ROGOZIN, I.I., prof., red.; YAFAYEV, R.Kh., kand. med. nauk, red.; BELYAKOV, V.D., kand. med. nauk, red.; BOLOTOVSKIY, V.M., red.

[Selected problems of epidemiology] Izbrannye voprosy epidemiologii. Moskva, Meditsina, 1964. 335 p. (MIRA 17:6)

1. Chlen-korrespondent AMN SSSR (for Rogozin).

ALEKSANYAN, A.B., prof.; BEZDENEZHNYKH I.S., doktor med. nauk; BELYAKOV, V.D., doktor med. nauk; BESSMERTNYY, B.S., dokt. med. nauk; VASHKOV, V.I., prof.; GROMASHEVSKIY, L.V., prof.; YELKIN, I.I., prof.; ZHDANOV, V.M., prof.; ZHMAYEVA, Z.M., kand. biol. nauk; KOVARSKIY, M.S., kand. med. nauk; NABOKOV, V.A., prof.; NOVOGORODSKAYA, E.M., prof.; PAVLOVSKIY, Ye.N., akademik; PETRISHCHEVA, P.A., prof.; PERVOMAYSKIY, G.S., prof.; POGODINA, L.N.; ROGOZIN, I.I., prof.; SUKHOVA, M.N., doktor biol. nauk; CHASOVNIKOV, A.A., kand. med. nauk; SHATROV, I.I., prof.; SHURABURA, B.L., prof.; YASHKUL', V.K., kand. med. nauk; ZHUKOV-VEREZHNIKOV, N.N., prof., otv. red.; BOLDYREV, T.I., prof., red.; ZASUKHIN, D.N., doktor biol. nauk, red.; KALINA, G.P., red.

[Multivolume manual on the microbiology, clinical aspects and epidemiology of communicable diseases] Mnogotomnoe rukovodstvo po mikrobiologii, klinike i epidemiologii infektsionnykh boleznei. Moskva, Meditsina. Vol.5. 1965. 548 p. (MIRA 18:3)

1. Deystvitel'nyy chlen AMN SSSR (for Aleksanyan, Gromashevskiy, Zhdanov, Zhukov-Verezhnikov). 2. Chlen-korrespondent AMN SSSR (for Rogozin, Boldyrev).

BELYAKOV, V.D.; ZOLOCHEVSKIY, M.A.; NIKITIN, V.M.; PASHININ, P.M.

Correlations between the general and specific immunological reconstruction of the organism and the production of C-reactive protein in polyvaccine immunization. Zhur. mikrobiol., epid. i immun. 42 no.8:92-95 Ag '65. (MIRA 18:9)

1. Voyenno-meditsinskaya ordena Lenina akademiya imeni Kirova, Leningrad.

BELYAKOV, V.D.; KIROV, S.K.; GORELIKOV, I.A.; DEGTYAREV, A.A.; CHIKIN, M.N.

Dependence of the immmnological effectiveness of typhoid and paratyphoid complete antigens on their quality and dosage. Zhur. mikrobiol., epid. i immun. 43 no. 1:37-41 Ja '66 (MIRA 19:1)

1. Submitted April 5, 1965.

BELYAKOV, V.G., konstruktor.

[redacted]

Viatka motorscooters. Za rul. 15 no.3:insert Mr '57.
(MLRA 10:5)

(Motorcycles)

V.G.)

BELYAKOV, V., inzh.-konstruktor

Power units of "Viatka" motorscooters. Za.rul. 16 no. 5:19 My '58. (MIRA 11:7)

(Motorscooters)

BELYAKOV, V.G. inzh.-konstruktor

Electric equipment of the "Viatka" motor scooter. Za rul. 16 no.6:17 Je. '58. (MIRA 11:9)
(Motor scooters--Electric equipment)

BELYAKOV, V.G. konstruktor

The "Viatka" motor scooter in 1960. Za rul. 18 no.2:18-19 F '60. (MIRA 13:6)
(Motor scooters)

BELYAKOV, V.G. konstruktor

Increasing the power of the "Viatka" motor scooter. Za rul. 18 no.6:25 Je '60. (MIRA 13:8)
(Motor scooters)

TARNOVSKIY, I.Ya.; SMIRNOV, V.K.; KOTSAR', S.L.; BEDIN, N.A.; BELYAKOV, V.I.

Intensifying the rolling of billets for forging. Kuz.-shtam. proizv. 1 no.6:1-6 Je '59. (MIRA 12:9)
(Rolling (Metalwork))

DELYAKOV, V.I.

IP 5100

81534

SOV/137-59-5-11228

Translation from: Referativnyy zhurnal, Metallurgiya, 1959, Nr 5, p 247 (USSR)

AUTHORS: Zarovskiy, I.Ya., Smirnov, V.K., Kotsar', S.L., Bedin, M.A., Delyakov, V.I.

TITLE: Rolling of Track Links for Tractors

PERIODICAL: Tekhn. ekon. byul. Sverdlovsk Chelyab. ekon. adm. r-na, 1958, Nr 7, pp 43 - 45

ABSTRACT: Information is given on technical possibilities and economical effectiveness of changing the manufacture of track links for S-80 tractors from stamping to longitudinal periodic rolling. Experimental rolling of links on a scale of 1 : 2, 1 : 3, 1 : 4, was carried out on a DP2 test mill with rollers of 470 mm in diameter and on a DP1 laboratory mill with rollers of 200 mm in diameter. Technical specifications were developed for the design of a rolling mill and the principal scheme of the technological process was set-up for the production of links on a continuous automatic line. The rolling mill has rollers of 1,120 mm in diameter, revolving at a speed of 10 or 15 revolutions per minute.

Card 1/2

Rolling of Track Links for Tractors

81534

SOV/137-59-5-11228

derived from a meter of 500 hp power. Blanks of shaped rolled metal having a simple cross-sectional shape, are heated to 1,220° - 1,240°C in an induction furnace. One blank is heated within 24 sec. The mill is equipped with a special device to supply the blank to the rollers at a given moment. Alternating rolling of left-hand and right-hand links on the same rollers is possible. After rolling the strips are transported to two lines of automated presses where cutting, piercing, trimming and straightening of the links is performed. Then the links are fed to the semi-automatic line for mechanical and thermal treatment. The described continuous line will raise the efficiency by a factor of 8 - 10 as compared to stamping on air-steam hammers. The annual economy of metal will amount to ~ 9500 tons; it will amount to more than 8 million rubles with respect to the saving in metal, power consumption and wages.

A.G.

Card 2/2

BELYAKOV, Viktor Ivanovich; KON'KOV, A.S., dots., red.; DUGINA, N.A., tekhn. red.

[Stamping on special equipment] Shtampovka na spetsial'nom oborudovanii. Pod red. A.S.Kon'kova. Moskva, Mashgiz, (Nauchno-populiarnaia biblioteka rabochego kuznetsa, no.13)
(MIRA 15:4)

(Metalwork)

BORISENOK, I.T.; GENEROZOV, M.N.; YEREMEYEV, N.V.; KARAMYSHKIN, V.V.; KUZOVKOV, N.T.; BORISENOK, I.T.; KULIKOVSKAYA, N.V.; SAVINOV, G.I., kand.fiz.-mat. nauk, dots. [deceased]; PIROGOV, I.Z.; Prinimali uchastiye: BALAYEVA, I.A.; BALAKIN, B.M.; BELYAYEVA, G.M.; BELYAKOV, V.I.; VELERSHTEYN, R.A.; ZHARKOV, G.M.; KOROLEVA, V.Ye.; LITVIN-SEDOY, M.Z.; POPOV, A.I.; PRIVALOV, V.A.; STUKALOVA, L.M.; CHISTYAKOV, A.I.; SAVVIN, A.B., red.; CHISTYAKOVA, K.S., tekhn. red.

[Laboratory work in theoretical and applied mechanics] Laboratornyi praktikum po obshchei i prikladnoi mekhanike. Moskva, Izd-vo mosk. univ. 1963. 233 p. (MIRA 16:12)

1. Kafedra prikladnoy mekhaniki Moskovskogo gosudarstvennogo universiteta (for Balayeva, Balakin, Belyayeva, Belyakov, Velershteyn, Zharkov, Koroleva, Litvin-Sedoy, Popov, Privalov, Stukalova, Chistyakov).
(Mechanics--Laboratory manuals)

BELYAKOV, V.G.; VITENBERG, I.M.

Direct current amplifier with an expanded frequency characteristic. Priborostroenie no.5:14-17 My '60. (MIRA 14:5)
(Amplifiers, Election-tube)

L 60040-65 EWG(j)/EWT(m)/EPF(c)/EWP(j)/EWA(h)/EWA(c)/EWA(l) Pc-4/Pr-4/Ps-4/Peb
ACCESSION NR: AP5018040 RPL WW/JAT/RM UR/0191/65/000/007/0043/0046
678.664.019.391

AUTHOR: Nevskiy, L. V.; Tarakanov, O. G.; Belyakov, V. K.

TITLE: Light aging of polyurethanes

SOURCE: Plasticheskiye massy, no. 7, 1965, 43-46

TOPIC TAGS: polyurethane, ultraviolet radiation, polyurea, polymer aging, polymer film, optical density, wetting angle, polymer viscosity

ABSTRACT: The article describes the effect of ultraviolet radiation on polyurethanes (polyurethane-1, -2, -3, -4), prepared from toluylenediisocyanate, and on polyurea-2, obtained from m-toluylenediamine and urea. After irradiation for 50, 100, 150, and 200 hrs., the following characteristics of the polymer film samples were measured: (1) Optical density change $\Delta D = D_1 - D_2$ (D_1 and D_2 being the optical density of the irradiated and original film, respectively); (2) Angle of wetting of the film by water; (3) Specific viscosity of the polymer solutions; (4) Rate of gas evolution during irradiation. It was found that an increase in the quantity of carbamide groups in polyurethane causes an increase in the color intensity of the irradiated samples, which turned yellow. This was

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L 60040-65

ACCESSION NR: AP5018040

associated with a rapid evolution of gas, which dropped off with time of irradiation. Mass-spectrometric analysis of the gaseous products of polyurethane containing 3% carbamide groups established the presence of CO_2, CO, H_2, H_2O, CH_4, HCN, and CH_2O. ESR spectra showed the presence of free radicals and will be discussed in a later report. The viscosity of the soluble part of the irradiated polymers remains practically unchanged during the course of irradiation. Measurements of the angle of wetting lead to the conclusion that, as irradiation goes on, hydrophobization of the surface of the films takes place. Orig. art. has: 4 figures, 1 table, and 2 formulas.

ASSOCIATION: None

SUBMITTED: 00 ENCL: 00 SUB CODE: OC

NO REF SOV: 004 OTHER: 011

Card 2/2

L 23075-66 EWT(m)/EWP(j)/T WW/RM

ACC NR: AP6010104 (A) SOURCE CODE: UR/0190/66/008/003/0380/0386

AUTHORS: Krasnov, Ye. P.; Savinov, V. M.; Sokolov, L. B.; Loginova, V. I.; Belyakov, V. K.; Polyakova, T. A.

ORG: Vladimir Scientific Research Institute of Synthetic Resins (Vladimirskiy nauchno-issledovatel'skiy institut sinteticheskikh smol)

TITLE: Thermal degradation of isomeric aromatic polyamides

SOURCE: Vysokomolekulyarnyye soyednieniya, v. 8, no. 3, 1966, 380-386

TOPIC TAGS: polyamide, terephthalic acid, pyrolysis, discarbolic acid, isomer, thermal stability, thermal effect, mass spectrometry, chromatographic analysis, heat resistance

ABSTRACT: A thermal decomposition in vacuo of four isomeric aromatic polyamides based on phenylenediamines and terephthalic acids has been investigated. The composition of the gaseous and liquid products of the polyamides pyrolysis was analyzed by means of mass spectrometry and gas liquid chromatography. It was shown that the heat resistance of polyamides greatly depends on the isomeric form of the starting phenylenediamines and dicarboxylic acids. The polyamide chain is the most stable with para-isomers and the least stable with metha-isomers.

Card 1/2 UDC: 678.01:54+678.675

L 23075-66
ACC NR: AP6010104

On the basis of kinetic data and the results of the parolysis product analysis, the causes were suggested that for different thermal stabilities of polyamides and for the thermal decomposition of isomeric aromatic polyamides. Orig. art. has: 5 figures and 2 tables. [Based on author's abstract] [NT]

SUB CODE: 07, 11/ SUBM DATE: 01Feb65/ ORIG REF: 006/
OTH REF: 006/

Card 2/2 VLR

25(6) SOV/91-59-5-14/27

AUTHOR: ~~Belyakov, V.M.~~, Technician, and Tsyrkin, I.Z., Engineer.

TITLE: Signalization Chart for Measuring of Bearings Vibration by Means of Distance Vibration-Measuring Instruments (Skhema signalizatsii pri zamerakh vibratsii podshipnikov distantsionnymi vibroizmeritel'nymi priborami)

PERIODICAL: Energetik, 1959, Nr 5, pp 25-26 (USSR)

ABSTRACT: This article describes the functioning of a BIP-4 device for measuring the vibration in the bearings, worked out by TsNIITMASh, provided with bulb signalization. The author recommends to use the three-wire, two-side signalization scheme shown in Fig 2. There are 2 circuit diagrams.

Card 1/1

BELYAKOV, Vasiliy Mikhaylovich; KRAVTSOVA, Raisa Ivanovna; RAPPOPORT, Moisey Genrikhovich; KUZNETSOV, P.I., doktor fiz.-matem. nauk, prof., otv. red.; YAKOVKIN, M.V., red.; BRUZGUL', V.V., tekhn. red.; SIMKINA, G.S., tekhn. red.

[Tables of elliptic integrals]Tablitsy ellipticheskikh integralov. Moskva, Izd-vo Akad. nauk SSSR. Vol.1. 1962. 655 p. (MIRA 15:12)
(Functions, Elliptic) (Mathematics--Tables, etc.)

BELYAKOV, V. M., VINOGRADOVA, S. V., and KORSHAK, V. V.

"Synthesis and properties of polyesters of various dicarboxydic acids and glycols," a paper presented at the 9th Congress on the Chemistry and Physics of High Polymers, 28 Jan-2 Feb 57, Moscow, Organic Chemistry Research Inst.

B-3,084,395

BELYAKOV, V. M.

USSR / Chemistry of High Molecular Compounds. L.

Abs Jour : Ref. Zhur. - Khimiya, No.2, 1958, 6800.

Author : Korshak, V.V., Vinogradova, S.V., Belyakov, V.M.

Inst : Not given.

Title : Heterogeneous Polyesters. Communication I. Polyesters of Isomeric Phthalic Acids.

Orig Pub : Izv. AN SSSR, Otd. khim. n., 1957, No.6, 730-736.

Abstract : Polyesters (PE) of phthalic (I), isophthalic (II), terephthalic (III) acids and glycols: $HO(CH_2)_nOH$, where n = 2 (IV), 3 (V), 4 (VI), 5 (VII), 6 (VIII), 10 (IX), 20 (X), propylene glycol (XI), butanediol-1,3 (XII), di-(XIII) and triethylene glycols (XIV) were synthesized and investigated. The PE were obtained by polycondensation IV-XIV with dimethyl esters of I-III in the presence of PbO. Enumerated were:

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[illegible] 1.1; II, IV, 0.24, 103-108, 73, 89, 2.25, 0.2, II, V, 0.20, 92-96, 43, 74, -, -,; II, VI, 0.27, 88-94, 47, 60, 0.96, 0.4; II, VII, o.25, 76-82, 28, 40, > 125, 1.2; II, VIII, 0.31, 75-80, 32, 80, > 125, 1.4; II, IX, 0.20, 34-36, 25, 29, > 125, 1.8; II, X, 0.08, 47-49, 45, 48, > 250, 5.0; II, XI, 0.11, 80-87, 54, 67, > 50, 4.9; II, XII, 0.12, 50-55,

Card : 2/4

USSR / Chemistry of High Molecular Compounds. L.

Abs Jour : Ref. Zhur. - Khimiya, No.2, 1958, 6800.

Abstract : 25, 33, >50, 4.5; II, XIII, 0.20, 55-60, 24, 30, >125, 3.3; II, XIV, 0.13, 60-65, 33, 64, >50, 9.5; I, IV, 0.09, 63-65, 37, 46, 38.9, 2.8; I, Vi, 0.12, 17-18, -14, 14, > 50, 16.0; I, VII, 0.16, 6-9, -19.5, >50, 2.6; I, VIII, 0.20, 0-2, -14, 2, >50, 2.1; I, IX, 0.1, -27 -26, -42, -29, >50, 9.7; I, X, 0.10, 47-52, -, -, -, -; I, XI, 0.13, 45-50, 33, 42, > 50, 10.5; I, XII, 0.12, -8, -0, -19, -6, -, -; I, XIII, 0.08, 10-11, -25, 7, >50, 8.0; I, XIV, 0.12, -8 ÷ -7, -28, -12, >50, 9.3. Comparing the properties of PE I-III and also of PE I-III with corresponding PE of succinic XV, glutaric and adipic (XVI) acids, the effect of starting materials on the properties of PE was discussed. The differences in melting points, transition temperatures, solubility, crystallinity of PE I-III were correlated with the differences in degrees of symmetry of molecules I-III and the ensuing greater or smaller density in packing of molecules. The higher melting points of PE III as compared to those of

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BELYAKOV, V.M.

USSR / Chemistry of High Molecular Compounds. L.

Abs Jour : Ref. Zhur. - Khimiya, No.2, 1958, 6801.

Author : Korshak, V.V., Vinogradova, S.V., Belyakov, V.M.

Inst : Not given.

Title : Heterogeneous Polyesters. Communication 2. Polyesters of Isomeric Diphenylcarboxylic Acids.

Orig Pub : Izv. AN SSSR, Otd. khim. 2., 1957, No.6, 737-745.

Abstract : In order to learn the effect on properties produced by symmetry in a polymeric chain and by the presence of aromatic nuclei therein, the authors synthesized and prepared the polyester PE of diphenic (I), m,m'-(II), and p,p'-diphenylcarboxylic acids (III) and of glycols: $HO(CH_2)_n OH$, where n - 2 (IV), 3 (V), 4 (VI), 5 (VII), 6 (VIII), 10 (XI), 20 (X), propylene glycol (XI), butandiol -1,3 (XII), di-(XIII)

Card : 1/6

USSR / Chemistry of High Molecular Compounds. L.

Abs Jour : Ref. Zhur. - Khimiya, No.2, 1958, 6801.

Abstract : and tri-(XIV) ethylene glycols. Enumerated are: starting materials for the synthesis of PE, melting point of PE in °C, transition temperature of PE into a viscous liquid in °C, temperature of PE flow in °C, solubility of PE in alcohol and C_6H_6 in g/l, ηsp. 0.5% solution of PE in cresol: III, IV, 330-333, -, -, 0, 0, -; III, V, 246-249, -, -, -, -, 0, 13; III, VI, 255-260, -, -, -, -, -; III, VII, 160-170, -, -, 0.9, 3.3, 0.15; III, VIII, 195-200, -, -, -, -, 0.8; III, IX, 126-132, -, -, -, -, 0.06; III, X, 112-115, -, -, -, -, 0.07; III, XI, 130-140, -, -, 3.3, 5.3, 0.05; III, XII, 125-135, -, -, -, -, 0.05; III, XIII, 117-119, -, -, 2, 3, 5.5, 0.05; III, XIV, 86-93, -, -, -, -, 0.05; II, IV, 119-122, -, 100.0, 2.0, 0.109; II, V, 76-78, 49, 67, -, -, 0.04; II, VI, 62-66, 30, 79, -, -, 0.06; II, VII, 57-60, 30, 42, -, 16, 0.086; II, VIII, 52-56, 25, 39, -, -, 0.094; II, IX, 86-90, 86, 96, -, -, 0.079; II, X, 89-91, 87, 96, -, -, 0.079; II, XI, 93-97, 53, 95, 1.9, 49.7, 0.094; II,

Card : 2/6

USSR / Chemistry of High Molecular Compounds. L.

Abs Jour : Ref. Zhur. - Khimiya, No.2, 1958, 6801.

Abstract : gularity of melting point variation in relation to the glycol structure is analogous to those that take place in a series of corresponding aliphatic dicarboxylic acid PE. If the PE is obtained from ADK in which the carboxylic groups occupy the ortho or meta position rather than the para position, then the presence of an aromatic nucleus in the polymeric chain is not always sufficient to obtain a higher melting PE as compared to the corresponding PE of the aliphatic dicarboxylic acid. It is not always that the melting point of PE increases when the number of aromatic nuclei in the acid increases from one to two. This can be attributed to the disruption of packing density in the polymeric chain on account of the occurring dissymmetry in the macromolecule. The greater is the dissymmetry in the polymeric chain, the lower is the melting point of the polymer. The effect of dissymmetry in the polymeric chain of PE ADK having carboxyl groups in ortho and meta position is so great that it suppresses the effect produced by structure modification in

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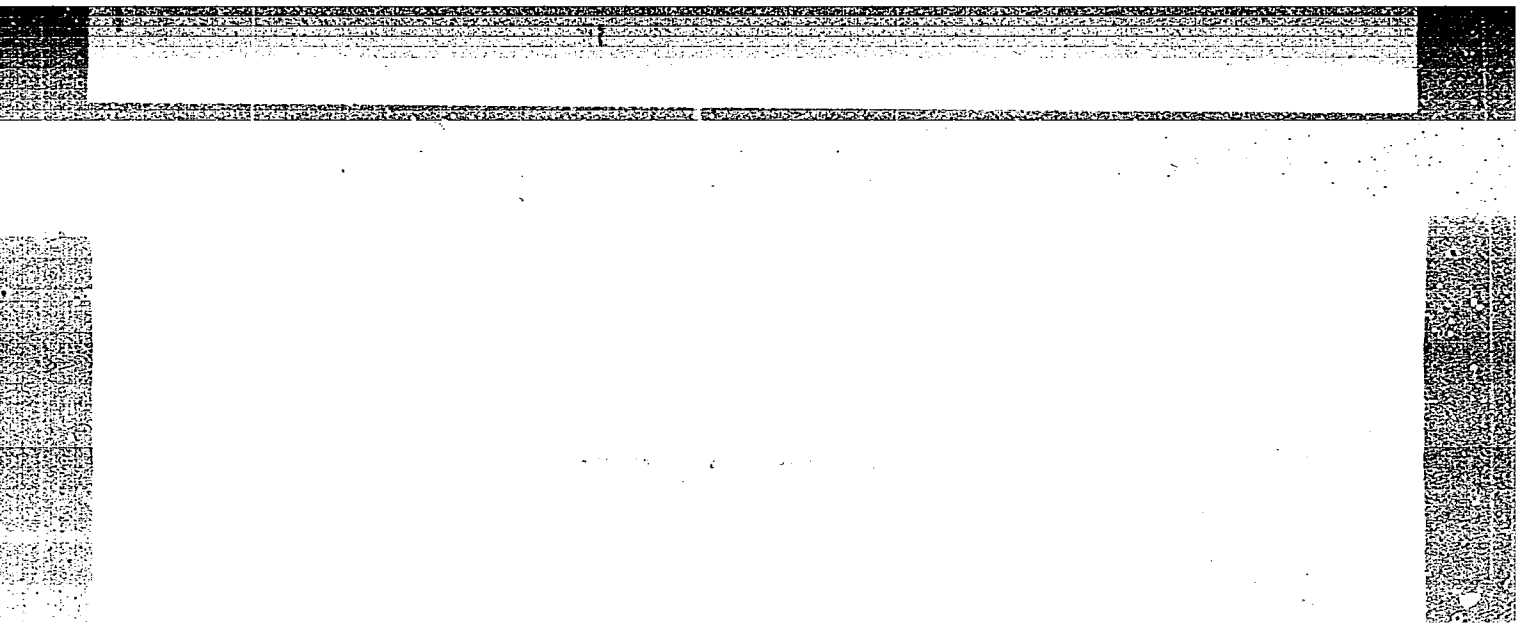


APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000204530002-5"

BELYAKOV, V.M.

KORSHAK, V.V.; VINOGRADOVA, S.V.; BELYAKOV, V.M.

Heterogenous chain polyesters. Report No.7: Polyesters of p-phenylenediacetic, cis- and trans-hexahydroterephthalic acids. Izv. AN SSSR. Otd. khim. nauk no.8:1000-1001 Ag '57. (MIRA 11:2)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Esters) (Terephthalic acid) (Acetic acid)

BELYAKOV ~~Belyakov~~, V.M., Cand Chem Sci--(diss) "Study in the field of polymers of aromatic dicarboxylic acids." Mos, 1958. 7 pp (Acad Sci USSR. Inst of Elemento-organic Compounds), 150 copies (KL,25-58,108)

GAVRILKO, V.M.; BELYAKOV, V.M.

Work of gravel filters in relation to the thickness of the filtering medium and the interlayer coefficient. Vod. i san. tekh. no.2:25-27 F '61. (MIRA 14:7)
(Filters and filtration)

GAVRILKO, V.M., kand.tekhn.nauk; BELYAKOV, V.M., inzh.

New design of filters for shallow driven wells. Gidr. i mel. 13 no.3:61-64 Mr '61. (MIRA 14:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut vodosnabzheniya, kanalizatsii, gidrotekhnicheskikh sooruzheniy i inzhenernoy gidrogeologii.

(Wells)

SHUL'GIN, S.V.; BELYAKOV, V.M.

Magnetic reverberators and their uses. Trudy VNAIZ no.9:86-102 '61. (MIRA 15:9)
(Electroacoustics) (Magnetic recorders and recording)

BELYAKOV, Vasiliy Mikhaylovich; KRAVTSOVA, Raisa Ivanovna; RAPPOPORT, Moysey Genrikhovich; KUZNETSOV, P.I., doktor fiz.-matem. nauk, prof., otv. red.; YAKOVKIN, M.V., red.; SIMKINA, G.S., tekhn. red.

[Tables of elliptic integrals] Tablitsy ellipticheskikh integralov. Moskva, Izd-vo AN SSSR. Vol.2. 1963. 783 p. (MIRA 17:2)

BELYAKOV, V.M.

Effect of chemical precipitations in the filtration cone of wells on their capacity. Trudy Lab. inzh. gidrogeol. [illegible] no.5:53-64 '63 (RA 17:8)

BELYAKOV, V.M.

Laboratory testing of gravel filters under pressure conditions. Vop. fil'tr. rasch. gidr. soor. no.4:182-188 '64.
(MIRA 17:6)

BELYAKOV, V.M.

Laboratory investigations of the selection of the optimal concentration of a hydrochloric acid solution for dissolving ferric oxide in the treatment of wells. Trudy VODGEO no.6: 5-6 '64. (MIRA 18:3)

BELYAKOV, V.N. (Ryazan', ul. Dzerzhinskogo, d. 46, kv.1)

Petr Aleksandrovich Dubovitskii (1815-1868). Vest.khir. 82 no.1:136-139 Ja '59. (MIRA 12:2)

(BIOGRAPHIES
Dubovitskii, Petr Aleksandrovich (Rus)
(SURGERY
contribution of Petr. A. Dubovitskii (Rus))

BELYAKOV, V.N. (Ryazan')

P.A. Dubovitskii's contribution to the development of restorative surgery. Khirurgiia 35 no. 5:130-132 My '59. (MIRA 13:10)
(DUBOVITSKII, PETR ALEKSANDROVICH, 1815-1868)

BELYAKOV, V.N. (Leningrad)

N.I.Pirogov's ideas on higher medical education. Sov.zdrav. 19 no.12:32-36 '60. (MIRA 14:3)

1. Iz Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta (direktor - prof.A.Ya.Ivanov).
(PIROGOV, NIKOLAI IVANOVICH, 1810-1881)
(MEDICINE—STUDY AND TEACHING)

BELYAKOV, V.N., podpolkovnik meditsinskoy sluzhby

History of training of medical teaching personnel in Russia.
Voen.-med. zhur. no.6:81 Je '61. (MIRA 14:8)
(MEDICINE—STUDY AND TEACHING)

BELYAKOV, V.P.

New design of the guide wheel of wood-milling machines. Der. prom. 10 no.6:20 Je '61. (MIRA 14:7)

1. Armavirskiy mebel'no-derevoobrabatyvayushchiy kombinat.
(Woodworking machinery)

BELYAKOV, V.T.

AID P - 4630

Subject : USSR/Aeronautics - bibliography

Card 1/1 Pub. 135 - 19/23

Author : Belyakov, V. T., Eng.-Lt.Col.

Title : Helicopter

Periodical : Vest. vozd. flota, 4, 78-80, Ap 1956

Abstract : Critical review of the book "Helicopter" by A. E. Tatarchenko, published by the Ministry of Defense of USSR, Moskva, 1955, 150 pages. One photo.

Institution : None

Submitted : No date

BELYAKOV, Vladimir Trofimovich; PANOV, Nikolay Nikolayevich; FILIPPOV, Vasiliy Vasil'yevich; DRUZHINSKIY, M.V., inzh.-podpolkovnik, red.; KRASAVINA, A.M., tekhn. red.

[Maintenance of helicopters] Tekhnicheskaia ekspluatatsiia vertoletov. Moskva, Voen. izd-vo M-va oborony SSSR, 1961. 311 p. (Helicopters—Maintenance and repair) (MIRA 15:2)

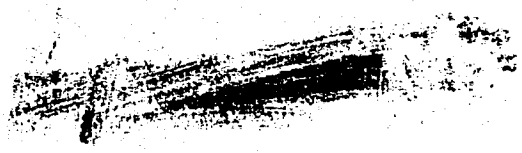
BELYAKOV, V.T. (Moskva)

Thirsty willows. Priroda 50 no.7:112 Jl '61. (MIRA 14:6)
(Willows)

BELYAKOV, V.T., inzhener-polkovnik

"Elementary theory of the helicopter" by A.M. Zagordan. Reviewed by V.T. Beliakov. Vest. Vozd. Fl. no.5:84-85 My '61. (MIRA 14:8)

(Helicopters)
(Zagordan, A.M.)



L 11260-66 (A) EWT(d)/EWT(m)/EWP(w)/EWP(v)/EWP(j)/T/EWP(k)/EWA(h)/ETC(m) EM/WW/RM

ACC NR: AP5028475 SOURCE CODE: UR/0286/65/000/020/0056/0057

INVENTOR: Gavrilov, I. K.; Filippov, D. A.; Strukov, V. M.; Blatov, V. S.; Shalimov, A. S.; Vul, N. I.; Ivanov, A. M.; Belyakov, V. V.; Frolov, R. A.; Khantsis, R. Z.; Andriyevskaya, A. G.; Zelenskiy, E. S.; Kuperman, A. M.; Dobrovol'skiy, A. K.; Dzhereliyevskiy, A. B.

ORG: none

TITLE: Method of fabricating fiberglass shells. Class 32, No. 175624

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 20, 1065, 56-57

TOPIC TAGS: shell, cylindrical shell, fiberglass shell, shell fabrication, fiberglass winding, solid fuel rocket, rocket case

ABSTRACT: This Author Certificate introduces a method of fabricating shells from fiberglass wound on a pattern which is then melted out or dissolved. To increase the strength of the shell, the winding is combined with the stretching of fiber by means of a fiber guide which rotates around the pattern. [DV]

SUB CODE: 11,19 SUBM DATE: 02Jul64/ ATD PRESS: 4178

HW

Card 1/1

L 62709-65 EPF(c)/EPA(s)-2/EWA(h)/EWP(j)/EWP(k)/EWT(d)/EWT(l)/EWT(m)/EWP(h)/T/EWP(t)/EWA(d)/EWP(w)/EWP(v) Pc-4/Pt-4/Pr-4/Ps-4/Pt-4/Peb EM/RM/WW/JD

ACCESSION NR: AP5019030 UR/0286/65/000/012/0065/0066

666.189 22.002.5

AUTHOR: Gavrilov, I. K.; Filippov, D. A.; Strukov, V. M.; Blatov, V. S.; Shalimov, A. S.; Vul, N. I.; Ivanov, A. M.; Belyakov, V. V.; Frolov, E. A.; Khantsis, R. Z.; Andriyevskaya, G. D.; Zelenskiy, E. S.; Kuperman, A. M.; [illegible]skiy, A. K.; Donerelliyevskiy, A. B.

TITLE: Winding machine. Class 32, No. 172009

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 12, 1965, 65-66

TOPIC TAGS: glass reinforced plastic, plastic filament, fiber glass, filament winding, winding machine, filament wound article

ABSTRACT: This Author Certificate introduces a machine for fabrication of glass-reinforced plastic articles by filament winding. The machine includes a drive with a reductor and a mandrel mounted on a rotating shaft. To fabricate spherical shapes the machine is equipped with profiled guides transmitting to the mandrel a tilting motion around the vertical axis simultaneously with a rotation around the axis (see Fig. 1 of the Enclosure). Orig. art. has: 1 figure. [ND]

Card 1/2

L 62709-65

ACCESSION NR: AP5019030

4

ASSOCIATION: Organizatsiya gosudarstvennogo komiteta po aviatsionnoy tekhnike SSSR (Organization of the State Committee on Aviation Engineering, SSSR) 44,55

15

SUBMITTED: 19May64 ENCL: 01 SUB CODE: MT,IE

NO REF SOV: 000 OTHER: 000 ATD PRESS: 4064

Card 2/3

BELYAKOV, V.V.; DELEKTORSKIY, N.V.

Increase in labor productivity at the "Acrichine" plant. Med.prom. no.2:43-45 Ap-Je '55. (MLRA 9:12)
(DRUG INDUSTRY,
in Russia, productivity)

BELYAKOVA, V.V.

AUTHOR: BELYAKOVA, V.V., MITTSEV, M.A. PA - 2807

TITLE: Passage of Lithium Positive Ions through the Thin Powdered Aluminum Layers. (Prokhozhdeniye polozhitel'nykh ionov litiya cheres tonkiye napylennyye sloi alyuminiya, Russian)

PERIODICAL: Zhurnal Tekhn.Fiz, 1957, Vol 27, Nr 4, pp 803-804 (U.S.S.R.)

Received: 5 / 1957 Reviewed: 7 / 1957

ABSTRACT: Experiments were carried out for the purpose of estimating the penetration depth of the ions of average energy into solid bodies. Slightly divergent ion bundles of Li^+ were directed on to the metal films to be investigated and the current having passed through the films was measured. This current was recorded by a mirror galvanometer with $\sim 10^{-9}$ A/mm. A heated tungsten spiral with coating of a lithium chloride solution served as a source. A strong current increase of the electrons reaching the collector was observed at an electron energy of from 200 to 500 eV. The energy threshold for the penetration of the lithium ions was observed at from 1200-2000 eV only in the case of aluminum films having an electron threshold of from 200 to 300 eV. The maximum losses of ion energy amounted to only about 170 eV, i.e. to about only 10% of their initial energy. Though, on the occasion of the tests, the films were not homogeneous with respect to thickness, the authors are of the opinion that

Card 1/2

ACC NR: AP6032352 SOURCE CODE: UR/0091/66/000/006/0005/0006

AUTHOR: Belyakov, Y. G.; Zinov'yev, A. V.

ORG: none

TITLE: Device for locating short-circuits on 6-10 KV overhead lines 15

SOURCE: Energetik, no. 6, 1966, 5-6

TOPIC TAGS: electric power transmission, electric measuring instrument, electronic amplifier

ABSTRACT: The article describes a device for locating points at which a power distribution system with isolated neutral may be grounded. The direction along which a fault has occurred is determined on the basis of zero-sequence current measurements by the two-loop method, while the actually grounded transmission pole is found by the single-loop method. The device is portable and consists of two basic components: a measuring instrument and an amplifier, both connected by a flexible shielded cable. All design parameters are given and the equivalent circuit diagram is shown: a millivoltmeter-microammeter connected through a filter to two coils in parallel; both coils are wound on silicon steel cores and their inductances are compensated by series capacitors. One coil, the "horizontal" one, is in the circuit permanently -- the other coil, the "vertical" one, is connected through a switch. The device was tested during the year 1965 on various rural networks according to procedure outlined here for the case of a single-phase to ground fault. The device reduces trouble shooting time by 3-4 times and makes any switching within the distribution network unnecessary. Orig. art. has: 4 figures. [JPRS: 37,061]

SUB CODE: 09, 10 / SUBM DATE: none

Card 1/1

UDC: 621.315.1

5406

BELYAKOV, Ye.L.; GEFEN, G.Ye.

Packing for a collection of agglutinating sera. Lab. delo [7] no.4: 54 Ap '61. (MIRA 14:3)

(SERUM—TRANSPORTATION)

GEFEN, G.Ye., podpolkovnik meditsinskoy sluzhby; BELYAKOV, Ye.L., podpolkovnik meditsinskoy sluzhby; MARTYUSHOV, A.A., kapitan meditsinskoy sluzhby

Epidemiology of dysentery under conditions of a military unit. Voen.-med. zhur. no.4:81-82 Ap '61. (MIRA 15:6)
(DYSENTERY)

BELYAKOV, Ye. M., Cand Med Sci -- (diss) "Comparative evaluation of some methods of early laboratory diagnostics of the grippe." Simferopol', 1960. 12 pp; (Crimean State Medical Inst im I. V. Stalin); 200 copies; price not given; (KL, 28-60, 164)

BELYAKOV, Ye.P., otv. red.; GINZBURG, N.Ya., otv. red.; KRICHEVSKIY, Ya.M., otv. red.; MELIK-GAYKAZOV, V.I., otv. red.; TIKHONOVA, Ye.D., red.; SELEZNEV, P.I., tekhn. red.

[Rolling mills]Stany prokatnye. Moskva, TSINTImash, 1960. 137 p. (MIRA 15:11)

1. Russia (1923- U.S.S.R.)Gosudarstvennyy nauchno-tekhnicheskiy komitet.

(Rolling mills)

BELYAKOV, Ye.P.; KONOVALOV, V.S.; NARTOV, G.I.; PONOMAREV, V.S.; STUDNITSYNA, K.P., red.; ALEKSEYEVA, T.V., tekhn. red.

[Rolling stock and equipment of railroad and city transportation; catalog-handbook] Podvizhnoi sostav i oborudovanie zheleznodorozhnogo i gorodskogo transporta; katalog-spravochnik. Moskva, TsNIIMASH. Sec.1. 1962. 219p. (MIRA 16:8)

(Streetcars) (Railroads--Rolling stock)

BELYAKOVA, Ye.P.; DVERNYAKOVA, A.A.

Decomposition of ilmenite concentrates by gaseous hydrogen chloride. Titan i ego splavy no.8:124-134 '62. (MIRA 16:1)
(Titanium oxide) (Hydrochloric acid)

NEMKOV, P.P., kand.tekhn.nauk; BELYAKOV, Ye.S., inzh.

Gas tempering of parts in ship repair. Trudy LIVT no.6: 49-53 '60. (MIRA 15:3)
(Tempering) (Ships--Maintenance and repair)

C A BELYAKOV, YE. V.

15

Effect of absorbed potassium on nitrogen fixation by Azotobacter. B. V. Belyakov. *Izvest. Akad. Nauk Kazakh. S.S.R., Ser. Pochv. Biokhim. Rastenii* No. 2 (Whole No. 39), 109–11(1947).—Fixation of atm. N by *Azotobacter* is promoted by K that is absorbed and bound by the gray desert soil (Karakhstan); the effect of K is much weaker if the latter is merely present free in aq. soln. However, as the Ca concn. is decreased, relative to K, the phys. properties of the soil deteriorate and the activity of *Azotobacter* also drops.

G. M. Kosolapoff

Беляков, Ye. V.

USSR/ Biology - Plant physiology

Card 1/1 Pub. 22 - 42/49

Authors : Belyakov, Ye. V.

Title : Application of growth curves of Radicula cereal grains in some physiological experiments

Periodical : Dok. AN SSSR 102/1, 169-171, May 1, 1955

Abstract : The applicability of growth curves of radicula type cereal grains (corn in particular) to the study of physiological properties of cereal grains is discussed. Three references: 2 Russ and USSR and 1 Chin. (1885-1949). Tables; graph.

Institution : .....

Presented by : Academician A. L. Kursanov, February 10, 1955

BELYAKOV, Ye.Ya.

Attachment to a minimeter for measuring great lengths. Izm.tekh. no.3:12 Mr '62. (MIRA 15:2)
(Length measurement)

USSR/Soil Science. Soil Biology J-4

Abs Jour : Ref Zhur - Biol., No 20, 1958, No 91418

Author : Belyakov Ye.V.
Inst : -
Title : Simple New Method of Isolating Azotobacter from the Soil

Orig Pub : Mikrobiologiya, 1957, 26, No 2, 186-188

Abstract : Watch glasses of somewhat less diameter are matched to Petri dishes (Petri dish halves, although flatter, can be taken instead of watch glasses); the watch glasses are encircled with wide strips of pure filter paper and put in the bottom of dishes with the convex side up, covered with lids and sterilized, after which a sterile liquid elective medium is introduced into them. When the entire strip of paper is made moist, to its upper surface sterile chalk is uniformly distributed with a spatula, after which the dish is inoculated with lumps of soil or smears are made. By the described method, a test of the acclimatibility of azotobacter in the

Card : 1/2

USSR/Soil Science. Soil Biology

Abs Jour : Ref Zhur - Biol., No 20, 1958, No 91418

soil can be made, as well as subcultures, multiplication and purifying of azotobacter from accompaniments. -- Ye.A. Krongauz

Card : 2/2

BELYAKOV, Ye.V. (Zhitomir)

Evgenii Pavlovich Gusel'nikov (1902-1962). Bot.zhur. 47 no.11: 1695 N '62. (MIRA 16:1)
(Gusel'nikov, Evgenii Pavlovich, 1902-1962)

BELYAKOV, Yu.A., inzh.

Adjustment of dispatcher control devices on the Northern Caucasus Railroad. Avtom., telem. i sviaz' 8 no.11:23-27 N '64.
(MIRA 17:12)

1. Laboratoriya signalizatsii, tsentralizatsii, blokirovki i svyazi Severo-Kavkazskoy dorogi.

BELYAKOV, Yu.I., inzh.; KHOKHRYAKOV, V.S., dots.

Load diagrams for scooping frozen ground with rotor excavators. Izv. vys. ucheb. zav.; gor. zhur. no.2:94-100 '58. (MIRA 11:5)

1. Ural'skiy filial Akademii nauk (for Belyakov). 2. Sverdlovskiy gornyy institut (for Khokhryakov).
(Excavating machinery--Electric driving)(Frozen ground)

BEL'YAKOV, Yu.I., inzh.; KOZHEMYAKIN, A.S., inzh.; NAVARSKIY, Yu.V., inzh.

Studying a rotary excavator in operation. Izv.vys.ucheb.zav.; gor.zhur. no.11:112-118 '58. (MIRA 12:8)

1. Ural'skiy filial AN (for Belyakov). 2. Ural'skiy politekhnicheskiy institut (for Koshemyakin, Navarskiy).
(Excavating machinery)

BELYAKOV, Yu.I.

Use of rotary excavators in severe climatic conditions.
Trudy Gor.-geol. inst. UFAN SSSR no.31:235-243 '58.
(MIRA 12:9)

(Strip mining--Cold weather conditions)
(Excavating machinery--Cold weather operation)

BELYAKOV, Yu.I.

Determination of cutting resistance in working ground with rotary excavators. Trudy Gor.-geol. inst. UFAN SSSR, no.34: 125-131 '58. (MIRA 14:10)

(Excavating machinery)
(Soil mechanics)

BELYAKOV, Yu. I., Cand of Tech Sci — (diss) "The Conditions for the Use of Rotary Excavators in the Ural Open Pits During Winter Months," Sverdlovsk, 1959, 14 pp (Mining-Geological Institute, Ural Affiliate of the Acad Sci USSR) (KL, 5-60, 125)

BELYAKOV, Yu.I.

Use of rotary excavators for operation in winter conditions.
Trudy Gor.-geol.inst.UFAN SSSR no.41:199-209 '59. (MIRA 13:5)
(Excavating machinery--Cold weather operation)

BELYAKOV, Yu.I., inzh.; ROZENPLENTER, A.E., inzh.

Analysis of the winter performance of rotary bucket excavators in Ural Mountain open-pit mines. Izv. vys. ucheb. zav.; gor. zhur. no.10:21-28 '60. (MIRA 13:11)

1. Gornogeologicheskiy institut Uralskogo filiala Akademii nauk (for Belyakov). 2. Institut Unipromed' (for Rosenplenter). Rekomendovana kafedroy otkrytykh rabot Sverdlovskogo gornogo instituta imeni V.V. Vakhrusheva.

(Ural Mountains--Strip mining)
(Excavating machinery--Cold weather operation)

BELYAKOV, Yu.I.

Cutting power for working frozen ground with use of rotary bucket excavators. Trudy Gor.-geol. inst. UFAN SSSR no.49:79-83 '60. (MIRA 13:8)
(Excavating machinery) (Frozen ground)

MELYAKOV, Yu.I., insh.

Baring operations in winter. Shakht.stroi. 4 no.9:7-9 S '60. (MIRA 13:8)

1. Gorno-geologicheskiy institut Ural'skogo filiala Akademii nauk SSSR.
(Strip mining—Cold weather conditions)

BELYAKOV, Yu.I., kand.tekhn.nauk; ROZENPLENTER, A.E., inzh.

Selection of units of continuous equipment for ore pits. Nauch. zap.Ukrniiproekta no.5:102-111 '61. (MIRA 15:7)
(Strip mining--Equipment and supplies)

BELYAKOV, Yu.I., kand.tekhn.nauk; KONONENKO, A.A., inzh.; CHERNYAVSKIY, A.T., inzh.

Selection of parameters and plans of operation of a stacker with a productivity of 500 M³/hr. Nauch.zap.Ukrniiproekta no.5:112-118 '61. (MIRA 15:7)

(Conveying machinery)

BELYAKOV, Yu.I.; ROZENPLENTER, A.E.

Working the loose rock of the Gay deposit. Trudy Gor.-geol. inst. UFAN SSSR no.57:23-27 '61. (MIRA 15:3)
(Gay region (Orenburg Province)--Copper mines and mining)

BELYAKOV, Yuriy Ivanovich, kand. tekhn. nauk; BYKHOVSKAYA, S.N., red. izd-va; LOMILINA, L.N., tekhn. red.

[Use of rotary excavators in the winter] Primenenie rotornykh ekskavatorov v zimnee vremia. Moskva, Gosgortekhizdat, 1962. 93 p. (MIRA 15:5)

(Excavating machinery)

AKSENOV, V. P., kand. tekhn. nauk; BELYAKOV, Yu. I., kand. tekhn. nauk;
KONONENKO, A. A., inzh.

Continuous action equipment complex for open-pit mining. Ugol' Ukr. 6 no.10:22-25 O '62. (MIRA 15:10)

(Coal mining machinery) (Strip mining)

DEMCHENKO, Viktor Vasil'yevich, inzh.; PECHKOVSKIY, Vsevolod Ivanovich, kand.tekhn. nauk; CHERNEGOV, Aleksandr Aleksandrovich, inzh.; NECHITAYLO, Aleksandr Aver'yanovich, inzh.; KAL'CHIK, Georgiy Semenovich, inzh.; BELYAKOV, Yu.I., kand. tekhn. nauk, retsenzent; SEMENENKO, M.D., inzh., red.izd-va; STARODUB,T.A., tekhn. red.

[Improvement of open-pit manganese mining in the Ukrainian S.S.R.] Sovershenstvovanie otkrytykh razrabotok margantsevykh rud USSR. Kiev, Gostekhizdat USSR, 1963. 119 p.
(MIRA 16:8)
(Nikopol' region--Manganese mines and mining)

AKSENOV, V.P., kand.tekhn.nauk; BELYAKOV, Yu.I., kand.tekhn.nauk;
PINCHUK, A.N., inzh.

Prospects for using continuous equipment in open pits of the U.S.S.R. Gor.zhur. no.2:10-13 F '63. (MIRA 16:2)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut ugol'noy, rudnoy, neftyanoy i gazovoy promyshlennosti, Kiyev.
(Strip mining--Equipment and supplies)

BUYANOV, Yuriy Dmitriyevich, kand. tekhn. nauk; AVERCHENKOV, Anatoliy Pavlovich, gornyy inzh.; BESSMERTNYY, Konstantin Sergeyevich, gornyy inzh.; AKSENOV, V.P., kand. tekhn. nauk, retsenzent; BELYAKOV, Yu.I., kand. tekhn. nauk, retsenzent; GEYMAN, L.M., red.izd-va; LAVRENT'YEVA, L.G., tekhn. red.

[Sand, gravel, crushed stone and clay quarries] Peschano-graviinye, shchebenochnye i glinianye kar'ery. Moskva, Izd-vo "Nedra," 1964. 358 p. (MIRA 17:3)

AKSENOV, V.P., kand. tekhn. nauk; BELYAKOV, Yu.I., kand. tekhn. nauk

Mine transportation equipment of continuous operation used in strip mine construction. Shakht. stroi. 7 no.3:6-11 Mr '63 (MIRA 17:7)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut ugol'noy, rudnoy, neftyanoy i gazovoy promyshlennosti UkrSSR.

AKSENOV, [illegible] tekhn.nauk; BELYAKOV, Yu.I., kand.tekhn.nauk; KONONENKO, A.A., inzh.

Technological bases of programming the operations of a rotary excavator. Izv.vys.ucheb.zav.:gor.zhur. 7 no. 1:45-52 '64. (MIRA 17:5)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut ugol'noy, rudnoy, neftyanoy i gazovoy promyshlennosti UkrSSSR.

BELYAKOV, Yu.I., kand.tekhn.nauk; REZUNIK, A.V., inzh.; SOLODNIKOVA, G.S., inzh.

Using artificial caving of the blasted rock in strip mines. Gor. zhur. no.3:20-23 Mr '65. (MIRA 18:5)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut ugol'noy, rudnoy, neftyanoy i gazovoy promyshlennosti UkrSSR, Kiyev.

BELYAKOV, Yu.I.; ZVEZDIN, Yu.I.

Mass-spectroscopic method for studying the hydrogen permeability of refractory materials. Zav. lab. 31 no.9:1107-1109 '65. (MIRA 18:10)

VASIL'YEV, Mikhail Vladimirovich, prof., doktor tekhn. nauk; BELYAKOV, Yu.I., retsenzent; ROZENPLENTER, A.E., retsenzent; PLYASKIN, I.I., retsenzent

[Combined transportation in open-cut mining] Kombinirovannyi kar'yernyi transport. Moskva, Nedra, 1965. 306 p. (MIRA 18:12)

AGISHEV, Ye.I.; BELYAKOV, Yu.I.

Thermionic emission from nickel in the presence of halides. Zhur. tekh.fiz. 29 no.12:1480-1483 D '59. (MIRA 14:6)
(Thermionic emission) (Nickel)

24.6700,24.7000

77315
SOV/57-30-2-12/18

AUTHORS: Belyakov, Yu. I., Ionov, N. I.

TITLE: Investigations of Hydrogen and Deuterium Desorption From Palladium by Means of a Pulse Mass Spectroscope

PERIODICAL: Zhurnal tekhnicheskoy fiziki, 1960, Vol 30, Nr 2, pp 216-222 (USSR)

ABSTRACT: It is of general interest to compare the composition of desorbed gases with the composition of the initial material. In the case of the system hydrogen-palladium the authors tried to answer the question about the possibility of creating H radicals and positive and negative ions, together with initial H_2 molecules.

There exist conflicting reports on this subject in the scientific literature and the authors used, therefore, a time-of-flight (pulse) mass spectrometer to investigate the desorbed particles after permeation of hydrogen through palladium. They also analyzed the equimolecular mixture of hydrogen and deuterium crossing the heated

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Investigations of Hydrogen and Deuterium Desorption From Palladium by Means of a Pulse Mass Spectroscope

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palladium membrane. The mass spectroscope was described earlier by Agishev and Ionov (ZhTF, XXVI, 203, 1956, ZhTF, XXVIII, 1775, 1958). The source shown on Fig. 1 contained a rectangular window on the electrode 1, covered by a 24 x 21 mm^2 palladium membrane 0.12 mm thick. Electrodes 2 and 3 were 22 mm in diameter and consisted of transparent grids. Tube C was connected through a covar junction O to the glass tube. The membrane could be heated up to 750° C by means of the heater H, and a platinum-platinorhodium thermocouple, T, supplied the temperature. Tube M was a bypass for the hydrogen gas. An electron beam was formed from the cathode K by means of electrodes Z and A, and ended on the collector C. An oil diffusion pump TsVL-100 with a vapor trap reduced the pressure to $1 \cdot 10^{-7}$ mm Hg. The authors first worked without an electron beam and observed significant ion currents of K^+ and Na^+, and also considerable peaks of Rb^+ and Cs^+. These elements are always present in small quantities in palladium.

Card 2/6

Investigations of Hydrogen and Deuterium Desorption From Palladium by Means of a Pulse Mass Spectroscope

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SOV/57-30-2-12/18

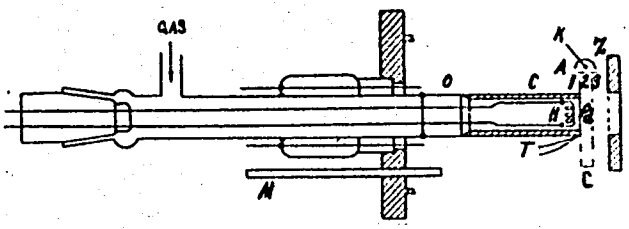

Fig. 1.

No new ions were found when hydrogen was passing through the membrane at temperatures between 80 and 750° C. The sensitivity of the spectrometer would allow the detection of currents of the order of 10^{-12} a/cm^2 of the Pa membrane. The authors did not observe any negative peaks whatsoever. After switching on the electron beam the ratio of the H^+/H_2^+ was 0.01 which can be due to the background of H radicals in the spectrometer chamber

Card 3/6

rather than to an effect of desorption. The authors finally investigated an equimolecular hydrogen-deuterium mixture. They first sent the mixture via the tube M and observed in addition to the H_2 and D_2 peaks not more than 10% of HD molecules. However, when the mixture was sent through the membrane, the ratio of the H_2^+, HD^+, and D_2^+ at 80° C would start with 4.0:3.5:1 values. With the increase of temperature the ratio between H_2^+ and D_2^+ becomes nearly unity, showing that the isotopic difference of permeation decreases with the increase in temperature. The high HD^+ content can be explained in the following manner: The system of metal plus 2H and metal plus H_2 potential curves have different shapes, as shown on Fig. 3 by curves 1 and 2, respectively. If the minimum of curve 1 is below the minimum of curve 2; the hydrogen is adsorbed in the form of atoms and desorbed in molecular form. In that case the heat of

Investigations of Hydrogen and Deuterium Disorption From Palladium by Means of a Pulse Mass Spectroscope

77315
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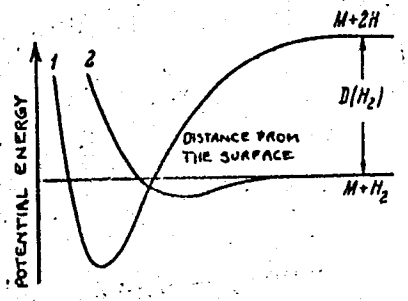

Card 5/6 Fig. 3.

Investigations of Hydrogen and Deuterium Disorption From Palladium by Means of a Pulse Mass Spectroscope

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SOV/57-30-2-12/18

desorption of hydrogen in the form of H_2 molecules is smaller than the heat of desorption of two atoms of hydrogen by the quantity $D(H_2) = 4.5$ ev. The experimental results show then, that all the hydrogen and deuterium, after crossing the diaphragm, first create on the outgoing surface a chemosorbed layer of adatoms H and D. From this layer, H and D desorb in the form of molecules of H_2, HD and D_2 through a combination of H and D adatoms, according to the laws of probability; E. I. Agishev helped during the work. There are 3 figures; and 12 references, 5 Soviet, 2 French, 1 Japanese, 2 German, 1 U.K., 1 U.S. The U.K. and U.S. references are: C. H. Bachman, P. A. Silberg, J. Appl. Phys., 29, Nr 8 (1958); R. G. Stensfield, Proc. Cambr. Phil. Soc., 34, 120 (1938).

ASSOCIATION: Physico-Technical Institute AS USSR, Leningrad (Fiziko-tekhnicheskiy institut AN SSSR, Leningrad)

SUBMITTED: August 14, 1959

Card 6/6

24.6700, 24.7400

77316
SOV/57-30-2-13/18

AUTHORS: Agishev, E. I., Belyakov, Yu. I.

TITLE: A Nonstationary Thermionic Emission From Nickel and Tungsten in Vacuum

PERIODICAL: Zhurnal tekhnicheskoy fiziki, 1960, Vol 30, Nr 2, pp 223-225 (USSR)

ABSTRACT: Using a time-of-flight (pulse) mass spectroscope described earlier by Agishev and Ionov (ZhTF, XXVIII, 1775, 1958), the authors were able to observe a short-living m/e 100 peak during fast heating of nickel and tungsten emitters up to a temperature of 600 to 900° C. The effect was reproducible and lasted only a few seconds after which one could observe the "stationary" peaks of alkaline metals. The effect was obtainable even after introducing CCl_4, freon, and butane, up to a pressure of 10^{-5} to 10^{-4} mm Hg. Platinum did not show this effect. Although the authors have no explanation for the effect,

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they present various experimental results. The curve shown on Fig. 1 represents the relationship between the maximum current, I, and the time of cooling of the emitter. The emitter was first heated up to 850° C and held there for 10 sec. It was then cooled for a time t, after which it was again heated to 850° C, and the maximum current taken. The curve was reproducible, and the effect in general does not show signs of wear. The authors also investigated the I_{max} as function of the minimum temperature to which the emitter would cool down during the time t. They further obtained a curve showing the maximum e/m ~ 101 ion current versus the maximum temperature of fast heating. The tungsten emitter showed a similar behavior. The authors noted that the effect disappeared after heating the emitter above 1200° C. This could mean that this very probably complex ion results from adsorption on the emitter surface of some residual gas components of the system. Heating above 1200° C then destroys the "active" surface

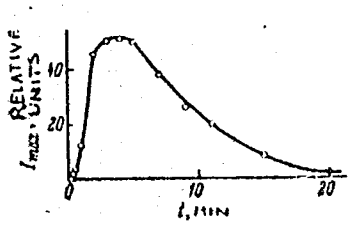

Fig. 1.

layer responsible for some catalytic action producing the 101 ion. The platinum surface is probably free from this catalyzer even at low temperatures. The ions could be the result of some organic radical with low potential of ionization. Professor N. I. Ionov discussed results and supplied advice. There are 2 figures; and 2 Soviet references.

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BELYAKOV, Yu. I., Cand. Phys-Math. Sci. (diss) "Use of Non-Magnetic Impulse Electroscope in the Study Reactions of a Gas - Metal System." Leningrad, 1961, 11 pp. (Leningrad Polytech. Institit. im. M. I. Kalinin) 150 copies (KL Supp 12-61, 249).

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TITLE: Penetration of hydrogen and deuterium through a nickel membrane in the temperature range from 250-600°C

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 2, 1961, 204-210

TEXT: The authors describe experiments of studying the penetration of H_2 and D_2 through a flat nickel membrane at a temperature range of 250-600°C by using a pulsed mass spectroscope (Ref. 7). On the basis of these experiments, the authors determined empirical rules governing diffusion, permeability, and solubility of H_2 and D_2 in nickel below and above the point of magnetic conversion. In the given temperature range nickel has, in the case of high permeability, very stable diffusion properties, and no structural defects are formed on protracted penetration of H_2 through the membrane (Refs. 8, 9). These properties of nickel are important when determining possible small isotopic effects. The scheme of the experimental

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