

ТАШКУН №. 5; ДЭНЬЯНБАЙЕВА, Р.К.; ЧАПРАСОВА, Л.В.; ГИТНЕРОВА, Р.И.

Фотометрич. определение цинка с
N-метилканabasine- α -азо- β -нафтаол. Науч. труды ТашГУ no.263.
Хим. науки no.13:72-76 '64.

(MIRA 13:8)

(Gutnikova) 7/2 K

AUTHORS: Zamyatnin, Yu. S., Gutnikova, Ye.K., Ivanova, N. I., 89-12-8/29
Safina, I. N.,

TITLE: Secondary Neutron Spectra Developing in Connection with Neutrons
Passing Through Layers of Various Materials (Spektry vtorichnykh
neytronov obrazuyushchikhsya pri prokhozhdenii neytronov cherez
sloi razlichnykh veshchestv)

PERIODICAL: Atomnaya Energiya, 1957, Vol. 3, Nr 12, pp. 540-541 (USSR)

ABSTRACT: The $T(d,n)He^4$ reaction is used as source of neutrons. The core
photo plates Ilford C-2 and NIKFI "K" are used as neutron detect-
or. (Thickness of layer about 100λ). The source of neutrons is
surrounded by a spheric layer of the material to be investigated
-thickness $\sim 1/3\lambda$: The photo plates are put up at a distance of
 $1 \approx 4R$ (R = exterior radius of the sphere)
The parameter T from the energy distribution $F(E) = C.E.e^{-E/T}$
is given as measure for the inelastic interaction of 14 MeV neut-
rons with different cores.
The following values were measured:

Isotope	T	Isotope	T
Li ⁶	0,78 \pm 0,8	Cu ⁶⁵	0,76 \pm 0,06
Li ⁷	0,80 \pm 0,08	Mo ⁹⁶	0,65 \pm 0,06

Card 1/2

Secondary Neutron Spectra Developping in Connection with Neutrons 89-12-8/29
Passing Through Layers of Various Materials.

Be ⁹	0,70±0,07	Cd ¹¹²	0,62±0,05
B ¹¹	0,75±0,10	Sb ¹²²	0,60±0,06
C ¹²	0,82±0,08	W ¹⁸⁴	0,62±0,08
Mg ²⁴	0,98±0,08	Hg ²⁰¹	0,60±0,05
Al ²⁷	1,13±0,08	Pb ²⁰⁷	0,73±0,05
Fe ⁵⁶	0,70±0,07	Bi ²⁰⁹	0,90±0,08

There are 1 table, 2 figures and 6 references, 1 of which is Slavic.

SUBMITTED: July 20, 1957

AVAILABLE: Library of Congress

Card 2/2

AUTHOR: Zolotarev, Yu.S., Sofina, I.N., Gutnikova, Ye.K., Ivanova, N.I. 89-4-4-1/23

TITLE: Neutron Spectrum Produced During the Passage of 14 MeV Neutrons Through a Layer of Fissionable Material. (Spektry neytronov, obrazuyashchikhya pri prokhozhdenii neytronov s energiyey 14 Mev cherez sloi delyashchikhya veshchestv)

PERIODICAL: Atomnaya Energiya, 1958, Vol. 4, Nr 4, pp. 337-342 (USSR)

ABSTRACT: If 14 MeV-neutrons pass through thin layers of Th^{232} , U^{233} , U^{235} , U^{238} and Pu^{239} , secondary neutrons are formed. The energy spectrum of these neutrons is recorded on photo plates (Ilford G2 and NIKFI-K). A tritium-nickelium target, which was bombarded with 15 MeV-deuterons, served as a neutron source. It was found that the spectra of secondary neutrons, which form in all isotopes investigated, consist of two components, viz. the fission neutrons and the spallation neutrons. Furthermore, the following values were found:

Card 1/2

A Neutron Spectrum Produced During the Passage of
14 MeV Neutrons Through a Layer of Fissionable Material

89-4-4-1/28

Isotope	Yield of fission neutrons (corrected)	Temperature of rest of nucleus in MeV	Temperature of the fission fragments in MeV
Th ²³²	0.23 ± 0.06	0.54 ± 0.05	1.2
U ²³³	0.76 ± 0.10	0.55 ± 0.10	1.20 ± 0.08
U ²³⁵	0.68 ± 0.06	0.40 ± 0.05	1.05 ± 0.06
U ²³⁸	0.49 ± 0.05	0.48 ± 0.05	1.25 ± 0.15
Pu ²³⁹	0.72 ± 0.10	0.53 ± 0.06	1.25 ± 0.08

There are 6 figures, 1 table, and 7 references, 3 of which are Soviet.

SOURCE: Postcard, 7, 1957

1. Neutrons--Spectrum 2. Neutrons--Sources

Card 2/2

L 19013-65 EWT(1)/EEC(b)-2/EWA(h) Feb SSD/ASD(a)-5/AS(mb)-2/RSD/AFWL/ESD(c)/
ESD(gs)/ESD(t)

ACCESSION NR: AP4049047

S/0057/64/034/011/2044/2047

AUTHOR: Khudyakova, L.N.; Gutnikova, Ye.K.; Tarasova, L.V.

TITLE: The hard component of the radiation from a pulsed x-ray tube 25 15

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.11, 1964, 2044-2047

TOPIC TAGS: x-ray emission, x-ray tube, pulsed radiation, hard photon contribution, high energy electron

ABSTRACT: The radiation from a pulsed x-ray tube of special design was examined and the presence of an ultrahard component was established; the quantum energy of this component considerably exceeded the maximum to be expected on the basis of the applied potential. The design of the x-ray tube is described in more detail elsewhere (K.B.Zelenskiy, I.A.Troshkin and V.A.Tsukerman, PTB 3, 140, 1963). It consists of a tungsten "needle" anode within and projecting 5 mm beyond a hollow conical cathode which terminates in a cylindrical portion. The electrodes are contained in a 3.5 cm diameter 18 cm long glass tube. The tube is powered by a pulse transformer that delivers 350 kV pulses of 1.5 microsec duration. The breakdown potential of the working gap is approximately 250 kV. The x-rays were investigated by

1/2

L 19013-65

ACCESSION NR: AP4049047

absorption in lead and by means of the Compton recoil tracks in thick nuclear emulsions. The absorption measurements were performed with plastic scintillators and photomultipliers. A complete absorption curve (up to 4 points) was obtained at each pulse. The absorption curves varied considerably from pulse to pulse, and it was found that 30% of the pulses produced photons with energies greater than the 350 kV limit expected on the basis of the potential developed by the pulse transformer. The nuclear emulsions were calibrated with Cs¹³⁷ and Co⁶⁰ γ -rays, passing through 2.2 cm of lead. It was established that the maximum x-ray photon energy was greater than 0.6 MeV and less than 1.3 MeV. By calibrating the emulsions with γ -ray sources of known intensities it was found that the yield of ultrahard x-rays was 10^8 to 10^9 photon/pulse. This is to be compared with the total estimated x-ray yield of 10^{11} photon/pulse. The mechanism by which the ultrahard x-rays are produced was not investigated, but several tentative suggestions are offered, based on the behavior of the plasma in the vacuum discharge. Orig.art.has: 1 figure.

ASSOCIATION: none

SUBMITTED: 07Feb64

SUB CODE: OP

NR REF SOV: 013

ENCL: 00

OTHER: 001

2/2

МЕТРИКА, С. П.

29819

Мягск болонгь дашрэтсвѣтнѣ--источник полученія (г'л'ного нѣдѣ)
Республика, 1949, No. 9 С. 38-39

№: 1870 15' №. 40

GUMNIKOVA, Z. I.

Moss Marshes are Honey Fields., Pchelovodstvo, 29, No. 1, 1952.

NLRA. May 1952

GUTNIKOVA, Z.I.

Schizandra chinensis Turcz.Ball. in the Soviet Far East. Priroda 42 no.12:
104-105 D '53. (MLRA 6:11)

1. Dal'nevostochnyy filial Akademii nauk SSSR.
(Soviet Far East--Magnoliaceae) (Magnoliaceae--Soviet Far East)

GUTNIKOVA, Z.I.

USSR/ Biology - Botany

Card 1/1 : Pub. 86 - 7/36

Authors : Grushvitskiy, I. V., and Gutnikova, Z. I.

Title : Ginseng

Periodical : Priroda 43/8, 55-61, Aug 1954

Abstract : Some history is given of the use of ginseng, a plant found only in the eastern part of Siberia. The botanical facts relating to this plant are discussed. An account is also given of extensive research conducted by Soviet scientists with the root of ginseng, which showed that remedies prepared from this root have a definite beneficial effect as a tonic on the human organism. Illustrations; drawings.

Institution : ...

Submitted : ...

GUTNIKOVA, Z.I.

Growth and development of ginseng cultivated under cover of
trees. Mat. k izuch. shem'-shenia i lim. no.2:71-76 '55.

(MLRA 9:10)

(GINSENG)

M

Country : KOREA
Category: Cultivated Plants, Medicinal. Essential
Oil Bearing. Toxins.

Abs Jour: RZhBiol., No 22, 1958, No 100510

Author : Gutnikova, Z.I.

Inst : -

Title : On the Growth of Ginseng on the Wooded Slopes
of Primorskiy Kray.

Orig Pub: Choson yakkhak, 1957, No 2, 38-41

Abstract: No abstract.

Card : 1/1

GUTNIKOVA, Z.I.; VOROB'YEVA, P.P.

Cultivation of ginseng in the southern part of the Maritime
Territory. Trudy Bot.inst.Ser.6 no.7:326-330 '59.
(MIRA 13:4)

1. Dal'nevostochnyy filial im. V.L.Komarova AN SSSR,
Vladivostok.
(Suputnika Preserve--Ginseng)

GRINEVICH, M.A.; GUTNIKOVA, Z.I.

Tenth anniversary of the Ginsong Committee. Izv.Sib.otd.AN SSSR
no.5:115-117 '60. (MIRA 13:7)
(Ginsong)

GUTNIKOVA, Z.I.

Materials on the cultivation of ginseng in forests of the Far East.
Mat. k izuch. zhen'shenia i lim. no.4:39-63 '60. (MIRA 13:9)

1. Dal'nevotstochnyy filial Sibirskogo otdeleniya AN SSSR.
(SOVIET FAR EAST--GINSENG)

GUTNIKOVA, Z.I.

Effect of gibberellin on growth and development of ginseng. Izv.
AN SSSR. Ser. biol. 26 no.1:40-42 Ja-F '61. (MIRA 14:3)

1. The Far-Eastern Branch of Academy of Sciences of the U.S.S.R.,
Vladivostok.
(GIBBERELLINS) (GINSENG)

GUSHIKOVA, Z.I.; VOLOB'YEVA, F.I.; BUKKINA, I.A.; BELIKOV, I.F.,
kand. biol. nauk, red.

[Ginseng and its cultivation] Zhen'shen' i ego vozde-
lyvanie. Vladivostok, Primorskoe knizhnoe izd-vo, 1963.
123 p. (MIRA 17:8)

GRUBOV, M.Z.; GRUBOVICH, L.V.; GIL'BERG, S...

Implantation of the surface sheets and leaves of ginseng.
Mat. k izuch. zhen'. i drug. lek. rast, Dal'. Vost. no.5:
39-43 '63. (MIRA 17:8)

I. Botanicheskiy institut AN SSSR i Dal'nevostochnyy filial
Imeni Komarova Sibirskogo otdeleniya AN SSSR.

GUTNIKOVA, Z.I.

Range of ginseng cultivation. Mat. k izuch. zhen', i drug. lek.
rast. Dal'. Vost. no.5953-62 '68. (MIRA 17:8)

1. Dal'nevostochnyy filial imeni Komarova Sibirskogo otdeleniya
AN SSSR.

GRINEVICH, M.A.; GUTNIKOVA, A.J.; VOROB'YEVA, T.P.

Effect of various growth conditions on the development of
ginseng and on the biological activity of its root. *Mis. k
izuch. zhen'. I drug. lek. rast. Dal'. Vest.* no. 5:89-97 '63.
(MIRA 17:8)

I. Dal'nevostochnyy filial Imeri Komarova Sibirskogo otdeleniya
AN SSSR.

GUTNIKOVA, Z.I.; VOROB'YEVA, P.P.

Seed production of girseng cultivated in the Maritime Territory.
Soob. DVFAN SSSR no.18:57-61 '63. (MIRA 17:11)

1. Dal'nevostochnyy filial imeni Komarova Sibirskogo otdeleniya AN
SSSR.

GUTNIKOVA, Z.I., VOROB'YEVA, P.P., ILIYEVA, SE.

Development and productivity of cultivated ginseng under various geological conditions. Soob. DVFAN SSSR no.21:29-32 '63.

(MIRA 18:5)

1. Biologo-pochvennyy Institut Dal'nevostochnogo Filiala Sibirskogo otdeleniya AN SSSR i Institut rasteniyevodstva bolgarskoy Akademii nauk.

BABUROV, A., student; GLADKOVA, N., studentka; GUTNOV, A., student;
ZVEZDIN, A., student; LEZHAVA, I., student; SADOVSKIY, S.,
student; SUKHANOVA, Ye., studentka; KHARITONOVA, Z., studentka

From the diploma project to the map of Siberia. Tekh.mol. 28
no.7:6-7 '60. (MIRA 13:8)

1. Moskovskiy arkhitekturnyy institut.
(Cities and towns--Planning)

YATSUNSKAYA, G.I.; CHERNIKEVICH, L.I.; SMIRNOV, N.A.; GUTNOV, F.B.;
ZUBREV, O.N.

Production of crumbling open-hearth furnace slag. Metallurg
10 no.5:20-21 My '65. (MIRA 18:6)

1. Metallurgicheskiy zavod "Serp i molot".

GUTOV, O. G., MUKHINA, O. N. and RYKOVA, V. A.

"Biomycin therapy in typhus fever," appears in TABCON of "Biomycin (Experimental Study and Clinical use of Biomycin)," edited by A. F. Bilibin, Moscow 1954.

SO: Translation-417, 21 Jun 1955.

BUNIN, K.V., prof.; BURASHNIKOVA, N.M.; VERISOVA, M.A.; GUTOP, O.G.;
KRUGLOVA, Ye.V.; LAGOVSKAYA, N.A.; PISTSOVA, M.N.

Some complications after smallpox vaccination. Sov. med. 25 no.5:
73-80 My '61. (MIRA 14:6)

1. Iz Infektsionnoy gorodskoy klinicheskoy bol'nitsy No.1 (glavnyy
vrach - zasluzhennyy vrach RSFSR N.G.Zaleskver, nauchnyy rukovoditel' -
prof. K.V.Bunin).

(SMALLPOX)

A.C.S.

J. L. ...

Heat conductivity of molten glass. V. G. Gutor.
Sibolnaya Press, 1960, No. 11-12, pp. 24-27. *KHIM.
Referat. Zhur.*, 6 [6] 94 (1961).—A method is given for
investigating the heat conductivity of glass masses at
high temperatures. The investigation was conducted with
five compositions of glass in the region of 300° to 1500°,
using an apparatus purposely constructed by G. The
coefficient of thermal conductivity of molten glass in-
creases with an increase in temperature. The presence
of CaO in the glass causes a greater increase of the co-
efficient with temperature. Substituting Na₂O and CaO
for SiO₂ causes a lowering of the thermal conductivity.
This decrease at high temperatures is relatively less when
SiO₂ is replaced by CaO. Replacing Na₂O by CaO causes
an increase in the thermal conductivity of glass. M. Ho.

GURIN, V. G.

GURIN, V. G. - "The basic principles of the theory of the structure of the molecule,"
Trudy Tekhn. Kontin. Nauchnoy Shkoly, Moscow, 1964, No. 1, p. 1-10.

SO: U-3600, 10 July 66, (Letopis 'Zhurnal Inzh. Staty, No. 6, 1-9).

GUTOV, V. G.

Author: Gutov, V. G.

Title: The control and regulation of thermal processes in the production of building materials. (Kontrol' i regulirovanie teplovykh protsessov v proizvodstve stroitel'nykh materialov.) 329 p.

City: Moscow

Publisher:

Substitution: State Printing of the Construction Materials Literature

Date: 1950

Available: Library of Congress

Source: Monthly List of Russian Accessions, Vol. 4, No. 3, June, 1951

Gurup. V.G.

Fully automatic reversal of regenerative glassmelting furnaces.
V. G. Gurup. *Steklo i Keram.*, 9 [3] 11-15 (1962); *Silikattech.*, 3
[10] 117-121 (1962).--The various types of control, according to
time between reversals and according to temperature drop in the
regenerators, are discussed; control diagrams are given. 7 ref-
erences. D.Z.K. & M.H.A.

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4-1977-3

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Automatic regulation of pressure in glass furnaces. V. G. Gutop and V. M. Obukhov (*Glass & Ceramics, Moscow, 1955, 8, No. 8, 107; Glasz. Ind., 1955, 38, 88-89*).--It was found that the rate and efficiency of melting and refining were noticeably affected by a change of furnace atm. pressure (above the surface of the molten glass) of 0.1 mm. water gauge. An automatic control was fitted which maintained a pressure constant to within 0.1 mm., except for the first 3 min. after the switch of regenerators. I. A. Soong.

①

GUTOP, VADIM GRIGOR'YEVICH

GUTOP, Vadim Grigor'yevich, kandidat tekhnicheskikh nauk; GINZBURG, Ye. TS.,
inzhener, retsenzent; CHISTYAKOV, S.F., kandidat tekhnicheskikh nauk,
doksent, retsenzent, nauchnyy redaktor; GURVICH, E.A., redaktor;
PANOVA, L.Ya., tekhnicheskiiy redaktor

[Control and measuring techniques in building materials production]
Kontrol'no-izmeritel'naya tekhnika v proizvodstve stroitel'nykh
materialov. Moskva, Gos. izd-vo lit-ry po stroit. materialam, 1954.
494 p. [Microfilm] (MLRA 8:3)
(Measuring instruments) (Building materials industry)

OBUKHOV, V.M.; MAKHNOVETSKIY, A.S.; GUTOP, V.G., nauchnyy redaktor;
GLADYSHEVA, S.A., redaktor; LYUDKOVSKAYA, N.I., tekhnicheskii
redaktor

[Automatization and heat control in glass production; work practice
of the Dzerzhinskii glass factory in Gusev] Avtomatizatsiia i teplovoi
kontrol' v proizvodstve stekla; iz opyta raboty Gusevskogo stekol'nogo
zavoda imeni Dzerzhinskogo. Moskva, Gos. izd-vo lit-ry po stroit.
materialam, 1956. 99 p. (MLRA 9:12)
(Gusev--Glass manufacture) (Automatic control)

GUTOP, V. G.

USSR/Chemical Technology - Chemical Products and Their Application. Silicates.
Glass. Ceramics. Binders, I-9

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 62264

Author: Gutop, V. G.

Institution: All-Union Scientific Research Institute of Glass

Title: Rate Control and Accounting of Output of Sheet Glass Produced by
Drawing and Rolling Methods

Original
Periodical: Tr. Vses. n.-i. in-ta stekla, 1956, No 36, 115-125

Abstract: The laboratory of automation of VNIIS has developed and built, for measuring the travel speed of a glass strip, an ISS instrument the operation of which is based on determination of time intervals between 2 impulses which are emitted when the strip has covered a certain length of its path (0.5, 1.0, 2.0 m). The instrument assembly comprises: impulse emitting device responsive to the number of running meters, impulse emitting device responsive to the number of sheets cut off, electronic contact block, automatic recording

Card 1/2

GUTON, V.G.

GUTON, V.G.; BEREZHKOVSAYA, M.I.; EL'KINSON, L.Z.

Over-all mechanization and automation of processes in the production
of window glass. Stek. i ker. 14 no.3:6-11 Mr '57. (MLBA 10:4)
(Plate glass) (Glass manufacture--Equipment and supplies)

GUTUP, V.G.

507, 12-58-12-21/23

25(1), 25(5)

SUBJECT

TITLE

Ross Gliven
Conference of Functionaries of the Glass Industry
(Konferentsiya funktsionnykh shtabov stekla'noy promyshlennosti)

PERIODICAL

ABSTRACT

Steklo i keramika, 1958, Nr 12, pp 45-46 (USSR)

The conference of functionaries of the glass industry of the USSR was held in the town of Vladimir from October 21-23, 1958. The organizing bodies were Gosstakprom, the interministerial committee of the State Minister of the USSR, the State Planning Commission, the State Council of Ministers of the USSR, the Ministry of Glass and Ceramics, the State Planning of the USSR, the Ministry of Chemical Industry, the Ministry of Machine Building, the Ministry of Mechanical Engineering, and the Ministry of Light Industry. The topic of the conference was reflection of production processes, introduction of general technical ideas, glass fiber, glass in the factories, and technical ideas. The main speaker of the conference was A.G. Boloyev, Chief of the State Committee of the USSR for Glass and Ceramics, State Committee of the USSR for Glass and Ceramics. He is citing the main tasks of the glass industry for the further development of the glass industry by introducing new technical achievements that will be the expression of the achievement of the glass industry in the coming years. He stressed the importance of scientific research in the glass industry and emphasized the role of scientists of Soviet and foreign countries. The following reports were given in the plenary session: V.G. Gutup, Director of the Institute of Glass and Ceramics (Laboratory of the Glass Institute), reported on the introduction of electric and gas-electric furnaces of the glass industry; L.S. Tyagunov, Director of the Laboratory of the Glass Melting process on technical experiments of intensifying the glass melting process by increasing the heating temperature and using chemical accelerators; Professor, Director of the Laboratory of the Glass Melting Institute, A.S. Solov'ev, on measures of supplying the glass industry with high-temperature refractory products; and the main speaker of the conference, Chief Engineer of the production shops of the glass industry, I.N. Bakharev, Chief Engineer of the factory, reports on the technology and the properties of refractory products. He also mentioned the achievements of the glass industry in the development of artificial aviation materials (acetylenes) and the formation of artificial materials of the form of brick lining. V.G. Gutup, Director of the Laboratory of the Glass Institute, reported on the results of the work of the laboratory on the production of glass melting materials. I.V. Kravchenko, Section of Building Materials of the Glass Institute, reported on the results of the work of the laboratory on the production of glass fibers. L.S. Tyagunov, Chief Engineer of the Laboratory of the Glass Melting and Refining, reported on the work of the laboratory on the production of glass fibers. The work of the conference was held in the technical building of the State Glass, ceramic, glass containers, glass fiber and glass plastics

Card 1/5

Card 2/5

Card 3/5

AUTHOR: Gutop, V. G.

72-58-3-1/13

TITLE: Automatic Regulation of Pressure in Glass Melting Furnaces
(Avtomaticheskoye regulirovaniye davleniya v stekloverennykh pechakh)

PERIODICAL: Steklo i Keramika, 1958, Nr 3, pp. 22-25 (USSR)

ABSTRACT: The author criticises the previous work (pp.17 to 22) made by 5 authors. He lays special stress on the following points, a.o.: 1) The authors attribute such defects and imperfections to the hydraulic pressure regulators as do not exist in reality. 2) Their data concerning high operation-cost are exaggerated. 3) Their estimation of the individual systems relating to their adjustabilities, is based on wrong conditions. 4) Great precaution must be applied with the measurement of chamber pressure because of its complication. 5) The proposal regarding zone-regulation of pressure is not sufficiently thought out. If this system was experimentally installed in the Gomel glassworks, then this system should only be recommended when results are available.

AVAILABLE: Library of Congress
Card 1/1 1. Glass--Production

AUTHOR: Gutop, V. G.

SOV/72-58-9-6/20

TITLE: On Perfection and Automation of the Processes of Fuel Gasification and Glass Melting (O sovershenstvovanii i avtomatizatsii protsessov gazifikatsii topliva i varki stekla)

PERIODICAL: Steklo i keramika, 1958, No 9, pp 15 - 17 (USSR)

ABSTRACT: The author presents a critical review of a number of statements made by N.I.Dubina (Ref 1). He asserts that an automation is only efficient if it permits to perfect the control of processes, to keep more closely to the technological processes determined from practical experience, to reduce production costs and to facilitate hand work or even to abolish it entirely. An overall automation can only be introduced if technological processes are fully taken into account and if everything is subordinated to the requirements imposed by the technology of the process. If the transformation processes of the batch into glass are considered to represent the essential criterion of the technology of glass melting a tank

Card 1/4

On Perfection and Automation of the Processes of Fuel Gasification and Glass Melting SOV/72-58-9-6/20

furnace is a continuously operating plant. As such a furnace possesses an extraordinarily great inertia there is no chance of an operative control of the process. If these properties are taken into account it appears that the processes of melting, of degasification, of cooling and of drawing from the tank require a stabilization. This can be achieved by reserve machines or by drawing the glass from the fining zone of the furnace. In this connection the editors remark (Ref 1) that, if no reserve machines are available and if no means exist for drawing off glass, the only radical solution is to reduce the furnace temperature, as was suggested by N.I.Dubina. The problem of temperature control is at present still unsolvable as the output and the quality of the fuel vary very much. At the Glass Works "Avtosteklo", imeni Dzerzhinskiy, and Gomel' the temperature is controlled automatically. The reliability and the efficiency, however, are still open to criticism because of the imperfect temperature measuring in the furnace.

Card 2/4

On Perfection and Automation of the Processes of Fuel Gasification and Glass Melting SOV/72-58-9-6/20

The author proposes to measure the furnace temperature by means of a radiation pyrometer, which is directed towards the bottom of a refractory pot. This pot should be placed into the arches of the hottest furnace zone. Tests with this device in the Dzerzhinskiy Glass Works yielded good results. However, as long as the production of corresponding pots and of fashioned ceramic refractory blocks with an eye for the pot has not yet been started this experiment cannot be extended to other works. A further perfection in the technology of the furnace processes and of control methods must be directed towards a stabilization of all factors which exert an influence upon the furnace temperature. There is 1 reference, 1 of which is Soviet.

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy institut stekla (State Scientific Research Institute of Glass)

Card 3/4

KOROBKO, M.I.; ZALIZNYAK, D.W.; FIRER, M.Ya.; STATSENKO, A.V.; KHRIZMAN, S.S.;
GUTOP, V.G.

Automatic pressure control in glass furnaces. Stek. i ker. 15 no.3:
17-25 Mr '58. (MIRA 11:3)
(Glass furnaces) (Governors (Machinery))

GUTOP, V. G., kand. tekhn. nauk; KALININ, I. B., inzh.

Automatic checking of the speed of a sheet of glass on vertical
glass drawing machines. Stek. 1 ker. 20 no.3:1-3 Mr '63.
(MIRA 16:4)

1. Institut stekla (for Gutop). 2. Proyektno-konstruktorskoye
byuro Instituta stekla (for Kalinin).

(Glass manufacture) (Automatic control)

BEREZINCOY, A.I.; BRODSKIY, Yu.A.; BRONSHTEYN, Z.I.; VEINBERG, K.L.;
GALDINA, N.M.; GLETMAN, E.A.; GINZBURG, D.B.; GUTOP, V.G.;
GUREVICH, L.R.; DAUVAL'TER, A.N.; YEGOROVA, L.S.; KOTLYAR,
A.Ye.; KUZYAK, V.A.; MAKAROV, A.V.; POLIYAK, V.V.; POPOVA,
E.M.; PRYANISHNIKOV, V.P.; SENTYURIN, G.G.; SIL'VESTROVICH,
S.I., kand. tekhn. nauk, dots.; SOLOMIN, N.V.; TEMKIN, B.S.;
TYKACHINSKIY, I.D.; SHIGAYEVA, V.F.; SHLAIN, I.B.; EL'KIND,
G.A. [deceased]; KITAYGORODSKIY, I.I., zasl. deyatel' nauki i
tekhniki RSFSR, doktor tekhn. nauk, prof., red.; GOMOZOVA,
N.A., red.izd-va; KOMAROVSKAYA, L.A., tekhn. red.

[Handbook on glass manufacture] Spravochnik po proizvodstvu
stekla. [By] A.I.Berezhnoi i dr. Pod red. I.I.Kitaigorodskogo
i S.I.Sil'vestrovicha. Moskva, Gosstroizdat. Vol.2. 1963.
815 p. (MIRA 16:12)

(Glass manufacture)

GUTOP. V.G., kand. tekhn. nauk

Immediate trends in the development of systems for the automatic control of glass furnaces. Stek. i ker. 22 no.1:2-7 Ja '65.

(MIRA 18:7)

L. Gosudarstvennyy nauchno-issledovatel'skiy institut stekla.

DERYAGIN, B.V.; GUTOP, Yu.V.

Theory of fluctuation rupture of wetting films and its application to the kinetics of flotation sticking. Dokl. AN SSSR 153 no.4:859-862 D '63. (MIRA 17:1)

1. Institut fizicheskoy khimii AN SSSR. 2. Chlen-korrespondent AN SSSR (for Deryagin).

DERYAGIN, B.V.; GUTOP, Yu.V.

Disjoining pressure and equilibrium of free films. Koll. zhur.
27 no.5:674-680 S-0 '65. (MIRA 18:10)

1. Institut fizicheskoy khimii AN SSSR, Moskva.

DERYAGIN, B.V.; MARTYNOV, G.A.; GUTOP, Yu.V.

Thermodynamics and stability of free films. Koll.zhur. 27
no.3:357-364 My-Je '65. (MIRA 18:12)

1. Institut fizicheskoy khimii AN SSSR, Moskva. Submitted
Nov. 3, 1964.

S/064/61/000/001/004/011
B110/B215

AUTHORS: Khmel'nitskaya, I. L., Gutorko, A. V., Shikhireva, L. I.,
Stroyesku, A. K.

TITLE: Technological problems of synthesizing 2,4- and 2,6-toluylene
diisocyanate

PERIODICAL: Khimicheskaya promyshlennost', no. 1, 1961, 18-21

TEXT: Diisocyanates required for the production of polyurethane, such as
2,4-toluylene diisocyanate and a mixture of 2,4- and 2,6-diisocyanates,
are commercially produced in the following way:

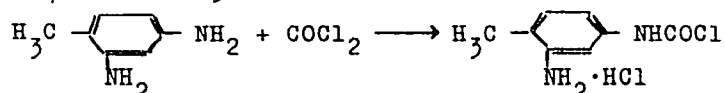


By applying the continuous method, the yield is increased from 65% to 80%
as compared to the periodic method. Time-consuming cleaning of the
apparatus becomes necessary due to the formation of adhesive resins in
the reaction. The authors studied the influence of various factors on
diisocyanate and the formation of resin, and the possibilities of using
Card 1/6

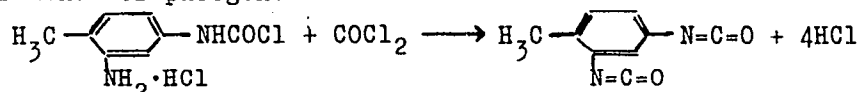
Technological problems of...

S/064/61/000/001/004/011
B110/B215

up and removing resin residues for improving the above method. To eliminate side reactions, phosgene treatment is first carried out at low temperatures (0 to 5°C). To eliminate the formation of urea derivatives, toluylene diamine is added to a solution of excessive phosgene in $o\text{-C}_6\text{H}_4\text{Cl}_2$ or $\text{C}_6\text{H}_5\text{Cl}$. The following reaction takes place:



By a temperature increase to more than 100°C, diisocyanate forms under the influence of phosgene:



The authors studied the addition of toluylene diamine dissolved (I) or suspended (II) to an inert solvent during the continuous method. In (I) the diamine was dissolved in $\text{C}_6\text{H}_5\text{Cl}$, heated to 90 to 95°C, and added to the solution of phosgene in $\text{C}_6\text{H}_5\text{Cl}$ which had been cooled down to -10°C.

Card 2/6

Technological problems of...

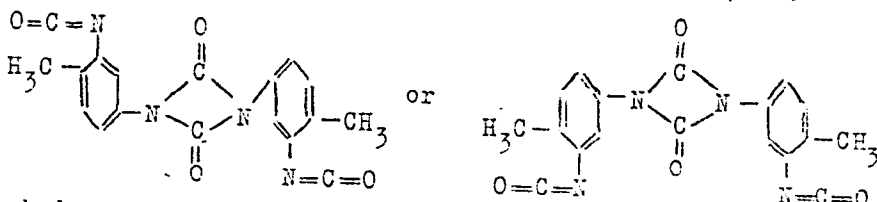
S/064/61/000/001/004/011
B110/B215

decomposition of the resin particles into toluylene diamine can only be carried out with aqueous alkali and under pressure, whereas they can be transformed into diisocyanate by distillation at 215°C and 1 to 80 mm Hg in high-boiling naphthene oil. For the latter process, however, an oil that is stable up to 300°C, a high vacuum, and filtering are required. The authors worked without solvents. After the distillation of diisocyanate at 105 to 107°C and 3 to 7 mm Hg, 16.5% of N₂ were microanalytically determined in the resin residue (38 to 40 percent by weight of the distilled diisocyanate) according to Dumas. Diisocyanate vapors were separated from the residue in the vacuum apparatus at 3 to 7 mm Hg and slowly increasing temperature. At 170 to 180°C it puffed up and hardened. Vapor separation stopped between 280 and 300°C. The residue, a dry, brittle, porous substance, was easily removable after cooling it in the N₂-current. Its nitrogen content was 16.4%. The authors assume that the original residue, besides the not distilled monomers, also contained the following dimer:

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Technological problems of...

S/064/61/000/001/004/011
B110/B215



which decomposes into the monomer at 175°C. The second residue consists of high-polymer compounds. There are 1 table and 6 references: 2 non-Soviet-bloc. ✓

Card 5/6

SHENIN, Ya.I.; GUSEV, I.I.

Treatment of gonorrhea in males. Vest. dokt. i ven. 38 no. 10:
71-72 0 1964. (MIM 1617)

1. Novosibirskiy gorodskoy kozhno-venereologicheskiy dispensar
(glavnyy vrach A.M. Zamayeva; nauchnyy rukevoditel' - prof.
A.K. Yakubson).

GUTOROV, F.G.

Calculations for air heaters (GSTM air heaters) Vod.i san.
tekh. no.7:19-25 0 '55. (MLRA 9:2)
(Hot-air heating)

GUTOROV, M.K., ministr.

~~SECRET~~
Progress. Leg.prom. 7 no.11:17-18 N '47.

(MLRA 6:11)

1. Ministerstvo legkoy promyshlennosti SSSR.
(Ukraine--Manufactures) (Manufactures--Ukraine)

GUTOROV, M. M.

Dissertation: "Shade-Forming Properties of an Illuminated Field and Its Consideration in the Designing of Illuminating Fixtures." Cand Tech Sci, Moscow Power Engineering Inst, Moscow, 1953. (Referativnyy Zhurnal--Fizika, Moscow, Aug 54)

SO: SUM 393, 28 Feb 1955

GUTOROV, M.M., assist.

Shadow-forming properties of light fields. Trudy MBI no.13:76-83
'53. (MIRA 11:4)

1. Moskovskiy energeticheskiy institut im. V.M. Molotova, Kafedra
svetotekhniki.

(Lighting, Architectural and decorative)

112-57-8-18087

Translation from: Referativnyy zhurnal, Elektrotehnika, 1957, Nr 8,
pp 327-328 (USSR)

AUTHOR: Gutorov, M. M.

TITLE: Evaluation of Depth of Incident Shadows (Uchet glubiny padayushchikh teney)

PERIODICAL: Tr. Mosk. energ. in-ta (Transactions of the Moscow Power-Engineering Institute), 1956, Nr 18, pp 410-428

ABSTRACT: General considerations in evaluating the depth of incident shadows are presented. It is necessary to allow for partial shading of both direct and reflected fluxes in order to develop a general method of evaluating shadow depth and to select the type and placement of luminaires according to the desired shadow depth. Upon examination of shading in the direct-radiation field, the author makes the following conclusions: (1) one luminaire gives the maximum depth of incident shadow, since the depth practically does not change by increasing the number of luminaires over 9; (2) for the same number of luminaires, the shadow depth increases with an increase of the relative distance between luminaires; (3) the

Card 1/2

GUTOROV, M.M., dotsent, kand.tekhn.nauk; LITVINOV-LUNTS, V.S., inzh., red.

[Collection of problems for the course on "Lighting Engineering."
Sbornik zadach po kursu "Osnovy svetotekhniki." Moskva, Mosk.ordena
Lenina energ.in-t. Pt.1. 1958. 74 p. (MIRA 12:8)
(Lighting--Study and teaching)

GUTOROV, Mikhail Maksimovich, dots.; KRUPENNIKOVA, L.I.,
assistant

[Principles of electric lighting engineering and light
sources] Osnovy svetotekhniki i istochniki sveta. Mo-
skva, Mosk. energeticheskii in-t. Pt.1. 1962. 148 p.
(MIRA 17:5)

1. Kafedra svetotekhniki i istochnikov sveta Moskovskogo
energeticheskogo instituta (for Gutorov).

GUTOROV, M.M., kand. tekhn. nauk

Average cylindrical illumination. Svetotekhnika 9 no.10:10-
13 0 '63. (MIRA 16:11)

1. Moskovskiy energeticheskiy institut.

12-48-4

GUTOROV, M.M., kand. teh. nauk

Graphical method for determining the average cylindrical illuminance of large luminous surfaces. Svetotekhnika 10 no.3:5-6 1964.
(MIRA 27.3)

1. Moskovskiy energeticheskiy institut.

GUT. 1965, N. 2, kand. tekhn. nauk

Semi-cylindrical illumination. Svetotekhnika P'rikladnaya (1965, No. 2) (1965: 17:17)

1. Moskovskiy energeticheskiy institut.

GUTOROV, V.

New agricultural machines for collective farm fields Moskva, Moskovskii rabochii,
1953. 66 p. (54-4225)

S760.R9G8

GUTOROV, V.I., inzh.; FOMICHEV, M.G., inzh.

KSF-1,0 self-propelled front-mounted mower. Trakt.i sel'-
khoz mash. no.1:35-36 Ja '60. (MIRA 13:4)

1. GKBS Lyuberetskogo zavoda sel'skokhozyaystvennogo mashino-
stroyeniya im. Ukhtomskogo.
(Mowing machines)

GUTOROV, V. G., Eng.

Cranes, Derricks, etc.

Preventing collisions of the TsKB-0. 5x16, 5 tower cranes. Rab. energ. 3, no. 1, 1953.

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

1. GUTOROV, V. G., Eng.
2. USSR (600)
4. Steam Boilers
7. Repairing locomobile boilers, 3, No. 3, 1953.

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

GRINBOYM, M.Ia.; GUTOROV, V.G.; ZHILYAYEV, A.V.; KASATKIN, V.N.; LEVIN, P.V. [deceased]; MITYAKOV, V.S.; OKOROKOV, A.A.; USHAKOV, P.N.; BURKOV, G.A., laureat Stalinskoy premii, redaktor [deceased]; AYZENSHEAT, I.I., redaktor; FRIDKIN, A.M., tekhnicheskii redaktor.

[Handbook on boiler inspection] Spravochnik po kotlonadzeru. Izd. 2-o, perer. Pod obshchei red. G.A.Burkova, Moskva, Gos. energ. izd-vo, 1954. 568 p. [Microfilm] (MLRA 8:2)
(Boilers--Inspection)

GUTOROV, V.G., inzhener.

Boiler damages caused by dangerous fall in the water level and
measures for their prevention. Bezop.truda v prom. 1 no.7:13-16
J1 '57. (MIRA 10:7)

(Boilers--Safety measures)

MOROZOV, M.P.; ATRUSHKEVICH, L.G.; GUTOROV, V.G.; KONDRASHOV, A.M.;
MOROZOV, K.S.; NIKITENKO, I.S.; TATARENKO, V.A.; USHAKOV, P.N.;
ZHILYAYEV, A.V., otv.red.; VOLKOVA, V.A., red.izd-va;
IL'INSKAYA, G.M., tekhn.red.

[Regulations for the construction and safe operation of steam
boilers and air tanks in industrial locomotives] Pravila
ustroistva i bezopasnoi ekspluatatsii parovykh kotlov i voz-
dushnykh rezervuarov parovozov promyshlennykh predpriatii.
Obiazatel'ny dlia vseh ministerstv, vedomstv i sovnarkhozov.
Moskva, Ugletekhizdat, 1958. 25 p. (MIRA 12:7)

1. Russia (1917- R.S.F.S.R.) Komitet po nadzoru za bezopasnym
vedeniyem robot v promyshlennosti i gornomu nadzoru.
(Locomotives)

GUTOROV, V.G., inzh.

Causes of an accident in a braided column. Bezop.trudn v prom.
2 no.5:16-18 My '58. (MIRA 11:4)
(Chemical apparatus)

OKOROKOV, A.A., *otv.red.*; MOROZOV, M.P., *red.*; GUTOBOV, V.G., *red.*;
ZHILYAYEV, A.V., *red.*; KONDRASHOV, A.M., *red.*; USHAKOV, P.N., *red.*;
MAGAZINER, S.I., *red.izd-va*; SHKLYAR, S.Ya., *tekh.red.*

[Rules for the installation and safe operation of elevators]
Pravila ustroistva i bezopasnoi ekspluatatsii liftov. Izd.3.
Moskva, Ugletekhizdat, 1959. 71 p.

1. Russia (1923- U.S.S.R.) Komitet po nadzoru za bezopasnym
vedeniyem rabot v promyshlennosti i gornomu nadzoru. (MIRA 14:6)
(Elevators)

GUFOROV, V.G., inzh.

Enforce the inspection of steam-boiler manufacturing. Bezop.
truda v prom. 3 no.2:16-17 F '59. (MIRA 12:2)
(Boilers--Safety measures)

MOROZOV, M.P., red.; GUTOROV, V.G., red.; ZHILYAYEV, A.V., red.;
KONDRASHOV, A.M., red.; OKOROKOV, A.A., red.; USHAKOV, F.N.,
red.; OKOROKOV, A.A., otv. red.; VOLKOVA, V.A., red. izd-va;
BCLLYREVA, Z.A., tekhn. red.

[Regulations for the installation and safe operation of
elevators; mandatory for all ministries and departments]
Pravila ustroistva i bezopasnoi ekspluatatsii liftov; obiazatel'ny
dlya vseh ministerstv i vedomstv. Izd. 4. Moskva,
Gosgortekhzdat, 1961. 71 p. (MIRA 15:11)

1. Russia (1923- U.S.S.R.) Kmitet po nadzoru za bezopasnym
vedeniem rabot v promyshlennosti i gornomu nadzoru.
(Elevators--Laws and regulations)

MOROZOV, M.P., red.; GUROROV, V.G., red.; GRINBOYM, S.M., red.;
ZHILYAYEV, A.V., red.; KONDRASOV, A.M., red.; LITVINOV,
D.A., red.; TATARENKO, V.A., red.; VOLKOV, V.A., red.
izd-va; MINSKER, L.I., tekhn. red.

[Regulations for the manufacture and safe operation of high-
pressure vessels; mandatory for all ministries and departments]
Pravila ustroistva i bezopasnoi ekspluatatsii sosudov, rabo-
taiushchikh pod davleniem; obiazatel'ny dlia vseh ministerstv
i vedomstv. Izd.4. Moskva, Gosgortekhnizdat, 1961. 79 p.
(MIRA 15:10)

1. Russia (1923- U.S.S.R.)Komitet po nadzoru za bezopasnym ve-
deniem rabot v promyshlennosti i gornomu nadzoru.
(Pressure vessels)

GUTOROV, Vasilii Georgiyevich; RUSANOV, A.A., red.; BUL'DYAYEV, N.A.,
tekh. red.

[Accidents and damages in boiler systems]Avarii i povrezhdenii
kotel'nykh agregatov. Moskva, Gosenergoizdat, 1962. 95 p.
(MIRA 15:12)

(Boilers)

ASTAF'YEV, Viktor Dmitriyevich; GUTOROV, V.I., inzh., retsenzent;
YAKOVLEVA, V.I., red.; TIKHANOV, A.Ya., tekhn.red.

[Handbook for designing cylindrical helical compression and
extension springs] Spravochnik po raschetu tsilindricheskikh
vintovykh pruzhin szhatia - rastiazhenia. Moskva, Gos.
nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1960. 123 p.

(Springs (Mechanism))

(MIRA 13:11)

POPOV, B.A., inzh.; GUTOROV, V.I., inzh.

Performance of mowers at increased speed. Trakt. i sel'khoz mash.
31 no.10:20-23 0 '61. (MIRA 14:12)

1. GKBS zavoda im. Ulchtomskogo.
(Mowing machines)

BOSOY, Ye.S.; GUTOROV, V.I.; POPOV, B.A.

Movement of the knife of harvester cutter bars. Trakt. 1
sel'khoz mash. no.5:24-26 My '64. (MIRA 17:6)

1. Rostovskiy institut sel'skokhozyaystvennogo mashinostroyeniya
(for Bosoy). 2. GKBS Lyuberetskogo zavoda im. Ukhtomskogo
(for Gutorov, Popov).

~~24(6)~~ 24.7700

66246

AUTHORS: Boltaks, B. I., Gutorov, Yu. A. SOV/181-1-7-2/21

TITLE: Some Data on the Diffusion and Effect of Impurities on the Electrical Properties of Gallium Antimonide

PERIODICAL: Fizika tverdogo tela, 1959, Vol 1, Nr 7, pp 1015-1021 (USSR)

ABSTRACT: 99.98% pure antimony and 99.97% pure gallium were molten in vacuum with continuous mixing and cleaning by the layer method; hole-type conductivity (hole concentration $\sim 10^{17}/\text{cm}^3$) was determinable along the whole length of the cast. The cast was divided into 4 equal parts and each part was mixed with 0.1 wt % of either In, Sb, Se, or Te in a repeated vacuum melting. Three plates each with the size of 3.8 . 4.5 . 16 mm of the melts of each mixture were prepared. The dependence of the electrical conductivity on temperature and the Hall-effect were measured by known methods for these samples. The influence of the additions In, Sb, Se, and Te on the electrical properties of GaSb is shown in table 1 (specific conductivity, concentration of current carriers, mobility). The dependence on temperature of the specific conductivity and the Hall constant are graphically represented

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66246

Some Data on the Diffusion and Effect of Impurities SOV/181-1-7-2/21
on the Electrical Properties of Gallium Antimonide

(Figs 1,2). In order to investigate diffusion, further samples were prepared by means of the layer melting process (GaSb was stoichiometrically synthesized, Sb-purity 99.90%). The surface of the samples was directly covered by the tracer impurities In^{114} , Sn^{113} , and Sb^{114} . The annealing temperature varied between 320° and 650°C , the annealing time between 24 and 114 hours. The hole concentration is cited to be $(0.5 - 2.0) \cdot 10^{17} \text{ cm}^{-3}$. Se^{75} and Te^{127} diffused from the vapor phase into the sample. After annealing thin layers were removed from the samples and their radioactivity was measured, as a criterion for the coefficient of diffusion. The results are represented in diagrams and tables. The following conclusions may be drawn: The activation energy rises by diffusion of impurity atoms in GaSb in the order: In, Sn, Sb, Te. In the same order increases also the influence of these elements on the dielectric properties of GaSb. The decrease of the activation energy with increasing ion radius of the diffusing particle does not depend on the

Card 2/3

GUTOROVA, A.N.

New method for designing electrostatic voltmeters with digital
reading. Izv. tekhn. no.7:32-34 J1 '63. (MIRA 16:8)

(Electron-tube voltmeter)

L 10498-65 EWT(d)/EEG(k)-2/EEG-4 Po-4/Pq-4/Pg-4/Pl-4/PL-4 ESI(L)/RAME(L)
ACCESSION NR: AR4046019 S/0274/64/000/007/A088/A089

SOURCE: Ref. zh. Radiotekhnika i elektrosvyaz'. Svodnyy tom, Abs. 7A505

AUTHOR: Gutorova, A. N.; Malygina, N. V.

TITLE: Precise measurement of low frequencies

CITED SOURCE: Uch. zap. aspirantov i soiskateley. Leningr. politekh. in-t. Elektroizmerit. tekhn. i avtomatika. L., 1963, 37-40

TOPIC TAGS: frequency measurement, low frequency measurement, frequency meter, digital frequency meter

TRANSLATION: Some problems are considered of digital methods for measuring low frequencies when the measurand is a number of pulses of an auxiliary generator per cycle of the oscillation being measured. The measurement results are often used for automatic computation of frequency by digital devices. Methods of division convenient for digital frequency meters are indicated. Block diagrams of the devices using parallel and series principles are supplied. Errors involved are briefly considered. Necessity for careful filtration of supply-line noise is noted. Ferrite transistorized digital devices are recommended as the most suitable.

Card 1/2

L 10498-65

ACCESSION NR: AR4046019

ASSOCIATION: Leningradskiy politekhnicheskiy institut (Leningrad Polytechnic Institute)

SUB CODE: EC

ENCL: 00

Card 2/2

GUTOROVA, L.D.

Phage typing of Salmonella breslau. Zhur. mikrobiol. epid. i immun.
29 no.12:53-55 D '58. (MIRA 12:1)

1. Iz kafedry mikrobiologii Leningradskogo sanitarno-gigiyenicheskogo
meditsinskogo instituta.

(SALMONELLA,

breslau, phagotyping (Rus))

(BACTERIOPHAGE,

typing of Salmonella breslau (Rus))

GUTOROVA, L. D., Cand of Med Sci -- (diss) "The Subdivision of S. Breslau
into Types With the Aid of Specific Types of Bacteria," Leningrad, 1959,
13 pp (Leningrad Sanitary-Hygiene Medical Institute) (KL, 6-60, 125)

GUTCROVA, L.D.

Characteristics of the temperate and virulent bacteriophages of the
A group of *Salmonella typhimurium*. Trudy LSGMI 66:212-216 '62.

(MIRA 17:4)

1. Kafedra mikrobiologii Leningradskogo sanitarno-gigiyenicheskogo
meditsinskogo instituta (zav. kafedroy - prof. M.N. Fisher).

15(2)

PHASE I BOOK EXPLOITATION

SOV/2071

Vargin, V. V., Ye. A. Antonova, L. L. Gutorova, Ye. I. Litvinova, V. V. Luchinskiy, Yu. V. Mazurek, V. Ya. Senderovich, and M. V. Serebryakova

Tekhnologiya emali i emalirovaniya metallov (Technology of Enamel and Enameling of Metals) Moscow, Gosstroyizdat, 1958. 397 p. Errata slip inserted. 5,000 copies printed.

Reviewers: G. I. Belyayev, Chief (Dnepropetrovsk Chemical and Technological Institute, Division of Silicate Technology), Candidate of Technical Sciences, Docent, and V. P. Vaulin, Candidate of Technical Sciences; Ed.: V. V. Vargin, Doctor of Technical Sciences;

Ed. of Publishing House: N. A. Gomozova; Tech. Eds: E. M. El'kina, and L. Ya. Medvedev.

PURPOSE: This book is intended for students of technological institutes and may also be useful to engineers and technicians.

Card 1/9

Technology of Enamel and Enameling of Metals

SOV/2071

COVERAGE: In this book the physicochemical, mechanical, thermal, optical, chemical, and electrical properties of enamels and enamel coating are described. General information on raw materials, classification and calculation of enamel compositions and processing methods is given. This book is for the most part a collective effort of faculty members of the Glass Department, Leningradskiy tekhnologicheskoy institute imeni Lensoveta (Leningrad Technological Institute imeni Lensovet). Chapters I, X and XV, and the section Adherence of Enamel to Metal in Chapter III were written by M. V. Serebryakova; Chapters II and III by Ye.A. Antonova, Candidate of Technical Sciences; Chapter IV by V. Ya. Senderovich, Candidate of Technical Sciences; Chapter V and the section Chemical Stability in Chapter III by Professor V. V. Vargin; Chapter VI by Yu. V. Mazurek, Candidate of Technical Sciences; Chapters VII and XVI by Ye. I. Litvinova; Chapters VIII and IX and the section Stress in an Enamel Layer in Chapter III by Engineer V. V. Luchinskiy; and Chapters XVII, XVIII, XIX, and the section Baseless Enamel Coating in Chapter XII by Senior Scientific Worker L. L. Gutorova. Ye. V. Kuklin, V. Ya. Lokshin, N. N. Kholodilin, K. P. Azanov, K. K. Tikhomirov, and V. P. Vaulin are mentioned as having contributed to the development of the Soviet enamel industry. The uses of enamel coatings for protection against corrosion, electric insulation,

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Technology of Enamel and Enameling of Metals

SOV/2071

and for combustion chambers and other parts of jet engines are treated briefly in the introduction. Basic research on enamel is being conducted at Leningrad Technological Institute; Novocherkasskiy politekhnicheskij institut imeni S. Ordzhanikidze (Novocherkassk Polytechnical Institute imeni S. Ordzhanikidze), Khar'kovskiy politekhnicheskij institut imeni Lenina (Khar'kov Polytechnical Institute imeni Lenin), Dnepropetrovskiy khimiko-technologicheskij institut (Dnepropetrovsk Institute of Chemical Technology), Khar'kov Branch Nauchno-Issledovatel'skiy institut khimicheskogo mashinostroyeniya (Scientific Research Institute of Chemical Machinery) and others. There are 9 references; 5 Soviet, 3 German and 1 English.

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PART I. PHYSICO-CHEMICAL PROPERTIES OF ENAMEL AND ENAMEL COATING

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GUTOROVA, L.L.

15(2)
AUTHOR:

Vergin, V.V.

30/12-58-12-22/23

Conference on Enamels and Metal Enameling
(Sovetskaniye po emalim i emalirovaniyu metallov)

TITLE:

Stanko I. Keramika, 1958, Br. 12, pp. 47-48 (USSR)

PERIODICAL:

ABSTRACT:

The organizers of the conference were: Leningradskoye obshchestvo nauko-tekhnicheskoye obshchestvo prozhektirovaniya i stroitelstva (Leningrad Obshch. Nauchno-Tekhnichesk. i Stroitel. Obshch.), the Institute of Building Materials, Leningradskiy sovetskoye nauko-tekhnicheskoye obshchestvo (Leningradskiy Nauchno-Tekhnichesk. i Stroitel. Obshch.) and Leningradskiy nauchno-tekhnicheskoye obshchestvo (Leningradskiy Nauchno-Tekhnichesk. i Stroitel. Obshch.). The program of the conference included: the most important problems of enamel synthesis, enameling of metal products and metal products from works in the USSR, Ural, Novosibirsk, Ulan-Ude, Kuznetsk, Dnepropetrovsk and Sverdlovsk institutes of the universities of the scientific research and design institutes in Leningrad, Moscow, Novocherkassk, Dnepropetrovsk and Sverdlovsk, Riga, Kharkov, and other towns. More than 40 reports were given and discussed. Professor K.S. Yastrop'yev, director of the LTI Institute, gave in his opening speech stressed the great economic importance of the problems of enameling metal products and apparatus.

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Ye.I. Litvinova (LTI Inst. Leningrad) reported on the influence of metal quality on the formation of "film-scale" in enameling. A.A. Shpenn, Institut Khimii Silikatov AN SSSR (Institute of Silicate Chemistry of the AN USSR), spoke on the present stage of the problems of calculating the properties of glass and enamels according to their composition. M.V. Serebryakova (LTI Inst. Leningrad) gave a survey of foreign literature of enamels and metal enameling. N.S. Litvinov, Nauchno-Issledovatel'skiy Institut Sverkhprochnosti (Scientific Research Institute of Super-Strength Engineering) reported on the enameling of products in the electric field of a corona discharge. I.G. Pavlovskiy, Nauchno-Issledovatel'skiy Institut (Leningradskiy Nauchno-Tekhnichesk. i Stroitel. Obshch.) gave a survey of foreign literature of enamels and metal enameling.

Card 2/6

Ye.I. Litvinova (LTI Inst. Leningrad) reported on the influence of metal quality on the formation of "film-scale" in enameling. A.A. Shpenn, Institut Khimii Silikatov AN SSSR (Institute of Silicate Chemistry of the AN USSR), spoke on the present stage of the problems of calculating the properties of glass and enamels according to their composition. M.V. Serebryakova (LTI Inst. Leningrad) gave a survey of foreign literature of enamels and metal enameling. N.S. Litvinov, Nauchno-Issledovatel'skiy Institut Sverkhprochnosti (Scientific Research Institute of Super-Strength Engineering) reported on the enameling of products in the electric field of a corona discharge. I.G. Pavlovskiy, Nauchno-Issledovatel'skiy Institut (Leningradskiy Nauchno-Tekhnichesk. i Stroitel. Obshch.) gave a survey of foreign literature of enamels and metal enameling. Ye.I. Litvinova (LTI Inst. Leningrad) reported on the influence of metal quality on the formation of "film-scale" in enameling. A.A. Shpenn, Institut Khimii Silikatov AN SSSR (Institute of Silicate Chemistry of the AN USSR), spoke on the present stage of the problems of calculating the properties of glass and enamels according to their composition. M.V. Serebryakova (LTI Inst. Leningrad) gave a survey of foreign literature of enamels and metal enameling. N.S. Litvinov, Nauchno-Issledovatel'skiy Institut Sverkhprochnosti (Scientific Research Institute of Super-Strength Engineering) reported on the enameling of products in the electric field of a corona discharge. I.G. Pavlovskiy, Nauchno-Issledovatel'skiy Institut (Leningradskiy Nauchno-Tekhnichesk. i Stroitel. Obshch.) gave a survey of foreign literature of enamels and metal enameling. Ye.I. Litvinova (LTI Inst. Leningrad) reported on the influence of metal quality on the formation of "film-scale" in enameling. A.A. Shpenn, Institut Khimii Silikatov AN SSSR (Institute of Silicate Chemistry of the AN USSR), spoke on the present stage of the problems of calculating the properties of glass and enamels according to their composition. M.V. Serebryakova (LTI Inst. Leningrad) gave a survey of foreign literature of enamels and metal enameling. N.S. Litvinov, Nauchno-Issledovatel'skiy Institut Sverkhprochnosti (Scientific Research Institute of Super-Strength Engineering) reported on the enameling of products in the electric field of a corona discharge. I.G. Pavlovskiy, Nauchno-Issledovatel'skiy Institut (Leningradskiy Nauchno-Tekhnichesk. i Stroitel. Obshch.) gave a survey of foreign literature of enamels and metal enameling.

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Conference on Enamels and Metal Enameling

SOV/72-54-12-22/13

P. G. Puzish, Latvyskiy gosudarstvennyy universitet (Latvian State University) reported on the investigation of fritted prime enamels for coating cast iron.

V. S. Kosshin, Scientific Research Institute of Sanitary Engineering, reported on the influence of chemical composition on some properties of enamel.

By the ISI is also reported the following reports were given:

L. A. Ostrova on prime enamels for aluminum enameling.

M. V. Serebryakova on non-durable silico-phosphate enamels.

G. A. Koryavina on slightly colored antimony enamel.

Iu. V. Masurek on the investigation of a systematic series of oxides for obtaining blue and brown pigments.

The Novocherkassk Polytechnical Institute gave the following reports:

E. P. Anarov on new methods of enamel testing, and on the influence of iron oxides on the physico-chemical properties of the prime coat.

V. G. Terin on the importance of the gas phase in the burning process of the prime coat.

Ye. M. Chistova on phosphate enamels.

V. I. Koryukina on prime-less coats.

Colloquium of the Department of Chemical-Technological Institute reported:

G. I. Balyayev on the acid content and basicity of enamels, and on the influence of the composition on some properties of prime enamel.

L. V. Terin, Institute of Chemistry of the Ministry of Chemical and Metallurgical Industry, reported on the damping of enamel by antimony.

Chemical Institute of the Ministry of Chemical and Metallurgical Industry, reported on the investigation of the properties of enamel.

A. M. Zemanova spoke on the construction of chemical apparatus for the investigation of the properties of enamel.

The methods of preventing this (see "Problemy" "Mestimly" series) and the application of vibration grinding for chromium and nickel-boric enamel layers, as well as on the experiment of using water titanium

enamel.

V. G. Zayev reported on the improvement in the burning technology of enamel coats in connection with the change-over of furnaces to gas.

Ye. A. Obort reported on the work of the design office of the enamel manufacturing plant, namely metallic works.

D. I. Izgorov, representative of the State Office for Planned Economy on the planned production of enamel for the next years, as well as on the standard specifications of enamel consumption.

The members of the conference passed resolutions for obtaining an improvement in the quality of enamel products, as well as for increasing the production and creating a new technology and new production methods.

Card 4/6

Card 4/6

GUTOROVA, L., starshiy nauchnyy sotrudnik; KAPLUN, I. JLi:

Enameling of aluminum. Prom.koop. 13 no.7:10 JI '59.

(MIRA 12:10)

1. Tekhnologicheskii institut im. Lensoveta, Leningrad (for Gutorova).
2. Zamestitel' nachal'nika tekhnicheskogo otdela gorpromsoвета,
Leningrad (for Kaplun).
(Leningrad--Enamel and enameling)

83642

17.1205

15.2120

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A006/A001

Translation from: Referativnyy zhurnal, Khimiya, 1960, No. 15, p. 375, # 62195

AUTHORS: Gutorova, L.L., Kheyfets, V.S.

TITLE: The Effect of Fluorine on the Viscosity of Glasses of the Na₂O-BaO-SiO₂, Na₂O-PbO-SiO₂ and Na₂O-MgO-SiO₂ Systems in the Annealing Temperature Range

PERIODICAL: Tr. Lenigr. tekhnol. in-ta im. Lensovet, 1959, No. 58, pp. 75-82

TEXT: The following cations were selected to investigate the effect of F according to the principle of their rôle in glass structure: Pb²⁺ - a cation included in the structural lattice of glass, Ba²⁺ - a cation, not included in the structural lattice of glass; Mg²⁺ - a cation occupying an intermediate position but being, however, closer to Ba²⁺. To eutectics of 73 mol.% SiO₂ and 27 mol.% Na₂O, Pb, Ba and Mg oxides are added; moreover, 3, 6, 9 and 12 weight portions of F were added to each series of glasses. It was found that the softening temperature of glass (10^{12.5} poise viscosity) depended on the presence of bivalent metal oxide and on the amount of F. A higher SiO₂ : Na₂O ratio in

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