

KLABOCH, L., inz.; DUFEK, Jaroslav, inz.; HAJEK, E., doc., inz.; REZNICEK, I., inz.; ROD, F., inz.; DRDA, J., inz.; MATOUSEK, B., inz.; KOUSAL, P., inz.; MANDA, V.; CAIS, O., inz.; NOVAK, S.; URBAN, S.; HANKE, M., inz.; VOKURKA, V., inz.; FOGL, J., inz.; HROMIR, M., inz.; SOLIN, J., prof., inz.; SLEZAK, A., inz.; TITLBACH, Z., inz.; DREXLER, J., inz.; HORNA, O., inz.; KUPEC, J., inz.

Discussion on tensiometry. Zpravodaj VZLU no.2:37-46, 69-80 '62.

1. Vyzkumny a zkusebni letecky ustav (for Dufek, Reznicek, Manda, Cais, Drexler and Kupec). 2. Statni vyzkumny ustav tepelne techniky (for Klabocho, Rod, Drda, Matousek, Titlbach). 3. Ceske vysoke uceni technicke (for Hajek, Solin). 4. Ustav pro vyzkum motorovych vozidel (for Hanke, Vokurka, Fogl, Hromir). 5. Vyzkumny ustav matematickych stroju (for Horna). 6. Moravan, n.p., Otrokovice (for Kousal). 7. Mikrotechna, Holesovice (for Novak). 8. Zavody V.I.Lenina (for Urban). 9. Svermovy zavody, Vyzkumny ustav (for Slezak).

SOLIN, Vaclav

Chemical Abst.
Vol. 48 No. 6
Mar. 25, 1954
Biological Chemistry

(2)
Biological degradation of phenols. I. Biological oxidation of monobasic phenols. Stanislav Landa, Vaclav Solin, Karel Buriánek, and Blanka Pisecká (Vysoká škola chem., Prague, Czech.). *Chem. Listy* 47, 822-9(1953).—*Escherichia coli* cultivated from the Moldavian water degrades 60-100 mg. PhOH/1./hr. The degradation of phenol homologs is much slower than that of PhOH: *o*-MeC₆H₄OH and *p*-MeC₆H₄OH are destroyed 2-5 times, *m*-MeC₆H₄OH 7-17 times, 2,3-Me₂C₆H₃OH 12 times slower than PhOH; 2,4- and 2,5-xyleneols resist degradation even after 480 hrs. An *Oospora* culture degraded phenol, cresols, and xylenols, but 3-7 times slower than *E. coli*. *cis-cis-Muconic acid* was isolated as an intermediate during the degradation by the *Oospora*. M. Hudlická

SOLIN, VACLAV

Chemical Abst.
Vol. 48
Apr. 10, 1954
Biological Chemistry

Biological degradation of phenols. II. Assimilation of pyrocatechol by molds. Stanislav Landa, Václav Solin, and Jiří Falatý (Vysoká škola chem., Prague, C. ch.). *Chem. Listy* 47, 1066-70(1953); cf. C.A. 48, 3445a. — *Sur-* face-cultivated *Penicillium* and submerged cultures of *Oospora* assimilate pyrocatechol (I). More than 14% of *cis,cis*-muconic acid has been isolated, the amt. and rate of formation being dependent on the age of the culture, acidity, and the concn. of I. *Oospora* assimilates I faster than *Penicillium*, and may stop the growth of *Penicillium* if both are present in the same soln. of I. Ca salts decrease and Mg salt increases the degradation of I. Fe salts do not influence the yields of muconic acid. The degradation of I with molds is slower but more general than with bacteria. The acidity of solns. caused by muconic acid increases the speed of degradation. Degradation of monobasic phenols with molds requires aeration; I is degraded even without aeration. M. Hudlický

SOLIA, VAR. LAY

053 H

✓ Biological treatment of sewage. Stanislav Landa and
 Václav Solin. *Czechoslov. 83,656*, May 5, 1955. *Oidium*,
d. Pentactina, *Aspergillus*, or *Fusarium* cultivated in sewage
 waters contain phenols, especially pyrocatechol (I), can
 produce org. acids, such as mucic acid (II). A solia
 contg. 100 g. land 2.5 g. $(NH_4)_2SO_4$ in 50 l. water was inocu-
 lated with *Botrytis* spores and aerated at 20° until I dis-
 appeared (neg. reaction). The pH changed from 6-7 to 5.
 II was sepd. by absorption on charcoal and elution with
 dil. NH_4OH . Yields of pur. II were 50%. based on the
 wt. of I. L. J. Urbánek

SOLIN

Czechoslovakia /Chemical Technology. Chemical Products I-14
and Their Application

Water treatment. Sewage water

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 31782

Author : Solin

Title : Biochemical Decomposition of Phenols by Means
of B. coli and Molds.

Orig Pub: Vodni hospodarstvi, 1955, 5, No 7-7a, priloha,
23-29

Abstract: A study was made of the decomposition of phenol
(I) by B. coli isolated from surface waters.
Optimal conditions: temperature 28-37°, pH
5.8-7.9, concentration of I 200 mg/liter. Addi-

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Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 31782

tion of NH_4^+ and PO_4^{3-} accelerates the process, addition of nutrient broth slows it down. The homologues of I are decomposed more slowly (o- and p-cresol by 2-5 times, m-cresol by 7-17 times, 2,4- and 3,5-xyleneol are not decomposed). At pH 7.0-7.5 pyrocatechol is decomposed, at first, more rapidly than I, but later on the process ceases due to a coating of the culture with a film of humic and tarry substances. The Oospora mold decomposes I, cresols, xyleneols and pyrocatechol at concentrations up to 1-5 g/liter (with and without aeration). Rate of decomposition of I depends on its initial concentration

Card 2/4

Czechoslovakia /Chemical Technology. Chemical Products I-14
and Their Application

Water treatment. Sewage water.

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 31782

and reaches a maximum (38 mg/liter per hour) at 3 g/liter (the same with pyrocatechol -- 70 mg/liter per hour at 4.5 g/liter). On decomposition of I by molds, acids are formed: muconic, oxalic, succinic, malic, tartaric, citric and beta-keto-adipic. Ca^{2+} and Ba^{2+} inhibit the decomposition of pyrocatechol; Fe^{2+} , Mn^{2+} , Ni^{2+} , Co^{2+} , S^{2-} and CN^{-} have no effect; CNS- accelerates the process. Optimal values of pH 5-5.5; concentration of O_2 in the inblown gas can be low ($\geq 2.6\%$). Sewage water dephenolized by molds contains organic acids and must be subjected to purifying after treatment. On decom-

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Czechoslovakia /Chemical Technology. Chemical Products I-14
and Their Application

Water treatment. Sewage water.

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 31782

position of I by molds humic acids are formed on
the filter. For different sewage water the charge
of I amounts to 200-300 g/m³ slag per 24 hours;
degree of purification is 90-95%.

Card 4/4

Chemical-Physical Technology, Chemical Processes II-5
and Their Application
Water Treatment. Sewage water.

Abs Jour: Referat Zhur - Khimiya, No 1, 1958, 1727

Author : Drabek, Hruska, Nosek, Ptacek, Solin

Title : Purification of Phenolic Sewage Water of Brown
Coal Gasification

Orig Pub: Voda, 1956, 35, No 10, 342-347

Abstract: Description of the purification in cinder filters.
On new filters a process of adsorption takes
place, on filters which have been in operation --
a process of oxidation, with O₂ of the air. The
cinders act as catalyst. Depth of the cinder bed
is of 2-2.5 cm. The sewage water is fed at a uni-
form rate onto the cinder surface from a height of
about 1.5 meters. Technical details are described.

Card 1/1

SOLIN, Vaclav; BURIANEK, Karel

Removal of trinitrotoluene from water. Sbor.pal.vod. VSChT 1958:237-
245. (KEAI 9:4)

1. Katedra technologie vody, Vysoka skola chemicko-technologicka,
Praha.

(Trinitrotoluene)

(Water)

SOLIN, Vaclav; KUSTKA, Miroslav

Purification of waste waters containing trinitrotoluene by means of ash filters. Sbor.pal.vod. VSChT 1958:247-257. (KBAI 9:4)

1. Katedra technologie vody, Vysoka skola chemicko-technologicka, Praha.

(Trinitrotoluene) (Filters and filtration) (Water) (Ash)

COUNTRY : Czechoslovakia H-5
 CATEGORY :
 ABB. JOUR. : RZKhim., No. 22 1959, No. 78989
 AUTHOR : Solin, V., Eriebach, J., Pitter, P., and Spoustova, J.
 INST. : Not given
 TITLE : The Purification of the Waste Waters from the Desalting of Petroleum
 ORIG. PUB. : Vodni Hospod, No 2, 51-55 (1959)
 ABSTRACT : The waste waters contain high concentrations of inorganic substances (up to 28 gms/liter), phenols, naphthenic acids, and synthetic detergents. The BOD₂₀ of the waste waters is 490 mg/liter, K₂PK 2990 mg/liter. The presence of detergents makes purification extremely difficult, since they lead to the formation of stable foams. Experiments with the purification of the waste waters by coagulation with Al₂(SO₄)₃·18H₂O, FeSO₄·7H₂O, and other iron salts have shown that best

CARD: 1/3

COUNTRY : Czechoslovakia H-5
 APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001652210010-3
 ABB. JOUR. : RZKhim., No. 22 1959, No. 78989
 AUTHOR :
 INST. :
 TITLE :
 ORIG. PUB. :
 ABSTRACT : results are obtained from the application of FeCl₃·6H₂O in doses of 1,000 mg/liter at pH 5.4 or 8.2-8.5. The coagulation is incomplete in neutral medium. The oxygen demand of the waste waters is reduced by 70% and the concentration of synthetic detergents by 60-70% following coagulation. Experiments with the purification of the waste waters by the use of activated sludge following a preliminary tenfold dilution with tap water (for the reduction of the concentration

CARD: 2/3

COUNTRY : Czechoslovakia
CATEGORY :

ABS. JOUR. : RZhKhim., No. 22 1959, No.

78989

AUTHOR :
:
TITLE :

ORIG. PUB. :

ABSTRACT : of inorganic salts) are also described. The effect of additions of PO_4^{3-} in concentrations of 5 mg/liter and of preliminary chemical purification has also been investigated. Complete removal of odors and colors was attained. The phenol test with p-nitroaniline was negative.
V. Berenfel'd

ORIG: 575

MADERA, Vladimír, prof., dr., inz., doktor technických ved; SOLIN, Václav;
VUČKA, Václav

The biochemical reduction of trinitrotoluene; the course and byproducts
of 2:4:6 trinitrotoluene reduction. Sbor pal vod VSChT no.3, part 1:
129-147 '59.

1. Vedoucí Katedry technologie vody; rektor Vysoké školy chemicko-
technologické, Praha (for Madera) 2. Katedra technologie vody Vysoké školy
chemicko-technologické, Praha (for Solin and Vucka)

SOLIN, Vaclav

Purification of generator waste water by means of slag filters. Results obtained at the sanitation works in Dubnica. Sbor pal vod VSChT no.3, part 1:149-175 '59.

1. Katedra technologie vody Vysoke skoly chemicko-technologické,
Praha.

ERLEBACH, Jan; STOCKELOVA, Jaroslava; SOLIN, Vaclav

Problem of purification of generator waste water by means of slag filters; removing of fatty acids by slag. Sbor pal vod VSChT no.3, part 1:177-189 '59.

1. Katedra technologie vody Vysoke skoly chemicko-technologicke, Praha.

SOLIN, V.

"German unit tests methods for water, waste water and sludge control."
"Solin." V. Solin. Chem listy 5 1963-1964. No. 163.

SOLIN, Z.

"Water Economy in Plants of the Mineral Industry." p. 98. Praha, Vol. 2, no. 4, Apr. 1954.

SO: East European Accessions List, Vol. 3, No. 9, September 1954, Lib. of Congress

SOLIN, J.

Purification of waste waters from plants of the mining industry,
p. 11, RUDY (Ministerstvo hutniho prumyslu a rudnych dolu) Praha,
Vol. 3, No. 1, Jan. 1955

SOURCE: East European Accessions List (EEAL) Library of Congress,
Vol. 4, No. 12, December 1955

SOLIN, Z.

"Transportation and cleaning of ore slime in the German Democratic Republic." p. 249

RUDY. Praha, Czechoslovakia. Vol. 3, no. 8, Aug. 1955.

Monthly list of East European Accessions (EFAI), LC, Vol. 3, No. 6, Jun 59, Unclas.

SOLIN, Z.

Czechoslovak steel structures. p. 44

CZECHOSLOVAK HEAVY INDUSTRY. (Ceskoslovenska obchodni komora) Prague,
Czechoslovakia. No. 3, 1959

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 7, July 1959
Uncl.

SOLINEK, V.A.; OLN'YEVA, Ye.I.; KONDRAT'YEVA, Ye.M., redaktor; MEDVEDEVA,
L.A., tekhnicheskii redaktor

[Technical chemical and microbiological control in the fish canning
industry] Tekhno-khimicheskii i mikrobiologicheskii kontrol' rybo-
konservnogo proizvodstva. Moskva, Pishchepromizdat, 1952. 219 p.
(Fishery products--Preservation) (MLRA 10:1)

SOLINEK, V. A.

USSR/Chemical Technology. Chemical Products and Their Application -- Food industry,
I-28

Abst Journal: Referat Zhur - Khimiya, No 2, 1957, 6750

Author: Solinek, V. A.

Institution: None

Title: French Fish Canning Industry

Original
Publication: Ryb. kh-vo, 1956, No 7, 83-86

Abstract: No abstract

Card 1/1

SOLINEK, V.A., kand.tekhn.nauk.

Investigating the properties of smoke generated for curing fish.
Trudy VNIRO 35:102:114 '58. (MIRA 11:11)

1. Nauchno-issledovatel'skiy institut mekhanizatsii rybnoy promyshlennosti.

(Fish, Smoked)

(Smoke)

GORELOVA, N.D.; DIKUN, P.P.; SOLINEK, V.A.; YEMASHANOVA, A.V.

Amount of 3,4-benzopyrene in fish smoked by different methods.
Vop. onk. 6 no. 1:33-37 '60. (MIRA 13:10)
(BENZOPIRENE) (FISH, SMOKED)

SOLINEK, Viktor Aleksandrovich; MAKAROVA, T.I., kand.tekhn.nauk,
spetsred.; MOROZOVA, I.I., red.; KISINA, Ye.I., tekhn.red.

[Processing sardines] Tekhnologiya sardin. Moskva, Pishche-
promizdat, 1961. 195 p. (MIRA 14:4)
(Sardines)

BORODIN, Ivan Vasil'yevich, kand.tekhn.nauk, dotsent; SOLININ, Ye.A.,
inzh., nauchnyy red.; SKVORTSOVA, I.P., red.izd-va; GORDEYEV,
P.A., red.izd-va; STEPANOVA, E.S., tekhn.red.

[Technology of building] Tekhnologiya stroitel'nogo proiz-
vodstva. Moskva, Gos.izd-vo lit-ry po stroit., arkhitekt. i stroit.
materialam, 1958. 446 p. (MIRA 12:3)
(Building)

SOLINOV, A.G.; YUDIN, A.M.

Use of automated filter presses for the separation of suspensions
in the production of phosphorus salts. Khim.prom. no.9:709-710
S '63. (MIRA 16:12)

A 13

13/100

Project for melting glass in a weighed state. P. G.
SOLINGOV. *Trudy Moskov. Khim.-Tehn. Inst. Mendeleeva*
1960, No. 6, pp. 130-30; *Khim. Razval. Zhur.* 4 [7-8]
M Ho.
01 (1941).

Sel'kov, V. G. - "Increasing the productivity of photo machines," Trudy Tekhn. Konf-tsil' rabotnikov stekol. prom-sti, Moscow, 1948, p. 69-70

SO: U-3500, 19 July 53, (Letopis 'Zhurnal 'nykh Statey, No. 6, 1949).

Handwritten signature

BCS

881. Experiment in drawing sheet window glass from a free surface.—F. G. Sidorov and I. O. Tomashovits (Zhuk. Kuzn., 8, No. 9, 5, 1951).—A detailed discussion on the types of defects and causes used in glass drawing. Uniform drawing conditions and best quality of products were obtained with double-air deflocculation. Experience has clearly shown that the higher the temp. in the channel, the higher the quality of the glass surface worked, other conditions being equal. It was also found that a reduction of alkali content in the glass comp. (expts. went as far as 14%) has a favourable effect on the working. (6 figs.)

SOLINOV, F.G.

[Sheet glass drawing on vertical machines] Vyrabotka listovogo stekla
mashinami vertikal'nogo vytiagivaniia. Moskva, Gos.izd-vo lit-ry po stroit.
materialam, 1952. 93 p.

(MLRA 6:7)

(Glass manufacture)

SPEKLENKIN, A., laureat Stalinskoy premii; SOLINOV, F.G., nauchnyy redaktor; GLADYSHEVA, S.A., redaktor.

[How we mastered a method for drawing glass without using a "debiteuse."] Kak my osvoili metod bezlodochnogo vytiagivaniia stekla. Moskva, Gos. izd-vo lit-ry po stroitel'nym materialam, 1953. 18 p. (MIRA 7:8)
(Glass manufacture)

SOLINOV, F.G.

Tasks of the Glass Institute in developing glass manufacture. Stek.
i ker. 12 no.9:4-7 S'55. (MIRA 8:12)

1. Direktor Vsesoyuznogo Nauchno-issledovatel'skogo instituta stekla
(Glass manufacture)

SECRET

AUTHOR: None Given 72-2-18/20

TITLE: The Production of Glass in the Ukrainian SSR Must be Developed
(Razvivat' proizvodstvo stekla v USSR)
From the Technical Conference of ~~Representatives~~ of the Glass Industry
(S tekhnicheskogo soveshchaniya rabotnikov stekol'noy
promyshlennosti).

PERIODICAL: Steklo i Keramika, 1958. Nr 2, pp. 43-45 (USSR)

ABSTRACT: This conference was called by the Ministry for the Industry of
Building Materials of the Ukrainian SSR as well as by the Ukrainian-
and Stalin-Regional NTO for Building Materials and took place on
December 10-12, 1957 at Konstantinovka. The minister for the build-
ing material industry of the Ukrainian SSR, Moroz, opened the con-
ference and stressed the fact that the production of glass must be
increased. The following reports were further delivered:

- 1.) Patenko, (Deputy Minister for the Building Material Industry)
spoke about the present stage of the glass industry, and pointed
out what work must be carried out in future.
- 2.) Solinov (Director of the Institute for Glass) gave a report con-
cerning new kinds of glass products for dwelling- and industrial
buildings and how they are to be properly used in practice.

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- 3.) Dubrovskiy (Director of the Ukrainian Branch of the Institute for Glass) described the work carried out by this institute.
- 4.) Tykachinskiy (Institute for Glass) gave a detailed description of the part played by the factors determining the intensity of the process of glass melting.
- 5.) Zhirnov ("Proletariy" plant) spoke about the success achieved by this plant.
- 6.) Lev (Representative of the Giprosteklo Institute) spoke about the distribution of new products.
- 7.) Alekseyev (Academy for Building and Architecture of the USSR) spoke about the assortment, quality, and value of building glass.
- 8.) Il'inskiy (Head of the Pyrometric Department of the Giprosteklo) spoke about the perfecting of glass smelting furnaces during future repair work.
- 9.) K.I.Borisov (PKB of the Institute for Glass) spoke about improved constructions of glass smelting furnaces and flues.

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72-2-18/20

- 10.) Solomin, Professor (Institute for Glass) spoke about re-fractories for tank furnaces.
- 11.) Pronin (Lisichansk Works) reported about dinas products of high stability.
- 12.) Bondarev (Director of the "Avtosteklo" Works, Konstantinovka) dealt with prospects for building glass.
- 13.) Firer (Representative of the Gomel Plant) spoke about the production and use of glass tubes and foam glass.
- 14.) Zabkov (Director of the Plant imeni October Revolution) spoke about the prospects of the production of special glass products.
- 15.) Bazhbeyk-Melikov (Scientific Collaborator of the Institute for Glass) gave a report on building glass blocks.
- 16.) Abakumov (Chief Engineer of the Skopino Works) spoke about the production of glass blocks in this plant.
- 17.) Shatokhin (Institute for Glass), Polik (Institute for Glass Fibres), Koryagina (Ivotsk Plant) spoke about glass fibres.

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72-2-18/20

- 18.) Perederiyenko (Director of the Glass Works at Lvov) spoke about plate glass of high quality.
- 19.) Myasnikov (Dotsent of the Polytechnic Institute of Kiyev) spoke about the production of glass tiles.
- 20.) Reznikov (PKB of the Institute for Glass), Minakov ("Avto-steklo" Works, Konstantinovka), Dolbin ("Proletariy" Works), Kolesnikov (Plant imeni October Revolution), Zhirnov (TsKB MPSM Ukrainian SSR) spoke about problems of mechanization.
- 21.) Pod"yel'skiy spoke about the packing of glass.
- 22.) Baklanov (Head of the Sovnarchose Stalinsk) spoke about the development of new building materials in that province.
- 23.) Potanin (Deputy Chief of the Department for Building Materials of the Gosplan USSR) spoke about general problems of the glass industry.

Decisions were made with a view of increasing the efficiency and the quality of the products of glass works and the works producing

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refractories. On the basis of the Ukrainian branch it is intended
that a Ukrainian Scientific Research Institute for Glass be
established at Konstantinovka.

AVAILABLE: Library of Congress

Card 5/5

SOLINOV, F. G.

25(1),25(5)

AUTHOR:

None Given

SOV/72-58-12-21/23

TITLE:

Conference of Functionaries of the Glass Industry
(Soveshchaniye rabotnikov stekol'noy promyshlennosti)

PERIODICAL:

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

ABSTRACT:

The conference of functionaries of the glass industry of the RSFSR was held in the town of Vladimir from October 21-23, 1958. The organizing bodies were: Gosudarstvennyy nauchno-tekhnicheskiy komitet Soveta Ministrov RSFSR (Scientific-Technical State Committee of the Council of Ministers of the RSFSR), Gosplan RSFSR (State Office for Economic Planning of the RSFSR), Vsesoyuznoye khimicheskoye obshchestvo imeni D.I. Mendeleyeva (All-Union Chemical Society imeni D.I. Mendeleev) and Vladimirskiy sovnarkhoz (Vladimir Council of National Economy). The topic of the conference was: Perfection of production processes, introduction of general mechanization and automatic control in the factories for building and technical glass, glass fiber, glass containers and vessels. A.S. Boldyrev, Deputy Chairman of the Scientific-Technical State Committee of the Council of Ministers of the RSFSR, in his opening speech termed the elaboration of measures for further development of the glass industry by introduction of the latest technical achievements as well as the experience of leading

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factories to be the most important task. He stressed that the achievements of Soviet and foreign science and engineering should be considered in planning new works. The following reports were given: F.G. Solinov, Director of the Gosudarstvennyy nauchno-issledovatel'skiy institut stekla (Scientific State Research Institute for Glass) reported on the basic trend of scientific research, experimental and construction work in glass industry.

V.Ye. Sheyko, Director of the Vsesoyuznyy nauchno-issledovatel'skiy institut steklovolokna (All-Union Scientific Research Institute for Glass Fiber) spoke on the prospects of development in the production of glass fiber and its products.

Voshchilov, Deputy Chief-Engineer of the GPI-3, reported on mechanization and automatic control in the factories of bottle and vessel production.

M.G. Stepanenko, Professor, Director of the laboratoriya Instituta Stekla (Laboratory of the Glass Institute), reported on the introduction of electric and gas-electric furnaces.

I.D. Tykachinskiy, Director of the Laboratory of the Glass Institute, spoke on methods and experiments of intensifying the glass melting process by increasing the melting temperature and using chemical accelerators.

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N.V. Solomin, Professor, Director of the Laboratory of the Glass Institute, spoke on measures of supplying the glass industry with high-grade refractory products.

D.S. Rutman, Chief Engineer of the Podol'skiy ogneupornyiy zavod (Podol'skiy Factory of Refractory Products) spoke on the manufacturing technology and the properties of refractory products of this factory.

A.G. Minakov, Deputy Chief Engineer of the Konstantinovskiy zavod "Avtosteklo" (Konstantinovskiy Works "Avtosteklo") reported on experiments of extension of the furnace working period by artificial cooling of the furnace brick lining.

V.G. Gutop, Director of the Laboratory of the Glass Institute, reported on the development in automatic control of working conditions for glass melting furnaces.

V.V. Erlandts, Deputy Chief of the Otdel stroitel'nykh materialov Gosstroya SSSR (Section for Building Materials of the Gosstroy USSR), spoke on the demands of building experts to the glass industry.

D.I. Klegg, Chief Engineer of the Gusevskoy stekol'nyy zavod imeni Dzerzhinskogo (Gusevskoy Glassworks imeni Dzerzhinskiy), reported on the operation of tank furnaces in this factory.

The work of the conference was done in 4 sections: Building and technical glass, vessels, glass containers, glass fiber and glass plastics.

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Conference of Functionaries of the Glass Industry

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In the sections, the following persons were speaking: S.M. Brekhovskikh, Gosplan SSSR (Gosplan of the USSR); V.N. Alekseyev, Institut novykh stroitel'nykh materialov Akademii stroitel'stva i arkhitektury SSSR (Institute of New Building Materials of the Academy for Building and Architecture of the USSR); L.V. Cherevatenko, Bytoshevskiy zavod (Bytoshevskiy Factory); V.I. Dyat'ko, Chagodoshchenskiy zavod (Chagodoshchenskiy Factory); A.I. Ivanova, Institut steklovolokna (Institute of Glass Fiber); I.A. Figurovskiy, Gusevskoy khrustal'nyy zavod (Gusevskoy Crystal Works); V.G. Chistoserdov, Leningradskiy zavod khudozhestvennogo stekla i sortovoy posudy (Leningrad Works of Artificial Glass and Vessels); B.M. Shalunov, Urshel'skiy zavod (Urshel'skiy Works); V.S. Lazarev, steklozavod imeni Kommunisticheskogo dobrovol'cheskogo otryada (Glassworks imeni Communist Voluntary Detachment); D.P. Kropotov, Moskovskiy zavod imeni Kalinina (Moscow Works imeni Kalinin); P.P. Durnovo, Tsentral'noye proyektno-konstruktorskoye byuro Ministerstva zdravookhraneniya SSSR (Central Projecting and Design Office of the Ministry of the Protection of Health USSR); K.A. Zelenskiy, Roslavl'skiy zavod (Roslavl'skiy Works); N.V. Chernov, Kalininskiy sovmarkhoz (Kalinin Council of National Economy); V.A. Kuzyak (GPI-3); V.I. Shakhurin (Scientific-Technical State Committee of the Council of Ministers of the RSFSR), and others. The

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members of the conference passed a resolution saying that measures should be taken for further development in the glass industry by the introduction of modern technical achievements.

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15(2),15(6)
AUTHOR:

Solinov, F. G.

SOV/72-59-4-1/21

TITLE:

On the Main Directions in the Scientific Research and Experimental Construction Work in the Glass Industry in the Years 1959-65 (Osnovnyye napravleniya nauchno-issledovatel'skikh i opytno-konstruktorskikh rabot v stekol'noy promyshlennosti v 1959-1965 godakh)

PERIODICAL:

Steklo i keramika, 1959. Nr 4, pp 1-5 (USSR)

ABSTRACT:

In 1958 the collective of the Institut stekla (Glass Institute) carried out a work which is of great importance for the further development of the glass industry. By the introduction of melting accelerators and the improvement of the glass melting conditions the output of the furnaces in the Bytoshevskiy and "Proletariy" Works could be increased by 15%. In the Gor'kiy Glass Works successful work was performed by means of the electric glass melting method and in the "Proletariy" Works in the matting of glass by means of rolls. In the Gusevskiy Works imeni Dzerzhinskiy the system of classification of types of sand on the assembly line ShS-500 could be improved. In the Lisichansk imeni Oktyabr'skaya revolutsiya and "Avtosteklo-25" Works the production of enameled tiles was introduced.

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On the Main Directions in the Scientific Research and SOV/72-59-4-1/21
Experimental Construction Work in the Glass Industry in the Years 1959-65

In the Lionozovskiy Brick Works a continuous operation furnace was installed for the experimental production of the building material foam keralite. In the course of the coming 7 years research and design work in the field of the production of building, container, and quality glass is to be carried out. An increase in the melting temperature up to 1,550° as well as a combined gas-electric heating of the metal in tank furnaces has been provided in order to achieve a specific glass output of up to 800-900 kg per 24 hours. The works are to be adapted for operation with natural gas and a further mechanization and automatization of the technological processes in window glass production is to be carried out. The production of new glass products has also been provided (insulating and building material). The Orlovskoye spetsial'noye proyektno-konstruktorskoye byuro (Orlovskoye Special Design Office) works on the introduction of mechanized assembly lines in glass insulator production. For the production of container- and bottle glass, highly efficient glass molding machines Linch 10-20 and AV-6-2 are to be introduced. For the production of quality glass assembly lines in conjunction with the

Card 2/3

On the Main Directions in the Scientific Research and SOV/72-59-4-1/21
Experimental Construction Work in the Glass Industry in the Years 1959-65

machines VS-24 are to be established and the output of the
RVM and VS-24 glass molding machines is to be increased. The
Glass Institute will continue its research of glass structures
by employing the most recent physical and physico-chemical
research methods.

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13(2)

SOV/72-59-10-4/14

AUTHORS: Solinov, F. G., Pankova, N. A.

TITLE: Investigation of the Glass Refining Process With the Help of Film Cameras

PERIODICAL: Steklo i keramika, 1959, Nr 10, pp 9 - 14 (USSR)

ABSTRACT: The kinetics of the refining process of glass was investigated here by photographing the melting state at high temperatures in a perpendicular plane on cinematographic film. This method permits the continuous observation of the actions taking place in the melt. This work was carried out together with the film studio for scientific-popular films. The films were made by the cameraman P. M. Kosov. Cuvettes of transparent optical quartz were used for the melting and refining of the glass. The pictures were projected 30 times enlarged on a screen. In a half-melted charge, a continuous upward movement of the individual unmelted parts and bubbles of various size takes place, as shown in figure 1 and table 1. The formation of bubbles on the bottom of the cuvette is shown in figure 2, and the time of the formation of bubbles and their separation from the bottom is shown in table 2. The average increase of the bubble volume during its upward movement, as well as its decrease on the surface are shown in table 3. The melting and refining process

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Investigation of the Glass Refining Process With the
Help of Film Cameras

SOV/72-59-10-4/14

changes considerably when water is added to the charge, as may be seen from figures 3,4, and 5. The process of periodic bubble formation on the bottom of the cuvette in a melt with the addition of arsenic is shown in figure 6, and in a sulphate melt in figure 7. The formation of foam in a charge with sulphate addition is shown in figure 8, and the formation of bubbles on the bottom of the cuvette in a melt with sulphate addition in figure 9. The formation of bubbles on the bottom of the cuvette may be seen from figure 10. The authors state in conclusion that the finished melt flows to the bottom of the cuvette, and the melted parts and the bubbles rise to the surface. After the charge is completely melted, the process of bubble formation takes place on the bottom. A number of quantitative measurements were made besides the visual observations, which show the course of the refining process in the course of time. The measurement results will be published at a later date. There are 10 figures and 3 tables.

Card 2/2

SHAPIRO, I.Ye.; FROLOVA, Ye.G.; SOLINOV, F.G., nauchnyy red.; STAROSVETOVA,
V.G., red.izd-va; RUJAKOVA, N.I., tekhn.red.

[Glass pipes; production and use] Stekliannye truby; proizvodstvo
i primeneniye. Moskva, Gos.izd-vo lit-ry po stroit., arkhit. i
stroit.materialam, 1960. 158 p. (MIRA 13:4)
(Pipe, Glass)

KITAYGORODSKIY, I.I., doktor tekhn. nauk, prof.; KACHALOV, N.N., prof.;
VARGIN, V.V., doktor tekhn. nauk, prof.; YEVSTROP'YEV, K.S.,
doktor tekhn. nauk, prof.; GINZBURG, D.B., doktor tekhn. nauk,
prof.; ASLANOVA, M.S., doktor tekhn. nauk, prof.; GURFINKEL', I.Ye.,
inzh.; ZAK, A.P., kand. tekhn. nauk; KOTLYAR, A.Ye., inzh.; PAVLUSH-
KIN, N.M., doktor tekhn. nauk, prof.; SENTYURIN, G.G., kand. tekhn.
nauk; SIL'VESTROVICH, S.I., kand. tekhn. nauk, dots.; SOLINOV, F.G.,
kand. tekhn. nauk; SOLOMIN, N.V., doktor tekhn. nauk, prof.; TEMKIN,
B.S., kand. tekhn. nauk; GLADYSHEVA, S.A., red. izd-va; TEMKINA, Ye.L.,
tekhn. red.

[Glass technology] Tekhnologiya stekla. Izd.3., perer. Moskva, Gos.
izd-vo lit-ry po stroit., arkhit. i stroit. materialam, 1961. 622 p.
(MIRA 14:10)

1. Chlen-korrespondent AN SSSR (for Kachalov).
(Glass manufacture)

S/081/62/000/024/072/073
B166/B186

AUTHORS: Solinov, F. G., Pankova, N. A.

TITLE: On the scatter of experimental data in the quantitative evaluation of the degree of clarification of glass

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 24, 1962, 587, abstract 24K360 (Steklo. Byul. Gos. n.-i. in-ta stekla, no. 3 (112), 1961, 5 - 11)

TEXT: A comparison of dispersions under various conditions has shown that the scatter of experimental data in tests is random in origin and little dependent on the stabilization of those conditions that are examined in the present work. The tests showed that no great advantage is to be gained by using any particular crucible. When there is a large quantity of bubbles the error in counting and measuring them increases considerably. This error can be reduced by recalculating the quantity of bubbles in the specimen. [Abstracter's note: Complete translation.]

✓

Card 1/1

SOLINOV, F.G.

Great success. Stek. i ker. 18 no.10:4-6 0 '61. (MIRA 14:11)

1. Direktor Gosudarstvennogo nauchno-issledovatel'skogo instituta
stekla.

(Glass manufacture)

SOLINOV, F.G.; PANKOVA, N.A.

Rapid rising of the bubbles in melted glass under changing temperature conditions. Stek. i ker. 19 no.2:15-17 F '62. (MIRA 15:3)
(Glass manufacture)

SOLINOV, F.G.; BORISOV, B.I.; TERMAN, V.B.

Design of the working end of a tank for drawing sheet glass
without using floaters (Pennvernon method). Stek. i ker. 19
no.6:4-9 Je 62. (MIRA 15:7)

(Glass furnaces)

SOLINOV, F.G.; PANKOVA, N.A.

Experimental determining of the movement rate of bubbles in
the melt. Stek.i ker. 19 no.9:13-18 S '62. (MIRA 15:9)
(Glass manufacture)

SOLINOV, F.G., kand. tekhn. nauk; TERMAN, V.B., inzh.

Changes in optical distortions of sheet glass. Stok. 1 ker. 20
no.12:12-15 D '63. (MIRA 17:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut stekla.

ACCESSION NR: APh042466

S/0294/64/002/003/0397/0400

AUTHORS: Fondysmakin, B. I.; Solinov, F. G.

TITLE: Thermal conductivity measurement in glasses of the type $\text{SiO}_2\text{-Li}_2\text{O-Al}_2\text{O}_3\text{-ZrO}_2$ during crystallization

SOURCE: Teplofizika vyssokikh temperatur, v. 2, no. 3, 1964, 397-400

TOPIC TAGS: heat propagation, thermal conduction, infrared radiation, glass plate, volume microcrystallization, calorimeter, microhardness, phonon, x ray analysis

ABSTRACT: In the temperature interval 34-400 heat propagation in glasses is shown to be primarily caused by thermal conduction. The glass actually becomes opaque to infrared rays above 4.5 micrometers. To measure the thermal conductivity λ , 20 mm diameter by 3 mm thick glass plates were prepared from the system $\text{SiO}_2\text{-Li}_2\text{O-Al}_2\text{O}_3\text{-ZrO}_2$. The specimens were divided into two groups, one heat-treated to induce volume microcrystallization and the other left untreated. λ was measured on a dynamic α, λ - calorimeter built in the Leningradskiy instituta tochnoy mekhaniki i optiki (Leningrad Institute Laboratory for Exact Mechanics and Optics). The

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ACCESSION NR: AP4042166

microhardness was measured on a PMT-3 instrument and the x-ray analysis was conducted using URS-50-I apparatus. The results show λ to vary only slightly with the temperature in the interval $34 < T < 400^\circ\text{C}$. Furthermore, increasing the temperature and the heat-treatment duration raises λ by as much as 50% by increasing the mean free path of phonons. The increase in microhardness was directly proportional to the degree of crystallization in the glass specimen. Finally, x-ray analysis indicates significant structural changes in the heat-treated glass specimens. Orig. art. has: 3 figures, 1 formula, and 1 table.

ASSOCIATION: Nauchno-issledovatel'skiy institut stekla (Scientific Research Institute for Glass)

SUBMITTED: 27Jan64

ENCL: 00

SUB CODE: MT

NO REF SOV: 007

OTHER: 006

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L 57489-65 EWP(a)/EWT(m)/EWP(1)/EWP(b) Pq-4 WH

ACCESSION NR: AP5015764

UR/0072/65/000/006/0022/0025
666.15:548

AUTHOR: Solinov, F.G. (Candidate of technical sciences); Budov, V.M. (Engineer);
Kruchinin, Yu.D. (Candidate of technical sciences); Ignat'yeva, L.M. (Engineer)
TITLE: Effect of addition of fluorine and substitution of potassium oxide for sodium
oxide on the crystallization properties of sheet glass

SOURCE: Steklo i keramika, no. 6, 1965, 22-25TOPIC TAGS: glass property, fluorine, potassium oxide, sodium oxide, glass
crystallization, glass conductivity, sheet glass

ABSTRACT: The initial glass used had the following composition (in %): 72.2 SiO₂, 1.6 Al₂O₃, 0.1 Fe₂O₃, 6.85 CaO, 4.05 MgO, 0.6 SO₃, and 14.8 Na₂O. Six groups of glasses were prepared (59 compositions in all) in which the content of fluorine or that of alkali oxides (K₂O and Na₂O) or both were varied, all other oxides being the same as in the initial glass. The crystallizing tendency of the glasses was determined by the gradient method. It was found that glasses containing both alkali oxides in certain proportions had a higher crystallizing tendency, which was attributed to the neutralization effect. Presence of the latter was confirmed by electrical conductivity curves. The substitution of K₂O for Na₂O changes the packing density of the ions and the strength

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L 57489-65

ACCESSION NR: AP5015784

3

of the bonding between the ions and the silicon - oxygen skeleton. Glasses containing 2-4% K_2O had the lowest electrical conductivity, an increased crystallizing tendency, and were less stable chemically. Indeed, their bonds were weak, and thus the mobility of the ions carrying the current was higher (lower conductivity), the leaching loss was greater, and there was more opportunity for rearrangement of the ions to form a crystal lattice and thus make the crystallization easier. Hence, the conductivity curves provide some evidence on the crystallizing tendency of glasses. Orig. art. has: 2 figures.

ASSOCIATION: [Solnov] Institut stekla (Glass Institute); [Budov] Salavatskiy zavod tekhnicheskogo stekla (Salavat Commercial Glass Plant); [Kruchinin, Ignat'yeva] Ural'skiy politekhnicheskii institut imeni S.M. Kirova (Ural'sk Polytechnic Institute)

SUBMITTED: 00

ENCL: 00

SUB CODE: MT

NO REF SOV: 006

OTHER: 000

dm
Card 2/2

BUDOV, V.M., inzh.; KRUCHININ, Yu.D., kand. tekhn. nauk; SOLINOV, F.G.,
kand. tekhn. nauk

Effect of fluorine additions and the replacement of sodium oxide
on the surface tension of sheet glass during forming. Steklo
ker. 22 no.10:12-14 0 '65. (MIRA 18:12)

1. Salavatskiy zavod tekhnicheskogo stekla (for Budov).
2. Ural'skiy politekhnicheskii institut imeni Kirova (for Kruchinin).
3. Gosudarstvennyy nauchno-issledovatel'skiy institut stekla (for Solinov).

ACC NR: AR6032304

SOURCE CODE: UR/0081/86/000/013/B066/B066

AUTHOR: Brekhovskikh, S. M.; Solinov, V. F.

TITLE: The Faraday effect in diamagnetic glasses ^{1/5}

SOURCE: Ref. zh. Khimiya, Part I, Abs. 13B528

REF SOURCE: Steklo. Tr. in-ta stekla, no. 2(127), 1965, 58-61

TOPIC TAGS: faraday effect, glass, diamagnetic glass, paramagnetic glass, ferromagnetic glass

ABSTRACT: The Faraday effect depends on the atomic number of the element of the oxide-modifier in Mendeleev's periodic system. This is due to the nature of the diamagnetic substance. The more electrons the atom of the oxide modifier contains, the higher the induced orbital moment of the atom: $\Delta P_n = Z^2 \Delta P_{n1}$ where ΔP_{n1} is the orbital moment of the electron; and therefore, the Faraday effect is also more pronounced. The Faraday effect increases directly with the percentage of the oxide-modifier. The magnitude of the Faraday effect in diamagnetic glasses probably has a limit which is connected with using limits of oxide-modifiers with a large atomic number of the element Z in glass production.

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ACC NR: AR6032304

The most promising trend in the synthesis of glass with a larger Faraday effect is the synthesis of paramagnetic and ferromagnetic glasses, which have a higher magnetic moment. [Translation of abstract]

SUB CODE: 07/

Card 2/2

SOLIGN, I.

Use of polymeric phosphates in washing technology. P. 151
MAGYAR TEXTILECHNIKA Budapest No. 4, Apr. 1956

SOURCE: East European Accessions List (EEAL) Library of Congress
Vol. 5, no. 8, August 1956

SOLIOM, I.

Production of polyphosphates in Hungary. p. 87.

(Magyar Kemikusok Lapja. Vol. 12, no. 3, Mar. 1957. Budapest, Hungary)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 10, October 1957. Uncl.

COUNTRY : HUNGARY H
CATEGORY : Chemical Technology. Chemical Products and Their
Application. Chemical Engineering.
ABS. JOUR. : RZhKhim., No 17, 1959, No. 61075
AUTHOR : Mucskai, I.; Solom, I.
INSTITUTE : -
TITLE : Calculations of Hydraulic Resistances in Heat
Exchangers.
ORIG. PUB. : Energija es Atomtehn., 1958, 11, No 7-8, 425-
-456
ABSTRACT : Based on literature data, the methods of calcu-
lation of approximate hydraulic resistances of
tubular type heat exchangers (with and without
baffles) were reviewed. -- A. Yermakova

Card: 1/1

H - 2

MUCSKAI, Laszlo; RUZSANYI, Tivadar; SOLIOM, Istvan

Fuller's earths and bleaching. Magy kem lap 15 no.1:30-35 Ja '60.

1. Vegyimuveket Tervezo Vallalat (for Mucskai, Soliom). 2. Buda-
pesti Kemsavgyar (for Ruzsanyi).

MUCSKAI, Laszlo, okleveles vegyeszmernok (Budapest); SOLIOM,
Istvan, oklevels vegyeszmernok (Budapest)

Purification by means of the earth. Term tud kozl 4
no. 11:509-512 N '60.

MEHHEIKO, F.V., otv. red.; KUZNETSOV, B.V., red.; MOSEYEV, I.V., red.; POLZIK, P.V., red.; SOLITENNIK, L.V., red.; TELESH, B.M., red.; TSEITSIFER, M.S., red.; YUR'YEVICH, G.S., red.

[Exchange of experience in production and technological techniques in power engineering] Obmen proizvodstvenno-tekhnicheskim opytom po promyshlennoi energetike. Minsk, 1965. 105 p. (MIRA 18:10)

1. Nauchno-tekhnicheskoye obshchestvo energeticheskoy promyshlennosti. Belcrusskoye otdeleniye.

ACU REF: AF6012973

SOURCE CODE: UR/0094/65/000/005/0054/0056

AUTHOR: Soliterman, J. V.; Gorin, F. I.

20
B

ORG: none

TITLE: Science-technical conference on efficient usage of fuel-power resources, power economy and rationalization of power installations in industrial enterprises of the Byelorussian SSR

SOURCE: Promyshlennaya energetika, no. 5, 1965, 54-56

TOPIC TAGS: electric engineering conference, electric power engineering, industrial condition

ABSTRACT: The conference, held in Minsk, 18-20 November 1964, attracted over 600 engineers and power engineers from throughout the republic. Twelve reports and 6 information reports were heard, on such subjects as: the fuel-power balance of the Byelorussian SSR for 1965, the development of industrial power requirements, prospects for development of electric power by regions and cities for Byelorussia, electrification of labor processes, normalization of power usage in industry, secondary power resources, the construction of new compressors, usage of ultrasonic sound in industrial processes, as well as a number of presentations on individual ways in which the usage of electric power could be made more efficient in the Byelorussian SSR. [JPRS]

SUB CODE: 10, 09, 05 / SUBM DATE: none

Card 1/1 *DK*

SOLITERMAN, M.L., kandidat meditsinskikh nauk (Leningrad)

Significance of a high T wave in thoracic leads in electrocardiographic interpretation. Terap.arkh. 26 no.4:60-65 J1-Ag '54.
(ELECTROCARDIOGRAPHY, (MLRA 7:11)
T wave in thoracic leads, interpretation)

SOLITERMAN, M.L., kandidat meditsinskikh nauk (Leningrad)

Diagnosis of intramural infarcts of the myocardium. Klin.med. 34 no.
9:69-73 S. '56. (MLRA 9:11)

1. Iz klinicheskoy bol'nitsy imeni Konyashina (glavnyy vrach L.N.
Akinchev)

(MYOCARDIAL INFARCT, diag.
intermural infarct)

SOLITERMAN, Ye.S.; MIRONOV, A.I.

Avoiding warping of press plates. Der.prom. 5 no.3:21 Mr '56.
(MLRA 9:7)

1. Kuybyshevskiy mebel'nyy kombinat.
(Kuybyshev--Veneers and veneering)

GROMOVA, K.G.; SOLITERNOVA, I.B.

Absorption of glucose, 2-deoxyglucose and L-arabinose by the
adipose tissue of the rat epididymis in the presence of
insulin and N-ethylmaleimide. Biokhimiia 30 no.6:1142-1146
N-D '65. (MIRA 19:1)

1. Otdel biokhimi Institute eksperimental'noy meditsiny
AMN SSSR, Leningrad. Submitted November 27, 1964.

POLEVOY Boris Nikolayevich; SOLITSEVA, V.P., red.; KAKHRAMANOVA, I.M., tekhn .
red.

[Through the wide world; diary of travels] Po belusvetu; dnevnik
puteshestvii. Moskva, Sovetskii pisatel', 1958. 569 p. (MIRA 11:4)
(Voyages and travels)

FEDOROV, V.D.; GUSEV, M.V.; SOKOLOV, L.I.; SOLIVO-DOBROVOL'SKIY, L.B.;
KOPIROVSKIY, K.M.; SHLENOVA, G.S.; CHAYKIN, I. Ya.;
RAZNOSHCHIK, V.V.; SPANOVSKAYA, V.D.; GRIGORASH, V.A.;
MARKOVA, K.P.; MAKSIMOV, V.N.; TELITCHENKO, M.M.; LEVSHINA,
N.A.

Supplement. V.D.Fedorov and others. Biul. MOIP. Otd. biol.
69 no. 3:158-166 My-Je '64. (MIRA 17:7)

Содержание

15(7) PHASE I BOOK MAP-01.01.01.01.01 37/292

RSPSR, Moskovskiy gosudarstvennyy ekonomicheskii raz'm, Sovet narodnogo khozyaystva
Chitanka v elektricheskoy forme byvanogo odpryamleniya (Painting in a High Voltage Electric Field) Moscow, Tsentr. byuro tekhn. inform., 1958. 63 p. (Series: Dostizheniya nauki i tekhniki). Errata slip inserted. 4,500 copies printed.

Compilers (Specialists, Central Scientific Research Laboratory of the All-Union Industrial Bureau "Lakraspokrytiye"): Z. B. Verkhovnovskiy, Engineer, Ye. M. Vlasovskiy, V. A. Gubenskiy, Engineer, V. I. Dorrendorf, Engineer, S. M. Serebryanikov, Engineer, V. U. Soliyenko, Engineer and Ye. P. Timodov, Engineer, Executive Engineer: V. Y. Tyurin; Ed.: B. A. Borovikov; Tech. Ed.: A. P. Ruptsov.

PURPOSE: This book is intended for workers, technicians, and students engaged in the manufacture, application, and development of equipment for spray painting in high voltage electric fields.

CONTENTS: The authors analyze the industrial and economic problems of spray painting in high voltage electric fields. The book treats the nature and theoretical principles of the spray painting method, verified design specifications for spray painting equipment, and data on the manufacture and operation of such equipment. It also includes information on the experimental work carried out by the TsMIL (Central Scientific Research Laboratory) in this field. No references are given.

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5(1, 3)

SOV/63-4-3-14/31

AUTHOR: Soliyenko, V.O.

TITLE: The Application of Varnish and Paint Materials in a High-Tension Electric Field

PERIODICAL: Khimicheskaya nauka i promyshlennost', 1959, Vol 4, Nr 3, pp 371-377 (USSR)

ABSTRACT: In the USSR the method of applying paints in the electric field has been developed by Chizhevskiy [Ref 6] and its technology by Vsesoyuznaya kontora "Lakokraspokrytiye" (All-Union Office "Varnish and Paint Coating") [Ref 7]. The method reduces the loss of varnishes and paints in mass production by 30 - 70%. The outer surfaces of metals and dielectrics may be painted, but notches, hollows, etc, must be treated preliminarily by pulverizers. Nitrocellulose and perchlorovinyl paints should not be used in the electric field due to their content of inflammable solvents. In Czechoslovakia the method was introduced in 1952 in the town of Karvino. At present 13 installations paint bedsteads, motorcar tanks, exhaust pipes, etc. Apparatuses are produced by the Plant "Kovo Finis". Considerable research regarding the effect of mechanical and electrical forces on spraying, size of droplets, etc,

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The Application of Varnish and Paint Materials in a High-Tension Electric Field

is carried out. For reducing the surface tension, 0.1 - 0.5% of silicon oils are added to the enamels during production. In the USSR about 100 installations for electric painting are operating. The leading role is played by Gor'kovskiy avtomobil'nyy zavod (Gor'kiy Automobile Plant). About 18,000 parts are painted each day. The Moskovskiy avtozavod imeni Likhacheva (Moscow Automobile Plant imeni Likhachev) paints radiators and springs, the Zavod malolitrzhnykh avtomobiley (Plant of Small-Capacity Motorcars) wheel disks and other parts. Agricultural machines are painted by this method at the Rostsel'mash (Rostov Agricultural Machine Plant), Khar'kovskiy traktornyy zavod (Khar'kov Tractor Plant) and the Plant "Krasnaya zvezda". The Magnitogorskiy metallurgicheskiy kombinat (Magnitogorsk Metallurgical Combine) and Chelyabinskiy truboprokatnyy zavod (Chelyabinsk Pipe Rolling Plant), the Taliinskiy zavod "Volta" (Tallin Plant "Volta"), "Uralskiy elektromotor" use the same method. The Tsentral'naya nauchno-issledovatel'skaya laboratoriya (Central Scientific Research Laboratory) of the All-Union Office "Varnish and Paint Coating" and the Plant "Krasnyy bogatyr" developed for the first time in the world the method of painting of rubber shoes in the electric field. The first installation produces 2,450 pairs of shoes per shift. The high tension of 135 - 140 kv directs part of the

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paint to the walls of the painting chamber. An electric protective screen has been developed (Figure 6) to avoid this drawback. Wood-filter plates may also be painted in the electric field. At the Semibratovskiy termozolyatsionnyy zavod (Semibratovo Heat-Insulation Plant) a workshop for this purpose will be erected. Its yearly output will be 1 million m². "Lakokraspokrytiye" has developed the painting of furniture in the electric field, which will be introduced in the Factory "Lira" of the Moscow City sovmarkhoz in 1959. The apparatus V-140-5 for electric painting is produced by the "Mosrentgen" Plant. In the Novo-Vil'nyusskiy zavod pokrasochnoy apparatury (Novo-Vil'nyus Plant of Painting Apparatus) paint pulverizers of type KRV-2 (Figure 9) and GHR-4 (Figure 10) are produced. The Knot'kovskiy zavod eksperimental'noy tekhnologii i apparatury (Knot'kovo Plant of Experimental Technology and Apparatus) produces batching devices for feeding paint to electrostatic pulverizers.

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There are 8 photos, 2 diagrams and 9 references, 5 of which are Soviet and 4 American.

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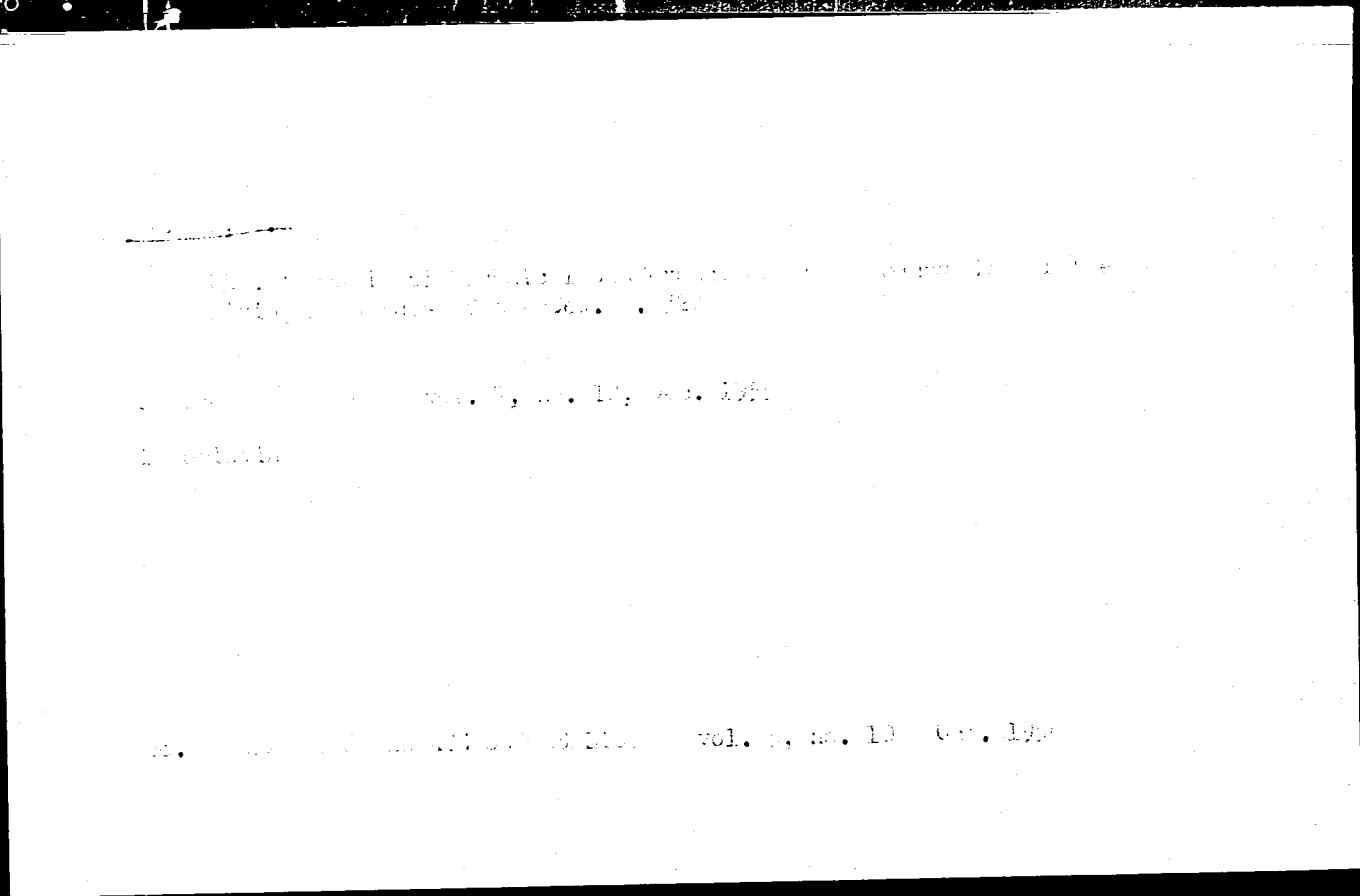
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