METELKIN, G.G., inzh.; BATAGOV, V.M., inzh.

Standardization of light partition elements. Sudostroenie 25 no.12:47-48 D '59. (MIRA 13:4)

(Bulkheads (Naval architecture))

METELKIN, G.G., inzh.; KRECHMAN, B.K., inzh.

Replacing rigid pipelines by flexible rubber-fabric hose. Sudostroenie 29 no.4:60-61 Ap '63. (MIRA 16:4)
(Marine pipe fitting) (Hose)

METELKIN, I., inzh. (Novosibirsk)

Effect of the gas medium on the swelling of clays. Stroi. mat. 4 no.2:32 F '58. (MIRA 11:2)
(Clay industries)

KRIVITSKIY, M.Ya., starshiy nauchnyy sotrudnik; LEYRIKH, A.A.; METELKIN, I.D.

Plant producing air-entrained concrete articles in Novosibirsk. Stroi.mat. 7 no.5:23-27 My '61. (MIRA 14:6)

1. Nachno-issledovatel'skiy institut betona i zhelezobetona Akademii stroitel'stva i arkhitektury SSSR (for Krivitskiy). 2. Glavnyy inzhener upravleniya promyshlennosti stroitel'nykh materialov Novosibirskogo sovnarkhoza (for Leyrikh). 3. Glavnyy tekhnolog Novosibirskogo otdeleniya proyektnogo instituta No.2 (for Metelkin).
(Novosibirsk--Concrete plants) (Air-entrained concrete)

[illegible]STEL'IN, I.I., Cand Tech Sci -- (diss) "Thermal cutting of tubular glas." [illegible], 1958, 16 pp (State Committee of Council of Ministers USSR for Radioelectronics. State Union Sci Res Inst) 130 copies (KL, 45-58, 108)

SOV/70-3-1-12/26

AUTHORS: Indenbom, V.L. and Metelkin, I.I.

TITLE: Application of Artificial Anisotropy to Directed Fracture of Materials (Ispol'zovaniye iskusstvennoy anizotropii dlya napravlennogo razrusheniya materiala) (The Artificial "Cleavage" Effect) (Yavleniye iskusstvennoy "spaynosti")

PERIODICAL: Kristallografiya, 1958, Vol 3, Nr 1, pp 80 - 82 + 1 plate (USSR)

ABSTRACT: Synthetic anisotropic materials have been found useful in applications where a high mechanical strength was required in a particular direction. For example, combination of glass fibre and plastics resulted in sheet material with a tensile strength of 100 kg/mm^2. Artifical anisotropy can be produced either by a combination of two or more materials or by establishment of a certain distribution of internal stresses in an initially isotropic material. The present paper deals with an application of artificial anisotropy to production of fracture in a predetermined direction, i.e. formation of an artificial cleavage plane along which binding between atoms or ions is weakened. An example of directed fracture is a glass tube which snaps easily at the point where it was earlier heated locally. Such a tube is shown in polarised light in Figure 1; colour photographs in polarized light are reproduced in a plate (Figures 2, 3).

Card1/2

Application of Artificial Anisotropy to Directed Fracture of Materials

Figure 4 shows the plot of elastic energy liberated on fracture of the glass tube of Figures 1-3 at distances from 0 to 7 mm on both sides of the cross-section which was preheated. The optimum fracture occurs in a narrow region which can be regarded as a cleavage plane. It was found also that if a crack starts outside the artificial cleavage plane, it tends to grow in the direction of that plane. This "self-focusing" property is very useful in practice since it helps to achieve fracture at a pre-determined cross-section. Figure 5 shows that directed fracture can be achieved in tubes of varied shapes: from very wide tubes with thin walls to thick-walled tubes with a narrow bore. There are 5 figures and 8 references, 6 of which are Soviet and 2 English.

ASSOCIATIONS: Institut kristallografii AN SSSR (Institute of Crystallography of the Ac.Sc.USSR)
Soyuznyy nauchno-issledovatel'skiy institut radiotekhnicheskoy promyshlennosti (Scientific Research Institute of the Radio-technical Industry)

SUBMITTED: January 12, 1957

METELKIN, I. I.

PHASE I BOOK EXPLOITATION SOV/4042

Leningrad. Universitet

Polyarizatsionno-opticheskiy metod issledovaniya napryazheniy; trudy konferentsii 13-21 fevralya 1958 goda (Optical Polarization Method for Stress Analysis; Transactions of the Conference of February 13-21, 1958). [Leningrad] Izd-vo Leningradskogo univ., 1960. 451 p. Errata slip inserted. 2,400 copies printed.

Resp. Ed.: S.P. Shikhobalov; Ed.: Ye.V. Shchemeleva; Tech. Ed.: S.D. Vodolagina; Editorial Board: S.G. Gutman, L.M. Kachanov, V.M. Krasnov, Ye.D. Makarova, N.I. Prigorovskiy, V.M. Proshko, S.B. Ryazanov, and Ye.I. Edel'shteyn.

PURPOSE: This collection of 58 articles is intended for scientists and engineers concerned with experimental stress analysis of machine parts and structural components.

COVERAGE: The collection contains reports presented at the conference on optical polarization methods in stress analysis held February 13 - 21, 1958, in Leningrad and attended by 324 delegates including representatives of the People's Republic of China, the Polish People's Republic, the German Democratic Republic, and the Republic of Czechoslovakia. The reports discuss general theoretical problems and new methods of investigation and describe apparatus and materials used in the optical method. Solutions of specific two-dimensional and three-dimensional problems occurring in shipbuilding, aircraft design, engine construction, in various branches of heavy and precision machine design, in mining, metallurgy, hydraulic structures, railroad transport, in structural mechanics, geodynamics, in the control of stresses in products of the glass and electronic industry, etc., are given. Solution of the three-dimensional problem by means of the method of photoelasticity is introduced and the use of this method for the solution of problems associated with plasticity, creep, dynamics, hydrodynamics, etc., is demonstrated. Reports previously published elsewhere are printed here in abbreviated form. No personalities are mentioned. References are found at the end of 47 of the reports.

Optical Polarization Method (Cont.) SOV/4042

XI. VARIOUS FIELDS OF APPLICATION OF THE OPTICAL POLARIZATION METHOD

55. Indenbom, V.L., and B.A. Rezchikov. Use of the Optical Polarization Method for Stress Analysis in the Manufacture of Glass Objects and in Checking Their Quality 426

56. Indenbom, V.L., and I.I. Metelkin. Investigation of Local Stresses Arising in the Heat Cutting of Tubes 434

57. Pavlov, I.M., and A.V. Krupin. Investigation of Flaws in Metal Due to Stress Concentration by the Optical Method 439

58. Shikhobalov, S.P. The Optical Method as an Illustration in the Course on Strength of Materials 446

AVAILABLE: Library of Congress

Card 12/12

AC/rn/mas
8-19-60

L 63582-65 EPF(c)/EPR/EPA(s)-2/EPA(w)-2/EWP(j)/EWP(k)/EWA(c)/EWT(m)/EWP(i)/EPA(bb)-2/
EWP(e)/EWP(v)/EWP(t) Pc-4/Pf-4/Pr-4/Ps-4/Pt-7/Pab-10 RM/WH/WW/JD/HM

ACCESSION NR: AP5015364 UR/0286/65/000/009/0114/0114
621.791.06.364

AUTHOR: Makarkin, A. Ya.; Metelkin, I. I. 70 B

TITLE: Method of brazing ceramics to metals. Class 49, No. 170826

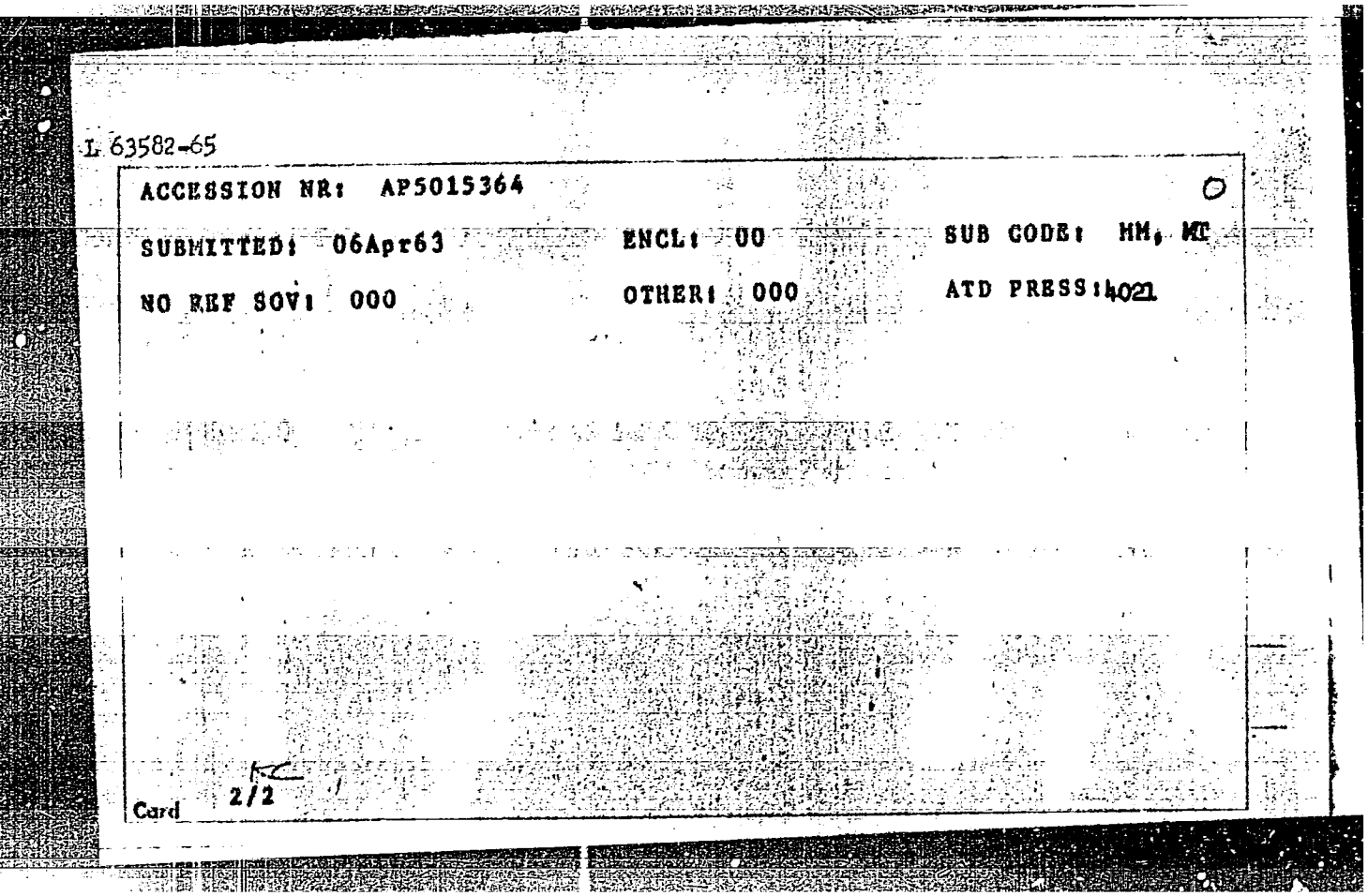
SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 9, 1965, 114

TOPIC TAGS: brazing, ceramic brazing, brazing alloy, ceramic to metal brazing, ceramic bonding

ABSTRACT: This Author Certificate introduces a method of brazing ceramics to metals in which the ceramic part is coated with metallizing paste to facilitate bonding. To increase the strength of the joint and to simplify the process, the parts to be brazed are put together, the brazing alloy is placed over the paste, and the parts are heated up to the brazing temperature. [ND]

ASSOCIATION: Organizatsiya gosudarstvennogo komiteta po elektronnoy tekhnike SSSR (Organization of the State Committee for Electronic Engineering, SSSR)

Card 1/2



L 63582-65

ACCESSION NR: AP5015364 O

SUBMITTED: 06Apr63 ENCL: 00 SUB CODE: HM, MT

NO REF SOV: 000 OTHER: 000 ATD PRESS: 4021

Card 2/2

A L 10192-66 EWP(e)/EWT(m)/EWA(d)/EWP(v)/EWP(j)/T/EWP(t)/EWP(k)/EWP(z)/EWP(b)/
ACC NR: AP5028538 EWA(c)/EEC(m) JD/WW/HM SOURCE CODE: UR/0286/65/000/020/0140/0140
44 JG/RM/WH 44

93
B
16

AUTHORS: Makarkin, A. Ya.; Metelkin, I. I.

ORG: none

TITLE: A method for obtaining vacuum-tight cermet junctions. Class 80, No. 175865

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 20, 1965, 140

TOPIC TAGS: cermet, solder, soldering, molybdenum, manganese, cermet product, metal joining, vacuum seal, vacuum technology

ABSTRACT: This Author Certificate presents a method for obtaining vacuum-tight cermet junctions by first metallizing the ceramics and then soldering with hard solders. To avoid destroying the metallized layer, to simplify the technique, and to lower the temperature of paste infusion, soldering is carried out directly along the metallized layer formed by the infusion of molybdenum-manganese paste.

SUB CODE: 11/ SUBM DATE: 19Apr62

Card 1/1 UDC: 666.3.037.5

AID P - 4845

Subject : USSR/Engineering

Card 1/2 Pub. 103 - 5/26

Authors : Metelkin, I. V., V. E. Popov, et. al.

Title : Machining of various materials with help of ultrasonic vibrations.

Periodical : Stan. i instr., 2, 16-19, F 1956

Abstract : The authors present the principles and the use of ultrasonic oscillation in the processing of various materials. They describe the magnetostrictive emitter, which was built for drilling hard metals like titanium, hardened steels, synthetic precious stones, glass and similar materials. They illustrate the construction, operation, attchments and the abrasives and ingredients utilized in ultrasonic drilling and finishing of hard surfaces. They suggest this method to improve such hazardous and tedious work as engraving, polishing precious stones, etc. Five photos, 2 drawings, 3 graphs and 1 table.

AID P - 4845

Stan. 1 instr., 2, 16-19, F 1956

Card 2/2 Pub. 103 - 5/26

Institution : None

Submitted : No date

METELKIN I.V.

117-58-5-17/24

AUTHORS: Metelkin, V.V., Engineer and Metelkin I.V., Candidate of Technical Sciences

TITLE: Instrument for Ultrasonic Cutting (Instrument dlya ul'tra-zvukovoy obrabotki)

PERIODICAL: Mashinostroitel', 1958, Nr 5, pp 35-38 (USSR)

ABSTRACT: In ultrasonic cutting, the material is destroyed by means of an abrasive powder which is in a state of suspension in the liquid. The passage of ultrasound through the liquid produces cavities or bubbles which at the moment of bursting bring about a sharp sudden knock. After dwelling on the theory of the ultrasonic wave effect, the article deals with the mathematical calculation of the instrument and the speed transformer. Figure 2 shows a type of instrument used for ultrasonic cutting. The different materials from which it can be made are mentioned. One end of the instrument is threaded for fixing to the transformer; this end must be very carefully machined to obtain a perfectly plane surface of contact. The advantage of the ultrasonic method lies in the great simplicity of the instruments. During the process

Card 1/3

Instrument for Ultrasonic Cutting

of cutting, the working part of the instrument is subjected to wear (Figure 3). Wear on the end of the instrument is much faster than on the circumference. Wear is also irregular; the greatest amount of wear takes place where the metal is thinnest. The table on page 37 shows the wear on a cylindrically shaped instrument with an outer diameter of 6 mm and an inner diameter of 4 mm. The duration of work is the same in all cases, frequency = 18.7 k-cycles, amplitude = 0.1 mm, abrasive material - boron carbide 230. The readings given refer to different materials processed with instruments of different kinds of metal. The most wear-resistant metal is steel EYaIT. Experience proved that instruments hardened by thermal treatment are less wear-resistant than unhardened ones. Ultrasonic work is done with one-piece or two-piece instruments. The two-piece instruments are more economical but the connection between the two parts must be soldered. In certain cases though, soldering will not suffice; the connection must be pressed, prior to being soldered. For obtaining accurate openings, the instrument chosen should be a one-piece instrument, part of the

Instrument for Ultrasonic Cutting 117-58-5-17/21

speed transformer. There are 5 figures and one table.

AVAILABLE: Library of Congress

Card 3/3 1. Machining-Ultrasonic methods 2. Mathematical analysis

SOV-117-58-10-7/35

AUTHORS: Metelkin, V.V., Engineer, Metelkin, V., Candidate of Technical Sciences

TITLE: The Physical Principles of Ultrasonic Treatment (Fizicheskiye osnovy ul trazvukovoy obra otki)

PERIODICAL: Mashinostroitel , 1958, Nr 10, pp 9 - 10 (USSR)

ABSTRACT: Of 3 types of ultrasonic oscillations, electrodynamical - up to 20,000 hz, magnetostriction - between 10,000 and 150,000 hz, and piezoelectrical - over 100,000 hz, magnetostriction-caused waves are most often used for the treatment of brittle materials. This treatment is done at frequencies between 16 and 40 khz. The magnetostriction emitters are simple, strong and reliable in operation. The physical and accustical principles of the magnetostriction vibrators as laid down by the English physicist Reley are presented and explained.

1. Magnetostrictive resonators---Operation 2. Ultrasonic radiation ---Propagation

Card 1/1

METCHIN, I.V.

25(1) PHASE I BOOK EXPLOITATION SOV/1932

Moscow. Aviatsionnyy tekhnologicheskiy institut

Issledovaniya v oblasti tekhnologii aviadvigateley; [sbornik] (Studies in the Field of Technology of Aircraft Engines; Collection of Articles) Moscow, Oborongiz, 1959. 100 p. (Series: Its: Trudy, vyp. 36) 2,100 copies printed.

Ed. (Title page): A.S. Ivanov, Professor; **Ed. (Inside book):** S.I. Bumshteyn, Engineer; **Ed. of Publishing House:** N.A. Gortsuyeva; **Tech. Ed.:** V.I. Oreshkina; **Managing Ed.:** A.S. Zaymovskaya, Engineer.

PURPOSE: This book is intended for engineering and technical workers, scientific research institutes, for teachers, aspirants, and students of higher educational institutions specializing in the technology of machine building.

COVERAGE: This is a collection of articles generalizing the results of the research work done by the Department of Aircraft Engine

Card 1/6

Technology of MATI (Moscow Aviation Technological Institute). The articles deal with various branches of technology and economics of the aviation industry. Some of the articles may be of interest to workers outside the aviation industry. The collection describes results of investigations of the following problems: use of centralizing devices in the machining parts on lathes, analysis and design of cutting tools using ultrasonic vibrations, improvement of the quality of dynamic balancing high-velocity rotors, gluing metals, determination of the work required to produce attachments, and the engineering utility of constructions.

TABLE OF CONTENTS:

Foreword 3

Bolotin, Kh.L., Candidate of Technical Sciences, Docent.
Investigation of a New Kind of Workholders for High-speed Machining 5
This article describes investigations of the use of centrifugal force for holding parts during machining operations. Experimental

and theoretical investigations were carried out at Moskovskiy tormoznoy zavod (Moscow Brake Plant) and MATI (Moscow Aviation Technology Institute). Mention is made of an instrument with a warm gear drive designed and manufactured by TIZPRIBOR (Heat-measuring Instrument Plant in Moscow). A dynamometer produced by TsNIITMASh (Central Scientific Research Institute of Heavy Machinery and Metalworking) is also mentioned. There are no references.

Metelkin, V.V., and ~~I.V. Metelkin.~~ Design and Calculation of an Ultrasonic Machine Tool 21

This article describes the shape of the tool, its holding devices, and tool wear. Tools for ultrasonic machining may be made of structural steel 05, 20, 30, 40, 45; of high carbon steels U7, U8, U10; of the alloy D 16T; or of brass or Monel metal. There are 3 references: 1 Soviet, 1 English, and 1 French.

Chistyakov, A.A., Candidate of Technical Sciences. On methods of Determining Allowances in Balancing Rotors of Turbojet Engines 34

Practical recommendations for reducing vibrations of high r.p.m.

rotors are given. The investigation was carried on at MATI. First attempts to solve this problem for rotor ventilators "Sirokko" were made by B.V. Shitikov. V.A. Samdylov studied the problem of vibrations of turbine units of electric power stations and rotors. A.P. Dinerman investigated static and dynamic balancing of steam turbine rotors. N.V. Kolesnik studied static and dynamic balancing of machine parts. To determine the allowable unbalance of rotors the theory of Gerts-Belyayev and the works of G.A. Ignat'yev are recommended. The following instruments are referred to: transmitters EDS, 2UG1-48, MV-21, MG-21; regenerator of sonic frequency ZG-2A; Ferromagnetic electrotachometer type FT-49; electrotachometer type TE-20; oscillograph MPO-2. There are 10 references, all Soviet.

Chistyakov, A. A., Candidate of Technical Sciences. Method of Checking Bearings of Rotors of Turbojet Engines for Admissible Vibrations 54

Recommendations are given for increasing the time limits of rotor-bearing service in turbojet engines. The theoretical investigations were made at MATI. The following equipment is mentioned: Gisholt, Shenk, and Lozengauzen balancing machines; oscillograph MPO-2. Anti-friction brass BrOS10-10 is also referred to. There are no references.

Kasatikov, T.P., Candidate of Technical Sciences, and G.V. Filatov, Engineer. Using Epoxide Glue in the Construction of Tooling Equipment 63

The article describes the advantages of epoxide gluing over other means of joining, such as riveting, bolting, welding, and gluing with other glues. The following products are mentioned: glues BF, PU-2, PU-3; firm coating NIAT-1; tars ED-3, ED-6, E40. There are no references.

Kasatikov, I.P., Candidate of Technical Sciences. Preliminary Evaluation of Work Requirements in the Production of Machine Tool Attachments 68

The author presents several methods for preliminary determination of requirements for machine tool preparation. The methods are as follows: (1) total number of codes, (2) volume of design work, (3) standard items, (4) qualitative and quantitative characteristics of typical parts, and (5) design factors (coefficients).

Gevorkyan, A.M., Candidate of Technical Sciences. Increasing Work Output and Decreasing Production Costs in Mass Production Plants 83

The article analyzes basic conditions for increasing productivity and reducing costs in mechanical assembly shops of plants as related to modern technology. It is stated that the works of Professors E.A. Satel', B.S. Balakshin, N.A. Borodachev, and M.G. Aref'yev laid the foundations for a systematic study of engineering utility of design. Professor B.L. Boguslavskiy gives a classification of machine tools according to their degree of automation. Professor S.I. Artobolevskiy classifies machine tools according to productivity. There are no references.

AVAILABLE: Library of Congress

Card 6/6

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6/30/59

34049

S/117/62/000/002/003/003
A004/A101

1.1100

AUTHORS: Metelkin, V. V., Metelkin, I. V

TITLE: Surface finish and accuracy of holes in ultrasonic machining

PERIODICAL: Mashinostroitel', no. 2, 1962, 29 - 32

TEXT: The authors point out that, although quite a number of Soviet and foreign publications have been devoted to the investigation of the machinability of hard materials, e.g. glass, ceramics, mineral-ceramics, cermet compounds semi-conductors, etc., the problems of accuracy and, particularly, surface finish have not yet been elucidated sufficiently in literature. Therefore, they present in their article a number of test results concerning the surface finish and accuracy attained with ultrasonic machining of various materials. To determine the effect of the tool oscillation amplitude and the grain size of the abrasive, glass was machined with a tool having a rectangular shape and being 5 x 20 mm in size. Oscillation amplitude A was changed in the range of 50 - 100 μ. The surface finish was measured by a Kiselev-type profilometer. The investigation results are presented in a table. According to the autnors, the experimental data confirm the assumption that the surface finish depends both on the oscillation

Card 1/3

Surface finish and...

amplitude and on the grain size of the abrasive. A better surface finish is obtained with small-size grains at low oscillation amplitudes of the tool. On the other hand, the ultrasonic machining process is more efficient if abrasives of a larger grain size are used at increased oscillation amplitudes. Therefore, to combine the required surface finish with efficient machining conditions it is recommended to carry out ultrasonic machining in two operations, i.e. a rough and a finish operation. The greater part of the material is removed at maximum oscillation amplitudes of the tool with abrasives of a large grain size, while the finish operation is carried out with fine-grained abrasives at low oscillation amplitudes. To determine the effect of the strength characteristics of the material being machined on the microgeometry of the surface, the authors machined glass, silicon, LM332 (TsM332) mineral-ceramic and the T30K4 sintered carbide For all materials the oscillation amplitude was 100 μ, while the grain size of the abrasive varied in the range of 100 to 320 mesh. The test results are presented in a graph and a number of tables. It was found that the higher the strength and plasticity of the material being machined, the better will be the surface finish. As to the accuracy of ultrasonic machining, the authors point out that two groups of factors play an important role. The first group includes factors like accuracy of equipment and tools, accuracy of fixtures, accuracy of

34049

Surface finish and.

relative position of tool and component being machined, etc. The second group includes factors which are characteristic only for this machining method, e.g. grain size of the abrasive, wear of the tool cutting part and depth of hole being cut. In glass specimens of 4 mm thickness, holes 6, 8, and 10 mm in diameter were cut. For all cases the oscillation amplitude amounted to 80 μ. The authors emphasize that in ultrasonic machining the dimension of the hole being cut is always larger than the tool dimension. Moreover, if a cylindrical tool is used, the hole produced will always have a tapered shape. It is characteristical that the magnitude of conicity and the magnitude of lateral clearance does not depend on the hole diameter. To obtain an aperture of the given dimension, it is necessary to reduce the tool diameter by a factor of 2.2 of the maximum size of abrasive of the given mesh number. To reduce the conicity, it is recommended to use a tool which has a reversed taper. The authors recommend, for obtaining an aperture with 0.01 - 0.02 mm tolerance, to carry out machining in two operations. The use of a large abrasive and maximum oscillation amplitudes increases the machining efficiency during the first operation. Finish machining should be carried out with a tool of a reversed taper and no. 240, 280 and 320 mesh abrasive. The authors give some additional recommendations on the machining of other materials, e.g. high-strength steels, titanium alloys, etc. There are 5 figures and 5 tables.

Card 3/3

S/117/62/000/008/004/005
I007/I207

AUTHORS: Metelkin, I.V., Metelkin, V.V., and Pleshivtsev, N.V.

TITLE: Machining output in ultrasonic cutting

PERIODICAL: Mashinostroitel', no. 8, 1962, 33-34

TEXT: A study is presented of the factors affecting machining output in ultrasonic cutting, and experimental results are reported. Graphs showing the dependence of machining output on the abrasive-grain size, the ultrasonic-oscillation and the amplitude, were plotted on the basis of these results. Increasing the abrasive grain-size was found to augment considerably the machining output. The graphs for ultrasonic cutting, although plotted only for the cutting of hard alloys and glass, may also be used for other materials. Appropriate conversion coefficients (given in this paper) should be used. There are 3 figures and 1 table.

Card 1/1

METELKIN, V.V.; METELKIN, I.V.; PLESHIVTSEV, N.V.

Tools for ultrasonic machining. Mashinostroitel' no.12:16 D '64. (MIRA 18:2)

BARANOV, Yu.B.; BARANOVA, Ye.N.; BOBROVSKIY, V.I.; GRISHCHENKO, G.I.; GONCHAR, G.V.; DOLBISH, V.S.; KALINOVSKIY V.S.; KARAKOTSKIY, Ye.D., KULICHKOV, G.M.; KAGANOVSKAYA, S.M.; LESTEV, A.V.; [illegible]; TIKHONRAVOV, V.M. [deceased]; DOLBISH, V.S., spetsred.; KUZ'MINA, V.S., red.; KISINA, Ye.I., tekhn.red.

[Fishing equipment used in Far Eastern waters] Orudiia rybolovstva Dal'nevostochnogo Basseina. Moskva, Pishchepromizdat, 1958. 214 p. (MIRA 11:12)

(Soviet Far East--Fishing--Equipment and supplies)

METELKIN, N., mashinist ekskavatora

Pins for caterpillar bands of excavators. Na stroi.Mosk. 1 no.9:29 S '58. (MIRA 11:12)

(Excavating machinery)

METELKIN, N.A.

Machine for making dividers for bottle cases. Masl.-zhir. prom. 26 no.1:28-29 Ja '60. (MIRA 13:4)

1. Sverdlovskiy zhirovoy kombinat.
(Oils and fats) (Box making)

METEIKIN, N. M.

Propaganda sel'skokhoziaistvennoi literatury v sel'skoi biblioteke /Popularizing agricultural reading matter in the village library/. Moskva, 1953. 40 p. (Gos. ordena Lenina b-ka SSSR im. V. I. Lenina. Nauch.-metod. kabinet bibliotekovedeniia. V pomoshch' sel'skomu bibliotekariu).

SO: Monthly List of Russian Accessions, Vol. 7, No. 3, June 1954.

KHRONAKOVA, A.A., redaktor; [illegible], redaktor; KHOVANSKIY, [illegible] tekhnicheskiy redaktor

[Work of libraries in aiding agriculture, machine operators; collection of articles] [illegible] bibliotek v pomoshch' mekhanizatoram sel'skogo khoziaistva; sbornik materialov. Moskva, [illegible] 1957. 162 p.

1. Moscow. Publichnaya [illegible] Nauchno-metodicheskiy [illegible] bibliotekovedeniya.
(Libraries, [illegible])
(Bibliography—[illegible] machinery)

METELKIN, A., prof. (Moskva); METELKIN, O. (Moskva)

Reviews and discussions. Izv. AN Kazakh. SSR. Ser. biol. nauk 3 no.6:103 N-D '65. (MIRA 18:12)

МЕТЕЛКИН, О.А.

Comparative tests of cedar substitutes for immersion oil used in microscopy. Lab.delo 3 no.6:37-38 N-D '57. (MIRA 11:2)
(MICROSCOPY--EQUIPMENT AND SUPPLIES)

MALYSHEV, A.; KLYUKANOV, G.; METELKIN, S., agronom-planovik

A wage system approved by practice. Sots. trud 7 no.8:107-112 Ag '62. (MIRA 15:10)

1. Direktor sovkhoza "Komintern", Gor'kovskaya oblast' (for Malyshev). 2. Glavnyy agronom sovkhoza "Komintern", Gor'kovskaya obl. (for Klyukanov).

(Gorkiy Province--Agricultural wages)

METELKIN, S. I.

"Calculation of Frame Structures in the Elastic Stage of Work and in the Stage of Plastic Deformations by the Method of Orthogonal Forces, Complexly Conjugated with the Deformation." Sub 17 Apr 51, Central Sci Res Inst of Industrial Structures (TsNIPS)

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

SOV/124-57-9-10965

Translation from: Referativnyy zhurnal. **Mekhanika**, 1957, Nr 9, p 157 (USSR)

AUTHOR: Metelkin, S. P.

TITLE: Influence-line Plotting for **Multiple-support** Beams on an Elastic Footing (Postroyeniye liniy vliyaniya **dlya mnogoopornykh** balok na uprugom osnovanii)

PERIODICAL: Sb. nauch. rabot. Vyssh. **shkoly promysl.** kooperatsii, 1957, Nr 2, pp 61-79

ABSTRACT: Bibliographic entry

Card 1/1

METELKIN, I.V.; POPOV, V.Ye.; NIKOL'SKIY, V.I.; METELKIN, V.V.; MUKASEYEV, A.A.

Ultrasonic vibration as a means of mechanical machining of various materials. Stan. i instr. 27 no.2:16-19 F '56. (MLRA 9:7)
(Ultrasonic waves--Industrial applications)

117-58-5-17/24

AUTHORS: Metelkin, V.V., Engineer and Metelkin I.V., Candidate of Technical Sciences

TITLE: Instrument for Ultrasonic Cutting (Instrument dlya ul'tra-zvukovoy obrabotki)

PERIODICAL: Mashinostroitel', 1958, Nr 5, pp 35-38 (USSR)

ABSTRACT: In ultrasonic cutting, the material is destroyed by means of an abrasive powder which is in a state of suspension in the liquid. The passage of ultrasound through the liquid produces cavities or bubbles which at the moment of bursting bring about a sharp sudden knock. After dwelling on the theory of the ultrasonic wave effect, the article deals with the mathematical calculation of the instrument and the speed transformer. Figure 2 shows a type of instrument used for ultrasonic cutting. The different materials from which it can be made are mentioned. One end of the instrument is threaded for fixing to the transformer; this end must be very carefully machined to obtain a perfectly plane surface of contact. The advantage of the ultrasonic method lies in the great simplicity of the instruments. During the process

of cutting, the working part of the instrument is subjected to wear (Figure 3). Wear on the end of the instrument is much faster than on the circumference. Wear is also irregular; the greatest amount of wear takes place where the metal is thinnest. The table on page 37 shows the wear on a cylindrically shaped instrument with an outer diameter of 6 mm and an inner diameter of 4 mm. The duration of work is the same in all cases, frequency = 18.7 k-cycles, amplitude = 0.1 mm, abrasive material - boron carbide 230. The readings given refer to different materials processed with instruments of different kinds of metal. The most wear-resistant metal is steel EYaIT. Experience proved that instruments hardened by thermal treatment are less wear-resistant than unhardened ones. Ultrasonic work is done with one-piece or two-piece instruments. The two-piece instruments are more economical but the connection between the two parts must be soldered. In certain cases though soldering will not suffice; the connection must be pressed, prior to being soldered. For obtaining accurate openings, the instrument chosen should be a one-piece instrument, part of the

Instrument for Ultrasonic Cutting 117-58-5-17/24

speed transformer. There are 5 figures and one table.

AVAILABLE: Library of Congress

Card 3/3 1. Machining-Ultrasonic methods 2. Mathematical analysis

METELKIN, V.V., inzh.; METELKIN, I.V., kand.tekhn.nauk

Physical bases for ultrasonic machining. Mashinostroitel' no.10:9-10 O '58. (MIRA 11:10)
(Ultrasonic waves--Industrial applications)

25(1)

PHASE I BOOK EXPLOITATION SOV/1932

Moscow. Aviatsionnyy tekhnologicheskiy institut

Issledovaniya v oblasti tekhnologii aviadvigateley; [sbornik] (Studies in the Field of Technology of Aircraft Engines; Collection of Articles) Moscow, Oborongiz, 1959. 100 p. (Series: Its: Trudy, vyp. 36) 2,100 copies printed.

Ed. (Title page): A.S. Ivanov, Professor; Ed. (Inside book): S.I. Bumshteyn, Engineer; Ed. of Publishing House: N.A. Gortsuyeva; Tech. Ed.: V.I. Oreshkina; Managing Ed.: A.S. Zaymovskaya, Engineer.

PURPOSE: This book is intended for engineering and technical workers, scientific research institutes, for teachers, aspirants, and students of higher educational institutions specializing in the technology of machine building.

COVERAGE: This is a collection of articles generalizing the results of the research work done by the Department of Aircraft Engine

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Technology of MATI (Moscow Aviation Technological Institute). The articles deal with various branches of technology and economics of the aviation industry. Some of the articles may be of interest to workers outside the aviation industry. The collection describes results of investigations of the following problems: use of centralizing devices in the machining parts on lathes, analysis and design of cutting tools using ultrasonic vibrations, improvement of the quality of dynamic balancing high-velocity rotors, gluing metals, determination of the work required to produce attachments, and the engineering utility of constructions.

TABLE OF CONTENTS:

Foreword 3

Bolotin, Kh.L., Candidate of Technical Sciences, Docent.
Investigation of a New Kind of Workholders for High-speed Machining 5

This article describes investigations of the use of centrifugal force for holding parts during machining operations. Experimental

and theoretical investigations were carried out at Moskovskiy tormoznoy zavod (Moscow Brake Plant) and MATI (Moscow Aviation Technology Institute). Mention is made of an instrument with a warm gear drive designed and manufactured by TIZPRIBOR (Heat-measuring Instrument Plant in Moscow). A dynamometer produced by TsNIITMASh (Central Scientific Research Institute of Heavy Machinery and Metalworking) is also mentioned. There are no references.

Metelkin, V.V., and I.V. Metelkin. Design and Calculation of an Ultrasonic Machine Tool 21

This article describes the shape of the tool, its holding devices, and tool wear. Tools for ultrasonic machining may be made of structural steel 05, 20, 30, 40, 45; of high carbon steels U7, U8, U10; of the alloy D 16T; or of brass or Monel metal. There are 3 references: 1 Soviet, 1 English, and 1 French.

Chistyakov, A.A., Candidate of Technical Sciences. On methods of Determining Allowances in Balancing Rotors of Turbojet Engines 34

Practical recommendations for reducing vibrations of high r.p.m.

rotors are given. The investigation was carried on at MATI. First attempts to solve this problem for rotor ventilators "Sirokko" were made by B.V. Shitikov. V.A. Samdylov studied the problem of vibrations of turbine units of electric power stations and rotors. A.P. Dinerman investigated static and dynamic balancing of steam turbine rotors. N.V. Kolesnik studied static and dynamic balancing of machine parts. To determine the allowable unbalance of rotors the theory of Gerts-Belyayev and the works of G.A. Ignat'yev are recommended. The following instruments are referred to: transmitters EDS, 2UG1-48, MV-21, MG-21; regenerator of sonic frequency ZG-2A; Ferromagnetic electrotachometer type FT-49; electrotachometer type TE-20; oscillograph MPO-2. There are 10 references, all Soviet.

Chistyakov, A.A., Candidate of Technical Sciences. Method of Checking Bearings of Rotors of Turbojet Engines for Admissible Vibrations 54

Recommendations are given for increasing the time limits of rotor-bearing service in turbojet engines. The theoretical investigations were made at MATI. The following equipment is mentioned: Gishol't, Shenk, and Lozengauzen balancing machines; oscillograph MPO-2. Anti-friction brass BrOS10-10 is also referred to. There are no references.

Kasatikov, T.P., Candidate of Technical Sciences, and G.V. Filatov, Engineer. Using Epoxide Glue in the Construction of Tooling Equipment 63

The article describes the advantages of epoxide gluing over other means of joining, such as riveting, bolting, welding, and gluing with other glues. The following products are mentioned: glues BF, PU-2, PU-3; firm coating NIAT-1; tars ED-3, ED-6, E40. There are no references.

Kasatikov, I.P., Candidate of Technical Sciences. Preliminary Evaluation of Work Requirements in the Production of Machine Tool Attachments 68

The author presents several methods for preliminary determination of requirements for machine tool preparation. The methods are as follows: (1) total number of codes, (2) volume of design work, (3) standard items, (4) qualitative and quantitative characteristics of typical parts, and (5) design factors (coefficients).

Gevorkyan, A.M., Candidate of Technical Sciences. Increasing Work Output and Decreasing Production Costs in Mass Production Plants 83

Studies in the Field of Technology (Cont.) SOV/1932

The article analyzes basic conditions for increasing productivity and reducing costs in mechanical assembly shops of plants as related to modern technology. It is stated that the works of Professors E.A. Satel', B.S. Balakshin, N.A. Borodachev, and M.G. Aref'yev laid the foundations for a systematic study of engineering utility of design. Professor B.L. Boguslavskiy gives a classification of machine tools according to their degree of automation. Professor S.I. Artobolevskiy classifies machine tools according to productivity. There are no references.

AVAILABLE: Library of Congress

Card 6/6

TS/jb
6/30/59

METELKIN, V. V., Cand Tech Sci -- (diss) "Research into process of treatment of fragile materials with the application of ultrasonics." Moscow, 1960. 17 pp including cover; (Ministry of Higher and Secondary Specialist Education RSFSR, Moscow Aviation Technology Inst): 150 copies; price not given;(KL, 24-60, 155)

83334
S/117/60/000/008/016/020
A002/A001

1.1110

AUTHOR: Metelkin, V.V.

TITLE: Ultrasound Machining of Deep Apertures

PERIODICAL: Mashinostroitel', 1960, No. 8, pp. 28-29

TEXT: The author discusses methods of improving the efficiency of cutting deep apertures in brittle materials by ultrasound. At unchanged cutting conditions (frequency, amplitude, pressure, etc), the cutting speed depends on the depth of cutting tool penetration into the material to be processed. The efficiency decreases considerably at cutting depths exceeding 2-5 mm, because increasing friction between the tool and the walls of the hole cause an oscillation amplitude reduction. The removal of loose particles becomes more difficult with increasing depth. Instead of a cylindrical cutting tool, the author recommends a cutting tool with a hollow end, whose external and internal surfaces are tapered in opposite directions (Figure 1). Comparative tests performed with a cylindrical and a tapered tool (oscillation amplitude 90 microns; frequency 18.3 kc; No. 180 boron carbide used as abrasive) showed that 150 seconds were needed for cutting a hole of 6 mm diameter through a glass plate of 8 mm thickness with a cylindrical

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Ultrasound Machining of Deep Apertures

tool end. The same operation was performed within 90 seconds with a tapered tool end. Rotating of the work piece (180 rpm) reduced the cutting time to 60 seconds with a tapered tool end. To improve the feed of abrasive to the work area, the author designed and tested a cutting tool in which the abrasive suspension is fed through a duct in the stem (Figure 3). The internal cavity of the tool end is arranged eccentrically in respect to the stem axis. This arrangement results in a core whose diameter is 0.3-0.4 mm smaller than the internal cavity of the tool end, and consequently, the abrasive feed is not impeded. The tool can be manufactured of У10 (U10), У8 (U8) or 30ХГСА (30KhGSA) steel. The design of the rotary work table is shown (Figure 4). The author recommends performing the cutting operation in several passes of 2-3 mm, especially in case the work piece cannot be rotated. He describes briefly the technology of cutting a rectangular aperture of 7.5 x 14.5 mm in a 60 mm thick glass plate using a cutting tool with a rectangular end of 7.5 x 10 mm (oscillation amplitude 100 microns; No. 120 boron carbide). Initially, a rectangle of 7.5 x 10 mm was cut to a depth of 2.5 mm and then the tool was displaced by 4.5 mm for the next pass. The total time required for the rough cutting (including displacement operations) lasted 22 minutes. The finishing pass was performed with a 8 x 15 mm tool end (oscillation amplitude 75 microns; No. 280 abrasive used). The abrasive was

Ultrasound Machining of Deep Apertures

fed to the tool end from the other side of the hole. The finishing pass was completed within 6 minutes and produced a 7th class surface. The author mentions briefly the cutting of single crystals of quartz, germanium and silicon with a boron carbide tip attached to a special ultrasound vibrator (Figure 5). There are 5 figures.

Card 3/3

VOLKOV, A.T.; NIKITYUK, I.P.; METELKIN, V.V.; MAMONTOVA, O.K., red.; MOSKALENKO, A.V., red.; OVECHKINA, L.S., red.; FILATOVA, G.M., tekhn. red.

[Mechanization of soybean cultivation and harvesting operations] Mekhanizatsiia vozdelyvaniia i uborki soi. Blagoveshchensk, Amurskoe knizhnoe izd-vo, 1962. 143 p. (MIRA 15:5)
(Soybean) (Agricultural machinery)

31049

3/117/62/000/002/003/003
A004/A101

1.1100

AUTHORS: Metelkin, V. V., Metelkin, I. V

TITLE: Surface finish and accuracy of holes in ultrasonic machining

PERIODICAL: Mashinostroitel', no. 2, 1962, 29 - 32

TEXT: The authors point out that, although quite a number of Soviet and foreign publications have been devoted to the investigation of the machinability of hard materials, e.g. glass, ceramics, mineral-ceramics, cermet compounds semi-conductors, etc., the problems of accuracy and, particularly, surface finish have not yet been elucidated sufficiently in literature. Therefore, they present in their article a number of test results concerning the surface finish and accuracy attained with ultrasonic machining of various materials. To determine the effect of the tool oscillation amplitude and the grain size of the abrasive, glass was machined with a tool having a rectangular shape and being 5 x 20 mm in size. Oscillation amplitude A was changed in the range of 50 - 100 μ. The surface finish was measured by a Kiselev-type profilometer. The investigation results are presented in a table. According to the authors, the experimental data confirm the assumption that the surface finish depends both on the oscillation

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Surface finish and...

amplitude and on the grain size of the abrasive. A better surface finish is obtained with small-size grains at low oscillation amplitudes of the tool. On the other hand, the ultrasonic machining process is more efficient if abrasives of a larger grain size are used at increased oscillation amplitudes. Therefore, to combine the required surface finish with efficient machining conditions it is recommended to carry out ultrasonic machining in two operations, i.e. a rough and a finish operation. The greater part of the material is removed at maximum oscillation amplitudes of the tool with abrasives of a large grain size, while the finish operation is carried out with fine-grained abrasives at low oscillation amplitudes. To determine the effect of the strength characteristics of the material being machined on the microgeometry of the surface, the authors machined glass, silicon, LM332 (TsM332) mineral-ceramic and the T30K4 sintered carbide For all materials the oscillation amplitude was 100 μ, while the grain size of the abrasive varied in the range of 100 to 320 mesh. The test results are presented in a graph and a number of tables. It was found that the higher the strength and plasticity of the material being machined, the better will be the surface finish. As to the accuracy of ultrasonic machining, the authors point out that two groups of factors play an important role. The first group includes factors like accuracy of equipment and tools, accuracy of fixtures, accuracy of

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34049

Surface finish and..

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A054/A101

relative position of tool and component being machined, etc. The second group includes factors which are characteristic only for this machining method, e.g grain size of the abrasive, wear of the tool cutting part and depth of hole being cut. In glass specimens of 4 mm thickness, holes 6, 8, and 10 mm in diameter were cut. For all cases the oscillation amplitude amounted to 80 μ. The authors emphasize that in ultrasonic machining the dimension of the hole being cut is always larger than the tool dimension. Moreover, if a cylindrical tool is used, the hole produced will always have a tapered shape. It is characteristical that the magnitude of conicity and the magnitude of lateral clearance does not depend on the hole diameter. To obtain an aperture of the given dimension, it is necessary to reduce the tool diameter by a factor of 2.2 of the maximum size of abrasive of the given mesh number. To reduce the conicity, it is recommended to use a tool which has a reversed taper. The authors recommend, for obtaining an aperture with 0.01 - 0.02 mm tolerance, to carry out machining in two operations. The use of a large abrasive and maximum oscillation amplitudes increases the machining efficiency during the first operation. Finish machining should be carried out with a tool of a reversed taper and no. 240, 280 and 320 mesh abrasive. The authors give some additional recommendations on the machining of other materials, e.g high-strength steels, titanium alloys, etc. There are 5 figures and 5 tables.

Card 3/3

S/117/62/000/008/004/005
I007/I207

AUTHORS: Metelkin, I.V., Metelkin, V.V., and Pleshivtsev, N.V.

TITLE: Machining output in ultrasonic cutting

PERIODICAL: Mashinostroitel', no. 8, 1962, 33-34

TEXT: A study is presented of the factors affecting machining output in ultrasonic cutting, and experimental results are reported. Graphs showing the dependence of machining output on the abrasive-grain size, the ultrasonic-oscillation and the amplitude, were plotted on the basis of these results. Increasing the abrasive grain-size was found to augment considerably the machining output. The graphs for ultrasonic cutting, although plotted only for the cutting of hard alloys and glass, may also be used for other materials. Appropriate conversion coefficients (given in this paper) should be used. There are 3 figures and 1 table.

Card 1/1

METELKIN, V.V.; METELKIN, I.V.; PLESHIVTSEV, N.V.

Tools for ultrasonic machining. Mashinostroitel' no.12:16 D '64. (MIRA 18:2)

L 23000-66 EWT(m)/EWP(w)/T/EWP(t) IJP(c) JD/JG

ACC NR: AP6012144 SOURCE CODE: UR/0413/66/000/007/0060/0060

INVENTOR: Moiseyev, V. N.; Glazunov, S. G.; Mikhaylov, B. M.; Metelkin, V. Ye. 40 B

ORG: none

TITLE: A titanium-base alloy. Class 40, No. 180351

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 7, 1966, 60

TOPIC TAGS: titanium alloy, aluminum containing alloy, molybdenum containing alloy, vanadium containing alloy, chromium containing alloy, iron containing alloy

ABSTRACT: This Author Certificate introduces a titanium-base alloy containing aluminum, molybdenum, vanadium, and chromium. To improve the mechanical properties, the alloy has the following chemical composition: 2—6% aluminum, 6—9% molybdenum, 1—3% vanadium, 0.5—2% chromium, 0—5% iron, and the rest titanium.

[WW]

SUB CODE: 11/ SUBM DATE: 06Jan65/ ATD PRESS: 4238

Card 1/1 pla

METELKINA, M. P.

Dissertation defended in the Geological Institute for the academic degree of Candidate of Geologo-Mineralogical Sciences:

"Genetic Series of Diamond Placer Deposits Spatially Associated with Native Sources (Mir River) of Kimberlite Pipe."

Vestnik Akad Nauk No. 4, 1963, pp. 119-145

Metelkina, Ye.M.

USSR/Chemical Technology - Chemical Products and Their Application - Leather. Fur. Gelatin. Tanning Agents. Technical Proteins. I-29

Abs Jour : Referat Zhur - Khimiya, No 9, 1957, 33127

Author : Goland, N.I., Metelkina, Ye.M.
Inst :
Title : Dyeing of Fur with Vat Dyes.

Orig Pub : Legkaya prom-st', 1956, No 5, 30-31

Abstract : On dyeing of fur with oxidation dyes it was not possible to produce fast grey shades. Experiments are described on the use for this purpose of vat dyes. Dyeing is carried out in a conventional drum which is filled almost to capacity. Two formulas have been worked out for dyeing sheepskins grey with thioindigo black using color modifying adjucts: in one instance vat golden-yellow ZhKh and bat brilliant green Zh, and in the other -- thioindigo red-brown Zh; with sodium alkyl sulfate as

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USSR/Chemical Technology - Chemical Products and Their Application - Leather. Fur. Gelatin. Tanning Agents. Technical Proteins. I-29

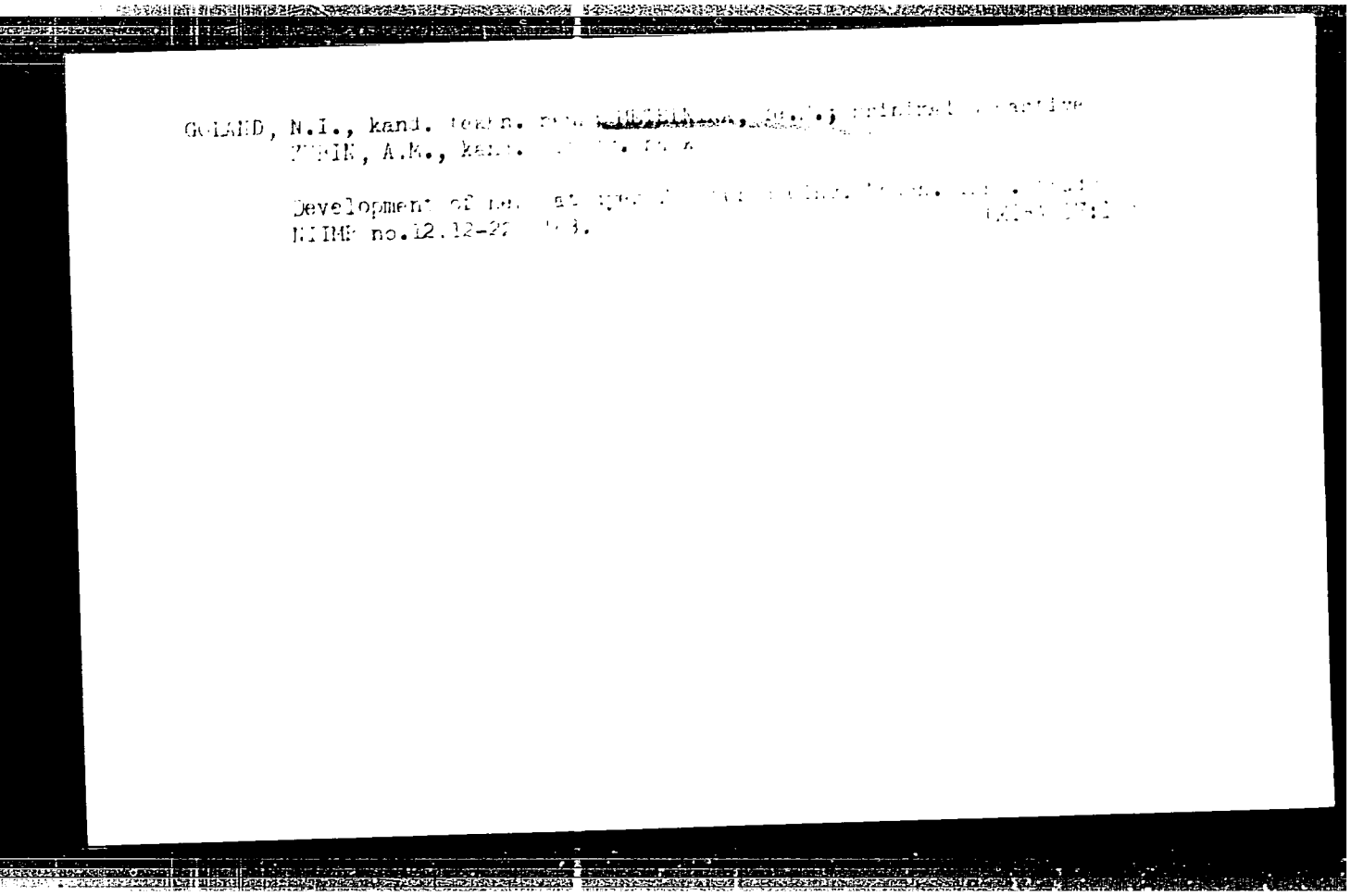
Abs Jour : Ref Zhur - Khimiya, No 9, 1957, 33127

dispersing agent. Dyeing according to the second formula is carried out directly. Samples dyed with the vat dyes are characterized by great fastness to light and weathering. Their physico-mechanical indices meet the specifications of the standard. Procedures have also been worked out for dyeing grey, lambskin and goat fur.

Card 2/2

GOLAND, N.I., kand.tekhn.nauk; METELKINA, Ye.M., tekhnolog; DROZHINOVA, L.Ya., mladshiy nauchnyy sotrudnik

Control of dye bathes in fur dyeing with vat dyes. Nauch.issl.trudy NIIMP no.11:13-28 '62. (MIRA 16:5)
(Fur--Dressing and dyeing)



GOLAND, N.I., kand. tekhn. nauk; [illegible], M.I.; [illegible]
PUNIN, A.M., kand. [illegible]

Development of [illegible]
NIIME no.12.12-27 [illegible].

METEIKO, S.

Report on the Second International Conference for Metalization, Birmingham, England, from September 29, to October 3, 1958. p.82

VARILNA TEHNIKA. (Drustvo za varilno tehniko IRS in Zavod za varjenje IRS Ljubljana, Yugoslavia. Vol.7, no.3/4, 1958

Monthly List of East European Accessions Index, (EEAI) LC, Vol.8, no 11
Nov. 1959
Uncl.

METELKO, Stane, ing.

First domestic equipment for welding in argon. Var teh 10 no.4: 120-121 '61.

[illegible], P.P., [illegible], P.T., [illegible], M.P.

Leather

Classification of hard leather. Leg. prom., No. 3, 1952

Monthly List of Russian Accessions, Library of Congress, June 1952. Unclassified

LYUBENBURG, M.S.; MITEL'KOV, M.P.; SHUSTOROVICH, M.L.

Efficient use of raw leather. Leg.prom. 16 no.5:11-13 My '56.
(MLRA 9:8)

(Hides and skins)

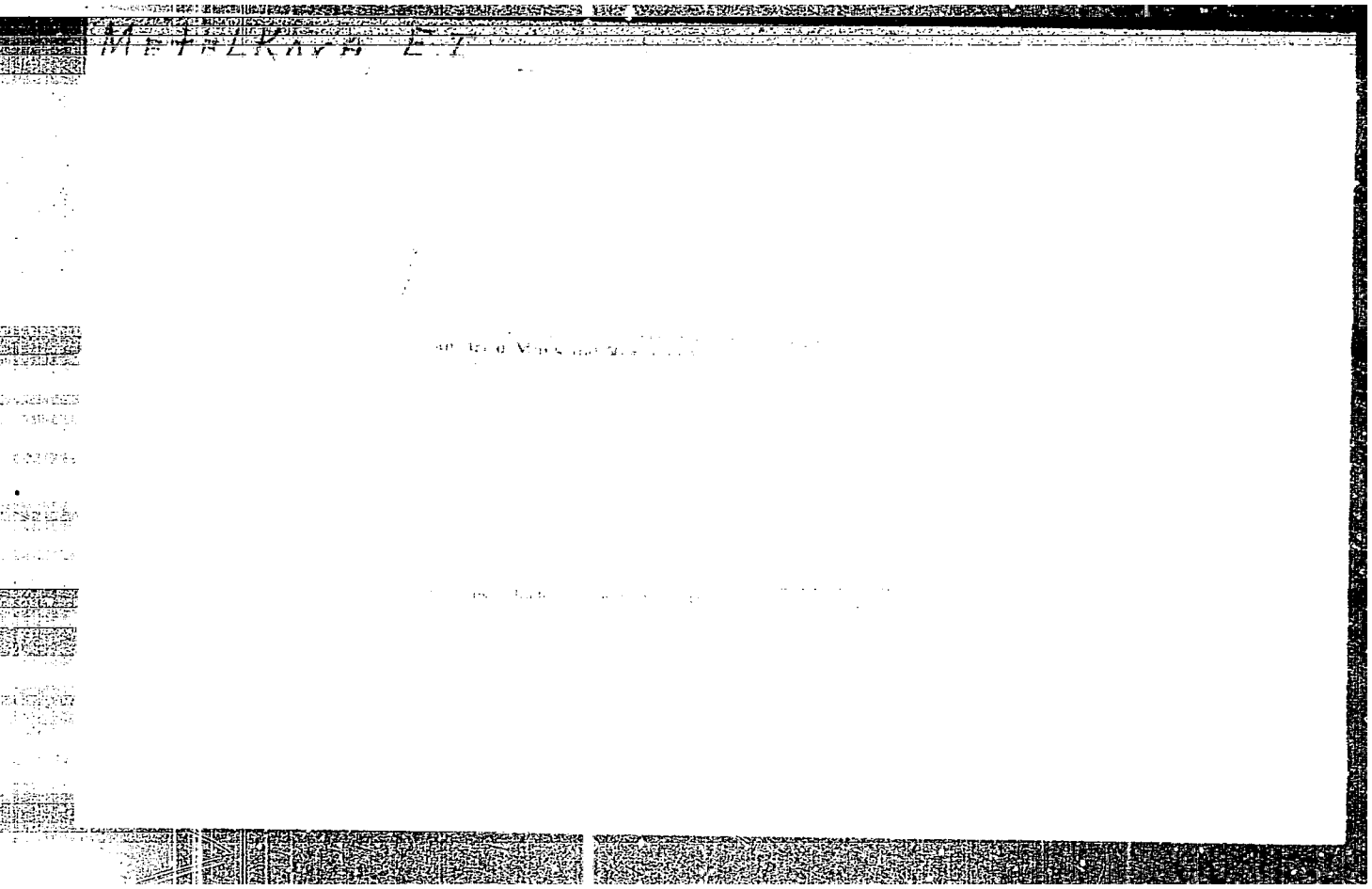
SENYANINOVA-KORCHAGINA, M.V.; METEL'KOVA, T.A.

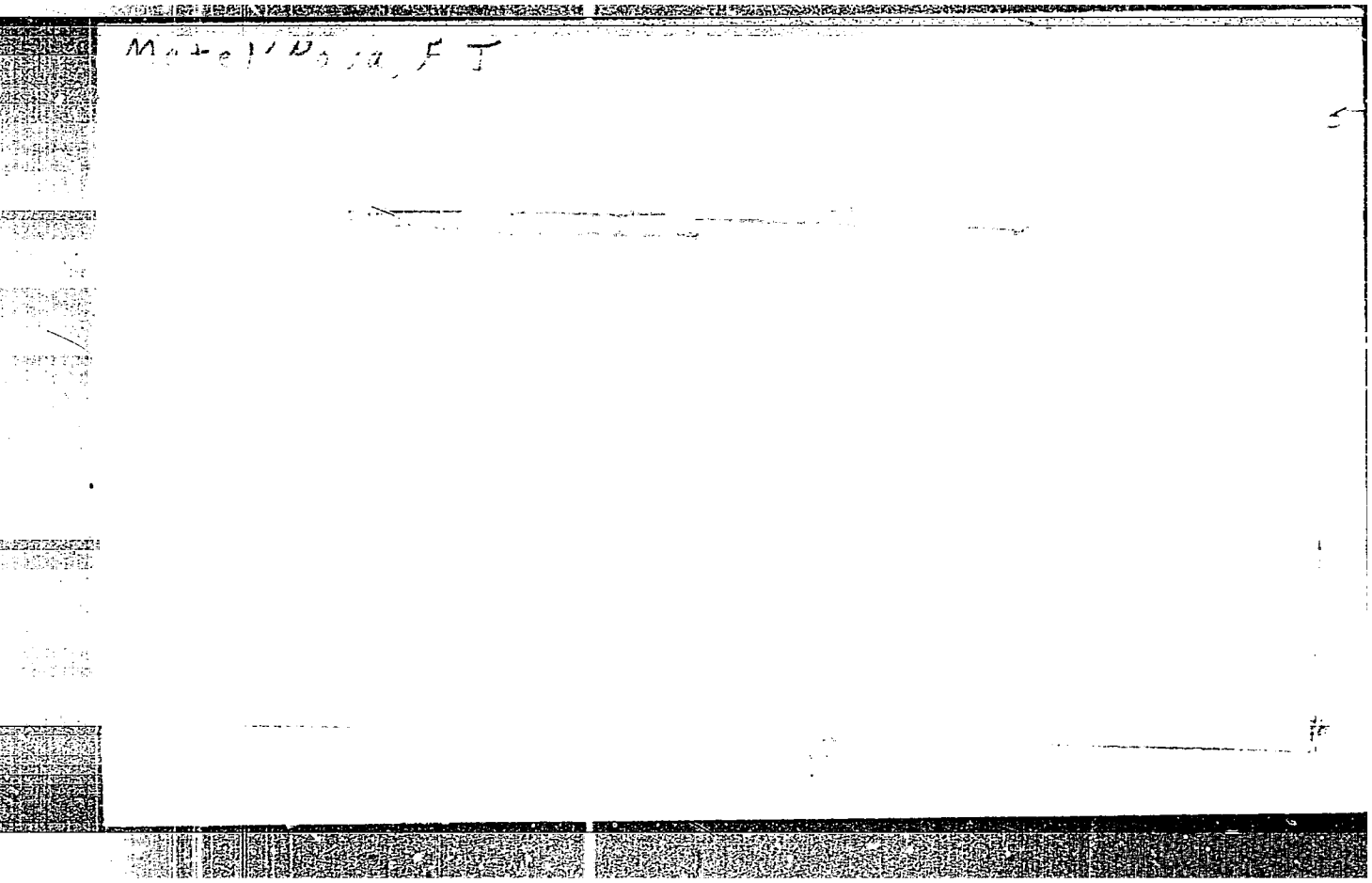
Is peat used as a fertilizer a source of weeds? Vest. LGU 17 no.18:77-94 '62. (MIRA 15:10)
(Weeds) (Peat)

ORLOV, I.M., dotsent; VIL'NINA, M.A.; METEL'KOVA, T.V.

Quality of the wool from fine-wooled sheep bred in the Northern Caucasus and Kalmyk A.S.S.R. Tekst. prom. 24 no.2:18-19 F '64. (MIRA 17:3)

1. Kafedra tovarovedeniya i tekhnologii zhivotnogo syr'ya Moskovskoy veterinarnoy akademii (for Orlov). 2. Glavnyy inzh. Nevinnomysskoy fabriki pervichnoy obrabotki shersti (for Vil'nina). 3. Nachal'nik nauchno-issledovatel'skoy laboratorii Nevinnomysskoy fabriki pervichnoy obrabotki shersti (for Metel'kova).





METEL'KOVA, E. I.

4

4'4'-Diaminodiphenyl sulfone. V. A. Zasosov, E. I. Metel'kova, and M. I. Gulchunk-a. U.S.S.R. 107,263, Aug. 25, 1957. The title compd. is obtained by acylation, oxidation, and hydrolysis of 4,4'-diaminodiphenyl sulfide. Acylation is done with phthalic anhydride, while the oxidation is accomplished with $KMnO_4$. M. Hoffa

ZASOSOV, V.A.; METEL'KOVA, Ye.I.; GALCHENKO, M.I.

New method for producing 4, 4'-diaminodiphenylsulphone. Med. prom. 13 no.2:18-20 F '59. (MIRA 12:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiki-farmatsevticheskiy institut imeni S. Ordzhonikidze i Institut farmatkologii i khimioterapii Akademii meditsinskikh nauk SSSR.
(SULFONS)

ZASOSOV, V.A.; METEL'KOVA, Ye.I.; ONOPRIYENKO, V.S.

Improvement in the method for producing vanillin. Med.prom. 13 no.3:22-24 Mr '59. (MIRA 12:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S.Ordzhonikidze.
(VANILLIN)

ZASOSOV, V.A.; METEL'KOVA, Ye.I.; ONOPRIYENKO, V.S.

Non-pyroforic nickel catalyst in the dehydration reaction of 3,4-dihydroisoquinoline and its derivatives. Med.prom. 15 no.3:35-38 Mr '61. (MIRA 14:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S.Ordzhonikidze.
(QUINOLINE) (CATALYSTS, NICKEL)

ZASOSOV, V.A.; METEL'KOVA, Ye.I.; VOLZHINA, O.N.; SHAGALOV, L.B.; VLASOV, A.S.

New method of producing norsulfazole. Med. prom. 17 no.9:19-22 S'63. (MIRA 17:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni Sergo Ordzhonikidze.

NOSOV, S.D.; BUDKEVICH, V.B.; LEVINA, S.S.; METEL'KOVA, Ye.M.; PESIKOVA, M.I.; PILICHEVA, Z.V.

Reducing hospitalization time in scarlet fever. Zhur.mikrobiol.epid. i immun. no.3:19-23 Mr '54. (MLRA 7:4)

1. Iz kafedry detskikh infektsionnykh bolezney (zaveduyushchiy - professor S.D.Nosov) Ivanovskogo meditsinskogo instituta. (Scarlet fever)

METEL'MAN, E. L.

Financial o erations of machine construction plants. Moskva, Gos. nauchnotekhn. izd-vo mashinostroit. i sudostroit. lit-ry, 1954. 218 p. (55-32369)

BURYAKOV, V.S., tekhnik; PETRUKOVICH, V.D., inzh.; KIRNOV, Ye.S., inzh.; METEL'NIKOV, V.I., inzh.; KUDRYASHOV, S.A., inzh.

Concerning V.V.Vasil'ev's article "Should equipment be grounded or reliably insulated?". Energetik 10 no.12:15-17 D '62. (MIRA 16:1)

(Electric lines—Overhead)

USSR/Human and Animal Physiology - (Normal and Pathological). Blood. General Problems. T-3

Abs Jour : Ref Zhur - Biol., No 16, 1958, 74600

Author : Bishinkevich, S.I., Metel'nikova, L.M.

Inst : Academy of Ped. Sciences, RSFSR.

Title : Influence of Cycle Racing on the Change of Blood Viscosity in Adolescents 16-18 years old.

Orig Pub : Dokl. Akad. ped. nauk RSFSR, 1957, No 2, 145-149

Abstract : In 11 boys and 12 girls 16-18 years old, the blood viscosity (BV) after competition in a cycle race usually increased with the length of distance of the race. After a race of 50 km, the BV increased no less than 22%, and in 3 cases increased by 2 times. In differents person, a decrease of BV was observed immediately after the training; its increse followed an absence of changes. Daily sleep after

Card 1/2

FILINSKI, W., METELSKA, H.

Observation on the administration of vitamin K in hemophilia.
Polski tygod. lek. 5:12, 20 Mar. 50. p. 448-50

1. Of the Department of Internal Diseases of the Hospital of Infant Jesus in Warsaw.

CLML 19, 5, Nov., 1950

GLORIOZOV, Pavel Aleksandrovich; METEL'SKAYA, G.S., red.; KORNEYEV, V.I., tekhn. red.

[Forming skills and habits in the teaching of chemistry] Formirovanie umenii i navykov v protsesse obucheniia khimii. Izd.2. Moskva, Uchpedgiz, 1963. 69 p. (MIRA 16:10)
(Chemistry—Study and teaching)

FEL'DT, Vladimir Vasil'yevich; METEL'SKAYA, G.S., red.; DRANNIKOVA, M.S., tekhn. red.

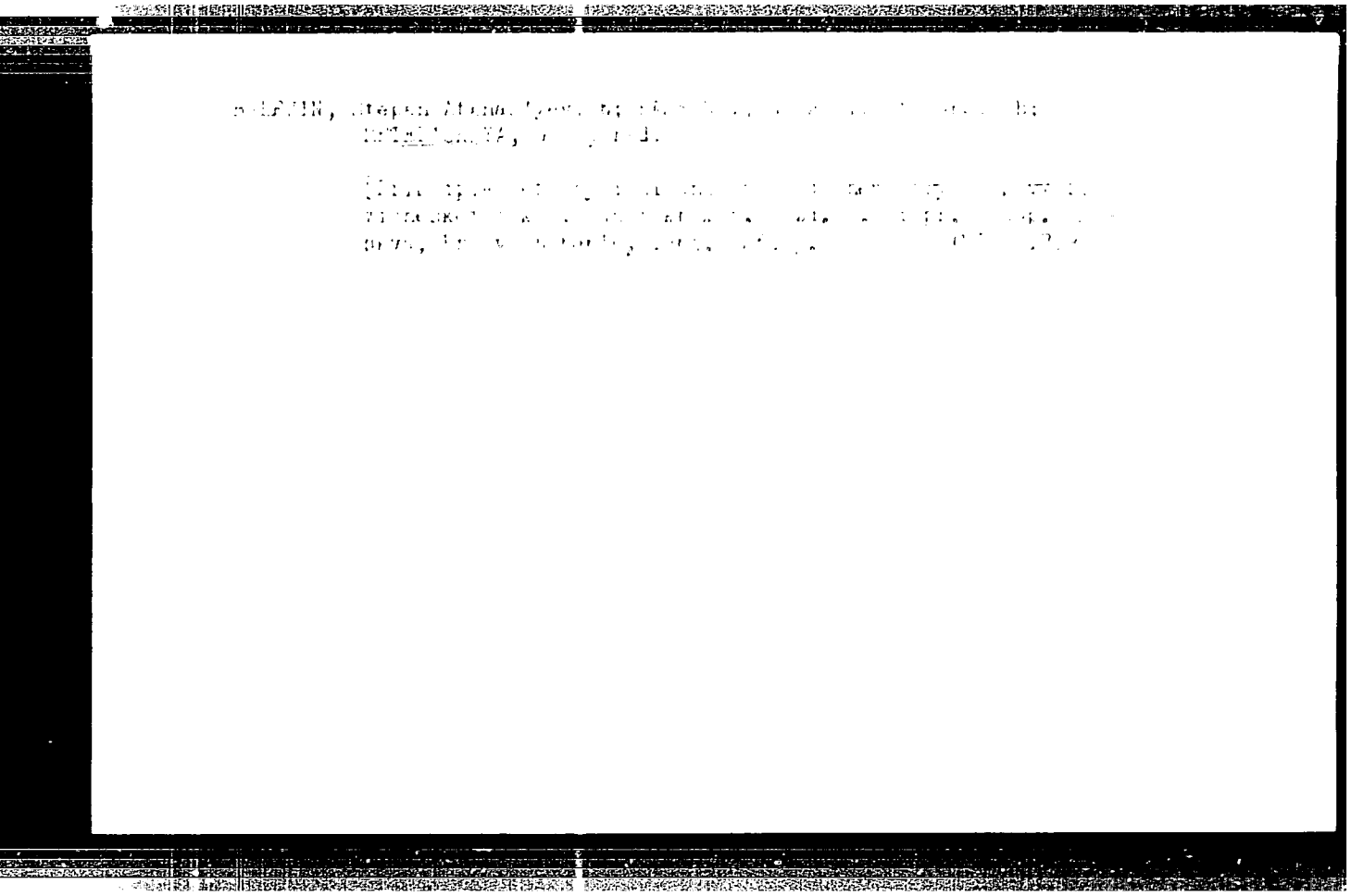
[Drawings in the teaching of chemistry; a teachers' manual] Risunok v prepodavanii khimii; posobie dlia uchitelei. Moskva, Uchpedgiz, 1963. 138 p. (MIRA 16:9)
(Chemistry--Audiovisual aids)

BERDOLOS[illegible] Sergey Gerasimovich; VLASOV, Lev Grigor'yevich;
[illegible], An.N., doktor khim. nauk, prof., retsenzent;
KLY[illegible], N.G., kand. khim. nauk, [illegible], retsenzent;
[illegible]SKAYA, L.S., red.

[Application of radioisotopes; a textbook for teachers] Primenenie radioaktivnykh izotopov; posobie dlia uchitelei. Moskva, Prosveshchenie, 1964. 117 p.
(MIRA 17:6)

BALEZIN, Stepan [illegible]; [illegible] K.Y[illegible], [illegible], red.

[Laboratory work in physical and colloid chemistry for students of chemical and biological faculties of pedagogical institutes] Praktikum po [illegible] i kol-loidnoi khimii dlia studentov khimiko-biologicheskikh fakul'tetov pedagogicheskikh institutov. Izd.[illegible] Moskva, Prosveshchenie, 1964. 238 p. (MIRA [illegible])



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KHODAKOV, Yuriy Vladimirovich, zasl. deyatel' nauki RSFSR;
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[General and inorganic chemistry; a textbook for teachers] Obshchaia i neorganicheskaia khimiia; posobie dlia uchitelei. Izd.3., perer. Moskva, Prosveshchenie, 1965. 710 p. (MIRA 18:6)

SKLYAROVA, A.P.; METEL'SKAYA, G.S., uchitel'nitsa

Preparing students for active assimilation of the study material. Biol. v shkole no.1:43-47 Ja-F '59. (MIRA 12:2)

1. Vologodskiy pedagogicheskiy institut (for Sklyarova). 2. Shkola No.713, Moskva (Metel'skaya)
(Biology--Study and teaching)

KRIKOV, V.I.; DOLGIKH, V.K.; METEL'SKAYA, L.I.

Rationalization of packing work. Apt. delo 14 no.1:57-60 Ja-F '65. (MIRA 18:10)

1. Pyatigorskiy farmatsevticheskiy institut.

KARGIN, V.A.; KABANOV, V.A.; METEL'SKAYA, T.K.

Polymerization on a potassium - carbon black catalyst. Vysokom. soed. 2 no.1:162-165 Ja '60. (MIRA 13:5)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova. Khimicheskiy fakul'tet.
(Polymerization) (Potassium) (Carbon black)

S/190/61/003/009/016/016
B124/B101

AUTHORS: Sogolova, T. I., Metel'skaya, T. K.

TITLE: Effect of anisodiametric-particle fillers on the properties of polymers

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 9, 1961, 1428 - 1429

TEXT: The effect of the shape and dimensions of the filler particle on the properties of polymers was studied on a system consisting of polyisobutylene (molecular weight 670,000) and "lavsan" (polyethylene terephthalate) fiber, diameter 20 μ, and 3 - 10 mm long. The dimensional stability of the lavsan fiber remains unchanged even at temperatures above the vitrification point and the flow point of polyisobutylene, and is, therefore, a convenient filler material. It was shown by thermomechanical studies that the flow point of the system, even with a relatively low fiber content of 5 - 10%, is raised by the introduction of the fibers. When the fiber length had been raised from 3 to 10 mm and the fiber concentration to 30 - 40%, the flow point of the system increased. The

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observed increase of the flow point is due to the rise in viscosity effected by the introduction of anisodiametric particles. This phenomenon is analogous to the increase in viscosity of liquid colloidal systems with an increase in length of the suspended particles, with high-molecular, amorphous polyisobutylene being the dispersion medium and crystalline lavsan fibers the dispersed solid particles in this case. It was established by tensile tests that samples with a high content of long fibers (i. e., with higher viscosity) show strength properties by far superior to the initial polyisobutylene (the strength of polyisobutylene in the systems investigated increases to the 30-fold at most). By an appropriate choice of the particle length of the filler, as well as of its concentration, systems showing high strength and sufficient flow for manufacturing purposes can be obtained. [Abstracter's note: Complete translation.] There are 3 references: 2 Soviet and 1 non-Soviet.

SUBMITTED: July 15, 1961

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S/190/62/004/004/017/019
B117/B138

5,4100
1.606V

AUTHORS: Kargin, V. A., Sogolova, T. I., Metel'skaya, T. K.

TITLE: Effect of fillers with anisodiametric particles on the properties of polymers. I

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 4, no. 4, 1962, 601-604

TEXT: The effect of the shape of filler particles on the mechanical properties of polymers was studied with polyisobutylene (molecular weight 670 000 and 1 400 000) filled with "Lavsan" fiber (polyethylene tetraphthalate; fiber diameter 20μ, length 25-75μ to 10 mm). Tensile tests with films pressed at 80°C showed that strength of the samples and their modulus-50 are already increased at low filler concentration (up to 10%), and that the tensile strength of the samples increases with increasing length of the filler fibers. In compression tests with tablets pressed at 140°C the yield temperature was found to decrease at relatively low filler content (up to 15% by weight) and a fiber length not exceeding 100μ. This may be explained by the effect of the filler on the secondary structures existing in amorphous polymers. In the case of longer fibers (3-10 mm), the yield temperature is increased, i. e., the properties of the high-

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Effect of fillers with anisodiametric...

polymer "liquid" of polyisobutylene are affected by size and shape of the particles similar to colloids. When introducing anisodiametric particles, a correlation between the increase of yield temperature and strength was ascertained. During solidification of the polymer its molecular weight is of great importance. Solidification is greater with lower molecular weight of the polymer. The strength of the polyisobutylene samples with different molecular weights and an equal weight of filler is, however, equalized when filler concentration is increased. Materials with properties required for further processing may be produced by altering the length of the filler particles and the filler content. There are 1 figure and 2 tables. The English-language reference is: P. Flory, J. Amer. Chem. Soc., 65, 372, 1943.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physico-chemical Institute imeni L. Ya. Karpov)

SUBMITTED: April 1, 1961

L 65086-65 EWT(m)/EWA(d)/EWP(v)/T/EWP(t)/EWP(k)/EWP(z)/EWP(b)/EWA(c)
ACCESSION NR: AP5021227 MJW/JD/HM UR/0125/65/000/008/0075/0075
621.791.75:546.621:625.2

AUTHOR: Metel'skiy, A.N. (Engineer); Poritskiy, M.P. (Engineer); Steblovskiy, B.A. (Engineer); Vyshnikov, I.Ye. (Engineer); Polyakov, A.Ye. (Engineer)

TITLE: Welding of sliding freightcar roofs made of AMg6 alloy

SOURCE: Avtomaticheskaya svarka, no. 8, 1965, 75

TOPIC TAGS: sliding freightcar roof, freightcar roof, transloading, freight loading, argon arc spot welding/AMg6 aluminum-magnesium alloy

ABSTRACT: To facilitate transloading operations and shorten their time, the Altay Rolling Stock Building Plant, in collaboration with the Ye. O. Paton Institute of Electric Welding, has designed and built a boxcar with a sliding roof (Fig. 2) made of the AMg6 aluminum-magnesium alloy. The roof (Fig. 1) consists of two parts each of which can be slid by means of power drive in either direction, thus making possible the mechanized loading and unloading of large shipments and bulk freight. Each half-roof consists of a frame atop a plating of 2 mm thick sheets of AMg6 aluminum-magnesium alloy. The welding of these sliding roofs was performed with the aid of a nonconsumable (tungsten) electrode in an argon atmosphere. The frame

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was assembled and welded in a special positioner equipped with locators and adjustable clamps for aligning the ten trapezoidal arches. The plating sheets were simultaneously welded together and welded to the arches, in the following regime: welding current I_w = 130-200 a; tungsten electrode of 3-5 mm diameter; filler wire of 3-5 mm diameter; Q_{argon} = 8-10 liters/min. In addition, the plating sheets were attached to the arches by means of manual argon-arc spot (diameter 12 mm) welding spaced 150 mm apart. Orig. art. has: 2 figures.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 02 SUB CODE: IE, GO

NO REF SOV: 000 OTHER: 000

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