USHAKOV, K.A.

KERSTEN, I.O. [translator]; USHAKOV, K.A., prof., doktor tekhn.nauk, otvetstvennyy red.; NURMUKHAMEDOVA, V.F., red.izd-va; CHANTSEVA, G.M., tekhn.red.

[New high efficiency ventilators; a collection of articles. Translated from the German] Novye ventiliatory s vysokim k.p.d.; sbornik statei. Pod red. K.A.Ushakova. Moskva, Ugletekhizdat, 1957. 35 p. (MIRA 11:5)
(Fans, Electric)

SOV/124-58-11-12452

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 11, p 72 (USSR)

AUTHOR: Ushakov, K. A.

TITLE: Scientific Research Work on Fans of the Main Ventilating System in Coal Mines and the Trends in the Future Development of Such Research (Nauchno-issledovatel'skiye raboty po shakhtnym ventilya toram glavnogo provetrivaniya i dal'neyshiye puti razvitiya etikh rabot)

PERIODICAL: V sb.: Shakhtn. ventilyatory i ventilyatorn. ustanovki. Moscow. Ugletekhizdat, 1957, pp 26-32

ABSTRACT: The paper presents a brief account of the basic research on mine ventilating fans conducted at the TsAGI (Central Aero-hydrodynamic Institute). A comparison is made between the domestic and foreign-made mine ventilating fans which leads to the conclusion that the aerodynamic characteristics of the domestic ventilators match those of the foreign-manufactured ones. The aerodynamic as well as weight characteristics of the various domestic fans are compared, and it is established that the most suitable type of ventilating fan is the axial-flow fan K-06 in its single-stage and two-stage versions. Fundamental approaches to the development of scientific research

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SOV/124-58-11-12452

Scientific Research Work on Fans of the Main Ventilating System (cont.)

on fans for the main ventilating system for coal mines are described.

V. A. Bashkin

Card 2/2

USHAKOV, Konstantin Andreyevich; BUSHEL', Aleksandr Romanovich; RASKIN, I.A., otv.red.; KOROVENKOVA, Z.A., tekhn.red.

[Mine ventilator equipment with axial flow ventilators; aerodynamic characteristics and designs] Shakhtnye ventiliatornye ustanovki s osevymi ventiliatorami; aerodinamicheskie kharakteristiki i konstruktsii. Moskva, Ugletekhizdat, 1958. (MIRA 12:4)
(Fans, Mechanical) (Mine ventilation--Equipment and supplies)

USHAKOV, K.A.; BUSHEL', A.R.

Investigating the effect of the number of blades on the characteristics of axial flow fans. Prom. aerodin. no.10: 36-42 '58. (MIRA 11:8)
(Fans, Mechanical)

USHAKOV, K.A.; BRUSILOVSKIY, I.V.

Investigating annular cascades of rotating runners in axial flow fans. Prom.aerodin. no.10:43-60 '58. (MIRA 11:8)
(Fans, Mechanical)

SOV/86-58-11-26/37

AUTHOR: Ushakov, K. A., Honored Scientist and Technologist, Professor, Doctor of Technical Sciences

TITLE: The Center of Thought of Aviation Technology (Tsentr aviatsionnoy tekhnicheskoy mysli)

PERIODICAL: Vestnik vozdushnogo flota, 1958, Nr 11, pp 75-79 (USSR)

ABSTRACT: This article is dedicated to the 40th Anniversary of the Central Aero-Hydro-dynamic Institute (TsAGI). The author describes briefly the foundation of the institute in 1918 and its history during the past 40 years. Three photos.

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USHAKOV, K.A.

14(1) PHASE I BOOK EXPLOITATION SOV/2685

Tsentral'nyy aero-gidrodinamicheskiy institut

Ventilyatory i vozdukhoprovody (Ventilators and Air Ducts) Moscow, Oborongiz, 1959. 249 p. (Series: Promyshlennaya aerodinamika, sbornik No. 12) Number of copies printed not given.

Ed. (Title page): K.A. Ushakov, Professor; Ed. (Inside book): A.S. Ginevskiy, Candidate of Technical Sciences; Ed. of Publishing House: E.A. Shekhtman; Tech. Ed.: I.M. Zudakin; Managing Ed.: A.S. Zaymovskaya, Engineer.

PURPOSE: This book is intended for engineers, technicians and scientific workers specializing in the field of industrial aerodynamics and ventilation.

COVERAGE: This collection of 14 articles deals with problems of ventilation technology. Results of experimental and theoretical investigations of the aerodynamic characteristics of axial and centrifugal fans are described. Some designs of new, highly economical centrifugal fans are presented and the drag coefficients of various ducts and elements of ventilation systems are given. No personalities are mentioned. References follow most articles.

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TABLE OF CONTENTS:

In this article the solution of a direct reversible problem of a one-stage axial fan is given. The fan consists of inlet guide vanes, rotor blades and outlet guide vanes in a cylindrical flow conduct from inlet to outlet. The efficiency changes with the radius of blade and vane rings. Some new parameters are introduced and it is shown that for a one-stage three-bladed-ring fan three equations may be established. These equations contain six unknown functions: distribution of the circulation along the radius in rings and axial velocities in inter-ring clearances and behind the outlet guiding van ring. In a number of cases for the three given functions, three other functions may be established.

4. Brusilovskiy, I.V. Investigation of the Regulation of a Two-stage Shaft Axial Fan Type TsAGI, K-06 by Two Types of Intermediate Vane Apparatus 36
In this article the following results of investigations are described: 1) Regulation of fan by changing the blade incidence of the guiding device most economical for the interval 50-105° of its setting 2) Regulation of fan with a guiding device provided with flaps. This is economical at angles of 50-90°. Of these two methods, regulation by flaps seems to be the more accurate.

5. Lokshin, I.L. Investigation of the Flow Behind a Circular Centrifugal Fan

is now mass-produced as a general purpose fan. Comparative results of tests are given.

8. Bychkov, A.G., I.L. Lokshin, and P.O. Mazmanyants. New Types of TsAGI Centrifugal Fans 125

This article describes ten types of new centrifugal fans. These fans were designed by TsAGI in 1956-1957 and have a high efficiency coefficient η-0.76-0.85. It is suggested that some of them might replace ten efficient fans now in production. The article states that 180,000 fans are currently produced in the USSR per year and operation of these fans requires 800,000 kw.

9. Ginevskiy A.S. and Ye.Ye. Solodkin. Aerodynamic Characteristics of the Initial Sector of a Circular Section Duct During Turbulent Flow in the Boundary Layer 155

The authors describe an approximate method for calculating the turbulent boundary layer in the initial sector of an annular duct taking account of the influence of the transversal curvatures of the internal and external convex and concave surfaces of given radiuses on the shape of the velocity profile and on other characteristics of the turbulent boundary layer.

The author describes the experimental installation, explains the method of investigation and gives the results obtained. He also gives a method for applying the results obtained to acoustic calculations of units with screen silencers.

14. Khanzhonkov, V.I. Wind Protection for Open-air Sports Arenas 239

The author considers a number of designs and discusses their comparative merits under various wind conditions. Diagrams and photographs of the models investigated and graphs of wind velocities and pressure distribution are given.

AVAILABLE: Library of Congress

IS/jb
12-29-59

USHAKOV, K.A.

Scientific work of Professor Grigorii Kharlampievich Sabinin; on the occasion of his 75th birthday. Prom. aerodin. no.13:5-7 '59. (MIRA 13:3)

(Sabinin, Grigorii Kharlampievich, 1884-)

USHAKOV, K.A.

Using balancing devices for determining the torque of fans, air blowers, and compressors. Prom. aerodin. no.12:5-18 '59.
(MIRA 13:1)

(Air compressors--Testing) (Fans, Mechanical--Testing)

PHASE I BOOK EXPLOITATION SOV/4820

Ushakov, Konstantin Andreyevich, Professor, Iosif Veniamenovich Brusilovskiy, and Aleksandr Romanovich Bushel'

Aerodinamika osevykh ventilyatorov i elementy ikh konstruktsiy (Aerodynamics of Axial-Flow Fans and Elements of Their Structure) Moscow, Gosgortekhizdat, 1960. 421 p. Errata slip inserted. 2,000 copies printed.

Ed.: Konstantin Andreyevich Ushakov, Professor; Ed. of Publishing House: G.B. D'yakova; Tech. Eds.: S.Ya. Shklyar, and Z.A. Korovenkova.

PURPOSE: This book is intended for workers of scientific research institutes and planning and design institutes of the ore-mining industry, and may be used by the personnel of other organizations concerned with the design and operation of axial-flow fans.

COVERAGE: The authors describe a modern method of the aerodynamic calculation of axial-flow fans and critically review the design of mine-ventilating machines. Their method of profiling bladed rings is said to be a synthesis of the theory of two-dimensional cascades of airfoils, testing data, and of the generalized results of various systematic experimental investigations carried out by the

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authors at the Tsentral'nyy aero-gidrodinamicheskiy institut (Central Aero-hydrodynamical Institute). Individual chapters were written as follows: K.A. Ushakov, Introduction, Sec. 3 and 6 of Ch. III, Sec. 4 of Ch. VI, and together with A.R. Bushel', Ch. XII (except Sec. 3); I.V. Brusilovskiy, Ch. I (except Sec. 4), Ch. II, Ch. III (except Sec. 2,3, and 6), Ch. IV, V, VI (except Sec. 4), Sec. 3 and 4 of Ch. VII, Ch. VIII (except Sec. 4 and 5), and Ch. X. (except Sec. 3); A.R. Bushel', Ch. VII (except Sec. 3 and 4), Sec. 4 and 5 of Ch. VIII, Sec. 3 of Ch. X, Sec. 3 of Ch. XII, Ch. XIII and Ch. XIV; A.S. Ginevskiy, Sec. 4 of Ch. I; A.A. Dzidziguri, Ch. IX; I.O. Kersten, Ch. XI; A.V. Kolesnikov, Sec. 2 of Ch. III. No personalities are mentioned. There are 107 references: 87 Soviet, 11 German, and 9 English.

TABLE OF CONTENTS:

PART I. AERODYNAMICS OF AXIAL-FLOW FANS

Aerodynamics of Axial-Flow Fans (Cont.)

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Ushakov, K A

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PHASE I BOOK EXPLOITATION SOV/5473

Gornoye delo; entsiklopedicheskiy spravochnik. t. 8: Statsionarnoye elektromekhanicheskoye oborudovaniye. Elektrosnabzheniye shakht (Mining Industry; an Encyclopedic Handbook. v. 8: Stationary Electromechanical Equipment. Electric Power Supply to Mines) Moscow, Gosgortekhizdat, 1960. 784 p. Errata slip inserted. 18,500 copies printed.

Chief Ed.: A. M. Terpigorev (Deceased); Members of the Editorial Board: A. I. Baranov, F. A. Barabanov (Deceased), A. A. Boyko, V. K. Buchnev, A. N. Zaytsev; Deputy Chief Eds.: I. K. Kit and N. V. Mel'nikov; I. N. Plaksin, N. M. Pokrovskiy, A. A. Skochinskiy (Deceased), A. O. Spivakovskiy, I. K. Stanchenko, A. P. Sudoplatov, A. V. Topchiyev, S. V. Troyanskiy, A. K. Kharchenko, L. D. Shevyakov and M. A. Shchedrin; Editorial Board for this volume: Resp. Ed.: F. A. Barabanov; Deputy Resp. Ed.: Z. M. Melamed; N. A. Arzamasov, G. M. Yelanchik, V. K. Yefremov, B. I. Zasadych, I. M. Zhumakhov, N. A. Letov, P. P. Nesterov, I. A. Rabinovich, K. I. Skorkin, and V. A. Sumchenko; Authors: G. A.

Card 1/16

Babak, Candidate of Technical Sciences, V. D. Belyy, Professor, Doctor of Technical Sciences, K. S. Borisenko, Candidate of Technical Sciences, A. G. Borumenskiy, Candidate of Technical Sciences, I. V. Brusilovskiy, Candidate of Technical Sciences, A. R. Bushel', Candidate of Technical Sciences, V. P. Bukhgol'ts, Engineer, M. N. Vasilevskiy, Candidate of Technical Sciences, A. N. Vas'kovskiy, Engineer, B. N. Vlasenko, Engineer, I. Ya. Gershikov, Engineer, V. G. Geyer, Professor, Doctor of Technical Sciences, A. D. Dimashko, Engineer, V. S. Dulin, Candidate of Technical Sciences, I. L. Lokshin, Engineer, B. M. Melamed, Engineer, Yu. A. Mikheyev, Engineer, V. P. Morozov, Engineer, M. I. Mushkatin, Engineer, V. S. Pak, Academician, I. M. Perskaya, Engineer, N. M. Rusanov, Candidate of Technical Sciences, G. P. Savel'yev, Candidate of Technical Sciences, Ya. M. Smorodinskiy, Candidate of Technical Sciences, K. A. Ushakov, Honored Scientist and Technologist, Professor, Doctor of Technical Sciences, B. M. Furmanov, Engineer, and N. N. Chernavkin, Engineer. Eds.: Ya. M. Drozdov, Engineer, B. I. Zasadych,

Candidate of Technical Sciences, N. S. Karpyshev, Candidate of Technical Sciences, N. A. Letov, Candidate of Technical Sciences, Z. M. Melamed, Candidate of Technical Sciences, Yu. A. Mikheyev, Engineer, V. P. Morozov, Engineer, V. I. Polikovskiy, Professor, Doctor of Technical Sciences, I. A. Rabinovich, Engineer, M. S. Rabinovich, Candidate of Technical Sciences, I. A. Raskin, Engineer, V. S. Tulin, Engineer, S. Ye. Unigovskiy, Engineer, K. A. Ushakov, Honored Scientist and Technologist, Professor, Doctor of Technical Sciences, M. M. Shemakhanov, Candidate of Technical Sciences, P. F. Shishkov, Candidate of Technical Sciences, and V. B. Yablonovskiy, Engineer; Eds. of Publishing House: N. A. Arzamasov and T. I. Rybal'nik; Tech. Ed.: V. L. Prozorovskaya and M. A. Kondrat'yeva.

PURPOSE: This handbook is intended for mining and mechanical engineers as well as for other skilled personnel of the mining industry concerned with the handling and operation of various installations and equipment used in mines.

Mining Industry (Cont.)

COVERAGE: Volume VIII of the mining handbook contains detailed information on mine hoisting installations, machines and equipment, mine ventilation units, duct systems, dewatering facilities, various types of pumps, pump meters, pumping stations, and the automatic remote control of these units. The handbook also describes and explains the operation of the air compression units and compressors. Heat-generating and heat-supply equipment of mines is described, as are the electric power supply systems and other electrical equipment such as transformers, power distribution systems, and grounding devices. Telephone communication and signaling systems used in mines are also treated. No personalities are mentioned. Each part of the handbook is accompanied by references, mostly Soviet.

TABLE OF CONTENTS [Abridged]:

Mining Industry (Cont.)

PART II. MINE FAN INSTALLATIONS

USHAKOV, K.A.

Method for obtaining dimensionless characteristics of fans immediately. Prom.aerodin. no.17:66-80 '60. (MIRA 14:3)
(Fans, Mechanical—Testing)

USHAKOV, K.A.

Power consumption by the fan of a heating system depending on its position in relation to the air heater. Vod. i san. tekh. no.7:37-38 Jl '61. (MIRA 14:7)
(Hot-air heating)

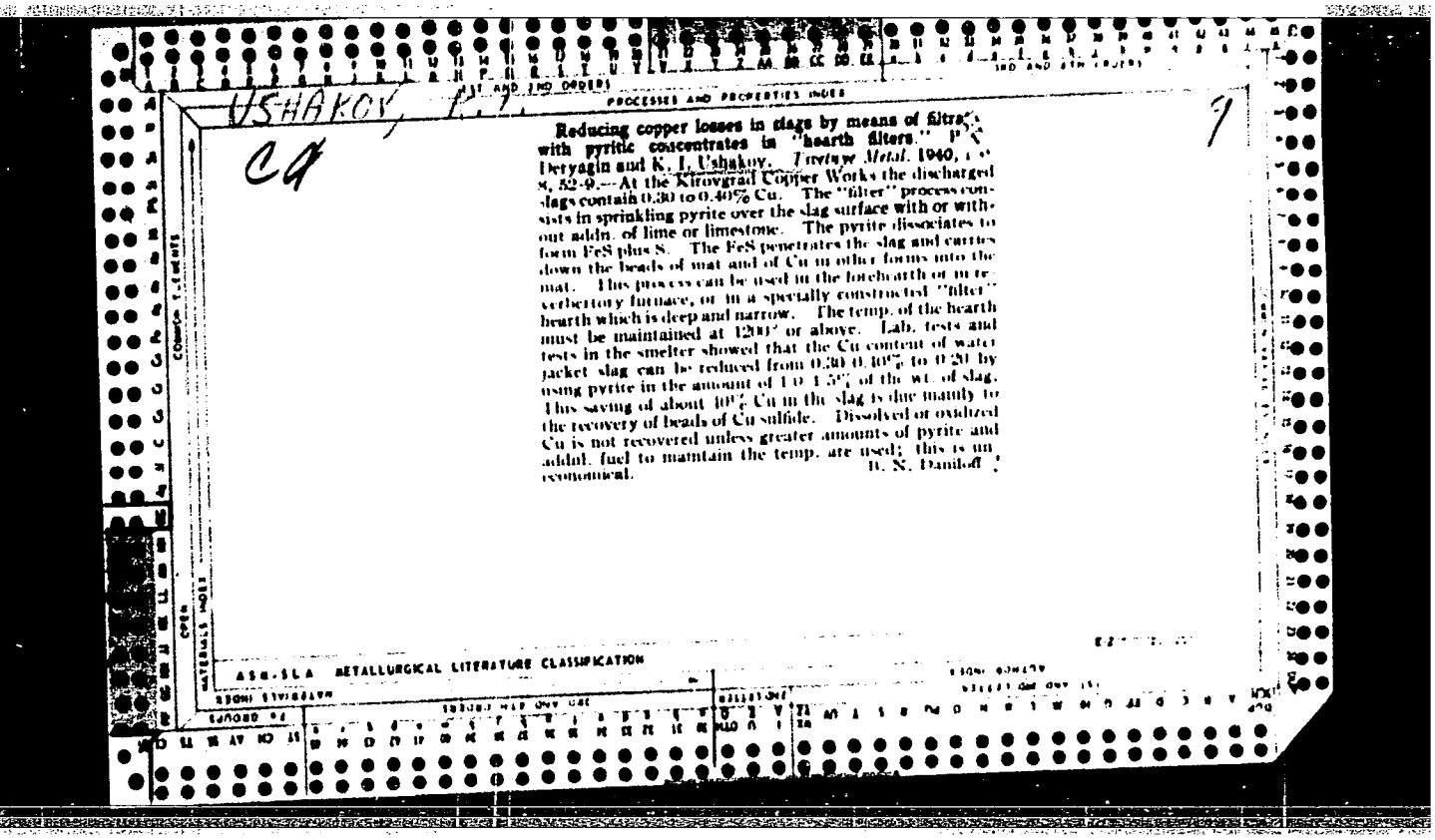
USHAKOV, K.A.; BUSHEL', A.R.

Eliminating the instability of the performance of axial-flow fans by means of separators. Prom.aerodin. no.24:9-34 '62. (MIRA 16:7)
(Fans, Mechanical)

USHAKOV, K.A.; KOLESNIKOV, A.V.

Investigating pressure losses in diffuser interblade channels of axial-flow fans. Prom. aerodin. no.25:52-95 '63. (MIRA 16:7)

(Fans, Mechanical)



USHAKOV, K. I.

CA

PROCESSES AND PROPERTIES INDEX

Reducing copper losses in slags by means of filtration with pyritic concentrates in "hearth filters." P. V. Deryagin and K. I. Ushakov. *Tsvetnye Metal.* 1940, [illegible] 8, 52-9.—At the Kirovgrad Copper Works the discharged slags contain 0.30 to 0.40% Cu. The "filter" process consists in sprinkling pyrite over the slag surface with or without addn. of lime or limestone. The pyrite dissociates to form FeS plus S. The FeS penetrates the slag and carries down the beads of mat and of Cu in other forms into the mat. This process can be used in the forehearth or in reverberatory furnace, or in a specially constructed "filter" hearth which is deep and narrow. The temp. of the hearth must be maintained at 1200° or above. Lab. tests and tests in the smelter showed that the Cu content of water jacket slag can be reduced from 0.30-0.40% to 0.20 by using pyrite in the amount of 1.0-1.5% of the wt. of slag. This saving of about 40% Cu in the slag is due mainly to the recovery of beads of Cu sulfide. Dissolved or oxidized Cu is not recovered unless greater amounts of pyrite and addnl. fuel to maintain the temp. are used; this is uneconomical.

B. S. Danilov

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

USHAKOV, K.I.

GRANOVSKIY, B.L.; DIYEV, N.P.; ZUBAREV, V.I.; KARCHEVSKIY, V.A.; KLUSHIN, D.N.; MAKOVSKIY, G.M.; MIRONOV, A.A.; OL'KHOV, N.P.; PARFANOVICH, B.V.; USHAKOV, K.I.; SHAKHNAZAROV, A.K.

Electric smelting for matte in copper metallurgy; a reply to L.M.Gazarian. TSvet.met. 28 no.1:33-41 Ja-F '55. (MIRA 10:10)
(Copper--Electrometallurgy) (Gazarian, L.M.)

K.I.

BAKAKIN, V.P.; BUBOK, K.G.; BUGAREV, L.A.; BUNIN, A.I.; VOROB'YEV, K.V. DROZDOV, V.V.; DOROKHOV, M.S.; ZUBRILOV, S.V.; IGNAT'YEV, L.A. KARGOPOLOV, I.G.; KLUSHIN, D.N.; KOMAROV, A.M.; KURILOV, M.S.; LOMAKO, P.F.; MIKULENKO, A.S.; MIKHAYLOV, M.M.; NEMTINOV, B.A.; OL'KHOV, N.P.; OSIPOVA, T.V.; PAKHOMOV, Ya.D.; PLAKSIN, I.N.; PODGHAYNOV, S.F.; PUSTYL'NIK, I.I.; ROZHKOV, I.S.; SAVARI, Ye.A.; SEMYNIN, A.P.; SPIVAKOV, Ya.N.; STRIGIN, I.A.; SUSHENTSOV, S.N.; SYCHEV, P.S.; TROITSKIY, A.V.; USHAKOV, K.I.; KHARLAMOV, A.Ye.; SHEMYAKIN, N.I.

Nikolai Konstantinovich Chaplygin. TSvet. met. 28 no.2:57-58 Mr-Ap '55. (MIRA 10:10)

(Chaplygin, Nikolai Konstantinovich, 1911-1955)

USHAKOV, K.I.; BLINOVA, L.A.; VOLYNSKAYA, M.A.

Briquetting finely divided particles of copper ores and concentrates. TSvet. met. 35 no.4:12-21 Ap '62. (MIRA 15:4)
(Copper ores) (Briquets)

USHAKOV, K.I.; VOLYNSKAYA, M.A.; BLINOVA, L.A.

Pelletizing oxidized nickel ores. TSvet. met. 36 no.10:21-25 O '63. (MIRA 16:12)

USHAKOV, K.I.; BLINOVA, L.A.; VOLYNSKAYA, M.A., FEL'MAN, R.I.

Briquetting fine copper ores and concentrates. Sbor. nauch. trud. Gintsvetmeta no.23:74-86 '65. (MIRA 18:12)

YALOVITSYN, M.V.; USHAKOV, K.P.

Preparation of hyperimmune serums for the diagnosis of some insect bacterioses. Trudy Inst. mikrobiol. i virus. AM Kazakh. SSR 7 :235-242 '63 (MIRA 16:12)

KUSOV, V.N.; USHAKOV, K.P.

Feeding of Ornithodorus ticks on sleeping animals. Izv. AN Kazakh. SSR. Ser. biol. nauk 3 no.6:53-57 N-D '65. (MIRA 18:12)

USHAKOV, K.V.

Fish Culture

Fertilizing spawning ponds. Ryb. khoz. 28, no. 4, 1952.

9. Monthly List of Russian Accessions, Library of Congress, AUGUST 1952 1953. Unclassified.

USHAKOV, K. Z.

USHAKOV, K. Z.: "Air losses under the condition of gaseous coal mines in the Donbass and the coefficients for calculating air reserves (inclined and vertical deposits)". Moscow, 1955. Min Higher Education USSR. Moscow Mining Inst imeni I. V. Stalin.

SO: Knizhnaya Letopis' No. 47, 19 November 1955. Moscow.

KONOGRAI, Valentin Polikarpovich; USHAKOV,K.Z., redaktor; ONKDIN,V.Ye., redaktor; MADEINSKAYA,A.A., tekhnicheskiy redaktor

[How a mine is ventilated] Kak provetrivaetsia shakhta. Moskva, Ugletekhizdat, 1955. 56 p. (MLRA 9:3)
(Mine ventilation)

Ушаков К. З.

15-57-7-10275

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 7, p 240 (USSR)

AUTHOR: Ushakov, K. Z.

TITLE: Air Passage Through Mined Out Spaces in the Stalino-Makeyevka District of the Donbas (Kharakteristika utechek vozdukha cherez vyrabotannyye prostranstva na shakhtakh Stalino-Makeyevskogo rayona Donbassa)

PERIODICAL: Nauch. tr. po vopr. gorn. dela, Mosk. gorn. in-t, 1955, sb. Nr 16, pp 67-87

ABSTRACT: The article represents part of a study of methods used in establishing coefficients of air supply for slightly inclined gas producing mines in the Stalino-Makeyevka district of the Donbas. The study was conducted, with participation of the author, by the Mine Ventilation Section of the Moscow Mining Institute in 1954-1955. Observations of air passage were

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Air Passage Through Mined Out Spaces (Cont.)

made on the following four mines of the district: No. 17-17 bis, No. 29, the imeni L. M. Kaganovich mine, and the No. 17 "Yevdokiyevka" mine. A system of total removal had been used on these mines, and the roof was supported by partial packing of the mined out area. The width of the mined zones was 6 m to 7 m; the width of the drifts was 3 m; the coefficient of packing of the mined-out area was 0.7 m. The length of the galleries averaged 150 m to 160 m. Most of the air leakage was found to occur in the first 150 m to 160 m of the galleries and amounts to 9 to 27 percent of the air supplied to the sector. The properties of the host rock, and especially the roof rock, greatly affect the passage of air, which increases with an increase in the strength of the rock of the immediate roof covering, decreases with a decrease in strength of this rock. All passage of air in a mined area of the highly gaseous mines of the Stalino-Makeyevka area is beneficial, since this air, after passing through a mined area in a ventilating drift, usually contains more than 1 percent methane. The specific air pressure resistance of a mined area decreases with an increase in strength of the roof rock.

Card 2/2

G. A. Teplitskiy

[illegible], redaktor izdatel'stva; [illegible], tekhnicheskiy redaktor

[Ventilation of mines in the Kuznetsk Basin] Provetrivanie shakht Kuzbassa. Moskva, Ugletekhizdat, 1957. 173 p. (MLRA 10:9)
(Kuznetsk Basin--Mine ventilation)

KSENOFONTOVA, A.I., dotsent; USHAKOV, K.Z., kand.tekhn.nauk

Method of establishing the coefficient of air supply for gassy mines in the Donets Basin. Nauch. dokl. vys. shkoly; gor. delo no.1:127-137 '58. (MIRA 11:6)

1.Predstavlena kafedroy rudnichnoy ventilyatsii i tekhniki bezopasnosti Moskovskogo gornogo instituta im. V.I. Stalina.
(Donets Basin--Mine ventialtion) (Mine gases)

KSENOFONTOVA, A.I., dotsent, kand.tekhn.nauk; BURCHAKOV, A.S., kand. tekhn.nauk; OREKHOV, V.S., gornyy inzh.; USHAKOV, K.Z.

[Ventilation of greatly extended development workings in Karaganda Coal Basin gas-discharging mines] Provetrivanie podgotovitel'nykh vyrabotok bol'shoi protiazhennosti v gazovykh shakhtakh Karagadinskogo ugol'nogo basseina. Moskva, M-vo vysshego obrazovaniia SSSR. Mosk.gornyi in-t im. I.V.Stalina, 1959. 14 p. (MIRA 13:8)

1. Zaveduyushchiy kafedroy rudnichnoy ventilyatsii i tekhniki bezopasnosti Moskovskogo gornogo instituta imeni I.V.Stalina (for Ksenofontova).

(Karaganda Basin--Mine ventilation)

USHAKOV, K.Z., dotsent, kand. tekhn. nauk

Cases of ventilation loss in parallel workings. Nauch. dokl. vys. shkoly; gor. delo no.1:87-92 '59. (MIRA 12:5)

1. Predstavlena kafedroy rudnichnoy ventilyatsii i tekhniki bezopasnosti Moskovskogo gornogo instituta im. I.V. Stalina.
(Mine ventilation)

BURCHAKOV, A.S., kand. tekhn. nauk;USHAKOV, K.Z., kand. tekhn. nauk

Gas release in stopes in mining "Verkhniaia Marianna" coal seam.
Ugol' 34 no.11:42-44 N '59 (MIRA 13:3)
(Donets Basin--Mine gases) (Donets Basin--Mine ventilation)

ALIDZAYEV, Yevgeniy Dmitriyevich; USHAKOV, K.Z., otv.red.; SHKLYAR, S.Ya., tekhn.red.; IL'INSKAYA, G.M., tekhn.red.

[Degasification of coal beds] Degazatsiia ugol'nykh plastov. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1960. 44 p. (Mine gases) (MIRA 14:6)

PEREPELITSA, Vladimir Konstantinovich; SKLYARENKO, Ivan Petrovich; USHAKOV, K.Z., otv.red.; OKHRIMENKO, V.A., red.izd-va; IL'INSKAYA, G.M., tekhn.red.

[Control of mine air composition by means of portable devices] Kontrol' sostava rudnichnoi atmosfery perenosnymi priborami. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1960. 49 p. (MIRA 13:5)

(Mine ventilation) (Gas detectors) (Dust collectors)

KEFER, Vladimir Nikolayevich. Prinimal uchastiye PONIZKO, T.A., inzh.. ABRAMOV, F.A., prof., doktor tekhn.nauk, retsenzent; DUGANOV, G.V., dotsent, kand.tekhn.nauk, retsenzent; USHAKOV, K.Z., otv.red.; OKHRIMENKO, V.A., red.izd-va; IL'INSKAYA, G.M., tekhn.red.

[Mine air cooling systems] Shakhtnye vozdukhookhladitel'nye ustanovki. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1960. 67 p. (MIRA 13:6)

1. Zaveduyushchiy kafedroy Rudnichnoy ventilyatsii i tekhniki bezopasnosti Dnepropetrovskogo gornogo instituta (for Abramov). 2. Kafedra Rudnichnoy ventilyatsii i tekhniki bezopasnosti Dnepropetrovskogo gornogo instituta (for Duganov).
(Coal mines and mining--Air conditioning)

BODYAGIN, Mikhail Nikolayevich, kand.tekhn.nauk; MILETICH, A.F., dotsent, kand.tekhn.nauk, retsenzent; DUGANOV, G.V., kand. tekhn.nauk, dotsent, retsenzent; KSENOFONTOVA, A.I., prof., retsenzent; KHAREV, A.A., dotsent, retsenzent; USHAKOV, K.Z., kand.tekhn.nauk, otv.red.; OKHRIMENKO, V.A., red.izd-va; LOMILINA, L.N., tekhn.red.; BERESLAVSKAYA, L.Sh., tekhn.red.

[Mine ventilation] Rudnichnaia ventiliatsiia. Moskva, Gos. nauchno-tekhn.izd-vo lit-ry po gornomu delu. 1960. 398 p. (MIRA 13:5)

1. Kafedra rudnichnoy ventilyatsii Dnepropetrovskogo gornogo instituta (for Duganov, Miletich). 2. Kafedra rudnichnoy ventilyatsii Moskovskogo gornogo instituta (for Ksenofontova, Kharev).

(Mine ventilation)

BYKOV, L.N., doktor tekhn. nauk, prof.; KSENOFONTOVA, A.I., prof.; KLIMANOV, A.D., kand. tekhn. nauk; KRICHEVSKIY, R.M., kand. tekhn. nauk; PREOBRAZHENSKAYA, Ye.I., inzh.; RASKIN, I.A., kand. tekhn. nauk; USHAKOV, K.Z., kand. tekhn. nauk; KHAREV, A.A., kand. tekhn. nauk; KHEYFITS, S.Ya., kand. tekhn. nauk; ZAKHAROV, M.I., red. izd-va; GIL'MAN, S.E., red. izd-va; MAKSIMOVA, V.V., tekhn. red.; SHKLYAR, S.Ya., tekhn. red.

[Handbook on mine ventilation] Spravochnik po rudnichnoi ventiliatsii. Pod red. A.I.Ksenofontovoi. Moskva, Gosgortekhizdat, 1962. 691 p. (MIRA 15:6)
(Mine ventilation--Handbooks, manuals, etc.)

USHAKOV, K.I., dotsent

Effect of the motion of the pulp on the air flow in a mine working. Nav. vys. ucheb. zav.; gor. zhur. 8 no.[illegible] '65. (MIRA 18:9)

1. Moskovskiy institut radioelektroniki i gornoy elektromekhaniki. Rekomendovana kafedroy rudnichnoy ventilyatsii i tekhniki bezopasnosti.

USHAKOV, L.

USHAKOV, L., inzhener-kapitan tyagi

Wheel lathes. Zhel.dor.transp. no.10:87-88 0'47. (MLRA 8:12)
(Wheels) (Lathes)

USHAKOV, L.D.

Make every effort to utilize all hidden potentials. Avtom., telem.i sviaz' 7 no.3:42 Mr '63. (MIRA 16:2)

1. Zaveduyushchiy marshrutno-releynoy tsentralizatsiyey stantsii Yaroslavl'-Glavnyy, Severnoy dorogi.
(Railroads—Employees)
(Railroads--Signaling--Interlocking systems)

VAVILOV, L.; USHAKOV, L.; DERKACH, A.; AKOL'ZIN, L.; YUTSOV, L., agronom; YEVMENENKO, L.

Successes of chemicalization. Zashch. rast. ot vred. i bol. 10 no.1:4-8 '65. (MIRA 18:3)

1. Nachal'nik Primorskoy stantsii zashchity rasteniy, Vladivostok (for Vavilov). 2. Nachal'nik Brestskoy stantsii zashchity rasteniy (for Ushakov). 3. Glavnyy agronom Brestskoy stantsii zashchity rasteniy (for Derkach). 4. Nachal'nik Pskovskoy stantsii zashchity rasteniy (for Akol'zin). 5. Mogilevskiy otryad po zashchite rasteniy (for Yutsov). 6. Nachal'nik Gomel'skoy stantsii zashchity rasteniy (for Yevmenenko).

ACC NR: AP6030781 (A) SOURCE CODE: UR/0363/66/002/009/1712/1715

AUTHOR: Zorina, M. L.; Setkina, O. N.; Ushakov, L. F.

ORG: Leningrad Technological Institute im. Lensovet (Leningradskiy tekhnologicheskiy institut)

TITLE: Infrared spectroscopic study of the course of crystallization in vitreous-crystalline enamels

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 9, 1966, 1712-1715

TOPIC TAGS: catalyzed crystallization, silicate glass, lithium glass, IR SPECTROSCOPY

ABSTRACT: The course of directed crystallization of an acid-resistant vitreous-crystalline enamel and coating obtained from this enamel was studied by analyzing IR absorption spectra of the multicomponent system Li_2O-MgO-Al_2O_3-SiO_2. The spectra showed that the main crystalline phase in enamel whose crystallization occurred at 700° in the presence of TiO_2 is β-eucryptite, β-spodumene or their solid solutions and the solid solution β-eucryptite-quartz. In addition, a certain amount of forsterite and rutile also crystallizes. The study of IR spectra made it possible to draw certain conclusion with regard to the phase composition as compared to x-ray structural analysis. However, even though the necessary data were obtained on the crystallization of the enamel, the IR spectra could not be fully interpreted because of their complexity. It is possible that some intermediate compounds responsible for the appearance of the

Card 1/2 UDC: 666.29:542.65

ACC NR: AP6030781

unidentified bands are formed during the crystallization. Authors thank O. M. Rimskaya-Korsakova and V. V. Gordiyenko for providing the samples of the mineral studied. Orig. art. has: 5 figures.

SUB CODE: 11/ SUBM DATE: 19Dec65/ ORIG REF: 007/ OTH REF: 002

Card 2/2

USHAKOV, L. I.

The rapid determination of extractives in pulp. L. I. Lapkin and L. I. Ushakov (A. M. Gorkii State Univ., Molotov). *Bumazh. Prom.* 29, No. 4, 10–11(1954).—The extractives (I) in pulp are detd. by means of the acid no. The pulp, approx. 2 g. in 5×5-mm. squares, was refluxed 1 hr. with 30 cc. 95% EtOH and Et$_2$O, the solvent filtered, and the extd. pulp washed with 30–40 cc. solvent mixt., and filtrate and washings were titrated with 0.1*N* NaOH in the presence of phenolphthalein. The percentage Et$_2$O-EtOH I in a pulp is given by $(a - b)0.001(100 - n)/0.8178c$, where a = cc. 0.1*N* NaOH used in the titration, b = cc. 0.1*N* NaOH used in a blank titration on the solvent mixt., 0.8178 is the acid no. of the resin, c is the wt. of sample in g., and n is the % H$_2$O of the pulp sample. The av. % I in 20 samples of sulfite pulp by the acid-no. method was 1.230, and the av. % I extd. by ClCH$_2$CH$_2$OH and weighing the residue after evapn. of the solvent was 1.305. The detn. required 2 hrs. John Lake Keays (1)

USHAKOV, L.I.

Rumania /Chemical Technology. Chemical Products and Their Application I-27

Wood chemistry products. Cellulose and its manufacture. Paper.

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 32697

Author : Lapkin I.I., Ushakov L.I.

Title : Rapid Method for Determination of Resin in Cellulose

Orig Pub: Ind. lemn. celul. si hirt., 1954, No 9, 349-350

Abstract: A translation. See RZhKhim, 1955, 22622.

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USHAKOV, M.

Horse-radish

Horse radish as a soil binder in a landslide area. les i step' No. 4, 1952.

9. Monthly List of Russian Accessions, Library of Congress, ~~August~~ 1953, Uncl.

USHAKOV, M.

Soil Binding

Horse radish as a soil binder in a landslide area. Les i step' No. 4 (1952)

9. Monthly List of Russian Accessions, Library of Congress, August 1952, Uncl.

USHAKOV, M., polkovnik, kand.istoricheskikh nauk

High and noble tasks of the Soviet people. Komm.Vooruzh.Sil 2 no.1:18-25 Ja '62. (MIRA 14:12)
(Russia--Armed forces)

USHAKOV, M.

In a technical studv room. NTO 3 no.6:16-17, 44, 45, 46, 47, 49, 50, 51 Je '61. (MIRA 14:6)

(Technical education)

USHAKOV, M.

How friendship is born. NTO 3 no.11:43-44 N '61.
(MIRA 14:10)

1. Chlen soveta Nauchno-tekhnicheskogo obshchestva avtozavoda imeni Likhacheva, Moskva.
(Moscow—Automobile industry)

USHAKOV, M.; STEPANENKO, Yu.

The best milling-machine operator at the Likhachev Automobile Plant. Mashinostroitel' no.2:5-6 F '63. (MIRA 16:3)
(Moscow—Milling machines—Technological innovations)

USHAKOV, M.

Likhachev Automobile Plant. Mashinostroitel' no.3:41 Mr '63.
(MIRA 16:4)
(Moscow--Automobile industry)

USHAKOV, M.A.

[Studying the laws of an electric current in the 10th class of the secondary school] K izucheniiu zakonov elektricheskogo toka v X klasse srednei shkoly. Moskva, Gos. uchebno-pedagog. izd-vo Ministerstva prosveshcheniia RSFSR, 1953. 43 p. [Microfilm]
(Electricity--Study and teaching) (MLRA 7:10)

USHAKOV, Mikhail Alekseyevich; BASOV, Yu.V., redaktor; PETROVA, M.D., tekhnicheskiy redaktor.

[Studying three-phase current in school] Izuchenie trekhfaznogo toka v shkole. Moskva, Gos. uchebno-pedagog. izd-vo Ministerstva prosveshcheniia RSFSR, 1955. 68 p. (MLRA 9:5)
(Electric currents)

VAL'DMAN, Edgar Karlovich; USHAKOV, M.A., redaktor; USHOMINSKAYA, M.M., redaktor; SOKOLOVA, R.Ya., tekhnicheskiy redaktor.

[100 entertaining problems for the young radio amateur] Sto zanimatel'nykh zadach iunogo radioliubitelia. Moskva, Gos.izd-vo lit-ry po voprosam sviazi i radio, 1955. 122 p. [Microfilm]
(Radio-- Juvenile literature) (MLRA 9:1)

IL'YASHENKO, Sergey Mikhaylovich; USHAKOV, Mikhail Aleksandrovich, redaktor; BOGACHEV, F.V., redaktor; OSTROV, N.S., tekhnicheskiy redaktor.

[Physics] Fizika. Moskva, Vsesoiuznoe uchebno-pedagog.izd-vo trud-rezervizdat, 1955. 283 p. (MLRA 8:11)
(Physics)

KLEMENT'YEV, Sergey Dmitriyevich; USHAKOV,M.A., tekhnicheskiy redaktor; SAKHAROVA, N.V., tekhnicheskiy redaktor; RYBIN, I.V, tekhnicheskiy redaktor.

[Teleautomatics] Teleavtomatika. Moskva, Gos. uchebno-pedagog. izd-vo Ministerstva prosveshcheniia RSFSR. Vol.1[Homemade automatic photoelectric appratus] Samodel'naia avtomaticheskaia fotoelektronnaia apparatura. 1955. 286 p. [Microfilm] (MLRA 8:9)
(Electric apparatus and appliances)
(Photoelectricity)

USHAKOV, M. A.

PERYSHKIN, Aleksandr Vasil'yevich; TRET'YAKOV, Nikolay Petrovich; USHAKOV, Mikhail Alekseyevich, redaktor; ROGACHEV, F.V., redaktor; OSTROUMOV, N.S., tekhnicheskiy redaktor

[Physics] Fizika. Izd. 2-e, ispr. i dop. Moskva, Vses. uchebno-pedagog. izd-vo Trudrezervizdat, 1955. 435 p. (MLRA 8:10)
(Physics)

USHAKOV, M.A. (g. Moskva)

"Elements of agricultural technology in teaching physics."
K.R. Krylov. Reviewed by M.A. Ushakov. Fiz.v shkole 15 no.3:
82-85 My-Je '55. (MLRA 8:6)
(Agricultural physics--Textbooks) (Krylov, K.R.)

USHAKOV, M.A. (Moskva)

Organization of practical courses in electricity. Fiz. v shkole 16 no.2:69-75 Mr-Ap '56. (MLRA 9:6)

1.273-ya srednyaya shkola.
(Electricity--Experiments)

USHAKOV, M.A.

USHAKOV, M.A.

A useful manual ("Organizing and conducting practical work in electric engineering for the tenth grade in the secondary school" by N.M.Borisov. Reviewed by M.A. Ushakov.) Politekh.obuch. no.12:85-87 D '57. (MIRA 10:12)
(Electric engineering--Study and teaching)
(Borisov, N.M.)

PHASE I BOOK EXPLOITATION 1118

Ushakov, Mikhail Alekseyevich

Rukovodstvo k praktikumi po elektrotekhnike; posobiye dlya uchitelya (Electrical Laboratory Manual; Textbook for the Teacher) Moscow, Uchpedgiz, 1958. 165 p. 35,000 copies printed.

Ed.: Gobanov, A.A.; Tech. Eds.: Dzhatiyev, S.G. and Ponomareva, A.A.

PURPOSE: This book is intended for high school teachers as an aid in organizing and equipping an electrical laboratory.

COVERAGE: The book contains general instructions for organizing a high school electrical laboratory and for setting up the work program. The author describes the basic equipment required and outlines the experiments to be performed. No personalities are mentioned. There are no references.

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TABLE OF CONTENTS:

Electrical Laboratory Manual (Cont.) 1118

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Electrical Laboratory Manual (Cont.) 1118

AVAILABLE: Library of Congress (TK147.U8)

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USHAKOV, M.A.; ANDRONNIKOV, V.V.

Unsuccessful book ("Practical works on electric engineering in school" by K.A. Muromtsev. Reviewed by M.A. Ushakov, V.V. Andronnikov). Politekh. obuch. no.5:75-76 My '58. (MIRA 11:5)
(Electric engineering--Study and teaching)
(Muromtsev, K.A.)

USHAKOV, Mikhail Alekseyevich; ALEKSEYEVA, N.V., red.; SHVARTSBREYM, L.D., tekhn.red.

[Methodology of teaching electric engineering in secondary schools; teachers' manual] Metodika prepodavaniia elektrotekhniki v srednei shkole; posobie dlia uchitelia. Moskva, Gos.uchebno-pedagog.izd-vo M-va prosv.RSFSR, 1960. 266 p. (MIRA 14:1)

(Electric engineering--Study and teaching)

BLUDOV, Mikhail Ivanovich; MINCHENKOV, Yevgeniy Yakovlevich; PERYSHKIN, Aleksandr Vasil'yevich; USHAKOV, Mikhail Alekseyevich. Prinimal uchastiye KRAUKLIS, V.V., ROGACHEV, F.V., red.; [illegible], A.M., tekhn.red.

[Teaching physics; methods manual for teachers of secondary technical schools] Prepodavanie fiziki; metodicheskoe posobie dlia prepodavatelei srednikh spetsial'nykh uchebnykh zavedenii. Pod red. A.V.Peryshkina. Moskva, Vses.uchebno-pedagog.izd-vo Proftekhizdat, 1960. 317 p. (MIRA 13:5)

1. Chlen-korrespondent Akademii pedagogicheskikh nauk RSFSR (for Peryshkin).
(Physics--Study and teaching)

USHAKOV, M.A.

Noise calculation in television channels. Tekh.kino i telev. 4 no.10:57-60 O'60. (MIRA 13:10)

1. Moskovskiy energeticheskiy institut.
(Television--Interference)

USHAKOV, M.A. (Moskva)

Studying magnetic materials and magnetic circuits in electrical engineering. Fiz. v shkole 20 no.5:58-62 S-O '60. (MIRA 13:11)
(Electric engineering—Study and teaching)
(Electromagnetism)

S/187/62/000/006/003/003
D053/D112

9.4140

AUTHOR: Ushakov, M.A.

TITLE: Compensation of parasitic signals in tubes working in fast-electron conditions

PERIODICAL: Tekhnika kino i televideniya, no. 6, 1962, 31-39

TEXT: A new method of compensating parasitic signals in TV camera tubes with a high-velocity electron scanning beam, such as iconoscopes and image iconoscopes, is described. The parasitic signal in these types of tubes is generated due to the impossibility of creating a sufficiently negative potential on the scanned target surface. This causes a weakening, or even a total elimination, of the collecting field in the target-collector space and the creation of a non-uniform space charge near the target surface. The proposed method consists in the use of additional scanning of the target by the electron scanning beam during the horizontal flyback period, thus strengthen-

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ing the collecting field. The method was tested in the Moskovskiy televizionnyy tsentr (Moscow Television Station) in TV channels using the ЛИ-1 (LI-1) iconoscope and ЛИ -3 (LI-3) and ЛИ -102 (LI-102) image iconoscopes. The obtained results indicated that: (1) The uniformity of the lower equilibrium potential of the target is sufficient for securing a high-quality image of both static and dynamic objects. (2) Efficiency of the camera tube is increased. (3) The required changes in the blanking pulse units of existing image iconoscope camera tubes can be readily made by the technical servicing personnel. (4) An introduction of the described parasitic signal compensation method makes it possible to improve the quality of the transmitted image and to eliminate the labor-consuming manual compensation process. V.K. Sinadino assisted in the experimental portion of this work. There are 6 figures.

ASSOCIATION: Moskovskiy energeticheskiy institut (Moscow Power Engineering Institute).

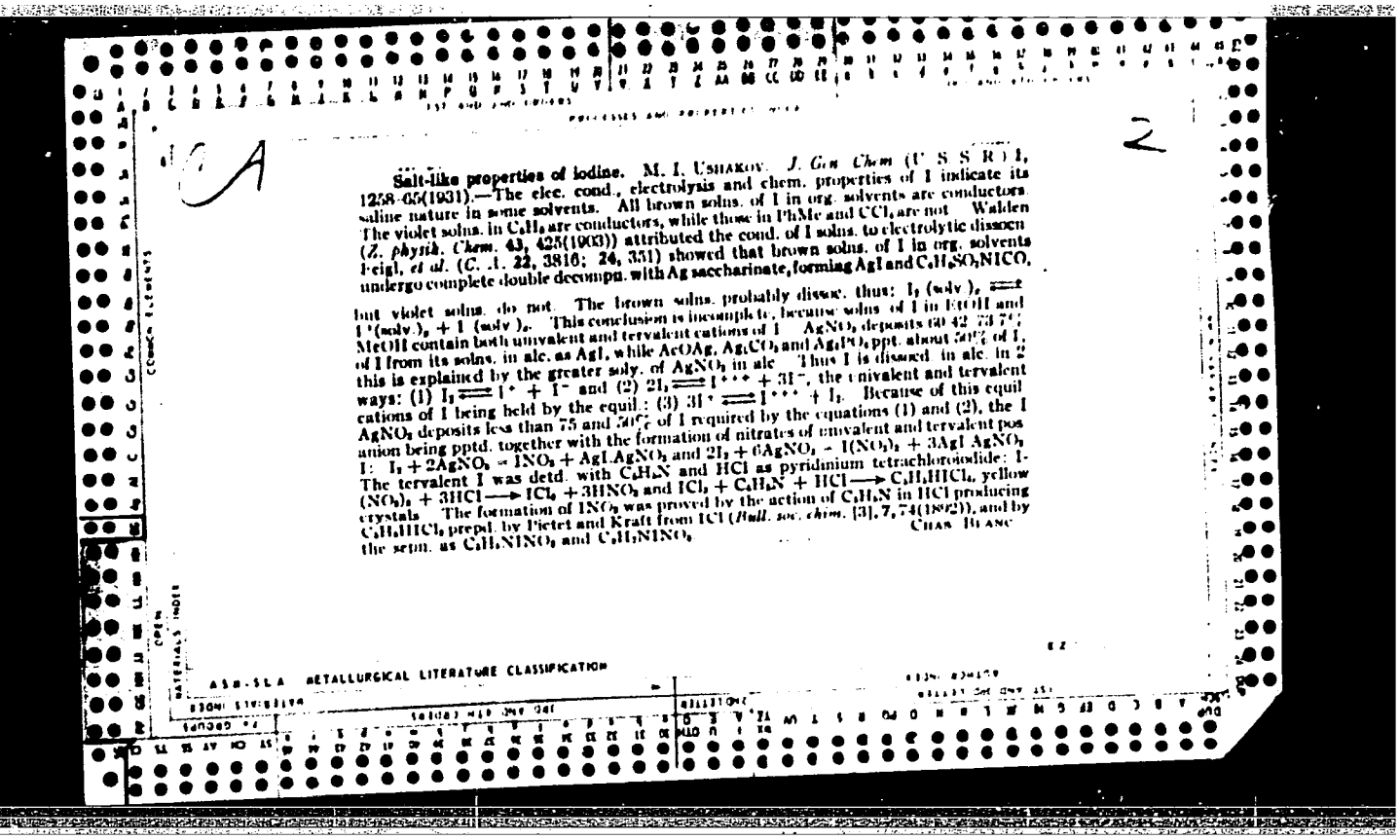
ANVEL'T, M.Yu. (Moskva); PUKHLYAKOV, Yu.Kh. (Moskva); USHAKOV, M.A. (Moskva)

New textbook on electrical engineering for students. Fiz. v shkole 23 no.4:49-52 Jl-Ag '63. (MIRA 17:1)

FILATOV, I.G. (Moskva); KRYLOV, D.G.; USHAKOV, M.A.; BRAVERMAN, E.M. (Moskva)

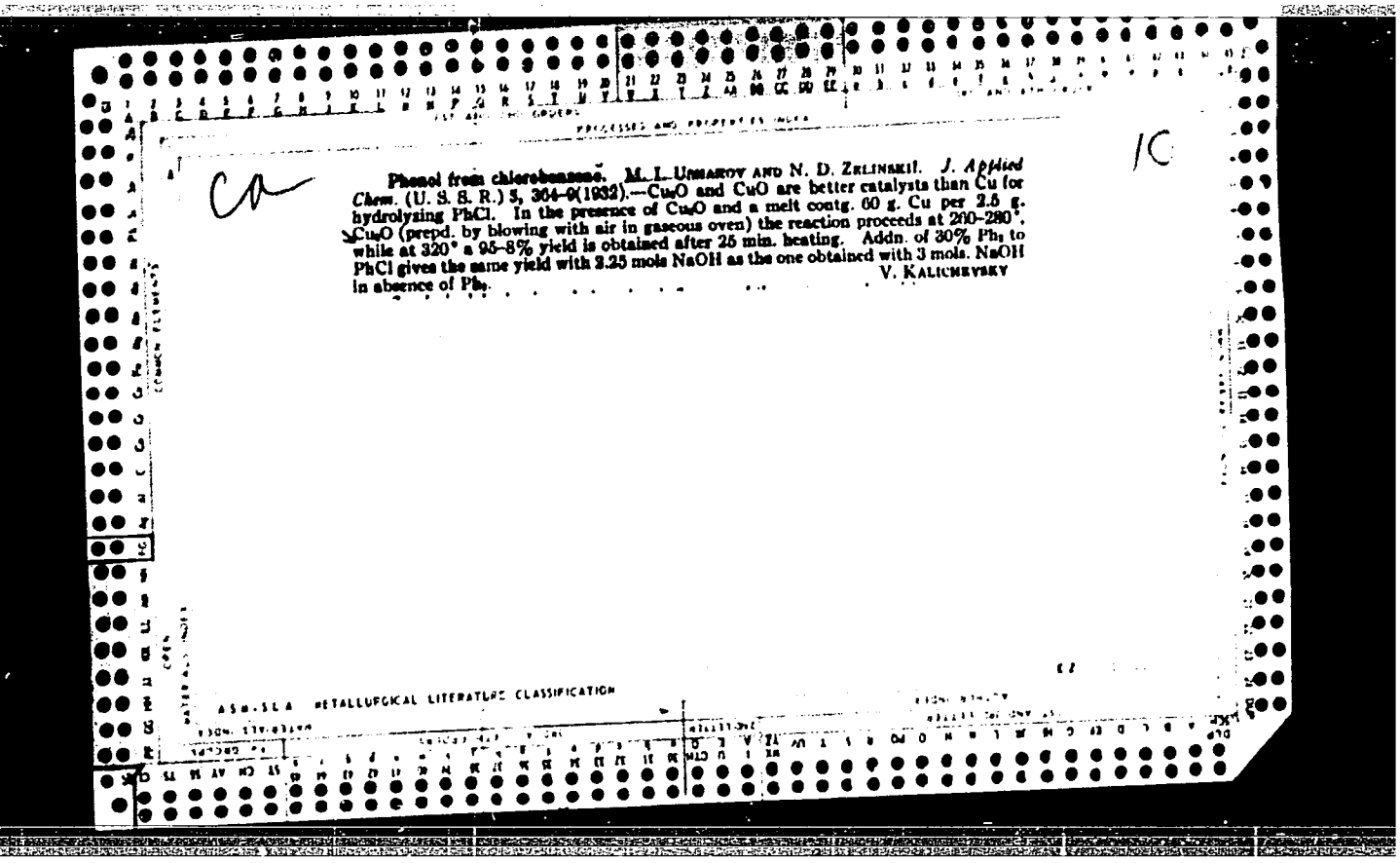
Criticism and bibliography. Fiz. v shkole 23 no.4:95-101 Jl-Ag '63. (MIRA 17:1)

1. Moskovskiy gosudarstvennyy pedagogicheskiy institut imeni V.I. Lenina (for Ushakov).



Salt-like properties of iodine. M. I. USHAKOV. *J. Gen. Chem.* (U. S. S. R.) 1, 1258-65(1931).—The elec. cond., electrolysis and chem. properties of I indicate its saline nature in some solvents. All brown solns. of I in org. solvents are conductors. The violet solns. in C_6H_6 are conductors, while those in PhMe and CCl_4 are not. Walden (*Z. physik. Chem.* 43, 425(1903)) attributed the cond. of I solns. to electrolytic dissocn. Feigl, *et al.* (*C. A.* 22, 3816; 26, 351) showed that brown solns. of I in org. solvents undergo complete double decompn. with Ag saccharinate, forming AgI and $C_6H_4SO_2NICO$, but violet solns. do not. The brown solns. probably dissoc. thus: I_2 (solv.) $\rightleftharpoons$ I^+(solv.)$_2$ + I^- (solv.)$_2$. This conclusion is incomplete, because solns. of I in EtOH and MeOH contain both univalent and tervalent cations of I. $AgNO_3$ deposits 60-42-73.7% of I from its solns. in alc. as AgI, while AcOAg, Ag_2CO_3 and Ag_3PO_4 ppt. about 50% of I; this is explained by the greater soly. of $AgNO_3$ in alc. Thus I is dissocd. in alc. in 2 ways: (1) $I_2 \rightleftharpoons I^+ + I^-$ and (2) $2I_2 \rightleftharpoons I^{+++} + 3I^-$, the univalent and tervalent cations of I being held by the equil.: (3) $3I^+ \rightleftharpoons I^{+++} + I_2$. Because of this equil. $AgNO_3$ deposits less than 75 and 50% of I required by the equations (1) and (2), the I anion being pptd. together with the formation of nitrates of univalent and tervalent pos. I: $I_2 + 2AgNO_3 = INO_3 + AgI.AgNO_3$ and $2I_2 + 6AgNO_3 = I(NO_3)_3 + 3AgI.AgNO_3$. The tervalent I was detd. with C_5H_5N and HCl as pyridinium tetrachloroiodide: $I(NO_3)_3 + 3HCl \longrightarrow ICl_3 + 3HNO_3$ and $ICl_3 + C_5H_5N + HCl \longrightarrow C_5H_5HICl_4$, yellow crystals. The formation of INO_3 was proved by the action of C_5H_5N in HCl producing $C_5H_5HICl_2$, prepd. by Pictet and Kraft from ICl (*Bull. soc. chim.* [3], 7, 74(1892)), and by the setn. as $C_5H_5NINO_3$ and $C_5H_5NINO_3$.

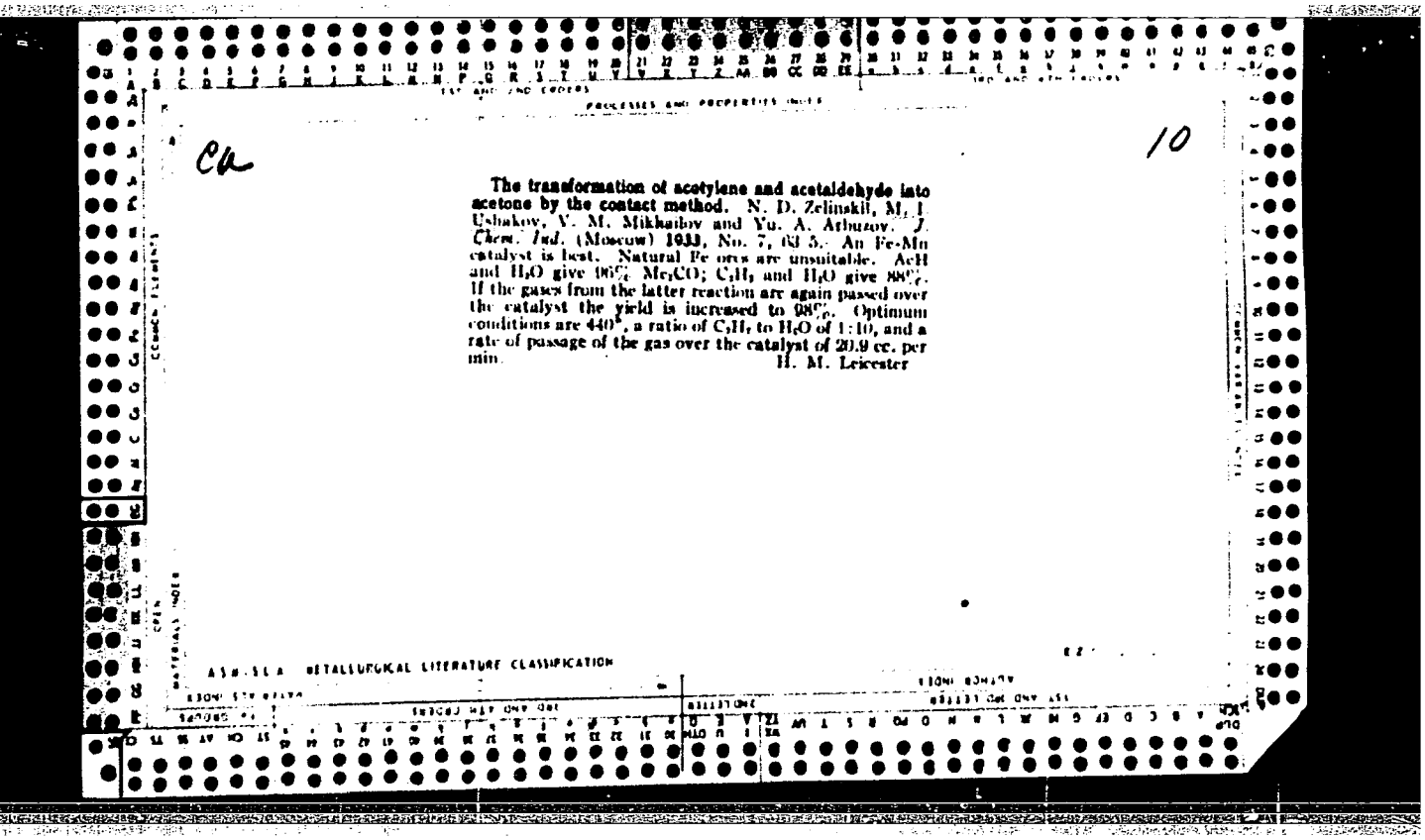
CHAS. BLANC



Phenol from chlorobenzene. M. I. Unkarov and N. D. Zelinskii. *J. Applied Chem.* (U. S. S. R.) 5, 304–6(1932).—Cu_2O and CuO are better catalysts than Cu for hydrolyzing PhCl. In the presence of Cu_2O and a melt contg. 60 g. Cu per 2.5 g. Cu_2O (prepd. by blowing with air in gaseous oven) the reaction proceeds at 200–280°, while at 320° a 95–8% yield is obtained after 25 min. heating. Addn. of 30% Ph_2 to PhCl gives the same yield with 2.25 mols NaOH as the one obtained with 3 mols. NaOH in absence of Ph_2.

V. Kalichevsky

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Ca

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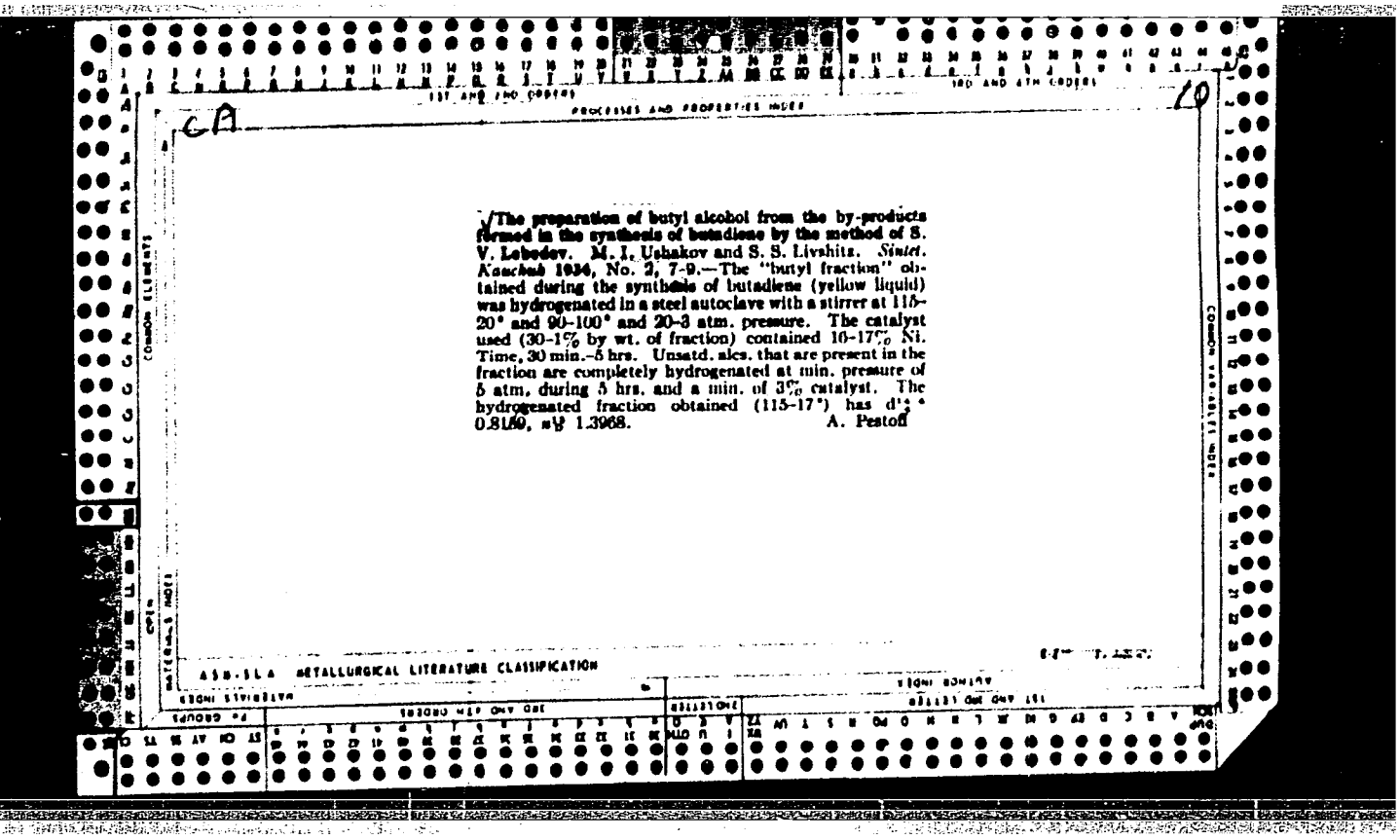
The transformation of acetylene and acetaldehyde into acetone by the contact method. N. D. Zelinskii, M. I. Ushakov, V. M. Mikhailov and Yu. A. Arbuzov. *J. Chem. Ind.* (Moscow) **1933**, No. 7, 83 5.- An Fe-Mn catalyst is best. Natural Fe ores are unsuitable. AcH and H_2O give 95% Me_2CO; C_2H_2 and H_2O give 88%. If the gases from the latter reaction are again passed over the catalyst the yield is increased to 98%. Optimum conditions are 440°, a ratio of C_2H_2 to H_2O of 1:10, and a rate of passage of the gas over the catalyst of 20.9 cc. per min.

H. M. Leicester

A.S.M.-S.L.A. METALLURGICAL LITERATURE CLASSIFICATION

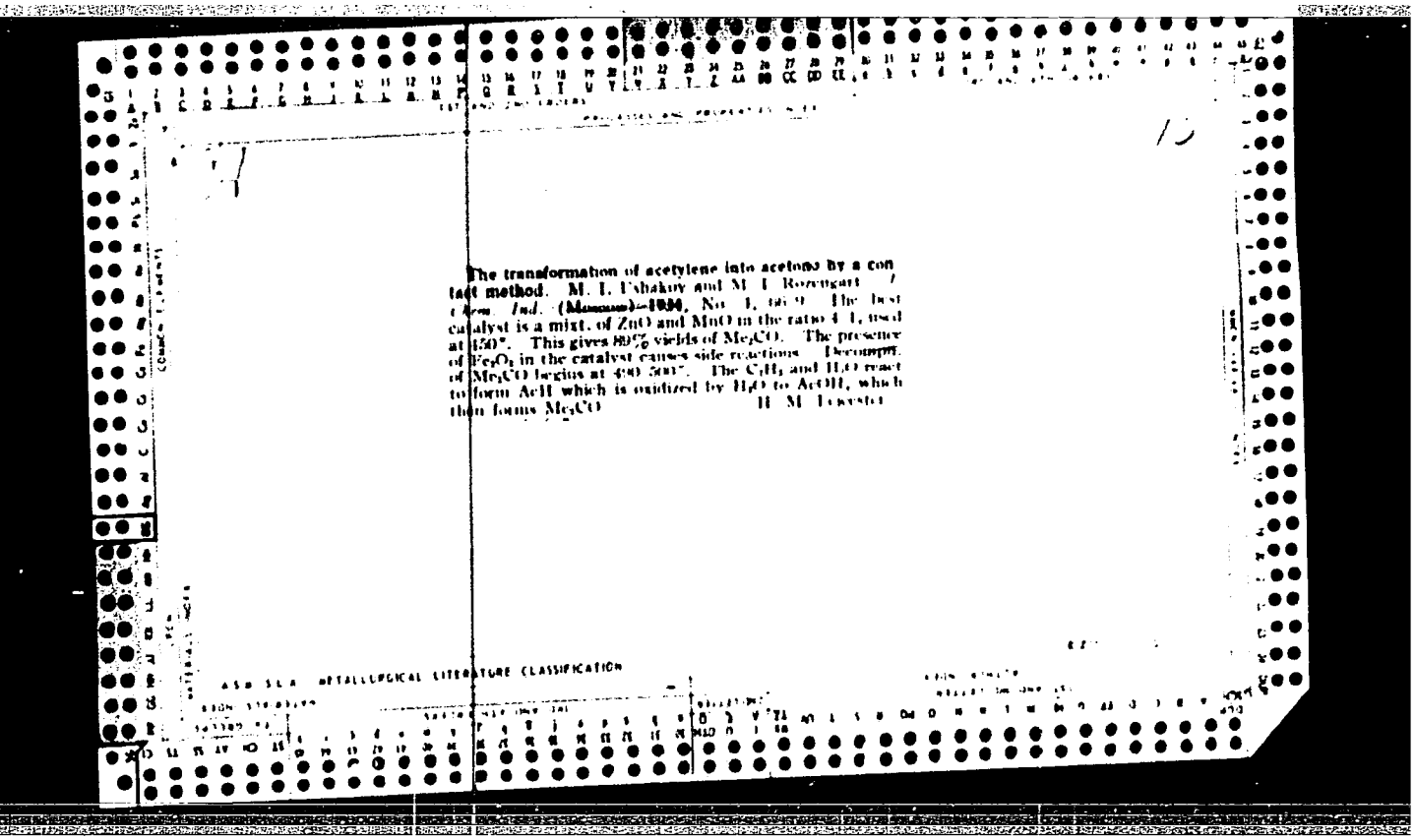


CA 10

PROCESSES AND PROPERTIES INDEX

√The preparation of butyl alcohol from the by-products formed in the synthesis of butadiene by the method of S. V. Lebedev. M. I. Ushakov and S. S. Livshits. *Sintet. Kauchuk* 1934, No. 2, 7-9.—The "butyl fraction" obtained during the synthesis of butadiene (yellow liquid) was hydrogenated in a steel autoclave with a stirrer at 115–20° and 90–100° and 20–3 atm. pressure. The catalyst used (30–1% by wt. of fraction) contained 10–17% Ni. Time, 30 min.–5 hrs. Unsatd. alcs. that are present in the fraction are completely hydrogenated at min. pressure of 5 atm. during 5 hrs. and a min. of 3% catalyst. The hydrogenated fraction obtained (115–17°) has d_4^{20} 0.8169, n_D^{20} 1.3968. A. Pestoff

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION



The transformation of acetylene into acetone by a contact method. M. I. Ushakov and M. I. Rozengart. *Khim. Ind.* (Moscow) 1934, No. 1, 46-9. The best catalyst is a mixt. of ZnO and MnO in the ratio 4:1, used at 450°. This gives 80% yields of Me_2CO. The presence of Fe_2O_3 in the catalyst causes side reactions. Decomposn. of Me_2CO begins at 480-500°. The C_2H_2 and H_2O react to form AcH which is oxidized by H_2O to AcOH, which then forms Me_2CO. H. M. Leicester

Properties of iodine nitrate. M. I. Lebakov. *J. Gen. Chem.* (U. S. S. R.) 4, 104 6(1934). Previously it was shown that I in EtOH or MeOH with $AgNO_3$ gives $I(NO_3)_3$ and some INO_3, and that $I(NO_3)_3$ with I is completely converted to INO_3, which with the HNO_3 salts of pyridine and quinoline gives, resp., $C_5H_5N.INO_3$ and $C_9H_7N.INO_3$. Attempts to obtain the 2 complex compds. with the free bases have failed. This is explained by a strong alcoholysis of INO_3 in EtOH or MeOH: INO_3 + MeOH ⇄ IOMe + HNO_3. The alcoholysis can be demonstrated by the interaction of INO_3 soln. with an unsatd. compd. By analogy with other compds. of a univalent pos. I (ICl, IOH), INO_3 and IOMe must be fixed by the double bond: -CH:CH- + INO_3 → -CHICHONO$_2$ and -CH:CH- + IOMe → -CHICHOMe. Actually I in MeOH produced with $(CH_2)_2$ 50% CH_2ICH_2OMe, b. 136.0° (b.$_{760}$ 137.8°, Karvonen, *Ber.* 42, 690), n_D^{20} 1.5118, and with cyclohexene 25% $CH_2(CH_2)_3CH(OMe)CHI$, b_{11} 105.7°. The ability of INO_3 in soln. to give the complexes with org. bases shows that the alcoholysis is reversible. INO_3 and the products of its alcoholysis as the derivs. of the univalent pos. I are capable of iodizing. Thus by the interaction of INO_3 soln. with p-$O_2NC_6H_4NH_2$ and PhOH were obtained, resp., 4,2-$H_2NC_6H_3(NO_2)I$, m. 107.8°, and p-IC_6H_4OH. Chas. Blanc

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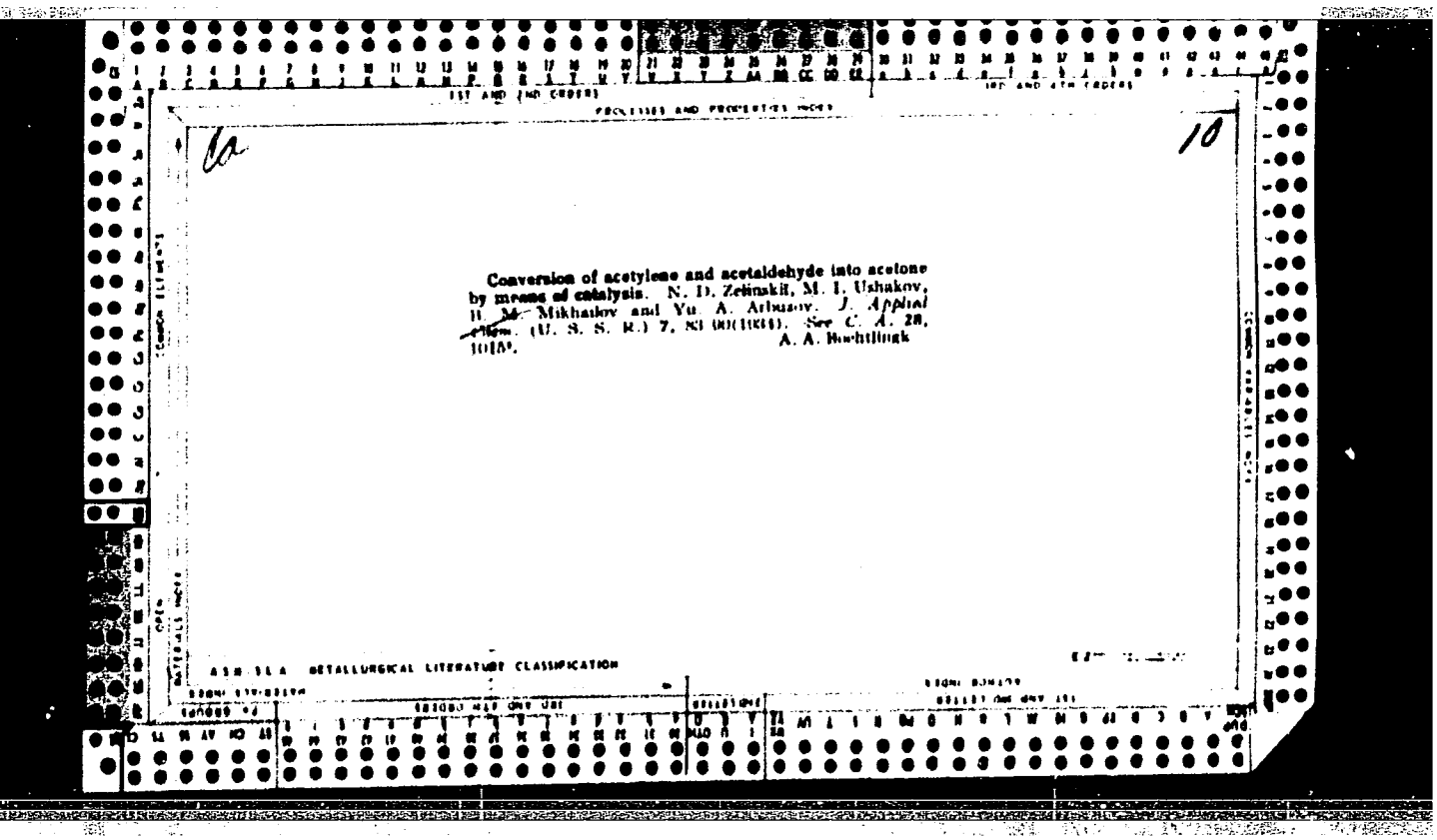

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Conversion of acetylene and acetaldehyde into acetone by means of catalysis. N. D. Zelinskiĭ, M. I. Ushakov, II. M. Mikhailov and Yu. A. Arbuzov. *J. Applied Chem.* (U. S. S. R.) 7, 81 (1934). See C. A. 28, 1018⁹.
A. A. Buchtiling

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