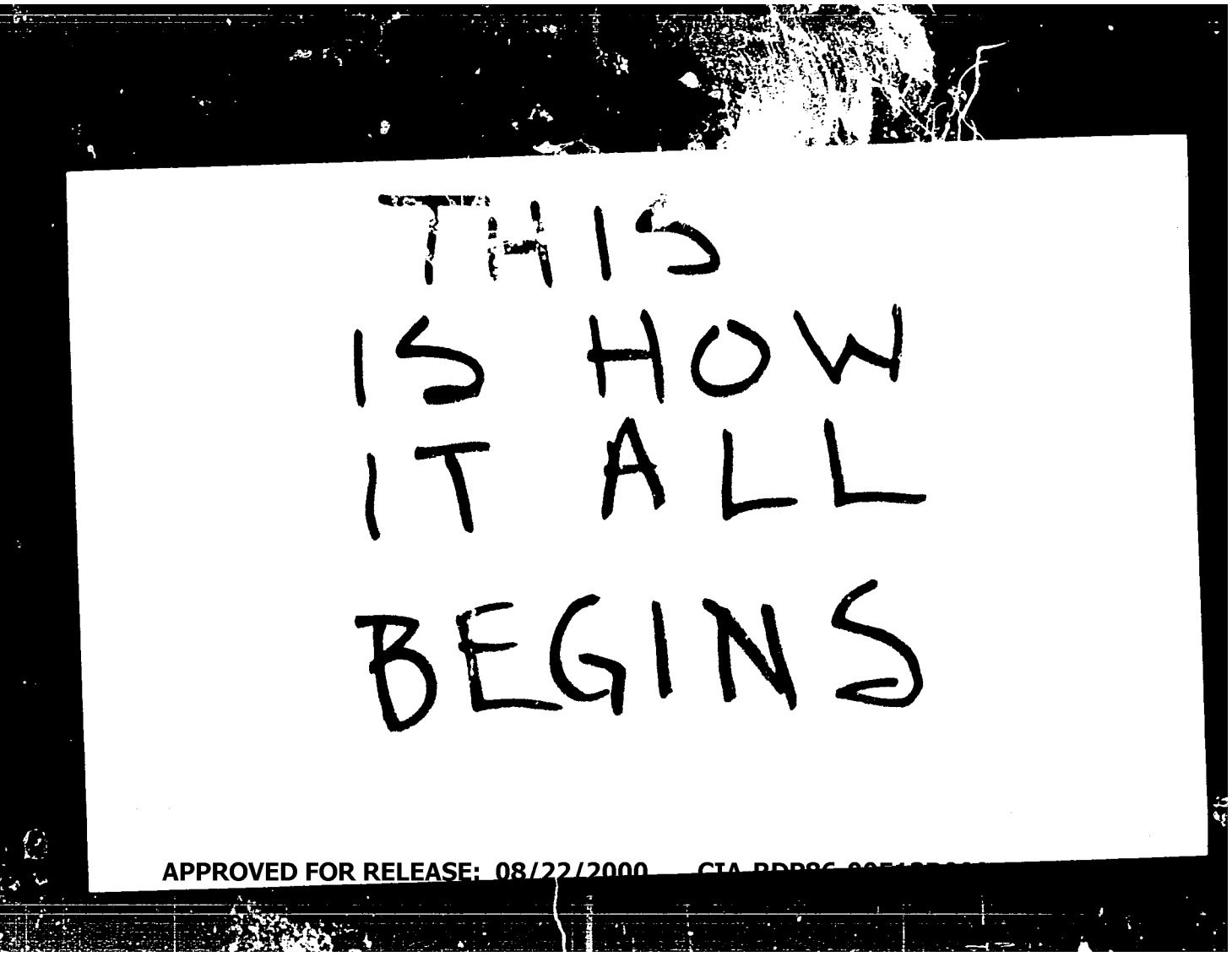
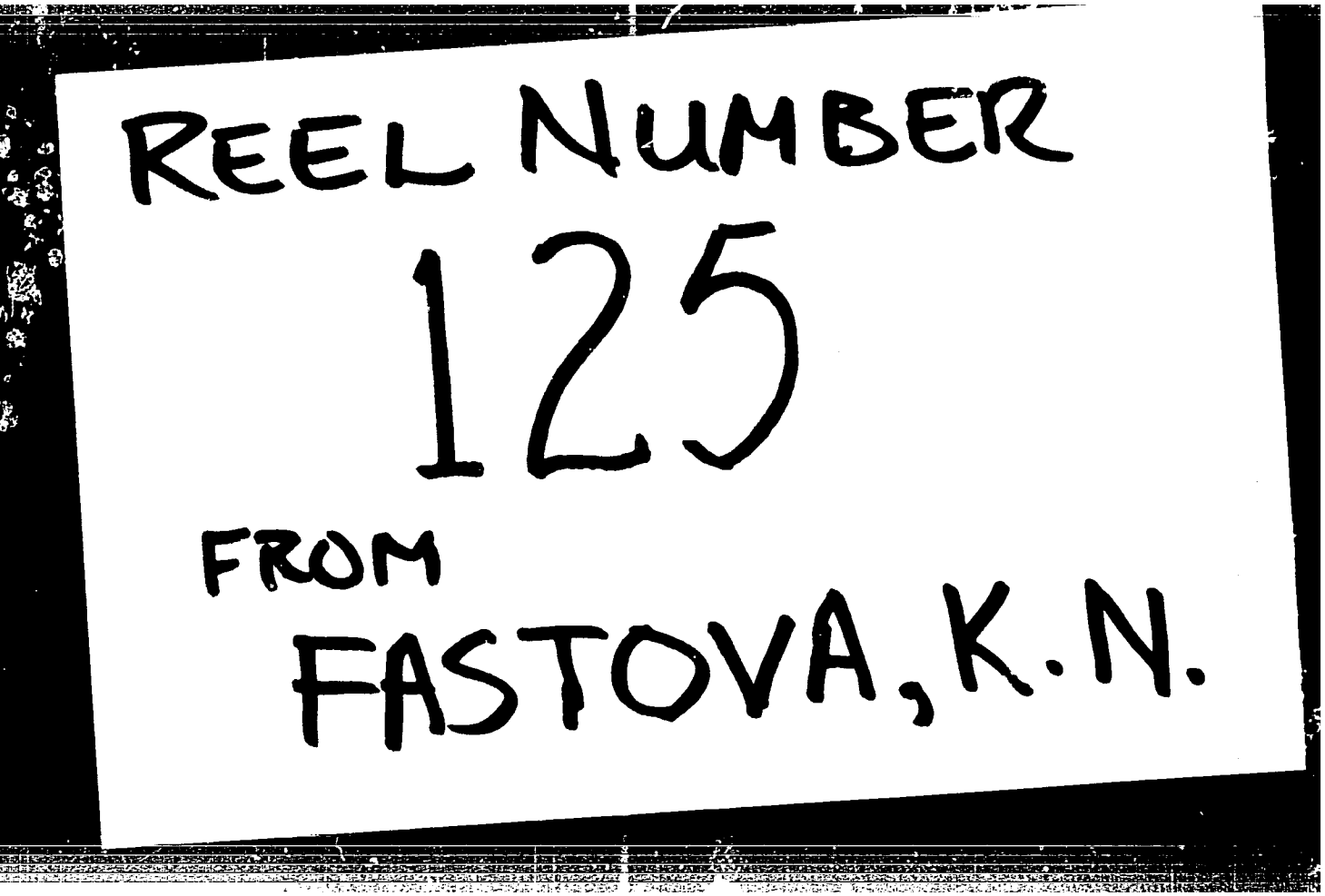
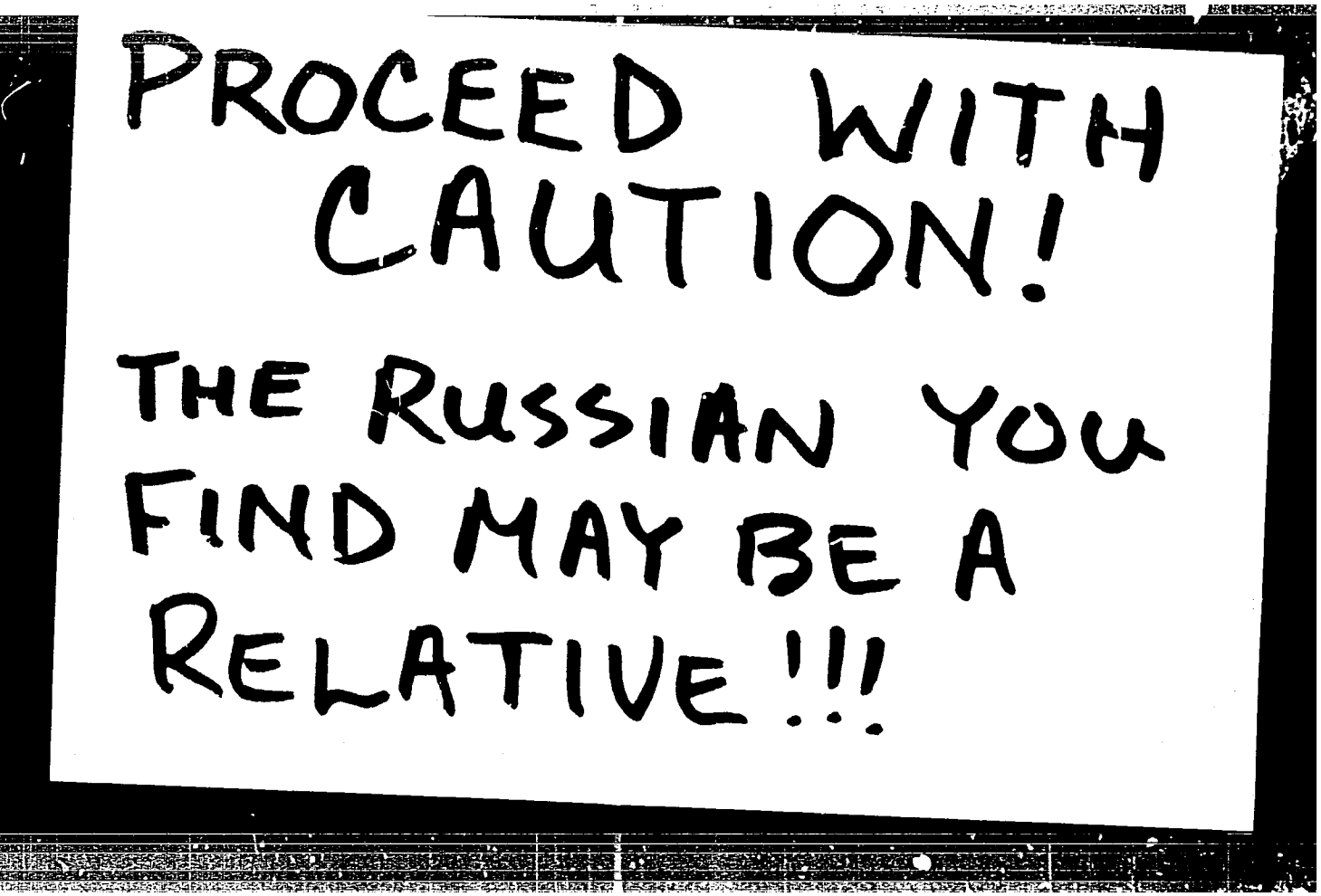






L 18225-63 EPA/EPF(c)/EWT(m)/BDS AEDC/AFFTC/ASD/APGC Paa-4/Pr-4 MN
ACCESSION NR: AT3001862 S/2909/62/000/006/C082/0093

72

AUTHORS: Voinov, A.I.; Fastova, K.N.; Zaytsev, V.A.; Chernov, N.P.

TITLE: Investigation of the effect of antidetonation additives on the processes that precede detonation in an engine

SOURCE: AN SSSR, Institut dvigateley. Trudy, no. 6, 1962, 82-93

TOPIC TAGS: detonation, knock, antidetonation, antiknock, Fe, Cu, pentacarbonyl, dicyclopentadiene, dicyclopentadienyl, pre-ignition, self-ignition, cold flame, mixture, rich, lean

ABSTRACT: This paper describes an experimental investigation of the effects of various metal-organic antidetonation (antiknock) additives on the various stages of the pre-combustion process in an engine intended to determine the distinctive characteristics of the mechanism of their action. The test equipment and methodology are described, and the processing and evaluation of the test data are detailed. It is established that, for any given level of antiknock effectiveness, the various metal-organic compounds tested affect the other stages of the pre-combustion reaction differently. (a) Tetraethyl (TE) and "ferrocene" or iron dicyclopentadienyl (FC) do not exert any noticeable effect on the inception of the cold-flame

Card 1/3

oxidation and, basically, act only on the development of the second stage of the pre-combustion process by shifting the boundary of the self-ignition of the hot combustion toward the side of higher temperatures and pressures. (b) Iron pentacarbonyl [$(FeCO_5)$ (hereinafter: IP)] and [$(C_8H_{16})_5Fe(CO)_5$]$_3$ (hereinafter: IIP) inhibit sharply the initial stages of the pre-combustion reaction, shift the boundary of the formation of the cold flame toward higher temperatures and pressures, and reduce it in size so that in rich mixtures there is no region of cold-flame oxidation at all. The entire character of the pre-combustion oxidation is altered: The hot-explosion region is shifted toward higher pressures and temperatures, with the minimums appearing in the temperature range of 760 to 800°K. (c) $C_{10}H_{16}N_2O_2Cu$ (hereinafter: III) appears to be comewhat intermediate between TE and IP, namely, it delays the beginning of the cold-flame oxidation, but to a smaller degree than IP, and gives the hot-detonation boundary a form that is similar to that afforded by IP (with a pressure minimum for rich mixtures); however, the detonation boundary lies much lower than with IP and, for lean mixtures, it may even be lower than for pure gasoline. Enrichment of the mixture with IP leaves the detonation boundary virtually unchanged, whereas with pure gasoline and all other additives it is displaced toward lower pressures. The peculiarities of a metal-organic antiknock additive are not determined by the presence in it of a specific metal. TE and FC contain different metals, but act almost identically on

L 18225-63
ACCESSION NR: AT3001862

the pre-ignition processes, whereas FC and carbonyl products of Fe (IP and [illegible]) act distinctly differently. It is concluded that the self-ignition tendency of a fuel-air mixture not only is not identical with its tendency toward detonation, but is not even single-valuedly related to it. Orig. art. has 6 figures.

ASSOCIATION: none

SUBMITTED:	00	DATE ACQ:	11Apr63	ENCL:	00
SUB CODE:	CH, PR, PH	NO REF SOV:	005	OTHER:	002

Card 3/3

FASTOVETS, F. N.

AID P - 721

Subject : USSR/Electricity

Card 1/1 Pub. 29 - 14/26

Author : Fastovets, F. N., Eng.

Title : A convenient placing of controlling push buttons

Periodical : Energetik, 9, 19-20, S 1954

Abstract : The author briefly describes cases in which the accumulation of conducting dust causes self-switching of electric motors. He submits for discussion methods of eliminating this possibility.

Institution : None

Submitted : No date

Fastovets, F.N., inzhener.

Group speed regulator for predetermined conditions. Leg.prom.15 no.2:44-47 F '55. (MIRA 8:4)
(Electric machinery) (Tanning)

FASTOVETS, L. D.

FASTOVETS, L. D.: "Anatomical principles for isometry and anisometry." Dnepropetrovsk State Medical Inst. Dnepropetrovsk, 1956. (DISSERTATION FOR THE DEGREE OF DOCTOR IN MEDICAL SCIENCE).

Knizhnaya letopis
No. 15, 1956. Moscow.

SHIMANSKIY, N.K., kand.biologicheskikh nauk; LOSHAK, I.F.; PASTOVETS, L.S.

Effect of fertilizers on the yield and oil content of sunflower seeds. Agrobiologiia no.6:849-853 N-D '61. (MIRA 15:2)

1. Vsesoyuznyy selektsionno-geneticheskiy institut, Odessa.
(Sunflower seed)

KHRIPIN, A.G., inzh.; BRAGINSKIY, M.A., inzh.; FASTOVETS, O.S., inzh.; KARPUKHIN, G.G., inzh.; TERESHCHENKO, F.P., inzh.; LIVYY, G.V., kand.tekhn.nauk

Drying of chrome leather under dynamic conditions. Izv.vys. ucheb.zav.; tekh.leg.prom. no.6:67-76 '59. (MIRA 13:5)

1. Ukrainskiy nauchno-issledovatel'skiy institut kozhevenno-obuvnoy promyshlennosti (for Khripin, Braginskiy, Fastovets, Livyy, Karpukhin). 2. Kiyevskiy kozhevennyy kombinat (for Tereshchenko).

(Leather--Drying)

KHRIPIN, A.G., inzh.; BRAGINSKIY, M.A., inzh.; FASTOVETS, O.S., inzh.; KARPUKHIN, G.G., inzh.; TERESHCHENKO, F.P., inzh.; LIVYY, G.V., kand. tekhn.nauk.

Drying of chrome leather in the dynamic state. Report No.2. Izv. vys.ucheb.zav.; tekh.leg.prom. no.2:62-70 '60. (MIRA 13:11)

1. Ukrainskiy nauchno-issledovatel'skiy institut kozhevenno-obuvnoy promyshlennosti (for Khripin, Braginskiy, Fastovets & Karpukhin). 2. Kiyevskiy kozhevennyy kombinat (for Tereshchenko). 3. Ukrainskiy nauchno-issledovatel'skiy institut kozhevennoy promyshlennosti (for Livyy).

(Leather--Drying)

VOROB'YEVA, M.D., tekhnik; DUSHIN, B.M., inzh.; FASTOVETS, O.S., inzh.

New developments in the processing of split leather. Kozh.-obuv. prom. 2 no. 12:32-33 D '60. (MIRA 14:1)
(Leather)

LIVYY, G.V., kand.tekhn.nauk; [illegible]; BRAGINSKIY, M.A., inzh.; KARPUZHIN, G.G., inzh.; [illegible], inzh.; ABRAMSKAYA, L.B., inzh.; BEREZOVSKAYA, M.G., inzh.; [illegible], F.P., inzh.; Prinimali uchastiye: OLEYNIK, N.N.; ZHUMBA, T.T.; GORBUNOVSKAYA, M.A.; SHAVZIN, A.I.; GERTSVOL'F, B.S.

Unit for dynamic drying of [illegible]. Report No.1. Nauch.-issl.trudy Ukr NIIKP no.[illegible]

(MIRA 18:2)

LIVYY, G.V., kand. tekhn. nauk; KAZARINA, N.N., inzh.; GIL'MAN, B.A., inzh.; FASTOVETS, O.S., inzh.; MOROZYUK, N.I., inzh.; LITVINOV, Sh.I., inzh.; SAGAYDACHNYY, V.G., inzh.; BALAYEV, Yu.V., inzh.; FITSA, A.S., inzh.

Manufacture of leather for lining and accessories from the face split of DOL type pigskins. Kozh.-obuv. prom. 7 no.6: 29-32 Je '65. (MIRA 18:8)

FASTOVETS, R.D.

Buried suture of the bile duct following choledochotomy. Sov.med. 28 no.7:63-68 Jl '65. (MIRA 18:8)

1. Kafedra obshchey khirurgii (zav. - dotsent N.V.Gerasimov) Saratovskogo meditsinskogo instituta.

FASTOVSKAYA, F. I.

"Characteristics of the Epidemiology of Malaria in Belorussian SSR During the War and in the First Postwar Years." Sub 29 Mar 51, Acad Med Sci USSR.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55.

FASTOVSKAYA, E.I.

Scientific session of the Department of Hygiene, Microbiology and Epidemiology of the Academy of Medical Sciences of the USSR on sanitary and antiepidemic protection in the construction area of the Main Turkmen Canal. Med.parazit.i parazit.bol. no.2:186-189 My-Ap '53. (MLRA 6:6)
(Main Turkmen Canal Region--Public health)

An account of a meeting at Ashkhabad on 17-20 Nov 52, attended by 594 persons. The following subjects were discussed: malaria, dysentery, V.D.Timakov, the effects of a hot climate, the danger of the introduction and spread of papatacci fever at the site of construction (Prof. P.A.Petrishcheva), the advisability and possible dangers of carrying out prophylactic inoculations against leishmaniasis, measures for the control of mosquitoes, ixodan ticks and fleas, etc.

257T47

1. FASTOVSKAYA, E. I.

2. USSR (600)

4. Main Turkmen Canal Region - Malarial Fever

7. Role of the medical service personnel in the control of malaria on the Main Turkmen Canal, Fel'd. i akush., no. 4, 1953. (p. 7 g)

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

LYSENKO, A.Ya.; GOZODOVA, G.Ye.,; FASTOVSKAYA, E.I.; ZAL'NOVA, N.S.: CHURNOSOVA, A.A.

Seeking methods for radical chemical prevention and cure without recurrence of tertian malaria with short and long incubation periods. Report no.6: Results of an investigation of tolerance to the new antimalarial drug quinocid . Med. paraz. i paraz. bol. 24 no.2:147-154 Ap-Je '55. (MLRA 8:10)

1. Iz sektora eksperimental'noy parazitologii Instituta malyarii meditsinskoy parazitologii i gel'mintologii Ministerstva zdravookhraneniya SSSR (dir. instituta-Prof. P.G.Serpiyev, zav.sektorom prof. V.P.Pod"yapol'skaya) i Stalinabadskoy gorodskoy sanitrano-epidemiologicheskoy stantsii (glavnyy vrach stantsii Kh.V.Vakhidov)

(QUINOLINES, effects,
aminoquinoline deriv.tolerance)

FASTOVSKAYA, E.I.; LYSENKO, A.Ya.; SHCHELKUNOVA, F.N.

Investigations of methods of radical chemoprophylaxis and of complete cure of tertian malaria with short and long incubation periods. Report no.7: Results of using quinocide in the treatment of tertian malaria with various possibilities of reinfection. Med.paraz. i paraz. bol. 25 no.3:222-226 Jl-S '56. (MLRA 9:10)

1. Iz otdeleniya epidemiologii malyarii i organizatsii bor'by s malyariey i drugimi parazitarnymi zabolevaniyami Instituta malyarii, meditsinskoy parazitologii i gel'mintologii Ministerstva zdravookhraneniya SSSR (dir. inst. prof. P.G.Sergiyev, zav. otdelom - dotsent M.G.Rashina)

(ANTIMALARIAIS, therapeutic use,
quinocide in tertian malaria (Rus))

FASTOVSKAYA, E.I.

Three years of work of the epidemic control squad of the Ministry of Public Health of the U.S.S.R. in eliminating malaria in Tajikistan. Med.paraz. i paraz.bol. 26 no.1:121-122 Ja-F '57. (MLRA 10:6)

(TAJIKISTAN--MALARIA--PREVENTION)

FASTOVSKAYA, E.I.; L'VOV, D.K.; LOPATIN, A.N.

Epidemiological data on tick-borne encephalitis in the construction zone of the Krasnoyarsk Hydroelectric Power Station. Med.parazit. i paraz.bol. 27 no.1:14-20 Ja-F '58. (MIRA 11:4)

1. Iz otdeleniya epidemiologii i organizatsii bor'by s malyariyey i drugimi parazitarnymi zabolevaniyami Instituta malyarii meditsinskoy parazitologii i gel'mintologii Ministerstva zdravookhraneniya SSSR (dir. instituta - prof. P.G.Sergiyev, zav. otdeleniyem M.G.Rashina)
(ENCEPHALITIS, epidemiology
tick-borne encephalitis in construction zone, statist. (Rus))

FASTOVSKAYA, E. I., CHURNOSOVA, A. A., SERGIYEV, P. G., STAVROSKAYAY, V. I. LYSENKO, A. L., BRAUSE, M..B., GLADKIKH, V. F., SHUKOVA, T. A., GAZODOVA, G. YE., ZAL'NOVA, N. S., MASHLOVSKIY, SH. D.

"Quinocide and the prospects of acceleration of the malaria eradication rate in the USSR."

report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists and Infectionists, 1959.

LYSENKO, A.Ya.; KALMYKOV, Ye.S.; PASTOVSKAYA, E.I.; BERDYYEV, Kh.B.; IVANENKO, A.K.; LYAPIN, P.D.

Principal results of three years' work for the extermination of malaria as a mass disease in the Tajik S.S.R. Sbor. rab. po mal. i gel'min. no.2:5-19 '59. (MIRA 15:3)
(TAJIKISTAN--MALARIA)

FASTOVSKAYA, E.I.; IVANENKO, A.K.

Comparative evaluation of various methods for the detection of persons sick with malaria in Tajikistan. Sbor. rab. po mal. i gel'min. no.2:21-24 '59. (MIRA 15:3)
(TAJIKISTAN--MALARIA)
(MEDICAL SCREENING)

FASTOVSKAYA, E.I.

Results of three years' work in clearing up malaria centers in the mountain-river zone of the Gissar Range Region. Sbor. rab. po mal. i gel'min. no.2:25-31 '59. (MIRA 15:3)
(GISSAR RANGE REGION--MALARIA)

FASTOVSKAYA, E.I.; LULIKOVA, M.Ya.

Results of the restriction of DDT spraying to villages in malaria control within the border region of southern Tajikistan (Kirovabad District). Sbor. rab. po mal. i gel'min. no.2:49-56 '59. (MIRA 15:3)

(KIROVABAD DISTRICT--MALARIA)
(DDT (INSECTICIDE))

RABENKO, L.V.; BUYANOVA, O.F.; KELLINA, O.I.; LEYKINA, Ye.S.; RAZUMOVA, Ye.P.; FASTOVSKAYA, E.I.; CHALAYA, L.Ye.; SHIPITSINA, N.K.

All-Union Conference on the Control of Parasitic Diseases. Med.paraz. i paraz.bol. 28 no.3:364-373 My-Je '59. (MIRA 12:9)

(PARASITOLOGY--CONGRESSES)

FASTOVSKAYA, E. I.

Method for an epidemiological study of pseudofocal tick-borne encephalitis. Med. paraz. i paraz. bol. no.4:401-406 '61. (MIRA 14:12)

1. Iz otdela epidemiologii Instituta meditsinskoy parazitologii i tropicheskoy meditsiny imeni Ye. I. Martsinovskogo Ministerstva zdravookhraneniya SSSR (dir. - instituta - prof. P. G. Sergiyev, zav. otdelom M. G. Rashina)

(ENCEPHALITIS)

FASTOVSKAYA, E.I. (Moskva)

Prevention of tick-borne encephalitis. Fel'd. i akush. 26 no.9: 42-45 S '61. (MIRA 14:10)
(ENCEPHALITIS) (TICKS AS CARRIERS OF DISEASE)

FASTOVSKAYA, E.I.; NIKIFOROV, L.P.; NAUMOV, R.L.

Influence of the terrain on tick-borne encephalitis morbidity in Krasnoyarsk Territory. Med. paraz. i paraz. bol. 32 no.3: 280-283 My-Je'63 (MIRA 17:2)

1. Iz epidemiologicheskogo otdela (zav. - prof. N.N. Dukhanina) i entomologicheskogo otdela (ispolnyayushchiy obyazannosti zaveduyushchego - prof. V.P. Derbeneva-Ukhova) Instituta meditsinskoy parazitologii i tropicheskoy meditsiny imeni Ye.I. Martsinovskogo (dir. - prof. P.G. Sergiyev) Ministerstva zdravookhraneniya SSSR.

BULANZHE, I.N., kand.khimicheskikh nauk,dotsent; PRINIMALA UCHASTIYE: Fastovskaya, P.I.

Studying the properties of phosphate and sulfide films obtained with the method of cold parkerizing and sulfidization of the surfaces of steel parts. Izv.vys.ucheb.zav.; tekh.leg.prom. no.1: 127-133 '62. (MIRA 15:2)

1. Kiyevskiy tekhnologicheskiy institut legkoy promyshlennosti. Rekomendovana kafedroy obshchey i analiticheskoy khimii.
(Protective coatings—Testing)

DUBOVYY, Ye. D., prof.; OKS, A. A., prof; BUCHINSKAYA, M. P.; VORONENKO, T. V.; DEMIDAS, V. V.; FASTOVSKAYA, R. M. (Odessa)

Treatment of thyrotoxicosis with radioactive iodine. Probl. endok. i gorm. no.6:50-56 '61. (MIRA 14:12)

1. Iz kafedry rentgenologii i radiologii (zav. - prof. Ye. D. Dubovyy) i kafedry fakul'tetskoy u gospital'noy terapii (zav. - prof. A. A. Oks) Odesskogo meditsinskogo instituta (dir. - zasluzhennyy deyatel' nauki prof. I. Ya. Deyneka)

(IODINE--ISOTOPES)
(THYROID GLAND--DISEASES)

SKVORTSOVA, L.I.; KRAKHMAL'NIKOVA, G.Kh.; FASTOVSKAYA, R.M.

Shereshevskii's syndrome observed in patients with toxoplasmosis. Probl. endok. i gorm. 10 no.6:60-61 N-D '64. (MIRA 18:7)

1. Kafedra infektsionnykh bolezney (zav. - prof. L.K.Korovitskiy), kafedra akusherstva i ginekologii lechebnogo fakul'teta (zav. - prof. A.I.Malinin), kafedra gospital'noy terapii pediatricheskogo i stomatologicheskogo fakul'tetov (zav. - prof. A.A.Ors) Odesskogo meditsinskogo instituta imeni Pirogova i 1-ya Odesskaya gorodskaya infektsionnaya bol'nitsa (glavnyy vrach L.T. Zhidovlenko).

FASTYKOVSKAYA, Ye.D.

Mammography in the diagnosis of breast cancer. Vop.onk. 7 no.12:47-51 '61. (MIRA 15:1)

1. Iz kafedry rentgenologii i radiologii (zav. - prof. A.I. Dombrovskiy). Adres avtora: Novo-Kuznetsk, Kemerovskoy obl., Gosudarstvennyy institut dlya usovershenstvovaniya vrachey.
(BREAST--CANCER) (BREAST--RADIOGRAPHY)

NIKIFOROV, L.P.; FASTOVSKAYA, Y.I.; LVOV, D.K.; BEKLEMISHEV, V.N. [deceased]

Quantitative indicators in the epizootology and epidemiology of tick-borne encephalitis. J. hyg. epidem. (Praha) 8 no.2:221-228 '64.

1. Martsinovsky Institute of Medical Parasitology and Tropical Medicine, Ministry of Health of the U.S.S.R., Moscow.

VAKSMAN, I.; KASTOVSKIY, A.I.

Timbering jacket. Mast.ugl. 5 no.5:23 My '56. (MLRA 9:8)
(Kuznetsk Basin—Mine timbering)

FASTOVSKIY, A.I., inzh.; TERESHCHENKO, P.M., inzh.

Using embedded anchor bolts. Shakht.stroi. no.10:26-27 O '57.
(MIRA 10:12)
(Kuznetsk Basin--Mine roof bolting)

FASTOVSKIY, A.I.

In the Technical and Economic Council. Tekh.-ekon.biul. no.1/2: 56-58 Ja-F '59. (MIRA 12:4)
(Kuznetsk Basin--Economic councils)

FASTOVSKY, A.S.

25(5) PHASE I BOOK EXPLOITATION SOV/2581

Veselkov, P. S., Yu. A. Gaydukov, S. Ye. Kamaltsev, Chief V. G. Kontorovich, O. A. Pishchulin, A.M. Savkin, A.S. Tolstykh, and A.S. Pastovskiy

Ratsionalnaya rabota mashinostroitel'nykh zavodov (Uniform Work of Machine-Manufacturing Plants) Moscow, Mashgiz, 1958. 171 p. Errata slip inserted. 4,000 copies printed.

Reviewer: A. K. Bondarenko, Engineer; Ed.: V. A. Letenko, Candidate of Economic Sciences; Tech. Ed.: V. D. El'kind; Managing Ed. for Literature on the Economics and Organization of Production (Mashgiz): T. D. Sakmaganskiy.

PURPOSE: This book is intended for engineering and technical personnel in machine-manufacturing plants

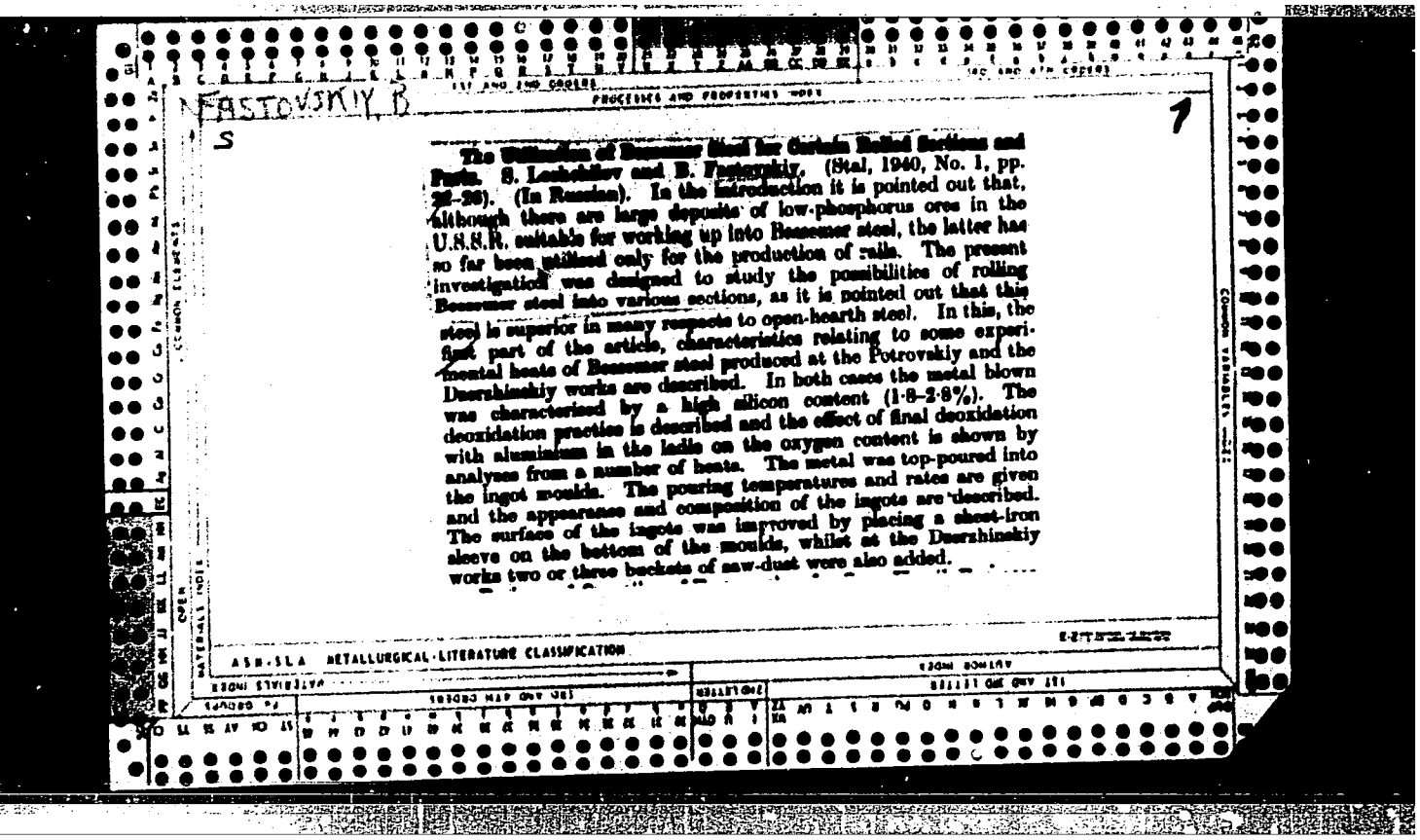
COVERAGE: This book discusses the national economic importance of uniform operation of plants according to a schedule, and points out planning problems that should be solved to permit work uniformity in manufacturing establishments. It defines organizational and technical prerequisites for uniform work, shows the influence of financial agencies of establishments on production uniformity, and describes methods of assuring work uniformity. The last two chapters are devoted to work practices at the Moscow "Elektrosnabsbytkhik" Plant and the Pervyy Moskovskiy chasovoy zavod (First Moscow Watch and Clock Plant). No personalities are mentioned. There are no references.

AVAILABLE: Library of Congress JG/ec 11-6-59

Card 5/5

FASTOVSKIY, A.S., inzh.

Improvement of methods for evaluating labor productivity. Vest. elektroprom. 32 no.10:51-54 O '61. (MIRA 14:9)
(Electric industries—Labor productivity)



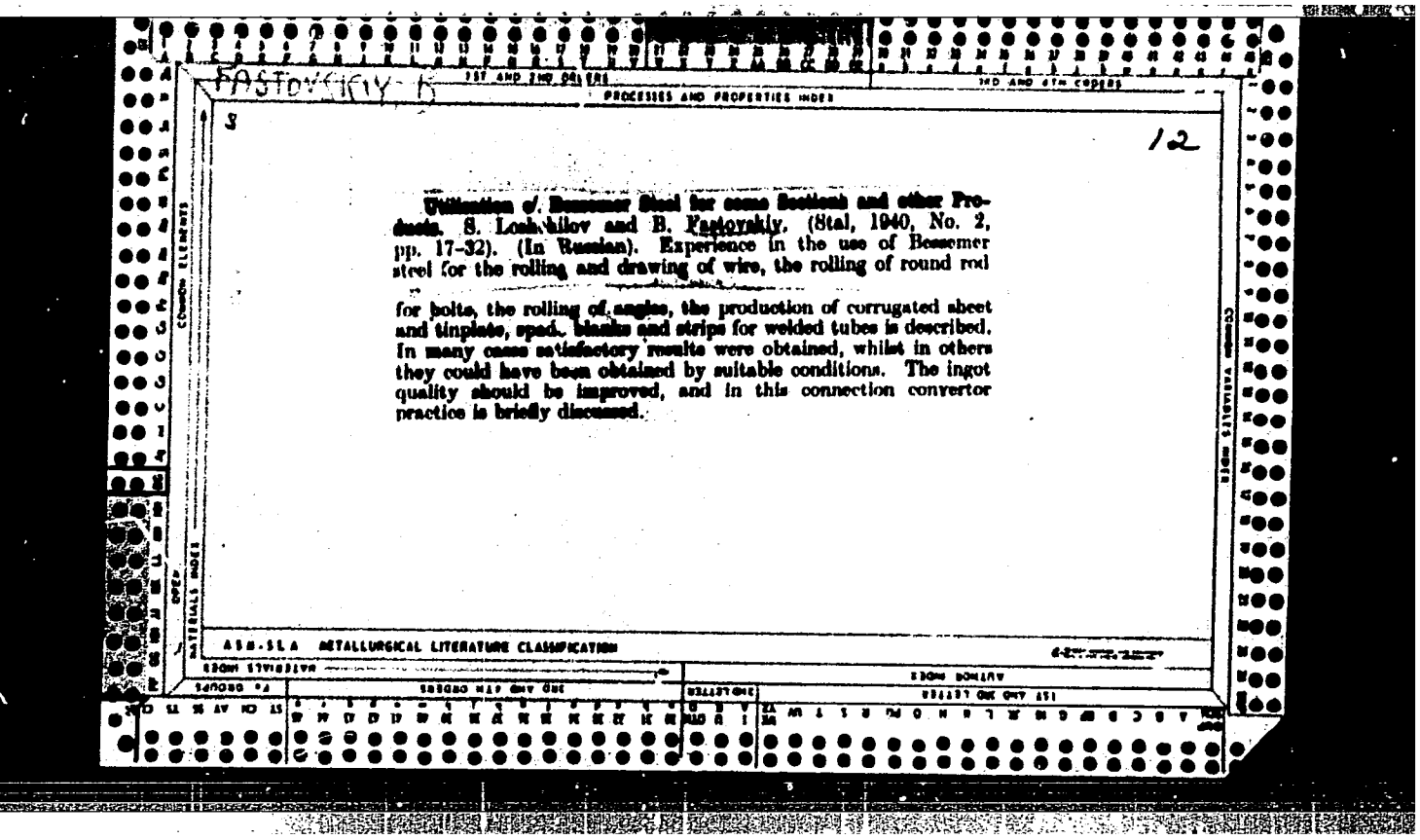
FASTOVSKIY, B

S

1

The Utilisation of Bessemer Steel for Certain Rolled Sections and Parts. S. Loshchilov and B. Fastovskiy. (Stal, 1940, No. 1, pp. 22–26). (In Russian). In the introduction it is pointed out that, although there are large deposits of low-phosphorus ores in the U.S.S.R. suitable for working up into Bessemer steel, the latter has so far been utilised only for the production of rails. The present investigation was designed to study the possibilities of rolling Bessemer steel into various sections, as it is pointed out that this steel is superior in many respects to open-hearth steel. In this, the first part of the article, characteristics relating to some experimental heats of Bessemer steel produced at the Potrovskiy and the Dzerzhinskiy works are described. In both cases the metal blown was characterised by a high silicon content (1·8–2·8%). The deoxidation practice is described and the effect of final deoxidation with aluminium in the ladle on the oxygen content is shown by analyses from a number of heats. The metal was top-poured into the ingot moulds. The pouring temperatures and rates are given and the appearance and composition of the ingots are described. The surface of the ingots was improved by placing a sheet-iron sleeve on the bottom of the moulds, whilst at the Dzerzhinskiy works two or three buckets of saw-dust were also added.

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



PROCESSES AND PROPERTIES INDEX

12

Utilization of Bessemer Steel for some Sections and other Products. S. Loshchilov and B. Pastovskiy. (Stal, 1940, No. 2, pp. 17-32). (In Russian). Experience in the use of Bessemer steel for the rolling and drawing of wire, the rolling of round rod for bolts, the rolling of angles, the production of corrugated sheet and tinplate, spad., blanks and strips for welded tubes is described. In many cases satisfactory results were obtained, whilst in others they could have been obtained by suitable conditions. The ingot quality should be improved, and in this connection convertor practice is briefly discussed.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

FASTOVSKIY, B.G., kandidat tekhnicheskikh nauk.

Economical rolled shapes for industry and constructions. Stal' 16 no.3: 224-229 Mr '56. (MLRA 9:7)

1.TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii.
(Rolling (Metalwork)) (Steel, Structural)

CHIZHIKOV, Yuriy Mikhaylovich, PASTOVSKIY, B.G., red.; GOLYATKINA, A.G., red.izd-va.; BEKKER, O.G., tekhn.red.

[Rolling mill practice] Prokatnoe proizvodstvo. Izd. 2., perer. i dop. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1958. 612 p. (MIRA 11:9)
(Rolling mills)

PANASENKO, Fedor Lavrent'yevich; FASTOVSKIY, B.G., red.; GORDON, L.M., red.izd-va; ISLENT'YEVA, P.G., tekhn.red.

[Rolling and heat treatment of thick sheets] Prokatka i termicheskaia obrabotka tolstykh listov. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1959. 152 p. (MIRA 12:2)

(Rolling (Metalwork)) (Sheet steel--Heat treatment)

FASTOVSKIY, B.G.

Economical shapes for rolled products. Metallurg 5 no.2: 23-25 F '60. (MIRA 13:5)

1. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii.
(Rolling(Metalwork))

FASTOVSKIY, B.G., kand.tekhn.nauk

Specialization of rolling mills. Stal' 21 no. 1:79-81 Ja '61.
(MIRA 14:1)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii.
(Rolling mills)

FASTOVSKIY, B.G.; FUNDE, A.N.

Manufacture and use of economical hot-rolled sections.
Metallurg 7 no.8:19-23 Ag '62. (MIRA 15:9)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii.
(Rolling (Metalwork))

FASTOVSKIY, B.G., kand.tekhn.nauk

Prospects for the production of hot-rolled economical sections. Stal' 23 no.5:435-438 My '63. (MIRA 16:5)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii.

(Rolling (Metalwork))

FASTOVSKII, I.

MEDVEDEV, Yul.; FASTOVSKIY, I.

In the world of wild radiowaves. IUn. tekh. no.4:33-37 Ap '57.
(Radio--Interference) (MLRA 10:6)

FASTOVSKIY, Izya Abramovich; LYUSTIBERG, V.F., inzh., ved. red.; EL'KIN, A.Yu., inzh., red.; PONOMAREV, V.A., tekhn. red.

[AP-28 interference analyzer]Analizator pomekh AP-28. Moskva, Filial Vses. in-ta nauchn. i tekhn. informatsii, 1958. 21 p. (Peredovoi nauchno-tekhnicheskii i proizvodstvennyi opyt. Tema 36. No.P-58-101/14) (MIRA 16:3)
(Radio measurements) (Interferometer)

FASTOVSKIY, Izya Abramovich; FURMANOV, Il'ya Mikhaylovich; SHTEYNBOK, G.Yu., inzh., ved. red.; SOSNOVSKIY, A.A., inzh., red.; PONOMAREV, V.A., tekhn. red.

[Specialized radio interference measuring devices]Spetsial'nye izmeriteli radiopomekh. Moskva, Filial Vses. in-ta nauchn. i tekhn. informatsii, 1958. 45 p. (Peredovoi nauchno-tekhnicheskii i proizvodstvennyi opyt. Tema 36. No.P-58-21/6) (MIRA 16:3)
(Radio measurements) (Radio--Interference) (Interferometer)

6(4) PHASE I BOOK EXPLOITATION SOV/2529

Fastovskiy, Izya Abramovich and Il'ya Mikhaylovich Furmanov

Poisk istochnikov industrial'nykh radiopomekh i ikh issledovaniye (Detection and Investigation of Industrial Sources of Radio Interference) Leningrad, Sudpromgiz, 1959. 60 p. 26,200 copies printed.

Resp. Ed.: A. Ye. Vorontsov; Ed.: B. I. Leonova; Tech. Ed.: L. M. Shishkova.

PURPOSE: This booklet is intended for engineers and technicians concerned with industrial radio interference.

COVERAGE: The authors discuss the purpose, fields of application, characteristics and methods of operation of special devices for analyzing radio interferences. They describe a radio interference detector, a television interference meter, special instrument generators, a spectrum analyzer and probability distribution analyzers. No personalities are mentioned. There are 6 references: 5 Soviet and 1 German.

TABLE OF CONTENTS:

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Detection and Investigation (Cont.) SOV/2529

Card 2/3

9(6) PHASE I BOOK EXPLOITATION SOV/2240

Fastovskiy, Izya Abramovich, and Il'ya Mikhaylovich Furmanov

Tipovyye pribory dlya izmereniya industrial'nykh radiopomekh (Standard Instruments for Measuring Industrial Radio Interferences) Leningrad, Sudpromgiz, 1959. 119 p. 41,200 copies printed.

Resp. Ed.: A. Ye. Vorontsov; Ed.: D. P. Smirnova; Tech. Ed.: L. M. Shishkova.

PURPOSE: This booklet is intended for electrical and radio engineers dealing with problems of suppression of radio interferences.

COVERAGE: The authors describe electrical circuits and standard interference meters used for determining the intensity of radio interferences. They discuss basic characteristics of interference-measuring devices. They also explain methods of measuring voltages and interference levels. The authors also discuss problems of calibration and of checking the accuracy of interference meters used in the frequency range between 0.15 and 1000 mc and present their characteristics. Devices discussed in this booklet were developed by TsLIR - Tsentral'naya laboratoriya po bor'be s industrial'nymi radiopomekhami (Central Laboratory for Combatting Industrial Radio Interferences). No personalities are mentioned. There are 13 references:

Card 1/3

Standard Instruments (Cont.) SOV/2240

AVAILABLE: Library of Congress
Card 3/3

JP/lsb
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88221

S/110/60/000/010/010/014
E041/E455

6.9460

AUTHOR: Fastovskiy, I.A., Engineer

TITLE: The Method of Measuring and Testing the Basic Parameters of Noise Meters

PERIODICAL: Vestnik elektropromyshlennosti, 1960, No.10, pp.55-57

TEXT: In meters for measuring radio noise, four parameters are of interest: the charge time τ_z, the discharge time τ_r, the ballistic time constant of the indicator τ_{II} and the pulse characteristic K(F). The measurement of τ_{II} is best carried out in the following way. A pulse of amplitude I and duration δ is applied to the circuit. The deviation α of the instrument is noted. τ_{II} may be calculated from the value of α_{max} as given by

$$\alpha_{max} = 0,354 \frac{\delta}{\tau_{II}} \alpha_M \qquad (1)$$

The recommended circuit for this measurement (that of Engineer A,G.Yakovlev) is given. τ_z may be measured by the usual method

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E041/E455

The Method of Measuring and Testing the Basic Parameters of Noise Meters

of evaluating the time required for a function to reach 63.2% of its maximum value; a suitable circuit is given. The same method may also be used for measuring τ_r. The pulse characteristic may be taken by using the conventional arrangement in which a variable pulse repetition frequency is supplied to the meter and its indication noted. There are 6 figures.

SUBMITTED: February 15, 1960

Card 2/2

FASTOVSKIY, I.A.

Operation of an inertial detector in the presence of impulses with complex shapes. Radiotekhnika 16 no.5:51-59 My '61. (MIRA 14:6)

1. Deystvitel'nyy chlen Nauchno-tekhnicheskogo obshchestva radiotekhniki i elektrosvyazi.
(Radio detectors)

FASTOVSKIY, I.A.

Performance of a magnetoelectric device under the action of exponential pulses. Izm.tekh. no.4:40-43 Ap '62. (MIRA 15:4)
(Pulse techniques (Electronics))

FASTOVSKIY, I.A.

An inertial voltmeter subject to the action of a random sequence of impulses. Radiotekhnika 18 no.2:70-80 F '63. (MIRA 16:4)

1. Deystvitel'nyy chlen Nauchno-issledovatel'skogo obshchestva radiotekhniki i elektrosvyazi imeni Popova.
(Radio measurements)

FASTOVSKIY, Izya Abramovich; KNELLER, I.A., otv. red.; TSEYTLIN, F.G., red.

[Radio interference measuring apparatus] Apparatura dlia izmereniia radiopomekh; informatsionnyi sbornik. Moskva, Sviaz', 1965. 56 p. (MIRA 18:5)

BELOTSERKOVSKIY, Grigoriy Bentsionovich; KALANTAROV, M.N., inzh., retsenzent; FASTOVSKIY, I.A., kand. tekhn. nauk, retsenzent; OKUN', Ye.L., inzh., nauchn. red.; KVOCHKINA, G.P., red.

[Oscillatory circuits and filters] Kolebatel'nye kontury i fil'try. Leningrad, Sudostroenie, 1965. 135 p. (MIRA 18:8)

FASTOVSKIY, I., kand.tekhn.nauk

New developments in radio interference measuring techniques.
Radio no.10:30-31 O '65.
(MIRA 18:12)

42137

S/203/62/002/002/013/017
I046/I236

9.6130

AUTHORS: Nalivayko, V.I., Tyurmin, A.V. and Fastovskiy, U.V.

TITLE: Field proton magnetometer ПМ-5 (PM-5)

PERIODICAL: Geomagnetism i aeronomiya, v.2, no. 2, 1962, 343-347

TITLE: The signal/noise ratio on the output of the new two-cycle paraphase amplifying circuit (see diagram) is 25:1 for a noise level that is approximately equal to the signal at the input; the total amplification factor K=40,000; the transmission band $\Delta F_{0.7}$ = 150 cycles; wider range can be obtained by simple replacement of capacitors. The total error in measurements for 60,000 γ fields (γ the gyromagnetic ratio of the proton) is $\Delta T/T = 4.08.10^{-3}\%$, or $\pm 2.5\ \gamma$. General principles of the proton magnetometer operation are cited after Packard and Varian (Ref.1: M. Packard, R. Varian. Phys. Rev., 1954, 93, 941). There are 4 figures.

ASSOCIATION: Institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln AN SSSR (Institute of the Terrestrial Magnetism, the Ionosphere and Propagation of Radiowaves AS USSR)

SUBMITTED: January 16, 1962

Card 1/1

YEROSHENKO, Ye. G.; DOLGINOV, Sh. Sh.; ZHUZGOV, L. N.; FASTOVSKIY, V. V.; ALEKSANYAN, L. M.

"Magnetic Investigations on the Electron 2 Satellite."

report presented at the 5th Intl Symp on Space Science, Florence, Italy, 12-16 May 64.

3

L 2885-66 FSS-2/EWT(1)/FS(v)-3/FCC/EMA(d)/EMA(h) TT/GS/GW

ACCESSION NR: AT5023603 UR/0000/65/000/000/0336/0341

AUTHOR: Gringauz, K. I.; Dolginov, Sh. Sh.; Bezrukikh, V. V.; Yeroshenko, Ye. G.; Zhuzgov, L. N.; Musatov, L. S.; Solomatina, E. K.; Pastovskiy, U. V. Bt

TITLE: Comparison of simultaneous measurements of magnetic field and positive ion flux within the Earth's magnetosphere recorded by the Elektron-2 satellite

SOURCE: Vsesoyuznaya konferentsiya po fizike kosmicheskogo prostranstva. Moscow, 1965. Issledovaniya kosmicheskogo prostranstva (Space research); trudy konferentsii. Moscow, Izd-vo Nauka, 1965, 336-341

TOPIC TAGS: space environment, ionospheric physics, electron density, ion density, earth magnetic field/Elektron 2 satellite

ABSTRACT: Measurements of charged-particle flux and magnetic field at a height of 6—11.6 R (R, Earth's radius) were made by Elektron-2. The particle trap used was capable of recording positive ion flux with ion energy in excess of the potential difference of the satellite with respect to its environment and electron flux with electron energy in excess of 100 ev. The magnetometer, with orthogonally arranged sensors, was capable of measuring the magnetic field in the range of ±120 x 10^{-5} erg

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ACCESSION NR: AT5023603

in each component direction. Its threshold was 2×10^{-5} erg. The satellite measurements, when compared with solar activity data in the form of K_p indexes recorded via ground observatories, show inconsistencies in the correlation between the variation of magnetic activity on the Earth's surface and the variation of the geomagnetic field intensity and charged particle flux as measured by the satellite. It is uncertain whether these observations can be explained by the solar wind penetrating the magnetosphere or by near-earth plasma due to charged particles accelerated by a yet unknown mechanism. Orig. art. has: 6 figures. [BD]

ASSOCIATION: none

SUBMITTED: 02Sep65 ENCL: 00 SUB CODE: ES,SV

NO REF SOV: 003 OTHER: 006 ATD PRESS: 4109

Card 2/2

L 23291-65 EWT(1)/FSF(h)/FSS-2/FS(v)-3/EWG(a)-2/FCC/EWA(d)/EEC(t) Pq-4/Pe-5/Pq-4/
ACCESSION NR: AP5001986 Pae-2/P1-4 IT/ S/0020/64/159/006/1272/1275
GW

AUTHOR: Gringauz, K. I.; Dolginov, Sh. Sh.; Bezrukikh, V. V.; Yeroshenko, Ye. G.; Zhuzgov, L. N.; Musatov, L. S.; Solomatina, E. K.; Fastovskiy, U. V.

TITLE: Observations using the artificial satellite Electron-2 of the correlation between variations of the magnetic field and streams of positive ions inside the terrestrial magnetosphere

SOURCE: AN SSSR. Doklady, v. 159, no. 6, 1964, 1272-1275

TOPIC TAGS: artificial satellite, magnetometer, positive ion, geomagnetic field, magnetosphere, radiation belt, flux intensity, negative ion, theoretical field, apogee distance

ABSTRACT: The artificial satellite Electron-2, equipped with magnetometers and a trap for charged particles, recorded positive ions of all energies, their fluxes with energies of more than 100 ev, and measured all three components of the geomagnetic field in the magnetosphere and at radiation belts. Recorded data showed a correlation between the variations of the magnetic activity on the terrestrial

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ACCESSION NR: AP5001986

surface and the intensities of fluxes of positive ions and the magnetic field far from the earth. This correlation was observed on quiet days and on days with magnetic disturbances. Numerous negative ion fluxes were recorded on magnetically quiet days. During this time, the magnetometer recorded a magnetic field of regular intensity although it exceeded the theoretical field by 20 γ. The maximum deflection from the theoretical field was detected at the apogee of the satellite. On 12 February 1964, all magnetic observatories on the earth recorded magnetic disturbances of sudden commencement while the trap in the satellite recorded positive ion fluxes exclusively of an intensity of $4 \cdot 10^{-10}$ amp. At this time the satellite was at apogee. The magnetometer recorded a rapid increase in the magnetic field. Orig. art. has: 4 figures. [EC]

ASSOCIATION: none

SUBMITTED: 15Sep64 ENCL: 00 SUB CODE: ES,SV

NO REF SOV: 003 OTHER: 008 ATD PRESS: 3173

Card 2/2

L 23434-66 FSS-2/EWT(1)/FCC TT/GW

ACC NR: AP6012835 SOURCE CODE: UR/0293/66/004/002/0302/0310

AUTHOR: Aleksanyan, L. M.; Yeroshenko, Ye. G.; Zhuzgov, L. N.; Festovskiy, U. V.

44
38
13

ORG: none

TITLE: Magnetometric apparatus of the Electron-2 space station

SOURCE: Kosmicheskiye issledovaniya, v. 4, no. 2, 1966, 302-310

TOPIC TAGS: magnetometer, magnetic field measurement

ABSTRACT: Two search-coil magnetometers capable of independently measuring three components of the magnetic field in the outer radiation belt were mounted on Electron-2. One had a measurement range of ±120 γ, and the other, a range of ±1200 γ. A block diagram of the basic magnetometer is shown in the figure. It consists of a 2-kc signal generator with associated low-pass filter for suppressing the second harmonic, a tuned amplifier (voltage gain, 12 x 10^3, bandwidth at 3 db, ±100 cps) tuned to the second harmonic with associated input filter to attenuate the first and third harmonics by 40 db, a synchronous phase detector, and a d-c current amplifier (gain, 20). Two telemetry channels are utilized for each magnetic-field coordinate, one channel for positive values and the other for negative values. A diode gate

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L 23434-66

ACC NR: AP6012835

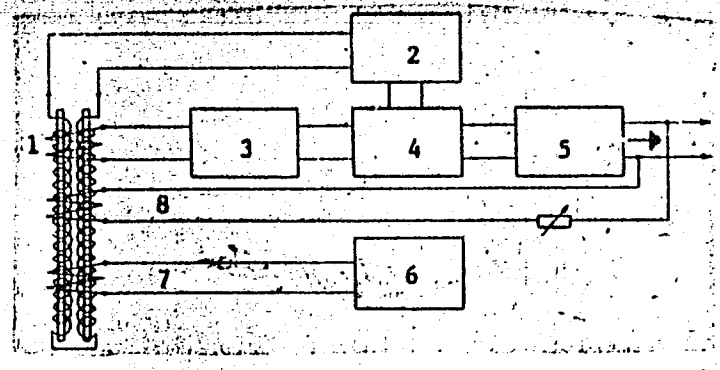

Fig. 1. Magnetometer

1 - Search coil; 2 - generator; 3 - amplifier; 4 - phase detector; 5 - dc amplifier; 6 - reference voltage; 7 - calibration loop; 8 - feedback loop.

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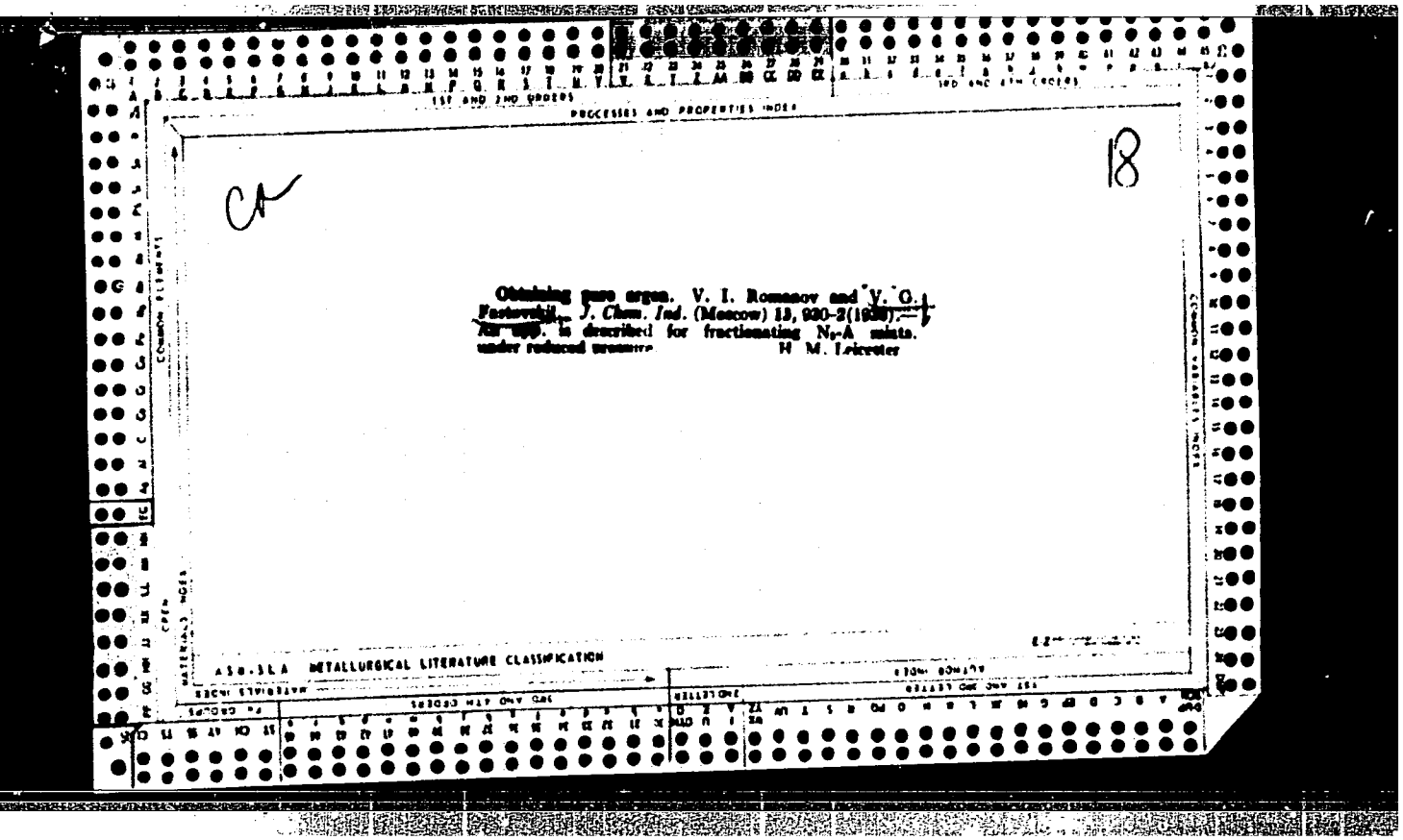
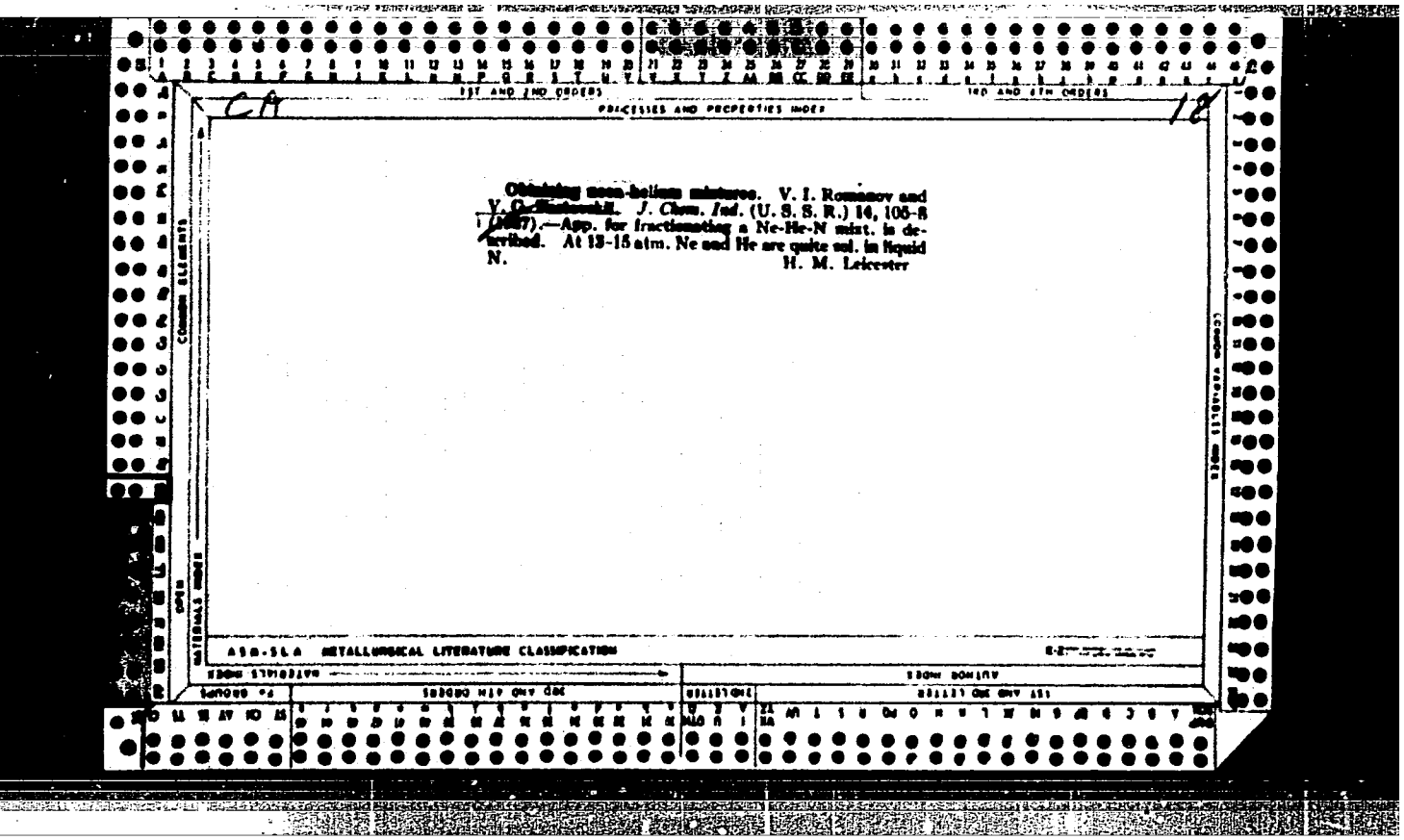
L 23434-66
ACC NR: AP6012835

in the d-c amplifier unit diverts the information to the appropriate channel. The inclusion of a heavy voltage feedback confines the magnetometer nonlinearity to 2—3%. The sensitivities of two magnetometers are 2—3 γ and 20—30 γ; the temperature stability measured at -3C, +18C, and +55C did not exceed 0.2 γ/C for the first and 0.7 γ/C for the second. A special unit for sensitivity calibration with the use of a reference voltage source is also included. The average error in measuring the scalar magnetic field was ±4 γ and ±40 γ. The zero drift did not exceed 2—3 γ per day. The 14-v power supply for the magnetometers was stabilized by a P203 transistor and a D811 Zener diode. All other transistors used were the P103 type. Power consumption for each magnetometer was 2.2 w. "In conclusion, the authors are indebted to A. V. Klimovskiy, A. I. Konnov, Ye. Ye. Kanonidi, L. I. Ulanov, V. M. Agafonnikov, and V. G. Ryzhov for their active participation during the manufacturing, calibration, and testing of equipment." Orig. art. has: 1 formula and 4 figures. [BD]

SUB CODE: 09, 17/ SUBM DATE: 05Jun64/ ORIG REF: 003/ ATD PRESS: 4235

Card 3/3 dda





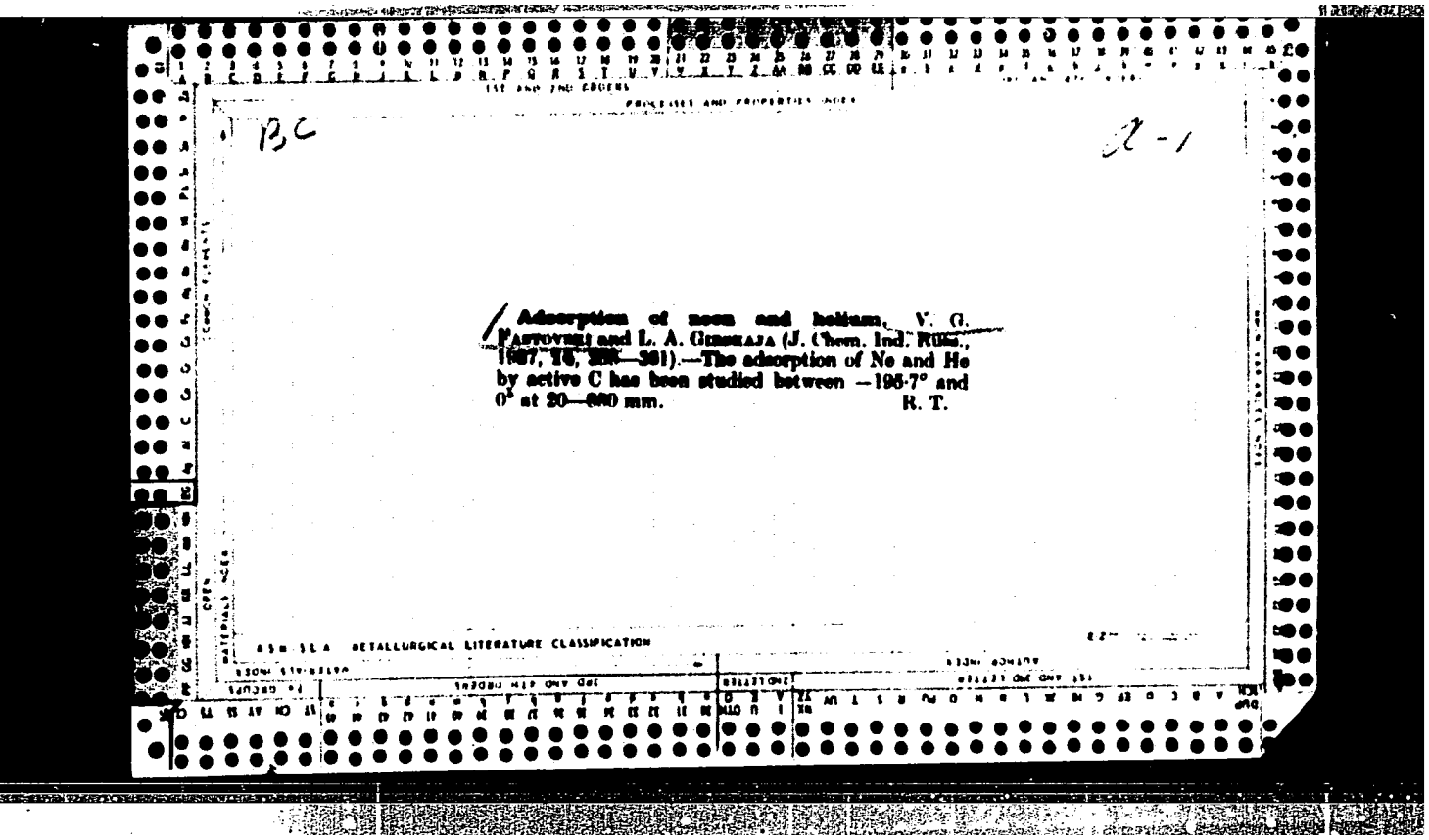
CA

PROCESSES AND PROPERTIES INDEX

10

Obtaining neon-helium mixtures. V. I. Romanov and V. G. Khodeev. *J. Chem. Ind.* (U. S. S. R.) 14, 105-8 (1937).—App. for fractionating a Ne-He-N mixt. is described. At 13-15 atm. Ne and He are quite sol. in liquid N. H. M. Leicester

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

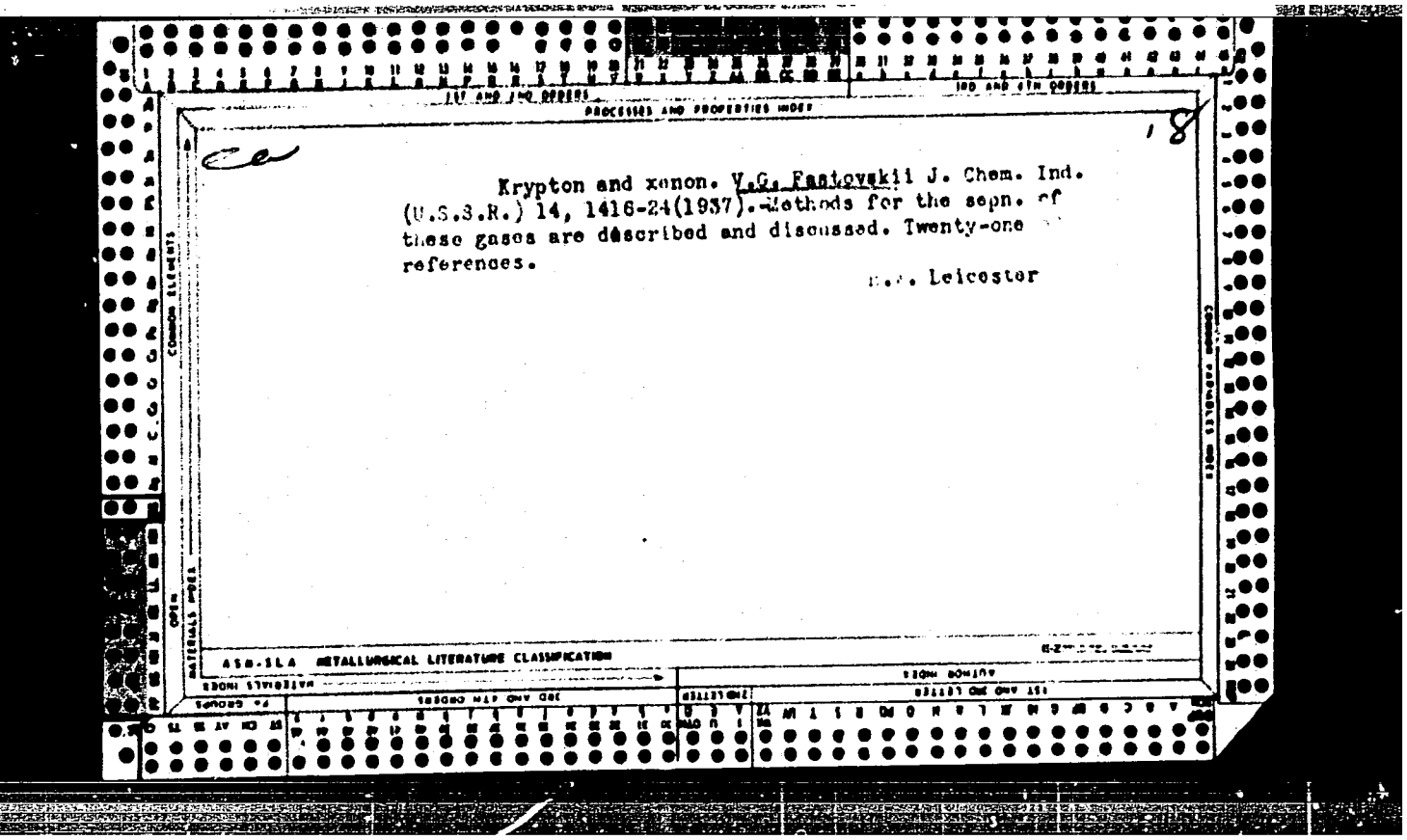


B C

X-1

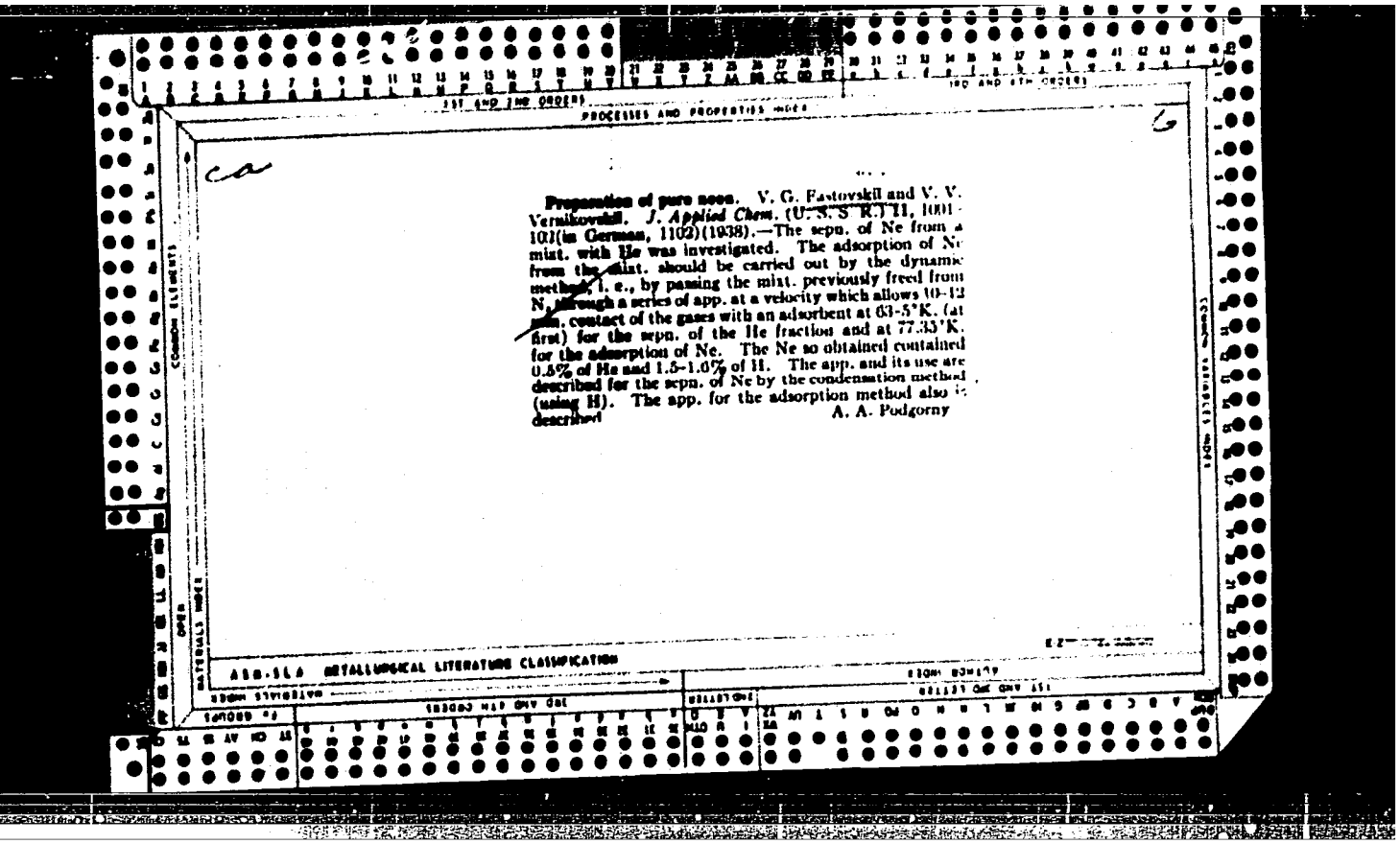
Adsorption of neon and helium. V. G. Khlopin and L. A. Gindin (J. Chem. Ind. Russ., 1937, 14, 298—301).—The adsorption of Ne and He by active C has been studied between −195·7° and 0° at 20—800 mm. R. T.

ASM SLA METALLURGICAL LITERATURE CLASSIFICATION



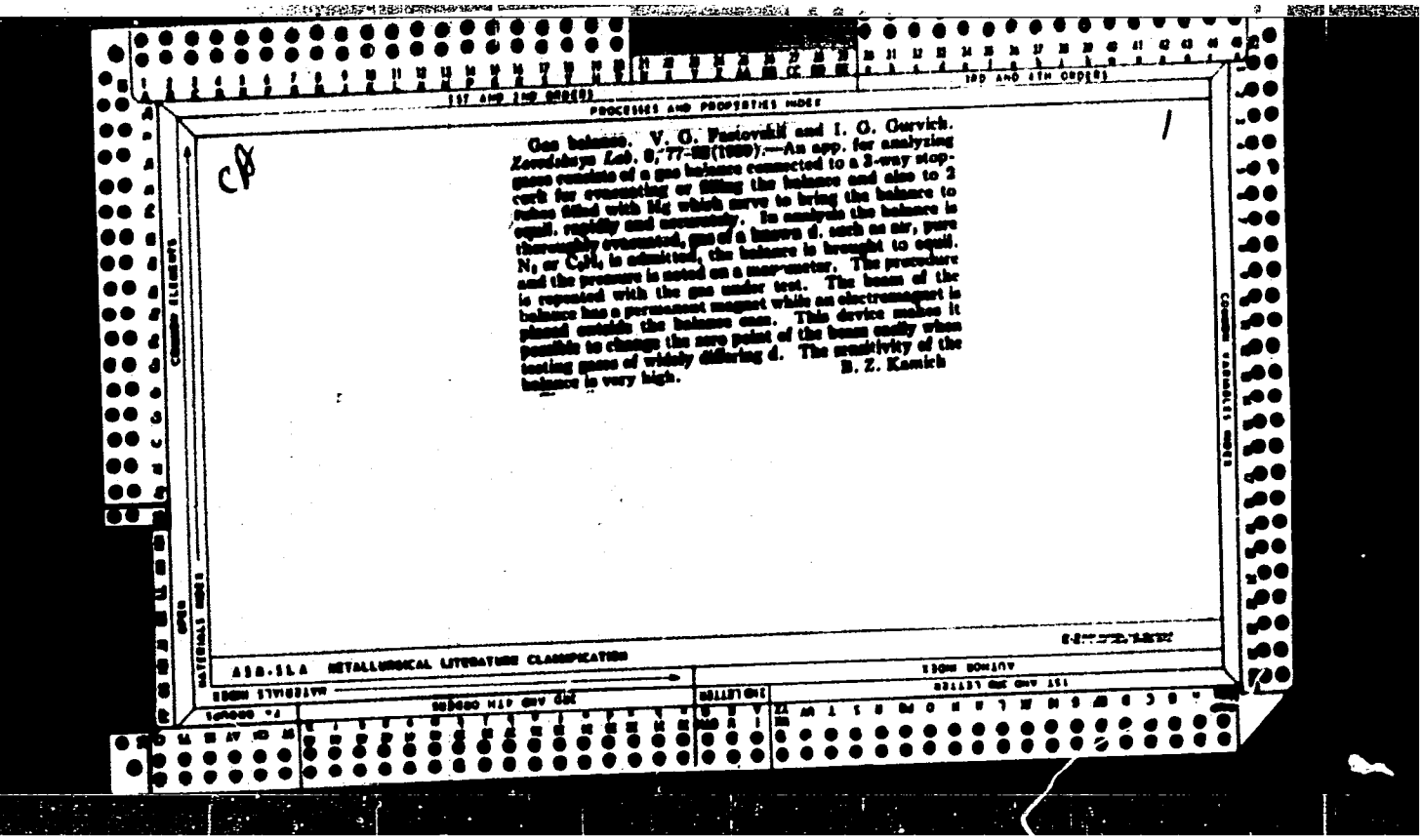
Krypton and xenon. V.G. Fastovskii J. Chem. Ind. (U.S.S.R.) 14, 1416-24(1937).—Methods for the sepn. of these gases are described and discussed. Twenty-one references.

M.A. Leicester



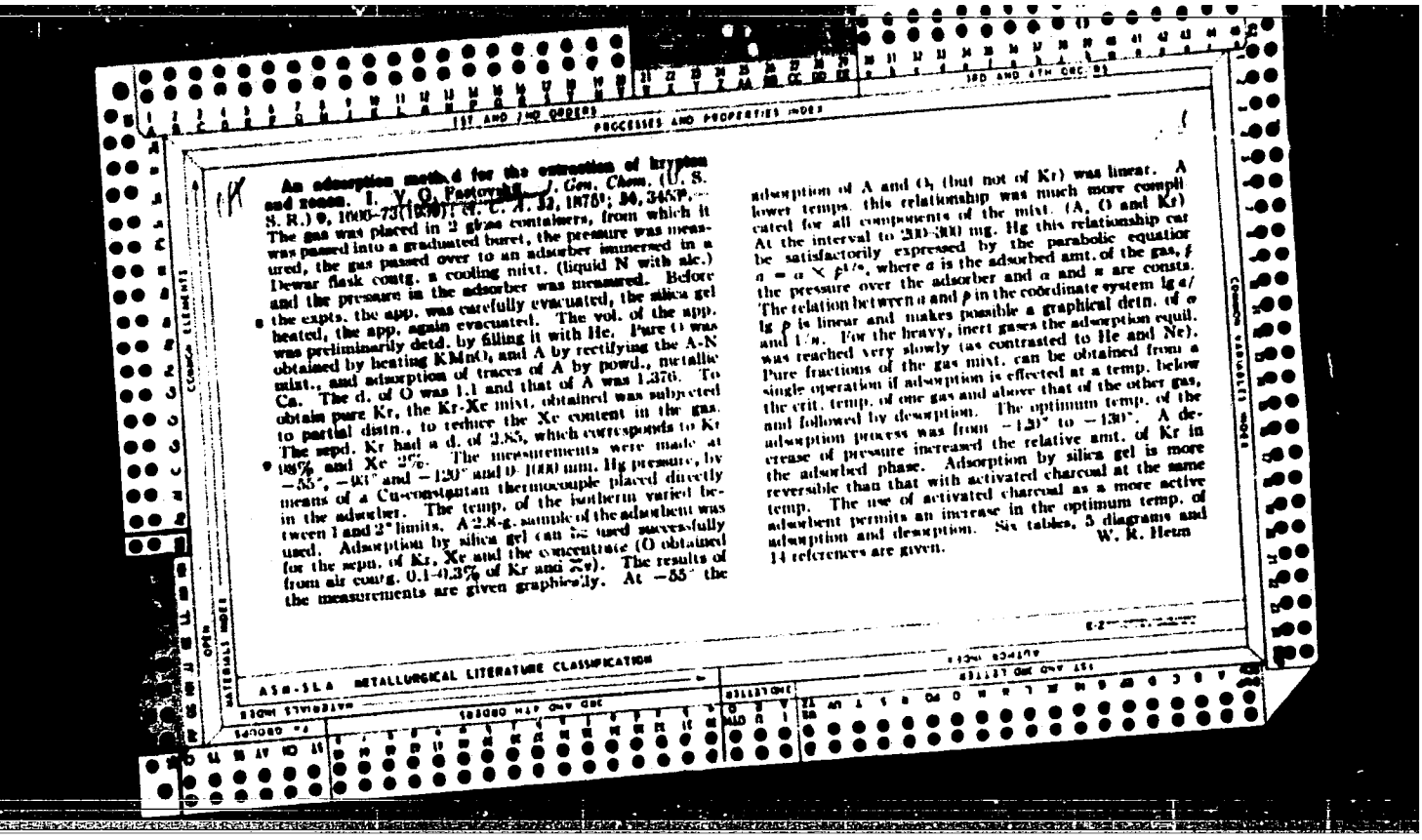
Preparation of pure neon. V. G. Fastovskii and V. V. Vernikovskii. *J. Applied Chem.* (U.S.S.R.) 11, 1001-10[illegible](in German, 1102)(1938).—The sepn. of Ne from a mixt. with He was investigated. The adsorption of Ne from the mixt. should be carried out by the dynamic method, i. e., by passing the mixt. previously freed from N through a series of app. at a velocity which allows 10-12 min. contact of the gases with an adsorbent at 63-5°K. (at first) for the sepn. of the He fraction and at 77.33°K. for the adsorption of Ne. The Ne so obtained contained 0.5% of He and 1.5-1.0% of H. The app. and its use are described for the sepn. of Ne by the condensation method (using H). The app. for the adsorption method also is described.

A. A. Podgorny



Gas balance. V. G. Pasiovskii and I. O. Gurvich. *Zavodskaya Lab.* 8, 77-88(1939).—An app. for analyzing gases consists of a gas balance connected to a 3-way stopcock for evacuating or filling the balance and also to 2 tubes filled with Mg which serve to bring the balance to equil. rapidly and accurately. In analysis the balance is thoroughly evacuated, one of 2 known gases, such as air, pure N_2 or CH_4, is admitted, the balance is brought to equil. and the pressure is noted on a manometer. The procedure is repeated with the gas under test. The beam of the balance has a permanent magnet while an electromagnet is placed outside the balance case. This device makes it possible to change the zero point of the beam easily when testing gases of widely differing d. The sensitivity of the balance is very high.

B. Z. Kamich



An adsorption meth. d for the extraction of krypton and xenon. I. V. O. Fastovskiĭ, ... J. Gen. Chem. (U. S. S. R.) 9, 1069–73(1939); C. C. A. 33, 1875⁹; 34, 3453⁹.— The gas was placed in 2 glass containers, from which it was passed into a graduated buret, the pressure was measured, the gas passed over to an adsorber immersed in a Dewar flask contg. a cooling mixt. (liquid N with alc.) and the pressure in the adsorber was measured. Before the expts. the app. was carefully evacuated, the silica gel heated, the app. again evacuated. The vol. of the app. was preliminarily detd. by filling it with He. Pure O was obtained by heating KMnO, and A by rectifying the A-N mixt., and adsorption of traces of A by powd., metallic Ca. The d. of O was 1.1 and that of A was 1.376. To obtain pure Kr, the Kr-Xe mixt. obtained was subjected to partial distn., to reduce the Xe content in the gas. The sepd. Kr had a d. of 2.85, which corresponds to Kr 98% and Xe 2%. The measurements were made at −55°, −80° and −120° and 0–1000 mm. Hg pressure, by means of a Cu-constantan thermocouple placed directly in the adsorber. The temp. of the isotherm varied between 1 and 2° limits. A 2.8-g. sample of the adsorbent was used. Adsorption by silica gel can be used successfully for the sepn. of Kr, Xe and the concentrate (O obtained from air contg. 0.1–0.3% of Kr and Xe). The results of the measurements are given graphically. At −55° the adsorption of A and O_2 (but not of Kr) was linear. At lower temps. this relationship was much more complicated for all components of the mixt. (A, O and Kr). At the interval to 200–300 mg. Hg this relationship can be satisfactorily expressed by the parabolic equation $a = \alpha \times p^{1/n}$, where a is the adsorbed amt. of the gas, p the pressure over the adsorber and α and n are consts. The relation between a and p in the coördinate system lg a/lg p is linear and makes possible a graphical detn. of α and $1/n$. For the heavy, inert gases the adsorption equil. was reached very slowly (as contrasted to He and Ne). Pure fractions of the gas mixt. can be obtained from a single operation if adsorption is effected at a temp. below the crit. temp. of one gas and above that of the other gas, and followed by desorption. The optimum temp. of the adsorption process was from −120° to −130°. A decrease of pressure increased the relative amt. of Kr in the adsorbed phase. Adsorption by silica gel is more reversible than that with activated charcoal at the same temp. The use of activated charcoal as a more active adsorbent permits an increase in the optimum temp. of adsorption and desorption. Six tables, 5 diagrams and 14 references are given.

W. R. Herm

FASTOVSKIY, V. G.

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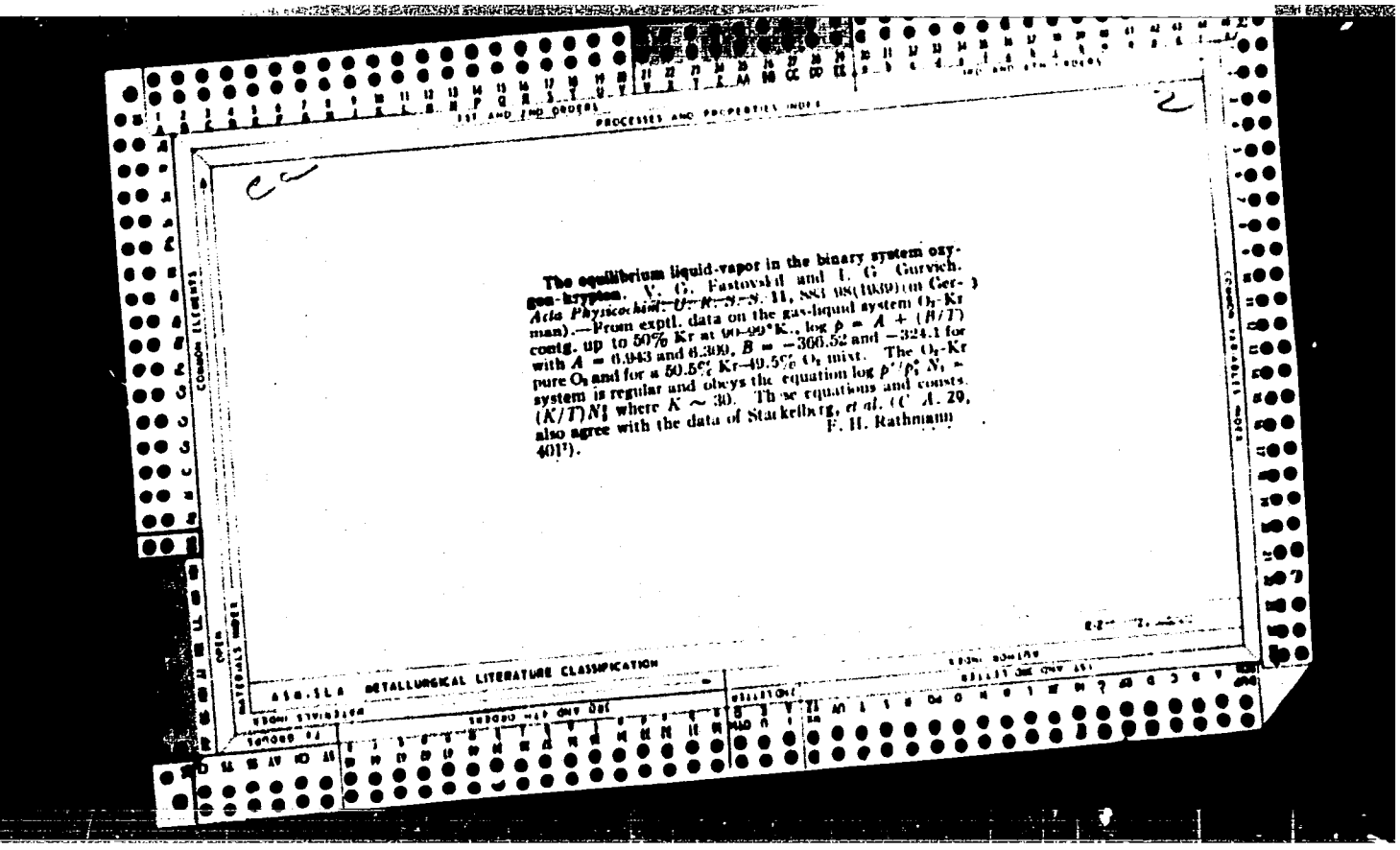
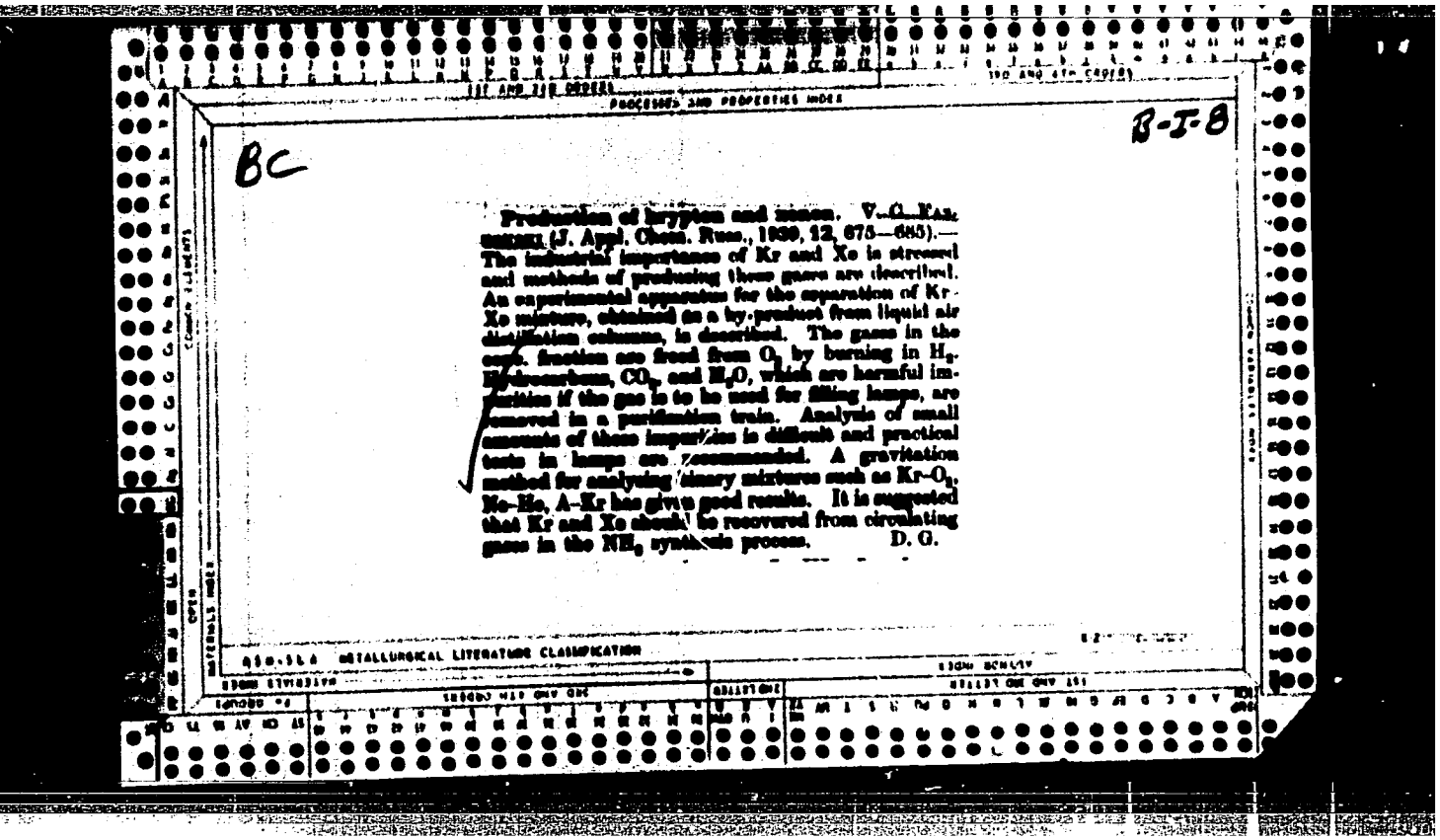
THE SOLUBILITY OF GASES IN LIQUIDS AT LOW TEMPERATURES AND HIGH PRESSURES. I. THE SOLUBILITY OF HYDROGEN IN LIQUID NITROGEN AT TEMPERATURES OF 79.0 - 109.0°K AND PRESSURES UP TO [illegible]ATM. (Die Löslichkeit von Gasen in Flüssigkeiten bei niedrigen Temperaturen und hohen Drucken. I. Die Löslichkeit von Wasserstoff in flussigem Stickstoff bei Temperaturen von 79.0 - 109.0°K und Drucken bis. zu 190 atm) M. G. Gonikberg, W. G. Fastowsky, and J. G. Gurwitch. Translated by D. J. Wright from Acta Physicochim. U.R.S.S. 11, 865-82(1939). 21p. (TT-478)

An apparatus for the investigation of liquid-vapor equilibria using the circulation method is described. The solubility of hydrogen in liquid nitrogen at temperatures of 79.0, 86.1, 95.4 and 109.0°K and pressures up to 190 atm. and the hydrogen content in the gas phase at these temperatures and pressures were determined. It was shown that at 79.0 to 109° K the binary hydrogen-nitrogen system, taking the entire pressure interval into consideration, does not follow the laws of dilute solutions. In certain pressure intervals which depend on the temperatures, the hydrogen-nitrogen system can be regarded as [illegible] which follows the thermodynamic equations for [illegible]. Thus negative values for the partial molar volumes of the nitrogen were obtained. Equations are suggested for the relationship between solubility of hydrogen in nitrogen and the temperature and pressure in the pressure and temperature interval under consideration, for the relationship between the hydrogen concentrations in the gas and liquid phases, and the pressure (for solubilities of hydrogen not over 20 to 22%), and for the relationship between the maximum value of the p - x curve and the temperature. (auth)



The equilibrium liquid-vapor in the binary system oxygen-krypton. V. G. Fastovskiĭ and I. G. Gurvich. *Acta Physicochim. U.R.S.S.* 11, 883-98(1939)(in German).—From exptl. data on the gas-liquid system O_2-Kr coexistg. up to 50% Kr at 90–99°K., $\log p = A + (B/T)$ with $A = 6.943$ and 6.309, $B = -366.52$ and -324.1 for pure O_2 and for a 50.5% Kr–49.5% O_2 mixt. The O_2-Kr system is regular and obeys the equation $\log p''/p'' N_1 = (K/T)N_1^2$ where $K \sim 30$. These equations and consts. also agree with the data of Stackelberg, *et al.* (*C. A.* 29, 401[2]).

F. H. Rathmann



B-I-8

BC

Production of krypton and xenon. V. G. Kaz. (J. Appl. Chem. Russ., 1939, 12, 675—685).—The industrial importance of Kr and Xe is stressed and methods of producing these gases are described. An experimental apparatus for the separation of Kr-Xe mixture, obtained as a by-product from liquid air distillation columns, is described. The gases in the crude fraction are freed from O_2 by burning in H_2. Hydrocarbons, CO_2, and H_2O, which are harmful impurities if the gas is to be used for filling lamps, are removed in a purification train. Analysis of small amounts of these impurities is difficult and practical tests in lamps are recommended. A gravitation method for analysing binary mixtures such as Kr-O_2, Ne-He, A-Kr has given good results. It is suggested that Kr and Xe should be recovered from circulating gases in the NH_3 synthesis process. D. G.

METALLURGICAL LITERATURE CLASSIFICATION

FASTOVSKIY4V8G8 600

1. FASTOVSKIY, V. G. ; GURVICH, I. G.

2. USSR (600)

"Research on the Equilibrium of the Liquid-Vapor of the Binary System Oxygen-Krypton," Zhur, Fiz. Khim. 13, No. 11, 1939. Moscow, All-Union Electrotechnical Inst. Received 9 July 1939.

9. [redacted] Report U-1615, 3 Jan. 1952

[redacted]

1. GONIKBERG, M. G.; FASTOVSKIY, V. G., GUKVICH, I. G.

2. USSR (600)

"The Solubility of Gasses in Liquids at Low Temperatures and High Pressures. I," Zhur. Fiz. Khim, 13, No. 11, 1939. Moscow, All-Union Electrotechnical Institute. Received 9 July 1939.

9. [redacted] Report U-1615, 2 Jan. 1952.

FASTOVSKIY, V. G.

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THE SOLUBILITY OF GASES IN LIQUIDS AT LOW TEMPERATURES AND HIGH PRESSURES. 2. THE SOLUBILITY OF HELIUM IN LIQUID NITROGEN AT TEMPERATURES BETWEEN 78.0 AND 109.0°K AND PRESSURES UP TO 295 ATM. (Die Löslichkeit von Gasen in Flüssigkeiten bei niedrigen Temperaturen und hohen Drucken. 2. Die Löslichkeit von Helium in Flüssigem Stickstoff bei Temperaturen von 78.0 bis 109.0°K und Drucken bis zu 295 atm). M. G. Gonikberg and V. G. Fastovsky. Translated by D. J. Wright from Acta [illegible] U.R.S.S. 12, 67-72(1940). 8p. (TT-479)

The solubility of He in liquid N was determined at 78, 90.1, and 109°K and pressures up to 295 atm, using the circulation method. The He content in the vapor phase generally exceeded 50 to 70%. It was shown that at temperatures from 78 to 109°K and between 50 and 300 atm., the binary He–N system follows the law of ideal solutions. The values of the Henry's law constants and the partial molar volumes of dissolved He were calculated at the above temperatures. (J.A.G.)

FASTOVSKIY, V.[G.]

241
THE SOLUBILITY OF GASES IN LIQUIDS A LOW TEMPERATURES AND HIGH PRESSURES 3. THE SOLUBILITY OF HYDROGEN IN LIQUID METHANE. (Die Löslichkeit von Gasen in Flüssigkeiten bei niedrigen Temperaturen und hohen Drucken. 3. Die Löslichkeit von Wasserstoff in flüssigem Methan). W. Fastowsky and M. Gonikberg. Translated by Dorothy J. Wright from Acta Physicochim. U.R.S.S. 12, 465-8(1940). 7p. (TT-480)

The solubility of hydrogen in liquid methane and in vapor phase was determined at 90.3, 110.0, 122.0, and 127.0°K and at pressures from 180 to 230 atm. It was shown that, at 90.3 to 127.0°K and the pressures studied, the binary system $H_2 - CH_4$ follows Krichevsky's equation of dilute solutions. The values of the Henry's law constants and the partial molar volumes of dissolved hydrogen at temperatures of 90.3, 110.0, and 127.0°K were calculated. (auth)

A-U Electrotechnical Inst.

1ST AND 2ND ORDERS

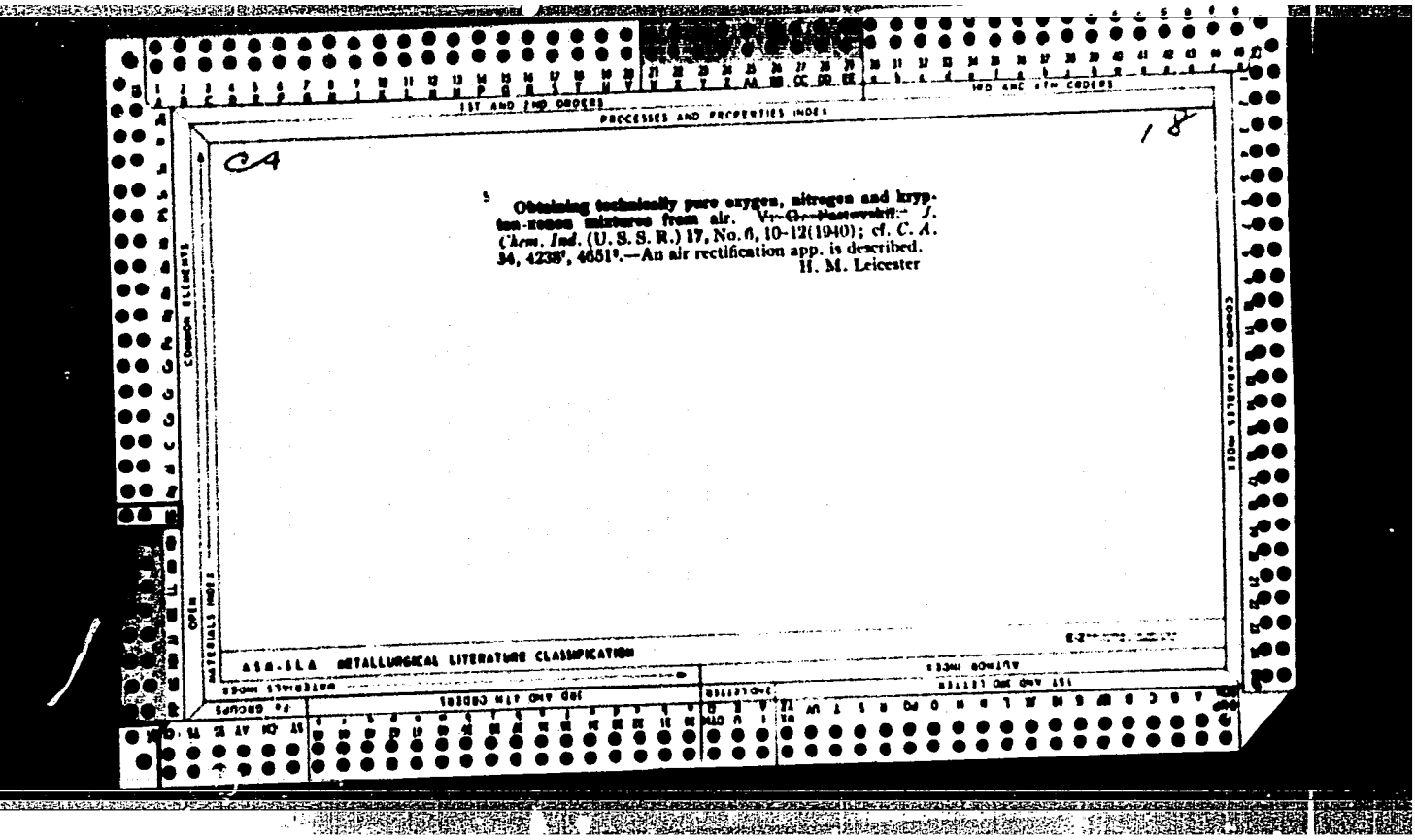
PROCESSES AND PROPERTIES INDEX

ca

1

Catalytic oxidation of low concentrations of acetylene. V. O. [illegible] and V. A. [illegible]. *J. Applied Chem.* (U.S.S.R.) 13, [illegible] (in French, [illegible]) (1940).—The investigation was carried out for the purpose of developing a method for the oxidation of minute amts. of C_2H_2 present in equipment used for the rectification of liquid air and causing explosions. Among the catalysts (com. MnO_2, activated MnO_2, electrolytic MnO_2, NiO, CuO pptd. from $CuSO_4$ and two-component hopcalite) used, all except NiO were found very active at 180-200° and vol. velocities of 3000-30,000. For the com. MnO_2 and pptd. CuO the amt. of oxidation of C_2H_2 increases with increase in the original concn. of C_2H_2 in the mixt. The apparent order of the reaction for com. MnO_2 at 180-200° is below one; it approaches the unimolecular type with increase in temp., evidently because of decreased adsorption of the reacting gases by the catalyst. At 180° the apparent order of the reaction increases with increase of the original concn. The catalytic oxidation of C_2H_2 in the presence of CuO is accompanied at 160-200° by a chemisorption of C_2H_2 with the formation of the explosive CuC_2; at higher temps. (200-300°) and low concns. of C_2H_2 (below 0.1%) formation of CuC_2 was not observed. Com. MnO_2 is recommended as a catalyst for use in com. processes; the oxidation should be effected at 200-300° and at a vol. velocity of 3000-5000. Seventeen references. A. A. Boehtlingk

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



PROCESSES AND PROPERTIES INDEX

CA

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5

Obtaining technically pure oxygen, nitrogen and krypton-xenon mixtures from air. V. G. Plastovskiĭ. *J. Chem. Ind.* (U. S. S. R.) 17, No. 6, 10-12(1940); cf. *C. A.* 34, 4238⁸, 4651⁹.—An air rectification app. is described.
H. M. Leicester

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

GONIKBERG, M. G. ; FASTOVSKIY, V. G.

Moscow

All-Union Electrotechnical Institute, (-1940-).

"The Solubility of Gases in Liquids at Low Temperatures and High Pressures," Part IV: "The Solubility of Helium in Liquid Methane at 90.3 Degrees K and 106.0 Degrees K and Pressures at to 160 Atmospheres."

Zhur. Fiz. Khim., Vol. 14, No. 8, 1940.

FASTOVSKIY, V. G.

Krypton and xenon. Moskva, Gos. energ. izd-vo, 1941. 116 p. (Trudy Vsesoiuznogo elektritekhnicheskogo instituta, vyp. no. 47) (51-45683)

QD181.K6F3

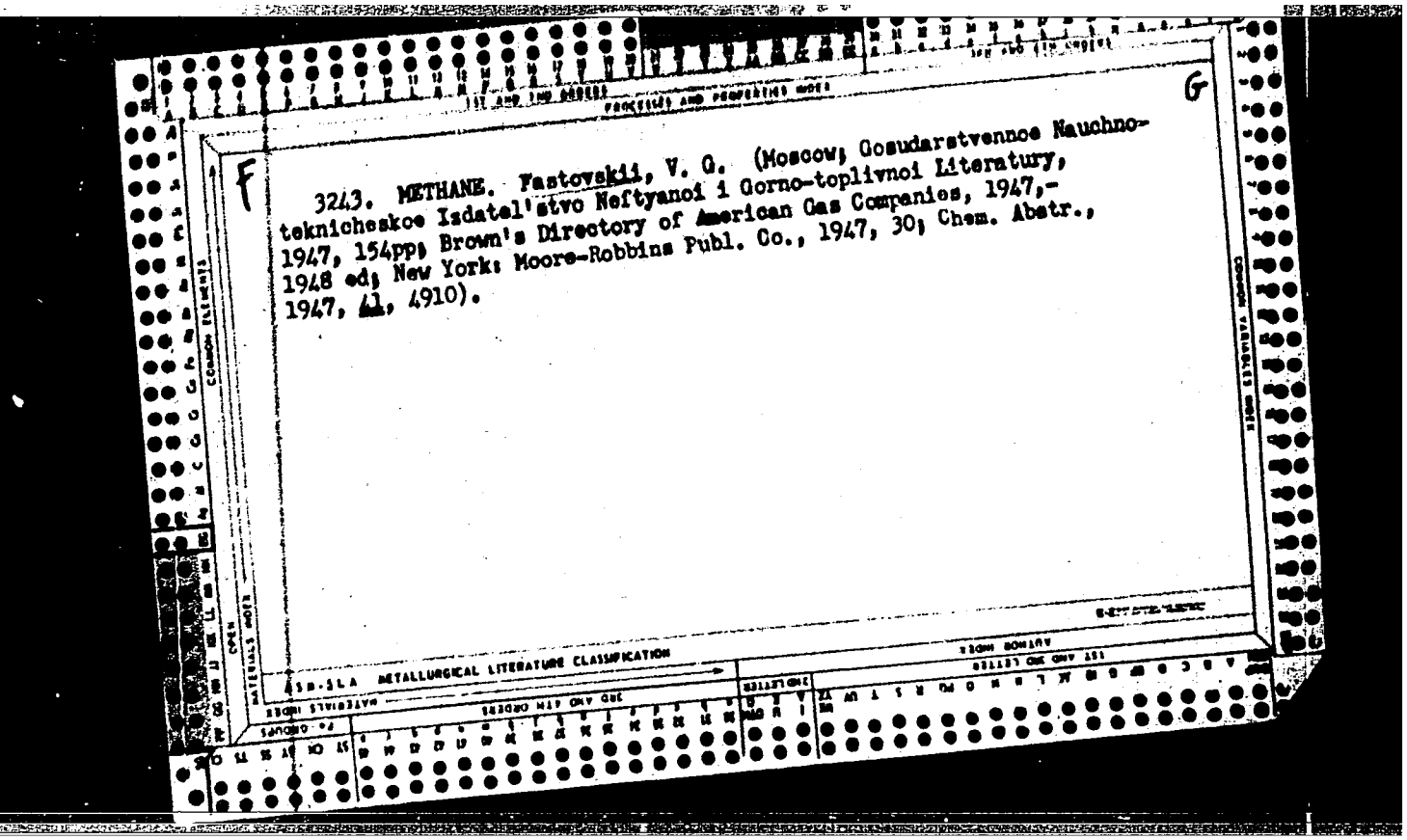
Solubility of solid methane in liquid nitrogen and oxygen. V. G. Fastovskii and J. A. Krestinski (*J. Phys. Chem. Russ.*, 1941, **15**, 525—531).—The mol. fraction N of CH_4 in its saturated solutions in N_2 between 70° and 79° K. and in O_2 between 69° and 74° K. satisfies the equations $\log N = 1{\cdot}34876 - 120{\cdot}48/T$ and $\log N = 0{\cdot}97096 - 85{\cdot}822/T$ respectively. J. J. B.

[redacted], V. G.; [redacted], M. A.

"The Solubility of Argon in Liguid Oxygen", Zhur. Fiz. Khim. 16, Nos. 3-4, 1942.

Moscow, All-Union Electrical Engineering Institute. Received 24 April 1941.

Report U-1523, 24 Oct. 1951.



F

3243. METHANE. Fastovskii, V. G. (Moscow; Gosudarstvennoe Nauchno-tekhnicheskoe Izdatel'stvo Neftyanoi i Gorno-toplivnoi Literatury, 1947, 154pp; Brown's Directory of American Gas Companies, 1947,- 1948 ed; New York: Moore-Robbins Publ. Co., 1947, 30; Chem. Abstr., 1947, 41, 4910).

G

Separation of gas compounds
Moskva, Gos. izd-vo tekhn.-teoret. lit-ry, 1947. 359 p. (49-29350)

TP?42.F3

FASTOVSKIY, V. G.

"The Giproazotmash Chart" (Razdeleniye gazovykh smesoy), State Publishing House of Technical and Theoretical Literature, Leningrad and Moscow, 1947

Translation - D 180564, 23 Feb 55