as constant deformation speed at temperatures ranging from +100° to -196°C. During the tests the ductility characteristics and the distribution of the plastic deformation over the specimen length were determined. There are 19 references.

D. Akimov-Peretts

[Abstractor's note: Complete translation]

Card 1/1

POGODIN-ALEKSEYEV, G.I., doktor tekhn.nauk, prof.

Preloading is one of the ways to increase the durability of machines. [Trudy] MVTU no.91:60-70 '59. (MIRA 12:7)
(Machine-shop practice)

POGODIN-ALEKSEYEV, G.I.

[Achievements in science and technology and the progressive practices of industry and construction] Dostizheniia nauki i tekhniki i peredovoi opyt v promyshlennosti i stroitel'stve. Moskva, Izd-vo VPSh i AON pri TsK KPSS. 1958-60.
(MIRA 14:7)

(Russia--Industries)

POGODIN-ALEKSEYEV, Gerbert Ivanovich, Ed.

Soviet Production Machinery Statistics; U.S.S.R. New York, USJPRS, 1960.
19 p. tables. (JPRS: 3370)
Translated from the original Russian: Dostizheniya Nauki i Tekhniki i Peredovoy Opty v Promyshlennosti i Stroitel'stve, Moscow, 1960.

RAZUMOV, Nikolay Alekseyevich; POGODIN-ALEKSEYEV, G.I., prof., doktor tekhn.nauk, red.; KOKOSHKO, A.G., red.; NAUMOV, K.M., tekhn.red.

[Over-all mechanization and automation of production processes and labor productivity; practice of the Moscow City Economic Council] Kompleksnaia mekhanizatsiia i avtomatizatsiia proizvodstvennykh protsessov i proizvoditel'nost' truda; opyt Moskovskogo gorodskogo sovnarkhoza. Pod obshchei red. G.I. Pogodina-Alekseeva. Moskva, Izd-vo VPSh i AON pri TsK KPSS, 1960. 54 p. (MIRA 14:2)
(Moscow--Automation) (Moscow--Technological innovations)
(Labor productivity)

KUZNETSOV, Vasiliy Ivanovich, prof., doktor tekhn.nauk; POGODIN-ALEKSEYEV, G.I., doktor tekhn.nauk, prof., red.; KOKOSHKO, A.G., red.; NAUMOV, K.M., tekhn.red.

[Main trends of technical progress in the U.S.S.R. from 1959 to 1965] Osnovnye napravleniia tekhnicheskogo progressa v SSSR v 1959-1965 godakh. Pod red. G.I.Pogodina-Alekseeva. Moskva, Izd-vo VPSh i AON pri TsK KPSS, 1960. 106 p. (MIRA 13:2)
(Russia--Economic policy)

BALANDIN, Gennadiy Fedorovich; POGODIN-ALEKSEYEV, Georgiy Ivanovich, doktor tekhn.nauk, prof.; RAZUMOV, Nikolay Alekseyevich; SHPITAL'NYY, Boris Gavrilovich; SHCHERBINA, Nikolay Avksent'yevich; KOKOSHKO, A.G., red.; NAUMOV, K.M., tekhn.red.

[Hot working of metals] Goriachaia obrabotka metallov. Moskva, Izv-vo VPSh i AON pri TsK KPSS, 1960. 148 p. (Dostizheniia nauki i tekhniki i peredovoi opyt v promyshlennosti i stroitel'stve, no.3). (MIRA 13:8)

(Metalwork)

POGODIN-ALEKSEYEV, G.I.

27

PHASE I BOOK EXPLOITATION SOV/5457

Nauchno-tekhnicheskoye obshchestvo mashinostroitel'noy promyshlennosti. Sektsiya metallovedeniya i termicheskoy obrabotki metallov.

Metallovedeniye i termicheskaya obrabotka metallov; trudy Sektsii metallovedeniya i termicheskoy obrabotki metallov (Physical Metallurgy and Heat Treatment of Metals; Transactions of the Section of Physical Metallurgy and Heat Treatment of Metals) no. 2. Moscow, Mashgiz, 1960. 242 p. 6,000 copies printed.

Sponsoring Agency: Nauchno-tekhnicheskoye obshchestvo mashinostroitel'noy promyshlennosti. Tsentral'noye pravleniye.

Editorial Board: G. I. Pogodin-Alekseyev, Yu. A. Geller, A. G. Rakhshtadt, and G. K. Shreyber; Ed. of Publishing House: I. I. Lesnichenko; Tech. Ed.: B. I. Model'; Managing Ed. for Literature on Metalworking and Machine-Tool Making: V. I. Mitin.

PURPOSE: This collection of articles is intended for metallurgists, mechanical engineers, and scientific research workers.

COVERAGE: The collection contains articles describing results of research conducted by members of NTO (Scientific Technical Society) of the machine-building industry in the field of physical metallurgy, and in the heat treatment of steel, cast iron, and nonferrous metals and alloys. No personalities are mentioned. Most of articles are accompanied by Soviet and non-Soviet references and contain conclusions drawn from investigations.

TABLE OF CONTENTS:

17

AVAILABLE: Library of Congress (TN672.N34)

188260

24581

S/137/61/000/005/034/060
A006/A106

AUTHORS: Pogodin-Alekseyev, G. I., and Sergiyevskaya, T. V.

TITLE: The effect of the microstructure on the development of reversible temper brittleness in low-carbon manganese steel

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 5, 1961, 19, abstract 5Zh156 (V sb. "Metallovedeniye i term. obrabotka metallov" [Tr. Sektsii metalloved. i term. obrabotki metallov. Tsentr. pravl. Nauchno-tekhn. o-va mashinostroit. prom-sti, no. 2] Moscow, 1960, 59-66)

TEXT: The effect of the grain size of an α-solid solution, obtained in various products by the decomposition of austenite, on the development of reversible temper brittleness was studied on steel with 0.04% C and 1.56% Mn by impact tests at +40, -40 and -60°C. The temper brittleness of various austenite decomposition products is different. A slight increase of ferrite dispersity reduces sharply the coefficient of temper brittleness; ferrite grains enlarged from 70-80 to 500-600 μ^2 raise the coefficient of temper brittleness, which is also affected by the magnitude and nature of carbide distribution and the degree of alloying of the ferrite. There are 11 references. L. V.

[Abstracter's note: Complete translation]

Card 1/1

POGODIN-ALEKSEYEV, G.I., doktor tekhn.nauk, prof.; ZABOLEYEV-ZOTOV, V.V., kand.tekhn.nauk

Effect of ultrasonics on processes of structure formation in metal alloys. Trudy Sek.metalloved.i term.obr.met.NTO mash.prom, no.2: 229-243 '60. (MIRA 14:4)

(Alloys—Metallography)
(Ultrasonic waves—Industrial applications)

S/129/61/000/003/009/011
E073/E535

AUTHORS: Pogodin-Alekseyev, G. I., Honoured Scientist and Artamonov, B. A., Engineer

TITLE: Diagram of Deformation of Steel Quenched from the Temperatures A_{c_1}—A_{c_3}

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov, 1961, No.3, pp.47-51

TEXT: The authors studied the dynamic and static strength of steel after quenching from the most characteristic recrystallization temperature range. From normalised blanks of steel (0.24% C, 0.60% Mn, 0.37% Si and 0.83% Cr) specimens of 10 x 10 mm cross-section and 55 mm long were produced. No notch was made so as to avoid creating a three-dimensional stress state and to avoid high relative errors in measuring the mechanical properties. Specimens in batches of five were heated to the test temperatures (700, 720, 740, 750, 760, 780, 790, 800, 820, 840, 860 and 880°C) in boric acid, held at the temperature for 40 min and then tempered for two hours at 100°C to reduce the internal stresses. After determining the hardness, the specimens were subjected to impact-bending

tests by means of an impact machine with a maximum energy of 35 kgm. In addition to the work required for the fracturing, the residual bending was determined and, for unfractured specimens, the angle of elastic rebound of the impact pendulum was measured. The average results for specimens quenched in water from various temperatures are given in Fig.1, showing the hardness HB, the work required for fracturing the specimen A_k, the bending arc f and the angle of elastic rebound β of specimens from the steel 20X (20 Kh) after heating to 700-880°C and quenching in water. Specimens without quenching (heating temperature 700-750°C) and also specimens quenched from 820-880°C proved to have the highest toughness. Specimens quenched from 760-800°C showed a sharp drop in the impact strength and ductility. Particularly characteristic is the change in impact plasticity; the flexure arc of non-quenched specimens (heating to 700-750°C) equalled 15.6 mm, whilst for specimens quenched from temperatures not exceeding greatly the A_{c_1} temperature the arc decreased to 4.8 mm, increasing again to 6.7-6.9 mm at quenching temperatures of 800°C and above. An increase in the angle of rebound of the pendulum from 4.5° for non-quenched

S/129/61/000/003/009/011
E073/E535

specimens to 11° for specimens quenched from 820°C and higher temperatures indicates a considerable increase in strength with increasing quenching temperature. This leads to an increase in the toughness of the specimens which is more intensive than the increase in ductility. Therefore, specimens without notches quenched from temperatures above 800°C did not fracture during the tests. Thus, the preliminary investigations showed a sharp decrease in plasticity and toughness of steels quenched from temperatures that did not exceed greatly the temperature of pearlitic-austenitic transformation, which was in agreement with earlier made observations on other steels and was designated by the authors as "recrystallization brittleness". The authors considered it of interest to study in detail the strength of steel quenched from the temperature of maximum embrittlement during recrystallization (770°C) and to compare the properties of such steel with the corresponding properties of steel which has not been quenched and also of steel which has been given the full quenching treatment. From the obtained results, diagrams of static and impact deformation during bending of the specimens were plotted for the following

three types of heat treatment; a) normalisation at 870°C, b) normalisation, quenching from 770°C and tempering at 100°C (maximum embrittlement after quenching), c) normalisation, quenching from 880°C and tempering at 100°C (normal full quenching treatment). The average values are given in Fig.2 in terms of the flexure arc f in mm as a function of the applied force P, kg. Curves 1 - static deformation, curves 2 - impact deformation (method of elastic characteristics), curves 3 - impact deformation (method of plastic characteristics). The plot, Fig.2a, relates to normalised specimens; plot Fig.2б relates to specimens which were normalised, quenched from 770°C and tempered at 100°C; plot, Fig.2в, relates to specimens which were normalised, quenched from 880°C and tempered from 100°C. It can be seen that dynamic application of the load increases appreciably the yield point, particularly for steels with a high ductility. There are 3 figures, 1 table and 4 Soviet references.

Card 4/04

23902

S/129/61/000/010/007/012
E193/E135

18.8200

AUTHORS: Pogodin-Alekseyev, G.I., Honoured Scientist and Technologist, and Dolmatov, Ye.G., Engineer.

TITLE: Variation of properties of steel during hardness testing with the aid of a spherical indenter

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov, no.10, 1961, 34-37

TEXT: One of the standard methods of hardness testing consists in pressing a spherical indenter into the surface of the metal tested and measuring the size of the indentation obtained under a predetermined load. As the indenter enters the metal, the latter undergoes plastic deformation and the resultant strain-hardening is bound to affect the test results. The object of the present investigation was to study plastic deformation of metals during hardness testing and its effect on the results obtained. Technical iron, steel 3 (in the annealed, hardened, or aged condition), steel 20, and steel 45 were used in the experiments which consisted in taking hardness measurements on a Rockwell hardness testing machine with a spherical indenter 1.589 mm dia.,

Card 1/ 4

and determining the effect of the variation of the load, P, (50, 90, and 140 kg) on the indentation depth, h, indentation modulus P/h, and hardness number HB. Some of the results are reproduced in Fig.1, showing the variation of HB determined for the 0-50, 50-90, and 90-140 kg intervals (graph a) and for the 50, 90, and 140 kg loads (graph б). Curves 1-7 relate to: 1 - steel 45; 2 - steel 3 aged for 15 days; 3 - steel 3 aged for 5 days; 4 - hardened steel 3; 5 - steel 20; 6 - annealed steel 3; 7 - technical iron. Analysis of these and other results has led the present authors to the following conclusions. 1) When a spherical indenter is used, h is not proportional to P because both the geometry of the system and the structural state of the metal tested change with increasing P. In contrast to conical or pyramidal indenters for which both the angle of taper and the indentation angle remain constant and which consequently produce geometrically similar indentations, irrespective of the magnitude of P, the angle of taper and the indentation angle of a sphere (equal, respectively, 180 and almost zero degrees at the initial moment of a hardness test) change in the course of the test.

As the spherical indenter enters the metal under test, the angle of taper decreases and the indentation angle increases. The smaller the angle of taper, the easier it becomes for the indenter to enter the metal. Consequently, a two-fold increase in P will produce more than a two-fold increase in h which means that the effect of the geometrical factor discussed above is to reduce HB with increasing P. The effect of the structural factor is opposite, since the degree of plastic deformation and, therefore, the degree of strain-hardening increase with increasing P. 2) In the case of metals that do not strain-harden readily, HB may remain constant or even decrease initially as progressively higher P is applied. However, a stage will be reached when the effect of strain-hardening becomes more pronounced than that of the geometrical factor, and further increases in P will bring about an increase in HB. 3) The rate at which HB of plastic metals increases with increasing P is faster than that for relatively hard materials. As a result, a soft metal tested under a sufficiently high P may have a HB higher than that of a relatively hard metal tested under the same conditions. It is for this reason that differences in hardness of various steels tend

Variation of properties of steel ...

to be obliterated when high P in conjunction with a spherical indenter are used in hardness testing. 4) The strain-hardenability of the materials studied in the course of the present investigation increased in the order of decreasing hardness.
There are 2 figures and 1 table.

ASSOCIATION: Zavod obrabotki tsvetnykh metallov
(Plant for Treatment of Non-Ferrous Metals)

Card 4/5

S/129/61/000/011/010/010
E193/E383

AUTHOR: Pogodin-Alekseyev, G.I., Honoured Scientist and Technician

TITLE: Some problems of hardness-testing

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov, no. 11, 1961, pp. 48 - 54

TEXT: As a result of automation of many metal-treatment processes need has arisen for speeding-up various process-control and acceptance tests, including hardness tests. Various automatic and semi-automatic hardness-testers have been designed, both in the Soviet Union and abroad. Satisfactory operation of equipment of this type depends on selecting optimum shape and size of the indenter and the correct test load, and it is in order to assist the designers in solving this problem that the present investigation has been undertaken. The experimental work consisted of measuring hardness of standard specimens with the aid of spherical indenters (1/16" and 2.5 mm in diameter), a pyramid, and a cone used under test loads, P , ranging from 10 - 250 kg. The hardness number was determined by the Brinell

Card 1/3

method (i.e. by calculating the P/S ratio, where S is the area of the impression), by the Meier method (i.e. by calculating the P/A ratio, where A is the projected impression area and by calculating the, so-called, plastic indentation modulus given by P/h , where h is the depth of the impression. The results obtained by these three methods are reproduced graphically. In Fig. 3, the Brinell hardness number (HB) is plotted against P (kg), graphs a, б and B relating to results obtained, respectively, with a spherical indenter (of a diameter shown by the corresponding curves), pyramid and cone; the hardness (on the Rockwell scale) of standard specimens is indicated by each curve. The fact that spherical indenters of different diameters yielded different values of HB was attributed to the earlier established fact (Ref. 2 - the author and Ye.G. Dolmatov, "MiTOM", no. 10, 1961) that in this case the condition of neither mechanical nor geometrical similarity is satisfied when different P is applied. The tests with the cone and pyramid indenters yielded rather unexpected results since it is held generally that the value of HB obtained with this type of indenter is independent of P. These

results indicated that when a pointed indenter was used the P/S ratio could not be regarded as a reliable and consistent criterion of hardness. Similar results were obtained when the effect of the variation of P on the Meier hardness number (P/A) was determined. Most realistic results were obtained when the hardness was measured in terms of the plastic indentation modulus (P/h); these are reproduced in Fig. 5, where P/h is plotted against P (kg), graphs a, ~~b~~ and B relating, respectively, to sphere, pyramid and cone indenters; the continuous and broken curves in graph a relate to spheres 2.5 mm and 1/16" in diameter, respectively; the hardness of the standard specimens is indicated by each curve. It was inferred from the results obtained that a pyramid (diamond or sintered carbide) indenter is most suitable for automatic hrdness-testers designed for use as process-control tools. The P/h ratio should be used as the measure of hardness, with h measured while the specimen is still under load (the dP/dh ratio is a more accurate criterion of hardness; since, however, its determination is more complex, it cannot be recommended for routine acceptance tests). The test load should be either so high that the range of maximum

S/887/61/000/000/060/069
E202/E155

AUTHORS: Pogodin-Alekseyev G.I., and Zaboleyev-Zotov V.V.

TITLE: Method of preparing metallic and nonmetallic alloys by means of ultrasonic treatment.
A.c. no.121912, cl.31c, 13 (z. no.595522 of March 26, 1958)

SOURCE: Sbornik izobreteniy; ul'trazvuk i yego primeneniye. Kom. po delam izobr. i otkrytiy. Moscow, Tsentr. byuro tekhn. inform., 1961, 89.

TEXT: According to the given method, the least refractory component of the alloy is melted and the other components are introduced into the melt in a dispersed solid state, with ultra-sonic energy used to secure uniform distribution of these particles in the alloy. In contrast to the orthodox methods of alloy preparation based on melting the initial components and their mixing in the liquid state, the proposed method does not depend on the solubility or wettability of the components in the liquid state, nor on the diffusional processes in the solid state. The use of ultrasonics and the introduction of heavy components in a dispersed solid state means that alloys can even be made of components which

Card 1/2

are non-soluble in the liquid state. Likewise those exhibiting strong segregation or great difference in specific gravity, can be handled with much less difficulty than by orthodox methods. As a result, dispersed and suspended alloys may have a considerably wider range of composition than that of orthodox alloys prepared by casting or sintering. Dispersed or suspended alloys may be prepared from practically any metals and metalloids and their compounds usually present in solid solution. At the same time the combination and proportions of the components may be selected almost at liberty. For that reason this method widens considerably the register of the applicable alloys. This application was accepted as useful by the Nauchno-issledovatel'skiy i proyektnyy institut po obrabotke tsvetnykh metallov (Scientific Research and Design Institute for Processing of Nonferrous Metals).

[Abstracter's note: Complete translation.]

Card 2/2

POGODIN-ALEKSEYEV, G.I.; SERGIYEVSKAYA, T.V. [deceased]

Effect of the rate of deformation on the critical temperature for cold brittleness in 45G2 steel with temper friability. Stal' 21 no.8:732-735 Ag '61. (MIRA 14:9)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii (for Litvinenko, Yakushin).
(Steel—Brittleness)
(Deformations (Mechanics))

36939
S/136/62/000/004/004/004
E021/E435

18.1Y14

AUTHORS: Pogodin-Alekseyev, G.I., Gavrilov, V.M., Korolev, F.V.

TITLE: The use of low-frequency vibrations in continuous casting of beryllium bronze

PERIODICAL: Tsvetnyye metally, no.4, 1962, 69-73

TEXT: Vibrations were used in order to try and eliminate the columnar structure in the billets, which makes subsequent rolling more difficult. The metal was melted in a high-frequency furnace with a graphite crucible of 60 kg capacity. The billets produced were up to 400 mm long. Vibrations were produced from an eccentric vibrator. The frequency could be varied from 0 to 100 c/s and the amplitude from 0 to 2 mm. The temperature of the molten metal was held at 1050 to 1060°C and that of the pouring funnel at 650 to 750°C since freezing occurred in the funnel at lower temperatures. With amplitudes of 0.7 to 0.8 mm and frequencies of 25, 50 and 75 c/s the vibration arrangement worked satisfactorily. With this amplitude drops of liquid metal were ejected at 100 c/s; at higher amplitudes ejection occurred

Card 1/2

The use of low-frequency ...

at lower frequencies. All the macrostructures of the billets were finer after the vibration treatment, the maximum refinement occurring at an amplitude of 1 mm and frequencies of 50 and 75 c/s. With these conditions the columnar structure is completely eliminated. Chemical analysis across the section of the billet showed that inverse segregation was reduced and could be completely eliminated by the vibration treatment and intensive cooling of the billet. The treatment resulted in a decrease in hardness by 2 to 5 units, which is explained by a smaller quantity of β-phase in the treated billets. There are 5 figures and 1 table.

38047
S/128/62/000/005/002/005
A004/A127

18.1000

AUTHOR: Pogodin-Alekseyev, G.I.

TITLE: The application of ultrasonics in the production of new alloys

PERIODICAL: Liteynoye proizvodstvo, no. 5, 1962, 28 - 30

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001

TEXT: The author reports on a new production process of alloys which he calls "dispersion alloys" and which are produced by feeding into the melt alloying elements, particular high-melting ones, with the aid of ultrasonics. Waveguides made of these alloying constituents are introduced in the melt. After energizing the ultrasonic installation, the waveguide metal disintegrates and its particles are transferred into the melt. The more intensive the ultrasonic irradiation, the more particles of the waveguide are getting into the melt. Thus the diffusion of the alloying elements in the melt is considerably accelerated under the effect of ultrasonics. If, however, the particles are not soluble in the melt, they remain in it also after solidification in the form of a suspension, i.e., the alloy represents a mechanical mixture of the base metal and the waveguide particles fed into it. The author points out that

The application of ultrasonics in the ....

good results are also achieved with fine powders of so-called micron dispersity, which, under the effect of ultrasonics of a given intensity, penetrate into the base metal. He points out that the known methods of producing alloys by casting and sintering are thus supplemented by a new process, in which the low-melting constituent is transformed into the liquid state, while the alloying elements are added in a dispersed form in the solid state. [See also "Liteynoye proizvodstvo", no. 7, 1958.] A uniform distribution of the dispersed phase in the matrix metal is ensured by elastic sonic oscillations, while it may not be impossible to introduce some constituents also in the liquid state. One or more constituents can be introduced into the alloy through a waveguide; in that case the necessity of preparing powders is eliminated. The characteristic feature of this method of producing alloys is the possibility of obtaining phases of a given composition and of the required quantity, depending on the intended use of the alloy - carbides, silicides, nitrides, intermetallic compounds and others, which in cast alloys is not always possible. By increasing the radiation intensity and duration, it is possible to considerably increase the degree of dispersion of the constituent phases being introduced. The author enumerates a number of applications for the new alloys. There are 4 figures.

Card 2/2

"POGODIN-ALEKSEYEV, G.I.

Ultrasonic waves in the production of new alloys. Lit. proizv. no.5:28-30 My '62. (MIRA 16:3)
(Alloys--Metallurgy) (Ultrasonic waves--Industrial applications)

S/032/62/028/002/023/037
B124/B101

AUTHORS: Pogodin-Alekseyev, G. I., and Artamonov, B. A.

TITLE: Methods of plotting deformation diagrams by impact tension of steel

PERIODICAL: Zavodskaya laboratoriya, v. 28, no. 2, 1962, 215-219

TEXT: An attempt has been made to extend the range of application of impact tests performed with a pendulum impact machine lifted to different amplitudes, and to carry out a comparative study of plastic and elastic properties of steels exposed to tensile stresses, with either the sag or the angle of resilience of the pendulum after deformation of the sample being measured. 20Х (20Kh) and 40Х (40Kh) steels were tested, the former after normalizing for 20 minutes, and the latter after oil hardening at 850°C and tempering at 500°C. The following mechanical properties were established by static tensile tests: tensile strength σ_S= 35.3 kg/mm^2, ultimate tensile strength σ_B= 52.1 kg/mm^2, relative elongation δ = 24.5%,

Methods of plotting deformation ...

and reduction of cross-sectional area Ψ = 72.1% for 20Kh steel; the corresponding values for 40Kh steel were 97.8; 106.2, 10.7%, and 56.3%. Dynamic elongation was measured with the standard ram impact machine MK-30 (MK-30) with 18 adjustable amplitude positions of the pendulum. The sample was used as dynamometer in each case. The amount of elastic energy A_{el} for sample deformation can be calculated from the angle of resilience. Elastic deformation stress is given by

$P = \frac{\sqrt{2EF}}{l_o} A_{el} = a\sqrt{A_{el}}$ (1). Its mean value is $P_{mean} = \frac{\Delta A}{\Delta(\Delta l)}$ (2), where ΔA is the increment of energy spent on transition from one amplitude position to the other, and $\Delta(\Delta l)$ is the corresponding increment of absolute elongation of samples. In addition, $P_{mean} = \frac{\Delta A_{total}}{\Delta(\Delta l_{pl})}$ (2a), where ΔA_{total} is the total increment of resilience, and Δl_{pl} is the absolute plastic elongation, and $P_{mean} = \frac{\Delta A_{total} - \Delta A_{el}}{\Delta(\Delta l_{pl})}$ (2b). Values of elastic deformation

Card 2/3

Methods of plotting deformation ...

energy, A_S = 0.3 kgm, plastic deformation energy P_S = 1660 kg (with E = 20,700 kg/mm^2) and σ_S = 84.6 kg/mm^2 were found for 20Kh steel; the corresponding values for 40Kh steel were 1.0 kgm, 3125 kg (with E=21,850 kg/mm^2), and 159.3 kg/mm^2. Both strength and liquid-flow limits are increased when impact tests are performed as compared to the results of tensile tests. This increase is more pronounced with 20Kh than with 40Kh steels. Consistent results are obtained by dynamic tests based on both plastic and elastic characteristics. Impact deformation curves are close to each other or even coincide when the relative stresses are calculated from Eq. (2b). The numerical value of dynamic elongation at break was determined by the method of plastic characteristics, since tests with small pendulum amplitudes are difficult to carry out with the given setup. S. I. Gubkin is mentioned. There are 2 figures, 2 tables, and 5 Soviet references.

ASSOCIATION: Moskovskiy zavod po obrabotke tsvetnykh metallov (Moscow Factory for Working of Non-ferrous Metals)

Card 3/3

L 18106-63 EWP(q)/EWT(m)/BDS AFFTC/ASD JD

ACCESSION NR: AP3001706 S/0126/63/015/005/0793/0795

57
56

AUTHOR: Pogodin-Alekseyev, G. I.

TITLE: A phenomenon opposite to aging in alloys (two kinds of alloy aging)

SOURCE: Fizika metallov i metallovedeniye, v. 15, no. 5, 1963, 793-795

TOPIC TAGS: brass L62, alloy aging, brass structure, brass hardness, excess phases

ABSTRACT: Experiments were conducted on brass L62 (per cent composition: Cu -- 62.12, Ln -- 37.82, Fe -- 0.05, S -- 0.004, P -- 0.001) in order to determine the changes in this alloy during the aging process. In its natural condition brass had Brinell hardness of 52, and microstructurally represented a mixture of phases α and β. Variations in its hardness and structure were investigated after: 1) different rates of cooling followed heating to 800C; 2) different periods of aging at 600C followed heating to 800C; 3) second heating to 600C followed hardening at 800C; 4) second heating to 600C followed heating to 800C and air-cooling. These experiments proved that alloys in which the con-

Card 1/2

L 18106-63

ACCESSION NR: AP3001706

centration of solid solutions increases at lower temperatures show an unstable structure at room temperature. After the second heating the superfluous phases are dissolved and the properties become different than those of normally hardened alloys. The author proposes that two types of aging be recognized, one characterized by the decomposition of a supersaturated solution, the other characterized by the solution of excess phases. The second type should be considered when heat-processing of such alloys is planned and when products made of these alloys are used at high temperatures. Orig. art. has: 3 figures.

ASSOCIATION: Moskovskiy zavod po obrabotke tsvetny*kh metallov (Moscow Nonferrous Metals Processing Plant)

SUBMITTED: 25Sep62 DATE ACQ: 11Jul63 ENCL: 00

SUB CODE: ML NO REF SOV: 000 OTHER: 000

Card 2/2

S/125/63/000/002/006/010
A006/A101

AUTHORS: Syrovatki, A. A., Pogodin-Alekseyev, G. I.

TITLE: Some peculiarities in electric-slag remelting of copper

PERIODICAL: Avtomaticheskaya svarka, no. 2, 1963, 77 - 78

TEXT: The investigation was made with 10 x 50 mm plate electrodes made of MO grade copper sheets. The electrodes were remelted to 50x 60 mm size in a water-cooled copper crystallizer on an A-550 unit. Fluorspar was used as a flux. The formation of a slag pool was accelerated by using TiO_2 or C -1 (S-1) flux, containing aluminum powder, potassium, nitric-acid spar and fluor spar. S-1 flux is recommended, being less scarce and expensive than TiO_2. The remelting process, conducted under conditions given in Table 1, was stable without splashing of metal or slag; the ingot surface was smooth; the slag crust could be easily removed, and there were no pores and slag inclusions in the metal. The macrostructure of the copper ingots shows coarse columnar crystals oriented in the direction of the ingot formation. Hardness tests of the remelted metal show that the hardness of copper, remelted at a higher current intensity, is

Card 1/2

Some peculiarities in...

somewhat reduced; this is explained by the reduced content of copper oxide in the metal. There are 2 figures and 1 table.

Table.

Heats	Current intensity amps -	Voltage in the welding circuit v	Electrode feed rate m/h	HB	Microhardness kG/mm^2
a	1,500	29 - 30	5.16	52.8	100.1
b	1,800	29 - 30	6.72	51.5	95.4
c	2,100	29 - 30	7.08	49.3	97.7

Card 2/2

L 11075-63 EWP(q)/EWT(m)/BDS AFFTC/ASD JD/JT

ACCESSION NR: AP3001015 S/0193/63/000/004/0015/0018 57

AUTHOR: Pogodin-Alekseyev, G. I. (Dr. of technical sciences); Romadin, Yu. P.; Prosvirov, E. N.

TITLE: Producing cast alloys from nonfusible components under the effect of ultrasonic vibration 14

SOURCE: Byul. tekhniko-ekonomicheskoy informatsii, vol. 16, no. 4, 1963, 15-18

TOPIC TAGS: dispersion-strengthened alloy, ultrasound casting

ABSTRACT: The Laboratoriya ul'trazvuka by*vsh. Volgogradskogo sovnarkhoza (Ultrasound Laboratory of the former Volgograd Sovnarkhoz) has experimented with ultrasound as a means of promoting fusion between usually nonfusible components (e.g., molten metals with oxide, carbide, or nitride powders). It was found that ultrasonic vibrations applied to molten metal break down the oxide film on powder particles and facilitate the wetting of powder by metal. Simultaneous stirring of the metal contributes to a uniform distribution of powder particles over the metal volume. The fusion and uniformity of distribution of powder particles depends very much upon the relative quantity, chemical

Card 1/2

L 11075-63
ACCESSION NR: AP3001015

composition, specific weight and size of powder particles, and upon the temperature of the molten metal. With increasing temperature the surface tension and viscosity of molten metal decrease, but oxide film forms and grows more rapidly and the ultrasonic head begins to disperse rapidly. The method was used in experimental production of various dispersion-strengthened alloys of tin, lead, bismuth, zinc, aluminum, or copper with oxide, carbide, nitride, and other powders. These alloys can be remelted and cast. Alloys containing 10 to 20% powder particles are sufficiently fluid and can be cast into molds of intricate shape. Alloys with higher contents of powder particles are thick flowing and can be cast only by special methods such as pressure casting. Orig. art. has: 1 figure.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 11Jun63 ENCL: 00

SUB CODE: ML, MA NO REF SOV: 000 OTHER: 000

Card 2/2

POGODIN-ALEKSEYEV, G.I.; SHCHELOKOV, K.F.

Forming cast metal-oxide compositions with the help of ultrasonic waves. Lit. proizv. no.8:26-27 Ag '63. (MIRA 16:10)

L 18916-63 EWT(d)/EWP(k)/EWP(q)/EWT(m)/BDS AFFTC/ASD Pf-4
JD/HW

ACCESSION NR: AP3006606 S/0129/63/000/009/0051/0053

AUTHOR: Pogodin-Alekseyev, G. I.

TITLE: Geometric factor and effect of work hardening upon hardening of metals.

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 9, 1963, 51-53.

TOPIC TAGS: geometric factor, work hardening, metal hardening, No. 10 steel, tensile test, IM-12A testing machine, plastic flow, strain aging, strain hardening, roll peening, cold rolling, shot blasting.

ABSTRACT: Author undertook this study in order to obtain a distinct evaluation of the geometric and structural factors and to clear up the effect of aging during the hardening of metals by preliminary strain. No. 10 steel was used for the tests. Composition of this steel consisted of C, Mn, Cr, P, and S. Tensile test was carried out on an IM-12A

Card 1/2

L 18916-63

ACCESSION NR: AP3006606

testing machine. Author concludes that an important factor bringing about a favorable effect in hardening by plastic flow is subsequent strain aging. On this basis, author recommends any process of surface or volumetric strain hardening (roll peening, shot blasting, drawing, cold rolling) which is accompanied by subsequent aging. Author cautions that stability and plastic properties of preliminarily-work hardened parts will change with course of time. Orig. art. has: 2 figures.

ASSOCIATION: none.

SUBMITTED: 00	DATE ACQ: 030ct63	ENCL: 00
SUB CODE: ML	NO REF SOV: 000	OTHER: 000

Card 2/2

POGODIN-ALEKSEYEV, G.I.

Stepped application of stresses to samples in testing for stress-rupture strength. Zav. lab. 29 no.9:1133 '63.
(MIRA 17:1)

POGODIN-ALEKSEYEV, G.I.

Problem of "new" hardness numbers. Zav. lab. 29 no.10:1272-1274 '63. (MIRA 16:12)

KUZNETSOV, Vasiliy Ivanovich, prof., doktor tekhn. nauk;
POGODIN-ALEKSEYEV, G.I., prof., doktor tekhn. nauk,
zasl. deyatel' nauki i tekhniki RSFSR, red.; KOKOSHKO,
A.G., red.; VOLODIN, R.A., tekhn. red.

[Technological progress and creating the material and technical foundation of communism] Tekhnicheskii progress i sozdanie material'no-tekhnicheskoi bazy kommunizma. Pod red. G.I. Pogodina-Alekseeva. Moskva, Izd-vo VPSh i AON pri TsK KPSS, 1963. 222 p. (MIRA 16:7)
(Technology) (Russia--Industries)

POGODIN-ALEKSEYEV, G.I., doktor tekhn. nauk; SYROVATKIN, A.A., inzh.

Gas content in copper following electric slag remelting.
Svar. proizv. no.1:13-14 Ja '64. (MIRA 17:1)

L 11313-65 EWT(m)/EWP(t)/EWP(b) IJP(c) JD

ACCESSION NR: AP4045411 S/0136/64/000/009/0078/0080

AUTHOR: Pogodin-Alekseyev, G. I.; Syrovatkin, A. A.

TITLE: Electric slag remelting of cathodic copper

SOURCE: Tsvetnyye metally, no. 9, 1964, 78-80

TOPIC TAGS: copper, cathodic copper, cathodic copper remelting, electric slag remelting, electrolytic copper

ABSTRACT: Remelting of cathodic copper is connected with certain difficulties due to the hydrogen content and the minute quantities of electrolyte which contaminate the metal with sulfur. Besides, Cu_2O is formed during melting, resulting in Cu-Cu_2O eutectics at the grain boundaries. The presence of oxygen lowers the plasticity and corrosion resistance of copper, hampering soldering, galvanization and plating processes. The remelting of cathodic copper plate electrodes was therefore investigated, considering the macro- and micro-structure of the melted metal, as well as the mechanical properties and chemical composition. The work was done with a TShS-3000 welding transformer. The amperage varied from 1100 to 2500 amps, while the feed rate of the electrode varied from 4.08 to 7.08 m/hr. The copper electrode plates were 10x80 mm in area, while the melted copper was 50x120x250 mm in size. The slag bath had a grade C-1 flux, while the working flux

Card 1/2

L 11313-65

ACCESSION NR: AP4045411

was fluorite. Examination of the structure showed that the grains obtained by electric slag remelting are larger and do not contain Cu_2O. On the basis of strength tests it was found that the mechanical properties of cathodic copper obtained by electric slag remelting are not significantly inferior to those of copper obtained by casting. The chemical composition is also the same, except that the remelted copper contained 0.003% silicon in comparison with 0.0003% in the initial copper. Tests showed that the conductivity of copper obtained in the usual way was 58 m/ohm·mm^2, while for electric slag copper it was 53 m/ohm·mm^2. The ususal 1:3 ratio of sizes of electrode and slag bath width was found to cause porosity along the entire section; dense metal without pores and/or inclusions could be obtained when the ratio between plate depth and slag bath width was 1:14-1:6. The article concludes that the use of technically pure fluorite as a flux lowers the conductivity of copper due to the passage of silicon from the slag into the metal. Only purified fluorite may be used. Orig. art. has: 2 figures and 2 tables.

ASSOCIATION: none

SUBMITTED: 00

NO REF SOV: 002 ENCL: 00

Card 2/2 OTHER: 000 SUB CODE: MM

L 42968-65 EWT(d)/EWT(m)/EWP(w)/EWP(v)/EPR EM
ACCESSION NR: AR5008932 S/0277/65/000/002/0036/0036

SOURCE: Ref. zh. Mashinostroitel'nyye materialy, konstruktsii i raschet detaley mashin. Otdel'nyy vyp., Abs. 2.48.227

AUTHOR: Pogodin-Alekseyev, G. I.; Artamonov, B. A.

TITLE: Impact strength and strain diagrams of steel subjected to bending impact

CITED SOURCE: Sb. Metallovedeniye i term. obrabotka. M., Mashinostroyeniye, 1964, 146-158

TOPIC TAGS: impact strain diagram, oscillogram method, pendulum hammer method, impact strength, variable safety factor, impact tester, plastic microstrain, impact yield point, steel bending strength

TRANSLATION: The authors compared impact strain diagrams obtained either with standard pendulum hammers or oscillographically by the use of modern electronic equipment. Series of samples from different steels were subjected to successive tests on impact testers with a varying safety factor, which increased to the point of failure. The magnitude of impact stress was determined from increases in the safety factor and bending deflection at the end

Card 1/2

L 42968-65
ACCESSION NR: AR5008932

of a stage, as well as from the extent of the hammer's elastic recoil after an impact. Tests demonstrated that numerical values of strength obtained from oscillograms approximate those derived by means of the strain characteristic method. Further, that methods of plotting impact strain diagrams during serial tests on impact testers with a variable safety factor provide adequately accurate results and can be recommended for evaluating the impact strength of metals. Oscillography disclosed periodic stress discontinuities in the elastic deformation region (indicating the presence of plastic microstrain at stress levels comprising 1/3 to 1/6th of stress levels at yield point) and peaks of impact yield point for the tested steels. Bibl. with 17 titles; 8 illustrations.

SUB CODE: MM ENCL: 00

Card 2/2

ESKIN, Georgiy Iosifovich; POGODIN-ALEKSEYEV, G.I., prof., doktor tekhn. nauk, retsenzent; AL'TMAN, M.B., doktor tekhn. nauk, retsenzent

[Ultrasonic treatment of molten aluminum] Ul'trazvukovaia obrabotka rasplavlennogo aliuminiia. Moskva, Metallurgiia, 1965. 223 p. (MIRA 18:7)

L 43064-66 EWT(d)/EWT(m)/EWP(j)/EWP(h)/T/EWP(e)/EWP(w)/EWP(v)/EWP(t)/EWP(k)/EWP

ACC NR: AP6014338 SOURCE CODE: UR/0122/65/000/012/0060/0062

IJP(c) WW/JD/WH

AUTHOR: Pogodin-Alekseyev, G. I. (Meritorious in science and technology, Doctor of technical sciences, Professor)

55
52
B

ORG: none

TITLE: Diamond tools from synthetic diamonds on M5 metallic binder

SOURCE: Vestnik mashinostroyeniya, no. 12, 1965, 60-62

TOPIC TAGS: diamond, abrasive, grinding, bonding material, cutting tool, grain size, alloy/ M5 bonding material, M1 bonding material, MI bonding material, TK15K6 alloy

ABSTRACT: The results of a study of M5 binder used with 12 types of diamond wheels are given. The grinding power of the wheels with M5 binder at s_{non} = 0.15 mm/double stroke was found to be equal to the grinding power of wheels with M1 binder at s_{non} = 0.05 mm/double stroke (see Fig. 1). The removal of metal in grinding with wheels with M5 binder is 2--4 g/min. According to tests by the All-Union Instrument Research Institute (Vsesoyuznyy nauchno-issledovatel'skiy institut), the efficiency of wheels with SA 10-12 100% synthetic diamonds in M5 binder is greater by a factor of 3.5--4 than those with M1 binder. The average consumption of diamond wheels with M5 binder was found to be 0.75 mg/g in laboratory tests and up to 1.5 mg/g under industrial conditions (see Fig. 2).

Card 1/2 UDC: 621.9.025:666.233

ACC NR: AP6014338

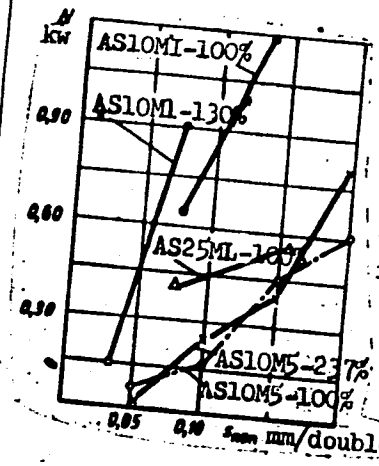


Fig. 1. Effect of transverse feed on power in grinding with diamond wheels with various metal binders of solid alloy T15K6; v_{cr} = 18 m/sec; s_{pr} = 1 m/min; strict contact of plate with wheel; the amount of diamond grains in the binder is given in %.

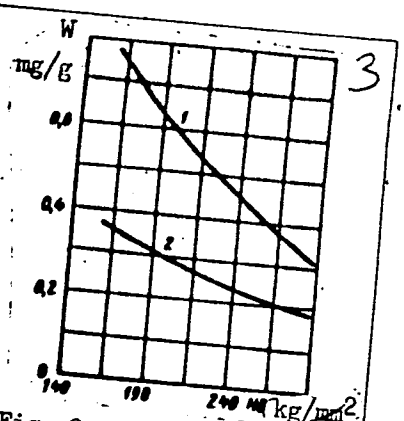


Fig. 2. Specific wear of diamonds versus rate of removal and hardness of binder: 1 - s_{non} = 0.04 mm/double stroke; 2 - s_{non} = 0.02 mm/double stroke.

Orig. art. has: 5 graphs and 1 table.

SUB CODE: 11/ SUBM DATE: none

Card 2/2 hs

L 31180-66 EWT(m)/EWP(t) IJP(c) JD

ACC NR: AP6007113 SOURCE CODE: UR/0129/66/000/002/0046/0048

AUTHOR: Romadin, Yu. P.; Prosvirov, E. N.; Pogodin-Alekseyev, G. I.

ORG: none

TITLE: Structure and properties of aluminum-silicon carbide alloy

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 2, 1966, 46-48

TOPIC TAGS: aluminum alloy, silicon carbide containing alloy, dispersion strengthened alloy, alloy structure, alloy property

ABSTRACT: The effect of the content and degree of dispersion of initial components on the mechanical and physicochemical properties of aluminum-silicon carbide alloys has been investigated. Alloy specimens were prepared from 99.99%-pure aluminum and contained 2.5, 5, 7.5, 10, 15, 20, or 30% silicon carbide with a particle size of 14, 28, 60, 100, or 160 μ. It was found that increasing the silicon-carbide content from 2.5 to 30% at the same particle size of 100 μ decreased elongation from 5 to 0.5%, reduction of area from 9 to 2%, reduction in upsetting from 50 to 30%, and notch toughness from 4.5 to 0.5 kgm/cm^2. Brinell hardness increased from 48 to 70 kg/mm^2. The maximum tensile strength of 12—14 kg/mm^2 was reached at a particle size of 16 μ and a silicon-carbide content of 3%; with increasing particle size the maximum tensile strength is lower and is reached at a higher content of silicon carbide. Orig. art. has: 3 figures.

SUB CODE: 11/ SUBM DATE: none/ ATD PRESS: 4214 [AZ]

UDC: 621.789.2:669.715'732

Card 1/1

POGODIN-ALEKSEYEV, G.I., zasluzhennyy deyatel' nauki i tekhniki, doktor tekhn. nauk, prof.

Synthetic diamond tools based on the M5 metaliic binder. Vest. mashinostr. 45 no. 12:60-62 D '65 (MIRA 19:1)

POGODIN-ALEKSEYEV, G.I.

Brittleness and ductility of metals. Metalloved. i term. obr. met. no.8:12-16 Ag '65. (MIRA 18:9)

1. Zavod-vtuz pri Moskovskom avtomobil'nom zavode.

POGODIN-ALEKSEYEV, G.I., doktor tekhn. nauk, prof., otv. red.; RAKHSHTADT, A.G., kand. tekhn. nauk, dots., nauchn. red.; SHREYBER, G.K., kand. tekhn. nauk, dots., nauchn. red.; BERNSHTEYN, M.L., doktor tekhn. nauk, red.; LAKHTIN, Yu.M., doktor tekhn. nauk, prof., red.; RUSTEM, S.L., kand. tekhn. nauk, dots., red.; FEDOTENKO, N.S., inzh., red.

[Study of metals and their heat treatment] Metallovedenie i termicheskaia obrabotka. Moskva, Mashinostroenie, 1964. 195 p. (MIRA 18:7)

1. Nauchno-tekhnicheskoye obshchestvo mashinostroitel'noy promyshlennosti. Sektsiya metallovedeniya i termicheskoy obrabotki.

POGODIN-ALEKSEYEV, G.I.; SYROVATKIN, A.A.

Electric slag remelting of cathodic copper. TSvet. met. 37 no.9; 78-80 S '64. (MIRA 18:7)

L 00854-66 EWT(d)/EWT(m)/EWP(w)/EWA(d)/T/EWP(t)/EWP(b)/EWA(c) WVH/JD/EM

ACCESSION NR: AP5020704 UR/0129/65/000/008/0012/0016

620.178.16

AUTHOR: Pogodin-Alekseyev, G. I. 44,55

TITLE: On brittle and ductile states of metal

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 8, 1965, 12-16

TOPIC TAGS: brittle metal, ductile metal, cold brittleness, plastic flowage, Cottrell cloud, atom mobility, twinning, ultrapure metal, fracture work, impact toughness, impact loading

ABSTRACT: Metal may undergo either plastic flowage or brittle fracture depending on whether the external loading stress causes plastic deformation or crack formation; brittle fracture occurs when the propagation rate of the microcrack exceeds the rate of plastic deformation. This is confirmed by the so-called rheotropic effect, namely, if a metal cooled to a temperature close to the upper limit of cold brittleness is subjected to plastic deformation the threshold temperature of cold brittleness decreases, i.e. the plasticity and ductility of the metal improve. Apparently, this treatment liberates the dislocations from the "Cottrell clouds" (impurities whose atoms surround and block the dislocations), thus making the metal more plastic. Furthermore, metals that are brittle at room temperature become ductile and plastic at higher temperatures. Thus, there are no brittle or ductile metals;

Card 1/4

ACCESSION NR: AP5020704

there are only the brittle or ductile states of metals, characterized by the transition temperature. The transition of metals from brittle to ductile state involves an increase in the degree of atom mobility (in iron this involves transition from twinning to shear), i.e. is a diffusion process analogous to the processes of recrystallization and melting, but with a lesser degree of atom mobility. The more pure a metal is, the lower is its temperature of recrystallization and transition to brittle state. Ultra-pure metals (e.g. following multiple zone refining) in principle do not undergo transition to brittle state even at the lowest test temperatures. The proneness of a material to cold brittleness is characterized by its T_1 and T_2 (upper and lower limiting temperatures of the transition region) as well as by its fracture work in brittle and ductile states. In this connection the author describes a "tangential" method he had previously proposed (Pogodin-Alekseyev, G. I., Svoystva metallov pri udarnom nagruzhenii (Properties of Metals Under Impact Loading), Moscow, Metallurgizdat, 1953) for the rapid determination of the thresholds of cold brittleness (Fig. 3). Tangential lines are plotted from the coordinate origin (i.e. from zero on the absolute temperature scale) to the experimentally plotted curve of $A = f(T)$. The tangential points T_1 and T_2, corresponding to the maximum and minimum points on the transformed curve $A/T = f_1(T$ (Fig. 3) may be taken as the upper and lower boundaries of the transition region, which simplifies

L 00854-66

ACCESSION NR: AP5020704

3

analysis of data. A second transformation of the basic curve A/T = f(T) is readily accomplished by graphic differentiation. In this case the transformed curve has only one maximum, at the center of the transition region, corresponding to the moment of the most drastic change in impact toughness. Such a transformation reveals the mid-point rather than the boundaries of the transition region. Orig. art. has: 1 photo, 3 figures.

ASSOCIATION: Zavod-vtuz pri Moskovskom avtomobil'nom zavode (Higher Technical Factory-School at the Moscow Motor Vehicle Plant)

44,55

SUBMITTED: 00	ENCL: 01	SUB CODE: MM, SS	
NR REF SOV: 008	OTHER: 002		

Card 3/4

L 00854-66

ACCESSION NR: AP5020704

ENCLOSURE: 01

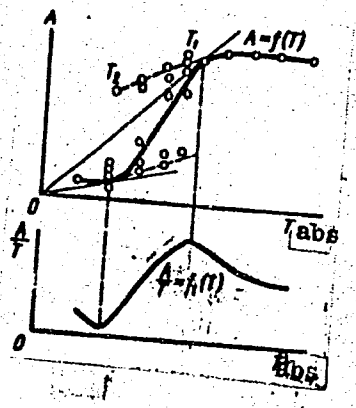


Fig. 3. Determination of thresholds of cold brittleness by the tangential method

Card 4/4

POGODINA-ALEKSEYEVA, K.M.; KROTKOVA, Ye.Ye.

Changing the coefficient of flange forming on low-carbon steel following strain aging. Kuz.-shtam. proizv. 7 no.8:13-14 Ag '65. (MIRA 18:9)

POGODINA-ALEKSEYEVA, K.M.; BIRONT, V.S.; SLAVIN, L.D.

Effect of ultrasonic waves on the mechanical properties of R18 steel. Metalloved. i term. obr. met. no.1:40-44 Ja '64. (MIRA 17:3)

1. Vsesoyuznyy zaochnyy politekhnicheskiy institut.

L 04662-67 EWT(m)/T/EWP(t)/ETI IJP(c) JD/WB

ACC NR: AP6007105 SOURCE CODE: UR/0129/66/000/002/0021/0025

AUTHORS: Pogodina-Alekseyeva, K. M.; Loshnevskaya, A. A.

ORG: All-Union Polytechnic Correspondence Institute (Vsesoyuznyy zaochnyy politekhnicheskiy institut)

TITLE: Influence of induction heating on the fine structure of austenitic stainless steel

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 2, 1966, 21-25

TOPIC TAGS: austenite steel, alloy steel, intergranular corrosion, nickel steel, austenitic steel / Kh18N9T austenitic steel

ABSTRACT: The effect of several induction heating parameters (temperature, rate of heating, and duration of annealing) on the fine structure of austenitic steel Kh18N9T was investigated. The microstructure was studied by electromicroscopy. The induction heating was applied after the method of K. Z. Sheplyakovskiy (MiTOM, 1963, No. 6). The experimental results are presented graphically (see Fig. 1). It was found that isothermal aging at 1100C leads to a dissolution of chromium carbides and to an increase of resistance to intercrystalline corrosion. It is concluded that the tendency of steel Kh18N9T to develop intercrystalline corrosion depends on the amount and the nature of the distribution of chromium carbides in the latter (the tendency towards intercrystalline corrosion is increased if the chromium carbides are

Card 1/2 UDC: 620.196:621.785.545.4:669.14.018.84

L 04662-67
ACC NR: AP6007105

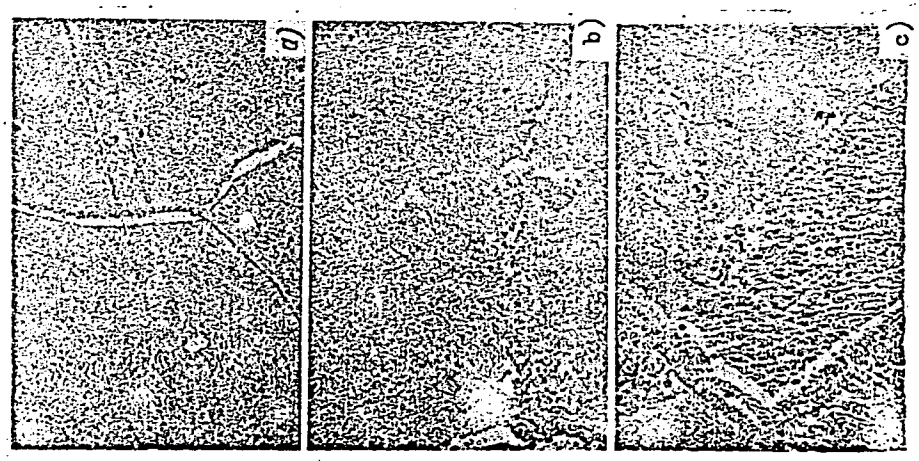


Fig. 1. Structure of steel Kh18N9T after induction quenching from 1100C. a - 30 sec, x 5000; b - 30 sec, x 7000; c - 1 min, x 5600.

distributed in the form of strings along grain boundaries or if local concentration of chromium carbides exists in the steel). Orig. art. has: 3 graphs.

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 001
kh

Card 2/2

L 06225-67 EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6019829 (N) SOURCE CODE: UR/0370/66/000/001/0080/0101

AUTHORS: Pogodin-Alekseyev, G. I. (Moscow); Gavrilov, V. M. (Moscow)

38
30
B

ORG: none

TITLE: The effect of elastic vibrations on the crystallization of metals and alloys

14

SOURCE: AN SSSR. Izvestiya. Metally, no. 1, 1966, 80-101

TOPIC TAGS: metallurgy, metallurgic research, metallurgic conference, elastic oscillation, alloy

ABSTRACT: The authors give a review of the history and current state of the technique for using elastic vibrations as a means of improving the strength and other mechanical properties of metals and alloys. The origin of the elastic vibration technique is traced back to D. K. Chernov (Nauka o metallakh, Metallurgizdat, 1950), who first made use of a vibration technique in the period 1868--1878. The first patented technique is due to Knaifel; however, the practical use of the process began with the work of V. V. Lemontirov and V. I. Tyzhnov (Staleliteynoye proizvodstvo permskogo pushechnogo zavoda. Petrograd, 1915). Practical and applied research gave way to a period devoted to a more theoretical approach for a number of years. A significant advance was the introduction of sonic and ultrasonic vibration techniques. Current knowledge on the effects of elastic vibration are summarized; the following phenomena result from use of the process: 1) a diminishing of the macrograin size

Card 1/2 UDC: 621.74.04

L 06225-67

ACC NR: AP6019829 8

and a tendency toward the obtaining of a uniform crystalline base; 2) an increase of the degree of uniformity of the structure and a lessening of an extraneous form of liquation; 3) a uniform distribution of admixtures and a reduction of their amounts; 4) a reduction in gas content and improved ingot density; 5) improvement of the microstructure of alloys. Several experimental methods and results are described in an effort to further relate the effect of elastic vibrations on the quality of ingots and the structure of alloys. Among the metals and alloys used in experiments are OTsS-5-5-5 bronze, AL-9, Kh28, OTsS-6-6-3, 1Kh18N9 alloys, and bronzes BrB and BNT. Orig. art. has: 7 figures and 5 tables.

SUB CODE: 11/ SUBM DATE: 19Jul65/ ORIG REF: 026

Card 2/2 LC

L 5N291-67 EWT(m)/EWP(t)/ETI IJP(c) JD/JH
ACC NR: AP6032454 SOURCE CODE: UR/0129/66/000/009/0018/0020

AUTHOR: Pogodin-Alekseyev, G. I.; Chormonov, T. Kh.

ORG: Special Design-Technological Bureau (Osoboye konstruktorsko-tekhnologicheskoye byuro)

TITLE: Investigation of the effect of ultrasound on alloy properties

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 9, 1966, 18-20 and appropriate insert facing p. 49

TOPIC TAGS: ultrasonic vibration, molten metal, metal crystallization, hardness, babbit metal, aluminum base alloy, zinc base alloy

ABSTRACT: The crystallization and structure formation in molten aluminum, zinc and B16 babbitt under the action of ultrasonic vibrations at an intensity of 15.6—39.8 w/cm^2 for 20—60 sec have been investigated. It was found that ultrasonic vibration accelerated crystallization of the melts and greatly increased the number of crystallization centers. The latter brought about metal grain fragmentation and consequent improvement in the strength and hardness of metals. For example, the microhardness of aluminum increased from 26.7 to 53.0 after a 20-sec

Card 1/2 UDC: 669.065.5:620.17:621.789

L 08291-67
ACC NR: AP6032454

treatment with ultrasound at an intensity of 15.6 w/cm^2. The microhardness of zinc increased from 32.4 to 55.7 after 60-sec treatment with ultrasound at an intensity of 39.8 w/cm^2. The tensile strength of zinc increased from 7.4 to 9.3 kg/mm^2 after treatment with ultrasound for 30 sec at an intensity of 18.0 w/cm^2. The maximum fragmentation of metal grains occurred with ultrasonic vibrations at an intensity of 40 w/cm^2 and a frequency of 22.5 kc. Analogous structure changes and higher mechanical properties were observed in B16 babbitt after ultrasonic treatment. Orig. art. has: 1 figure and 1 table.

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 008/

Card 2/2 hs

Pogodina, A. A. "The anomalies of the dento-maxillary system among school ages children in the city of Kazan," Trudy Kazansk. gos. stomatol. in-ta, Issue 2, 1949, p. 131-142, Bibliog: 16 items

SO: U05240, 17 Dec. 53, (Letopis 'Zhurnal 'nykh Statey, No. 25, 1949).

OKSMAN, I.M.; POGODINA, A.A.; FRENKEL', A.N.

Teeth - Abnormities and Deformities

Clinical observation and treatment of first class abnormal occlusion (Katz's classification). Stomatologiia No. 2 1952.

9. Monthly List of Russian Accessions, Library of Congress, October 1952 1977, Uncl.

1. POGODINA, A. A.

2. USSR (600)

4. Teeth-Abnormities and Deformities

7. Etiology and pathogenesis of malocclusion. Stomatologia no. 4, 1952.

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

POGODINA, A.A.

Relation of nasal respiration disorders and malocclusion. Stomatologiia no.1:58-60 Ja-F '55. (MIRA 8:5)

1. Iz Kazanskoy gorodskoy stomatologicheskoy poliklinikl (glavnyy vrach V.N. Parshin, rukovoditel' nauchnoy raboty prof. I.M.Oksman).
(MALOCCLUSION, physiology,
relation to disord. of nasal resp.)
(RESPIRATION,
nasal, relation of malocclusion to disord. of nasal resp.)

POGODINA, A. A.: Master Med Sci (diss) -- "On the pathogenesis of anomalies of the dental-maxillo-facial system and their connection with diseases of the nose and throat". Kazan', 1958. 12 pp (Kazan' State Med Inst), 200 copies (KL, No 11, 1959, 123)

OKSMAN, I.M., prof.; POGODINA, A.A., kand.med.nauk

Present-day methods of treating anomalies of the maxillodental system. Stomatologiia 40 no.3:78-81 My-Je '61. (MIRA 14:12)

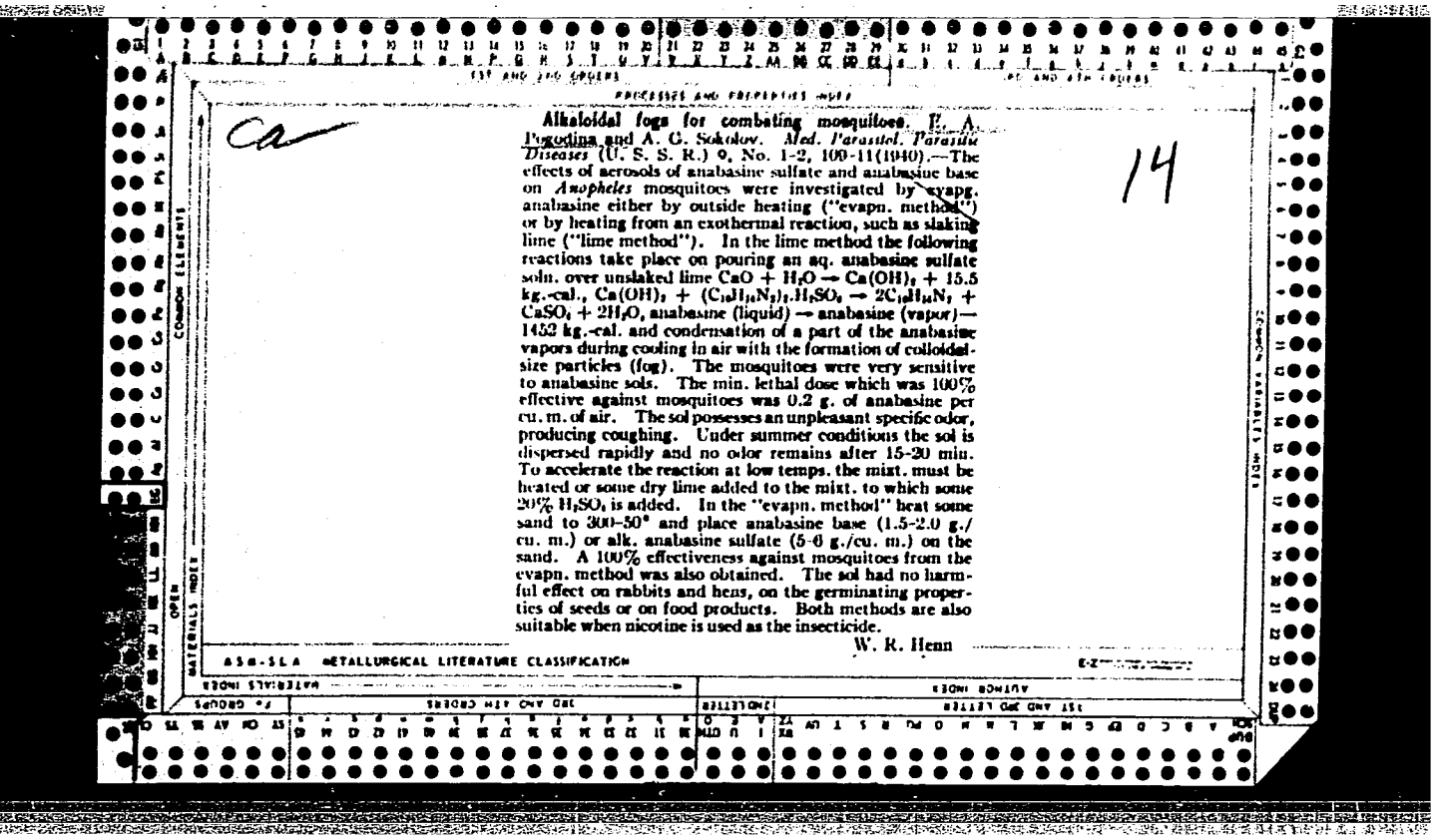
1. Iz kafedry ortopedicheskoy stomatologii (zav. - prof. I.M.Oksman) Kazanskogo meditsinskogo instituta (dir. - dotsent R.A.Vyaselev).
(ORTHODONTIA)

POGODINA, A. M.

N/5
755.01
.R98

B. C. Ryazantseva Sbornik Statey Po Novoy Tekhnike Stsb I Svyazi (Collection of articles on new techinques of centralization) Pod. Red.B. C. Ryazantseva I A. M. Pogodina. Moskva, Transzheldorizdat, 1955.

298 p. Illus., diagrs., graphs, tables.



Alkaloidal fogs for combating mosquitoes. V. A. Pogodina and A. G. Sokolov. *Med. Parasitol. Parasitic Diseases* (U. S. S. R.) 9, No. 1-2, 109-11(1940).—The effects of aerosols of anabasine sulfate and anabasine base on *Anopheles* mosquitoes were investigated by evapg. anabasine either by outside heating ("evapn. method") or by heating from an exothermal reaction, such as slaking lime ("lime method"). In the lime method the following reactions take place on pouring an aq. anabasine sulfate soln. over unslaked lime $CaO + H_2O \rightarrow Ca(OH)_2 + 15.5$ kg.-cal., $Ca(OH)_2 + (C_{10}H_{14}N_2)_2.H_2SO_4 \rightarrow 2C_{10}H_{14}N_2 + CaSO_4 + 2H_2O$, anabasine (liquid) — anabasine (*vapor*)— 1452 kg.-cal. and condensation of a part of the anabasine vapors during cooling in air with the formation of colloidal-size particles (fog). The mosquitoes were very sensitive to anabasine sols. The min. lethal dose which was 100% effective against mosquitoes was 0.2 g. of anabasine per cu. m. of air. The sol possesses an unpleasant specific odor, producing coughing. Under summer conditions the sol is dispersed rapidly and no odor remains after 15-20 min. To accelerate the reaction at low temps. the mixt. must be heated or some dry lime added to the mixt. to which some 20% H_2SO_4 is added. In the "evapn. method" heat some sand to 300–50° and place anabasine base (1.5–2.0 g./cu. m.) or alk. anabasine sulfate (5–6 g./cu. m.) on the sand. A 100% effectiveness against mosquitoes from the evapn. method was also obtained. The sol had no harmful effect on rabbits and hens, on the germinating properties of seeds or on food products. Both methods are also suitable when nicotine is used as the insecticide.

W. R. Henn

POGODINA, E. A.

USSR/Zooparasitology - Acarina and Insect-Vectors of Disease Pathogens. G-4

Abs Jour : Ref Zhur - Biol., No 3, 1958, 10121

Author : Pogodina, E.A., Safyanova, V.M.
Inst :
Title : Catching of Blood-Succking Diptera by Means of Mercury-Vapor Lamp PRK-4.

Orig Pub : Zool. zh., 1957, 36, No 6, 894-899

Abstract : Conical insect traps with mercury-vapor lamp PRK-4 prepared from the model by G.A. Mazokhin, and the same traps but with an incandescent lamp of 500 volts, were tested simultaneously in June-July, 1955, in Vladimirsk Oblast. The tests were conducted in environments of a damp, very swampy mixed forest, while the lamps were lit from 20 hours to 22 hours 30 minutes -- 23 hours 30 minutes. At twilight and at night the rays of the mercury-vapor lamp attracted incects considerably more strongly than the light of the

Card 1/3

Abs Jour : Ref Zhur - Biol., No 3, 1958, 10121

incandescent lamps. The representatives of diptera (Brachycera) as well as lepidoptera, beetles, Heteroptera and Trichoptera reacted especially markedly to ultra-violet rays. Bloodsucking mosquitoes, notwithstanding their great numbers and ferocious attacks on humans, were very slightly attracted by the rays of mercury-vapor lamps under the conditions in the median regions of the USSR. Their number in catches did not exceed 0.8% of the total insect catch. Even less than that were gnats attracted by UV rays. The proportion of Culicoides in collections with the aid of a mercury-vapor lamp was 7.8% of the total catch. However, UV rays attracted mosquitoes and particularly wood-lice considerably more strongly than the light of incandescent lamps. Thus, in the catches, traps with mercury-vapor lamps contained 9 species of Culicoides, while in catches with ordinarly light there were only 5

USSR/Zooparasitology - Acarina and Insect-Vectors of Disease Pathogens. G-4

Abs Jour : Ref Zhur - Biol., No 3, 1958, 10121

species. The method of catching bloodsucking diptera by use of mercury-vapor lamps as a method of control cannot be utilized under conditions of the median region of the USSR, where mosquitoes of the genus Aedes compose the basic component of vermin. On the other hand, insect catches with the aid of mercury-vapor lamps may be useful as an effective means of entomological research. For instance, UV rays attracted Anopheles maculipennis (males and females), male Aedes, water beetles and bedbugs, which were not caught by the light of incandescent lamps.

Card 3/3

POGODINA, E. A., FEDOROV, M. N., SPRERANSKAYA, V. N., SIYANITSKIY, F. M., SHUSTROV, A. K., ALEKSANDROV, P. M., KLEVAKKIN, V. N., BORISKIN, M. M., LIL'P, G. M., ZIL'BERMINTS, I. V., GUDNEVA, O. A., POPOV, S. C., DENISENKO, V. K., KOROVIN, F. T., GUTSEVICH, A. V. and FEREFIL'YEV, P. P.

"The Effectiveness of a Chemical Method for Combatting Arthropods over Large Areas From Airplanes."

Tenth Conference on Parasitological Problems and Diseases with Natural Reservoirs, 22-29 October 1959, Vol. II, Publishing House of Academy of Sciences, USSR, Moscow-Leningrad, 1959.

(Leningrad - Moscow)

POGODINA, G.S.

At the Central Council of the All-Union Society of Soil Scientists. Pochvovedenie no. 7:110-112 Jl '65
(MIRA 19:1)

BLAGOOBRAZOV, V.A.; BONDAREV, L.G.; KOZHEVNIKOVA, N.D.; POGODINA, G.S.; TOKOBAYEV, M.M.; CHUMICHEVA, G.D.; SHCHERBAKOV, M.P.; ZABIROV, R.D., kand. geogr. nauk, red.; BLAGOOBRAZOV, V.A., red.; SKRIPKINA, Z.I., red.izd-va; ANOKHINA, M.G., tekhn. red.

[The Naryn River basin; physicogeographical features] Bassein reki Naryn; fiziko-geograficheskaia kharakteristika. Frunze, 1960. 288 p. (MIRA 14:6)

1. Akademiya nauk Kirgizskoy SSR, Frunze. Otdel geografii.
(Naryn Valley--Physical geography)