L 49250-65

ACCESSION NR: AP5010804

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy energeticheskiy institut im. G.M.Krzhizhanovskogo, Moscow (State Scientific Research Power Engineering Institute)

SUBMITTED: 04Jul64 ENCL: 00 SUB CODE: ME, OP

NR REF SOV: 009 OTHER: 004

Card 3/3

MAKAROV, Yu.V.; MAKSIMOV, A.M.

Structure of shock waves in an electromagnetic shock tube.
Zhur. tekh. fiz. 35 no.4:650-657 Ap '65.

Spectroscopic studies on the electromagnetic shock tube.
Ibid.:658-666 (MIRA 18:5)

1. Gosudarstvennyy nauchno-issledovatel'skiy energeticheskiy institut imeni Krzhizhanovskogo, Moskva.

L 20180-66 EWT(1)/EWP(e)/EWP(m)/EWT(m)/EWA(d)/EWA(h) WW/WH

ACC NR: AP6007076 UR/0057/66/036/002/0280/0293

AUTHOR: Makarov, Yu.V.; Maksimov, A.M.

ORG: Power Engineering Institute im. G.M.Krzhizhanovskiy, Moscow (Energeticheskiy institut, Moskva)

TITLE: Investigation of the processes behind a reflected shock wave in an electromagnetic shock tube

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 2, 1966, 280-293

TOPIC TAGS: plasma shock wave, plasma temperature, plasma density, plasma conductivity, shock tube, shock wave reflection, reflected shock wave, air, argon, carbon dioxide

ABSTRACT: The reflection of shock waves normally incident on a solid wall was investigated in air, argon, and carbon dioxide at pressures up to 2 mm Hg, and at M_s numbers up to 34 for air and argon and up to 50 for carbon dioxide. The shock waves were produced in a 5.7-cm-diameter, 110-cm-long electromagnetic shock tube equipped with a conical discharge chamber and closed at the far end with a Plexiglas reflecting wall. The velocity of the waves was measured with the aid of two photomultipliers mounted 20 cm apart, one of which recorded the radiation from the region immediately adjacent to the reflecting wall. The pressure was measured with a 2-mm-diameter piezoelectric ceramic transducer mounted 5 mm from the reflector near the cylindrical wall of the tube. Time-resolved spectrograms were recorded of the radiation originating near the

Card 1/2 UDC: 533.9

L 20180-66

ACC NR: AP6007076

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reflector and high-speed streak photographs were made with the integrated light through a 15-cm-long slit parallel to the axis of the tube. The conductivity of the plasma behind the reflected shock wave was measured with the aid of a 2-mm-thick spiral winding with inner and outer diameters of 1.0 and 1.5 cm, respectively. This winding was mounted within the Plexiglas reflecting wall and formed part of a resonant circuit with a resonance frequency of 865 kcps and a Q of 110. The plasma conductivity was obtained from the change in the current in the resonant circuit under constant excitation with the aid of an empirical calibration curve recorded under static conditions. The manifold data are discussed at length. The data recorded for air are compared with thermodynamic calculations and reasonable agreement is shown. Possible sources of error of the conductivity measurements are considered and it is concluded that the measured values of the conductivity are reasonable but that final conclusions must await improvement of the technique and performance of appropriate calculations. "The authors thank A.S.Predvoditelev for valuable discussions, V.S.Chebyshev and V.A.Poltoratskiy for assistance with the experiments, and N.N.Shipkov for cooperation in the conduct of this work." Orig. art. has: 6 formulas, 7 figures, and 3 tables. [15]

SUB CODE: 20/ SUBM DATE: 15Apr65/ ORIG REF: 012/ OTH REF: 004

ATD PRESS: 4215

Card 2/2 mjs

L 45437-66 EWT(l)/EWP(m) IJP(c) FDN/GD/AT

ACC NR: AT6022648 SOURCE CODE: UR/0000/66/000/000/0081/0087

AUTHOR: Makarov, Yu. V.; Maksimov, A. M.

ORG: none

TITLE: Investigation of glow front structure in an electromagnetic shock tube

SOURCE: AN SSSR. Energeticheskiy institut. Issledovaniya po fizicheskoy gazodinamike (Studies of physical gas dynamics). Moscow, Izd-vo Nauka, 1966, 81-87

TOPIC TAGS: glow front, electromagnetic shock tube, gas discharge plasma, ring shaped electrode, shock tube, shock wave, GLOW DISCHARGE, SHOCK TUBE, DISCHARGE CHAMBER

ABSTRACT: On the basis of previous works, the authors describe in detail the results of an investigation of the structure of the glow front in the air at a great distance from the discharge chamber. The investigation was made with the aid of an electromagnetic shock tube with a conical discharge chamber. The extension of the glow front along the tube showed the changes in the shape of the front along the

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L 45437-66

ACC NR: AT6022648

tube and made possible a comparison of the separate phases of the process with the changes in the discharge current. The authors reached the following conclusions: At a certain distance from the ring-shaped electrode, the glow front breaks up with the formation of various types of instabilities and therefore, is not a shock wave. The glow front is a gas-discharging plasma, which plays the part of a "piston" when the shock wave is formed. The area of the shock-heated gas between the shock front and the gas-discharging plasma decreases sharply as the discharge current is reduced and the volume is increased and becomes discernible. Measurements in the air, nitrogen, hydrogen, and carbon dioxide gases have shown that the "piston" characteristic of the gas-discharging plasma is common to all gases investigated. Therefore, the glow front observed optically in electromagnetic shock tubes is the boundary line of gas-discharging plasma. The breakdown of the boundary of this plasma can produce a change in the condition of the shock heated-gas at the expense of the penetration of its "tongues" into the "bottleneck" region. Orig. art. has: [GC] 3 figures.

SUB CODE: 20, 09/ SUBM DATE: 31Feb66/ ORIG REF: 004/ OTH REF: 001/

Card 2/2

TUL'MAN, M., student; MAKSIMOV, A.M., kand. ist. nauk, nauchnyy rukovoditel'

Donets Basin Communists in the period of preparing the Great October Socialist Revolution. Sbor. nauch. rab. stud. SNO DII no.2:7-15 '57. (MIRA 11:12)

1.Gorno-mekhanicheskiy fakul'tet Donetskogo industrial'nogo instituta im. N.S. Khrushcheva.
(Donets Basin--Revolution, 1917-1921)

GALEPA, M. student, chlen kruzhka istorii Kommunisticheskoy partii Sovetskogo Soyuza; MAKSIMOV, A.M., kand. ist. nauk, nauchnyy rukovoditel'

Donets Basin proletariat in the period of the February bourgeois-democratic revolution. Sbor. nauch. rab. stud. SNO DII no.2:17-23 '57. (MIRA 11:12)

1.Gorno-mekhanicheskiy fakul'tet Donetskogo industrial'nogo instituta im. N.S. Khrushcheva.
(Donets Basin--February Revolution, 1917)

MAKSIMOV, A.M.

Improving control sieves on mills with central driving. TSement 23 no.3:26-28 My-Je '57. (MLRA 10:7)

1. Kuznetskiy tsementnyy zavod.
(Crushing machinery)

MAKSIMOV, A.M.

Sanding and cutting of window sashes on twin machines. Der.prom. 9 no.4:23 Ap '60. (MIRA 13:9)

1. Oktyabr'skiy demostroitel'nyy kombinat, Kuybyshevskaya oblast'.
(Woodworking machinery)

MAKSIMOV, A.M.

Circular saw mills operating without idling. Der.prom. 9 no.12:22 D '60. (MIRA 13:12)

1. Oktyabr'skiy domostroitel'nyy kombinat.
(Circular saws)

L 63045-65 EWT(m)/EWP(j)/T Pc-4 JAJ/RM

ACCESSION NR: AP5017786 UR/0080/65/038/007/1638/1639
678.7

AUTHOR: Maksimov, A. M.; Kharit, Ya. A.; Vol'f, L. A.; Meos, A. L.

TITLE: New method of preparing graft polyvinyl alcohol fibers

SOURCE: Zhurnal prikladnoy khimii, v. 38, no. 7, 1965, 1638-1639

TOPIC TAGS: polyvinyl alcohol fiber, graft copolymerization, ion exchanger, dialdehyde, hydrophobization, acrylic acid

ABSTRACT: The authors found that during the hydrophobization of polyvinyl alcohol fibers, fabrics, and films by dialdehydes, the macromolecules acquire free aldehyde groups; this process occurs in addition to the main acetylation reaction associated with the formation of cross links. Thus, the hydrophobization process, in addition to making the polyvinyl alcohol materials insoluble, gives rise to active centers necessary for carrying out the reaction of graft copolymerization. For example, freshly formed polyvinyl alcohol fiber subjected to the action of maleic dialdehyde for 1.5 hrs. at 55C, after washing and extraction, was treated with a 1.5% solution of hydrogen peroxide for 0.5 hr, to

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ACCESSION NR: AP5017786

convert the aldehyde groups into hydroperoxide groups. The fiber was then treated in a solution of acrylic acid in the presence of a salt of divalent iron. Graft copolymerization was thus achieved under conditions excluding the formation of a homopolymer. The fiber obtained had cation-exchanging properties; its staticion-exchange capacity is 2.0-2.5 meq/g. Acrylonitrile and other vinyl monomers were grafted on fiber, fabrics, and films in similar fashion.

ASSOCIATION: Leningradskiy institut tekstil'noy i legkoy promyshlennosti imeni S. M. Kirova (Leningrad Institute of the Textile and Light Industry)

SUBMITTED: 19Jan65 ENCL: 00 SUB CODE: OC, MT

NO REF SOV: 000 OTHER: 000

Card 2/2

MAKSIMOV, A.M., kapitan [illegible]

Training of specialists [illegible]. Mor. sbor. 42
no.7:57-59 Jl '65. (MIRA 18:8)

MAKSIMOV, A.M.

Determination of the depth of intercrystallite failure of metals and alloys by the change of internal friction and the resonant frequency of the variations of the sample. Zav. lab. 29 no.6:713-718 '63. (MIRA 16:6)

1. Tsentral'nyy nauchno-issledovatel'skiy institut tekhnologii i mashinostroyeniya.
(Steel—Corrosion)
(Deformations(Mechanics))

OZE, S.E., inzhener; MAKSIMOV, A.N., inzhener.

Local strength of steel girder walls joined to reinforced concrete slabs. Avt. dor. 19 no.10:25-26 O '56. (MLRA 9:12)

(Girders)

MAKSIMOV, A.N.

Decreasing the vibration of the floor. Prom.stroi. no.10:43-44 '62. (MIRA 15:12)

1. Volgogradskiy institut inzhenerov gorodskogo khozyaystva.
(Floors—Vibration) (Machinery—Foundations)

YAKOVLEV, A.I.; MAKSIMOV, A.N.

Work conditions of traction transmission on streetcars.
Sbor.nauch.rab.AKKH no.13:119-137 '62. (MIRA 16:4)
(Streetcars)

MAKSIMOV, A. P.

MAKSIMOV, A. P. -- "Roentgenographic Investigation of the Atomic Structures of Some Two- and Three-Member Systems of Easily Corroded Alloys." Min Higher Education USSR. Rostov State U imeni V. M. Molotov, Rostov na Donu, 1955. (Dissertation for the Degree of Candidate in Physicomathematical Sciences)

SO: Knizhnaya Letopis', No 1, 1956, pp 110-122, 124

MAKSIKOV, A.P., dotsent, kandidat tekhnicheskikh nauk; PRISHVITSYN, V.M., otvetstvennyy redaktor; SAVIN, M.M., redaktor; NADEINSKAYA, A.A., tekhnicheskiy redaktor

[Engineering structures and buildings in the mining industry] Inzhenernye sooruzheniia i zdaniia gornykh predpriiatii. Moskva, Ugletekhizdat, 1954. 347 p. [Microfilm] (MLRA 8:4)
(Mine buildings)

MAKSIMOV,A.P., kandidat tekhnicheskikh nauk, dotsent; LIPKOVICH,S.M., dotsent; ZHEDANOV,S.A., dotsent

Remarks on F.A.Kan's article "On the problem of a calculated load on horizontal mine timbering." ("Ugol" no.2, 1955) Ugol' 30 no.10: 41-42 O '55. (MLRA 8:12)

1. Dnepropetrovskiy gornyy institut (for Maksimov) 2. Donetskiy industrial'nyy institut (for Lipkovich and Zhedanov)
(Mine timbering) (Kan, F.A.)

MAKSIMOV, A.P., kand. tekhn. nauk, dots.

Amount of rock pressure on mine shaft linings and lining thicknesses. Shakht. stroi. no.7:7-10 '58. (MIRA 11:9)

1. Dnepropetrovskiy gornyy institut im. Artema.
(Earth pressure) (Shaft sinking)

MAKSIMOV, Aleksandr Pavlovich. Prinimali uchastiye: PUSHKARENKO, G.V., arkhitektor; MIGAY, I.B., dotsent; KOZACHENKO, V.S., dotsent; KUDLOV, L.V., assistent. DANILEVSKIY, A.S., otv.red.; KRASOVSKIY, I.P., red.izd-va; SHKLYAR, S.Ya., tekhn.red.

[Industrial residential and public buildings and structures for mining enterprises] Promyshlennye i grazhdanskie zdaniia i sooruzheniia gornykh predpriiatii. Izd.2. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1959. 492 p. (MIRA 13:2)

1. Dneprogiproshakht (for Pushkarenko). 2. Dnepropetrovskiy inzhenerno-stroitel'nyy institut (for Migay, Kozachenko). 3. Kafedra stroitel'stva gornykh predpriyatiy Dnepropetrovskogo gornogo instituta (for Kudlov).
(Mine buildings) (Mining engineering)

MAKSIMOV, A.P., dots.

Determination of the angle of internal friction and the coefficient of adhesion of rocks by means of a spherical stamp. Izv.vys.ucheb. zav.; gor.zhur. no.2:81-86 '60. (MIRA 14:5)

1. Dnepropetrovskiy gornyy institut.
(Mining geology)

MAKSIMOV, A.P., dotsent, kand.tekhn.nauk

Studying some physicomechanical properties of Donets Basin rocks on samples with an irregular shape. Ugol' Ukr. 4 no.8:26-27 Ag '60. (MIRA 13:9)

(Donets Basin--Coal geology) (Rocks--Testing)

ABRAMOV, F.A., professor, doktor tekhn.nauk; MAKSIMOV, A.P., dotsent, kand.tekhn.nauk; DOLINSKIY, V.A., gornyy inzh.

Modification of mine shaft lining reinforcement methods.
Ugol' 35 no.3:50-54 Mr '60. (MIRA 13:6)
(Shaft sinking) (Reinforced concrete)

MAKSIMOV, A.P. (Dnepropetrovsk)

Determination of the coefficient of adherence and the angle of internal friction on samples of arbitrary shape. Osn., fund.i mekh.grun. 3 no.6:17-18 '61. (MIRA 15:4)
(Rocks--Testing)

MAKSIMOV, A.P., kand.tekhn.nauk; ROSTOVTSEV, A.G., inzh.

Radiometric probing of rocks in underground workings. Ugol' Ukr. no.6:14-17 Je '61. (MIRA 14:7)

1. Dnepropetrovskiy gornyy institut.
(Mining engineering) (Subsidences (Earth movements))

MAKSIMOV, A. P., dotsent, kand. tekhn. nauk

Ways of increasing the stability of underground workings at great depths. Ugol' 38 no.4:13-18 Ap '63. (MIRA 16:4)

1. Dnepropetrovskiy gornyy institut.

(Donets Basin—Mine timbering)

MAKSIMOV, A.P., kand. tekhn. nauk

Rod bolting as a means of controlling extrusion of rocks in mine workings. Shakht stroi. 5 no.10:14-16 O '61.
(MIRA 16:7)

1. Dnepropetrovskiy gornyy institut.
(Mine roof bolting)

MAKSIMOV, Aleksandr Pavlovich; KATSAUROV, I.N., kand. tekhn. nauk, retsenzent; TRUMBACHEV, V.F., doktor tekhn. nauk, otv. red.; CHERNEGOVA, E.N., red.izd-va; LOMILINA, L.N., tekhn. red.

[Bulging of rocks and the stability of underground workings] Vydavlivanie gornykh porod i ustoichivost' podzemnykh vyrabotok. Moskva, Gosgortekhizdat, 1963. 143 p. (MIRA 16:12)
(Rock pressure) (Mining engineering)

MAKSIMOV, A.P., kand. tekhn. nauk

Some considerations about the stability of mine working during the mining of deep levels. Shakht. stroi. 8 no.5:8-11 My '64
(MIRA 17:5)

1. Dnepropetrovskiy gornyy institut.

MEKSIMOV, A.P.

Case of pulmonary hyperlasia. Vest.rent.i rad. 40 no.[illegible]
(MIRA 18:12)
S-O '65.

1. Rentgenovskoye otdeleniye (nachal'nik R.A.Yablonskaya) Kazanskoy zheleznodorozhnoy bol'nitsy.

MAKSIMOV, A.S., inzhener.

Reinforced concrete tubbings for lining Leningrad subway tunnels. (MLRA 10:7)
Shakht.stroi. no.6:23-25 Je '57.

1. Lenmetrostroy.
(Leningrad--Subways) (Reinforced concrete constructions)

CHERNICHKIN, D.S.; BORISENKO, N.I.; MESHCHERYAYKOV, K.N.; KOMAR, Ye.G.; FEDULOV, L.N.; IOZLINSKIY, V.A.; MAKSIMOV, A.S.; GEL'PERIN, B.B.

Professor D. V. Efremov; obituray. Elektrichestvo no.2:95-96 F '61. (MIRA 14:3)

(Efremov, Dmitrii Vasil'evich, 1900-1961)

L 34411-66 EWT(1) SCTB DD/GD

ACC NR: AT6009451 SOURCE CODE: UR/0000/65/000/000/0297/0301

AUTHOR: Malakhov, A. N.; Maksimov, A. S.; Nefedov, Yu. Ya.

ORG: None

TITLE: Electromagnetic hypothesis on biological communication

SOURCE: AN SSSR. Nauchnyy sovet po kompleksnoy probleme Kibernetika. Bionika (Bionics). Moscow, Izd-vo Nauka, 1965, 297-301

TOPIC TAGS: communication, electromagnetic radiation, spectrum, very low frequency, bionics, animal physiology

ABSTRACT: The authors measured the spectrum of the biopotentials of certain biological objects. The spectrum included the frequency band from 1 to 500 cps. The electromagnetic radiation from biological objects was also measured at frequencies of 3 to 150 kc. These measurements were conducted in order to verify the other results (e.g., W. K. Volkers, W. Candib. 1960. Detection and analysis of high frequency signals from muscular tissues with ultra-low noise amplifiers. —IRE International Convention Record, part 9.). The apparatus and conditions for these measurements are discussed. The results show that the biological activity spectrum of animals is compact and falls with frequency

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L 34411-66

ACC NR: AT6009451

increase. The compactness of the spectrum indicates a stochastic noisy character of the biopotentials. The dimensions of the spectrum at high frequencies indicate that the energy of biological activity occurs at subsonic frequencies. It is shown that electromagnetic radiation of bioobjects does exist. The final results show that electromagnetic emission by biological objects cannot serve the function of information carrier in biological communication. This conclusion is based on the fact that the electromagnetic emission is too weak up to 150 kc. Orig. art. has: 4 figures.

SUB CODE: 06, 05/09 SUBM DATE: 26Oct65 / ORIG REF: 002 / OTH REF: 001

Card 2/2 BLG

MAKSIMOV, A.V., kapitan meditsinskoy sluzhby; SOSIN, V.V., mayor meditsinskoy sluzhby

Provision of submarines with sterile surgical linen and material during cruises without contact with shore bases. Voen.-med. zhur. no.3:38-39 Mr '60. (MIRA 14:1)

(SUBMARINE MEDICINE)
(SURGICAL INSTRUMENTS AND APPARATUS)

USSR/Mining Equipment
Drives, Electric

Nov 48

"Hydroelectric Drive for Mining Lifting Equipment,"
Docent A. V. Maksimov, 3½ pp

"Gor Zhur" No 11

PA 40/49769

Results of tests and operation of hoisting equipment with hydroelectric drive at the Leningrad subway were the basis on which hydroelectric drives for other mining lifting machines of Lenmetrostroy were manufactured. Discloses technical details of basic parts of machines. Gives two illustrations

40/49769

USSR/Mining Equipment (Contd) Nov 48

of a centrifugal hydrocoupling and a hydrogeared transmission, and three diagrams of characteristics of certain parts of machine.

40/49769

MAKSIMOV, A.V., DOCENT

KUL'CHITSKIY, Ya.O. [Kul'chyts'kyi, IA.O.]; ZHILOVSKIY, N.I. [Zhylovs'kyi, M.I.]; DABAGYAN, N.V. [Dabahian, N.V.]; MAKSIMOV, A.V. [Maksimov, O.V.]; KHLOPONIN, K.L.

Stratigraphy of Paleocene and Eocene eastern Carpathian Mountains [with summary in English]. Dop. AN URSR no.3:310-314 '58. (MIRA 11:5)

1. Ukrains'kiy viddil Vsesoyuznogo naukovo-doslidnogo geologo-rozviduval'nogo naftovogo institutu. Predstavleno akademikom AN USSR O.S. Vyalovym.
(Carpathian Mountains--Geology, Stratigraphic)

AUTHOR: Maksimov, A.V. SOV-21-58-9-22/28

TITLE: About the Presence of the Soymul Series on the Tereblya River -Transcarpathian Oblast' (O nalichii Soymul'skoy svity na reke Tereble - Zakarpatskaya oblast')

PERIODICAL: Dopovidi Akademii nauk Ukrains'koi RSR, 1958, Nr 9, pp 999 - 1001 (USSR)

ABSTRACT: P.I. Kalugin [Ref.2] singled out a series from the Senoman-Turon stage, which he named the Tereblya series. In this series, Inoceramus concentricus Park. and Inoceramus cripsi Mant. were found by V.I. Slavin [Ref.4], and these finds indicate the Albian-Senoman age of the series. Deposits of the same age and similar lithological composition were singled out in this tectonic zone by O.S. Vyalov [Ref.1] under the name of the Soymul series. The author therefore concludes, that the name of Tereblya series is unnecessary, as it is

Card 1/2

About the Presence of the Soymul Series on the Tereblya River - Transcarpathian Oblast' SOV-21-58-9-22/28

identical with the Soymul series. There are 5 Soviet references.

ASSOCIATION: Ukrainskiy otdel Vsesoyuznogo nauchno-issledovatel'skogo geologorazvedochnogo instituta nefti (Ukrainian Branch of the All-Union Research Geological-Prospecting Petroleum Institute)

PRESENTED: By Member of the AS UkrSSR, O.S. Vyalov

SUBMITTED: April 7, 1958

NOTE: Russian title and Russian names of individuals and institutions appearing in this article have been used in the transliteration

1. Geology--USSR

Card 2/2

MAKSIMOV, A.V.

Age of the "Tereblya" series. Trudy UkrNIGRI no.1:34-38 '59.
(MIRA 12:12)

(Transcarpathia--Geology, Stratigraphic)

MAKSIMOV, A.V.

Concerning some species of mollusks from Oligocene sediments in the vicinity of Nizhniye Vorota in Transcarpathia. Trudy UkrNIGRI no.1:139-146 '59. (MIRA 12:12)
(Transcarpathia--Mollusks, Fossil)

MAKSIMOV, A.V. [Maksymov, O.V.]

Age of the Sheshory horizon of the eastern Carpathians. Dop. AN URSR no.1:69-71 '60. (MIRA 13:6)

1. Ukrainskiy nauchno-issledovatel'skiy geologo-razvedochnyy institut. Predstavleno akademikom AN USSR V.G.Bondarchukom [V.H.Bondarchuk].
(Carpathian Mountains--Geology, Stratigraphic)

MAKSIMOV, A.V.

Boundary between the Eocene and Oligocene in the eastern Carpathians. Geol. nefti i gaza 4 no. 3:28-31 Mr '60.
(MIRA 13:12)

1. Ukrainskiy nauchno-issledovatel'skiy geologo-razvedochnyy institut.
(Carpathian Mountains--Geology, Stratigraphic)

KUL'CHITSKIY, Ya.O. [Kul'chyts'kyi, IA.O.]; MAKSIMOV, A.V. [Maksymov, O.V.]

Stratigraphy of the Cretaceous deposits of the Chornohora Ridge in the Carpatho-Ukraine. Dop. AN URSR no.8:1066-1068 '61. (MIRA 14:9)

1. Ukrainskiy nauch-issledovatel'skiy geologorazvedochnyy institut. Predstavleno akademikom AN USSR V.B. Porfir'yevym [Porfir"iev, V.B.]

(Cherno Gory Mountains--Geology, Stratigraphic)

GRUZMAN, A.D.; MAKSIMOV, A.V.; REYFMAN, L.M.

Lower boundary of Oligeocene in the eastern Carpathian. Dokl. AN SSSR 145 no.5:1110-1112 '62. (MIRA 15:8)

1. Ukrainskiy nauchno-issledovatel'skiy geologorazvedochnyy institut. Predstavleno akademikom N.M.Strakhovym.
(Carpathian Mountains--Geology, Stratigraphic)

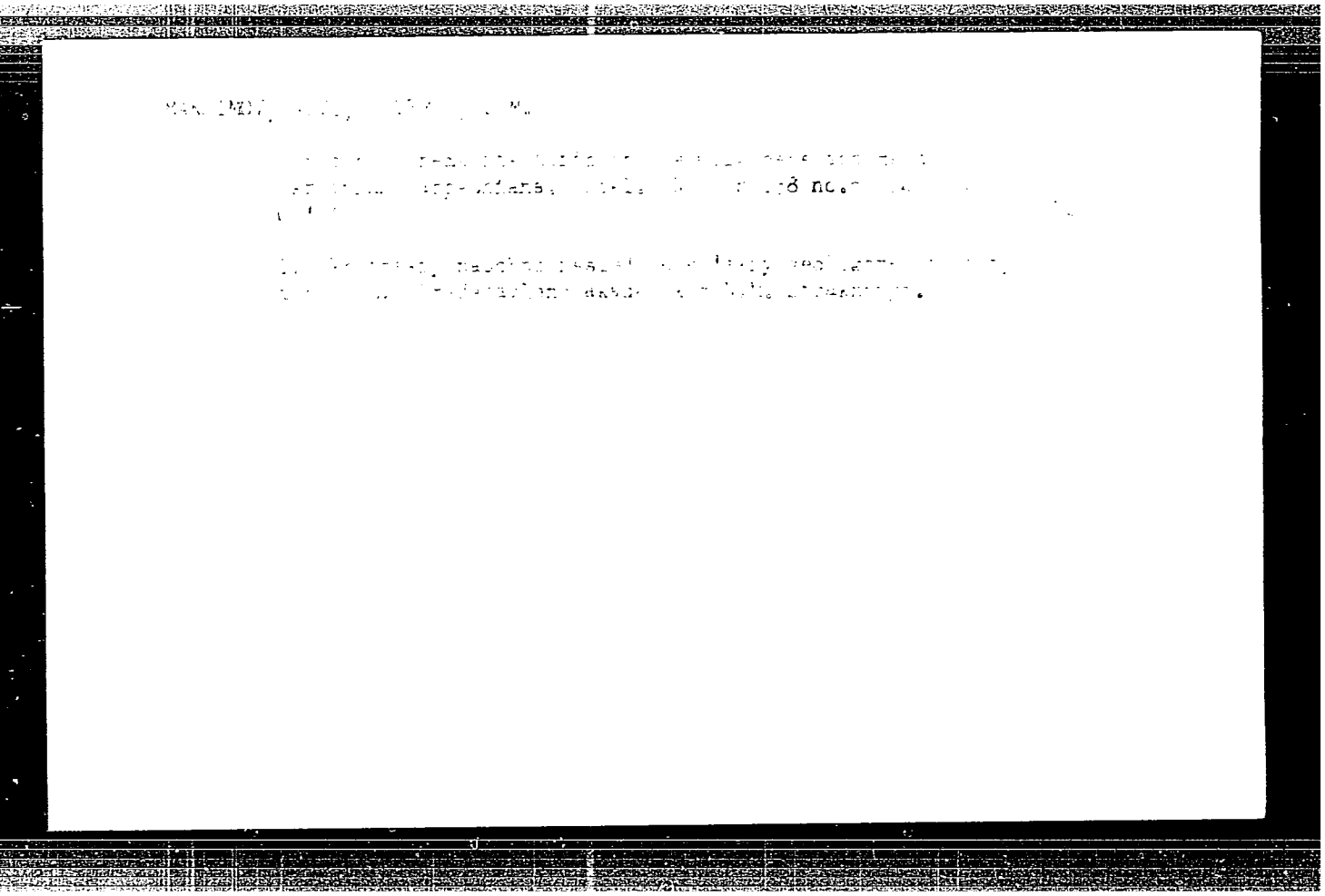
KUL'CHITSKIY, Yu.O.; MAKSIMOV, A.V.

Stratigraphic pattern of the Cretaceous of the Ukrainian Carpathians. Dokl. AN SSSR 146 no.1:175-178 S '62. (MIRA 15:9)

1. Ukrainskiy nauchno-issledovatel'skiy geologorazvedochnyy institut. Predstavleno akademikom A.L. Yanshinym.
(Transcarpathia--Geology, Stratigraphic)

MAKSIMOV, A.V.; REYFMAN, L.M.

Age of the s·b-Golovetskaya series in the Ukrainian Carpathians.
Trudy UkrNIGRI no.5:142-146 '63. (MIRA 18:3)



MAKSIMOV, A. E.

Hydroelectric drive of mine hoisting machinery. Moskva, Ugletekhizdat, 1951.
(Mic 53-869)

Collation of the original: 165 p.

Microfilm TN-14

MARKIMOV, A. Ye

Elektro-Hydraulische Antriebe. Dargestellt Am Beispiel Von Antrieben Fur Fordermaschinen. Berlin, Technik, 1954.
183.p. Illus., Diagrs., Tables.
Translation From the Russian, "Gidroeliktroprivod Rudnichnykh Pod'yemnykh Mashin," Moscow, 1951.
Added T. -p. in Russian.
"Literaturverzeichnis": p. 167.

So: N/5
7L1.312
.M21

MAKSIMOV, A.Ye., dotsent

Automatization of mine hoisting with an induction motor drive. Zap.Len.gor.inst.32 no.1:16-47 '54. (MLRA 9:1)
(Mine hoisting) (Electric motors, Induction) (Automatic control)

MAKSIMOV, A.Ye., dotsent

The hydroelectric drive of mine pumping installations. Zap.Len. gor.inst.32 no.1:77-101 '54. (MLRA 9:1)
(Mine pumps)

MAKSIMOV, A.Ye., dotsent.

Outcome of discussions on the automation of induction drive hoisting in mines. Gor.zhur. no.12:40-42 D '55. (MLRA 9:4)
(Mine hoisting) (Electric driving)

ALATORTSEV, S.A.; GLADILIN, L.V.; MAKSIMOV, A.Ye.; RYS'YEV, A.V.

Proceedings of the scientific conference on problems of electric power supply, electrification and automatization in mining. Gor. zhur. no.5:61-62 My '56. (MLRA 9:8)
(Electricity in mining)

MAKSIMOV, A.Ye.

Automatization of induction motor-driven mine hoists for freight.
Zap.Len.gor.inst.35 no.1:3-7 '57. (MIRA 10:10)
(Mine hoisting) (Electric motors, Induction) (Automatic control)

MAKSIMOV, A. Ye., Doc Tech Sci (diss) -- "Hydro-electrical power supply to mine hoist machines". Leningrad, 1958. 25 pp (Min Higher Educ USSR, Leningrad Order of Lenin and Order of Labor Red Banner Mining Inst im G. V. Plekhanov), 120 copies (KL, No 24, 1959, 133)

MAKSIMOV, A.Y.

[Priniciples of electric drives]Osnovy elektroprivoda. Leningrad. Leningr. Gornyi in-t im. G.V.Plekhanova. Pt.1. [Mechanical characteristics of d.c. machines]Mekhanicheskie svoistva mashin postoiannogo toka; konspekt lektsii dlia studentov elektromekhanicheskoi spetsial'nosti gornykh VUZ'ov. 1962. 173 p. ___[Diagrams and tables]Risunki i tablitsy. 73 p. (MIRA 16:3)

(Electric driving)

MAKSIMOV, A. Z.

AID P - 677

Subject : USSR/Electricity

Card 1/1 Pub. 29 - 12/24

Authors : Maksimov, A. Z., Technician and Kedrin, V. M., Eng.

Title : Causes of deficiency of a circuit breaker tripping mechanism

Periodical : Energetik, 7, 21-22, Jl 1954

Abstract : Deficiencies of GP-125 electromagnetic mechanism and measures applied to avoid such damages are discussed.

Institution : None

Submitted : No date

KOLYADIN, A., kapitan; MAK[illegible], B., starshiy leytenant

Mastery is forged in work. Komm. Vooruzh. Sil 4 no.22:56-59 N '63. (MIRA 17:1)

KLEPIKOV, V.V., kand. geogr. nauk; MOROSHKIN, K.V.; BOGOYAVLENSKIY, A.N.; NAZAROV, V.S.; MAKSIMOV, B.A.; ZHIVAGO, A.V.; BRODSKIY, K.A.; KOLTUN, V.M.; ANDRIYASHEV, A.P.; PAKHAREVA, M.M., red.; KOTLYAKOVA, O.I., tekhn. red.

[Transactions of the Soviet Antarctic Expedition] Trudy Sovetskoi antarkticheskoi ekspeditsii, 1955. Leningrad, Izd-vo "Morskoi transport." Vol.22. [Third Sea Expedition of the diesel-electric ship Ob', 1957-1958; observational data] Tret'ia morskaia ekspeditsiia na d/e "Ob'" 1957-1958 gg.; materialy nabliudenii. Pod red. V.V.Klepikova. 1961. 233 p. (MIRA 14:11)

1. Sovetskaya antarkticheskaya ekspeditsiya, 1955.
(Antarctic regions—Oceanographic research)

MAKSIMOV, B. I. Docent, Troitsk Veterinary Institute

" Treatment of Postnatal Sepsis in Animals with Penicillin"

Veterinariya, No. 8, 1950, (CLINICAL PRACTICE - From Material Received by the Editors), pp 48-51
U-5603, 24 Feb 1954, p 5

MAKSIMOV, B. I.

Maksimov, B. I. "On the use of a magnetometer in prospecting for magnetite sand," Prikl. geofizika, Issue 5, 1948, p. 106-10

SO: U-3264, 10 April 1953, (Letopis 'Zhurnal 'nykh Statey, no. 3, 1949)

USSR/Nuclear Physics - Showers, Cosmic Ray Jan 52

"Scattering of Shower Particles in Heavy Elements," S. Z. Belen'kiy, B. I. Maksimov, Moscow State U

"Zhur Eksper i Teoret Fiz" Vol XXII, No 1, pp 102-111

Derives a recurrence formula that permits one to calc successively the moments of the distribution function of shower particles taking into account scattering. Finds the function giving the distribution of shower particles according to angles, averaged with respect to depth, without any

204T85

USSR/Nuclear Physics - Showers, Cosmic Ray (Contd) Jan 52

assumption concerning the smallness of the scattering angles and with consideration for the angle of ionization loss. On the basis of these results, the influence of scattering on the form of the cascade curve is evaluated more accurately. Submitted 1 Mar 51.

204T85

MAKSIMOV, B. I.

MAKSIMOV, B.I.

USSR

The theory of the determining stage in the decomposition of supersaturated solid solutions. B. Ya. Lyubov and B. I. Maksimov. *Zhur. Tekh. Fiz.* 23, 1203–11(1953).—The decomposition of supersatd. solid solns. is discussed theoretically from the standpoint of deviations in the concn. from the av. value in a certain small vol. of the soln. A very small, initial inhomogeneity of concn. is sufficient to cause significant local deviations from the av. concn. The instability caused by these deviations allows a rearrangement of the lattice of the solid soln. to form a new phase. J. R. L.

MAKSIMOV, B.I.

MAKSIMOV, B.I.--"Towards a Theory of Diffusion Processes in Solid Bodies."* (Dissertations For Degrees In Science And Engineering Defended At USSR Higher Educational Institutions) (34). Min Higher Education, Kiev State U imeni T.G. Shevchenko, Moscow, 1955.

SO: Knizhnaya Letopis' No. 34. 20 August 1955

* For the Degree of Candidate in Physico-Mathematical Sciences

Maksimov, B.I.

USSR/Crystals.

B-5

Abs Jour : Referat Zhur - Khimiya, No 6, 1957, 18306

Author : B.Ya. Lyubov, B.I. Maksimov.
Title : Theory of Determination Methods of Concentration Dependence of Diffusion Factors in Solid Solutions.

Orig Pub : Probl. metalloved. i fiz. matallov, sb.4, 1955, 543-569

Abstract : The theory of a new method to determine the dependence of the diffusion factor D on the concentration c is given. A special method to determine $D = f(c)$ by means of radioactive indicators is developed. It is shown by examples that in case of thick layers, the new method yields results close to results yielded by Matano's method, and that the usual methods of determination of D with radioactive indicators yield values of D close to the mean values in the concentration interval in question.

Card 1/1

S/881/57/000/001/002/013
A066/A126

AUTHORS: Lomsadze, Yu. M., Maksimov, B. I.

TITLE: An idea of developing a non-local field theory

SOURCE: Uzhgorod. Universitet. Nektoryye problemy sovremennoy fiziki yadra i elementarnykh chastits; sbornik statey, no. 1, 1957, 14 - 18

TEXT: The hitherto vain attempt to develop a non-local field theory free from inherent contradictions is attributed to the fact that the very conception of non-locality is incompatible with the ordinary Cauchy problem. The equation of motion for a non-local field is chosen in such a manner that the quantities which determine the state of the field and which are given on a discrete set of points or regions within the space--time continuum can be determined uniquely. The equation of motion reads

$$\psi(x) = \sum_i{}' S(x - x_i)\psi(x_i) \qquad (2)$$

on the right-hand side of which summation is taken over all the points

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S/881/57/000/001/002/013
A066/A126

An idea of developing a non-local .....

of the chosen set. A detailed analysis of the equation reveals that the latter results in inconsistencies because the group property is disturbed.

SUBMITTED: October 14, 1956

Card 2/2

SOV/58-59-10-21844

Translation from: Referativnyy Zhurnal, Fizika, 1959, Nr 10, p 17 (USSR)

AUTHOR: Maksimov, B. I.

TITLE: Adaption of Schwinger's Variational Method to Pair Theory

PERIODICAL: Dokl. i soobshch. Uzhgorodsk. un-t, Ser. fiz.-matem. i khim., 1957, Nr 1, p 26

ABSTRACT: The author reports on the derivation of equations in variational derivatives for Greenians and the vacuum functional in the case of pair neutral-pion theory, as well as on a solution of equations for the vacuum functional in the form of a continuous integral.

Yu.M. Lomsadze

Card 1/1

S/081/57/000/001/004/013
A066/A126

AUTHOR: Lomsadze, Yu. M., Maksimov, B. I.

TITLE: Some preliminary calculations in pair theory

SOURCE: Uzhgorod. Universitet. Nekotoryye problemy sovremennoy fiziki yadra i elementarnykh chastits; sbornik statey, no. 1, 1957, 39 - 54

TEXT: Part I: The scattering of π - and μ-mesons from a nucleon. On the basis of the pair theory, the cross sections for the scattering of pions and muons from a nucleon are calculated in first non-vanishing approximation of a perturbational method developed by the first-mentioned author in previous papers (Nauchnyye zapiski Uzhgorodskogo universiteta, v. 18, p. 155 (1957); Nekotoryye problemy sovremennoy fiziki yadra i elementarnykh chastits; sbornik statey, no. 1, 1957, p. 19). A comparison between the differential cross sections obtained by the modified perturbational method and those obtained in the usual first non-vanishing approximation indicates that almost the same results are achieved with

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Some preliminary calculations in pair theory

S/881/57/000/001/004/013
A066/A126

muon energies of up to 135 Mev and with much higher pion energies. - Part II: The scattering of an antinucleon from a nucleon in π-meson pair theory. The same method was used here to calculate the cross section for the scattering of an antinucleon from a nucleon. The differential cross section recorded for the scattering of an antiproton by a proton exhibits a resonance peak at a definite energy of the antiproton. A similar maximum was observed in Part I. These maxima permit a qualitative interpretation of the multiple production of pions. - Part III: The application of Schwinger's variational method to the pair theory. Assuming that the Green function of a meson is independent of the mesonic field averaged over the vacuum operator, and that it is a given function of the coordinates, the authors consider the system of equations derived by them in one of the above-mentioned publications for the Green function of a nucleon within the framework of the pion pair theory. From the Green function of a nucleon within a classical mesonic field they derive an integral functional for the Green function of a nucleon in a quantized mesonic field. There are 4 figures.

SUBMITTED: October 16, 1956

Card 2/2

S/881/57/000/001/012/043
A066/A126

AUTHOR: Lomsadze, Yu. M., Maksimov, B. I.

TITLE: Investigation of potentials in theories with "non-linear" meson coupling

SOURCE: Uzhgorod. Universitet. Nekotoryye problemy sovremennoy fiziki yadra i elementarnykh chastits; sbornik statey, no. 1, 1957, 111 - 141

TEXT: Part I: Theories with triple meson coupling. It is shown that it is possible in theories with triple meson coupling to give a finite representation of the S-matrix of two nucleons in first non-vanishing approximation of the perturbation theory by renormalizing the constants of the "contact" terms. The singularities of the potentials are considered for several varieties of the theory (spinor mesonic field and pseudoscalar mesonic field). The singularities are of the types $1/r^7$ and $\ln(r/r^7)$. - Part II: Theories with quadruple meson coupling. The S-matrix can again be represented in a finite manner, and, in analogy

Card 1/2

Investigation of potentials in .....

to Part I, the singularities of the potentials have the form $1/r^{11}$ and $\ln(r/r^{11})$. Some varieties of the theory lead to attractive and repulsive potentials. - Part III: The finite form of the scattering matrix can again be attained by renormalizing a sufficient number of constants of the "contact" terms. The elimination of all infinites requires a minimum number of constants. An analysis of the singularities in the various varieties of the theory indicates that in the case of a 2m-fold spinor meson coupling and of an n-fold pseudoscalar meson coupling the singularities have the form $\ln(r/r^{6m+2n-1})$. There are 14 figures.

SUBMITTED: October 15, 1956

Card 2/2

LOMSADZE, Yu.M.; MAKSIMOV, B.I.

Double -meson annihilation of an antiproton according to the theory of parity. Nauch. dokl. vys. skoly; fiz.-mat. nauki no.1: 80-83 '58. (MIRA 12:3)

1. Uzhgorodskiy gosudarstvennyy universitet.
(Particles, Elementary) (Quantum theory)

SOV/58-59-7-14834

Translation from: Referativnyy Zhurnal Fizika, 1959, Nr 7, p 37 (USSR)

AUTHOR: Maksimov, B.I.

TITLE: Neutral Pion Production During Electron-Proton Scattering

PERIODICAL: Dokl. i soobshch. Uzhgorodsk. un-t, 1958, Nr 2, p 27

ABSTRACT: The author calculated the $e + p \longrightarrow e + p + \pi^0$ process in a first non-vanishing approximation of the method of perturbations.

Yu.L

Card 1/1

SOV/58-59-7-14802

Translation from: Referativnyy Zhurnal Fizika, 1959, Nr 7, p 33 (USSR)

AUTHORS: Maksimov, B.I., Dubrovka, V.M., Sivulich, I.M., Tsibere, I.M.

TITLE: Some Antiparticle Processes

PERIODICAL: Dokl. i soobshch. Uzhgorodsk. un-ta, 1958, Nr 2, p 29

ABSTRACT: The authors calculated the cross sections of a number of processes involving the formation of a particle-antiparticle pair (proton-antiproton, electron-positron, muon-antimuon) near the reaction threshold from the field coupling constants in a first nonvanishing approximation.

Yu.L.

Card 1/1

S/058/61/000/010/003/100
A001/A101

AUTHORS: Lomsadze, Yu. M., Maksimov, B. I.

TITLE: Application of Schwinger's variational method to the pair theory

PERIODICAL: Referativnyy zhurnal. Fizika, no. 10, 1961, 24, abstract 10A254 (V sb. "Probl. sovrem. teorii elementarn. chastits", no. 2, Uzhgorod, 1959, 30-36, Engl. summary)

TEXT: In complete analogy with the known methods, a system of equations in variational derivatives has been derived for the Green one-nucleon and one-meson functions in the isotopically invariant version of the theory with π-meson pair coupling. This system, in view of its non-linearity, can be solved only approximately. The system of equations for vacuum functional has been also derived and solved in the form of iterate integral.

V. Lend'yel

[Abstracter's note: Complete translation]

Card 1/1

MAKSIMOV, B.I., inzhener.

Investigating the parts for the centrifugal separation of potatoes in potato combines. Sel'khozmashina no.6:1-5 Je '57. (MLRA 10:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokhozyaystvennogo mashinostroyeniya.
(Potatoes--Harvesting) (Combines (Agricultural machinery))

MAKSIMOV, B. I., Cand Tech Sci -- (diss) "Search for and investigation of a new separating device for potato-harvesting combines for work on heavy soils of high humidity." Mos, 1958. 18 pp. (Min Agr USSR, Mos Inst of Mechanization and Electrofication of Agr), 150 copies. (KL, 9-58, 118)

MAKSIMOV, B.I., kand.tekhn.nauk

System of machines for harvesting potatoes in separate stages. Trakt. i sel'khozmash. 30 no.7:21-23 Jl'60. (MIRA 13:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut mel'skokhozyaystvennogo mashinostroyeniya.
(Potatoes--Harvesting)

MAKSIMOV, B.I.

The KMP-2 elevator-type potato digger. Biul.tekh.-ekon.inform.Gos.-nauch.-issl.inst.nauch. i tekh.inform. no.4:75-76 '62. (MIRA 15:7)
(Potato digger (Machine))

MAKSIMOV, B.I., kand. tekhn.nauk; AMELICHEV, V.I., inzh.

Machines for harvesting potatoes by stage and some problems of the technological process. Trakt. i sel'khozmash. 33 no.1:24-26 Ja '63. (MIRA 16:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokhozyaystvennogo mashinostroyeniya.

(Potatoes--Harvesting)

PETROV, G.L., kand. tekhn. nauk; MAKSIMOV, B.I., kand. tekhn. nauk

Propsects for and trends in the potato harvesting machinery.
Trakt. i sel'khozmash. no.8:21-24 Ag '65. (MIRA 18:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'-skokhozyaystvennogo mashinostroyeniya, Moskva.

MAKSIMOV, B.K.

High-voltage generator of periodic square pulses for studying corona discharge. Trudy MEI no.64:45-60 '65. (MIRA 19:1)

130-58 5-11/16

AUTHORS: Maksimov, B.M., Zhetvin, N.P., Ivanov, A.A. and Baskov, G.V.

TITLE: Roller Guides on a 250 Wire Mill (Rolikovyye propuski na provolochnom stane 250)

PERIODICAL: Metallurg, 1958, Nr 5, pp 28 - 30 (USSR).

ABSTRACT: Roller instead of slip guides have been successfully used for the last five years when rolling 30-65 mm dia. rounds. The advantages of roller guides are outlined by the authors who discuss the difficulties which arose through high rolling speeds when such guides were used with 5-8 mm dia. wire. At the "Serp i Molot" Works, the 250 wire mill is used to roll low-carbon, medium carbon, tool (U7 - U13), austenitic and ferritic stainless (type 1Kh18N9T, "furrodit"), heat-resisting, high-speed and other steels into coiled 5.25-12.0 mm dia. wire. A fairly satisfactory slip guide was developed at the works jointly with the Moskovskiy institut stali (Moscow Steel Institute) in 1954 but this still gave a defective product and a roller guide (Figures 1, 2) was constructed. This has one pair of rollers, is quickly and easily mounted and demounted and has some interchangeable bearings. For ease of passing the strip into the rollers and protecting the latter tubular ochre guides are provided made,

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like the rollers, of chromium-nickel-vanadium steel (1.8-2.2% C, 0.8-1.2% Mn, 0.5-1.0% Si, 23-25% Cr, 1.5-2.0% Ni, 1.0-1.3% W, 0.3-0.6% V, under 0.045% S and under 0.05% P. Two cone guides in series are provided, the feed-end one being held in position with a wedge which facilitates the clearing of cobbles. This type of guide the authors recommend both with manual and repeater operation. On the 450 and 300 mills at the works, guides with two pairs of rollers (Figure 4) are used but they have not proved satisfactory, whereas the one-pair types gave good results even when deliberately mis-aligned. The durability of a pair of rollers is up to 40-45 and 18-20 shifts on the Nr 2 and 3 lines, respectively, of the 250 mill. There are 4 figures.

ASSOCIATION: Zavod "Serp i Molot" ("Serp i Molot" Works)

POLUKHIN, P. I., prof., doktor tekhn. nauk; FEDOSOV, N. M., prof.; KRUPIN, A. V., kand. tekhn. nauk; MATEROV, V. A., inzh.; SHILKOV, B. N., inzh.; MAKSIMOV, B. M., inzh.

Increase in width during rolling with drawing dies. Sbor. Inst. stali i splav. no.40:100-106 '62. (MIRA 16:1)

(Drawing(Metalwork))

BOGOYAVLENSKIY, M.S.; VASHCHENKO, A.I.; DENISOV, A.N.; ZHETVIN, A.N.; ZEN'KOVSKIY, A.G.; MAKAROV, D.M.; MAKSIMOV, B.M.; FILATOVA, A.I.; SHABUNIN, Ye.M.

Oxidation and decarburizing of certain steels in duo-muffle furnaces of nonoxidizing heating. Stal' 23 no.12:1124-1126 D '63. (MIRA 17:2)

ISHUNIN, G.I.; MAKSIMOV, B.N.

Food of the carrion crow in the coastal area of the Amu Darya Delta. Ornitologiia no.5:276-280 '62. (MIRA 16:2)
(Amu Darya Delta region--Crows)
(Amu Darya Delta region--Birds--Food)

MAKSIMOV, B. YE.

Maksimov, B. Ye. "On work with catamnesis," Ogr.-metod. voprosy sovr. neyropsikiatrii (VII), 1948, p. 135-39

SO: U-3264, 10 April 53 (Letopis 'Zhurnal 'nykh Statey, No. 4, 1949).

MAKSIMOV, D.G.

EXCERPTA MEDICA Sec 18 Vol 3/5 Cardio. Dis. May 59

1221. **Change of duration of the ECG ventricular complex in decline and re-establishment of heart work (Russian text)** MAXIMOV D. G. *Byull. Eksper. Biol. i Med.* 1958, 45/6 (30—36) Graphs 3 Tables 1

ECG changes were studied in the agonal condition and in resuscitation of dogs. After quick death the ventricular complex usually shortened to 0.15-0.20 sec.; during the first minutes of clinical death while in re-establishment of the heart work it was increased to 0.25-0.35 sec. In a prolonged agonal state and clinical death the ventricular complex was not shortened as much, while in resuscitation it was prolonged to 0.4-0.55 sec. Various changes which take place in the length of the ventricular complex in the processes of dying and resuscitation may be explained by the relationship of 2 factors: the velocity of the spread of excitation and the number of the myocardial elements which are excited. (II, 18)

MAKSIMOV, D.G.

Some data on the restoration of the neuroreflex regulation of the cardiovascular system in revivification after clinical death. Biul. eksp. biol. i med. 52 no.10:34-38 O '61. (MIRA 15:1)

1. Iz laboratorii eksperimental'noy fiziologii po ozhivleniyu organizma (zav. - prof. V.A.Negovskiy) AMN SSSR, Moskva. Predstavlena deystvitel'nym chlenom AMN SSSR V.V.Parinym.

(RESUSCITATION) (DEATH, APPARENT) (CARDIOVASCULAR SYSTEM) (REFLEXES)

S/865/62/001/000/033/033
E028/E485

AUTHORS: Agadzhanyan, N.A., Akulinichev, I.T., Zazykin, K.P. Maksimov, D.G.

TITLE: A method of fixation of electrodes for the recording of the electrocardiogram during human space flights

SOURCE: Problemy kosmicheskoy biologii. v.1. Ed. by N.M.Sisakyan. Moscow, Izd-vo AN SSSR, 1962. 451-459

TEXT: Types of electrodes for recording the electrocardiogram during space flights and methods of attaching them to the body were studied by the authors in experiments carried out on themselves and on 12 volunteers. Silver discs, 10 to 20 mm in diameter and 0.3 to 0.5 mm thick, gave good electrical contact with the least irritation to the skin. The edges were rounded and the undersurface was cupped in order to retain a layer of conducting paste. This consisted generally of sodium chloride, glycerol, lanoline and antiseptics and was best applied as a liquid layer to the skin and as a semisolid layer to the electrode. The electrodes were attached to the chest either by a covering of gauze which was fixed in position with glue, or by means of an

Card 1/2

A method of fixation ...

S/865/62/001/000/033/033
E028/E485

elastic harness. These 2 methods of fixation were used in the respective flights of Gagarin and Titov. During the first few days after attachment the interelectrode resistance ranged from 5000 to 40000 ohms; after 10 to 14 days the resistance had risen 5 to 7-fold. There are 4 figures and 2 tables.

Card 2/2

ACCESSION NR: AT4042642 S/0000/63/000/000/0006/0008

AUTHOR: Akulinichev, I. T.; Bayevskiy, R. M.; Belay, V. Ye. Vasil'yev, P. V.; Gazenko, O. G.; Kakurin, L. I.; Kotovskaya, A. R.; Maksimov, D. G.; Mikhaylovskiy, G. P.; Yazdovskiy, V. I.

TITLE: Results of physiological investigations aboard the "Vostok-3" and "Vostok-4" spaceships

SOURCE: Konferentsiya po aviatsionnoy i kosmicheskoy meditsine, 1963. Aviatsionnaya i kosmicheskaya meditsina (Aviation and space medicine): materialy* konferentsii. Moscow, 1963, 6-8

TOPIC TAGS: biomedical monitoring, electrooculogram, pneumogram/Vostok-3, Vostok-4, EEG, EKG

ABSTRACT: A number of physiological indices were monitored during the tandem spaceflights of Nikolayev and Popovich (Vostok-3 and Vostok-4). New procedures used for the first time on these flights and improvements of existing equipment yielded a great deal of physiological information. Weightless-

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ACCESSION NR: AT4042642

ness had no noticeable effect on the functional state of the CNS in either cosmonaut, as evaluated on the basis of performance of various tasks. EEG's showed a dominance of comparatively high-amplitude rhythms with a frequency of 5 to 7 cps, similar to those observed in athletes after intense physical exertion, during the first hours of weightlessness. Later a gradual shift toward beta-rhythms with a reduced mean amplitude of EEG biopotentials occurred. Heightened emotional stress in the first hours of flight and before reentry was reflected in decreased electrical resistance of the cortex. Functional stability of the higher involuntary nervous centers is indicated by the maintenance of normal daily variation of cortical resistance--higher at night, lower during the daytime--during the rest of the flights. EOG's (electrooculograms) were used as an index of the functional state of the vestibular apparatus. Asymmetries in oculomotor reaction, which could have indicated disturbances of the vestibular centers, were not observed in either cosmonaut. Vestibular tests not supplemented by EOG's also failed to yield any evidence of vestibular disturbance. Oculomotor activity was also used as an index of general and motor activity. Variations in oculomotor activity had a phase character. At the beginning of the flight Nikolayev, and to

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a lesser degree Popovich, showed an increase of oculomotor activity up to 4 to 6 eye movements per second. Eye movements of an uncoordinated character, of both large and small amplitude, were recorded. On the 6th and 7th orbits eye movement fell off, and later EOG's show periodic increases and decreases in oculomotor activity. Toward the end of the flight a second stable increase in oculomotor activity occurred, but its level was lower than at the beginning of the flight. Cardiac activity was monitored by EKG's (using chest leads). Increased pulse rates (from 98 to 112 for Nikolayev, and from 94 to 136 for Popovich) occurred immediately before launch, with corresponding shortening of the PQ and QT intervals. EKG changes during the powered-flight phase were similar to those observed in ground experiments with centrifuging. The maximum pulse rate during the first minute of flight was 136 for Nikolayev and 132 for Popovich. Normalization of pulse rates to the rates observed 4 hr before launch took place on Nikolayev's 6th and 7th orbit and on Popovich's 3rd to 4th orbit. Normalization of pulse to initial rates took 5 to 10 min during tests. No IKG changes indicating disturbances of automatism, excitability, or conductivity were observed. In flight Popovich registered 3 separate extra

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