IOFFE, Boris Veniaminovich. Prinimali uchastiye: TATARSKIY, V.B., prof.; FRENKEL', S.Ya., starshiy nauchnyy sotrudnik; RYSKIN, Ya.I., nauchnyy sotrudnik; SVERDLOVA, O.V., mladshiy nauchnyy sotrudnik; RAVDEL', A.A., red.; SHMYNINA, G.A., red.; ERLIKH, Ye.Ya., tekhn.red.

[Refractometric methods in chemistry] Refraktometricheskie metody khimii. Leningrad, Gos.nauchno-tekhn.izd-vo khim.lit-ry, 1960. 382 p. (MIRA 14:2)

1. Leningradskiy universitet (for Tatarskiy). 2. Institut vysokomolekulyarnykh soyedineniy AN SSSR (for Frenkel'). 3. Institut khimii silikatov AN SSSR (for Ryskin).
(Refractometry)

IOFFE, B.V.; BORISOV, A.I.

Refractometric determination of tertiary butyl alcohol in complex mixtures with water and secondary and primary alcohols. Zhur.anal. khim. 15 no.2:227-230 Mr-Ap '60. (MIRA 13:7)

1. Leningradskiy gosudarstvennyy universitet im A.A.Zhdanova.
(Butyl alcohol)

IOFFE, B.V.

Refractometry as a method of physicochemical analysis of organic systems. Usp.khim. 29 no.2:137-161 F '60. (MIRA 13:6)

1. Khimicheskiy institut Leningradskogo gosudarstvennogo universiteta.
(Refractometry)

IOFFE, B.V.; ZELENIN, K.N.

New rearrangement of hydrazine derivatives. Synthesis of β-dialkylaminopropionitriles from unsymmetrical dialkylhydrazines and acrolein. Dokl. AN SSSR 134 no.5:1094-1097 O '60. (MIRA 13:10)

1. Leningradskiy gosudarstvennyy universitet im. A.A.Zhdanova. Predstavleno akademikom A.N.Nesmeyanovym.
(Propionitrile) (Hydrazine) (Acrolein)

IOFFE, B.V. (Leningrad)

Determination of the refractive index of mixtures of volatile liquids by means of the Pulfrich refractometer. Zhur.fiz.khim. 34 no.5:1113-1135 My '60. (MIRA 13:7)

1. Leningradskiy gosudarstvennyy universitet im. A.A.Zhdanova.
(Refractometry)

S/020/60/134/005/013/023
B016/B054

AUTHORS: Ioffe, B. V. and Zelenin, K. N.

TITLE: New Regrouping of Hydrazine Derivatives. Production of β-Dialkylamino Propionitriles From Asymmetrical Dialkyl Hydrazines and Acrolein

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 134, No. 5, pp. 1094-1097

TEXT: The authors tried to synthesize the hitherto unknown unsaturated hydrazones by condensing asymmetrical dialkyl hydrazines with acrolein, and observed a regrouping of a new type with simultaneous formation of β-dialkylamino propionitriles (see Diagram). This reaction was carried out with dimethyl hydrazine (yield of the final product: 68%) and diethyl hydrazine (yield: 56%). The new regrouping is characterized by the rupture of the nitrogen-nitrogen bond under very mild conditions, i.e., with addition of acrolein to the aqueous solution of the hydrazine salt in the cold, in a weakly acid medium. When acrolein is added to free dimethyl hydrazine (i.e., in an alkaline medium), a water-soluble, highly

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New Regrouping of Hydrazine Derivatives. Production of β-Dialkylamino Propionitriles From Asymmetrical Dialkyl Hydrazines and Acrolein

molecular substance is formed, which has not yet been investigated in detail. When dimethyl hydrazine was added to acrolein, a violent explosion took place, probably due to a spontaneous polymerization of acrolein. As yet, regroupings with a rupture of the N—N bond and the formation of new N-C bonds have only been found in the aromatic series. Apparently, the reaction with acrolein proceeds via the formation of unsaturated hydrazones: $CH_2=CH-CH=N-NR_2$, which in a weakly acid medium are immediately regrouped to aminonitriles. The only known case of nitrile formation from hydrazine derivatives is the catalytic decomposition of aldehyde phenyl hydrazones into nitriles and aniline at about 200°C, i.e., under much harder conditions (discovered by A. Ye. Arbuzov, Ref. 1). The β-dialkylamino propionitriles produced by the authors as described above have hitherto been synthesized by cyanoethylation of secondary amines. They are of practical importance as starting material for the production of physiologically active preparations and detergents. For a reliable identification of the final products obtained, the authors made

New Regrouping of Hydrazine Derivatives. Production of β -Dialkylamino Propionitriles From Asymmetrical Dialkyl Hydrazines and Acrolein

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their syntheses from acrylonitrile (Refs. 2,3). Table 1 shows the melting points of the products obtained. Finally, the authors present the infrared spectra measured on an instrument (UR-10, Zeiss, Jena) supplied by A. N. Sidorov. There are 1 table and 10 references: 4 Soviet, 3 US, and 1 French.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet im. A. A. Zhdanova (Leningrad State University imeni A. A. Zhdanov)

PRESENTED: June 4, 1960, by A. N. Nesmeyanov, Academician

SUBMITTED: June 2, 1960

Card 3/3

IOFFE, B.V.; BATALIN, O.Ye.

New data on the dispersimetric analysis of aromatic hydrocarbons.
Neftekhimiia 1 no.2:156-162 Mr-Ap '61. (MIRA 15:2)

1. Leningradskiy universitet im. A.A. Zhdanova.
(Dispersimetry)
(Hydrocarbons—Analysis)

JOFFE, B. V.[Ioffe, B. V.]

Refractometry as a method in the physicochemical analysis of organic systems. Analele chimie 16 no.3:69-97 Jl-S '61.

(Refractometry) (Chemistry, Organic)
(Systems(Chemistry))

IOFFE, B.V.; DAUKSHAS, V.K. [Daukšas, V.]; LEVINA, R.Ya.

Relationship between the refractive dispersion of alkanes and their structure. Vest.Mosk.Un.Ser.2; khim. 16 no.6:67-72 N-D '61. (MIRA 14:11)

1. Kafedra organicheskoy khimii Moskovskogo gosudarstvennogo universiteta i kafedra organicheskoy khimii Leningradskogo gosudarstvennogo universiteta.

(Paraffins) (Chemical structure)
(Dispersimetry)

IOFFE, B.V.; BATALIN, O.Ye.

Deviation of the refraction dispersion of hydrocarbon mixtures from additivity. Zhur.prikl.khim. 34 no.3:603-613 Mr '61. (MIRA 14:5)

1. Leningradskiy gosudarstvennyy universitet i Vsesoyuznyy neftyanoy nauchno-issledovatel'skiy geologorazvedochnyy institut.
(Hydrocarbons--Optical properties)

IOFFE, B.V.; ZELENIN, K.N.

Simplest unsaturated dialkylhydrazones. Dokl. AN SSSR 141 no.6: 1369-1372 D '61. (MIRA 14:12)

1. Leningradskiy gosudarstvennyy universitet im. A.A.Zhdanova. Predstavleno akademikom A.N.Nesmeyanovym.
(Hydrazone)

IOFFE, B.V.; ZELENIN, K.N.

Amino nitrile rearrangement. Zhur.ob.khim. 32 no.5:1708-1709 My '62. (MIRA 15:5)

1. Leningradskiy gosudarstvennyy universitet.
(Nitriles) (Rearrangements (Chemistry))

IOFFE, B.V.; STOLYAROV, B.V.

Isomerization during the sulfuric acid alkylation of benzene by alcohols. Zhur.ob.khim. 32 no.10:3452-3453 O '62. (MIRA 15:11)

1. Leningradskiy gosudarstvennyy universitet.
(Benzene) (Alkylation) (Isomerization)

IOFFE, B.V.; STOLYAROV, B.V.

Quantitative analysis of mixtures of propyl- and butyl benzenes by the method of gas-liquid chromatography. Neftekhimiia 2 no.6: 911-917 N-D '62. (MIRA 17:10)

1. Leningradskiy universitet im. A.A. Zhdanova.

IOFFE, B.V.; ZELENIN, K.N.

Mechanism of amino nitrile rearrangement. Dokl. AN SSSR. 144 no.6: 1303-1306 Je '62. (MIRA 15:6)

1. Leningradskiy gosudarstvennyy universitet im. A.A. Zhdanova. Predstavleno akad. A.N.Nesmeyanovym.
(Nitriles)

IOFFE, B.V.; ZELENIN, K.N.

Condensation of methoxy amine with acrolein and methacrolein. Izv.-vys.ucheb.zav.;khim.i khim.tekh. 6 no.1:78-82 '63. (MIRA 16:6)

1. Leningradskiy gosudarstvennyy universitet imeni Zhdanova, kafedra organicheskoy khimii.
(Amines) (Acrolein) (Methacrylaldehyde)

IOFFE, B.V.; SABININA, Ye.I.

Condensation of asymmetric dipropyl- and dibutylhydrazines with acrolein and methacrolein. Zhur.ob.khim. 33 no.7:2188-2196 Jl '63. (MIRA 16:8)

1. Leningradskiy gosudarstvennyy universitet.
(Hydrazine) (Acrolein)

IOFFE, B.V.; YAN TSZAN'-SI [Yang TSan-hsi]

Isomerization, orientation, and steric hindrances during the sulfuric acid alkylation of o-xylene, p-xylene, and mesitylene with alcohols. Zhur.ob.khim. 33 no.7:2196-2202 Jl '63. (MIRA 16:8)

1. Leningradskiy gosudarstvennyy universitet.
(Hydrocarbons) (Isomerization) (Alkylation)

IOFFE, B.V.; ZELENIN, K.N.

Aminonitrile rearrangement and its use for preparative purposes. Zhur.ob.khim. 33 no.10:3231-3238 O '63. (MIRA 16:11)

1. Leningradskiy gosudarstvennyy universitet.

IOFFE, B.V.; SERGEYEVA, Z.I.; TSITOVICH, D.D.

Propargyl rearrangement of a new type. Zhur.ob.khim. 33 no.10: 3448 O '63. (MIRA 16:11)

1. Leningradskiy gosudarstvennyy universitet.

IOFFE, B.V.; TSITOVICH, D.D.

Synthesis of pyrazolines from acetylenic chlorides and hydrazine. Zhur.ob.khim. 33 no.10:3449 O '63. (MIRA 16:11)

1. Leningradskiy gosudarstvennyy universitet.

IOFFE, B.V.; SERGEYEVA, Z.I.; DERVINSKAYTE, K.M.

Aminonitrile cleavage of quaternary aldehyde hydrazonium salts. Zhur. ob. khim. 33 no.8:2794-2795 Ag '63. (MIRA 16:11)

1. Leningradskiy gosudarstvennyy universitet.

ACCESSION NR: AP4024412 S/0204/64/004/001/0160/0169

AUTHOR: Ioffe, B. V.; Batalin, O. Ye.

TITLE: Determination of the group composition of the dearomatized portion of direct distillation gasolines.

SOURCE: Neftekhimiya, v. 4, no. 1, 1964, 160-169

TOPIC TAGS: gasoline, group analysis, paraffinic hydrocarbon, naphthenic hydrocarbon, bicyclic hydrocarbon, alkylcyclopentane, alkylcyclohexane, aniline point, refractive index, density, specific refractivity, physical constant, mean arithmetic value

ABSTRACT: Calculations were made of the mean arithmetic values of the physical constants for paraffinic and naphthenic hydrocarbons of direct distillate gasoline fractions and an effort was made to ascertain the possibility of further improving methods of group analyses using the new calculated constants. Standard gasoline fractions were used: 40-60 C, 60-95 C, 95-122 C, 122-150 C, 150-175 C and 175-200 C. The paraffinics are normal-structure methanes, i.e., normal alkanes and mono- and di-methylalkanes. The naphthenics include alkylcylcopentanes,

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ACCESSION NR: AP4024412

alkylcyclohexanes and bicyclic hydrocarbons (the percentage of bicyclics in the 122-150 C fraction is less than 1%, in the 150-175 C fraction is 5% and in the 175-200 C fraction, 15%). In the naphthenics it was necessary to establish the ratio of the above mentioned three component types of hydrocarbons in the specific fractions and to establish the ratios of the cis and trans forms and the distribution of the alkylcyclopentanes and alkylcyclohexanes. There is a linear relationship between the aniline points and the physical constants, the refractive index, density and specific refractivity. The recommended mean values for the physical constants for the various types of hydrocarbons in the standard gasoline fractions are tabulated. The effect of variations in the hydrocarbon composition of natural gasolines and of experimental errors on the accuracy of group analysis was evaluated. The accuracy was found to be within 3% and approximately the same for the refractive index, density and aniline point values. Specific refractivity does not provide for greater accuracy in the analysis in comparison with the other physical constants, in spite of its lesser sensitivity to variation in the hydrocarbon composition. The naphthenic hydrocarbon content (N) is calculated by the formula: $\%N = \frac{a - a_1}{a_2 - a_1} \cdot 100$

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ACCESSION NR: AP4024412

where a_1 = value of the property for paraffinic hydrocarbons, a_2 = value of the property for naphthenic hydrocarbons and a = value of the property of the saturated fraction. Orig. art. has: 2 figures and 7 tables.

ASSOCIATION: Leningradskiy universitet im. A. A. Zhdanova Khimicheskiy fakul'tet (Leningrad University, Chemistry Department)

SUBMITTED: 22Jun63 DATE ACQ: 17Apr64 ENCL: 00

SUB CODE: GC, FP NO REF SOV: 024 OTHER: 021

Card 3/3

IOFFE, B.V.; BATALIN, O.Ye.

Determining the group composition of the dearomatized part of straight-run gasolines. Neftekhimiia 4 no.1:160-169 Ja-F'64

1. Leningradskiy universitet imeni A.A. Zhdanova, Khimicheskiy fakul'tet.

IOFFE, B.V.; STOLYAROV, B.V.

Physicochemical properties of isomeric pentylbenzenes. Neftekhimia 4 no.3:361-366 My-Je '64. (MIRA 18:2)

1. Leningradskiy gosudarstvennyy universitet.

IOFFE, B.V.; BATALIN, O.Ye.

Refractometric methods in the determination of the group composition of gasoline fractions. Neftekhimia 4 no.3:481-486 My-Je '64. (MIRA 18:2)

1. Leningradskiy gosudarstvennyy universitet im. A.A.Zhdanova.

IOFFE, B.V.; ZELENIN, K.N.

Hofmann degradation of the pyrazoline ring. Dokl. AN SSSR 154 no.4:864-867 F '64. (MIRA 17:3)

1. Leningradskiy gosudarstvennyy universitet im. A.A. Zhdanova. Predstavleno akademikom B.A. Kazanskim.

IOFFE, B.V.; TSITOVICH, D.D.

New method of synthesizing pyrazolines. Condensation of tertiary acetylene chlorides with hydrazine. Dokl. AN SSSR 155 no.6: 1348-1351 Ap '64. (MIRA 17:4)

1. Leningradskiy gosudarstvennyy universitet im. A.A.Zhdanova. Predstavleno akademikom A.N.Nesmeyanovym.

IOFFE, B.V.; STOLYAROV, B.V.

Isomerization and fragmentation of carbenium ions during sulfate alkylation. Dokl. AN SSSR 161 no.6:1339-1341 Ap '65. (MIRA 18:5)

1. Leningradskiy gosudarstvennyy universitet im. A.A.Zhdanova.
Submitted September 25, 1964.

IOFFE, B.V.; YAKHKIND, A.K.

Measurement of immersion liquids of high refractive index on the IRF-23 reflectometers (Pulfrich type). Zap. Vses. min. ob-va 94 no.4:475-476 '65. (MIRA 18:9)

L 23213-66 EWP(e)/EWT(m) WH

ACC NR: AP6008323 SOURCE CODE: UR/0237/66/000/001/0001/0006

AUTHOR: Yakhkind, A. K.; Ioffe, B. V.

ORG: none

TITLE: Using highly refractive glass for expanding the measurement range of critical-angle refractometers

SOURCE: Optiko-mekhanicheskaya promyshlennost', no. 1, 1966, 1-5

TOPIC TAGS: refractive index, optic glass, refractometer, optic prism

ABSTRACT: The authors review the properties of highly refractive industrial and experimental glasses and examine the possibilities for using these glasses in making measurement prisms for critical-angle refractometers to increase the maximum possible indices of refraction which may be measured on these instruments. Tellurite glasses of the super-heavy flint type have extremely high indices of refraction (2.25306 at 435.8 mμ) and are transparent in the visible and near infrared regions of the spectrum. Refractometers using STF2 tellurite glass may be used for measuring indices of refraction from 1.94 to 2.15. These glasses have the further advantage of chemical stability. Orig. art. has: 3 tables.

SUB CODE: 20,11/ SUBM DATE: 20Feb65/ ORIG REF: 013/ OTH REF: 023

UDC: 535.322.4 : 666.22

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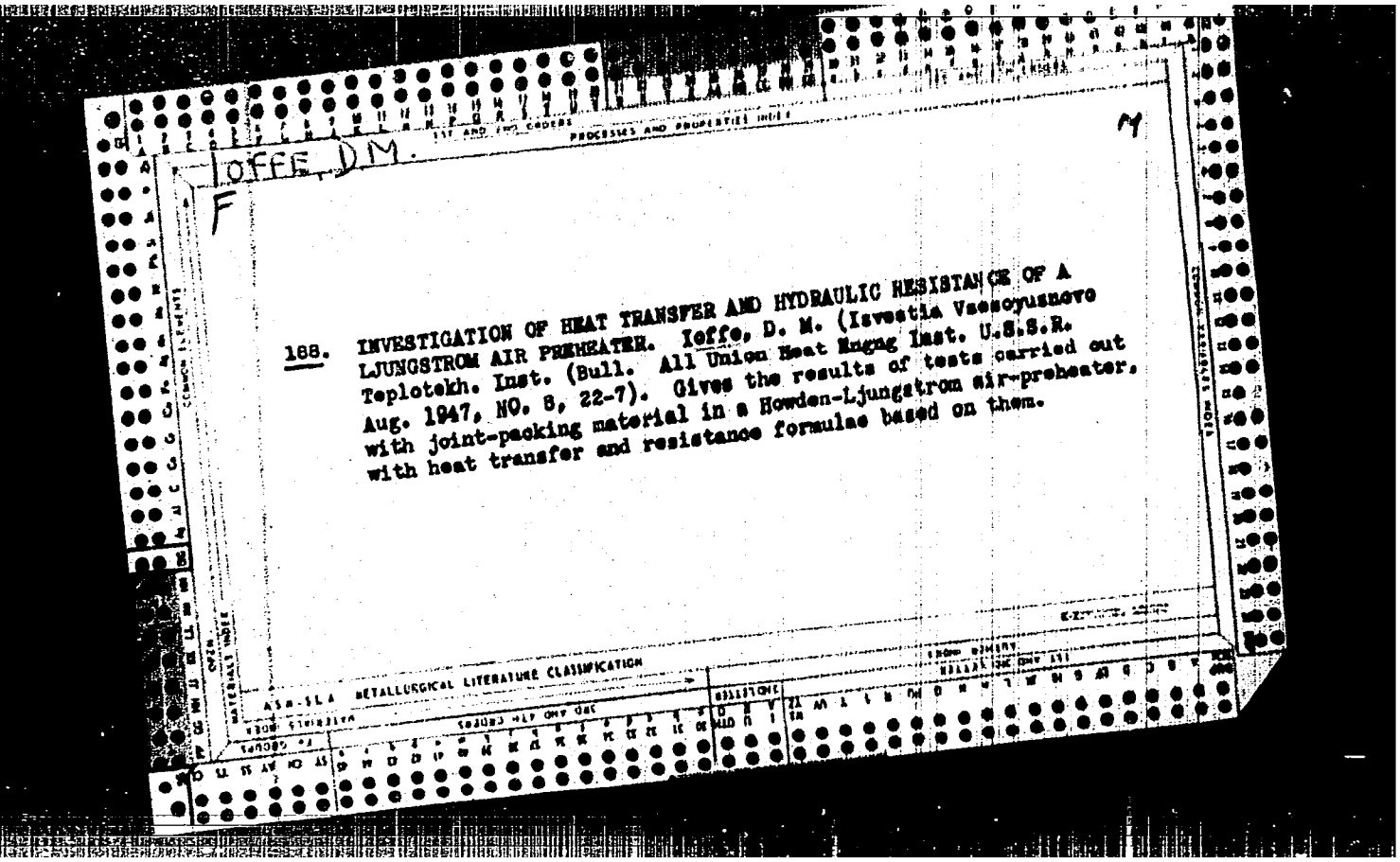

Ioffe, D.M.

F

168. INVESTIGATION OF HEAT TRANSFER AND HYDRAULIC RESISTANCE OF A LJUNGSTROM AIR PREHEATER. Ioffe, D. M. (Izvestia Vsesoyusnovo Teplotekh. Inst. (Bull. All Union Heat Engng Inst. U.S.S.R. Aug. 1947, NO. 8, 22-7). Gives the results of tests carried out with joint-packing material in a Howden-Ljungstrom air-preheater, with heat transfer and resistance formulae based on them.

IOFFE, D.M.

Investigation of heat losses in external combined enveloping of banks of pipes. [Trudy] MVTU no.15:136-143 '52. (MLRA 8:5)
(Heat--Transmission) (Steam pipes)

IOFFE,D.

IOFFE,D., kandidat tekhnicheskikh nauk

Chamber cooler with ridged piping. Khol.tekh.32 no.2:23-31 Ap-Je '55. (MLRA 8:10)
(Pipe fittings) (Refrigeration and refrigerating machinery)

IOFFE, D.M., kand.tekhn.nauk

Testing evaporator banks with internal ammonia circulation.
Khol.tekh. 33 no.4:18-23 O-D '56. (MIRA 12:1)
(Refrigeration and refrigerating machinery)

IOFFE, D.

(Scientific Research Institute of the Refrigerating Industry, Moscow): "Investigation of Air-Cooled Condensers for Small Refrigerating Machines" /English - 9 pages/

report presented at the International Inst. of Refrigeration (IIR), Annual Meetings of Commissions 3,4, and 5, Moscow, 3-6 Sep 1958.

IOFFE, D.

IOFFE, D., kand. tekhn. nauk.

Economical operation of freon refrigeration plants for commercial equipment. Khol. tekh. 34 no.4:65-66 O-D '57. (MIRA 11:1)
(Refrigeration and refrigerating machinery)

14(1) PHASE I BOOK EXPLOITATION SOV/2365

Ioffe, Dmitriy Moiseyevich

Kondensatory s vozdushnym okhlazhdeniyem dlya malykh kholodil'nykh agregatov; nauchnoye soobshcheniye (Air-cooled Condensors For Small Refrigeration Units; Scientific Report) Moscow, Gostorgizdat, 1958. 39 p. 2,500 copies printed.

Sponsoring Agencies: USSR Ministerstvo torgovli, and Vsesoyuznyy nauchno-issledovatel'skiy institut kholodil'noy promyshlennosti.

Ed.: N. G. Nikolayeva; Tech. Ed.: N. N. Sokolova.

PURPOSE: This book is intended for specialists in the refrigeration industry.

COVERAGE: This book deals with the construction and utilization of air-cooled condensers for refrigeration units. Results of an investigation on condensers made by VNIKhI are presented. Formulas for heat and hydraulic designs, suggestions for selecting air velocity, and arrangements of the surfaces of heat exchangers are given. No personalities are mentioned. There are 13 references: 6 Soviet, and 7 English.

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Air-cooled Condensors (Cont.) SOV/2365

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AVAILABLE: Library of Congress

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GO/fal
10-19-59

Ioffe, D.

IOFFE, D.

Temperature conditions and arrangement of goods in open commercial refrigerated showcases. Khol. tekh. 35 no.1:66 Ja-F '58. (MIRA 11:2)

(Refrigeration and refrigerating machinery)

IOFFE, D.

Refrigerating equipment for field use in the U.S.Army(from "Refrigerating Engineering," Apr. 1957). Khol. tekh. 35 no. 3:76-77 My-Je '58. (MIRA 11:7)
(United States--Army--Refrigeration and refrigerating machinery)

IOFFE, D. M., kand.tekhn.nauk

Study of air-cooled condensers for small refrigerating machines. Khol.tekh. 35 no.5:29-37 S-O. '58. (MIRA 11:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut kholodil'noy promyshlennosti.
(Refrigeration and refrigerating machinery)

Ioffe, D.M.

14(1) SOV/66-59-4-19/28

AUTHOR: None Given

TITLE: All-Union Scientific Technical Convention on Refrigeration Engineering

PERIODICAL: Kholodil'naya tekhnika, 1959, Nr 4, pp 61-65 (USSR)

ABSTRACT: Under the auspices of the Leningradskiy tekhnologicheskiy institut kholodil'noy promyshlennosti (Leningrad Technological Institute of Refrigeration Industry), of the Vsesoyuznyy nauchno-issledovatel'skiy institut kholodil'noy promyshlennosti im. Mikoyana (All-Union Scientific Research Institute of Refrigeration Industry im. Mikoyan) and of the Vsesoyuznaya sektsiya kholodil'shchikov (All-Union Section of Refrigeration Workers), a convention was held in Leningrad from the 6 through 9 August, 1959, which was attended by 534 people. Below are given the names of the principal lecturers, the names of the institutions they represent and the titles of their lectures: V.Ya. Koberov (Ministry of Trade of the RSFSR) "Tasks of Development and of Application of Refrigeration in the National Economy of the USSR"; T.V. Gogolina, Engineer (Central Designing Bureau of Refrigeration Machine Building) "Fields of Application of Refrigeration Equipment in Industry"; V.P. Izhevskiy, Engineer (Odessa Designing Institute of Complex Automation of Production

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Processes in the Food Industry) "Orientation and Designing of Automatic Systems in Refrigeration Installations"; B.L. Tsyrlin, Engineer (VNIIKhI) "Investigation of the Work of Compressors of the Piston Block-Crankcase Type"; Ya.B. Yakobson, Candidate of Technical Sciences (VNIIKhI) "Investigation of Small Freon Compressors With Built-in Electric Motors"; D.M. Ioffe, Candidate of Technical Sciences (VNIIKhI) "Analysis and Investigation of Heat-Exchanging Machinery with a Ribbed Heat Transmitting Surface"; L.M. Rozenfel'd, Professor and Doctor of Technical Sciences (Leningrad Technological Institute of Refrigeration Industry) "The Problem of Complete Utilization of Refrigeration Machines"; V.S. Martynovskiy, Professor and Doctor of Technical Sciences and B.B. Parulejkar, Professor (Odessa Technological Institute of Food and Refrigeration Industries) "Thermal Air Separation at the Cold End of the Vortex Tube"; I.P. Usyukin, Professor and Doctor of Technical Sciences (Moscow Institute of Chemical Machine Building) "Results of the Two Years Working Period of the Installation BR-1 and the Prospects of Producing Technological Oxygen"; A.I. Moroz, Candidate of Technical Sciences and B.V. Danishchuk, Engineer (VNII of Oxygen Machine Building); K.I. Strakhovich, Professor and G.K. Ozhigov, Candidate of Technical Sciences (Leningrad Technological Institute of Re-

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frigeration Industry) "Theoretical Investigation of Expansion of Moist Vapor of the Air Turbo-Pressure-Reducer"; A.A. Gogolin, Candidate of Technical Sciences (VNIIKhI) "Ways of Developing Air Conditioning Engineering in the USSR"; A.L. Satanovskiy, Engineer (Institute of Thermal Power Engineering of the AS USSR) "Air-Water-Evaporation Cooling and Air Conditioning on the Cranes in Hot Workshops"; L.K. Lozina-Lozinskiy, Professor and Doctor of Biological Sciences (Institute of Cytology of the AS USSR) "The Latest in the Doctrine Pertaining to the Influence of Low Temperatures on Organisms"; N.A. Golovkin, Professor and Doctor of Technical Sciences (Leningrad Technological Institute of Refrigeration Industry) "Mechano-Chemistry of the Muscular Tissue Under Refrigeration Processes of Food Products of Animal Origin"; D.G. Rutov, Candidate of Technical Sciences and F.A. Alekseyev, Candidate of Technical Sciences (VNIIKhI) "Conditions of Storage and Weight Losses of Frozen Meat in a Cold Room with Jacket Heat Protection"; A.P. Sheffer, Candidate of

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Technical Sciences and A.G. Sestrina (All-Union Scientific Research Institute of Meat Industry) "Single-Stage Freezing of Meat"; A.P. Chizhikov (Astrakhan' Technical Institute of Fish Industry) "Proteolysis of Sprats and the Influence of Temperature on the Terms of Ripening and Storage of Sprat Preserves".

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APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620016-1"

Ioffe D.

PHASE I BOOK EXPLOITATION SOV/3747

International Congress of Refrigeration. Moscow, 1958

Sbornik dokladov ot SSSR (Collected Soviet Reports) Moscow, Gostorgizdat, 1959. 214 p. Errata slip inserted. 2,000 copies printed.

Ed. (Title page): Sh. I. Kobulashvili; Ed. (Inside book): N. V. Chichkov; Tech. Ed.: V. V. Babicheva.

PURPOSE: This collection of articles is intended for those interested in the problems of food refrigeration.

COVERAGE: The collection contains 26 reports which were submitted at the meeting of the 3rd, 4th, and 5th Committees of the International Institute of Refrigeration. The meeting was held in Moscow, September 3-6, 1958, and was attended by 265 Soviet specialists and 115 representatives from other countries. The 73 reports discussed at this meeting cover such broad areas as the automation of the cooling of refrigerating installations, the use of finned-tube type refrigerating devices, fast-freezing food freezers, the theory and technique of rapid cooling and freezing of meat and fish, the use of antibiotics in the cold storage of food, and the operation of refrigerators and cooling systems. A complete account of the proceedings of this meeting was published by the International Institute of Refrigeration in 1959. No personalities are mentioned. References follow several of the articles.

TABLE OF CONTENTS:

BADYL'KES, I.S., prof., doktor tekhn.nauk; BUKHTER, Ye.Z., inzh.; VEYMBERG, B.S., kand.tekhn.nauk; VOL'SKAYA, L.S., inzh.; GERSH, S.Ya., prof., doktor tekhn.nauk [deceased]; GUREVICH, Ye.S., inzh.; DANILOVA, G.N., kand.tekhn.nauk; YEFIMOVA, Ye.V., inzh.; IOFFE, D.M., kand.tekhn.nauk; KAN, K.D., kand.tekhn.nauk; LAVROVA, V.V., inzh.; MEDOVAR, L.Ye., inzh.; ROZENFEL'D, L.M., prof., doktor tekhn. nauk; TKACHEV, A.G., prof., doktor tekhn.nauk; TSYRLIN, B.L.; SHUMELISHSKIY, M.G., inzh.; SHCHERBAKOV, V.S., inzh.; YAKOBSON, V.B., kand.tekhn.nauk; GOGOLIN, A.A., retsenzent; GUKHMAN, A.A., retsenzent; KARPOV, A.V., retsenzent; KURILEV, Ye.S., retsenzent; LIVSHITS, A.B., retsenzent; CHISTYAKOV, F.M., retsenzent; SHEYNKLIN, A.Ye., retsenzent; SHEMSHEDINOV, G.A., retsenzent; PAVLOV, R.V., spetsred.; KOBULASHVILI, Sh.N., glavnyy red.; RYUTOV, D.G., zam.glavnogo red.; GOLOVKIN, N.A., red.; CHIZHOV, G.B., red.; NAZAROV, B.A., glavnyy red.izd-va; NIKOLAYEVA, N.G., red.; EYDINOVA, S.G., mladshiy red.; MEDRISH, D.M., tekhn.red.

[Refrigeration engineering; encyclopedic reference book in three volumes] Kholodil'naia tekhnika; entsiklopedicheskii spravochnik v trekh knigakh. Glav.red. Sh.N.Kobulashvili i dr. Leningrad, Gostorgizdat. Vol.1. [Techniques of the production of artificial cold] Tekhnika proizvodstva iskusstvennogo kholoda. 1960. 544 p. (MIRA 13:12)

(Refrigeration and refrigerating machinery)

ALEKSANDROV, S.V.---(continued) Card 2.
1. Vsesoyuznyy institut rasteniyevodstva (for Sechkarev, Lizgunova, Brezhnev, Gazenbush, Meshcherov, Filov, Tkachenko, Kazakova, Krasochkin, Levandovskaya, Shebalina, Syskova, Makashova, Ivanov, Martynov, Girenko, Ivanova, Shilova). 2. Oribovskaya ovoshchnaya selektsionnaya opytnaya stantsiya; chleny-korrespondenty Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk im. V.I.Lenina (for Alpat'yev, Solov'yeva). 3. Deystvitel'nyy chlen Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk im. V.I.Lenina (for Brezhnev).
(Vegetables--Varieties)

ZELILOVSKIY, I., inzh.; IOFFE, D., kand. tekhn. nauk

New hermetic refrigerating unit of 700 kcal/hr capacity. Kholtekh. 37 no.5:4-8 S-O '60. (MIRA 13:10)

1. Khar'kovskiy zavod torgovogo mashinostroyeniya (for Zelikovskiy).
2. Vsesoyuznyy nauchno-issledovatel'skiy institut kholodil'noy promyshlennosti (for Ioffe).
(Refrigeration and refrigerating machinery)

S/066/60/000/006/001/009
A053/A029

AUTHOR: Ioffe, D., Candidate of Technical Sciences

TITLE: Refrigerating Unit AK 2FB-6/3 (AK 2FV-6/3) With Air-Cooled Condenser

PERIODICAL: Kholodil'naya tekhnika, 1960, No. 6, pp. 4-8

TEXT: The article gives a description of the design and the results of tests of the Freon-12 air-cooled refrigerating unit AK 2FV-6/3 with a rated capacity of 3,000 kcal/hour, produced by the Moscow Plant "Iskra". The design of this unit has been worked out by the Central Designing Bureau of Refrigeration Machine Building in cooperation with "Iskra". The unit, which weighs 190 kg, comprises the following elements: compressor, motor, condenser, fan, receiver, pressure relay, supports, as well as filter, dryer, and heat exchanger mounted on a separate panel. The compressor is of the vertical two-cylinder type, having a diameter of 67.5 mm and a 50 mm piston stroke with 650 rpm. The condenser is of the 6-sectional type with copper tubes 12 x 1 mm and steel ribs 24 mm wide with a 4.5 mm pitch. The air circulating around the condenser is forced through by a 6-blade fan,

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Refrigerating Unit AK 2ФВ-6/3 (AK 2FV-6/3) With Air-Cooled Condenser

mounted on the shaft of the 2.8-kw motor, which is connected with the compressor by a triple V-belt drive. Compressor and motor are mounted on the receiver. The heat exchanger consists of a steel jacket and a 10 x 1 mm copper tube coil; the vapor passes through the jacket, while the cooling agent flows through the coil. The heat exchanger is placed before the filter, which is equipped with a brass net and an asbestos sheet 3 mm thick. Unit and compressor have been tested in the laboratory of VNIKhI by the author, using a stand with an electric calorimeter. The capacity of the unit in accordance with readings of the calorimeter and the condenser was 4.3 % on an average. Tests were conducted at air temperatures of 20°, 30° and 40°C and at a vapor temperature of 15°C. The compressor was tested at condensation temperatures of 25°, 30° and 50°C. The article describes the tests on the capacity, performance factor and condensation temperatures of the unit for cooling air temperatures of 20°, 30° and 40°C and for fans with different capacities. Thus at a boiling temperature of -15°C and an air temperature of 20°C the refrigerating capacity of the unit amounted to 3,330 kcal/hour, which is 11 % higher than the rated capacity. By changing

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Refrigerating Unit AK 2ФВ-6/3 (AK 2FV-6/3) With Air-Cooled Condenser

the boiling temperature from -30°C to 5°C, the refrigerating capacity increases from 1,200 to 5,700 kcal/hour or almost 5 times, but the difference between boiling temperature and air temperature from 4°C to 20°C. This shows that the design of this unit is not an adequate solution. In the unit with the same compressor intended for low temperature equipment, a condenser could be installed with a surface 2.5 times smaller as compared with that in the condenser of the unit AK 2ФВ-6/3 (AK 2FV-6/3). At boiling temperatures close to 0°C, the dimensions of the condenser are insufficient and the temperature limit of 50°C [ГОСТ 6492-53 (GOST 6492-53)] is already reached at an air temperature of 30°C. The AK 2FV-6/3 unit should be used in installation with boiling temperatures from -25°C to -5°C. For higher and lower temperatures units of different condenser and fan dimensions should be issued, as provided for in the grading of small hermetically sealed refrigerators (Ref. 2). Other tests revealed that the best air rate is 5 - 7 kg/m^2 second (Ref. 3). Experimenting with different condensers, it was found that the pitch of the ribs should be reduced to 3.5 mm, the thickness to 0.35 mm and the number of sections to 5. Copper tubes could be replaced

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Refrigerating Unit AK 2ФВ-6/3 (AK 2FV-6/3) With Air-Cooled Condenser

by steel tubes, since copper holds no advantage over steel in this case. Air cooled condensers should use steel or aluminum tubes. A comparison between air- and water-cooled refrigerators shows that the latter are 32 % heavier than the former. Further investigations show that the cost of water and power consumption in water-cooled refrigerators is 35 % higher than the cost of power consumed by the AK 2FV-6/3 unit with air-cooled condenser. There is 1 photograph, 2 diagrams, 2 graphs and 4 Soviet references.

ASSOCIATION: Vsesoyuznyy nauchno issledovatel'skiy institut kholodil'noy promyshlennosti im A. I. Mikoyana (All-Union Scientific Research Institute of the Refrigeration Industry im. A. I. Mikoyan)

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S/066/60/000/006/001/009
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Refrigerating Unit AK 2ΦB-6/3 (AK 2FV-6/3) With Air-Cooled Condenser

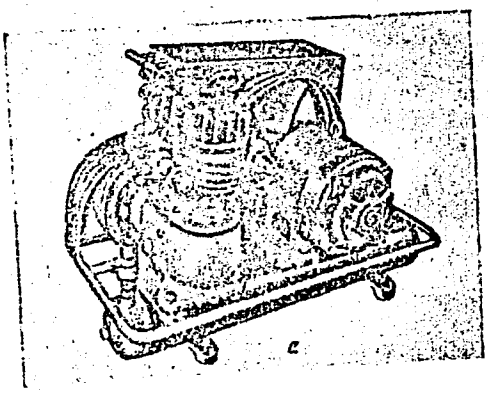

Figure 1:

AK 2FV-6/3 unit
a - general view
b - side view
1) compressor
2) belt driver
3) condenser
4) electric motor
5) fan
6) switch
7) receiver
8) supports

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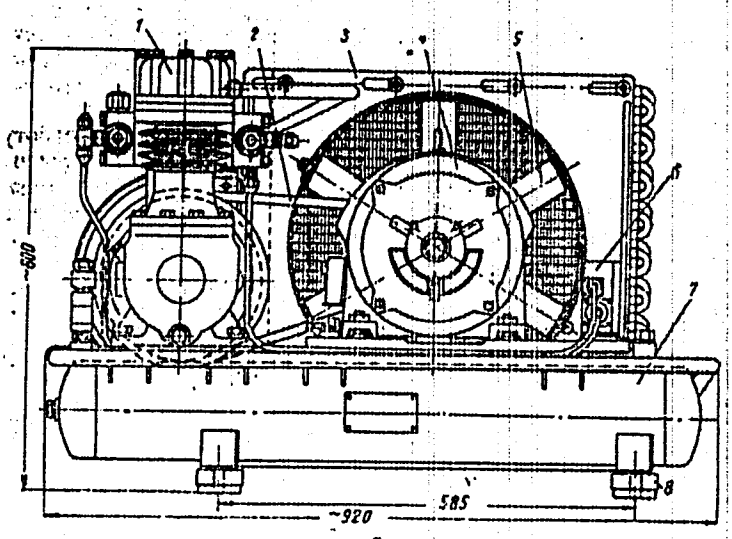
A053/A029

Refrigerating Unit AK 2ФВ-6/3 (AK 2FV-6/3) With Air-Cooled Condenser

Figure 1: (continued)



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Card 6/6

IOFFE, Dmitriy Moiseyevich; YAKOBSON, Viktor Borisovich; CHICHKOV, N.V., red.; EL'KINA, E.M., tekhn. red.

[Small refrigerating machines and commercial refrigerating equipment] Malye kholodil'nye mashiny i torgovoe kholodil'noe oborudovanie. Moskva, Gos. izd-vo torg. lit-ry, 1961. 298 p. (MIRA 14:11)
(Refrigeration and refrigerating machinery)

IOFFE, D.M.

Utilization of welding and soldering in repairing the aluminum apparatus of refrigerating machines. Khol. tekh. 38 no. 1:73-74 Ja-F '61. (MIRA 14:4)
(United States--Refrigeration and refrigerating machinery--Welding)

IOFFE, D.M., kand.tekhn.nauk

Characteristics of a compressor with various refrigerants and their mixture. Khol.tekh. 39 no.4:61-66 Jl-Ag '62. (MIRA 17:2)

IOFFE, D.M., kand.tekhn.nauk

Use of thermoelectric refrigeration in foreign countries. Khol. tekh. 40 no.3:65-71 My-Je '63. (MIRA 16:9)
(Refrigeration and refrigerating machinery)

IOFFE, D.M., kand.tekhn.nauk

Investigating the technical and economic characteristics and the development of the grading of air-cooled condensers. Khol.tekh. 40 no.6:23-31 N-D '63. (MIRA 17:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut kholodil'noy promyshlennosti.

IOFFE, D. S.

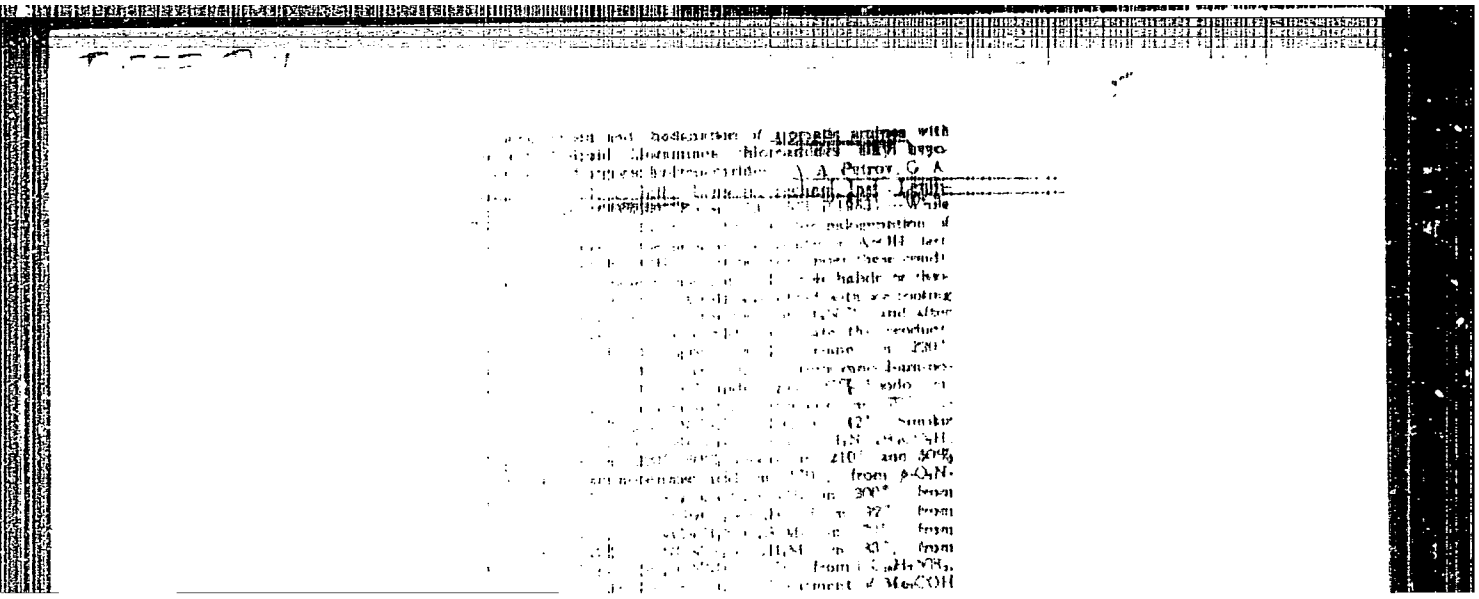
USSR/Engineering
Construction Industry
BIBliography Jun 48

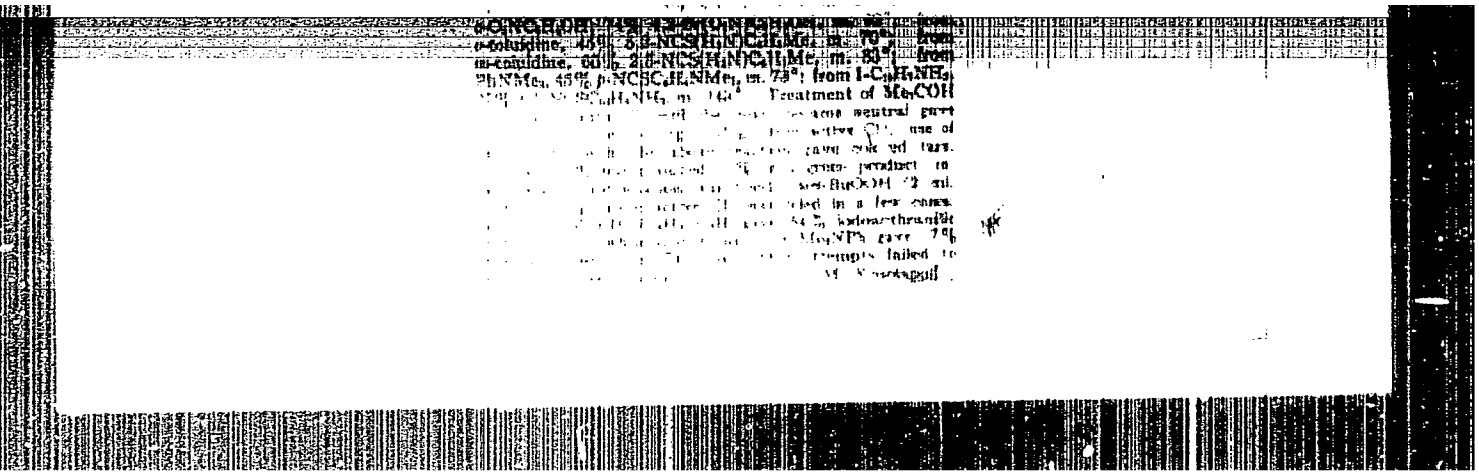
"Soviet Technical Periodicals" 2 pp

"Stroi Prom No 6

Reviews technical periodicals, among others: N. K. Chayka's "Production of Tower Cranes for Residential Constructions," I. M. Iog's "Mechanization of Limestone Unloading," D. S. Ioffe's "Mobile-Suspension Cableway," etc.

PA 43/49T42





IOFFE, D.V.

GINZBURG,O.F.; IOFFE,D.V.; MEL'NIKOVA,N.S.

Dyes with antipyrine rings. Part 4. Acid-base properties of dyes. Zhur.ob.khim. 25 no.2:358-362 F '55. (MLRA 8:6)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
(Dyes and dyeing--Chemistry)

IOFFE, D.V.

USSR/Organic Chemistry - Synthetic Organic Chemistry, E-2

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 61557

Author: Ginzburg, O. F., ~~Ioffe, D. V.~~

Institution: None

Title: On Dyes Containing Antipyrine Nuclei. V. Hydrolysis of Dyes with Substituents in Ortho-position

Original Periodical: Zh. obshch. khimii, 1955, 25, No 9, 1739-1743

Abstract: By condensation of antipyrine (2 mols) with o-chlor-, o-methoxy-, o-sulfo- and p-sulfobenzaldehyde in alcohol in the presence of HCl (~20°, 12 hours) and subsequent treatment with 10% NaOH were prepared diantipyryl phenylmethanes (I) substituted in the phenyl nucleus (below are listed substituent, yield in %, MP of bases and salts in ° C): o-methoxy, 66, 216-217° (from benzene-gasoline), hydrochloride, 184-185° (decomposes); picrate 165-166°; o-chlor, 70, 260-261°, picrate 199-200°; o-sulfo (from Na-salt in water, 73, temperature of decomposition 288-290°; p-sulfo (from Na-salt

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USSR/Organic Chemistry - Synthetic Organic Chemistry, E-2

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 61557

Abstract: in water) 93, temperature of decomposition 300-302° (from alcohol). By oxidation of the prepared I (2 g) and also of the o-nitro-derivative (Communication IV, see Referat Zhur - Khimiya, 1956, 54304) with 0.5 ml HNO_3 (added in 20 minutes) in 20 ml boiling HCl (d 1.17) in the presence of 0.2 g $NaNO_2$ with subsequent alkalinization with a solution of NaOH and boiling, there have been prepared the corresponding substituted diantipyrylphenylcarbinols, converted by heating with picric acid (II) to the diantipyrylphenylmethane dyestuffs of the general formula $C_6H_5N(C_6H_5)N(CH_3)C(CH_3)C = C(C_6H_4R)C = C(CH)N(CH)N(CH)CO^+X^-$, wherein R = H (III), o-Cl (IV), o-NO_2 (V), o-SO_3^- (VI), p-SO_3^- (VII), o-OCH_3 (VIII), and X^- is anion II. Dyes VI and VII were obtained direc[redacted] corresponding I on oxidation and are betaines. Determined wi[redacted] the hydrolysis constant (K_1) of the [redacted] to the corresponding carbinol by the method described in communication IV. Below are listed MP, K_1 of dyes (in parentheses is shown K_1 of corresponding para-isomers): III, 2.5·10^{-7}; IV, [redacted]-112°, 1.4·10^{-7} (8.0·10^{-7}); V, 130-132°, 5.6·10^{-8} (1.8·10^{-5}; VI, --, 2.5·10^{-11}; VII, --, 2.4·10^{-6}; VIII, 134-136, --. Comparison shows that negative substituents in para-position of phenyl

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USSR/Organic Chemistry - Synthetic Organic Chemistry, E-2

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 61557

Abstract: nucleus enhance the hydrolysis of dyes while in ortho-position they decrease it. This fact is explained by shielding action of the substituents in relation to the central C atom located next thereto.

Card 3/3

AUTHORS: Rachinskiy, F. Yu., Slavachevskaya, M. M., SOV/79-28-11-21/55
Ioffe, D. V.

TITLE: Mercapto Amines (Merkaptoaminy) I.β-Mercapto Ethyl Amine and Its N-Substituted Forms (I. β-Merkapto-etilamin i yego N-zameshchennyye)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol 28, Nr 11, pp 2998 - 3004 (USSR)

ABSTRACT: β-mercapto ethyl amine and its derivatives due to their pharmacological and chemical properties (Refs 1-5) attract more and more the attention of scientists. Its synthesis and properties are, however, insufficiently explained. The experiments by I.S.Ioffe on the synthesis of β-mercapto ethyl amine led the authors to two closely related methods, as they believe: The reaction of ethylenimine with H_2S, and the acid cleavage of mercapto thiazoline, which is directly obtained from ethanol amine. Unlike Knorr (Ref 10) the synthesis of the 2-mercapto thiazoline in aqueous medium was carried out in the presence of an emulsifier (yield:85%). Its acid

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cleavage is obtained by long boiling with concentrated hydrochloric acid. The formed β-mercapto ethyl amine hydrochloride contained 5% bis-(β-amino ethyl)-disulfide. Mercapto ethyl amine is a strong base and easily forms salts (Table 1); it is easily oxidized to the disulfide by atmospheric oxygen in alkaline medium. The taurine is obtained by strong oxidizing agents. The authors found a synthesis that was more convenient than the one described in reference 13 for the N-substituted β-mercapto ethyl amine, in the condensation of the ethylene thio-oxide with amines, which hitherto has not been sufficiently dealt with in references as regards its reaction conditions. The authors succeeded in demonstrating that in this reaction two cases must be distinguished: The reaction of the ethylene thio-oxide with amines of high basicity, and that with those of low basicity. In table 2 the properties of the synthesized N-substituted β-mercapto ethyl amines are mentioned.

Mercapto Amines. I. β-Mercapto Ethyl Amine and Its N-Substituted Forms SOV/79-28-11-21/55

The results obtained show that the β-mercapto ethyl amine is an accessible preparation for the further synthesis of its pharmacological derivatives to be investigated. The synthesis of the amino sulfides was improved proceeding from the β-halogen alkyl amines and sodium disulfide. The properties of the synthesized amine disulfides are given in table 3. There are 3 tables and 19 references, 7 of which are Soviet.

SUBMITTED: September 25, 1957

Card 3/3

AUTHORS: Ginzburg, O. F., Ioffe, D. V., Zavlin, P. M.

SOV/79-29-2-34/71

TITLE: On Dyestuffs With Antipyrine Nuclei (O krasitelyakh s antipirinovymi yadrami). VI. Dyestuffs With One Antipyrine Nucleus (VI. Krasiteli s odnim antipirinovym yadrom)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 2, pp 519-522 (USSR)

ABSTRACT: On the heating of antipyrine with Michler's ketone in the presence of phosphorus trichloride the dyestuff (I) is formed to the ion of which structure (I) corresponds. This dyestuff colors cotton treated with tannin blue and the wool fiber violet. On the action of alkali liquor (I) is transformed into bis-(n-dimethyl-amino-phenyl)-antipyryl carbinol, which on acidification again passes into the dyestuff. Dyestuff (II) which contains only one antipyrine nucleus was synthesized from antipyryl phenyl ketone and dimethyl alanine. The authors tried to synthesize (II) also by reaction of 4-dimethyl-amino benzophenone with antipyrine in the presence of PCl_3, but only traces of (II) were produced and diantipyryl methane was obtained from the reaction mass, the formation of

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which can be explained only by cleavage of 4-dimethyl-amino benzophenone which is far-reaching under these conditions. Compound (II) is an asymmetrical dyestuff that is similar to the orange antipyrine dyestuff and malachite green as far as their arrangements are concerned. The dyestuffs synthesized hydrolyze in aqueous solutions, as is the case with triaryl methane dyestuffs. The hydrolysis constants of the dyestuffs which were determined by the colorimetric method are listed in table 1. For comparison also the hydrolysis constants of the orange antipyrine dyestuff and malachite green are given in the same table. The asymmetrical dyestuff that is produced from antipyryl phenyl ketone and dimethyl aniline possesses a higher resistivity to hydrolysis than the corresponding symmetrical dyestuffs, malachite green and antipyrine orange. There are 1 figure, 2 tables, and 3 references, 2 of which are Soviet.

On Dyestuffs With Antipyrine Nuclei.
VI. Dyestuffs With One Antipyrine Nucleus

SOV/79-29-2-34/71

ASSOCIATION: Leningradskiy tekhnologicheskiy institut imeni Lensoveta (Leningrad Institute of Technology imeni Lensovet)

SUBMITTED: December 31, 1957

Card 3/3

IOFFE, D.V.; EFROS, L.S.

N-oxides of aromatic nitrogen-containing heterocycles. Usp.khim. 30 no.11:1225-1351 N '61. (MIRA 14:10)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
(Heterocyclic compounds)

KUZNETSOV, S.G.; IOFFE, D.V.

Studies on atropine and acetylcholine sorption on ion-exchange resins. Farm.i toks. 24 no.4:445-448 Jl-Ag '61. (MIRA 14:9)

1. Institut toksikologii AMN SSSR.
(ATROPINE) (CHOLINE) (ION EXCHANGE RESINS)

KUZNETSOV, S.G.; IOFFE, D.V.

Formation of polymethyleneammonium rings. Part 1: Synthesis and transformations of some esters of diphenylacetic acid. Zhur. ob.khim. 31 no.7:2289-2297 Jl '61. (MIRA 14:7)

1. Institut toksikologii Akademii meditsinskikh nauk SSSR.
(Acetic acid) (Ammonium compounds) (Ring formation)

IOFFE, D.V.; KUZNETSOV, S.O.

Preparation of aminoalkyl esters of benzilic acid. Zhur.ob.khim. 31 no.9:3051-3056 S '61. (MIRA 14:9)

1. Institut toksikologii Akademii meditsinskikh nauk, Leningrad.
(Benzilic acid)

GOLIKOV, S.N.; KUZNETSOV, S.G.; IOFFE, D.V.

Transformation in the body of certain cholinolytic substances containing the tertiary amino group into quaternary ammonium compounds. Farm. i toks. 25 no.6:651-657 N-D '62.
(MIRA 17:8)

IOFFE, D.V.; KUZNETSOV, S.G.

Formation of polymethylene ammonium cycles. Part 2: Synthesis and conversions of some benzilic acid esters. Zhur.ob.khim. 32 no.10:3237-3244 O '62. (MIRA 15:11)

1. Institut toksikologii Ministerstva zdravookhraneniya SSSR, Leningrad.

(Benzilic acid)
(Ethylamine)

IOFFE, D.V.; KUZNETSOV, S.G.

Migration of the acyl group in N-acyl derivatives of 1,4-amino alcohols. Zhur.ob.khim. 33 no.3:991-994 Mr '63. (MIRA 16:3)

(Acyl groups)
(Alcohols)

IOFFE, D.V.; KUZNETSOV, S.G.

On 2-bromoethyl ester of benzilic acid. Zhur.ob.khim. 33 no.3:1041 Mr '63. (MIRA 16:3)

(Benzilic acid)
(Ethanol)

IOFFE, D.V.; SOMIN, I.N.

Synthesis of 1,1-diphenyl-ω-dialkylamino-2-alkanon-1-ol. Zhur.ob. khim. 34 no.2:703-704 F '64. (MIRA 17:3)

IOFFE, D.V., KUZNETSOV, S.G.

Synthesis of hydroxy butylaminoethyl esters. Zhur. ob. khim. 34 no.12:3898-3900 D '64 (MIRA 18:1)

IOFFE, D.V.

Alkylation of benzophenone disodium derivatives with dihaloalkanes.
Zhur. ob. khim. 34 no.12:3900-3902 D '64 (MIRA 18:1)

IOFFE, D.V.

Reducing metalation of carbonyl compounds. Part 3. Interaction of dimetallic benzophenone derivatives with acid nitriles. Zhur. ob. khim. 35 no.10:1851-1855 O '65. (MIRA 18:10)

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BELYAYEV, A.M.; LOFFE, E.I.; PERVOZVANSKIY, A.I.; NAVASARDYAN, Ye.N.; BLIOKH, S.S.; REVAZASHVILI, B.I.; PROTOPOPOV, M.M.; RAKHMATULLIN, K.Kh.; SEMENOV, V.I.; KRIVOSHEIN, S.S.; SHVETSOV, A.P.; MAKAROV, M.F.; OTROZHDENNOV, A.I.; ZHUKOV, D.D.; BELYAYEV, A.M.

Speeches. Trudy Mekhanobr. no.93:122-173 '56. (MIRA 11:6)
(Ore dressing--Equipment and supplies) (Waste products)

GORELIK, Mariam Borisovna, inzh.; IOFFE, Ernest Isaakovich, inzh.; SURIS, Mordko Ar'yevich; STRIZHEVSKIY, I.V., kand.tekhn.nauk, red.; AVRUSHCHENKO, R.A., red.izd-va; SALAZKOV, N.P., tekhn.red.

[Protection of the gas network from eddy currents; experience of operating and planning organizations in Moscow] Zashchita gazovykh setei ot bluzhdaiushchikh tokov; opyt ekspluatatsionnykh i proektnykh organizatsii Moskvy. Moskva, Izd-vo M-va kommun.khoz. RSFSR, 1959. 140 p. (MIRA 13:2)
(Electric currents, Eddy) (Gas pipes--Corrosion)

IOFFE, E.I.; SURIS, M.A.

Improved electric drainage protection against eddy currents.
Sbor. nauch. rab. AKKH no.2:74-80 '60. (MIRA 15:5)
(Electric railroads--Current supply)

STRIZHEVSKIY, I.V.; IOFFE, E.I.

Study of the effect of the frequency and density of vagrant currents on the corrosion of steel in acid and neutral electrolytes. Sbor.-nauch.rab.AKKH no. 4. Zashch.podzem.soor.ot kor no.2:108-125 '60. (MIRA 15:7)

(Pipe, Steel—Corrosion) (Electric currents, Leakage)

TOLSTAYA, M.A.; IOFFE, E.I.; POTEMINSKAYA, I.V.

Effect of the salt content, ion composition, the value of pH, and the degree of ground aeration on the corrosion of underground steel pipelines under the influence of a.c. Transp. i khran. nefti i nefteprod. no. 1:16-23 '64. (MIRA 17:5)

1. Akademiya kommunal'nogo khozyaystva im. K.D.Pamfilova.

TOLSTAYA, M.A.; IOFFE, E.I.; POTEMINSKAYA, I.V.

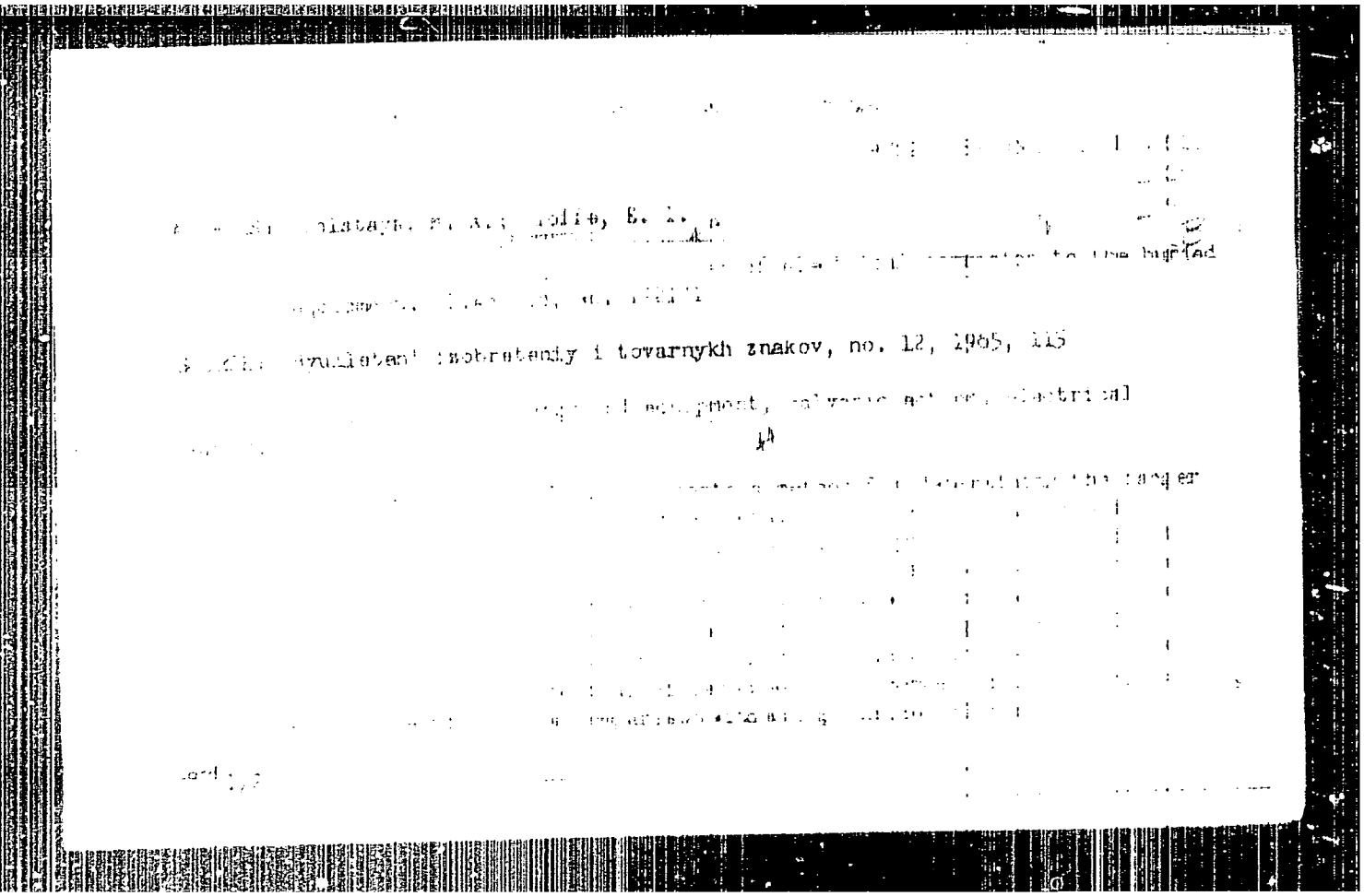
Electrochemical corrosion of underground steel equipment by commercial frequency currents. Gaz. delo no. 3:19-26 '64. (MIRA 17:5)

1. Akademiya kommunal'nogo khozyaystva imeni K.D.Pamfilova.

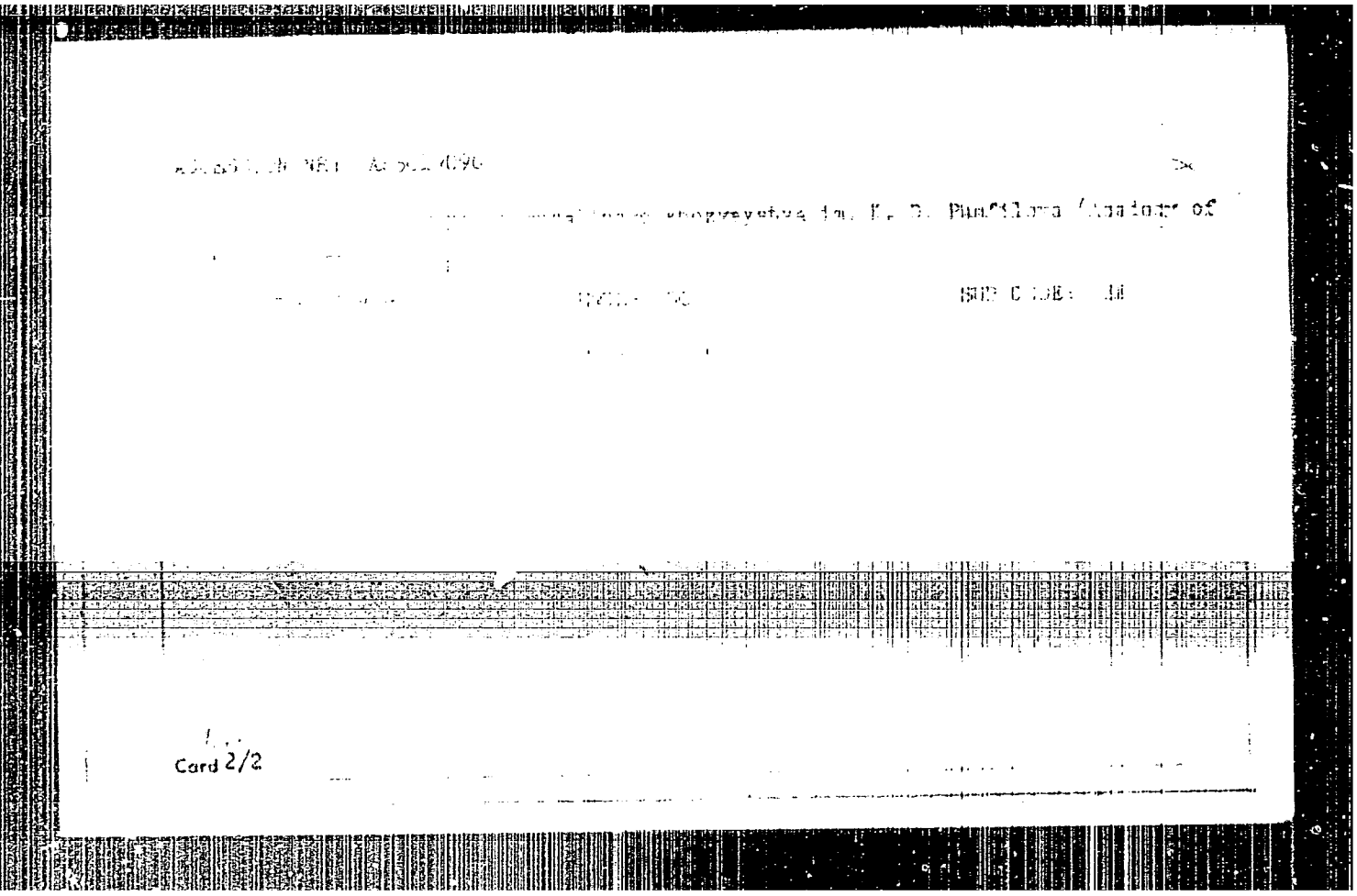
IOFFE, E.I.; TARNIZHEVSKIY, M.V.

Cathodic protection of municipal underground structures. Gaz. delo no.4:27-28 '65. (MIRA 18:6)

1. Akademiya kommunal'nogo khozyaystva im. K.D. Pamfilova.



Izobretatel' i rats., no. 12, 1965, 115



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TOLSTAYA, M.A.; POTEMINSKAYA, I.V.; IOFFE, E.I.

Electrolytic corrosion of cables with an aluminum sheathing under the effect of a commercial frequency alternating current. Zashch. met. 2 no.1:67-74 Ja-F '66. (MIRA 19:1)

1. Akademiya kommunal'nogo khozyaystva imeni K.D. Pamfilova, Leningrad. Submitted May 20, 1965.

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TITLE: Electrocorrosion of underground aluminum materials in anodic and cathodic zones

SOURCE: Zashchita metallov, v. 2, no. 2, 1966, 168-175

TOPIC TAGS: corrosion rate, corrosion protection, aluminum alloy, polarization, cathode polarization, electrochemistry

ABSTRACT: A study of the electrocorrosion of aluminum cable sheathing under the action of anodic and cathodic currents is described. The rate of electrocorrosion was measured by weight loss after the surfaces were cleaned in a solution of CrO_3 (20 g/l) and 85% H_3PO_4 (35 ml/l) at 90-95°C for 10-20 min. Weight loss is given as a function of anodic current density (constant time--30 sec) and time (constant current densities of 0.02, 0.2, 0.75 and 5 ma/dm^2). The intensity of corrosion in the anodic regions is characterized by a coefficient of aggressiveness--K_a (defined as the ratio of actual corrosive wear to that calculated from Faraday's law) which ranged from 1.5 to 1.7. Polarization characteristics of Al and AMg-6 were obtained in sandy soils moist-

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ened with 10-12% solutions containing different amounts of Na_2SO_4, NaCl, $NaHCO_3$, $MgSO_4$ and $MgCl_2$. The intensity of local electrocorrosion was high and caused pitting as a result of erratic currents in both the anodic and cathodic zones. Under the action of the erratic currents in stable cathodic zones, the basic indicator of corrosion danger is the displacement of the electrode potential in the negative direction, surpassing the value of the maximum safe potential -1.4 v (relative to a copper sulfate electrode). Above -1.4 v, alkaline corrosion of Al takes place. The results attest to the difficulty of cathodic protection for underground aluminum materials. Orig. art. has: 5 figures.

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