L 9879-63 EWT(1)/BDS/EEC(b)-2--AFFTC/ASD/
ESD-3/SSD--GG/IJP(C)
ACCESSION NR: AP3000788 S/0070/63/008/003/0471/0473

AUTHOR: Petrov, N. S.; Goncharenko, A. M.; Sotskiy, B. A. 61 60

TITLE: Oscillation of a plane parallel anisotropic layer in the presence of total reflection

SOURCE: Kristallografiya, v. 8, no. 3, 1963, 471-473

TOPIC TAGS: oscillation, plane parallel layer, anisotropic medium, negative coefficient of absorption

ABSTRACT: Oscillation in a plane parallel anisotropic layer in which electromagnetic waves are propagated obliquely to the layer's surfaces is analyzed within the framework of linear optics. Two cases are considered: 1) oscillation in the presence of total reflection, rather than oscillation in a layer with metal coatings on both sides, and 2) oscillation with total reflection taking place at a single interface only. It is shown that in the former case a stable oscillation regime cannot be attained for either the ordinary or the extraordinary waves without resorting to high energy densities.

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L 9879-63
ACCESSION NR: AP3000788

and nonlinear theory. However, in the latter case oscillation of both ordinary and extraordinary waves can be attained within the framework of linear optics by changing the Fresnel coefficient of absorption at one of the boundaries. Orig. art. has: 15 formulas.

ASSOCIATION: Institut fiziki AN BSSR (Institute of Physics AN BSSR)

SUBMITTED: 08Oct62 DATE ACQ: 21Jun63 ENCL: 00

SUB CODE: 00 NO REF SOV: 003 OTHER: 000

Cord 2/2

PETROV, N.T.

Treatment of neuralgia of the trigeminal nerve with intra-arterial injection of novocaine. Vest. khir. 71 no.1:13-15 1951. (CIML 20:8)

1. Of the Faculty Surgical Clinic, Minsk Medical Institute (Director of Clinic--N.T. Petrov.).

PETROV, N. I.

LEBEDEV, A.P., kandidat meditsinskikh nauk; PETROV, N.T., professor, zasluzhennyy deyatel' nauki, direktor kliniki.

Erythrocytic therapy in surgery. Vest.khir. 73 no.4:13-16 Jl-Ag '53. (MLRA 6:9)

1. Fakul'tetskaya khirurgicheskaya klinika Minskogo meditsinskogo instituta. (Blood--Transfusion)

PETROV, N.T.

LEBEDEV, A.P., kandidat meditsinskikh nauk; PETROV, N.T., professor, zaslushennyy deyatel' nauki, direktor.

Case of polyneuritis in subacute osteomyelitis. Vest.khir. 73 no.5:55-56 S-O '53. (MLRA 6:11)

1. Fakul'tetskaya khirurgicheskaya klinika Minskogo meditsinskogo instituta.
(Osteomyelitis) (Neuritis)

PETROV, Nikolay Vasil'yevich; VYSOTSKAYA, R.S., redaktor; GOLUBKOVA, L.A., tekhnicheskiy redaktor

[Inspecting the quality of grain products and oil cakes] Inspektirovanie kachestva zernoproduktov i zhmykhov. Moskva, Izd-vo tekhn. i ekon. lit-ry po voprosam mukomol'noi, krupianoi, kombikormovoi promyshl. i elevatorno-skladskogo khoziaistva, 1956. 55 p. (MLRA 10:3)
(Oilseeds) (Grain)

[redacted]

[redacted]

[redacted]

FEDOROVA, Z.D., kand.med.nauk; KOTOVSHCHIKOVA, M.A., kand.biolog.nauk; PETROV, N.V., zasluzhennyy vrach Estonskoy SSR

Some observations on the use of BK-8. Akt.vop.perel.krovi no.7: 352-357 '59. (MIRA 13:1)

1. Laboratoriya sukhikh preparatov krovi i krovozameniteley (zav. - prof. L.G. Bogomolova) Leningradskogo instituta perelivaniya krovi i klinika obshchey khirurgii I Leningradskogo meditsinskogo institua im. akad. I.P. Pavlova (zav. klinikoy - chlen-korrespondent AMN SSSR prof. A.N. Filatov).
(BLOOD PLASMA SUBSTITUTES)

PETROV, N. V. and BATAN[illegible], [illegible]. V.

[illegible]tal'nye pruzhiny; tekhnologiia izgotovleniia i zashchita ot korrozii. Moskva, Mashgiz, 1950. 213 (i.e. 231) p. diagrs.

Bibliography: p. [230].

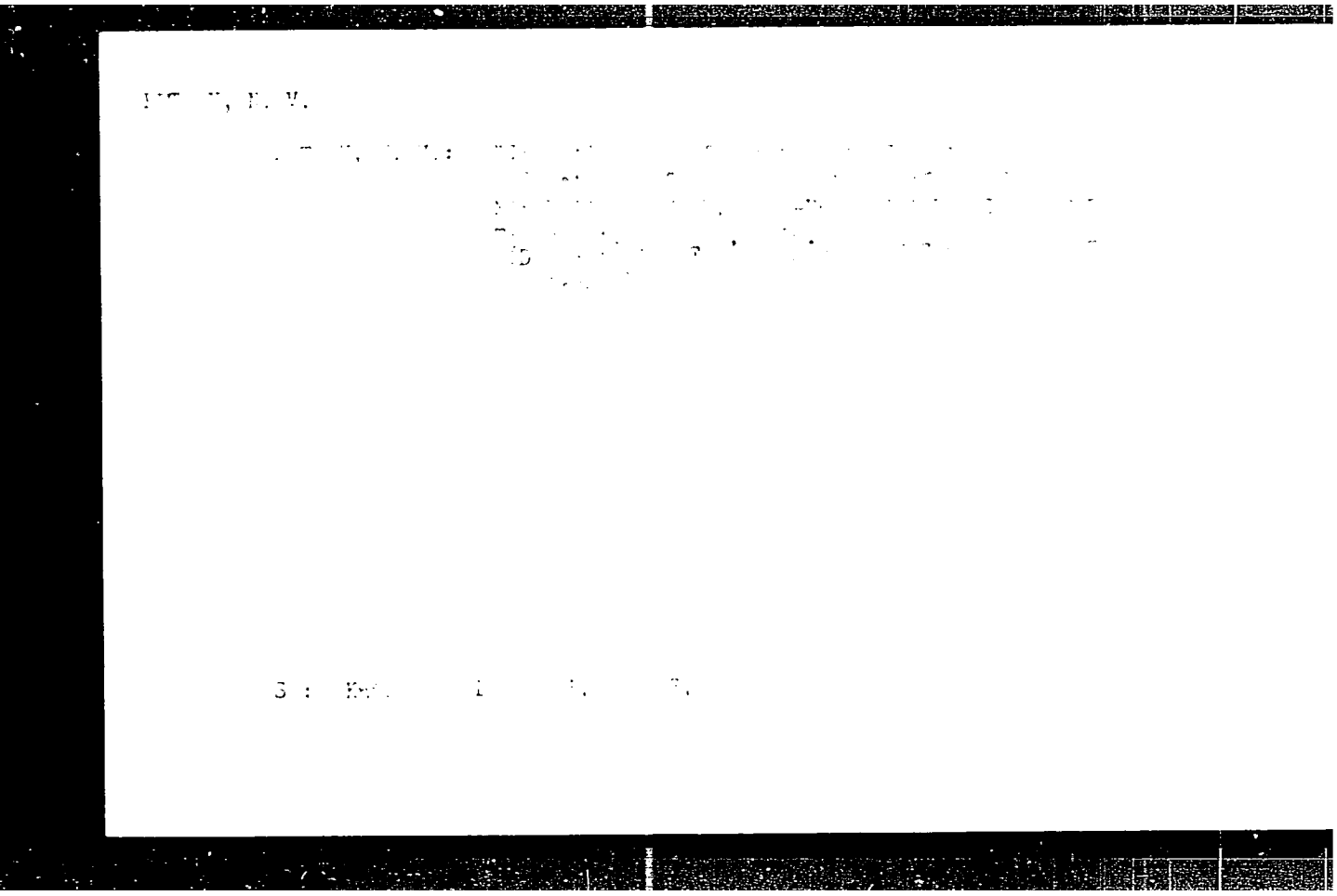
Steel springs; technique of production and protection against corrosion.

DLC: TJ210.B3

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

PETROV, N.V., kand.tekhn.nauk

Synthetic materials for the superstructure. Put' i put.khoz. 8 no.3:16-19 '64. (MIRA 17:3)



PETROV, N.V., kand.tekhn.nauk

A system of ballast prism cleaning is needed. Put' i put.khoz. no.12:33-35 D '57. (MIRA 10:12)

(Ballast (Railroads))

PETROV, N.V., kand.tekhn. nauk.; PINUS, A.D., inzh.

Prolonging the life of poles. Avtom., telem. i sviaz' 2 no.10:14-16 O '58. (MIRA 11:10)
(Railroads--Communication systems)

PEKHOV, N.V., kand. tekhn. nauk.

Determining the accumulation of clogging matter in crushed stone ballast. Vest. TSNII MPS 17 no.2:34-38 Mr '58. (MIRA 11:4)
(Ballast (Railroads))

KUTEYNIKOV, A.F.; PETROV, N.V.; CHUMAKOV, V.D.

Indirect complexometric determination of carbon. Zav. lab. 31 no.11:1326 '65. (MIRA 19:1)

PETROV, N.V., kand.tekhn.nauk; KUZ'MIN, V.V., inzh.

Spring fastenings with double-layer clamps for reinforced concrete ties. Vest.TSNII MPS 22 no.6:8-11 '63. (MIRA 16:10)

PETROV, N.V.; PATENOVSKAYA, M.I., red.; BOROVNEV, N.K., tekhn. red.

[Safety manual for fitters engaged in interior sanitary engineering] Pamiatka po tekhnike bezopasnosti dlia slesaria-santekhnika po vnutrennim sanitarno-tekhnicheskim rabotam. Izd.2., perer. i dop. Moskva, Gosstroiizdat, 1963. 23 p. (MIRA 17:2)

ZVEREV, B.N., kand. tekhn. nauk; PETROV, N.V., kand. tekhn. nauk;
GAYDAMAKA, P.S., inzh.; YAKHOV, M.S., kand. tekhn. nauk;
PETROVA, V.L., red.; DROZDOVA, N.D., tekhn. red.

[New design for rail fastenings] Novye konstruktsii rel'-
sovykh skreplenii. [By] B.N.Zverev i dr. Moskva, Transzhel-
dorizdat, 1963. 62 p. (MIRA 16:7)
(Railroads--Rails--Fastenings)

SENCHILO, Ye.A., kand.med.nauk (Leningrad, ul. Rakova, d.16, kv.68);
PETROV, N.V., dotsent

Some data on the clinical effectiveness of polyvinal. Vest. khir. no.8:79-83 '61. (MIRA 15:3)

1. Iz laboratorii sukhikh preparatov krovi (zav. - prof. L.G. Bogomolova), khirurgicheskoy kliniki (zav. - prof. A.N. Filatov) Leningradskogo ordena Trudovogo Krasnogo Znameni nauchno-issledovatel'skogo instituta perelivaniya krovi i kliniki obshchey khirurgii 1-go Leningradskogo meditsinskogo instituta im. I.P. Pavlova.
(BLOOD PLASMA SUBSTITUTES)

BRUK, I.I., inzh.; KON, M.L., inzh.; PETROV, N.V., inzh.

Performance of the steam superheaters of coiler Martenov waste-heat boilers. Prom.energ. 17 no.5:16-21 My '62. (MIRA 15:5)
(Boilers) (Superheaters)

ROMANKEVICH, Ye.A.; PETROV, N.V.

Oxidation-reduction potential and the pH of sediments in the north-eastern part of the Pacific Ocean. Trudy Inst.okean. 45:72-85 '61. (MIRA 15:2)
(Pacific Ocean--Sediments (Geology)) (Oxidation-reduction reaction) (Hydrogen-ion concentration)

PETROV, N.V., kand.tekhn.nauk; RABINOVICH, G.D., kand.tekhn.nauk

Electric resistance of reinforced-concrete ties. Put' i put.khoz. 5 no.4:13-15 Ap '61. (MIRA 14:7)
(Railroads—Ties, Concrete)

PETROV, N.V.; PINUS, A.D.

[Measures to prolong the life of the poles of communication lines and of high-voltage automatic block-signal lines] Meropriiatiia po prodleniiu sroka sluzhby stolbov linii sviazi i vysokovol'tno-signal'nykh linii avtoblokirovki. Moskva, 1959. 18 p. (Moscow. Vsesoiuznyi nauchno-issledovatel'skii institut zheleznodorozhnogo transporta. Soobshchenie, no.2). (MIRA 13:9)
(Wood--Preservation) (Electric lines--Poles)

PROCESSES AND PROPERTIES INDEX

B-II-8

Rapid separate determination of nitrogen peroxide and nitric oxide in the gases of tower-process sulphuric acid factories. M. N. [illegible] and O. D. [illegible] (Zavod. Lab., 1936, 5, 290—291).—500 ml. of gas are bubbled through 4 wash-bottles each containing 20 ml. of distilled H_2O, 20 ml. of Griess reagent and 2 ml. of 80% AcOH are added, the solution is warmed to dissolve any ppt. formed, then diluted to 1 litre, and 25 ml. of the solution are added to 150 ml. of hot H_2O. 2 ml. of Griess reagent and 20 drops of 80% AcOH are added to 150 ml. of H_2O, and the solution is titrated with standard $NaNO_2$ until the colour matches that of the above solution, whence the $NO + NO_2$ content is calc. The NO content in excess of that corresponding with N_2O_3 is determined similarly in the gas after absorption in H_2SO_4.

R. T.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

PETROV, N.V.

[Inspecting the quality of grain products and oilseed cakes] Inspektirovanie kachestva zernoproduktov i zhmykhov. Izd.2., dop. Moskva, Izd-vo tekhn. i ekon.lit-ry po voprosam mukomol'no-krupianoi, kombikormovoi promyshl. i elevatorno-skladskogo khoz., 1959. 85 p. (MIRA 13:10)
(Grain--Grading)

PETROV, O.

A man who outdistanced time ("Zhukovskii" by M.Arlazorov. Reviewed by O.Petrov). Mir.tekh. 4 no.2:64-65 F '60.
(MIRA 13:6)

(Zhukovskii, Nikolai Egorovich, 1847 - 1921)
(Arlazorov, M.)

PETROV, O., inzh.

Large panel apartment houses in areas under development. Zhil.-stroi. no.3:32 '62. (MIRA 15:9)
(Apartment houses)

PETROV, O.A., inzh.; PYASTOLOV, V.I., inzh.

Using arc suppression coils in 6 kw circuits in mines.
Ugol' 40 no.11:30-32 '65. (MIRA 18:11)

SHIKHOV, V.N.; SITNIKOV, V.P.; PETROV, O.A.

Semiconductor meter of the magnitudes of charges of static electricity. Izv. vys. ucheb. zav.; prib. 8 no.5:24-26 '65. (MIRA 18:10

1. Ural'skiy politekhnicheskiy institut. Rekomendovana kafedroy tekhniki bezopasnosti.

L 16909-66 EWT(d)/T/EWP(1) IJP(c) GG/BB/GS

ACC NR: AT6004687 SOURCE CODE: UR/0000/65/000/000/0025/0029

AUTHOR: Turbovich, I. T.; Petrov, O. A.

ORG: none

TITLE: A method for the complete description of unidimensional patterns by means of the totality of simple functions (applicable to speech signals) [Paper presented at a Scientific Conference of IPPI AN SSSR 11 December 1963]

SOURCE: AN SSSR. Institut problem peredachi informatsii. Opoznaniye obrazov. Teoriya peredachi informatsii (Pattern recognition. Theory of information transmission). Moscow, Izd-vo Nauka, 1965, 25-29

TOPIC TAGS: pattern recognition, speech recognition

ABSTRACT: One of the basic problems in unidimensional pattern recognition is the establishment of appropriate characteristics (functionals) which differ little for all the realizations of the given pattern and differ substantially from the realizations of all other possible patterns. A significant simplification can be achieved by performing a preliminary decomposition of a complete description into a set of several simple descriptions. The present article outlines theoretically and experimentally one of

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ACC NR: AT6004687

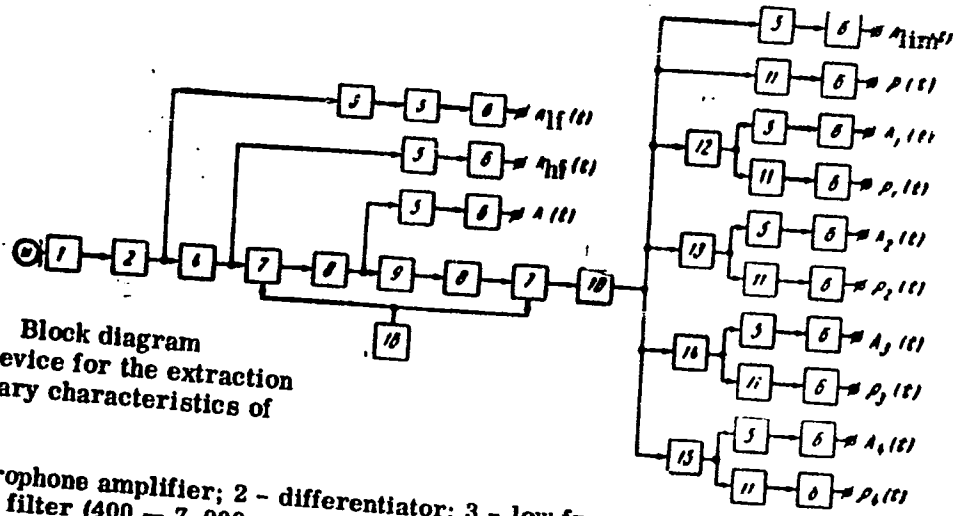

Fig. 1. Block diagram of the device for the extraction of primary characteristics of speech.

1 - Microphone amplifier; 2 - differentiator; 3 - low frequency filter (0-400 cps); 4 - band filter (400 — 7,000 cps); 5 - detector; 6 - low frequency filter (0 — 50 cps); 7 - balancer modulator; 8 - band filter (25 400 — 3,200 cps); 9 - limiter; 10 - low frequency filter (0 — 7,000 cps); 11 - standard pulse shaper; 12 - band filter (400 — 900 cps); 13 - band filter (900 — 2,000 cps); 14 - band filter (2,000 — 4,000 cps); 15 - band filter (4,000 — 7,000 cps); 16 - quartz generator (25Kc).

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L 16909-66
ACC NR: AT6004687

such possible decompositions in which a quasi-harmonic signal is split into an instantaneous amplitude signal and an instantaneous frequency signal. The basic theoretical relationships are applied to human speech and the results of the theoretical development are tested by means of an experimental setup (Fig. 1). The unit processed the primary characteristics of 15 letter sounds dictated by 40 persons. The analysis of the statistical data showed that the set of primary characteristics simplifies sufficiently the original signals and allows the establishment of invariant characteristics needed for reliable identification of letters. Authors thank Cand. of Techn. Sci. A.V. Knipper for his help in the development of the experimental equipment. Orig. art. has: 7 formulas and 1 table.

SUB CODE: 05 / SUBM DATE: 25Sep65 / ORIG REF: 006/OTH REF: 001

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L 16908-66 EWT(d)/T/EWP(i) IJP(c) GG/BB/GS
ACC NR: AT6004688 SOURCE CODE: UR/0000/65/000/000/0030/0036

67
63
B+1

AUTHOR: Petrov, O.A.

ORG: none

TITLE: Statistical processing of primary characteristics of speech signals on electronic computers [Paper presented at a seminar of IPPI AN SSSR 11 November 1964]

SOURCE: AN SSSR. Institut problem peredachi informatsii. Opoznaniye obrazov. Teoriya peredachi informatsii (Pattern recognition. Theory of information transmission). Moscow, Izd-vo Nauka, 1965, 30-36

TOPIC TAGS: pattern recognition, speech recognition, data processing, electronic computer

ABSTRACT: The article reports on the qualitative estimate of a newly proposed set of primary speech signal characteristics by the statistical processing on an electronic computer of 15 letter sounds dictated by 40 persons. The study covers 1) the estimate of the feasibility of a simple establishment of invariant functionals characterizing a group of sounds or separate sounds; 2) the estimate of the feasibility of primary functionals description by averaging the characteristics over the various speakers

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involved; 3) the study of the effectiveness of a linear normalization of letter sound production duration; and 4) the feasibility of primary functional description by means of normal distribution low parameters. An analysis of the statistical results shows that it is possible to extract by simple devices a sufficient number of invariant characteristics needed for a reliable recognition of a set of letter sounds. However, the problem of the establishment of characteristics by means of normal distribution parameters still remains unclear. It is possible that this approach may work in conjunction with the sound production duration normalization. Author thanks Dr. of Tech. Sci. I. T. Turbovich and Cand. of Techn. Sci. A. V. Knipper for valuable advice, and Engineers V. Ye. Gumenyuk and V. A. Myslivets for their help. Orig. art. has: 5 figures and 1 table.

SUB CODE: 05, 09 / SUBM DATE: 25Sep65 / ORIG REF: 002

L 29672-66 EEC(k)-2/EWT(d)
ACC NR: AP6009172 SOURCE CODE: UR/0146/65/008/005/0024/0026

AUTHOR: Shikhov, V. N.; Sitnikov, V. P.; Petrov, O. A.

ORG: Ural Polytechnic Institute im. S. M. Kirov (Ural'skiy politekhnicheskiy institut); Chelyabinsk Polytechnic Institute (Chelyabinskiy politekhnicheskiy institut)

TITLE: Semiconductor instrument for measuring static-electricity charge

SOURCE: IVUZ. Priborostroyeniye, v. 8, no. 5, 1965, 24-26

TOPIC TAGS: electricity, ~~static~~ electricity measurement

ABSTRACT: The development of a new semiconductor instrument for measuring electrostatic potential or surface charge density is briefly reported. Operating on the well-known electrostatic-generator principle, the instrument includes a 3-stage transistorized (P13A) amplifier with a gain of 30--40 in each stage; the instrument's circuit diagram is shown. The laboratory model has a range of 10^{-12}--10^{-9} coulombs/cm^2. The instrument is intended for measuring static electricity charges in the textile, printing, petroleum, paper, and other industries. Orig. art. has: 1 figure.

SUB CODE: 09 / SUBM DATE: 04Jul64 / ORIG REF: 008

Card 1/1 UDC: 621.317.713

ACC NR: AT6004685 SOURCE CODE: UR/0000/65/000/000/0016/0020

AUTHOR: Knipper, A.V.; Petrov, O.A.; Turbovich, I.T.

ORG: none

TITLE: The feasibility of obtaining the characteristics of unidimensional patterns which are scale invariant [Paper presented at a Scientific Conference of IPPI AN SSSR on 10 April 1964]

SOURCE: AN SSSR. Institut problem peredachi informatsii. Opoznaniye obrazov. Teoriya peredachi informatsii (Pattern recognition. Theory of information transmission). Moscow, Izd-vo Nauka, 1965, 16-20

TOPIC TAGS: speech recognition, pattern recognition, speech signal

ABSTRACT: In the classification of functions which describe patterns, it is often expedient to put into a single class functions which are similar in form but which differ in the scale of the independent variable and of the function itself. Thus, the functions $y = f(t)$ and $y_1 = \lambda f(\mu t)$ would belong to the same class for arbitrary λ and μ. The present paper outlines a method for the description of the y(t) function which is invariant to both types of scale changes. This approach for the establishment of appropriate

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[illegible], V.I.; [illegible], [illegible].A.

Experience in the operation of the [illegible] protection system. Ugol' 39 no.10:48-50 [illegible] (MIRA [illegible])

1. Chelyabinskiy politekhnicheskiy institut.

ZHILINSKIY, O.V.; KOZLOV, V.A.; MIKHAL'KEVICH, I.V.; PETROV, O.D.

Hydraulic system of a broaching machine with two-position safety valves. Stan.i instr. 32 no.6:36-37 Je '61. (MIRA 14:6)
(Broaching machines--Hydraulic driving)

ZHILINSKIY, O.V., inzh.; KOVZEL', N.I., inzh.; LEMESHONOK, V.D., inzh.; PETROV, O.D., inzh.

Automatic broaching machine for machining bimetallic bushings. Vest.mashinostr. 43 no.8:57-60 Ag '63. (MIRA 16:9)
(Broaching machines)

RABINOVICH, Ye.Ya., inzh.; PETROV, O.D., inzh.; ZIL'BERBERG, A.M., inzh.

The new D-451 bucket loader. Stroi. i dor.mashinostr. 4 no.6:15-19 Je '59. (MIRA 12:8)
(Road machinery)

15-8360

30223

S/081/61/000/019/072/085
B117/B110

AUTHORS: Kurmayev, A. D., Petrov, O. L.

TITLE: Antifriction material ЭТ-52 (ETS-52) on the basis of epoxy resin and thiocol

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 19, 1961, 481, abstract 19P40 (Tr. Kazansk. khim.-tekhnol. in-ta. no. 29, 1960, 115 - 120)

TEXT: A new antifriction material, ETS-52, is proposed. It was obtained from 100 g of epoxy resin ЭД-6 (ED-6), 25 g of low-molecular thiocol ЛП-2 (LP-2), 10 g of dibutyl phthalate, 10 g of polyethylene polyamine, 100 - 200 g of marshalite, 50 - 100 g of second-quality graphite of the type СХАН (SKhAN). After the components were mixed a homogeneous mass was obtained, which was filled into various molds for hardening. At ~20°C hardening takes 5 - 6 hours, and at 60° - 70°C it takes 1.5 - 2 hours. For comparison the finished samples, together with bronze samples (БРАЖ 9-4 (BRAZh 9-4)), were subjected, to comparative frictional tests lasting

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Antifriction material ЭТС -52 (ETS-52)... S/081/61/000/019/072/085
B117/B110

5 minutes without lubrication, using a steel disk hardened to 160 kg/mm^2 (specific pressure 10 kg/cm^2, rate 0.63 m/sec. 600 rpm). In all the tests the bronze samples suffered greater losses (0.0162 as against 0.0014 with cooling and 0.0041 without cooling). ETS-52 possesses good physical and mechanical properties; its wear resistance is 5-6 times higher than that of bronze; specific gravity 1.35 - 1.52; frictional coefficient on polished steel, without lubrication, 0.020; it does not swell in gasoline. ETS-52 absorbs 1/10 - 1/30 of the amount of water absorbed by polyamides (0.01 % within 24 hours at 20°C). Its thermal conductivity and hardness are higher than in polyamides. The strong adhesion of ETS-52 to metal makes it possible to take it as a basis for the creation of bimetallic products. A disadvantage of ETS-52 is its low tensile and static bending strength in comparison with polyamides. [Abstracter's note: Complete translation.]

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S/737/61/000/000/006/010

AUTHOR: Petrov, O.I., Engineer.

TITLE: Optimal heat-treatment procedures for X17H2 (Kh17N2) Steel.

SOURCE: Stal', sbornik statey. Ed. by A.M. Yampol'skiy. Moscow. 1961, 447-454.

TEXT: Optimal quench temperatures (QT) and tempering temperatures (TT) and soaking times were established to obtain high resilience and ductility in the stainless steel X17H2 (Kh17N2) - basically designated as ЭИ-268 (EI-268). Kh17N2 is a martensitic-ferritic steel with good corrosion and strength properties, except for a marked strength anisotropy: E.g., the resilience (notch toughness) of tangential specimens is 50-70% lower than that of cross-cut specimens. The anisotropy has been attributed to δ-ferrite which, upon hot working, forms ferritic filaments. G.A. Khasin and L.I. Posysayev [The dependence of the structural characteristics of X17H2 (Kh17N2) steel on its treatment (in Russian). In sbornik "Metallovedeniye i termicheskaya obrabotka," Metallurgizdat, 1959 7 denote that the quantity of δ-ferrite at high temperatures can be regulated by the content of the C, Cr, and Ni in the steel. The present investigation of optimal heat-treatment procedures was done on a given steel of the following chemical composition

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(in %): C 0.15, S 0.010, P 0.028, Si 0.42, Cr 17.20, Mn 0.76, Ni 1.90). Tensile-testing and notched toughness-testing specimens were made in accordance with extant All-Union "GOST" Standards. The specimens were quenched in oil from 980, 1030, and 1070°C and tempered at various temperatures (240 to 550°C) and times (1 to 6 hours) with subsequent air-cooling. Maximum tensile strength was obtained at 1030° QT, minimum at 980°; these findings concur with those of other authors. Tempering raises the tensile strength up to about 450°C (≈140 kg/mm^2) TT; at yet higher TT the tensile strength drops below that required by the engineering-specifications (ES), viz., 110-130 kg/mm^2. Ductility and toughness of specimens quenched at 1030° improve with increase in TT from 300 to 450°; at 500° there is a dip, but at higher TT a further rise occurs. Similar behavior obtains in steel with higher or lower QT; the highest absolute peak values are achieved with a QT of 1070°C. Steel quenched from 980°C and tempered at 500° falls even below the lower toughness limit (5.5 kgm/cm^2) of the ES; this finding militates against the heat-treatment procedure recommended by the current All-Union Standard GOST 5949-51. Tempering time is much less important than the TT. Generally, longer times reduce the hardness of this steel, especially with higher C content. Toughness and ductility for 550° TT are best after 4 hours; at 360° TT after 1 hour. Practical times are 1-2 hours. Production samples with fairly broad variations in composition were tested (distribution frequency curves are shown). 60% of the specimens had a

tensile strength of 130-135 kg/mm^2; maximal toughness was 6.6-7.5 kgm/cm^2, necking 58-61%, elongation 13-14.5%. Ductility and toughness of specimens with a QT of 1030° were half of that of specimens with a QT of 1070°; the same occurs in specimens with a Cr/Ni ratio of 10-12 (Khasin and Posysayev recommend a ratio of 6.5-8.5). Hardness tests of the interior of tempered specimens indicated a marked optimum at QT 1030°C, even though the difference in R_C hardness numbers between the exterior surface and the core sample is 6.0 (details of a test are illustrated). Corrosion tests were made on specimens oil-quenched at 980 and 1070° and tempered at 230, 370, 500, and 550°C for 1 and 4 hours. General corrosion tests were made on polished disks, 28 mm dia and 2.5 mm thick, exposed in a fog chamber with a relative humidity of 98%. Intercrystalline-corrosion tests were made on specimens as prescribed by GOST 6032-58 Standard (method AM) in 24-hour soakings in a boiling bath of $CuSO_4 \cdot 5H_2O$ (160 g), H_2SO_4 (100 cm^3, spec.grav.1.835), H_2O (1 liter), with copper shavings. There was no detectable tendency toward intercrystalline corrosion either in low-TT or in high-TT quenched specimens. There are 5 figures and the one (unnumbered) Russian-language Soviet reference cited in the abstract.

ASSOCIATION: None given.

Card 3/3

S/191/61/000/001/010/015
B101/B205

AUTHORS: Petrov, O. L., Kurmayev, A. D.

TITLE: Antifriction compositions on the basis of thiocols and epoxy resins

PERIODICAL: Plasticheskiye massy, no. 1, 1961, 46-48

TEXT: In view of the fact that: 1) epoxy resins can be rendered insoluble and unswelling in petroleum products by adding thiocols; 2) such compositions have a high bending strength and are water-repellent, the application of such compositions as antifriction material has been studied. High-molecular thiocols of the types "A" ("A"), "ДА" ("DA"), and "ФТ-1" ("FT-1") easily combine with epoxy resins (ER) when slightly heated. Low-molecular thiocols of the type "ЛП" ("LP") combine with ER at room temperature: $2R'\text{-}CH_2\text{-}CH\text{-}CH_2 + 2RSH \rightarrow R'\text{-}CH_2\text{-}CH(OH)\text{-}CH_2\text{-}R\text{-}S\text{-}S\text{-}R$ (R: thiocol radical; R': ER radical). The results of abrasion tests on a lathe were compared with БрАЖ9-4 (BrAZh9-4) bronze. The tests were made with a steel disk (maximum strength: 160 kg/mm^2) without lubrication:

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duration; 5 min; specific pressure: 10 kg/cm^2; rate; 0.63 m/sec. With the use of compressed air, the steel disk had a temperature of 70-100°C, and without compressed air, 170-210°C. The composition with the best properties has been designated ЭТС-52 (ETS-52). Its weight loss by abrasion was 4.1 mg without compressed air, and 1.4 mg with compressed air (bronze; 16.2 mg). Abrasion caused neither piercing noises nor smoke. The following physico-mechanical data are presented for this composition; limit of strength (kg/cm^2) on elongation; 366.0; on compression; 1009.4; on bending; 380.0; specific gravity; 1.43 g/cm^3; coefficient of friction on steel without lubrication; 0.020; no swelling in gasoline at 20°C for 24 hr; in transformer oil, swelling by 0.0007%; water adsorption at 20°C for 24 hr; 0.01%; at boiling point after 1 hr 0.1%. ETS-52 has only 1/10-1/30 of the hygroscopicity of polyamides, but is harder, can be used without lubrication, and has a lower coefficient of friction. On account of its good adhesiveness, bimetallic products may be obtained by the following method: Thiocol, a plasticizer, a hardener, and a filler are successively added to slightly heated NR, then the mass is mixed and poured into molds for hardening. Duration of hardening; 1.5-6 hr. Neither H_2S nor mercaptanes are formed. Bushes [illegible]

Card 2/3

Antifriction compositions on...

the gear box of a T[illegible]-135 (TS-135) lathe and friction bearings for the cantilever of a "Wanderer" horizontal milling machine were made from LTS-52. The following conditions are given for the treatment of the non-ferrous alloy [illegible]16T (D16T), [illegible] (ZOKhGSA) steel, and [illegible]95T (V95T): feed: 36-85 mm/min; speed: 80-200/min. The test results obtained for three bushes of the TS-135 lathe are illustrated in Fig.4. There are 4 figures. and 4 Soviet-bloc references.

Legend to Fig.4: a) Duration of test, months; b) increase in internal diameter.

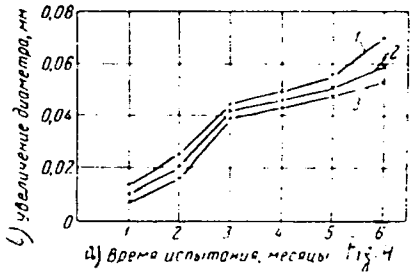


Fig.4

Card 3/3

PETROV, O.L., inzh.

Heat treatment of low-carbon structural steels (with summary in English). Stal' 19 no.1:81-85 Ja '59. (MIRA 12:1)
(Steel, Structural--Heat treatment)

PETROV, O.L.; TSYGANKOV, A.A.

Use of anodized aluminum shells. Lit. proizv. no.1:38 Ja '62.
(MIRA 16:8)
(Shell molding (Founding))

AUTHOR: Petrov, O.L., Engineer SOV/133-59-1-19/23

TITLE: Thermal Treatment of Structural Low-carbon Steels (Termicheskaya obrabotka konstruktsionnykh malouglerodistykh staley)

PERIODICAL: Stal', 1959, Nr 1, pp 84 - 85 (USSR)

ABSTRACT: The possibility of improving strength and some other mechanical properties of low-carbon structural steels by an appropriate thermal treatment was investigated. Specimens from rolled steels St. 3kp, 20 and St. 0 were taken for the investigation. In order to establish the optimum annealing temperature, tensile and impact specimens were hardened from 920 °C in water (about 16 °C) and annealed at temperatures from 200 to 700 °C at 100 ° intervals with the soaking time of 40 min. The dependence of mechanical properties of hardened steels on the annealing temperatures are shown in Figure 1; the microstructure of St.3 steel before and after hardening and annealing at 200, 450 and 700 °C - Figure 2; the results of tests for hardenability, the dependence of impact strength on the temperature of the test and the results of fatigue tests are shown in Figures 3, 4 and 5, respectively. It was found that hardening from 920 °C in water (16 °C) with subsequent annealing at 450 °C

Card1/2

Thermal Treatment of Structural Low-carbon Steels

considerably increases the strength of machine parts, permitting a corresponding decrease in their weight. The metal and machine parts so treated can be used at low temperatures (up to - 70 °C).
There are 5 figures and 6 Soviet references.

Card 2/2

PETROV, O. M.

"Pleistocene stratigraphy and outline of the Pleistocene history of [illegible] Peninsula, northeastern Siberia."

report submitted for the 7th Int. Cong., Intl Assoc for Quaternary Research, Boulder & Denver, Colorado, 30 Aug-[illegible] Sep 65.

MERKLIN, Roman L'vovich ; PETROV, Oleg Mikhaylovich; AMITROV, Oleg Vladimirovich; MENNER, V.V., otv. red.; NEVESSKAYA, L.A., red. izd-va; SIMKINA, G.S., tekhn. red.

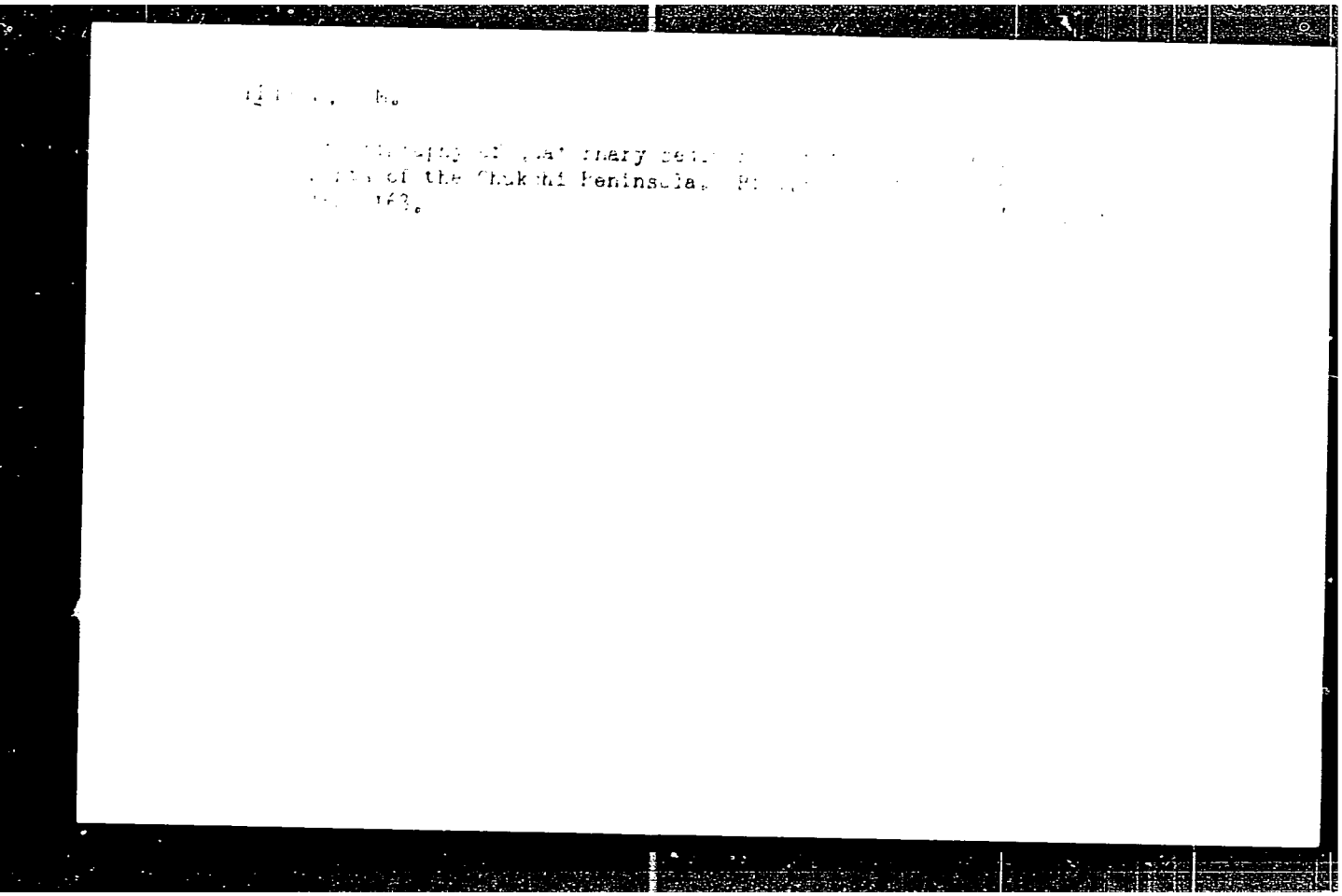
[Atlas for the identification of mollusks in Quaternary sediments of the Chukchi Peninsula] Atlas-opredelitel' molliuskov chetvertichnykh otlozhenii Chukotskogo poluostrova. Moskva, Izd-vo Akad. nauk SSSR, 1962. 56 p. 12 tables. (MIRA 15:5)
(Chukchi Peninsula—Mollusks, Fossil—Classification)

MERKLIN, R.I.; PETROV, O.M.; GOPKINS, D.M. [Hopkins, D.]; MAK-NEIL, F.S. [McNeil, F.S.]

Attempting the correlation of late Cenozoic marine sediments in the Chukchi Peninsula, northeastern Siberia, and western Alaska. Izv. AN SSSR. Ser. geol. 29 no.10:44-57 O '64.

(MIRA 17:11)

1. Paleontologicheskiy institut AN SSSR, Geologicheskiy institut AN SSSR, Moskva i Geologicheskaya sluzhba SShA, Kaliforniya.



PETROV O.S.

Application of the unitary transformation method to the calculation of atom terms. Trudy Ural. politekh. inst. no.92:5-18 '59. (MIRA 13:12)

(Atoms) (Quantum theory)

PETROV, O.S.

Calculating the spectrum of lithium-like ions. Trudy Ural. politekh. inst. no.92:19-24 '59. (MIRA 13:12)
(Ionic crystals--Spectra)

PETROV, O.S.

Dissertation defended for the degree of Candidate of Physicomathematical Sciences at the Institute of Metal Physics in 1962:

"Application of the Method of Successive Unitary Transformations to Calculations of Atomic Spectra."

Vest. Akad. Nauk SSSR. No. 4, Moscow, 1963, pages 119-145

PETROV, O.S.

Application of the unitary transformation for calculation of atomic states. Opt. i spectr. 5 no.3:225-235 S '58. (MIRA 11:10)

1.Ural'skiy politekhnicheskiy institut im. S.M. Kirova.
(Quantum theory)

AUTHOR: Petrov, C.S.

TITLE: Application of the Unitary Transformation to the Calculation of Atomic Terms (Primeneniye unitarnogo preobrazovaniya k raschetu termov atomov)

PERIODICAL: Optika i Spektroskopiya, 1958, Vol 5, Nr 3, pp 335-338 (USSR)

ABSTRACT: The exact solution of the Schrödinger equation is possible only for hydrogen-like ions. To calculate the terms of complex atoms various approximate methods are used, such as the statistical Thomas-Fermi method, Hartree-Fock method and variational methods (Refs 1-4). The present paper describes an approach which is based on calculations of perturbations by means of successive unitary transformations which diagonalize the Hamiltonian operator of the atomic system. The possibility of use of successive unitary transformations in the perturbation theory was mentioned in a short note by Kemmer (Ref 5). The present author describes a calculation method which differs from that of Kemmer and, in contrast to Kemmer, it is applied to [illegible]. Successive application of the unitary transformations to the operator matrix decreases the value of the non-diagonal elements of the matrix

Card 1/2

Application of the Unitary Transformation to the Calculation of Atomic [illegible]

at each transformation, until they become negligibly small. On application of the described calculation method to helium-like lithium-like ions it was found that even in a rough approximation this method yields the value of the ground term with an error [illegible] yet inferior to that of the variational methods. It is thought use of more precise approximations will improve the results. described is simpler than variational methods, and it gives restrictions on the limit of precision obtainable. The [illegible] S.V. Vonsovskiy for his help and P.P. Parinskiy who made [illegible] their advice. There are [illegible] mathematical appendix and bibliography, 1 of which is Soviet, 3 English, 1 German and [illegible]

ASSOCIATION: Ural'skiy politekhnicheskiy institut im. S. . Kirova (Ural Polytechnical Institute imeni S... Kirov)

SUBMITTED: September 9, 195[illegible]

Card [illegible]

1. Ions--Mathematical analysis 2. Mathematics--Theory

PETROV, O.S., Cand Phys-Math Sci -- "Application of the method of consecutive unitary transformations to the calculation of atomic spectra." Sverdlovsk, 1961. (Ural Branch Acad Sci USSR) (KL 8-61, 228)

L 45404-66 EWT(d) IJP(c)

ACC NR: AR6016621 SOURCE CODE: UR/0044/65/000/012/B123/B123

AUTHOR: Petrov, O. S.

30 B

TITLE: Use of the saddle point method for obtaining asymptotic expansions of certain Coulomb integrals

SOURCE: Ref. zh. Matematika, Abs. 12B649

REF SOURCE: Tr. Ural'skogo politekhn. in-ta, sb. 144, 1965, 15-23

TOPIC TAGS: asymptotic expansion, Coulomb field

ABSTRACT: It is shown that one can obtain expressions for Coulomb integrals in the form of simple functions of smooth quantum numbers if one uses the formula

$$K_{mn} = Z(S_1 - S_2 - S_3),$$

where Z is the ordinal number of an element in the Mendelian periodic table; S_1, S_2 and S_3 are functions of the smooth quantum numbers m and n. By means of passing to the Euler integral representation for hypergeometric functions, one finds the asymptotic expansion for S_1 in the form

$$S_1 = \frac{4n}{(n-m)^3\sqrt{mn}}\left(\frac{n-m}{n+m}\right)^{n+m} L,$$

where

$$L = \frac{1}{2\pi i}\oint\left(\frac{1}{z}-1\right)^m (1-xz)^n \frac{1}{1-xz}\,dz.$$

Card 1/2

UDC: 518

L 45404-66

ACC NR: AR6016621

The saddle point method is used to obtain the asymptotic expansion of L. After substitution of the numerical values of the appropriate γ-functions, the final asymptotic expansion for S_1 has the form

$$S_1^{mn} = \frac{0.5635720}{\sqrt{mn^3}\sqrt{mn(n^3-m^3)}} \times \left[1 - 0.01653\,|g\,\frac{3n^6 - 4m^3n^3 + 3m^6}{[mn(n^3-m^3)]^{4/3}} + 0.008883889 \times \frac{n^6 - 2n^6m^3 - 2n^3m^6 + m^6}{m^3n^3(n^3-m^3)^3}\right].$$

I. Shelikhova [Translation of abstract]

SUB CODE: 12

hs

Card 2/2

PETROV, O.V.

Significance of forest ravines in the life of murine rodents of steppe oak forests. Vest. LGU 20 no.9:26-32 '65.

(MIRA 18:6)

PETROV, O.V.; FOKIN, I.M.

Distribution and population density of murine rodents on seed plots of the forest-steppe oak woods. Vest LGU 15 no.15:69-81 '60.
(MIRA 13:8)

(Belgorod Province--Field mice) (Forest fauna)

PETROV, O.V.; KRASNYUK, A.A.

Measures for increasing the acorn crop and the rate of their consumption by rodents on seed plots of the forest-steppe-zone. Vest. LGU 15 no.3:122-134 '60. (MIRA 13:1)
(Acorns) (Rodentia)

PETROV, O.V.

Thirty years of the "Les na Vorskle" Forest Steppe Scientific Research Station. Vest. LGU 10 no.3:156-159 '55.

(MIRA [illegible])

Petrov [illegible]

[illegible], C. [illegible]; [illegible], Yu.G.

Contri[illegible] [illegible] of mites inhabiting [illegible] rodents in [illegible] forest steppe. Vest. [illegible] 141 '61. ([illegible])
(Rodents [illegible] D [illegible]—Mites as carriers of dis[illegible]) (P[illegible]—Field [illegible])

PETROV, O.V.

Concentration of murine rodents in the habitats of steppe oak forests. Vest. LGU 19 no.21:28-33 '64 (MIRA 18:1)

P TROM, C.V.; AYRAPETYANTS, L.S.

Reproduction and the first stages of postembryonic development in the red-backed bank vole Clethrionomys [illegible]. under laboratory conditi[illegible] • Vest LGU no.21:51-61 '61. [illegible]:11)

([illegible] cc)

PETROV, O.V.

Application of the Bergman rule in studying the intraspecific variety of ermine. Vest. LGU 17 no.9:144-148 '62. (MIRA 15:5)
(Weasels) (Bioclimatology)

PETROV, O.V.; SHMATKO, G.I.

Distribution and numbers of murine rodents in the forest steppe deciduous forest stands of commercial importance [with summary in English]. Zool.zhur. 36 no.5:762-772 My '57. (MLRA 10:7)

1. Kafedra zoologii pozvonochnykh Leningradskogo gosudarstvennogo universiteta im. A.A. Zhdanova.
(Forest fauna) (Mice)

PETROV, O.V.

Sexual dimorphism of the skull in ermines (Mustela erminea L.).
Vest. Len. un. 11 no.15:41-56 '56. (MLRA 9:10)

(DIMORPHISM (ANIMALS)) (WEASELS) (SKULL)

PETROV, O.V.

On the infestation of ermine (Mustela erminea L.) by Skrjabingylus nasicola Leucart. Vest. Len. un. 11 no.21: 56-60 '56. (MLRA 10:2)

(WEASELS--DISEASES AND PESTS) (WORMS, INTESTINAL AND PARASITIC)

PETROV, O.V.

Structure of the ermine fur. Uch.zap. Len. un. no.181:122-132 '55.
(Weasels) (Fur) (MLRA 8:11)

PETROV, O.V.

Feeding habits of murine rodents of the forest-steppe oak groves under laboratory conditions. Vop. ekol. i biotsen. no.8:119-173 '63. (MIRA 17:1)

PETROV, O.V.

Studying adaptive characters in the extremital structures of the ermine [with summary in English]. Vest.LGU 13 no.21:73-78 '58. (MIRA 11:12)
(Weasels) (Extremities (Anatomy)) (Adaptation (Biology))

PETROV, O.V.

Revision of fur standards for ermine pelts; some results of a study of intraspecific variation in the fur. Uch.zap.Len. un. no.181:133-143 '55. (Weasels) (Fur) (MLRA 8:11)

PETROV, O.L.

Replacing bronze machine parts with cast iron parts. Stan. i instr. 28 no.10:40 O '57. (MLRA 10:11)
(Machinery--Construction)

PETROV, O.Z., doktor fiz.-matem.nauk

Riddles of gravitation. Znan. ta pratsia no.12:3-5 D '62. (MIRA 16:1)

(Gravitation)

STANULOV, N., inzh.; ILIEV, Vl., inzh.; PETROV, P., inzh.

The model studies of the axially radiating antenna system for medium-wave broadcasting. Radio i televiziia 12 no.1:20-21 '63.

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(Radio)

PHASE I BOOK EXPLOITATION [illegible]

Radiatsionnaya meditsina; posobiye dlya vrachey i [illegible] (Textbook for Physicians and Students). [illegible] 6,000 copies printed.

Eds.: A.I. Burnazyan, Docent and A.V. Lebedinskiy, [illegible] N.A. Vlasova.

PURPOSE: This textbook is inte[illegible] physicians interested in the [illegible] and medicine.

COVERAGE: This is a [illegible] diagnosis and t[illegible] disease, and [illegible] based on t[illegible] [illegible] in the USSR. No per[illegible]

AVAILABLE: Library of Congress

Card 8/8

JA/odv/mas
9-2-60

PETROV, P.; RUSKOV, M.

Effect of planted grain seed treated with disinfectants on partridges. p. 175.

NAUCHNI TRUDOVE. Vissh lesotekhnicheski institut. Sofiia, Bulgaria, Vol. 6, 1958.

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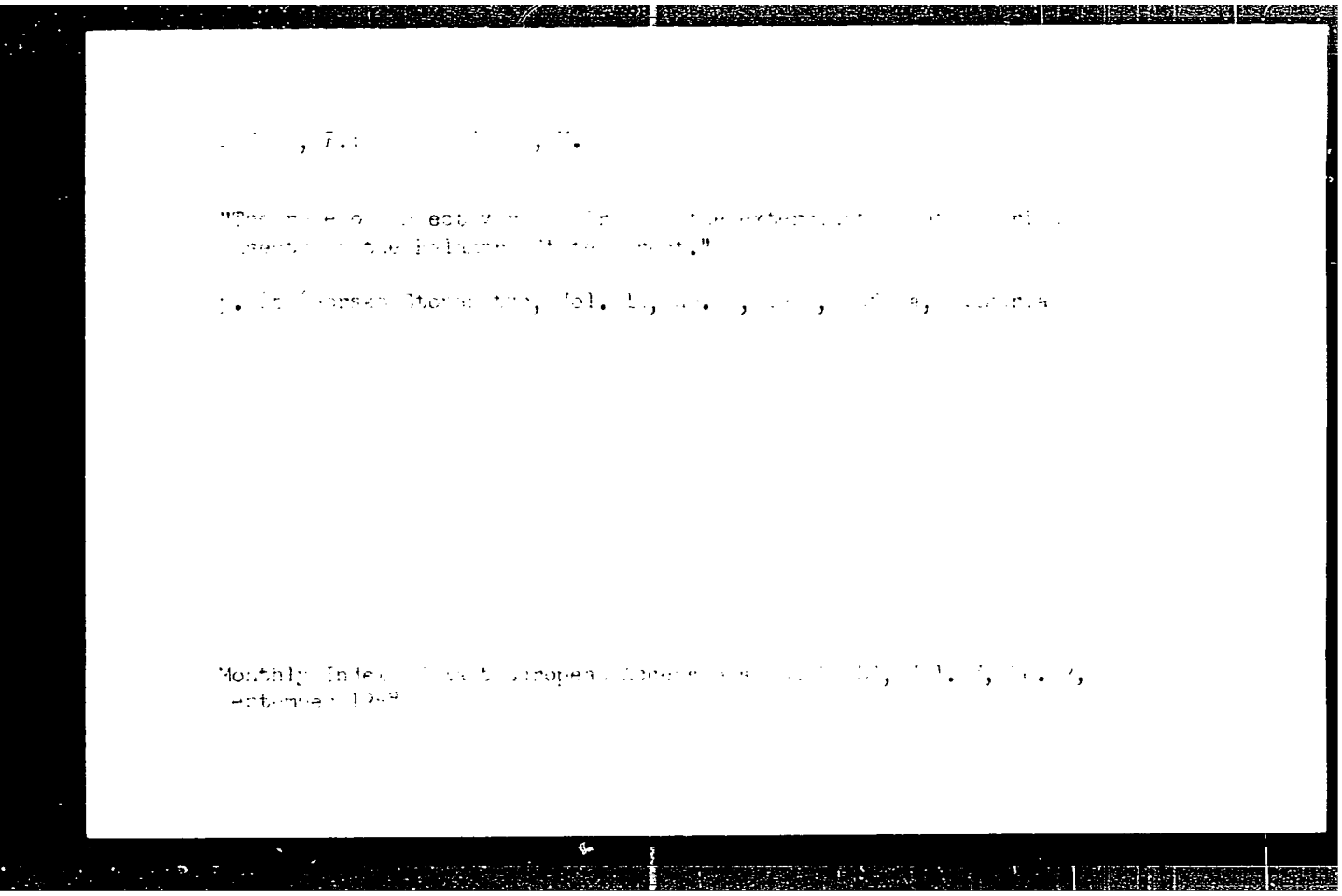
Uncl.



PETROV, P.

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P.104 (Minno Delo, Vol. 12, no. 2, Mar./Apr. 1957, Sofiia, Bulgaria)

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 8, August 1958

PETROV, P.

"Methods of fighting sudden outbursts of coal and gas in the Yegorshina anthracite coal fields, in the USSR, and possibilities of their application in the Balkan coal basin."

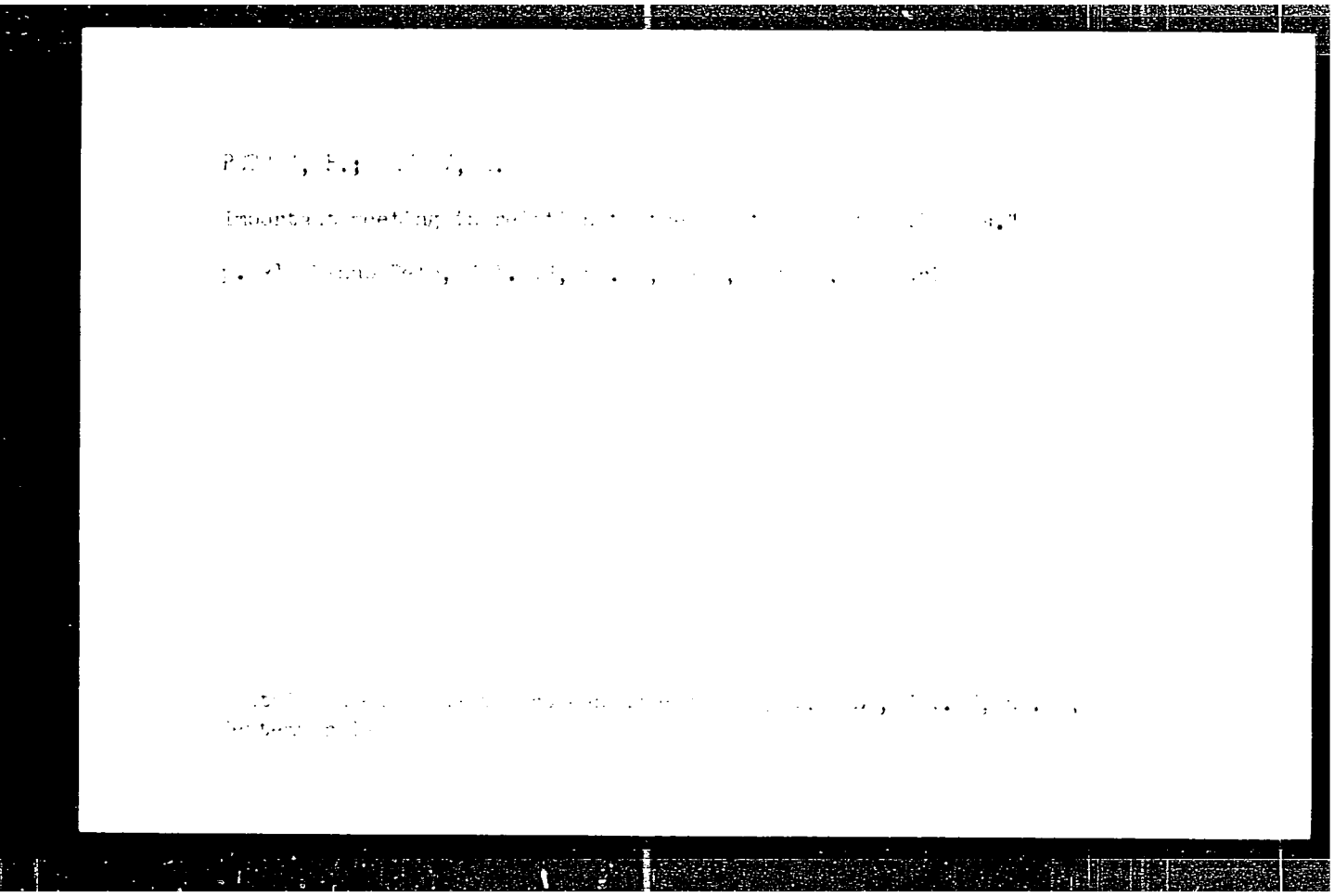
p.47 (Minno Delo, Vol. 12, no. 6, Nov./Dec. 1957, Sofiia, Bulgaria)

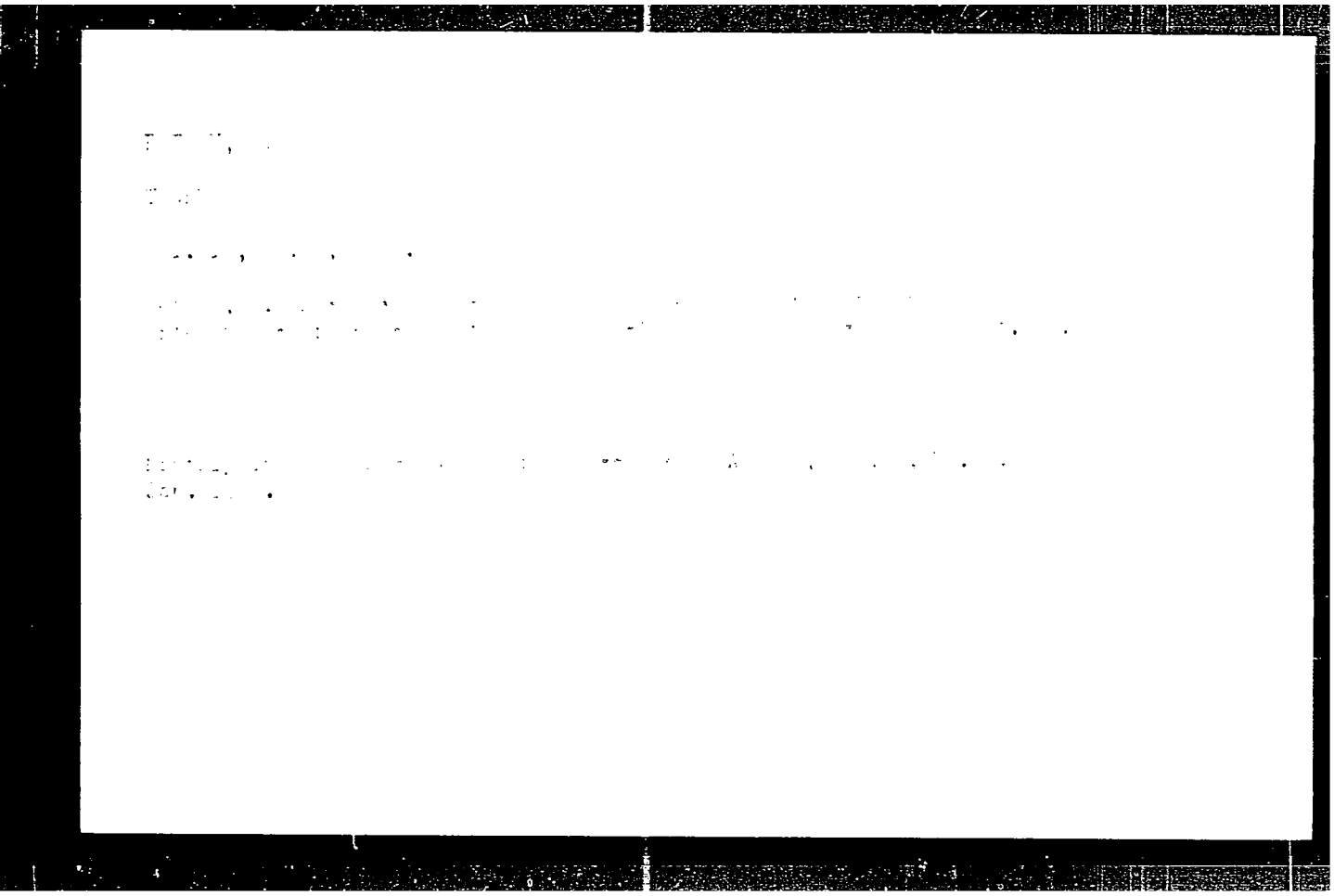
Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 8, August 1958

PENCHEVA, Ye. [Pencheva, E.]; PETROV, P.

Geochemical studies of helium and argon in natural gases of northern Bulgaria. Doklady BAN 17 no.11:1039-1042 '64.

1. Geologic Institute of the Bulgarian Academy of Sciences.
Submitted July 15, 1964.





PETROV, P.

Building a new automobile and motorcycle club. Za rul. 17 no.1:2 Ja '59. (MIRA 12:3)
(Kabardia--Public buildings)

PETROV, P.

A new feed mill to be completed for the 41st anniversary of the Great October Revolution. Muk.-elev. prom. 24 no.10:12 O '58.
(MIRA 11:12)

1.Redaktsiya zhurnala "Sel'skoye khozyaystvo Kazakhstana."
(Alma-Ata--Feed mills)

PETROV, . .

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BULGARIA/Cosmochemistry. Geochemistry. Hydrochemistry. D

Abs Jour: Ref Zhur-Khim., No 24, 1958, 81229.

Author : Petrov P., Oshanova N.
Inst :
Title : Plankton, Benthos and Hydrochemical Characteristics of the Dolnorakovskiy Mineral Springs.

Orig Pub: Nauchni tr. Vissh. selskostop. in-t " G. Dmitrov". Zootekhn. fak., 1956, 6, 235-244.

Abstract: Investigation of the hypothermal mineral springs located near Dolni - Rakovets village of the Radomirskiy rayon, that were conducted from September 1953 to December 1954, revealed that due to an even and higher temperature (15-24°), to more suitable hydrochemical conditions (pH of 6.8-8.0; free CO_2 of 12.2 - 39.0 mg/l, and others) and to constant presence of plankton and benthos type organisms in the Milenino

Card : 1/2

USUNOV, G.; BOZHINOV, S.; GEORGIEV, I.; PETROV, P., IANKOV, Ia.; SAKHATCHIEVA, L.; VETSKA, P.

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(BRAIN NEOPLASMS, complications,
supratentorial & subtentorial, causing epilepsy (Bul))
(EPILEPSY, etiol. & pathogen.
subtentorial & supratentorial tumors (Bul))

PLOSKOV, D.; ANDREEV, T.; BEIMER, IU.; GINEV, I.; KALEV, N.; KIM IZHUN, KIM CHE M'ON.; LI CHAN SO.; LI ZON I.; PETROV, P.; SIMEONOV, L.

Etiopathogenetic surgical treatment of torpid infection with various localizations in the light of I. P. Pavlov's teaching. Khirurgiia, Sofia 11 no.3:207-215 Mar 58.

(INFECTION, surg.
in torpid infect. in various localizations (Bul))

PETROV, P. ; [illegible], K.

Sverdlovsk, city which manufactures heavy machinery. [illegible].

Vol. 5, no. 7, 1955
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So: Eastern European Accession Vol. [illegible] No. 1, Jan. 195[illegible]

PETROV, P., dotsent

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(MEDICINE--HISTORY)