ORESCANIN, B.; ANTIC, A.; ISVANSKI, M.

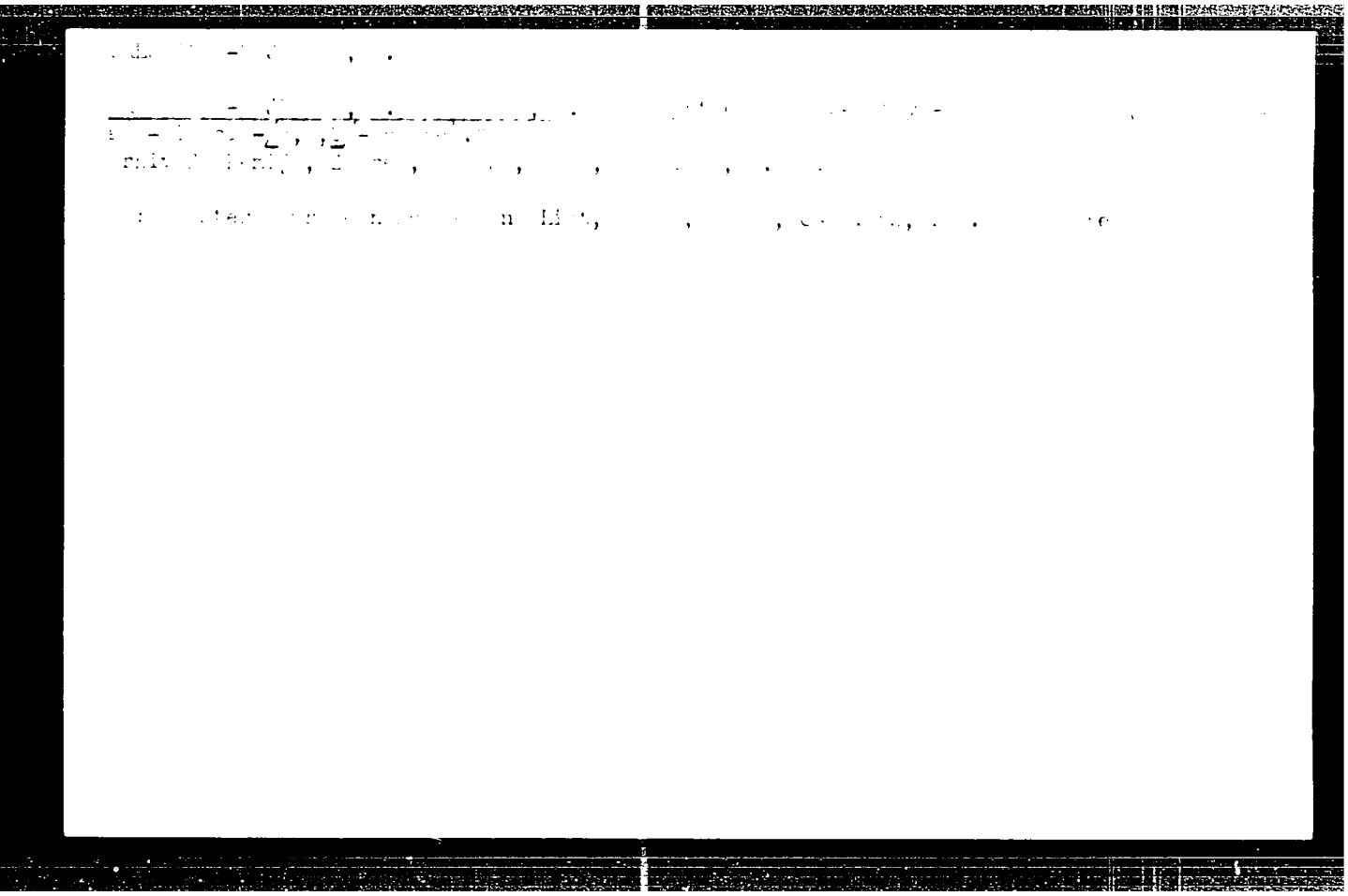
Use of electrocardiography in experimental intoxication with Clostridium perfringens A toxin. Acta med. iugoslavl. 1. no.[illegible]-4.5 '60.

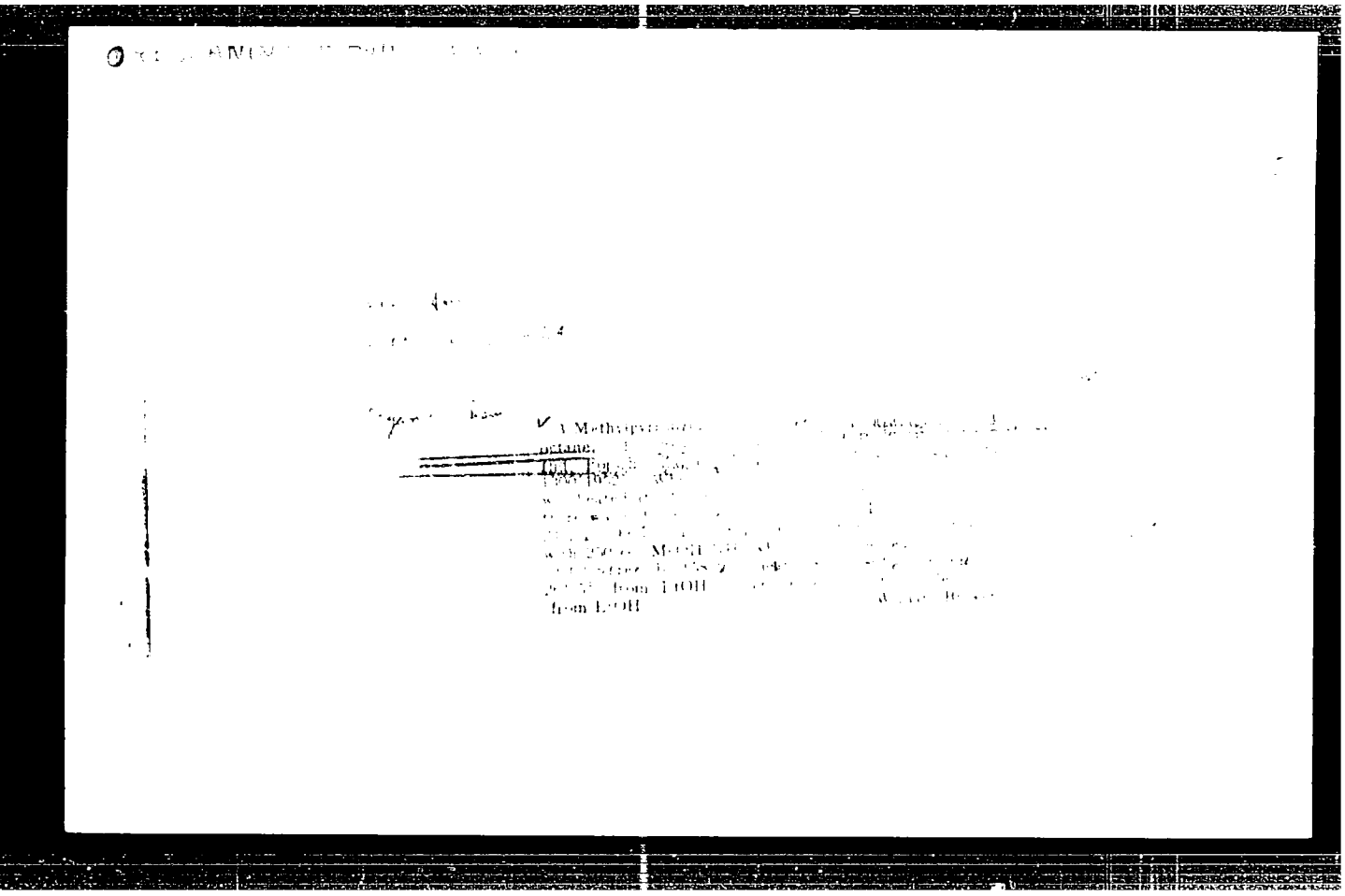
1. Patofiziloski institut, Interna klinika B i Patolosko-anatomski institut Medicinskog fakulteta u Beogradu.
(CLOSTRIDIUM PERFRIGENS) (ELECTROCARDIOGRAPHY)
(TOXINS AND ANTITOXINS)

ORESCANIN-MAJHOFER, B.

The synthesis of 1-methylpyrrolizidine (4-methyl-1-aza-bicyclo[0.3.3]octane). R. Selwerth and B. Orešanin-Majhofer (Inst. Ind. Research, Zagreb). [illegible] 24, 53–7 (1952) (German summary).—1-Acetyl-furan (26 g.) was treated with 47.5 g. $BrCH_2CO_2Et$, 178 g. C_6H_6, and 19 g. Zn dust, and fractionated; the 110° fraction was mostly Et β-hydroxy-β-(2-furyl)butyrate (I). I heated with a 6% soln. of $(CO_2H)_2$ loses H_2O and gives 52% Et β-(2-furyl)crotonate (II), b_{18} 124–5°. II (19 g.) hydrogenated in 100 cc. abs. EtOH 4 hours with 5 cc. Raney-Ni at 170° and 110 atm. gave 84% Et β-(tetrahydro-2-furyl)-butyrate (III), b_{11} 110–15°. III (16 g.) in 200 cc. abs. EtOH and 44 g. Na added over a short period of time, heated, 10 cc. H_2O added, and heated 1 hr. further to give 69% γ-(tetrahydro-2-furyl)butanol (IV), b_{11} 120–7°. IV (8 g.) heated with 60 cc. 70% HBr 5 hrs. in a sealed tube at 100–110°, taken up in C_6H_6 washed with water and dried with $CaCl_2$, and fractionated to give 78% 3-methyl-1,4,7-tribromoheptane (V), $b_{0.5}$ 145–50°. V (6 g.) dissolved in 150 cc. MeOH at 180° and treated with NH_3 under 5 atm. pressure gives 40% 1-methylpyrrolizidine (VI), which comes over in the 170–80° fraction; picrate, m. 241–1.5°; picronolate, m. 153°. This suggests that this VI is mostly the hellotridane of Leonard and Felley (*C.A.* 43, 5778h).

Werner Jacobson



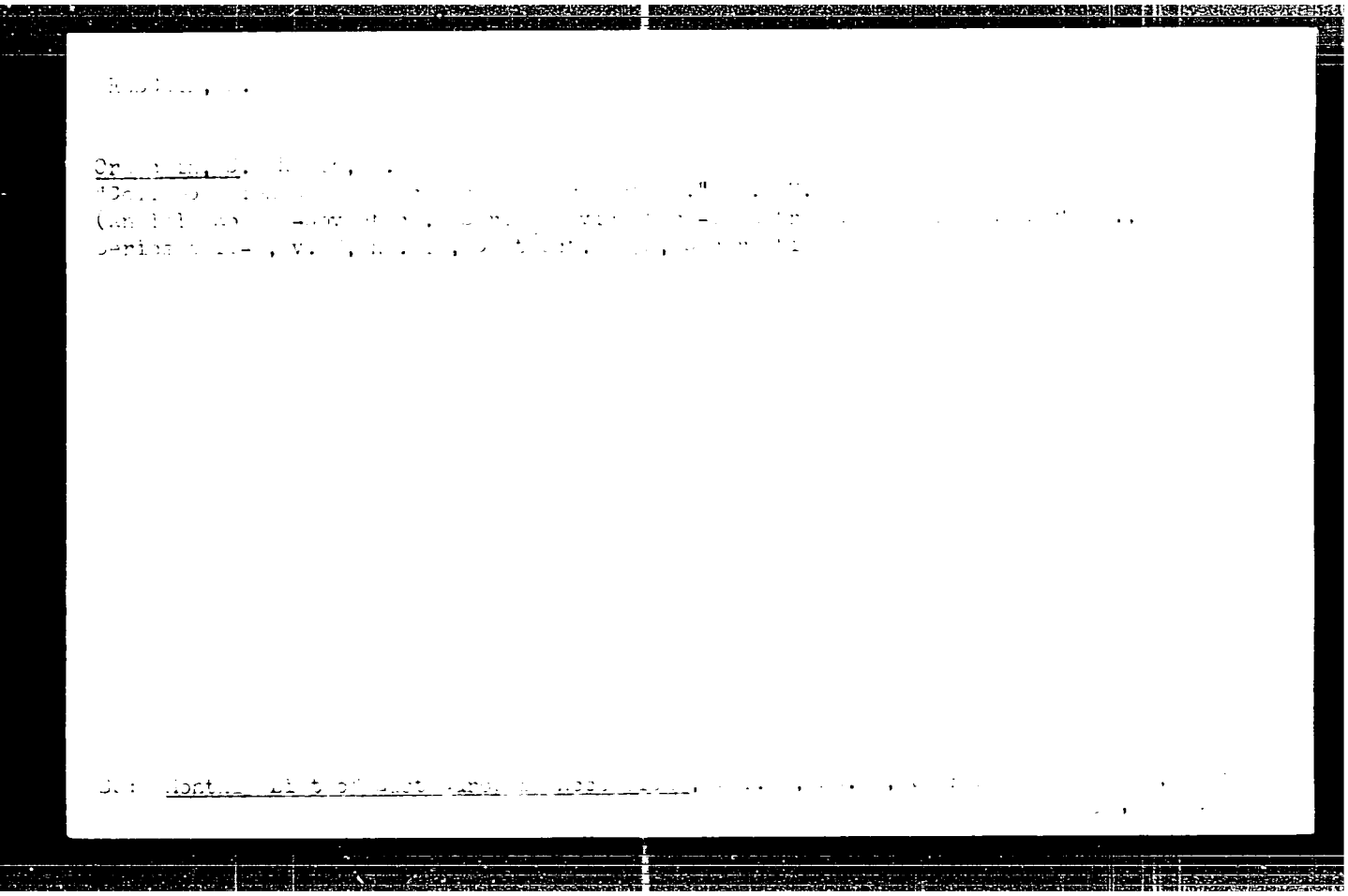


CRETCANIN-MAJHOFER . B

2-Methyl-1-azabicyclo[5.3.0]decane. B. Oreščanin-Majhofer and R. Schwerth (Research Inst. [illegible], Zagreb, Yugoslavia). *Monatsh.* 86, 777–8(1955).—1-Methyl-5-(tetrahydro-2-furyl)-1-pentanol (15 g.) in 150 cc. refluxing HOAc satd. with HBr treated 3 hrs. with a slow stream of HBr gas, concd. by distn. *in vacuo*, and the residue taken up in C_6H_6, washed with H_2O, Na_2CO_3, and H_2O, dried over $CaCl_2$, and distd., gave 33 g. *1,6,9-tribromodecane* (I), b.p. 129–30°. I (33 g.) heated 4 hrs. in an autoclave at 140° with 250 cc. 20% NH_3 in MeOH, the mixt. concd., the residue made alk. and steam distd., the distillate worked up with $PhSO_2Cl$, and the base purified via the HCl salt and distd. gave 6.5 g. *3-methyl-1-azabicyclo[5.3.0]decane*, b. 82°; *picrate*, m. 190° (from MeOH); *picrolonate*, m. 187° (from MeOH).

Jane C. Aycock

(1)



DOSKOW, I.; ORESCHKOW, W.

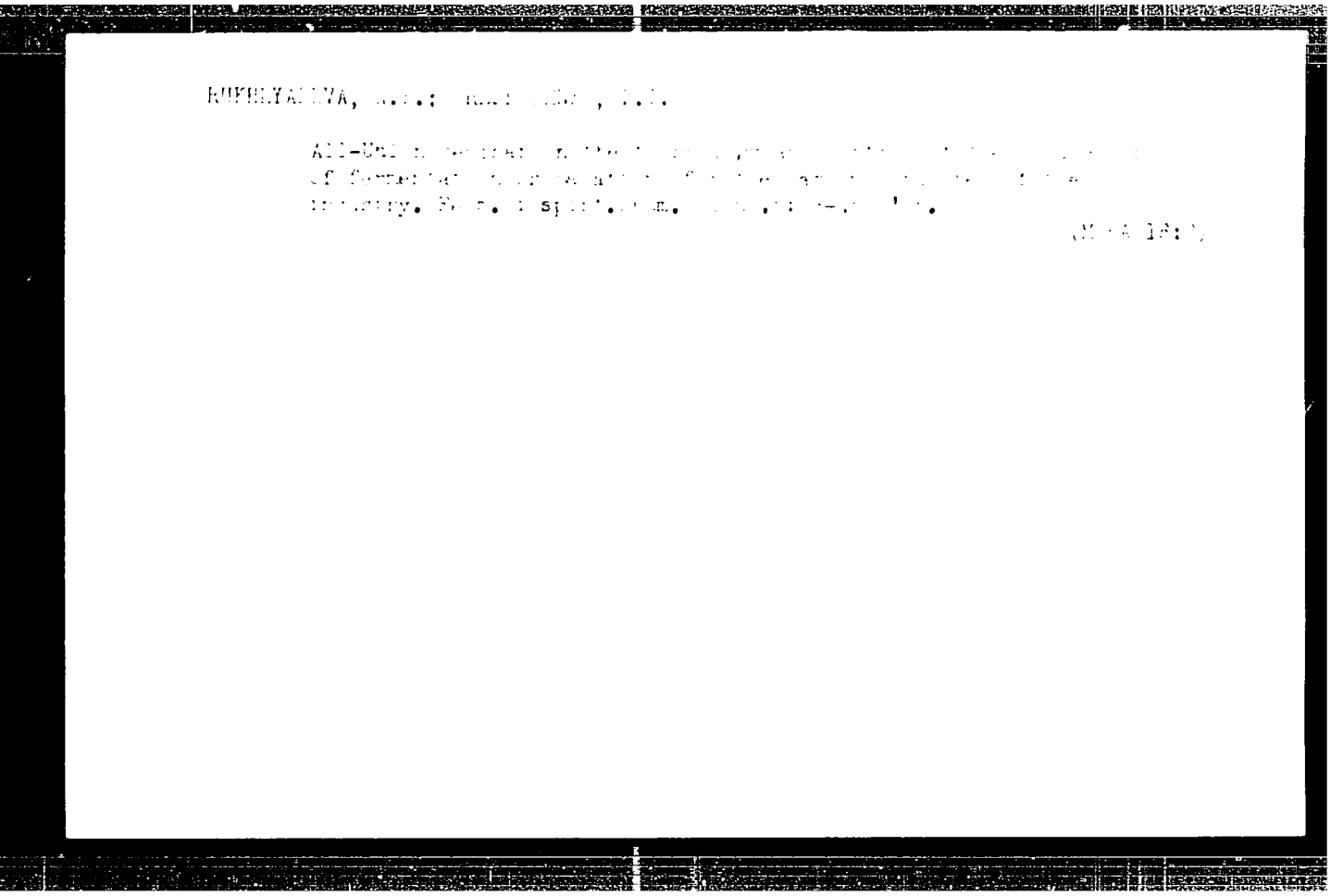
Effect of mechanical and functional aspects in electrocardiography of Valsalva's experiment. Dokl. Bolg. akad. nauk 15 no.2:227-230 '62.

1. Vorgelegt von Akademiemitglied St. Angeloff.
(RESPIRATION physiol) (ELECTROCARDIOGRAPHY)

ORESHAROV, P.

ORESHAROV, P. Fishery is a profitable industry. p. 29. Vol. 11, no. 12 Dec. 1956. KOOPERATIVNO ZEMEDELIE. Sofiia, Bulgaria

SOURCE: East European Accessions List (EEAL) Vol. 6 No. 4 April 1957



MAKSIMOV, V., podpolkovnik, kand.voyennykh nauk; ORESHCHENKOV, A., kapitan; MAKAROV, S., starshiy inzhener-leytenant; GOLOVIN, P., inzhener-podpolkovnik

What do you suggest? Av.i kosm. 45 no.8:70-71 '62. (MIRA 15:8)
(Aeronautics, Military)

YAKOVLEV, N.N., prof., d-kt'or biol. nauk; ORESHCHENKO, N.I., prepod.; KARPUKHINA, Yu.L., kand.biol. nauk; KOGOZKIN, V.A., kand. biol. nauk; KOLKOVA, A.I., kand. biol. nauk; BERZIN, A.A., MANINA, M.P., tekhn. red.

[Biochemistry] Biokhimiia. Moskva, Fizkul'tura i sport, 1964. 246 p. (MIRA 17:2)

ORESHCHUK F A

3011. SPINAL SHOCK IN AMPHIBIANS AND REPTILES (Russian text) - Oreshtchuk F. A. Dept. of Physiol., N. I. Pirogoff Med. Inst., Moscow - FIZIOL. ZH. IM. SECH. 1958, 44/7 (628-632) Illus. 5

Spinal shock was produced in amphibians (R. temporaria) and reptiles (Varanus) by total interruption of the spinal cord at T1. Appraisal of depth and duration of shock was based upon determinations of blood pressure (left aortal arch in the frog, carotid pressure in Varanus) and variations of the vasomotor reflex elicited by stimulation of the central end of the sciatic nerve. The condition of spinal shock lasted as long as 1.5 hr. in the frog. Simonson - Minneapolis, Minn. (II, 5)

ZHURAVLEV, P.I.; ORESHEK, I.F.

Strengthening of intramine economic accountability. Ugol' Ukr. 5 no.11:44 N '61. (MIRA 14:11)

1. Trest Novovolynskugol'.
(Coal mines and mining--Accounting)

ORESHENKOV, A., kapitan, voyennyy shturman 2-go klassa

His own airstrip. Starsh.-serzh. no.7:6 Jl '61. (MIRA 14:8)
(Air pilots)

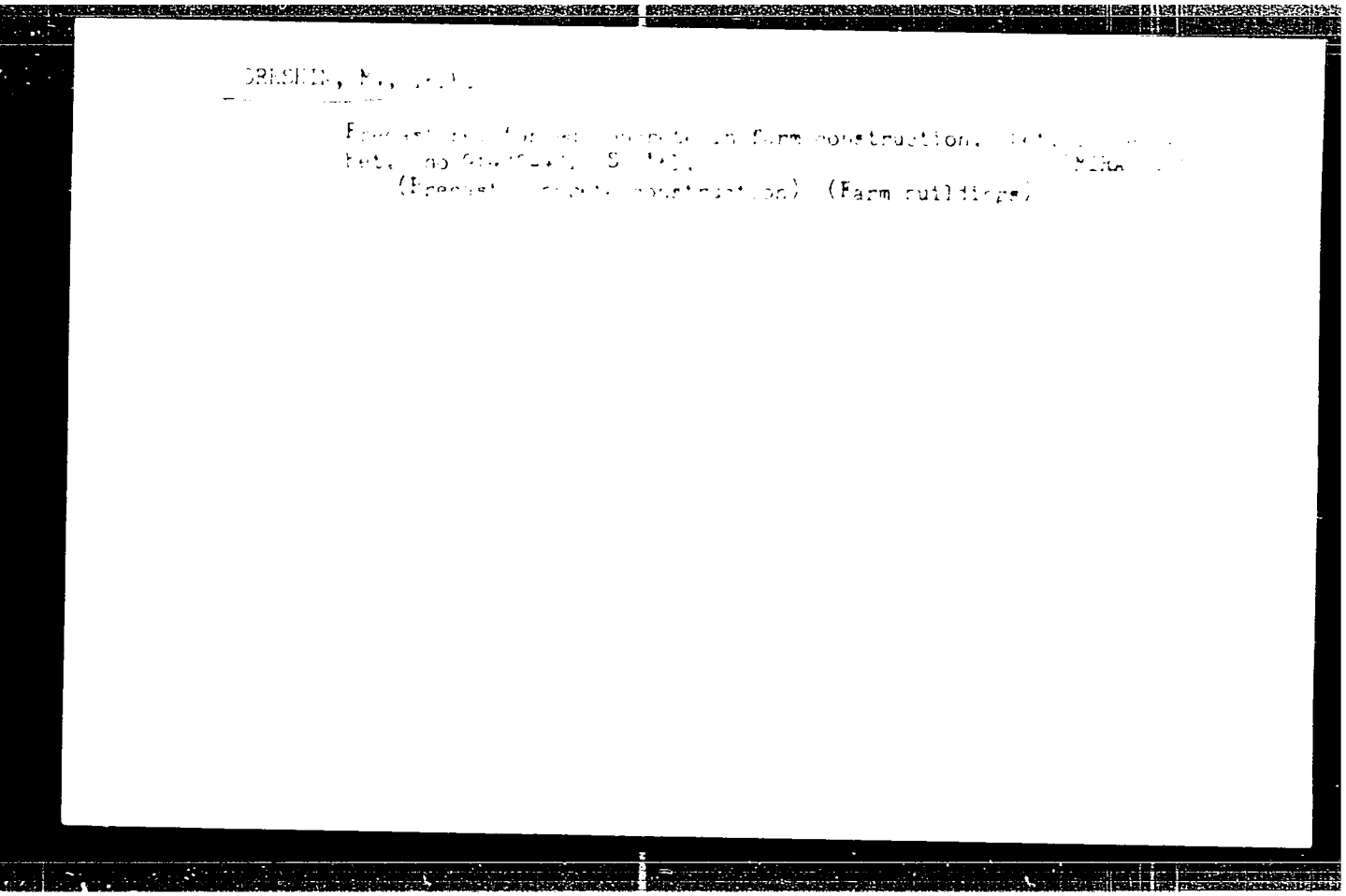
ORESHENKOV, I., inzh.; MARSHAK, S., inzh.

Reducing gear of rear axles of the "Moskvich" automobile. Avt. transp. 37 no.4:36-38 Ap '59. (MIRA 12:6)
(Automobiles--Transmission devices)

ORESHIN, Mikhail Aleksandrovich, aspirant; SHERMAN, Abram Borisovich; KASITSYNA, K.N., inzh., red.

[Manufacturing and assembling prefabricated units for farm buildings of arch and frame design] Izgotovlenie i montazh sbornykh detalei sel'skokhoziaistvennykh zdanii arochnoi i ramnoi konstruktsii. Moskva, Gosstroiizdat, 1961. 37 p. (MIRA 16:8)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut organizatsii, mekhanizatsii i tekhnicheskoy pomoshchi stroitel'stvu. 2. Sektor organizatsii sel'skokhozyaystvennogo stroitel'stva Instituta organizatsii, mekhanizatsii i tekhnicheskoy pomoshchi stroitel'stvu Akademii stroitel'stva i arkhitektury SSSR (for Oreshin). 3. Glavnyy inzhener zavoda zhelezobetonnykh izdeliy tresta "Saratovoblstroy" (for Sherman).
(Farm buildings) (Buildings, Prefabricated)



ORESHIN, M., inzh.

Transporting the parts of arched and framed cow barns. Sel'stroi. 16 no.5:7-8 My '61. (MIRA 14:6)
(Concrete products--Transportation)

ORESHIN, M., inzh.; KACHANOV, P., inzh.

Rural buildings made of reinforced concrete elements.
Sel'. stroi. no.10:7-9 O '6<. (MIRA 15:11)
(Farm buildings)
(Precast concrete construction)

ORESHIN, M.A., inzh.; [illegible]

Methods of improving the use of cranes in agricultural construction. [illegible] no.8:5-8 Ag '63.
(MIRA 16:11)

ORESHIN, P.

In a leather factory. Pozn. delo 8 no.9:5 S '62.
(MIRA 16:11)

1. Glavnyy inzh Kazanskogo kozhevennogo zavoda "Kzyl kunche", predsedatel' pozharno-tekhnicheskoy komissii zavoda.

CRESHINA, A. F.

CRESHINA, A. F. -- "An experiment in the [illegible] characteristics of the conditions of use of [illegible] beaches." Min Health [illegible]. Leningrad Sanitary-Hygiene Med Inst. Leningrad, 1956. (Dissertation for the degree of Candidate in Medical Sciences).

So.: Knizhnaya Letopis', No. 2, 1957.

2

L 6467-66 EWT(m)/EPF(c)/ETC/EPF(n)-2/EWG(m) WW/DM
ACCESSION NR: AP5019819 UR/0089/65/019/001/0086/0089
621.039.58

AUTHOR: Ramzayev, P. V.; Belyayeva, I. A.; Gus'kova, V. M.; Ibatullin, M. G.; Konstantinov, Yu. O.; Nikolayev, S. P.; Oreshina, A. F.

TITLE: Radiation conditions near the VVR-M nuclear reactor

SOURCE: Atomnaya energiya, v. 19, no. 1, 1965, 86-89

TOPIC TAGS: argon, atmospheric contamination, radiation dosimetry, radiation hazard, radiation protection, Gamma background, radioactive waste disposal

ABSTRACT: The article deals with the determination of the concentration of radioactive waste in the atmosphere near research reactors. It is shown first that if the fuel-element cladding is hermetically sealed and the aerosols are effectively trapped, the radioactivity in the surrounding air is due for the most part to Ar^{41} (disregarding the very slight oxygen activity). The chemical inertness of the argon prevents its accumulation in the organism, its dangerous effects are due to its external γ radiation. This, on the other hand, facilitates its monitoring and prevention of harm to the population. The authors have measured the radioactive contamination of the air around the VVR-M reactor operating at 10 MW power, over an area of a 20-km radius around the reactor. No radioactive fission products,

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ACCESSION NR: AP5019819

which might appear if the fuel-element cladding is not hermetically sealed, were observed. The intensities of fallout of long-lived radioactive isotopes (total β activity and Sr^{90}) were the same near the reactor as in other control points, and were governed by global fallout conditions. The maximum γ-ray dose intensity was registered at distances 400 meters from the reactor chimney axis and amounted to 380 microrad/hr. Even under the worse conditions the limit of the maximum permissible dose (50 mber/yr) was about 1 km from the reactor on the windward side. The actual dose was much less. The authors reason that under the most stringent conditions, the permissible hourly dose intensity must not be exceeded in the guarded safety zone around the reactor, and point out that in the case of the VVR-M reactor the limit of hourly maximum dose intensity extends over distances 3--4 times larger than the limit of the maximum annual dose, and that future reactor designs must take this circumstance into account. Orig. art. has: 2 figures and 1 table.

ASSOCIATION: none
SUBMITTED: 20Jul64
NR REF SOV: 005
ENCL: 00
OTHER: 000
SUB CODE: NP

aw
Card 2/2

AKULOV, V.V., kand.geogr.nauk; BABUSHKIN, L.N., doktor geogr.nauk; ORESHINA, L.M.; SKVORTSOV, Yu.A., doktor geol.-mineral.nauk; PETROV, N.P., kand.geol.-mineral.nauk; CHERNEVSKIY, N.N.; KRYLOV, M.M., doktor geol.-mineral.nauk; KHASANOV, A.S.; BEDER, B.A., kand.geol.-mineral.nauk; KIMBERG, N.V., kand. sel'skokhoz.nauk; SUCHKOV, S.P.; GLAGOLEVA, A.F.; PERVUSHINA-GROSHEVA, A.N.; VERNIK, R.S., kand.biol.nauk; MOMOTOV, I.F.; GRANITOV, I.I., kand.biol.nauk; SALIKHBAYEV, Kh.S., kand. biolog.nauk; STEPANOVA, N.A., kand.biolog.nauk; YAKHONTOV, V.V.; DAVLETSHINA, A.G., kand.biolog.nauk; MURATBEKOV, Ya.M., kand. biolog.nauk [deceased]; KUKLINA, T.Ye.; KORZHENEVSKIY, N.L., red. [deceased]; GORBUNOV, B.V., kand.geologo-mineral.nauk, red.; DOBSKOY, P.V., red.; YAKOVENKO, Ye.P., red.izd-va; GOR'KOVAYA, Z.P., tekhn.red.

[Materials on the productive forces of Uzbekistan] Materialy po proizvoditel'nym silam Uzbekistana. Tashkent. No.10. [Natural conditions and resources of the lower reaches of Amu-Darya; Kara-Kalpak A.S.S.R. and Khorezm Province of the Uzbek S.S.R.] Prirodnye usloviia i resursy nizov'ev Amu-Dar'i; Kara-Kalpakskaia ASSR i Khorezmskaia oblast' UzSSR. 1959. 351 p. (MIRA 13:5)

1. Akademiya nauk Uzbekskoy SSR, Tashkent. Sovet po izucheniyu proizvoditel'nykh sil. 2. Chleny-korrespondenty AN UzSSR (for Yakhontov, Korzhenevskiy).
(Amu-Darya Valley--Physical geography)

SHUL'TS, V.L.; ORESHINA, L.M.

Water balance of the Fergana Valley. Izv. AN Uz. SSR. Ser. tekh. nauk no.4:72-81 '59. (MIRA 13:1)

1. Institut vodnykh problem i gidrotekhniki AN UzSSR.
(Fergana--Water supply)

SHUL'TS, V.L.; AKHMEDOV, G.A.; OLESHINA, L.M.; RUBINOVA, F.E.

Changing the stream flow of the Syr Darya in the region of the Chardara Reservoir in connection with the development of irrigation. Izv.AN Uz.SSR. Ser.tekh.nauk no.2:20-31 '61. (MIRA 14:3)
(Syr Darya Valley—Water resources development)

ORESHINA, V.

Proof of the basic theorem of [illegible] geometry. [illegible]
MGPI 96:283-286 '60.

(Axonometric proje[illegible]

ACCESSION NR: AP4020313 S/0302/64/000/001/0028/0031

AUTHOR: Derkach, V. P. (Candidate of technical sciences); Zhivkova, T. P.; Korsunskiy, V. M.; Oreshkevich, A. I.

TITLE: Luminescent matrix for photorecording images produced by electronic computers

SOURCE: Avtomatika i priborostroyeniye, no. 1, 1964, 28-31

TOPIC TAGS: luminescent matrix, computer, computer output, computer output photorecording, EL-510 phosphor, EL-460 phosphor

ABSTRACT: Experiments with recording the output information of computers on luminescent 256 x 256-element plates ("matrices") and photographing it are described. Each element is 0.5 x 0.5 mm, and the distance between elements is 0.5 mm. A line-by-line exposure is used to ensure higher speed and contrast of the plates coated with EL-510 (green) and EL-460 (blue) phosphors.

Card 1/2

ACCESSION NR: AP4020313

Characteristic curves for two types of film are given. Symbol formation as shown in Enclosure 1 permits a recording rate of 700 symbols per sec; 21 lines, 40 symbols in each line, are used. The same plates permit the recording of drawings, sketches, etc. A nonlinear-resistance powder based on CdS can be used to increase the contrast of the plates. It is claimed that a plate treated with this powder can ensure a recording rate of 10,000 symbols/sec. Orig. art. has: 5 figures, 7 formulas, and 1 table.

ASSOCIATION: Institut kibernetiki AN UkrSSR (Institute of Cybernetics, AN UkrSSR)

SUBMITTED: 00	DATE ACQ: 31Mar64	ENCL: 01
SUB CODE: CP	NO REF SOV: 001	OTHER: 000

Card 2/3

[redacted], S. V. (Cand. Tech. Sci.

"New System of Regulation of Asynchronous Motors with the Electromagnetic Amplifier,"

paper read at the Session of the Acad. Sci. [redacted], on Scientific Problems of Automatic Production, 15-20 October 1956.

Avtomatika i telemekhanika, No. [redacted], 1956.

[redacted]

Oreshkevich, I. V.

Subject : USSR/Medicine

Card 1/1 Pub. 37 - 3/18

Authors : Arkhipov, A. Dotsent; Bogatkov, P. K., Kand. of Chem. Sci., Oreshkevich, I. V., Eng.; Seredirina, Kand. of Med. Sci.

Title : The problem of the purification of ventilated air from tetraethyl lead

Periodical: Gig. i san., 3, 1-16, Mar 1955

Abstracts: Describes different methods, filters and solutions used for air purification and discusses their respective efficiency in eliminating the toxic effect of T. E. L. Tables, diagram.

Institution: Gor'kiy Institute of Industrial Hygiene and Occupational Diseases of the Ministry of Health of the USSR

Submitted : 0 6, 1954

K

USSR/Pharmacology. Pharma[illegible] Toxicology. General Problems.

Abs Jour : Referat Zhur - Biol., No. [illegible], 1958, [illegible]

Author : Oreshkevich, S.A.
Inst : Gorkovsk. Med. Inst'
Title : New Native Medicinal Preparations.

Orig Pub : Gorkiy, 1956, 8 p.

Abstract : No abstract.

Card 1/1 - 4 -

BATUNINA, V.Ya.; ORESHKEVICH, S.A. (Gor'kiy)

Effect of birch white rot callus and camphor on the development of sarcomas in white rats following the administration of 9,10-dimethyl-1,2-benzanthracene. Pat.fiziol. i eksp.terap. 3 no.1:75 Ja-F '59. (MIRA 12:2)

1. Iz kafedry patologicheskoy fiziologii (ispolnyayushchiy obyazannosti zaveduyushchego - dots. V.Ya. Batunina) i kafedry farmakologii (zav. - prof. N.P. Sinitsyn) Gor'kovskogo meditsinskogo instituta im. S.M. Kirova.
(BENZANTHRACENE) (TUMORS) (CAMPHOR)

ORESHKEVICH, S.A.

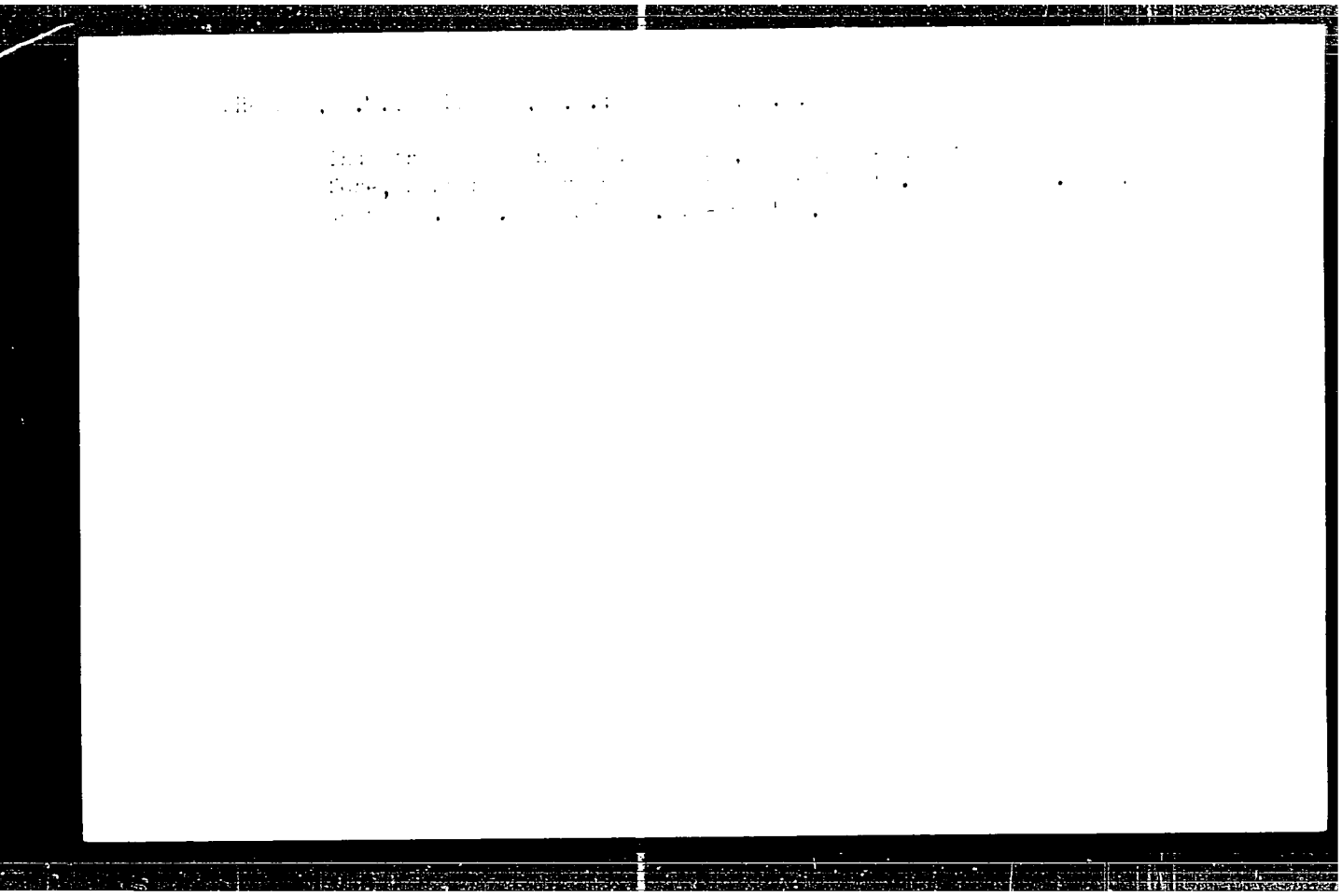
Effect of stimulation of the sympathetic nerve on the ionic composition of frog skeletal muscle perfusate. Biul. eksp. biol. med. 47 no.5: 8-10 My'59. (MIRA 12:7)

1. Iz farmakologicheskoy laboratorii (zav. - prof. N.P. Sinitsyn) Gor'kovskogo meditsinskogo instituta imeni S.M. Kirova. Predstavlena deystvitel'nym chlenom AMN SSSR V.V. Zakusovym.

(NERVOUS SYSTEM, SYMPATHETIC, physiol.
eff. of stimulation on ionic composition of frog musc. perfusate (Rus))
(MUSCLES, physiol.
eff. of sympathetic stimulation on ionic composition of frog musc. perfusate (Rus))

ORESHKIN, A.

The five-year plan is completed on schedule. Avt. transp. 33 no.5:8 My '55. (MLRA 8:8)
(Estonia--Transportation, Automotive)



ORESHKIN, [illegible]

Liteynoye proizvodstvo (Foundry [illegible]) [illegible] L[illegible]skiy, [illegible] Oreshkin, [illegible] S[illegible]kharchuk. Pod red. [illegible] Oreshkina. Moskva, [illegible], 1[illegible]. [illegible] illus., tables. "Literatura" at end of each chapter.

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1[illegible]. 11
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APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R0012381

ORESHKIN, B.M., inzhener.

Traffic capacity of ferryboat transport. Avt.dor.19 no.5:14-16 My '56. (MLRA 9:8)

(Ferries)

CRESHKIN, B.M.

ORESHKIN, B.M., kand.tekhn.nauk.

Comparison of various methods of crossing water barriers. Avt.dor. 19 no.12:24-26 D '56. (MIRA 10:10)
(Bridges) (Ferries)

ORESHKIN, B.M., kandidat tekhnicheskikh nauk.

Efficiency of precast reinforced concrete construction elements.
Avt. dor. [illegible] May '57. (MLRA 10:8)
Bridges, Concrete)

ORESHKIN, B.M., kandidat tekhnicheskikh nauk.

Technical and economical bases for designing crossings over water currents. Avt.dor. 20 no.9(179):26-27 S '57. (MIRA 10:10)
(Road construction)

ORESHKIN, Boris Mikhaylovich, dots., kand. tekhn. nauk; SLAVUTSKIY, A.K., red.; KHRUSTALEVA, N.I., red. izd-va; GARINA, T.D., tekhn. red.

[Organization of earthwork in road construction] Organizatsiia proizvodstva zemlianykh rabot pri stroitel'stve avtomobil'nykh dorog. Moskva, Gos. izd-vo "Vysshaia shkola," 1961. 242 p. (MIRA 15:3)
(Earthwork) (Road construction)

ORESHKIN, Boris Mikhaylovich, dots., kand. tekhn. nauk; GU A.I., M.S., nauchn. red.; AKHUSTALEVA, N.I., red.

[Organization and planning of road construction] Organizatsiia i planirovanie dorozhnogo stroitel'stva. Moskva, Vysshaia shkola, 1963. 310 p. (MIRA 17:5)

KOPIT, Boris Savel'yevich; ORESHKIN, Boris Sergeyevich; MYAGKOV, M.N., red.; RAKOV, S.I., tekhn.red.

[Forest conveyor] Lesnoi konveier. Moskva, Izd-vo VTaSPS, Profizdat, 1959. 110 p. (MIRA 13:2)
(Lumbering--Machinery)

ORESHKIN, B.

On the right path. Okhr.truda i sots.strakh. no.10: 73-74
O '59. (MIRA 13:2)
(Forestry engineering--Safety measures)

ORESHKIN, D., inzh.; TIKHONENKO, A.

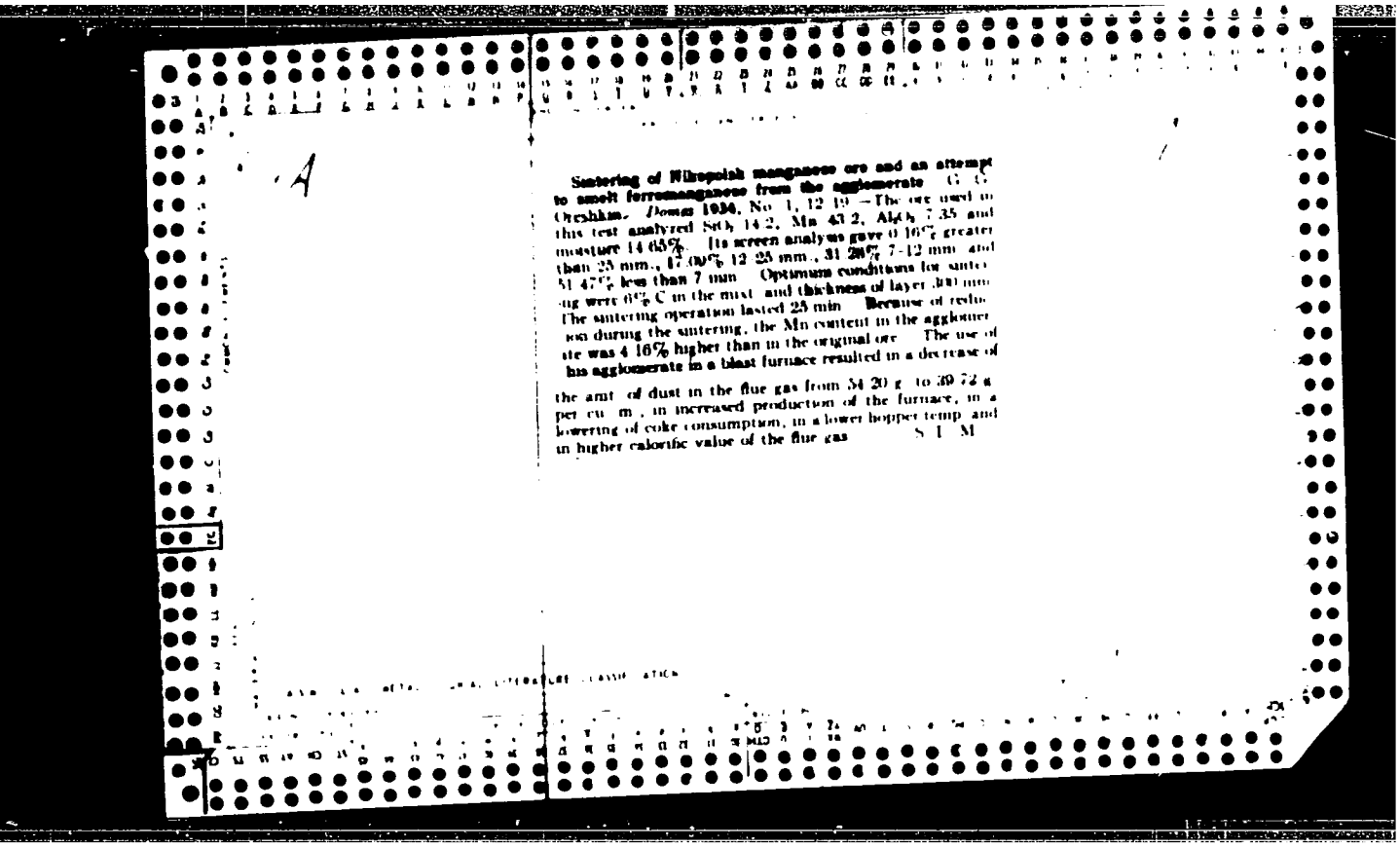
Untapped resources in the oils and fats industry of Uzbekistan.
Masl.-zhir.prom. 25 no.11:5-6 '59. (MIRA 13:3)

1. Uch-Kurganskiy maslookstraktsionnyy zavod.
(Uzbekistan--Oil industries)

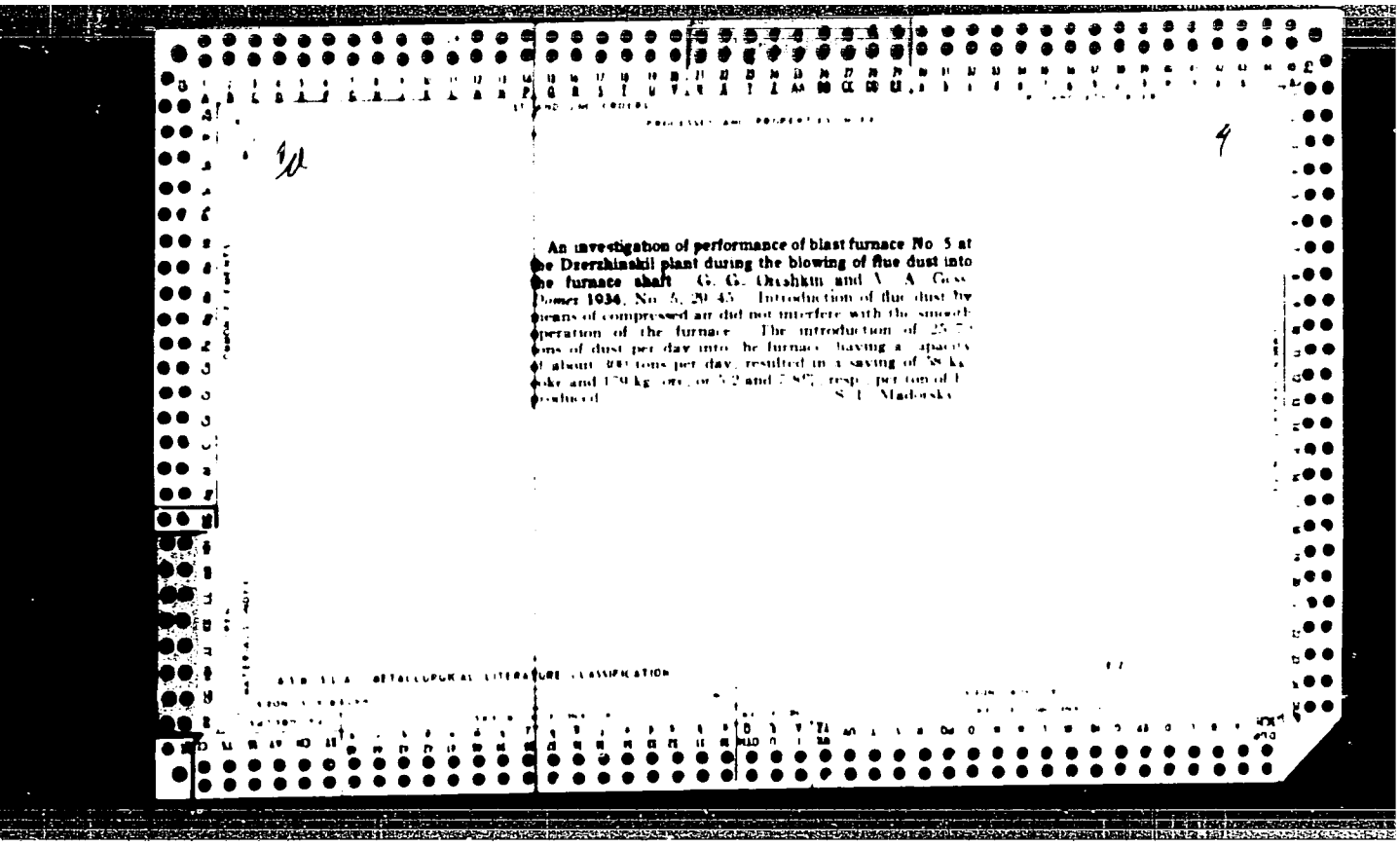
ISMAILOV, I.M., inzh.; GAVRILENKO, I.V., kand.tekhn.nauk; Prinimali uchastiye: KUTYAVIN, S.M.; ORESHKIN, D.K.; TADZHIBAYEV, G.T.; AKHUNDZHANOV, A.I.; TONKIKH, P.I.; PANCHENKO, A.I.; FEL'DSHER, M.G.; VORONINA, L.D.

Lowering the solvent content in seed meal before treatment in evaporators. Masl.-zhir.prom. 26 no.10:7-13 O '60. (MIRA 13:10)

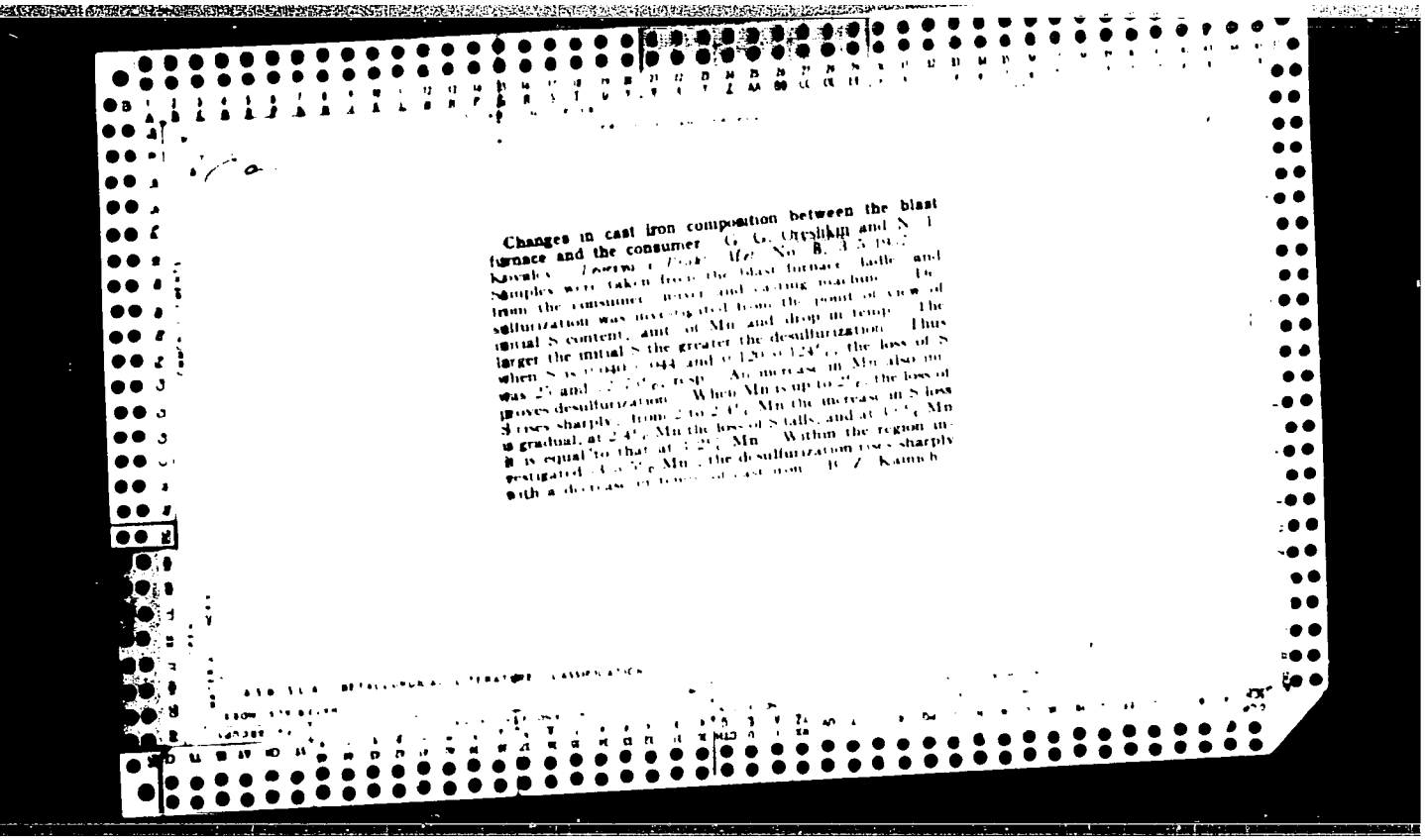
1. Vsesoyuznyy nauchno-issledovatel'skiy institut zhirov (for Ismailov, Gavrilenko). 2. Uch-Kurganskiy masloekstraksionyy zavod (for Kutyavin, Oreshkin, Tadzhibayev). 3. Srednеaziatskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta zhirov (for Panchenko, Fel'dsher, Voronina). (Uch-Kurgan--Oil industries--Equipment and supplies)



Sintering of Nikopolsk manganese ore and an attempt to smelt ferromanganese from the agglomerate G. G. Orekhkin. *Domna* **1934**, No. 1, 12-19.—The ore used in this test analyzed SiO$_2$ 14.2, Mn 43.2, Al$_2$O$_3$ 7.35 and moisture 14.65%. Its screen analysis gave 0.16% greater than 25 mm., 17.00% 12-25 mm., 31.20% 7-12 mm. and 51.47% less than 7 mm. Optimum conditions for sintering were 0% C in the mix and thickness of layer 300 mm. The sintering operation lasted 25 min. Because of reduction during the sintering, the Mn content in the agglomerate was 4.16% higher than in the original ore. The use of this agglomerate in a blast furnace resulted in a decrease of the amt. of dust in the flue gas from 54.20 g. to 39.72 g. per cu. m., in increased production of the furnace, in a lowering of coke consumption, in a lower hopper temp. and in higher calorific value of the flue gas. S. L. M.



An investigation of performance of blast furnace No 5 at
he Dzerzhinskii plant during the blowing of flue dust into
he furnace shaft G. G. Urushkin and V. A. Gus
Donets 1934, No 5, 29-45 Introduction of flue dust by
eans of compressed air did not interfere with the smooth
peration of the furnace The introduction of 25
ons of dust per day into the furnace having a capacity
f about 200 tons per day, resulted in a saving of 58 kg
oke and 170 kg ore, or 5.2 and 7.8%, resp., per ton of I
roduced S. L. Madovskii



Changes in cast iron composition between the blast furnace and the consumer

PROCESSES AND PROPERTIES INDEX

9

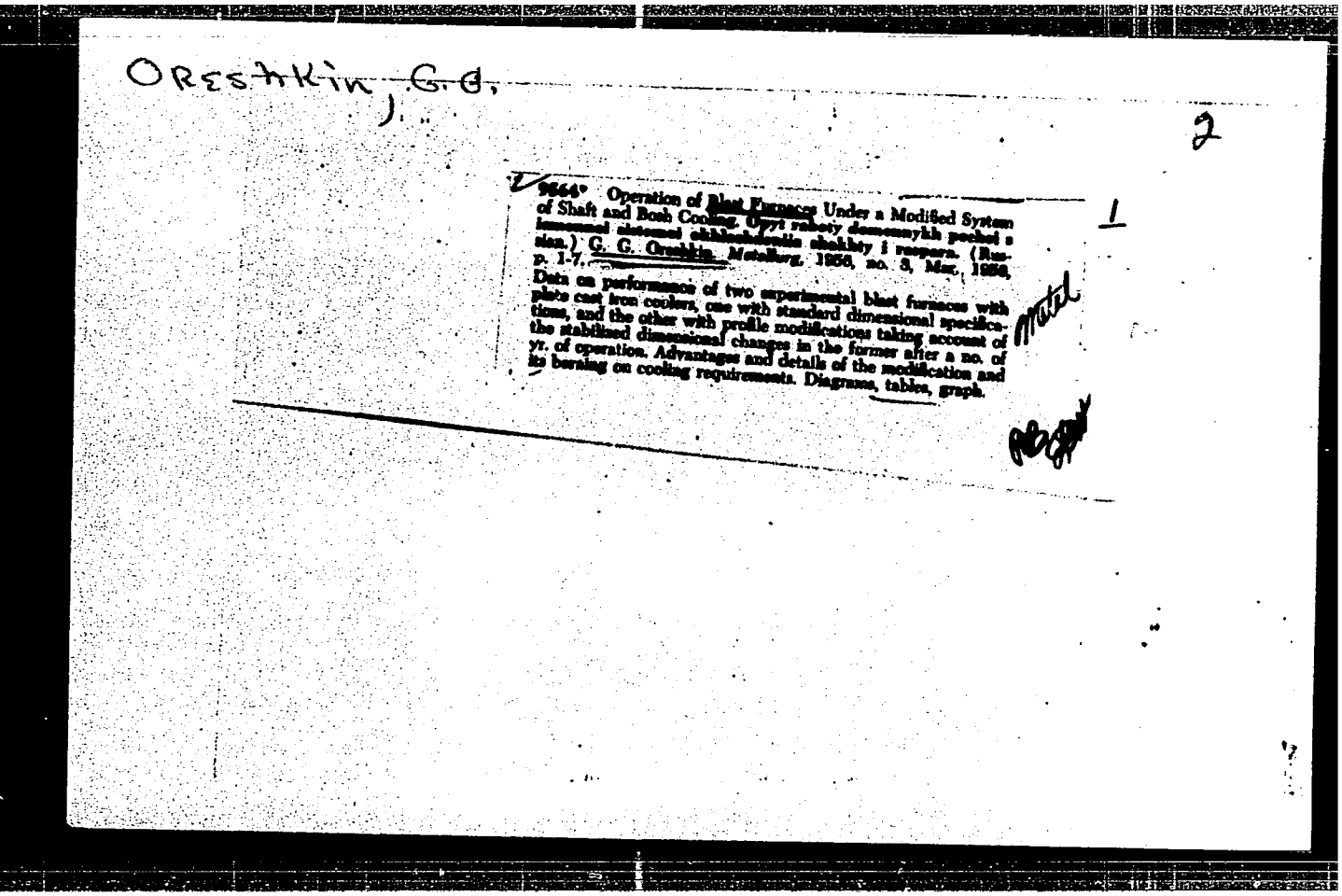
Smelting ferro alloys in large blast furnaces V. Gol'mshtok, G. Otrubkin and V. Gess. Stal J. N. ... 8-11(1943). On the basis of their experiences with smelting ferro alloys in a metallurgical plant the authors conclude that ferro alloy can be smelted in large blast furnaces if these precautions are taken: (1) The furnaces ... fed uninterruptedly. Idling causes filling up of the h... which disrupts the normal run of the furnace ... required blast is 2000-500 cu. m. per min. ... should be preheated as high as possible. ... The ... must be run out regularly to avoid its overflow ... hearth. (5) The cooling system should be in good ... to prevent water entering the furnace. (6) The ... in the mouth of the furnace should not be over 150 ... this purpose it is advisable to moisten the entire charge, coke included. (7) The furnace should not be tapped more than 3-4 times a day in order to avoid loss of ... (8) Each furnace should be provided with special la... In addn. to these general requirements there are special requirements for various ferro alloys. For FeSi ... Dinas brick should be avoided in the charge. For FeMn: (a) Crush the ore to 70-80 mm. (b) Keep the CaO:SiO₂ ratio in the slag at 1.0-1.6. (c) Keep the SiO₂ content at the upper limit of GOST and at no time lower than ... (d) Prevent freezing of the ore in hoppers and its sticking to the walls. M. Hos...

METALLURGICAL LITERATURE CLASSIFICATION

PLOTKIN, N.Z., kandidat tekhnicheskikh nauk, dotsent; ORESHKIN, G.G., kandidat tekhnicheskikh nauk; RUDKOV, A.K., inzhener.

New methods of testing the mechanical properties of an agglomerate. Stal' 15 no.10:887-891 O '55. (MLRA 9:1)

1.Dneprodzerzhinskiy metallurgicheskiy institut i zavod imeni Dzerzhinskogo.
(Dneprodzerzhinsk--Blast furnaces) (Metals--Testing)



Oreshkin, G. G.

2

9864* Operation of Blast Furnace Under a Modified System of Shaft and Bosh Cooling. Opyt raboty domennykh pechei s izmenennoi sistemoi okhlazhdeniia shakhty i raspara. (Russian.) G. G. Oreshkin. Metallurg, 1956, no. 3, Mar., 1956, p. 1-7,

Data on performance of two experimental blast furnaces with plate cast iron coolers, one with standard dimensional specifications, and the other with profile modifications taking account of the stabilized dimensional changes in the former after a no. of yr. of operation. Advantages and details of the modification and its bearing on cooling requirements. Diagrams, tables, graph.

1

Metal

ORESHKIN, G. G

Blowing of powdered coal through tuyères into the hearth of blast furnaces. V. I. Lotiaev, G. G. Oreshkin, I. G. Polovchenko, A. A. Sorokin, and I. N. Kardaevich. (Met. Inst. and Works, Dneprodzerzhinsk). *Metallurg*, 1956, No. 4, 10–12.—Powd. anthracite coal containing 10–14% ash and 1.7–3% S, heat content 6000 cal./kg., was successfully blown-in in a small exptl. furnace smelting iron and ferrosilicon. The ash contained <50% SiO_2 and 23% Al_2O_3 and was relatively easily melted; 92–4% of the coal particles were less than 0.086 mm. Blowing at the rate of 1000 kg./hr. (16% moisture) of powd. coal with 0.5% of the total air stream with a mean temp. of 800° was necessary to raise the stream temp. 50–60°. The Si concn. of iron did not change, while S dropped from 0.03–0.04 to 0.02–0.025%. Blown-in pulverized coal can replace 5–6% of total coke.

V. N. Bednarski

5

ORESHKIN, G. G.

Blowing coal dust into the hearth of blast furnaces. V. I. Loginov, G. G. Oreshkin, I. G. Polovchenko, A. A. Sorokin, and I. N. Kardasevich (Derzhinskii Met. Plant, Dneptoderzhinsk). *Stal'* 16, 975–82(1956); cf. *C.A.* 50, 10620a.—Powd. anthracite refuse carrying 18% ash and 1.7–3.0% S was blown into the hearth of a 427-cu. m. furnace through 1–2 tuyères from a tank. In a 4-day run up to 20 tons of dust was blown in 1 hr. while raising blast temp. to 800° in place of conventional 700°, and appropriately adjusting the coke charge. The furnace, which ran on FeSi, operated smoothly, coke consumption and S decreased, while slag basicity and Si content of FeSi increased. The dust replaced 5–6% of coke with its equal amt. It began to burn directly after leaving the tuyère nozzle, and the temp. of the combustion zone decreased inwardly. J. D. Gat

AUTHOR: Orestkin, G. [illegible]

TITLE: The Decisions of the Party Should be Realised (Pretvorit' v zhizn' resheniya partii)

PERIODICAL: Stal', 1959, Nr 3, pp 197 - 198 (USSR)

ABSTRACT: The programme of the development of the iron and steel industry during 1959-1965 approved by the 21st Congress of the Communist Party is briefly outlined. In 1965, the output of the main products should reach the following figures (percent increase on the 1958 figures given in brackets): pig iron 65-70 million tons (64-77%), steel 86-91 million tons (53-66%), rolled products 65-70 million tons (53-63%) and iron ore 150-160 million tons (230-245 million tons raw ore). In order to fulfil the plan, a considerable increase in the output from the existing units is necessary. A considerable effort in this direction has been and is being made by many iron and steel works. As an example, the progress achieved at the Dzerzhinsky Works which celebrates this year its 70th anniversary is quoted in general terms. Main points: a new plant for the calcination of limestone (55-60 million tons/year) which is added directly to the sinter mix for the intensification

Card1/2 of the sintering process (note: "million" is probably a

The Decisions of the Party Should be Realized

printing error; the value is probably 55 000 to 60 000 tons/year), tests on the production of basic iron using blast enriched with oxygen and natural gas which increased the output by 9-10% and decreased the coke rate by 7-8%; basic treatment of bessemer rail steel, an improved control of stopping blowing bessemer converters so as to produce steel of a required carbon content; an experimental automatic control of the open-hearth smelting process; experiments in replacing lump ore in open-hearth furnaces with a high basicity sinter; application of compressed air for the intensification of the open-hearth process; replacement of cast-iron rolls at rolling mills with rolls made from modular iron; an increase in the durability of steel rolls by facing with hard alloys; production of a number of economical (lightened) profiles; rolling of some profiles with only minus tolerances, an increase in the degree of automation in the production of power.

ASSOCIATION: Zavod im. Dzerzhinskogo (im. Dzerzhinsky Works).

Card 2/2

AUTHORS: Oreshkin, G.G., Pletkin, ... Z ... and R...k..., A...

TITLE: ~~Continuous~~ Calcining of Limestone for Adding to Sinter Mixes (Nepreryvnyy obzhig izvestnyaka dlya aglomeratsionnoy shikhty)

PERIODICAL: Stal', 1959, Nr 3, pp 197 - 203 (USSR)

ABSTRACT: In 1957, the authors developed at the Dzerzhinskiy Works a scheme for the calcination of limestone directly on the sinter plant by installing a "round calcining machine" OPR (first letters of the authors' names) in the mix preparation section. The design of the machine is shown in Figure 1. The machine consists of a rotating wind box in the form of a cut-off cone, with the diameter of the large base carrying the sintering grate from 4 - 8 m with a corresponding working surface area from 10 to 40 m^2. The ignition of the mix for calcining consisting of crushed limestone 0-10 mm (oversize of crushed lime after screening-off -3 mm fraction for adding to sinter mixes), crushed coke breeze (about 10%) and moisture (3-4%), is done by a row of burners made from tubes 20 mm in diameter with flattened outlets (4-5 mm) fired with coke-oven gas. The calcined lime is transferred to a feeding

Card1/4

Continucus Calcining of Limestone for Adding to Sinter Mixes

table from which it is added to the sinter mix. In order that hot lime (with a temperature of the individual pieces of up to 1 200 - 1 300 °C) [illegible] not fall directly onto the conveyor belt the diameter of the feeding table was increased to 3 m and fitted with two spirals and two knives. The first knife transfers limestone onto the convevor carrying the sinter mix while the second knife transfers the hot lime on top of the limestone layer. In order to prevent the formation of dust at the discharge of the calcined lime approximately 3/4 of the calcination machine was enclosed into a casing so that the dust is sucked into the calcining layer. Similarly, the place of discharge onto the conveyor lever was closed and the casing connected to the exhaust tube. The dust formed during calcining is trapped in a dust catcher (bag) from which it is passed to the feeding table carrying calcined limestone. The position of the calcining machine in the mix preparation department is shown in Figure 2. The influence of such a on the calcining process was investigated on a laboratory-scale apparatus and the results obtained are given in Figure 4. Similar machines with a working area of

Card2/4

Continuous Calcining of Limestone for Adding t[illegible]

10 and 15 m^2 are being designed for other sinter plants. An improved design of the machine with upward suction is shown in Figure 5. It is planned that at the Makeyevka Works the calcined lime will be discharged directly into the mixing drum and at the "Krivorozhstal" (Krivoy Rog) and "Zaporozhstal'" Works directly onto the conveyor belt already carrying the remaining components of the sinter mix. On the basis of prolonged experience in the operation of the calcining machine the following conclusions are drawn: a) it is advantageous to calcine limestone of the size 0-10 mm (not larger than 15 mm) from oversize after screening -3 mm fraction for the addition to the sinter mix in the raw state; b) the limestone mix should contain 8-10% of carbon and 3-4% of moisture; the size distribution of fuel should be the same as for sintering; c) it is advantageous to carry out the calcining process up to 70-80% of decarbonisation; d) the ignition of the mix can be done with coke-oven gas with a consumption of not less than 40 kcal/ton of the charge; e) for mixing the charge before calcining a worm mixer should be used; charging onto the grate is done with a swinging spout; f) the through-put of the machine of 4 m diameter and 200 mm H$_2$O suction

Card3/4

Continuous Calcining of Limestone for Adding to Sinter

is up to 150 t/day and can be considerably increased by increasing the capacity of the fan from 30 000 to 40 000 m³ and suction of up to 500 mm H_2O (5 g) as the calcined lime is added hot (800 - 900 °C) its influence on the intensification of the sintering process is higher than that of cold lime, b) on the introduction of the calcination of limestone into the sintering system, the output of sinter increased by 6.6 (by 10% if compared with the operation without calcined lime). In addition, the dust content of the lime handling plates considerably decreased, c) the cost of the machine of 10 m² working surface area is about 150 000 roubles and is recovered in a few months of operation. There are 3 figures and 3 Soviet references

ASSOCIATIONS: Zavod im. Dzerzhinskogo (im. Dzerzhinskiy Works) and Dneprodzerzhinskiy vechernyy metallurgicheskiy institut (Dneprodzerzhinsky Evening Metallurgical Institute)

Card 4/4

AUTHORS: Oreshkin, G.G. and Brilliantov, B.A., Candidates of Technical Sciences

TITLE: Reconstruction of the Blast Furnace Hearth and Hearth Bottom at the Dzerzhinskiy Works (Rekonstruktsiya gorna i leshchadi domennoy pechi zavoda im. Dzerzhinskogo)

PERIODICAL: Stal', 1959. Nr 3 pp 206 - 209 (USSR)

ABSTRACT: It is pointed out that numerous investigations (Refs. 1-4) indicated that isotherms in the centre of a conventional hearth bottom descend deep down while isotherms of a cooled hearth bottom approach its internal designed contour in shape. Therefore, it is possible to decrease the non-uniformity of stresses in the hearth bottom and thus the number and dimensions of cracks if the bottom is cooled and made from a heat-conducting material such as carbon blocks. Moreover the thickness of the bottom must be co-ordinated with its heat conductivity so that the temperature of the iron in contact with any part of the hearth bottom did not exceed 1 050 - 1 100 °C. The latter can be achieved by designing the hearth bottom in the form approaching a volume limited by two spherical sectors with a distance between them of 1.2 - 1.5 m (thickness of the hearth layer). Some possible variants

Card 1/3

Reconstruction of the Blast Furnace Hearth and Hearth [illegible] at the Dzerzhinskiy Works

of the bottom will not only remove its centre from the zone of maximum temperatures but will also decrease the mechanical degradation of the lining by convection currents. It was decided to check on the durability of a spherical hearth during the reconstruction of a furnace at the works. The design of the project is described. The general lay-out and the design of the individual hearth sectors is shown in Figure 1. The bottom and sides of the hearth up to the level of slag notches will be lined with carbon blocks. The hearth bottom (1 600 mm thick) and walls (1 200 mm thick) will be water-cooled with coolers 300 mm thick with two rows of tubes 35 mm in diameter (Figure 3). The casing of the hearth will consist of a round bottom plate, three conical and one cylindrical surfaces (Figure 2). Coolers are placed between the lining and the casing (Figure 3). The bottom cooler will have a round shape, the remaining coolers will form conical surfaces. The lining of the tuyere zone and the remaining part of the furnace will be made from chamotte bricks. A new casing is being made for the bosh and tuyere level 25 mm thick and for the rest

Card2/3

Reconstruction of the Blast Furnace hearth and [illegible]
Dzerzhinskiy Works

of the hearth 36 mm thick. The spherical hearth will be standing on a support from plates 40 mm thick, resting on reinforced concrete. The lentil will be welded to the stack casing and supported by 8 columns, the length of which will increase from 7 500 mm to 12 893 mm as the lentil will be raised by 2 213 mm. It is planned that the whole hearth and bosh will be built near to an operating furnace (total weight 1 100 tons) and then pushed into position. There are 4 figures and 4 references, 2 of which are English, 1 Soviet and 1 German.

ASSOCIATION: Zavod im. Dzerzhinskogo (im. Dzerzhinskiy Works)

Card 3/3

ORESHKIN, Georgiy Grigor'yevich; LEVCHENKO, V.Ye., otv.red.; LIBERMAN, S.S., red.izd-va; ANDREYEV, S.P., tekhn.red.

[Greater efficiency in blast-furnace operations] Voprosy ratsionalizatsii raboty domennykh pechei. Khar'kov, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii. 1960. 189 p. (MIRA 13:12)

(Blast furnaces)

BESEDIN, P.T.; ORESHKIN, G.G.; SOROKIN, A.A.; KARPUNIN, A.M.; OHEPELEV, P.M.; VASIL'YEV, A.F.; KUTSENKO, A.D.

Mastering and introducing at the Dzerzhinsk Plant normalizing and sorbitizing practices for rails along their entire length. Stal' 20 no.10:946-953 O '60. (MIRA 13:9)

1. Zavod im. Dzerzhinskogo i Ukrainskiy nauchno-issledovatel'skiy institut metallov.

(Railroads--Rails)
(Dneprodzerzkinsk--Annealing of metals)

ORESHKIN, G.G.

Carry out the resolutions of the 22d Congress of the CP
Stal' 21 no.12 [illegible] D '61.

1. Direktor metallurgicheskogo zavoda im. Dzerzhinskogo.
(Dneprodzerzhinsk--Metallurgical plants)

L 04202-67 EWT(m)/EWP(j)/T IJP(c) RM
ACC NR: AP6030022 (A) SOURCE CODE: UR/0020/66/169/005/1102/1103

AUTHOR: Oreshkin, I. A.; Chernenko, G. M.; Tinyakova, Ye. I.; Dolgoplosk, B. A. (Academician)

ORG: Institute of Petrochemical Synthesis im. A. V. Topcheviy, Academy of Sciences SSSR (Institut neftekhimicheskogo sinteza Akademii nauk SSSR)

TITLE: π-allyl derivatives of chromium and titanium as catalysts for steoreospecific polymerization of butadiene

SOURCE: AN SSSR. Doklady, v. 169, no. 5, 1966, 1102-1103

TOPIC TAGS: chromium, titanium, polymerization catalyst, polybutadiene

ABSTRACT: Stereospecific polymerization of butadiene was studied at 20-80°C using 2.7 mol/l concentration o butadiene in toluene and 0.2 mol/% (based on butadiene) of chromium and titanium tri:crotylates as catalysts. The polymerization duration was 2-68 hr. In some experiments the catalysts were supplemented with $NiCl_2$ (MR_2:$NiCl_2$ = from 1:8 to 1:24) with $TiCl_4$ (MR_2:$TiCl_4$=1:1), or with O_2 (MR_2:O_2=1:0.5). The chromium system was prepared by reacting anhydrous $CrCl_3$ with crotylmagnesiumchloride in an ether toluene mixture (1:2 by volume) at -10° to -20°C. The titanium system was prepared by reacting anhydrous $TiCl_4$ with bis-crotyl magnesium in diethyl ether solvent at -80°C; the ratios of $TiCl_4$ to R-Mg was from 5:1 to 12:1. The polymer yields varied from [illegible]

UDC: 542.952+547.64

Card 1/2

ACC NR: AP6030022

to 100%. It was found that pure $(C_4H_7)_3Cr$ or $(C_4H_7)_3Ti$ yielded a polymer with 91-93% of 1,2-units. The addition of $NiCl_2$ or TiJ_4 to either chromium or titanium triscrotonate was found to result in a polymer with 85-93% of 1,4-cis units. In the presence of O_2 or chromium oxide, the polymer showed 92.5-99% of 1,3-trans units. Orig. art has: 2 tables.

SUB CODE: 07/ SUBM DATE: 18Jan66/ ORIG REF: 004/ OTH REF: 007

Card 2/2

ORESHKIN, K., kapitan 1 ranga.

Using a magnetic compass on a demagnetized ship. Mor. flot 18
no.5:7 My '58. (MIRA 11:6)
(Magnetism of ships) (Compass)

ORESHKIN, K., kand.voyenno-morskikh nauk

Possibility of utilizing infrared techniques in ship handling on rivers. Rech.transp. 20 no.6:55-56 Je '61. (MIRA 14:6)
(Inland navigation) (Infrared rays)

BARANOV, Yu., dotsent; ORESHKIN, K., starshiy nauchnyy sotrudnik

Infrared techniques to serve the merchant marine. Mor. flot 22 no.6:11-13 Je '62. (MIRA 15:7)

1. Leningradskoye vysshoye inzhenernoye morskoye uchilishche im. admirala Makarova (for Baranov). 2. Leningradskiy institut vodnogo transporta (for Oreshkin).
(Infrared rays--Industrial applications)
(Merchant marine--Equipment and supplies)

OREŠHKIN, K., starshiy nauchnyy sotrudnik

Use of infrared apparatuses on river ar[illegible]s. Mech. transp. 22 no.[illegible]: 43-45 Jl '63. (MIRA 16:6)

1. Leningradskiy institut vodnogo transporta.
(Inland navigation)
(Infrared rays in navigation)

ORESHKIN, K.P., starshiy nauchnyy sotrudnik

Principles underlying the design of a [illegible] reinforced by [illegible] for rivercraft. Trudy LIVT no.71:47-53 '64. (MIPA 18:10)

ACC NR: AR6034817 (N) SOURCE CODE: UR/0398/66/000/008/V018/V018

AUTHOR: Oreshkin, K. P.

TITLE: Ensuring night sailing of hydrofoils

SOURCE: Ref. zh. vodnyy transport, Abs. 8V128

REF SOURCE: Inform. sb. Tsentr. n.-i. in-t morsk. flota, no. 31(141), 1965, 31-38

TOPIC TAGS: hydrofoil, ship navigation, radar, ship, navigation equip
/Raketa hydrofoil

ABSTRACT: It is noted that hydrofoils are not used effectively enough owing to the lack of facilities for safe navigation at night. A series of tests made in 1963 on a ship of the "Raketa" model is described, and on this basis preliminary conclusions are drawn on the possibility of using searchlights, infrared equipment, and radar stations to guide the ships. Observations have shown that under certain visibility conditions, infrared equipment, can increase the distance at which objects can be sighted as compared to observations made with optical instruments and the

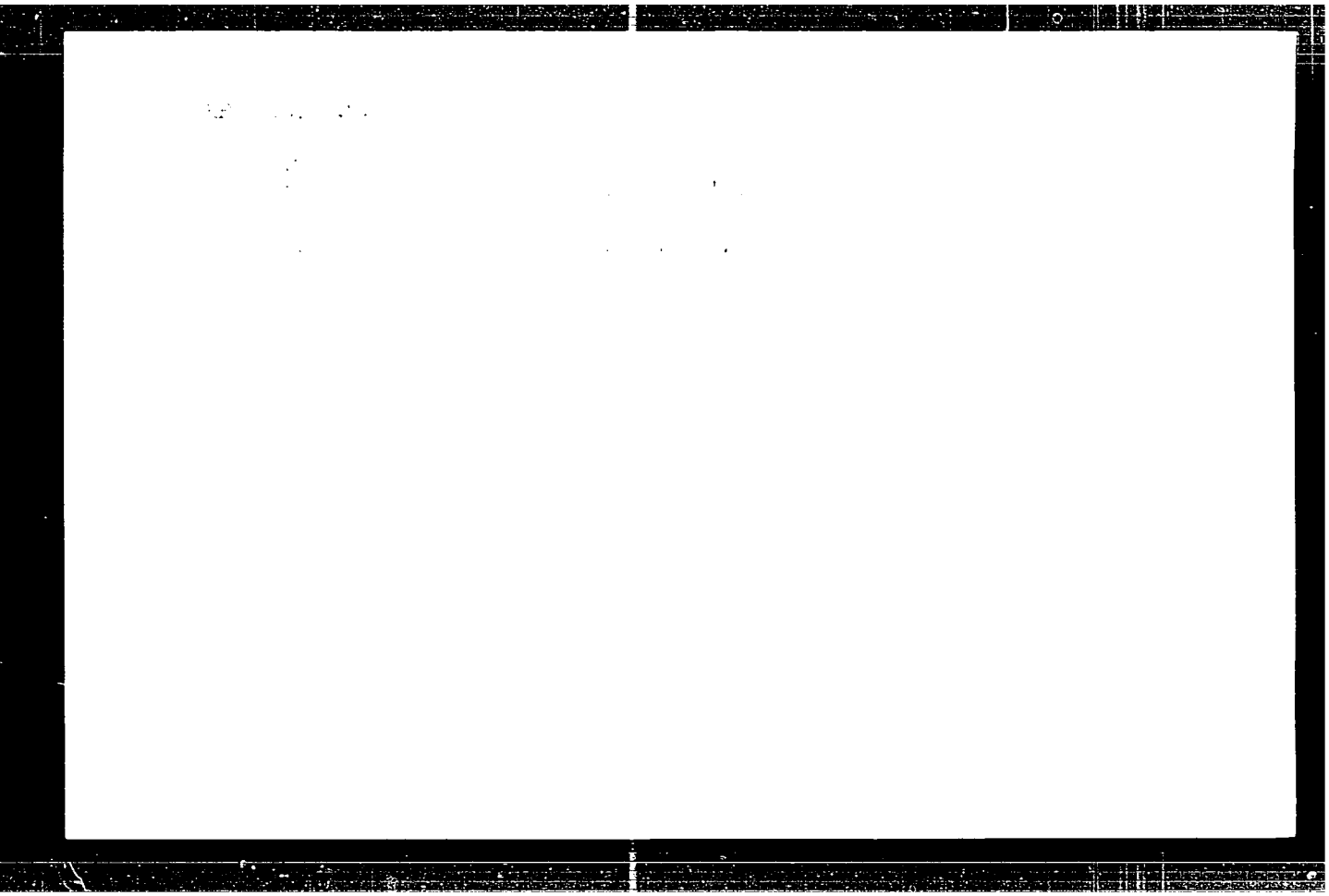
Card 1/2 UDC: 656.61:621.128.8

ACC NR: AR6034817

naked eye. In spite of individual cases of successful sighting of floating objects when using the "Donets" radar station, the radar method cannot guarantee safe navigation of hydrofoils in the dark. Hydrofoils require a radar station with a higher resolution capacity, a smaller blind zone, and the possibility of obtaining a normal picture on the screen while sailing at full speed. It is pointed out that under present-day conditions, each facility examined cannot secure complete safety for the night navigation of hydrofoils. A series of measures to increase the safety of night navigation of hydrofoils is proposed. I. Makarov. [Translation of abstract] [GC]

SUB CODE: 14, 17/

Card 2/2



ORESHKIN, N. V.

Champagne (Wine)

For further increasing the quality of champagne. Vin. SSSR. 12 no. 6, 1952.

9. Monthly List of Russian Accessions, Library of Congress, September 1952, Unc..

MEL'NIKOV, Aleksandr Illarionovich; ORESHKIN, N.V., retsenzent; UNGURYAN, P.N., spetsredaktor; KRUGLOVA, G.I., redaktor; KISINA, Ye.I., tekhnicheskiy redaktor

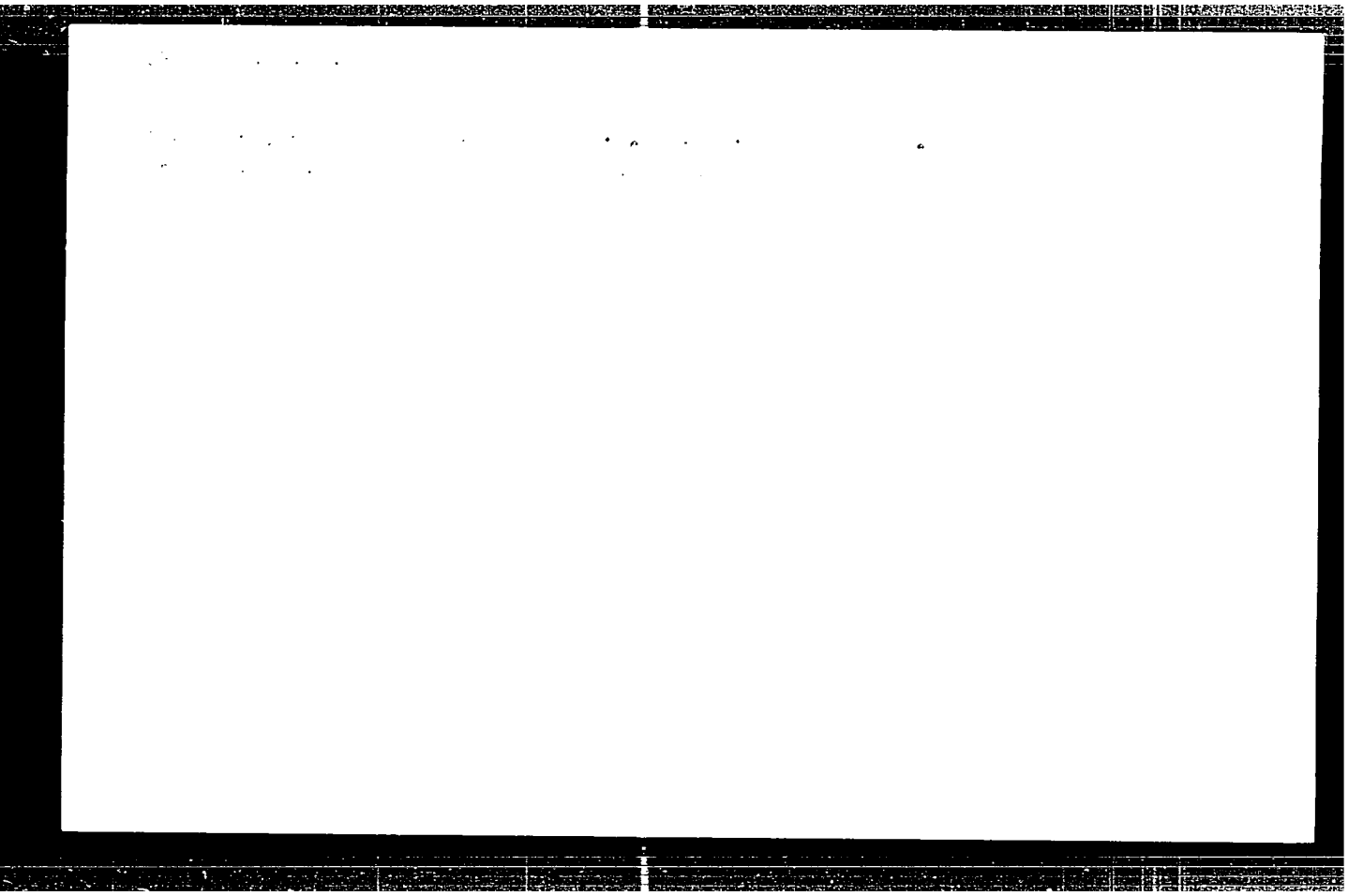
[The resevoir method of Soviet champagne production] Proizvodstvo sovetskogo shampanskogo rezervuarnym sposobom. Moskva, Pishchepromizdat, 1956. 113 p. (MLRA 10:1)
(Champagne (Wine))

OKESHKIN, N. V.

FROLOV-BAGREYEV, Anton Mikhaylovich, prof., doktor sel'sko-khoz.nauk, zasluzhennyy deyatel' nauki i tekhniki RSFSR [deceased]; AGABAL'YANTS, G.G., prof., doktor sel'sko-khoz.nauk, spetsred.; OKESHKIN, N.V., inzh., spetsred.; MASLOVA, Ye.F., red.; KISINA, Ye.I., tekhn.red.

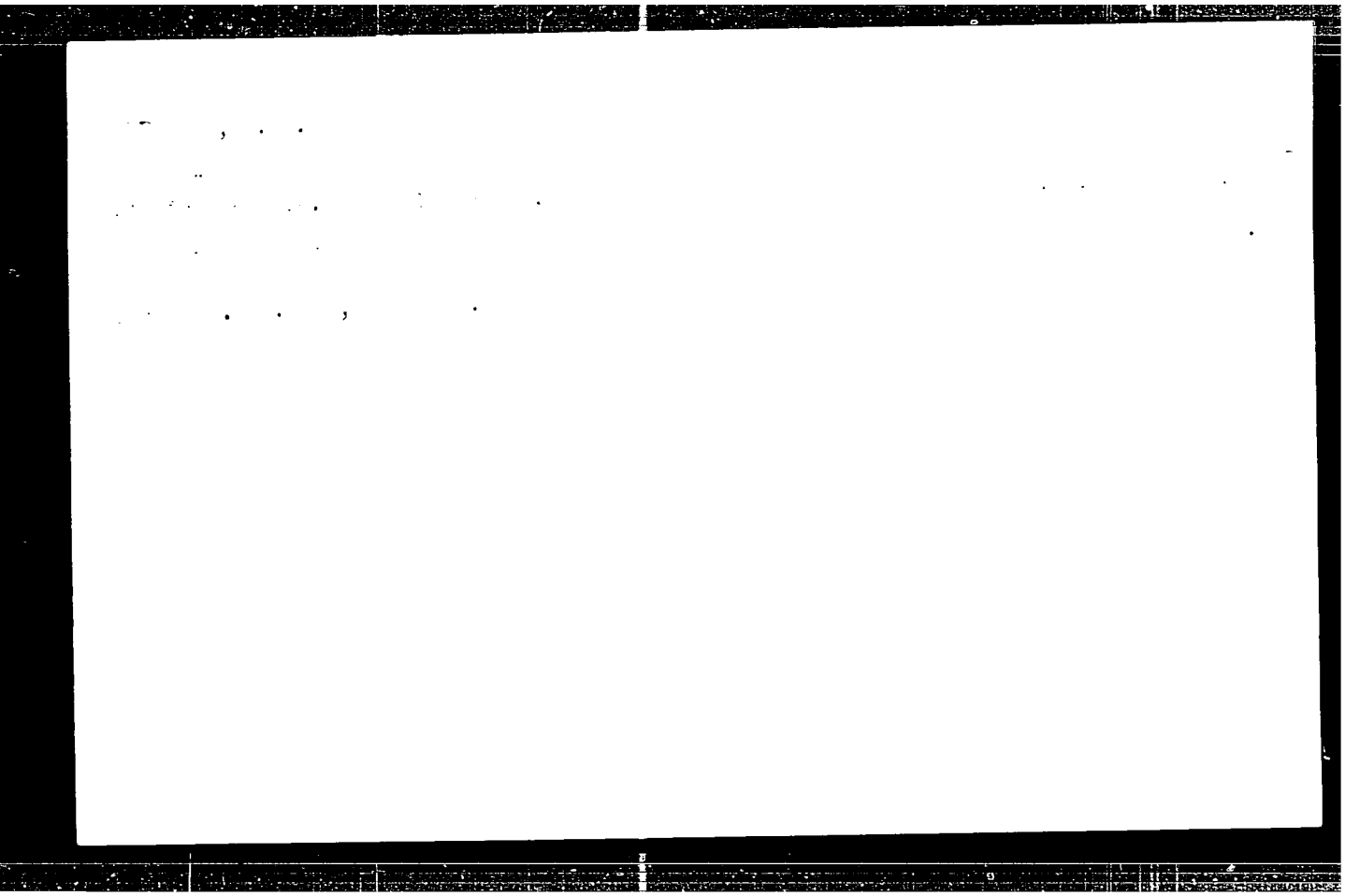
[Chemistry and technology of wine] Trudy po khimii i tekhnologii vina. Vol.1. [Soviet champagne. Technical control in making table wines; Sovetskoe shampanskoe; Tekhnicheskii kontrol' v vinodelii stolovykh vin. 1958. 354 p. (MIRA 12:3)

(Wine and wine making)



ORESHKIN, Petr Petrovich; FILIMONOV, I.M., red.; ANDRIANOV, B.I., tekhn.red.

[Story of the motor scooter] Rasskaz o motorollere. Moskva, Izd-vo DOSAAF, 1958. 37 p. (MIRA 12:2)
(Motor scooters)



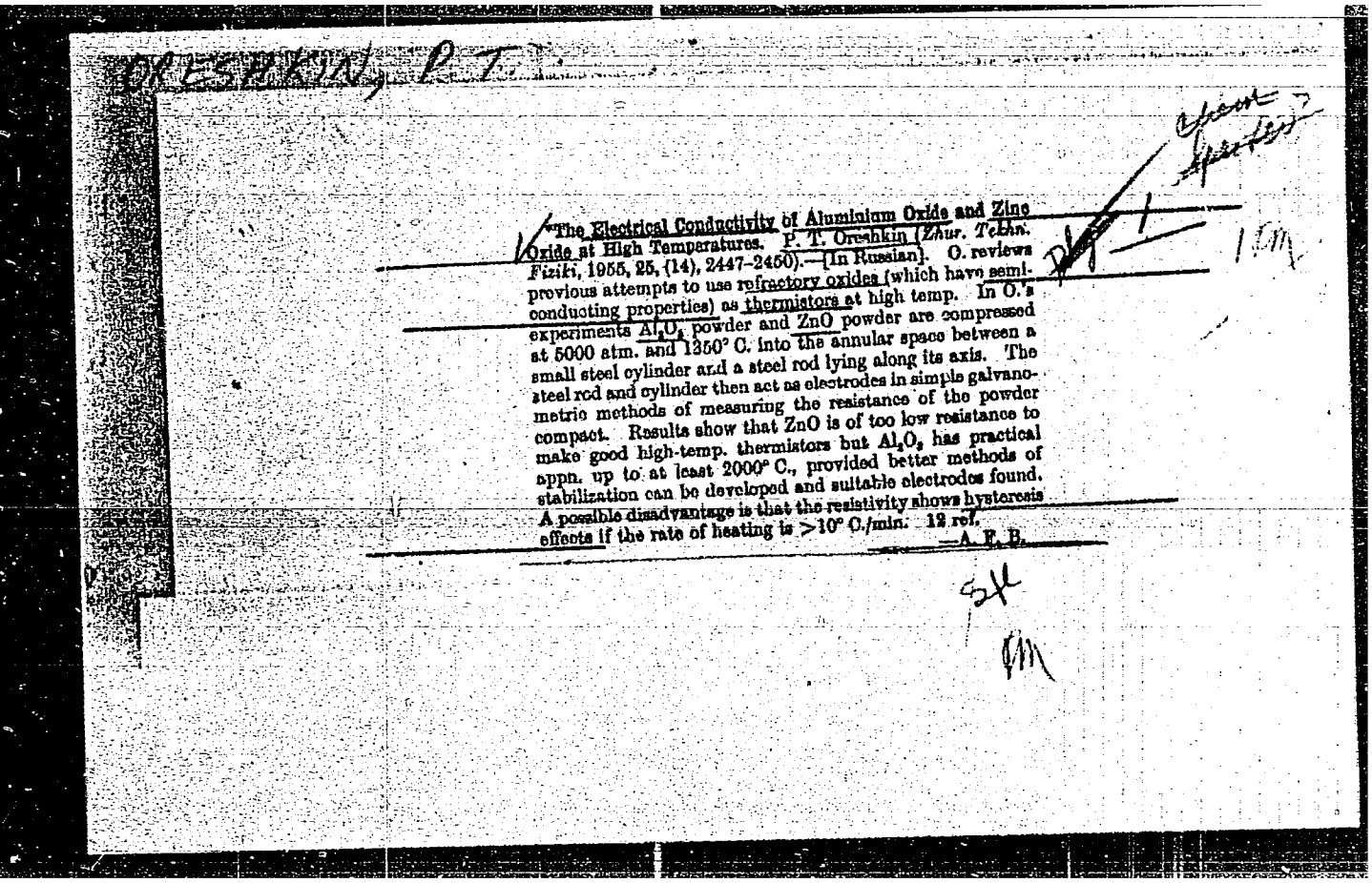
1. ORESHKIN, P. T.

2. USSR (600)

4. Magnetism

7. Change in magnetism during elastic overall compression. Zhur eksp i teor fiz. No. 6 1952

9. Monthly List of Russian Accessions, Library of Congress, April 19[illegible], Incl.



ORESHKIN, P. T.

"The Electrical Conductivity of Aluminium Oxide and Zinc Oxide at High Temperatures. P. T. Oreshkin (*Zhur. Tekhn. Fiziki*, 1955, 25, (14), 2447–2460).—[In Russian]. O. reviews previous attempts to use refractory oxides (which have semi-conducting properties) as thermistors at high temp. In O.'s experiments Al_2O_3 powder and ZnO powder are compressed at 5000 atm. and 1350° C. into the annular space between a small steel cylinder and a steel rod lying along its axis. The steel rod and cylinder then act as electrodes in simple galvanometric methods of measuring the resistance of the powder compact. Results show that ZnO is of too low resistance to make good high-temp. thermistors but Al_2O_3 has practical appn. up to at least 2000° C., provided better methods of stabilization can be developed and suitable electrodes found. A possible disadvantage is that the resistivity shows hysteresis effects if the rate of heating is >10° C./min. 12 ref.

—A. E. B.

Oreshkin, P.T.

High-temperature thermistors (semiconductor resistance thermometers). P. T. Oreshkin. *Izvest. Akad. Nauk S.S.S.R., Otdel. Tekh. Nauk* 1956, No. 8, 123–30.—Pressed rods of Al_2O_3, MgO, ZnO, and MgO + Al_2O_3 were tested for use as high-temp. pyrometers at temp. up to 1570°. The results obtained with Al_2O_3 were readily reproducible, with a scattering of ±10° for the different samples, but the values obtained with MgO were not dependable. Some preliminary tests were also made with a.c. —W. M. Sternberg

CRESHKOV

SUBJECT USSR / PHYSICS CARD 1 / 2 PA
AUTHOR Author not mentioned
TITLE The Conference on Semiconductor and Nonconductor Technique
PERIODICAL Radiotechnika 11, fasc.10, 79-80 (1956)
Issued: 11 / 1956

The conference was held at the Leningrad Electrotechnical Institute A I ULJANOV (Lenin).
In his lecture on "Semiconductors in Modern Technology" NASLEDOV said that although Russian physicists attained some success in this field, the level of semiconductor technique already attained in other countries has not been attained in Russia.
PETROV spoke about the methods of obtaining super-pure germanium and [illegible] as well as about a number of new substances with crystalline structure similar to that of germanium and silicon. Among them particularly the antimonide of aluminium is worth mentioning. It will be widely used in devices intended to work at a surrounding temperature of 300° C. The antimonide of indium was used in photoelements which are highly sensitive to infrared radiation. DOBROKODICKIJ declared that the use of the titanate of zirconium or zirconium and of the stannate of calcium promotes the development of a condenser [illegible] with very high thermostable properties, while losses at high dielectric transmissivity are low.

Radiotekhnika, 11, [illegible] CARD 2 / 2

[illegible] of nonlinear condenser variants and [illegible] of their application [illegible] as dielectric amplifiers, in voltage stabilizers, frequency modulators [illegible] devices

ORLOKIN [illegible] thermistors at high temperatures [illegible] the possibility of [illegible] thermistors of aluminium oxide magnesium [illegible] their materials

A large number of articles are devoted to ferrites

INSTITUTION

AUTHOR: Oreshkin, V. T.

TITLE. Experimental Variants of a High Temperature Thermistor (Opytnyye varianty vysokotemperaturnogo termistora)

PERIODICAL Zhurnal tekhnicheskoy fiziki 1958, Vol. [illegible], Nr. [illegible], pp. 1402 - 1412 (USSR)

ABSTRACT The experimental results of a semiconductor-resistance thermometer (SRT) supplemented in an earlier paper of the author (Refs. [illegible]) are given. The present paper deals with the influence of continuous burning on the stability of the readings of the experimental variants of the SRT. It was shown that a burning at 1500°C during 40 ... 50 hours leads to a deterioration of the initial conductivity by approximately the tenfold. After this the graduation is maintained. In the case of a series of samples the total working time amounted to 70 ... 90 hours at 1500° after previous burning. The graduation curves reproduced show a different slope in dependence on the contact surface and the burning conditions. The reason for this difference is the influence of the admixtures. As an example it is shown that in the low temperature range an increase of the

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Experimental Variants of a High Temperature Thermistor [illegible]

silicon carbide admixture increases considerably the conductivity whereas the same in the high-temperature range (above 14[illegible]) even reduced somewhat by the increase of the admixture In most cases a stability of graduation was observed after the burning In the experiments carried out shortly analogous results were obtained Thus the SRT can be used within the range of 900 - 1600°C It is possible that the upper [illegible] may be increased up to 1700 - 1800°C especially for short operation V I Korel' and V I Karinskaya carried out the microstructure analysis V F.Belyukov took part in the measurements The results of the microstructure analysis are given for four variants of the case sample There are 6 figures and 8 references 3 of which are Soviet

ASSOCIATION Sibirskiy metallurgicheskiy institut (Siberia Institute of Metallurgy)

SUBMITTED July 1 [illegible]

Card 2/2

ORESHKIN, P.T.

9(4) PHASE I BOOK EXPLOITATION SOV/2773

Poluprovodnikovyye termosoprotivleniya; sbornik statey (Thermistors; Collection of Articles) Moscow, Gosenergoizdat, 1959. 229 p. 15,000 copies printed.

Ed. (Title page): B. S. Sotskov, Doctor of Technical Sciences, Professor; Ed. (Inside book): V. A. Petrov; Tech. Ed.: G. I. Matveyev; Editorial Board: B. S. Sotskov, Doctor of Technical Sciences, Professor (Chief Ed.), N. P. Udalov, Candidate of Technical Sciences, N. S. Zaytsev, Engineer, Ye. N. Ganzorev, Engineer, and V. I. Turkulets, Engineer.

PURPOSE: This collection of articles is intended for engineering and technical personnel of plants, OKB, NII and also instructors and students of vuzes.

COVERAGE: The book contains articles dealing with problems of manufacture of thermistors and determining thermistor parameters and characteristics. The authors also discuss problems of industrial application of thermistors as control elements. The book is an effort of cooperation by scientists of a number of vuzes, members of NII and engineers of one of the plants (name is not given) of Mosgorsovnarkhoz. No personalities are mentioned. References appear at the end of some articles.

Udalov, N.P. Thermistor ... 62

The author discusses optimum parameters of thermistors with direct and indirect heating and presents methods of calculating temperature characteristics, constant B and power dissipation coefficient. He also discusses thermistor volt-ampere characteristics and presents methods of constructing a heating characteristic as well as methods of experimental determining of thermistor parameters. There are references, all Soviet.

Sachkov, G. K. Problems of Design of Thermistors for Circuits Based on Relay Effect 72

The author discusses operating conditions of thermistors used in circuits based on relay effect and calculates thermistor parameters required in the design of thermistors. There are 3 references, all Soviet.

Andriyevskiy, A. I., and I. D. Tretiyak. Temperature Characteristics of Thermistors Made From Two-oxide Mixtures 82

The authors present experimental temperature characteristics of thermistors made from the following two-oxide mixtures: $BeO-Cu_2O$; $MgO-Cu_2O$; $CaO-Cu_2O$; $ZnO-Cu_2O$; MnO_2-Cu_2O; and TiO_2-Cu_2O. They describe the importance of these mixtures in the design of new types of thermistors. There are 4 references, all Soviet (including 1 translation).

Proliskova, Ye. G. Thermistors for Controlling Heating of an Automobile Engine 95

The author discusses fundamentals of manufacture of laboratory types of thermistors used as thermosensitive elements in the automobile cooling system and presents thermistor characteristics. There are 2 references, both Soviet.

Oreshkin, P. T. Experimental High-temperature Thermistor 101

The author discusses the manufacture and operation of a laboratory-type thermistor used at temperatures 1,000 - 1,500°C and presents its basic characteristics. There are 9 references: 4 Soviet, 2 English and 3 German.

Sotskov, B. S. Analytical Methods of Determining Operating Conditions for Thermistors Using Alternating Current 114

The author discusses operating conditions of a-c thermistors with the time constant much larger than the period of alternating current used. He also presents a method of calculating thermistor ... parameters such as current values, function R=f(.) etc. There are no references.

Sotskov, B. S. Voltage Stabilizer Circuits With Thermistors 119

The author presents fundamentals of voltage stabilizer ... thermistors and discusses methods of calculating circuit ... There is 1 Soviet reference

Udalov, N. P. Transients in Simple Circuits With Thermistors

The author presents a method of calculating dynamic characteristics of thermistors. The method can be used in the design of ... lays utilizing lag in thermistor circuits. He also ... transients in simple circuits with thermistors. There are 2 references, both Soviet

Borovkin, M. F. Dynamic Parameters ...

S/139/62/000/003/009/021
E036/E435

34 7700

AUTHORS: Oreshkin, P.T., Bykov, S.B.

TITLE: On relaxation processes in dielectrics and semiconductors

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Fizika, no.3, 1962, 65-73

TEXT: Expressions are derived for the electric current in aluminium oxide in the intrinsic conduction range (above 1000°C) which can also be applied to other dielectrics and semiconductors at high temperatures. The aim was to clarify the conduction mechanisms at high temperatures, where possible practical developments are in thermistors which are impeded by the decay of direct current in aluminium oxide at high temperatures. P.T.Oreshkin has shown earlier that this decay is a rectification effect and thus high temperature rectifiers can be envisaged. Two extreme cases are considered:
1)The intrinsic conduction is solely due to Al^{3+} ions whilst the O ions are fixed; it is assumed that a barrier layer forms at the electrodes in which the concentration of ionized molecules is a

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On relaxation processes ...

function of the contact potential and the applied voltage. The residual current, i.e. that finally reached some time after application of the voltage, is derived. At small voltages, the derived expression is in good agreement with experiment. 2) The residual current is entirely of electrons, the ions having been removed from the barrier layer by the large field; the formula for the residual current consists of two terms, one proportional to the voltage and the other independent of it and corresponding to the reverse polarization current usually measured under short circuit conditions. Qualitative agreement is obtained with experiment for voltages greater than 50 to 100 V; the measured short-circuit current was independent of voltage. The decrease of current with time depends on previous history (whether subjected to voltages before, type and quality of contacts). The varied nature of the results up to 1300°C suggests a range of time constants of which only a "tail" is observed. Measurement of the residual and short-circuit currents yields reproducible results if the sequence of measurements is through rising temperature and voltage.

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On relaxation processes ...

Conductivity measurements with short duration low voltages indicate that the change of current is due mainly to depletion of the charge in the barrier layer. Comprehensive measurements of current against voltage are reported on several samples under various conditions (pressure exerted in differing directions, various electrode materials). For a particular sample the activation energy, derived from the variation of current with temperature, increases with voltage from 1.9 ev at 10 V to 2.57 ev at 450 V. This could be explained on this model by the barrier layer being depopulated of its ions as the voltage increases and the conduction being by electrons with a higher activation energy than that corresponding to dissociation of molecules. The role of polarization is quite small and no impurity effects were detected. A sample was tested as a thermistor for 400 hours at 1000 to 1300°C. Scatter from the calibration curve with respect to temperature was 1.5%.

This paper was presented at the Third Inter-University Conference on Contemporary Techniques in the Field of Dielectrics and Semiconductors.

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S/170/62/005/008/006/009
B104/B102

[illegible] [illegible]ov, [illegible], [illegible]rateyev, [illegible] D., [illegible]reshkin, [illegible], [illegible]ayev, [illegible]

[illegible] [illegible] for working temperatures up to [illegible]^{o}C

[illegible] Inzh[illegible]rno-fizicheskiy zhurnal, v. 5, no. 8, 1962, 93-96

[illegible] [illegible] mm long and 0.6 mm thick cylinders, small grains and beads, [illegible] produced from the three powder mixtures (1) 75% CuO + 25% Fe_2O_3, (2) [illegible] (3) 7[illegible] MnO_2 + [illegible]% NiO with the aid of press molds. [illegible] calcined at [illegible]^{o}C, the other two at [illegible]^{o}C for [illegible] of the specimens were silver plated, with iron or [illegible] brazed onto them. After aging, these thermistor were [illegible] in the temperature range from 20 to 200^{o}C. The mean temper ture [illegible] quantity B, which enters into the relation for the [illegible] = [illegible]exp([illegible]) have the following values for the three [illegible] [illegible]ations:

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S/170/62/005/008/006/009
B104/B102

Microthermistors for working ...

	α_{20°	α_{100°	α_{200°	B
(1)	5....	....%	1.2%	2830 °K
(2)	5.7%	5.9%	2.75%	12980 °K
(3)	4.1%	2.5%	1.0%	3660 °K

The calibration curves reproduce well and no aging occurs with continuous operation. The thermistor has a low heat capacity and can be connected with elastic conductors (Fig. 1). There are 2 figures.

ASSOCIATION: Sibirskiy metallurgicheskiy institut imeni Sergo Ordzhonikidze, g. Novokuznetsk
(Siberian Metallurgical Institute imeni Sergo Ordzhonikidze, Novokuznetsk)

SUBMITTED: October 4, 1961

Card 2/3

ORESHKIN, P.T.; KHRAMKOVA, M.N.; ANDREYEVA, L.P.

Electric conductivity of oxide refractories at high temperatures. Izv. vys. ucheb. zav.; chern. met. 6 no.2:142-149 '63. (MIRA 16:3)

1. Sibirskiy metallurgicheskiy institut.
(Refractory materials—Electric properties)

ORFSHKIN, P.T.

Theory of the thermoelectromotive force of refractories. Izv. vys. ucheb. zav.; chern. met. 6 no.8:164-168 '63. (MIRA 16:11)

1. Sibirskiy metallurgicheskiy institut.