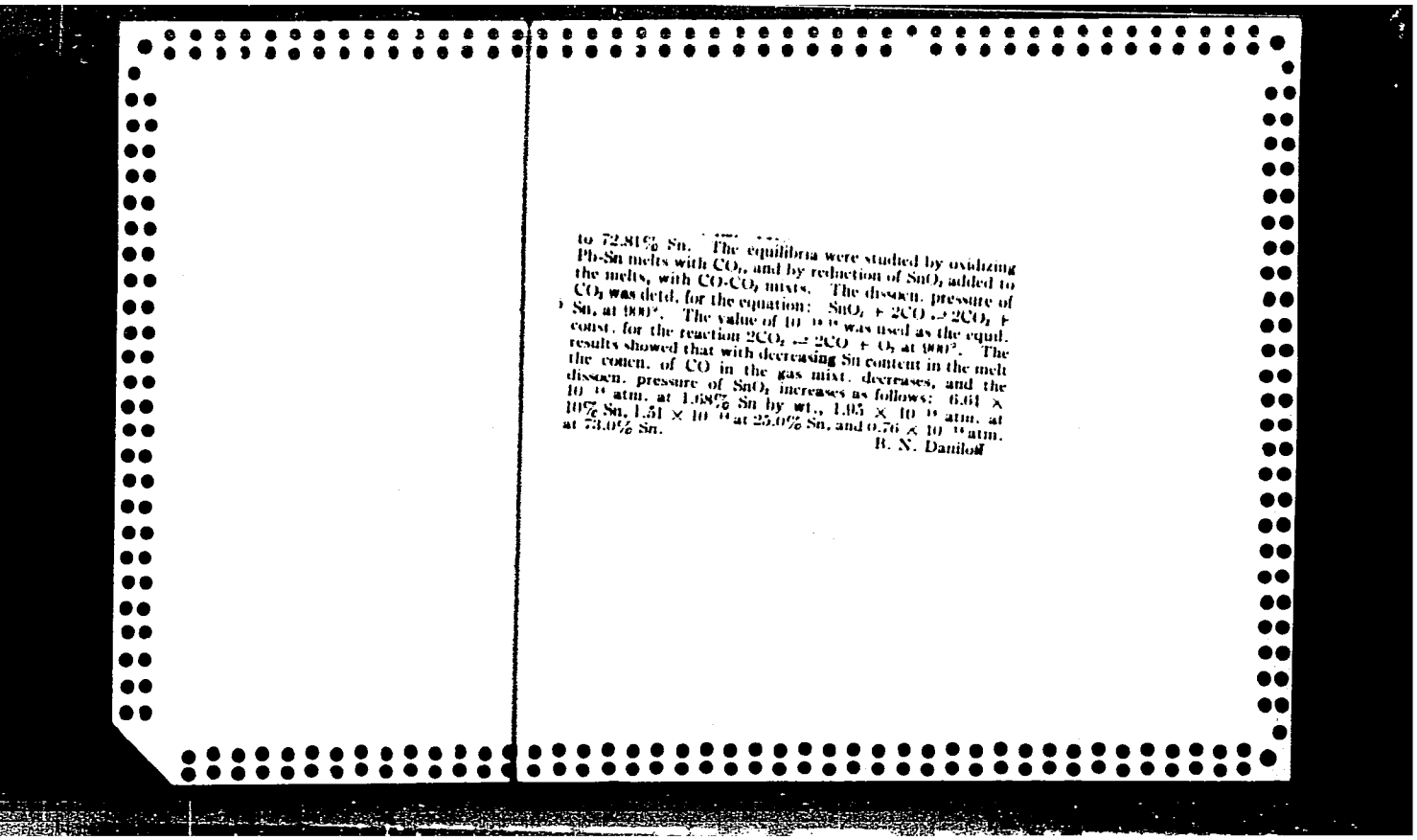

to 72.81% Sn. [illegible] The equilibria were studied by oxidizing Pb-Sn melts with CO_2, and by reduction of SnO_2 added to the melts, with CO-CO_2 mixts. The dissocn. pressure of CO_2 was detd. for the equation: $SnO_2 + 2CO \rightarrow 2CO_2 +$ Sn, at 900°. The value of $10^{-10.6}$ was used as the equil. const. for the reaction $2CO_2 \rightarrow 2CO + O_2$ at 900°. The results showed that with decreasing Sn content in the melt the concn. of CO in the gas mixt. decreases, and the dissocn. pressure of SnO_2 increases as follows: 6.61×10^{-16} atm. at 1.08% Sn by wt., 1.03×10^{-16} atm. at 10% Sn, 1.51×10^{-17} at 25.0% Sn, and 0.76×10^{-18} atm. at 73.0% Sn.

B. N. Daniloff

SLOBODSKOI, IA. IA., ed.

Economy and replacement of non-ferrous metals; Soviet and foreign literature of 1932-1939. Moskva, Gos. izd-vo mauchno-tekhn. lit-ry po chernoi i tsvetnoi metallurgii, 1940. (Mic 53-476)
Microfilm copy.

Microfilm TS-10

RYSS, Iosif Grigor'yevich, professor, doktor khimicheskikh nauk; SLOBODSKOY, Ya.Ya., redaktor; SHPAK, Ye.G.tekhnicheskiy redaktor

[The chemistry of fluorine and its inorganic compounds] Khimiia ftora i ego neorganicheskikh soedinenii. Moskva, Gos. nauchno-tekhn. izd-vo khim. lit-ry, 1956. 718 p. (MLRA 9:12)
(Fluorine)

Slobodskoy, Ya. Ya.

20-3-46/59

AUTHORS: Chizhikov, D. M., Corresponding Member of the Academy, Slobodskoy, Ya. Ya., Tsvetkov, Yu. V.

TITLE: Note on the Catalytic Action of Zinc on the Decomposition of Carbon Oxide (O kataliticheskom deystvii tsinka na razlozheniye okisi ugleroda).

PERIODICAL: Doklady Akademii Nauk, 1957, Vol. 115, Nr 3, pp. 586-587 (USSR).

ABSTRACT: It is well known, that at 900°C the decomposition of CO becomes thermodynamically possible. Without an catalysator, however, it does not take place, practically, because of the tight combinations of the carbon- and oxygen atoms in the CO molecule. A number of papers proved, that metal oxydes do not catalyse this reaction, but some metals (Fe, Ni, Co, Cr) act as catalysators, in particular, if they are produced in active form by reduction. References are contradicting with respect to zinc having any effect. This question of the influence of zinc has a great practical importance. There are known, for example, destructions in the upper parts of furnaces, which occured on the smelting of ores with a little zinc content. This formation of zinc oxide in the pores of the furnace coating can also take place in the pyrometallurgy of zinc. In this case the oxidation of zinc leads to a reduction in the production rate of liquid zinc

Card 1/2

SLOBODSKOY, Ya.Ya.

To improve the methods of testing petroleum products and the sanitary conditions in laboratories. Khim.i tekh.topl.i masel 5 no.8:71 Ag '60. (MIRA 13:8)

1. Institut okhrany truda Vsesoyuznogo tsentral'nogo soveta profsoyuzov.

(Petroleum products)
(Testing laboratories--Sanitation)

BEKIROV, M.; GOLUBKOV, V., kand.tekhn.nauk; SLOBODSKOY, Ye.; SHEKHOVTSOV, V., inzh.

Correcting the pitch of a smokestack under diffucult circumstances. Prom.stroi. i inzh. soor. 4 no.4:34-36 Jl-Ag '62. (MIRA 15:9)

1. Glavnyy inzh. tresta "Odespromstroy" (for Bekirov).
2. Glavnyy inzh. stroitel'no-montazhnogo upravleniya No.1 tresta "Odespromstroy" (for Slobodskoy).

(Chimneys)

SLOBODSKOY, Yu.Ya.

Rare complication due to a foreign body in the external auditory meatus. Zhur. ush., nos. i gorl. bol. 22 no.1:84 Ja-F '62. (MIRA 15:5)

1. Iz otdeleniya bolezney ukha, gorla i nosa (zav. - B.M.Shneyder) Grodenskoy oblastnoy bol'nitsy.

(EAR--FOREIGN BODIES)

SLOBODU, D.
SURNAME (in caps); Given Names

Country: Rumania

Academic Degrees: Engineer

Affiliation: -not given-

Source: Bucharest, Stiinta si Tehnica, No 6, Jun 1961, pp 2-4.

Data: "23,000 Kilometers of High Tension Lines."

KUPRIY, O.M.; SLOBODYAN, D.I.; VAYNTRUB, V.K.

New equipment for manufacturing welt insoles with synthetic lip and binding. Leh.prom. no.1:16-19 Ja-Mr '62. (MIRA 15:9)

1. Kiyevskaya obuvnaya fabrika No.4.
(Kiev--Shoe industry--Equipment and supplies)

ABKIN, B.V., inzh.; LOSEV, A.S., inzh.; SOFRYGIN, P.V., inzh.; SLOBODYAN, I.P., inzh.; TSYUPA, F.P., inzh.

Start of the leading PK-47 boiler. Elek. sta. 35 no.9:2-5 S '64.
(MIRA 18:1)

SLOBODYAN, M.P.

Materials on the study of natural distribution of the European spruce in the Ukrainian Polesye. Ukr. bot. zhur. 19 no.4: 79-83 '62. (MIRA 15:9)

1. L'vovskaya ekspeditsiya "Lisproyekt".
(Polesye--Spruce)

SLOBODYAN, M.P.

Study of the natural distribution of hornbeam (Carpinus betulus L.) in Chernigov Province, Ukrainian S.S.R. Ukr. bot. zhur. 20 no.4: 73-79 '63. (MIRA 17:4)

1. L'vovskaya ekspeditsiya "Lisproyekt".

SLOBODYAN, M. P.

Notes on the natural occurrence of some species of vascular plants in the Chernigov Polesye. Ukr. bot. zhur. 20 no. 5: 68-75 '63. (MIRA 17:5)

1. L'vovskaya ekspeditsiya "Lisproyekt".

SLOBODYAN, M.P.

Leatherleaf (Chamaedaphne calyculata (L.) Moench.) in the west of Western Polesye. Ukr. bot. zhur. 21 no.1:98 '64. (MIRA 17:3)

1. L'vovskaya ekspeditsiya "Lisproyekt".

SLOBODYAN, M.P.

New insular findings of Siberian fir (Abies sibirica Ledeb.) in the Kostroma area of the Volga Valley. Ukr. bot. zhur. 22 no.3:101-102 '65. (MIRA 18:7)

1. L'vovskaya ekspeditsiya "Leproyekt".

SLOBODYAN, M.P.

Two introduced species of woody plants becoming wild in the north of Polesye within the boundaries of Volyn' Province, Ukrainian S.S.R. Ukr. bot. zhur. 22 no.2:105-106 '65. (MIRA 18:4)

1. L'vovskaya ekspeditsiya "Lisproyekt".

SLOBODIAN, R. T.

Slobodyan, R. T.- "Regarding the calculation fo filtration in earth dams", Izvestiya In-ta gidrologii i gidrotekhniki (Akad. nauk Ukr. SSR), Vol. IV, 1948, p. 66-74, (In Ukrainian, resume in Russian), - Bibliog: 8 items.

SO: U-3042, 11 March 1953, (letopis 'nykh Statey, No. 10, 1949).

SLOBODYAN, R.T., kand. tekhn. nauk.

Seepage resistance of soils used in earth dams. Izv. Inst. gidrol. (MIRA 11:4)
i gidr. AN URSR 8:73-91 '51.
(Soil percolation) (Dams)

SLOBODYAN, R.T. [Slobodian, R.T.], kand. tekhn. nauk.

Calculating the seepage of earth dams. Trudy GGI no.37:66-74 '53.
(Dams) (MIRA 11:6)

SLOBODYAN,R.T.

Introducing the results of investigations on percolation and stability of ground masses into earth dam designing. Visnyk AN URSR 26 no.5:55-56 My '55. (MIRA 8:8)
(Dams)

SOV/124-57-5-5986

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 5, p 141 (USSR)

AUTHOR: Slobodyan, R. T.

TITLE: Analyzing the Stability of the Embankments of Earth Dams by the V. V. Sokolovskiy Method (Primeneniye metoda V. V. Sokolovskogo dlya rascheta ustoychivosti otkosov zemlyanykh plotin)

PERIODICAL: Izv. In-ta gidrol. i gidrotekhn. AN UkrSSR, 1956, Vol 14 (21), pp 76-88

ABSTRACT: The author examines dams whose crest widths are of the order of 3-4 times the dam height, when the effect of the finiteness of the crest widths can be neglected. The author's purpose is to evaluate the influence which the prevailing seepage forces and the inhomogeneity of the medium of loose material exerts upon the shape of an embankment as calculated by V. V. Sokolovskiy's limiting-state method [Statika sypuchey sredy (The Statics of a Medium of Loose Material). Izd-vo AN SSSR, 1942]. Examined first is the effect of the seepage pressure; the seepage forces, for the moment, are lumped together with and viewed as part of the total internal body forces acting on the embankment. Seepage rates were determined

Card 1/2

Analyzing the Stability of the Embankments of Earth Dams (cont.)

with an electrohydrodynamic analog simulator. The calculations showed that the seepage forces do affect substantially the shape of an embankment; in the example which the author adduces, for instance, the slope at the foot of an embankment through which seepage is occurring was found to be only half the slope at the foot of a completely dry embankment. The author adduces further examples to show that the variations with ground depth in the density, internal friction, and cohesive strength of the soil represent a factor of equal significance. In all the calculations the author uses finite-difference equations in place of partial differential equations. It is the author's opinion that, when the suggested refinements in the terms representing the soil characteristics are made and the suggested procedure for allowing for the seepage forces is employed, the Sokolovskiy method "can be safely recommended for use in analyzing the stability of the embankments of earth dams subjected to elevated hydraulic pressure heads."

G. S. Shapiro

Card 2/2

SLOBODYAN, R.T., kand. tekhn. nauk

Studying critical pressure gradients of filtration streams in soils for hydraulic engineering purposes. Izv. Inst. gidrol. i gidr. AN URSR 15:91-100 '59. (MIRA 12:9)
(Soil percolation)

SHVETS, G.I. [Shvets', H.I.]; ZIL'BAN, M.S.; KOBERNIK, S.G. [Kobernyk, S.H.]; OLEYNIK, A.Ya. [Oliinyk, O.IA.]; PIVOVAR, N.G. [Pyvovar, M.H.]; ROZOVSKIY, I.L. [Rozovs'kyi, I.L.]; SLOBODYAN, R.T.; DIDKOVSKIY, M.M. [Didkovs'kyi, M.M.], kand.tekhn.nauk, otv.red.; KRENTSEL', Sh.G. [Krentsel', Sh.H.], red.-leksikograf; SHIKAN, V.L., red.izd-va; BUNIY, R.O., tekhn.red.

[Russian-Ukrainian hydraulic-engineering dictionary; 13000 terms] Russko-ukrainskii gidrotekhnicheskii slovar'. 13000 terminov. Kiev, Izd-vo Akad.nauk USSR, 1960. XIV, 192 p. (MIRA 13:7)
(Hydraulic engineering--Dictionaries)
(Russian language--Dictionaries--Ukrainian)

OLIYNIK, O.Ya. [Oliinyk, O.IA.], kand.tekhn.nauk; SLOBODYAN, R.T., kand.tekhn. nauk

Observations in situ on seepage around the abutments of earth dams of the Kakhovka hydroelectric power center on the right and left banks. Vitsi Inst.gidrol.i gidr.AN URSR 18:103-112 '61. (MIRA 15:3)

(Kakhovka Reservoir—Seepage)

ARISTOVSKIY, Valer'yan Valer'yanovich[Arystovs'kyi, V.V.], doktor tekhn. nauk; SLOBODYAN, Roman Tikhonovich, kand. tekhn. nauk. Prinimal uchastiye GARKAVI, O.Ya.[Harkavi, O.IA.], mladshiy nauchnyy sotr.; DIDKOVSKIY, M.M.[Didkovs'kyi, M.M.], kand. tekhn. nauk, otv. red.; REVERA, O.Z., kand. geog. nauk, nauchnyy red.; DAKHNO, Yu.M., tekhn. red.

[Resistance of the shores of the Kakhovka Reservoir to damage by landslides and settling] Stiikist' berehiv Kakhovs'koho vodoskhovyshcha, shcho zaznaiut' zsuvnykh ta prosadochnykh deformatsii. Kyiv, Vyd-vo Akad. nauk URSR, 1962. 145 p. (MIRA 15:6)
(Kakhovka Reservoir--Shorelines)

OLEYNIK, A.Ya., kand.tekhn.nauk; SLOBODYAN, R.T., kand.tekhn.nauk

Some results of actual observations of seepage at the Kakhova hydroelectric development. Gidr.stroi. 32 no.9:4-7 S '62. (MIRA 16:2)

(Kakhova Hydroelectric Power Station—Soil percolation)

SLOBODYAN, V.

Radio Clubs

In the radio circle of the Regional Committee of the All-Union Voluntary Society for Assistance to the Army, Aviation and Navy. Radio, No. 4, 1953.

Monthly List of Russian Accessions, Library of Congress, June 1953. Uncl.

SLOBODYAN, V., (Terebovlya Ternopol'skoy oblasti).

Useful advice. Radio no.6:15 Je '53. (MLRA 6:6)
(Radio--Stations)

SLOBODYAN, V.I., inzh.; GOPENKO, S.V., inzh.

Standard fittings for industry and shipbuilding. Mech.transp. 18 no.11:39-40 N '59. (MIRA 13:4)
(Pipe fittings)

SLOBODYAN, V.I., inzh.; GOPENKO, S.V., inzh.

Standard pipeline fittings for industry and shipbuilding.
Sudostroenie 25 no.10:51-53 O '59. (MIRA 13:2)
(Marine engineering) (Pipe fitting)

SLOBODYAN, Yu.S.

Four-dimensional Riemann spaces admitting of families of three-dimensional fully geodesic surfaces. Dop. AN URSR no.4:410-412 '65. (MIRA 18:5)

1. Fiziko-tekhnicheskiy institut nizkikh temperatur AN UkrSSR.

SLOBODYANIK, A.P., dotsent (L'vov)

Congresses, conferences, consultations, brief news. Vrach. delo no.12:153 D '61. (MIRA 15:1)

(UKRAINE--MEDICINE)

SLOBODYANIK, Aleksandr Pavlovich, dots.; CHUCHUPAK, V.D., tekhn. red.

[Psychotherapy, suggestion, hypnosis] Psikhoterapiia, vnushenie, gipnoz. Kiev, Gosmedizdat URSR, 1963. 348 p. (MIRA 16:10)
(PSYCHOTHERAPY) (THERAPEUTICS, SUGGESTIVE)
(HYPNOTISM--THERAPEUTIC USE)

TSELIKOV, Aleksey Ivanovich; SLOBODYANIK, Aleksey Petrovich; VOLODIN, P.A., red.; MOROZOVA, G.V., red.izd-va; TEMKINA, Ye.L., khud.-tekhn.red.

[Novokuybyshevsk; housing and public construction] Novokuibyshevsk; zhilishchno-grazhdanskoe stroitel'stvo. Pod red. P.A.Volodina. Moskva, Gos.izd-vo lit-ry po stroit., arkhit. i stroit.materialam, 1961. 94 p. (MIRA 14:4)
(Novokuybyshevsk--City planning)

SLOBODYANIK, A.Z., inzh.-mayor

Operation of equipment and instruments on hydroplanes.
Mor. sbor. 48 no.2:65-69 F '65. (MIRA 18:11)

SLOBODYANIK, A.Z., inzhener-mayor

Volunteer design bureau. Vest. Vozd. Fl. no.2:58-59 F '61.
(MIRA 14:7)
(Aeronautics, Military--Technical innovations)

SLOBODYANIK, G. [Slobodianyk, H.], doktor tekhn.nauk, prof.; RUBINOWICH, Ye. [Rudynovych, E.], inzh.; LISINA, N. [Lysyna, N.], inzh.; DOROFEYEVA, K. [Dorofieieva, K.], inzh.

Replacing the lime in cement building mortars with local additives. Bud. mat. i konstr. 4 no.1:44-45 Ja-F '62. (MIRA 15:7)
(Mortar)

SLOBODYANIK, G.Ya. [Slobodianyk, H.IA]; DOROFEYEVA, K.V. [Dorofieieva, K.V.]

Investigation of pelicanite granites as used in the production of building materials. Dop.AN URSR no.5:659-662 '60. (MIRA 13:7)

1. Kiyevskiy inzhenerno-stroitel'nyy institut. Predstavleno akademikom B.S.Lysinym].
(Cimolite)

SLOBODYANIK, I. [Slobodianyk, I.], kand.tekhn.nauk; RUBINOVICH, Ye. [Rubinovych, IE.], inzh.; LISINA, P. [Lysina, P.], inzh.; DOROFEYEVA, K. [Dorofieieva, K.], inzh.

Locally mined lime for mortars. Sil'.bud. 11 no.11:14-15 N '61. (MIRA 15:3)

(Ukraine--Lime)

SLOBODYANIK, I. [Slobodianyk, I.]; BIDNA, L., assistent

Lightweight concrete and heat insulating materials from agricultural wastes. Sil'.bud. 13 no.10:14 O '63. (MIRA 17:3)

1. Zaveduyushchiy kafedroy stroitel'nykh materialov Kiyevskogo inzhenerno-stroitel'nogo instituta (for Slobodyanik). 2. Kafedra stroitel'nykh materialov Poltavskogo inzhenerno-stroitel'nogo instituta (for Bidna).

ZHUKOV, A.V., kand. tekhn. nauk; SARTAKOV, Yu.A., inzh.; SLOBODYANIK, I.I., inzh.

Industrial use of heat insulating materials from bloated perlite
Stroi. mat. 11 no.1:26-27 Ja '65. (MIRA 18:6)

SLOBODYANIK, I. P. Cand Tech Sci -- (diss) "Study of the process of chemical absorption of CO_2 by solutions of NaOH and KOH in built-up columns." Mos, 1957. 14 pp with graphs 22 cm. (Min Higher Education USSR. Mos Order of Lenin Chem ~~technological~~ Engineering Inst im D.I. Mendeleyev). 120 copies.

(KL, 23-57, 114)

-89-

87

KASATKIN, A.G.; KAFAROV, V.V.; SLOBODYANIK, I.P.

Study of the chemical sorption process of CO_2 by NaOH and KOH solutions in a packed column. Trudy MKHTI no.24:389-404 '57.
(Sorption) (Carbon dioxide) (MIRA 11:6)

SLOBODYANIK, I.P.; KASATKIN, A.G.; KAFAROV, V.V.

Calculation of packed columns under condititons of chemisorption. Izv.vys.ucheb.zav.; khim.i khim.tekh. 2 no.6:956-961 '59. (MIRA 13:4)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni D.I. Mendeleyeva. Kafedra protsessov i apparatov.
(Packed towers)

SLOBODYANIK, I.F.

Method for analyzing the operation of packed extraction columns. Izv. vys. ucheb. zav.;pishch. tekh. no.3:111-115 '60. (MIRA 14:8)

1. Krasnodarskiy institut pishchevoy promyshlennosti, Kafedra protsessov i apparatov.
(Extraction apparatus)

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S/153/60/003/02/30/034
B011/B006

5.1105

AUTHORS: Slobodyanik, I. P., Kasatkin, A. G., Kafarov, V. V.

TITLE: Influence of Hydrodynamic Conditions on Chemosorption in Checker Columns

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1960, Vol. 3, No. 2, pp. 369-374

TEXT: The authors found that the papers published on investigations of chemosorption all refer to special cases, and that the results obtained are therefore not valid for other conditions. The present paper is an investigation of the effect of flow rates of the solution and the gas on the rate of chemosorption. The absorption of CO_2 by NaOH and KOH in a checker column was used as an example. To render a comparison between their data and those of other investigators possible, the authors also evaluated their data basing on the volume coefficients $K_g\sigma$ of absorption. Fig. 1 gives a scheme of the experimental apparatus. Experiments were carried out at 17-19°. Fig. 2 shows the dependence of the rate of

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Influence of Hydrodynamic Conditions on Chemosorption in Checker Columns

S/153/60/003/02/30/034
B011/B006

CO_2 absorption by KOH solutions on the rate of gas flow at a constant rate of flow of the solution L = 153 kg/h. The maximum absorption rates with respect to gas (1) and with respect to the solution (2) were calculated by means of the corresponding equations. As is shown in Fig. 2, the absorption rate increases practically linearly with an increase in the gas rate up to the point of beginning emulsification. Thereafter, it increases rapidly until complete emulsification occurs. In order to clarify the influence of the flow rate of the solution on the rate of absorption, the gas rate, the CO_2 content in the gas at its entrance into the column, and the initial concentration of the NaOH- and KOH solutions were maintained constant. The rate of CO_2 absorption by NaOH solutions as a function of the rate of flow of the solution is illustrated in Fig. 3. For a comparison, the results given in Ref. 2 are represented in Fig. 4. As is evident from the diagrams, the rate of CO_2 absorption by NaOH solutions is influenced more strongly by the rate of the solution than by the gas rate (before the occurrence of emulsification). The highest

SLOBODYANIK, I.P.; KASATKIN, A.G.; KAFAROV, V.V.

Rate of adsorption of CO_2 by NaOH solutions in a packed column in an emulsifying state. Part 3. Izv.vys.ucheb.zav.;khim. i khim.tekh. 3 no.3:534-539 '60. (MIRA 14:9)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni D.I. Mendeleyeva, kafedra protsessov i apparatov.
(Packed towers) (Absorption) (Carbon dioxide)

S/153/60/003/004/033/040/XX
B020/B054

AUTHORS: Slobodyanik, I. P., Kasatkin, A. G., Kafarov, V. V.

TITLE: IV. Rate of CO_2 Absorption by Films of NaOH Solutions in Packed Towers

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1960, Vol. 3, No. 4, pp. 731 - 736

TEXT: Earlier investigations (Ref.1) gave the data required for calculating the absorption processes of CO_2 in NaOH solutions in packed towers under emulsifying conditions. Fig.1 shows the dependence of the absorption rate of CO_2 in NaOH solutions on the velocity of the solution under various hydrodynamic conditions at L/G = const, and α = const (L is the velocity of the solution (kg/h), G that of the gas (kg/h), and α the equivalence coefficient). The diagram shows that the relation between the absorption rate and the velocity of the solution (of the gas)

$G_{A.em} = 0.619 . L_{em} . d_e^{-0.585} H^{0.8} \alpha^{0.9} C_{in}^{1.16}$ (7), where H is the height of the filling body, C_{in} the initial concentration of the NaOH solution, and d_e the equivalent diameter of the filling body. The absorption rate of CO_2 in NaOH solutions in a packed tower under any hydrodynamic conditions can be calculated from equations (5), (6), and (7). To confirm the accuracy of the equations derived, the authors calculated the absorption rate for more than 150 results given in publications (Refs.2,3). Fig.2 compares the calculated results with the experimental ones. Fig.3 compares the experimental values of the absorption rate determined in the gaseous and liquid phases by I. B. Tepe and B. F. Dodge (Ref.2). The method suggested for analyzing the chemisorption processes permits a calculation of chemisorption processes in packed towers over a wide range of process conditions. There are 3 figures and 6 references: 2 Soviet and 4 US.

IV. Rate of CO_2 Absorption by Films of NaOH Solutions in Packed Towers

S/153/60/003/004/033/040/XX
B020/B054

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut im. D. I. Mendeleyeva, kafedra protsessov i apparatov (Moscow Institute of Chemical Technology imeni D. I. Mendeleyev, Department of Processes and Apparatus)

SUBMITTED: September 11, 1958

Card 4/4

SLOBODYANIK, I. P.

"A New Method of Analisis of Chemical Sorption Processes in Filling Columns."

Report submitted for the Conference on Heat and Mass Transfer, MINSK, BSSR, June 1961.

SLOBODYANIK, I.P.

Evaluation of the efficiency of diffusers. Izv. vys. ucheb. zav.; pishch. tekh. no. 2:130-135 '61. (MIRA 14:5)

1. Krasnodarskiy institut pishchevoy promyshlennosti. Kafedra protsessov i apparatov.

(Diffusers)

SLOBODYANIK, I.P.

Analyzing the performance of packed rectification columns. Izv. vys.ucheb.zav.; pishch.tekh. no.3:129-133 '62. (MIRA 15:7)

1. Krasnodarskiy institut pishchevoy promyshlennosti, kafedra protsessov i apparatov.
(Mass transfer) (Packed towers)

SLOBODYANIK, I. P.; GASHKEVICH, V. B.

"Hydraulic test of a laminated plate with liquid-phase recirculation."

report submitted for 2nd All-Union Conf on Heat & Mass Transfer, Minsk, 4-12 May 1964.

Krasnodarskiy Inst of Food Ind.

ACC NR: AP6018953 (A) SOURCE CODE: UR/0322/66/000/001/0164/0169

AUTHOR: Slobodyanik, I. P.; Gashkevich, V. B.

ORG: Krasnodar Polytechnic Institute (Krasnodarskiy politekhnicheskiy institut)

TITLE: Investigation of mass exchange on a layered plate with liquid phase recirculation

SOURCE: IVUZ. Pishchevaya technologiya, no. 1, 1966, 164-169

TOPIC TAGS: fractional distillation, liquid air fractionation, heat transfer

ABSTRACT: The efficiency of a distillation plate previously described by the authors was determined for desorbing oxygen from water and fractionating methanol-water mixtures. The column arrangement shown in the figure (see Fig. 3) was used for the latter.

Card 1/3 UDC: 66.048.375.021.3

ACC NR: AP6018953

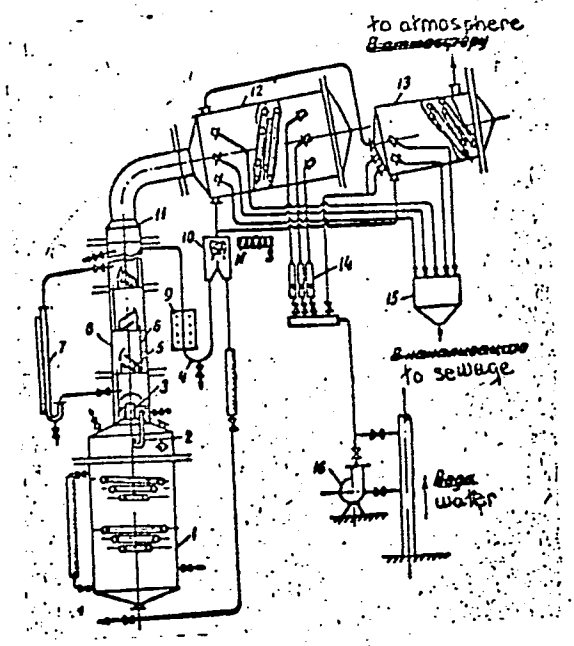

Figure 3.

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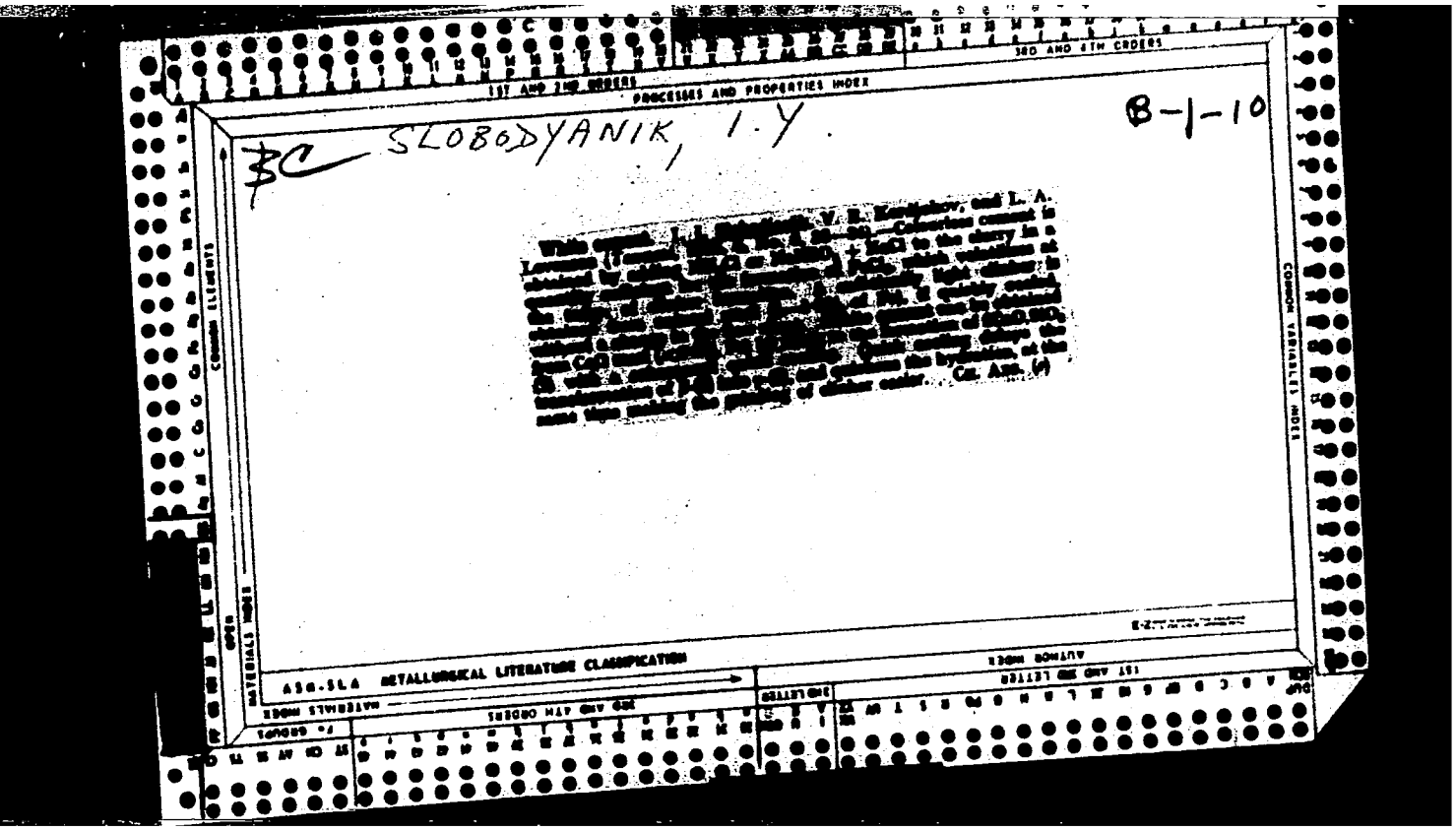
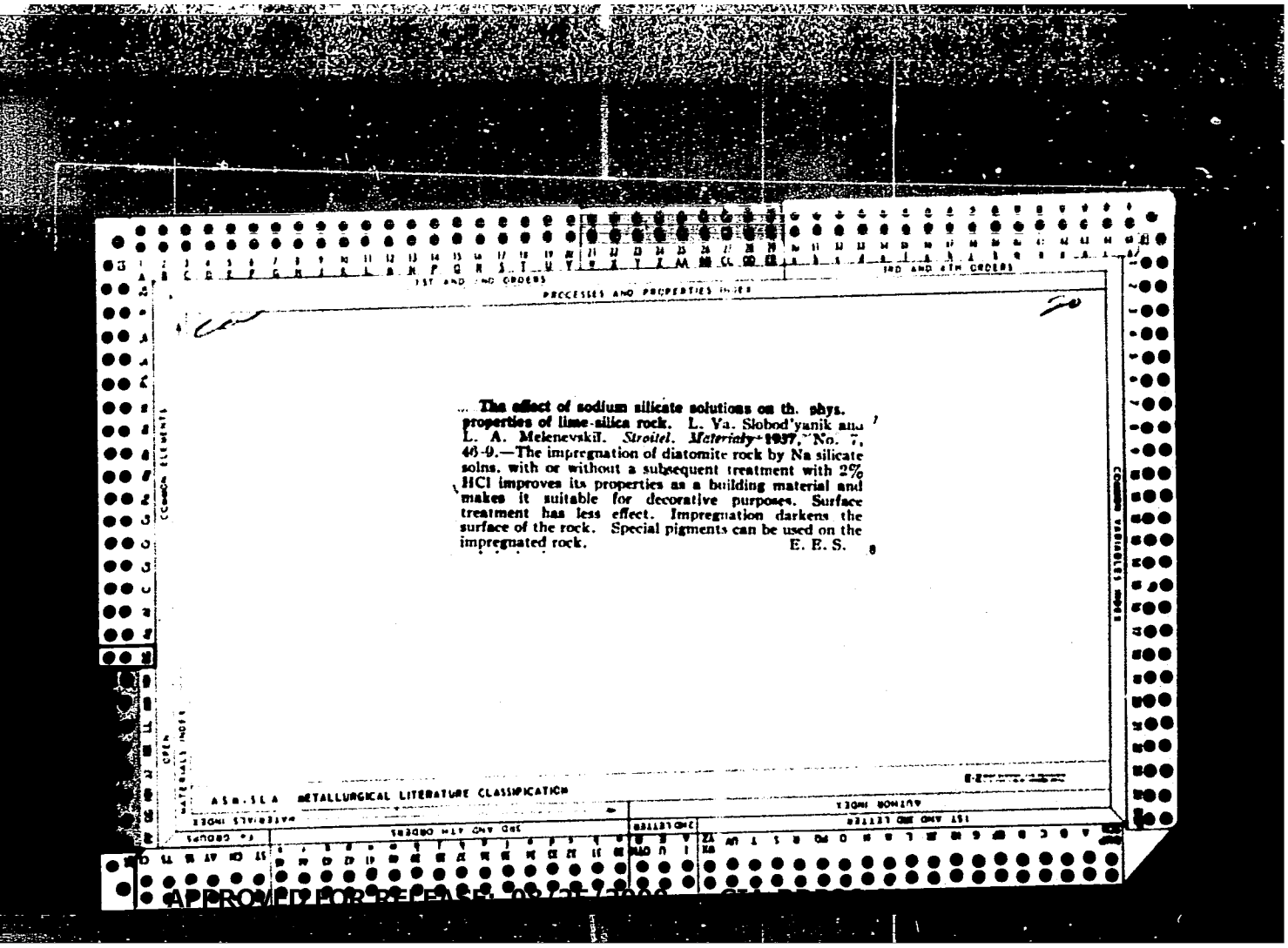
ACC NR: AP6018953

Vapors from the steam coil heated still 1 are admitted to the column through outlet 3. The column, made up of flanged cylinders 8, contains three plates 5 (250 mm in diameter 300 cm apart, inclined 18°), overflow pipes 6 and connecting pipe 2 to the still, and manometer 7. Vapors proceed through cylinder 11 to reflux condenser 12, provided with separator 10 for returning distillate to the still and to reflux through water seal 4 past the electric heater 9 to the top of the column. Uncondensed vapors from reflux condenser 12 pass to condenser 13 (both inclined about 12° to the horizontal). The condenser is open to the atmosphere. Condensed water goes from the main line through a RS-7 type rotometer 14 to collector 15 and on to the sewer. The 3K-6 centrifugal pump 16 is used for pumping cooling water to the fractionating column and condenser. Plate efficiency of 80-85% was attained with vapor velocities of about 2 m/sec through the column. The stability of the high values for plate efficiency and mass transfer coefficients indicates that this plate construction, which offers minimum hydraulic resistance, is suitable for fractionating gas-liquid systems, especially where the thermal instability of the materials usually requires vacuum fractionation. Orig. art. has: 5 figures and 6 equations.

SUB CODE: 13/ SUBM DATE: 19Feb65/ ORIG REF: 008/ OTH REF: 001

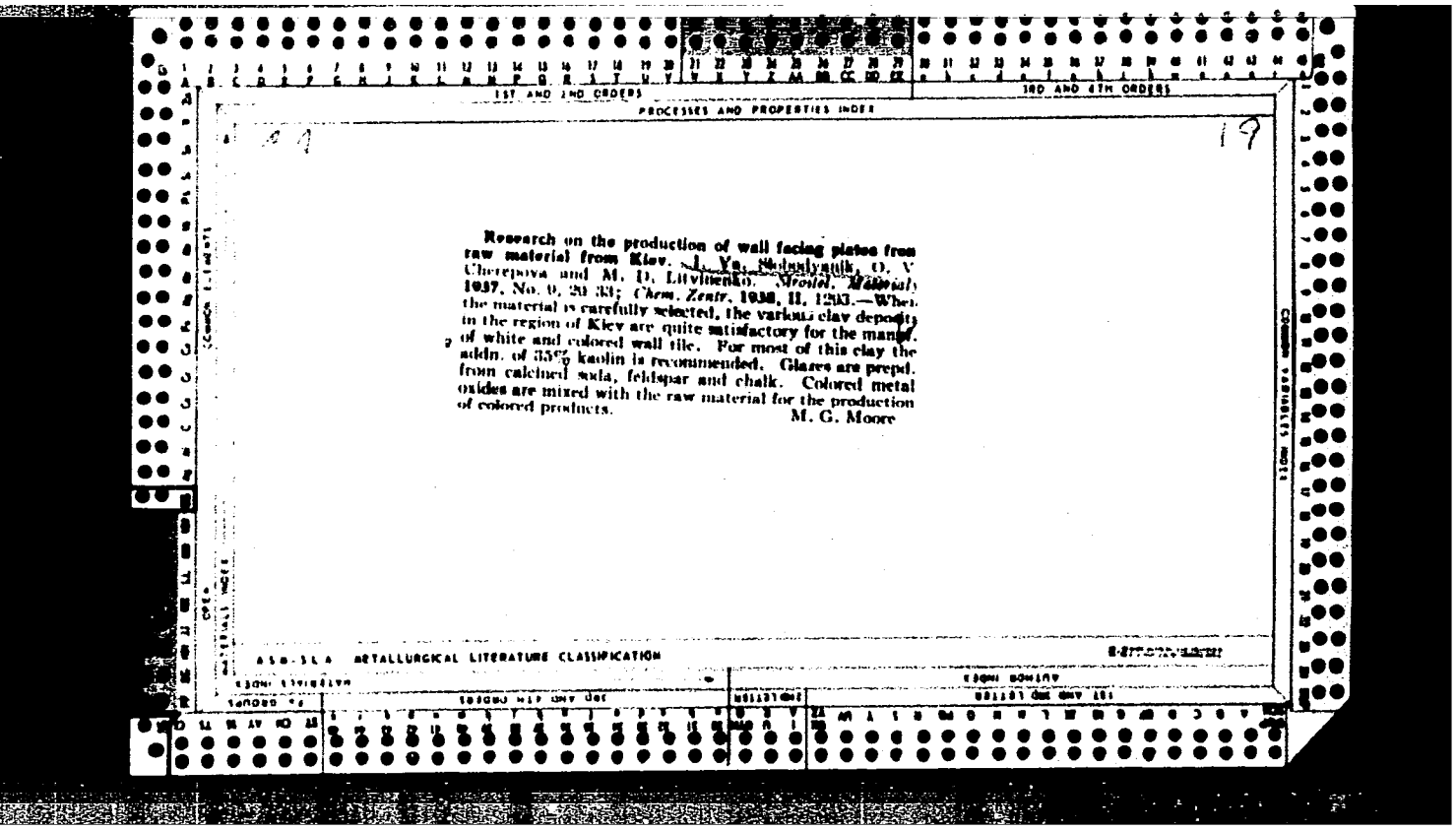
Card 3/3





... **The effect of sodium silicate solutions on th. phys. properties of lime-silica rock.** L. Va. Slobod'yanik and L. A. Melenevskil. *Stroitel. Materialy* 1937, No. 7, 46-9.—The impregnation of diatomite rock by Na silicate solns. with or without a subsequent treatment with 2% HCl improves its properties as a building material and makes it suitable for decorative purposes. Surface treatment has less effect. Impregnation darkens the surface of the rock. Special pigments can be used on the impregnated rock.

E. E. S.



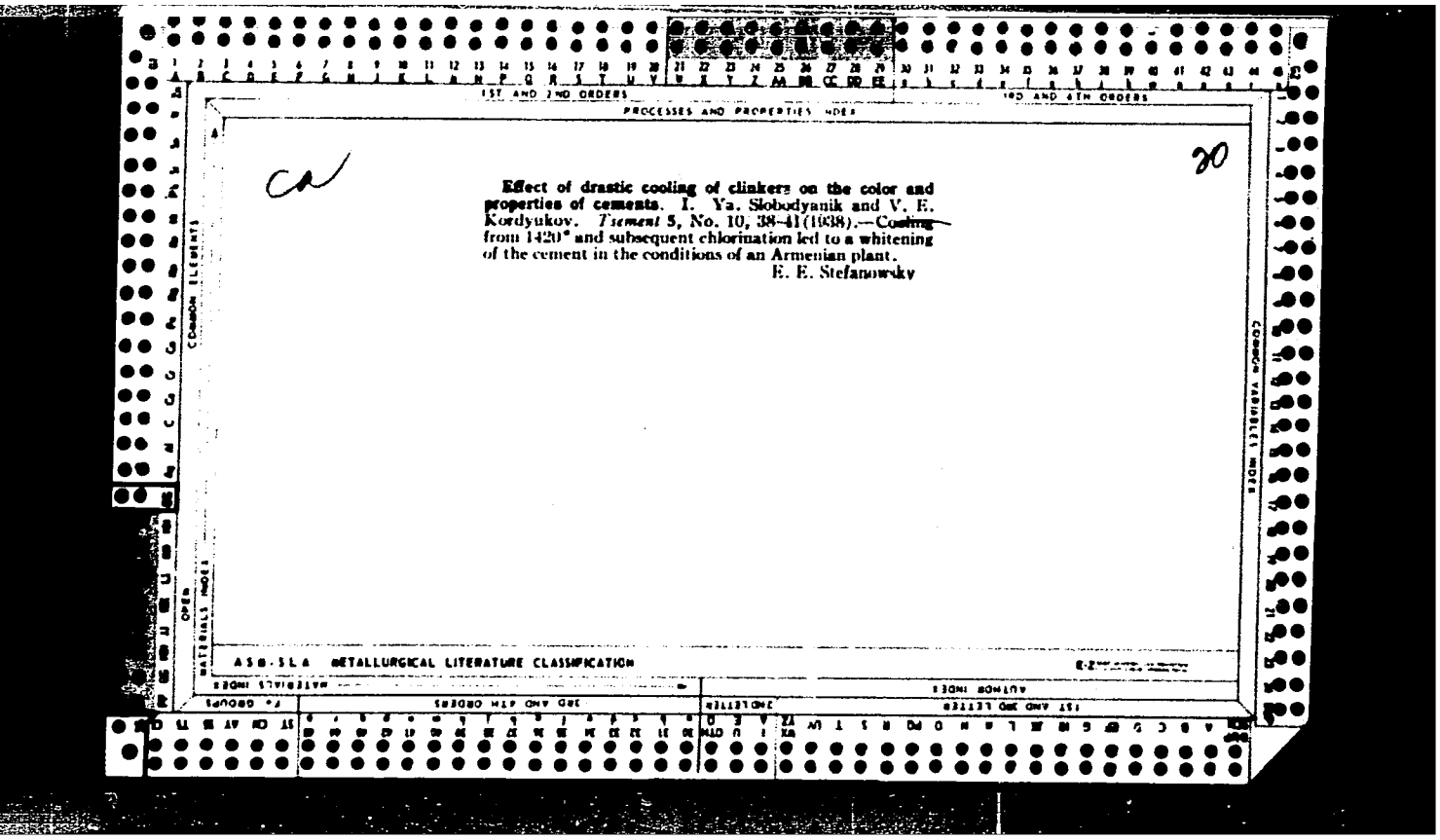
PROCESSES AND PROPERTIES INDEX

19

Research on the production of wall facing plates from raw material from Kiev. S. Ya. Shidlyanik, O. V. Cherepova and M. D. Litvinenko. *Stroitel. Materialy* 1937, No. 9, 29-33; *Chem. Zentr.* 1938, II, 1203.—When the material is carefully selected, the various clay deposits in the region of Kiev are quite satisfactory for the manuf. of white and colored wall tile. For most of this clay the addn. of 35% kaolin is recommended. Glazes are prepd. from calcined soda, feldspar and chalk. Colored metal oxides are mixed with the raw material for the production of colored products.

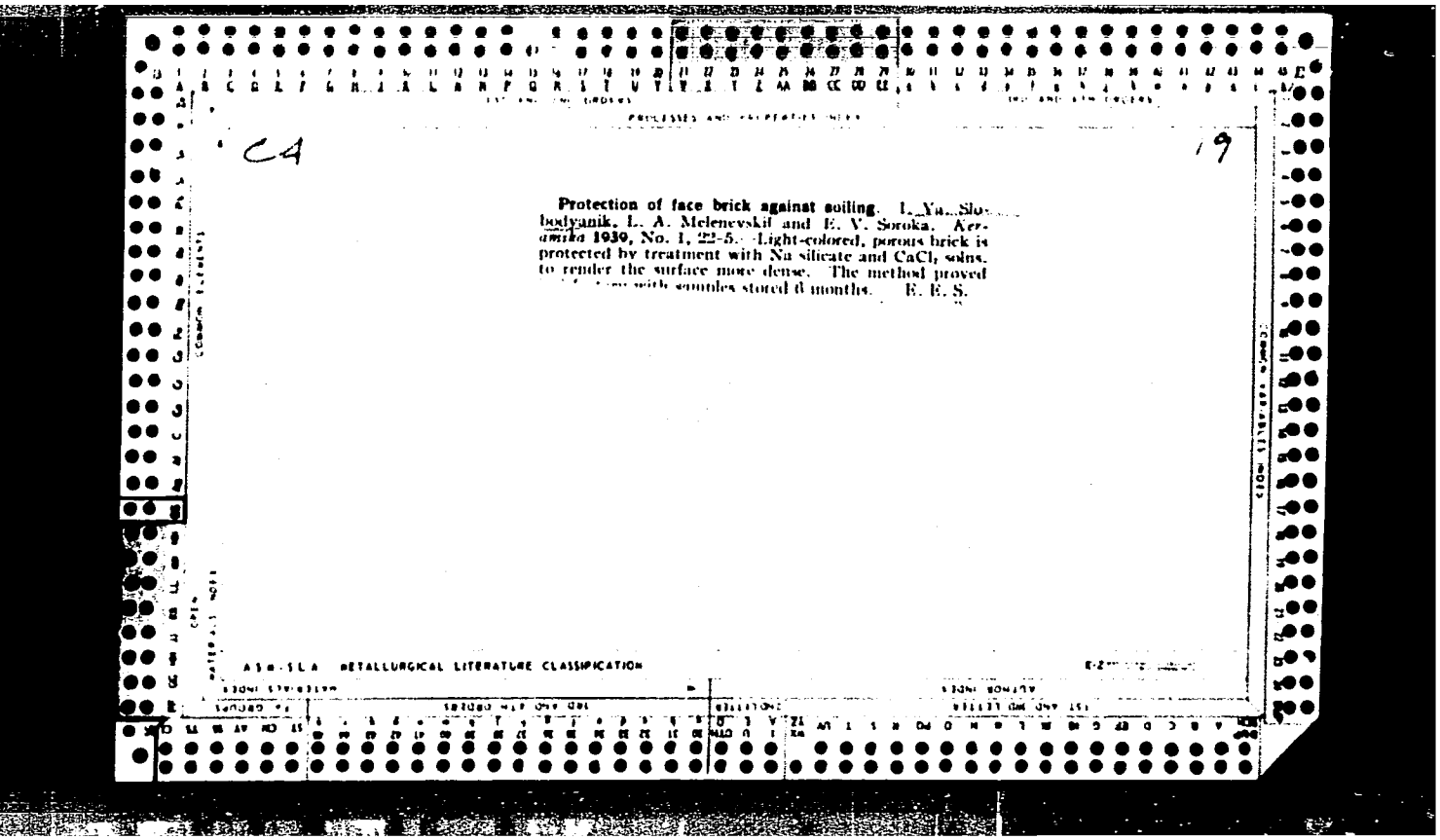
M. G. Moore

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Effect of drastic cooling of clinkers on the color and properties of cements. I. Ya. Slobodyanik and V. E. Kordyukov. *Tsement* 5, No. 10, 38–41 (1938).—Cooling from 1420° and subsequent chlorination led to a whitening of the cement in the conditions of an Armenian plant.

E. E. Stefanowsky

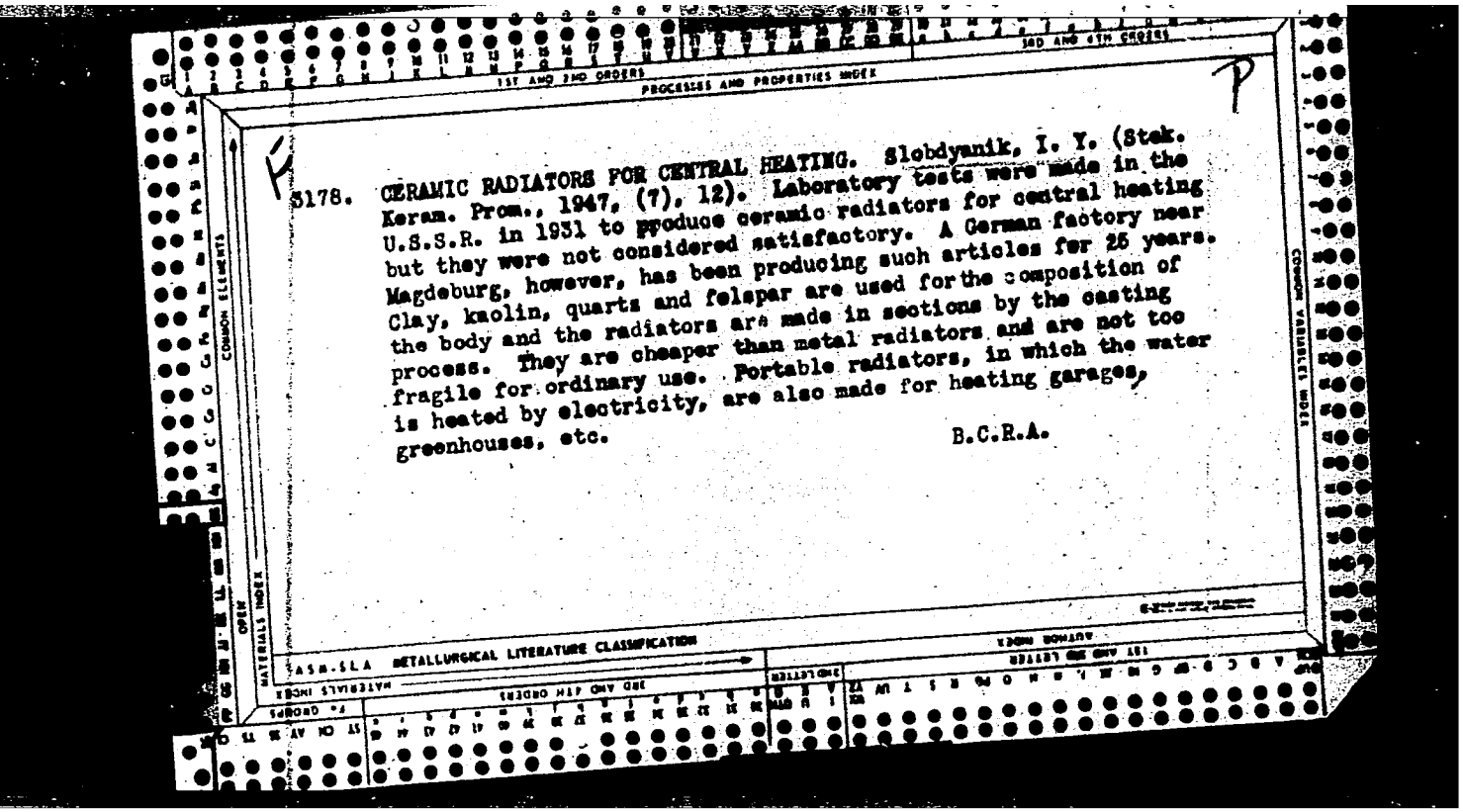


C4

19

Protection of face brick against soiling. L. Yu. Slobodyanik, L. A. Melenevskiĭ and E. V. Soroka. *Keramika* **1939**, No. 1, 22–5.—Light-colored, porous brick is protected by treatment with Na silicate and $CaCl_2$ solns. to render the surface more dense. The method proved [illegible] with samples stored 6 months. E. E. S.

A S M - S L A METALLURGICAL LITERATURE CLASSIFICATION



5178. CERAMIC RADIATORS FOR CENTRAL HEATING. Slobdyanik, I. Y. (Stek. Keram. Prom., 1947, (7), 12). Laboratory tests were made in the U.S.S.R. in 1931 to produce ceramic radiators for central heating but they were not considered satisfactory. A German factory near Magdeburg, however, has been producing such articles for 25 years. Clay, kaolin, quarts and felspar are used for the composition of the body and the radiators are made in sections by the casting process. They are cheaper than metal radiators and are not too fragile for ordinary use. Portable radiators, in which the water is heated by electricity, are also made for heating garages, greenhouses, etc.

B.C.R.A.

SLOBODYANIK, I. YA.

BELOKHVOSTIKOVA, V. I. - nauchn. sotr. i, SLOBODYANIK, I. YA. - Kand. tekhn. nauk.

Institut stroitel'nykh materialov Akademii arkhitektury USSR

POLUCHENIYE MOLOTOY GIDRAVLICHESKOY IZVESTI IZ FIL'TRPRESSNOY GRYAZI SAKHARNYKH ZAVODOV
Page 105

SO: Collection of Annotations of Scientific Research Work on Construction, completed in 1950, Moscow, 1951

BCS

Henry Chymere

3420. Manufacture of clay roofing tiles with ribbon presses by new methods. I. YA. SLOBODYANIK (*Stek. Keram.*, 8, No. 8, 21, 1951). A Russian patented method is discussed according to which 2–3 rows of horizontal ribbons are shaped in a ribbon press and extruded through a special mouthpiece. These ribbons, coming out simultaneously, are cut off to give separate tiles. The mouthpiece has holes so that the clay ribbons are separated from each other by clay rods. This characteristic ensures normal drying conditions and prevents the ribbons from sticking to each other. Details of the method are not given. (4 figs.)

SLOBODYANIK, I.YA.

[illegible] Committee on Stalin Prizes (of the Council of Ministers USSR) in the fields of [illegible]ence and inventions announces that the following scientific works, popular scien[illegible] books, and textbooks have been submitted for competition for Stalin Prizes for the years [illegible] and [illegible]. (Sovetskaya Kul'tura, Moscow, No. [illegible], [illegible] Feb - 3 Apr 1954)

Name	Title of Work	Nominated by
Slobodyanik, I.Ya.	"Construction Materials" (in Ukrainian, textbook)	Kiev Construction Engineering Institute

[illegible]

MUSIYENKO, P.N.; SLOBODYANNIK, I., spetsial'nyy redaktor; IMAS, R., redaktor; GARSHANOV, A., tekhnicheskiy redaktor.

[Ceramics in architecture and construction; methods for the artistic design of ceramic elements] Keramika v arkhitekture i stroitel'stve; metody khudozhestvennogo oformleniia keramicheskikh izdelii. Kiev, Izd-vo Akademii arkhitektury Ukrainskoi SSR, 1953. 126 p. [Microfilm] (MLRA 7:10)
(Ceramics)

SLOBODYANNIK, I.Ya., kandidat tekhnicheskikh nauk; TUROVSKIY, B., redaktor; GARSHANOV, A., tekhnicheskiy redaktor

[Obtaining hydraulic data from filter press silt] Poluchenie gidravlicheskoi izvesti iz fil'trpressnoi griazi. Kiev, Izd-vo Akademii arkhitektury USSR, 1951. 21 p. [Microfilm] (MLRA 10:2)
(Filter presses)

SLOBODYANIK, I.Ya., kandidat tekhnicheskikh nauk.

Reed cover for plastering. Strei.prom. 34 no.6:46 Je '56.
(Plastering) (MLRA 9:9)

SLOBODYANIK, Ignatiy Yakovlevich; NEMENKO, K., vedushchiy redaktor; KORSAK, Yu., vedushchiy redaktor; PATSALYUK, P., tekhnicheskiy redaktor

[Building materials and elements] Stroitel'nye materialy i izdeliia. Izd. 2-oe, perer. Kiev, Gos.izd-vo tekhn.lit-ry USSR, 1957. 515 p. (Building materials) (MLRA 10:10)

22(1) SOV/3-59-4-10/42

AUTHORS: Kazakevich, D.M., Candidate of Economic Sciences; Larina, M.N.; Chirkov, A.V., Candidate of Economic Sciences, Docent; Slobodyanik, I.Ya., Candidate of Technical Sciences

TITLE: Our Readers Suggest

PERIODICAL: Vestnik vysshey shkoly, 1959, Nr 4, pp 33-34 (USSR)

ABSTRACT: In order to raise the quality of exercises on economic subjects, D.M. Kazakevich and M.N. Larina of the Tomsk Electromechanical Institute of RR Engineers suggest that some of the seminar exercises be conducted with the participation of plant engineers and economists. Such seminars were organized last year by the Chair of Political Economy of the Tomskiy politekhnicheskiy institut (Tomsk Polytechnical Institute) at the plants "Sibelektromotor", "Manometr" and others. It is advisable for the vuz instructors and the workers of the scientific-research institutions to establish scientific collectives which will handle such problems. The economic chairs of the institutes of Novosibirsk, Tomsk and other Siberian vuz centers could participate in scientific researches on themes of the

Card 1/3

Our Readers Suggest

latest technical devices. The author considers it desirable that the various exhibitions furnish the vuzes with copies of new posters and photographs of equipment, catalogues, models or motion pictures. Plants turning out new laboratory and productional equipment should be requested to supply the laboratories of the respective vuzes with specimens of such equipment.

Card 3/3

SLOBODYANIK, I.Ya., kand.tekhn.nauk; LYSINA, L.B., inzh.

Cementless binders and concretes based on Aleksandriya brown-coal cinders. Stroi.mat. 5 no.11:38 N '59. (MIRA 13:3)

(Binding materials) (Cinder blocks)

SLOBODYANIK, Ignat Yakovlevich [Slobodianyk, I.IA.], kand.tekhn.nauk; PASHKOV, Igor' Aleksandrovich [Pashkov, I.O.], kand.tekhn.nauk; CHUPRUNENKO, Yekaterina Vasil'yevna [Chuprunenko, IE.V.], kand. tekhn.nauk; CHERKASOV, Nikolay Antonovich [Cherkasov, M.A.], kand. tekhn.nauk; LYSINA, Nina Borisovna, inzh.; RUBINOVICH, Esfir' Abramovna, inzh.; PAL'CHIK, Petr Karpovich, inzh.; LITVINENKO, Melan'ya Dmitriyevna, inzh.; SVARICHEVSKIY, Lyubomir Vladimirovich [Svorycheva'kyi, L.V.], inzh.; OSOVSKAYA, I. [Osova'ka, I.], red.; ZELENKOVA, Ye. [Zelenkova, IE.], tekhn.red.

[Local binding materials based on new raw materials of the Ukraine] Mistsevi v'iazhuchi na novii syrovyni Ukrainy. Za zahal'noiu red. I.IA.Slobodianyka. Kyiv, Derzh.vyd-vo lit-ry z budivnytstva i arkhit.URSR, 1960. 115 p. (MIRA 13:10)
(Ukraine--Binding materials)

SLOBODYANIK, I.Ya.; ZHURAKOVSKAYA, L.V.

Precast mesh-reinforced ceramic products for rural construction. Stroi. mat., det. i izd. no. 2:68-72 '65 (MIRA 19:1)

1. Kiyevskiy inzhenerno-stroitel'nyy institut.

SLOBODYANIK, N. I.

Seed Industry

Threshing, rubbing, and extracting vegetable seeds. Sel.i sem. 19, No. 6, 1952

Monthly List of Russian Accessions, Library of Congress, September 1952. UNCLASSIFIED.

SLOBODYANIK, N. I.

"Study of Physicomechanical and Biological Properties of Seeds of Vegetable Cultures, and Principles Underlying Processes of Their Separation." Moscow Order of Lenin Agricultural Academy imeni K. A. Timiryazev, Moscow, 1955. (Dissertation for the Degree of Candidate of Agricultural Sciences)

SO: M-972, 20 Feb 56

M

USSR/Cultivated Plants - Potatoes. Vegetables. Melons.

Abs Jour : Ref Zhur Biol., N 12, 1958, 53625

Author : Slobodyanik, M.I.

Inst : Scientific Research Institute for Vegetable Raising

Title : Determination of the Optimum Conditions for the Artificial Drying of Seeds of Vegetable Cultures.

Orig Pub : Byul. nauchno-tekhn. inform. N.-i. in-ta ovoshchn. kh.-va, 1957, 2, 12-16

Abstract : The effect of artificial drying conditions on the germinating ability and the vigor of sprouting in cucumber and tomato seeds was studied in experiments in the laboratory dryer ofVISKhOM (All-Union Scientific Research Institute of Agricultural Machinery), consisting of a drying chamber, an electric heater and a blast fan. The optimum temperature for the artificial drying was

Card 1/2

SLOBODYANIK, N.I., kand.sel'skokhozyaystvennykh nauk

Using the qualitative differences in vegetative seeds as basis of their cleaning and grading. Agrobiologiia no.5:134-137 S-O '58. (MIRA 11:11)

1. Nauchno-issledovatel'skiy institut ovoshchnogo khozyaystva, st. Perlovskaya, Moskovskaya oblast'.
(Vegetables)

SLOBODYANIK, O.P. [Slobodianyk, O.P.]; MASLOV, Yu.V., doktor med. nauk, prof., otv. red.

[Forensic psychiatry] Sudova psykhiatriia. L'viv, Vyd-vo L'vivs'koho univ., 1963. 158 p. (MIRA 18:2)

1. Zaveduyushchiy kafedroy psikhiatrii L'vovskogo Gosudarstvennogo meditsinskogo instituta (for Maslov).

FAYDYSH, A.N. [Faidysh, O.M.]; SLOBODYANIK, V.V. [Slobodianyk, V.V.]

Photoconductivity of anthracene. Visnyk Kyiv.un.no.2.Ser.fiz.ta khim. no.1:3-9 '59. (MIRA 14:8)
(Photoconductivity) (Anthracene--Electric properties)

S/058/62/000/007/046/068
A061/A101

24.7709

AUTHORS: Paydish, O. M., Slobodyanik, V. V.

TITLE: Dependence of photoconductivity in anthracene crystals on material, shape and directivity of the electrodes

PERIODICAL: Referativnyy zhurnal, Fizika, no. 7, 1962, 32, abstract 7E246 ("Visnyk Kyïvs'k. un-tu", 1960 (1961), no. 3, ser. astron., fiz. ta khimiï, no. 2, 8 - 15, Ukrainian; Russian summary)

1/B

TEXT: It is shown that as a result of the formation of barrier layers in crystal-electrode contact points, a significant short-circuit current may be observed in anthracene crystals. Owing to the variable character of the barrier layers, the value of this current may change considerably from one specimen to another. The formation of a space charge in barrier layers tells mainly in the time dependence of photoconductivity under illumination. In some specimens photoconductivity drops considerably after 1 - 2 min of illumination. The presence of barrier layers is confirmed by the dependence of photoconductivity on polarity and by the existence of photo-emf. Investigations on electrodes made from Ag, Zn,

Card 1/2

S/058/62/000/007/046/068
A061/A101

Dependence of photoconductivity in...

Sn, Al, Bi, aquadag, and India ink have shown that the magnitude of photocurrent in good specimens does not substantially depend on the nature of the electrode material. An exception is Ga whose photocurrent is about five times less than that occurring with other electrodes. Photocurrent has been found to be about five times larger along the b-axis than along the a-axis. It is believed that the strong dependence of photocurrent on the crystallographic direction is associated with the existence of an intermolecular energy barrier which has to be overcome by holes in motion.

[Abstracter's note: Complete translation]

Card 2/2

ACCESSION NR: AP4040770 S/0021/64/000/006/0752/0756

AUTHOR: Zima, V. L., Slobodyany*k, V. V. (Slobodyanik, V.V.), Faydy*sh, O.M. (Faydy*sh, A. M.)

TITLE: Effect of oxygen on the photoconductivity and luminescence of anthracene crystals

SOURCE: AN UkrRSR. Dopovidi, no. 6, 1964, 752-756

TOPIC TAGS: Photoconductivity, intrinsic photoconductivity, luminescence, luminescence quenching, photooxide, oxidized anthracene, anthracene, naphthacene, phenazine, photoconductive quantum yield

ABSTRACT: The effect of oxygen on the photoconductivity and luminescence of anthracene crystals was studied between -170 and +90 C with light of wavelengths 3130, 3650 and 4050 A. The photoconductivity was found to increase (at all but the lowest temperatures) when the samples were exposed to oxygen; the luminescence was correspondingly quenched. The photoconductivity fell to its "vacuum" value upon evacuation of gases only when the crystals were simultaneously illuminated. The rates of rise and fall of photoconductivity and luminescence quenching were dependent upon temperature and the intensity of illumination. These facts indicated a mechanism whereby excited anthracene molecules interact with oxygen

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molecules to form an ionic complex:

$$A^0(\downarrow\uparrow) + O_2(\uparrow\uparrow) \rightarrow A^+(\uparrow)\cdot O_2^-(\uparrow\downarrow) \quad (1)$$

An exciton interaction scheme can also account for the vacuum rejuvenation of oxidized crystals:

$$A^0 + A^+O_2^- \rightarrow A^+ + A + O_2^- \quad (2)$$

or

$$A^+O_2^- + A^0 \rightarrow A^+ + O_2 + A^- . \quad (3)$$

From studying the temperature dependence of the photoluminescence quenching by photooxides, an activation energy of 0.17±0.02EV was established.

The agreement of this energy with the activation energy for photoconductivity (as found in the literature) indicates that the thermal of the photoconductivity is not due to any temperature dependence of the mobility of charges, but that it is directly related to the formation of photooxides. Much evidence points to the conclusion that the observed "vacuum" photoconductivity is, in fact, an intrinsic phenomena. Orig. art. has 3 numbered equations, 2 graphs and 1 table.

ASSOCIATION: Ky*yivs'ky*y dershavny*y universy*tet (Kiev State University)

ACCESSION NR: AP4040770

SUBMITTED: 030ct63 ENCL: 00

SUB CODE: OC, OP NO REF SOV: 003 OTHER: 013

Card 3/3

L 54033-65 EWT(1)/EWT(m)/EPF(c)/EWP(j)/EEC(t) Pc-4/Pz-6 IJP(c) AT/RM

ACCESSION NR: AP5013519 UR/0076/65/039/005/1041/1051
541.14

AUTHOR: Slobodyanik, V. V.; Faydysh, A. N. 21 1

TITLE: Effect of oxygen on the photoconductivity of anthracene crystals

SOURCE: Zhurnal fizicheskoy khimii, v. 39, no. 5, 1965, 1041-1051

TOPIC TAGS: anthracene crystal, photoconductivity, photocurrent

ABSTRACT: The effect of oxygen on the magnitude, kinetics and current-voltage and light characteristics of the photocurrent in anthracene crystals was investigated. In an oxygen atmosphere, the photoconductivity in anthracene crystals is mainly due to the formation of an unstable form of photoconductive anthracene oxides. The photocurrent increases with rising oxygen pressure. Under illumination, the current intensity I changes exponentially with time, and the exponent is proportional to the intensity of the incident light L. It was found that light participates in the formation and breakdown of the photoconductive oxides. In oxygen or air, the dependence of I on the wavelength of the exciting light λ_e is chiefly determined

Card 1/2

33
32
B

L 54033-65
ACCESSION NR: AP5013519

by the change in the absorption coefficient, and in a vacuum, by the energy of the incident photons. After a thorough removal of oxygen from the crystal, the kinetics, light characteristics, and dependence of I on λ_e change considerably. This leads to the conclusion that anthracene crystals possess intrinsic conductivity. A theory was advanced which accounts for the kinetics of photoconductivity and dependence of I on L, and makes it possible to estimate the quantum yield for the formation of charge carriers. Orig. art. has: 6 figures, 1 table, and 6 formulas.

ASSOCIATION: Kiyevskiy gosudarstvennyy universitet im. T. G. Shevchenko (Kiev State University)

SUBMITTED: 17Dec62 ENCL: 00 SUB CODE: OC, EM

NO REF SOV: 009 OTHER: 038

Card 2/2

L 08219-67

ACC NR: AP6030331 SOURCE CODE: UR/0170/66/011/002/0161/0165

AUTHOR: Slobodyannikov, S. S.; Chudakov, A. D.; Pelipenko, V. I. 50 B

ORG: Moscow Technological Institute (Tekhnologicheskiy institut g. Moskva)

TITLE: Electric simulation of reciprocally moving fields

SOURCE: Inzhenerno-fizicheskiy zhurnal, v. 11, no. 2, 1966, 161-165

TOPIC TAGS: simulation, temperature simulation, electric analog, field theory, TEMPERATURE DISTRIBUTION, MECHANICAL ENGINEERING

ABSTRACT: An electrical analog computer developed by the Moscow Technological Institute for simulating problems of field theory involving reciprocal movements of field elements is described. The problem of determining the thermal distribution in the brake system of a hoisting rig is considered and solved by using the analog computer described here. A schematic drawing of the network analog computer and an oscillogram of the temperature variations in a brake drum in terms of the turning angle of the drum are given. Orig. art. has: 3 figures and 2 formulas. [AB]

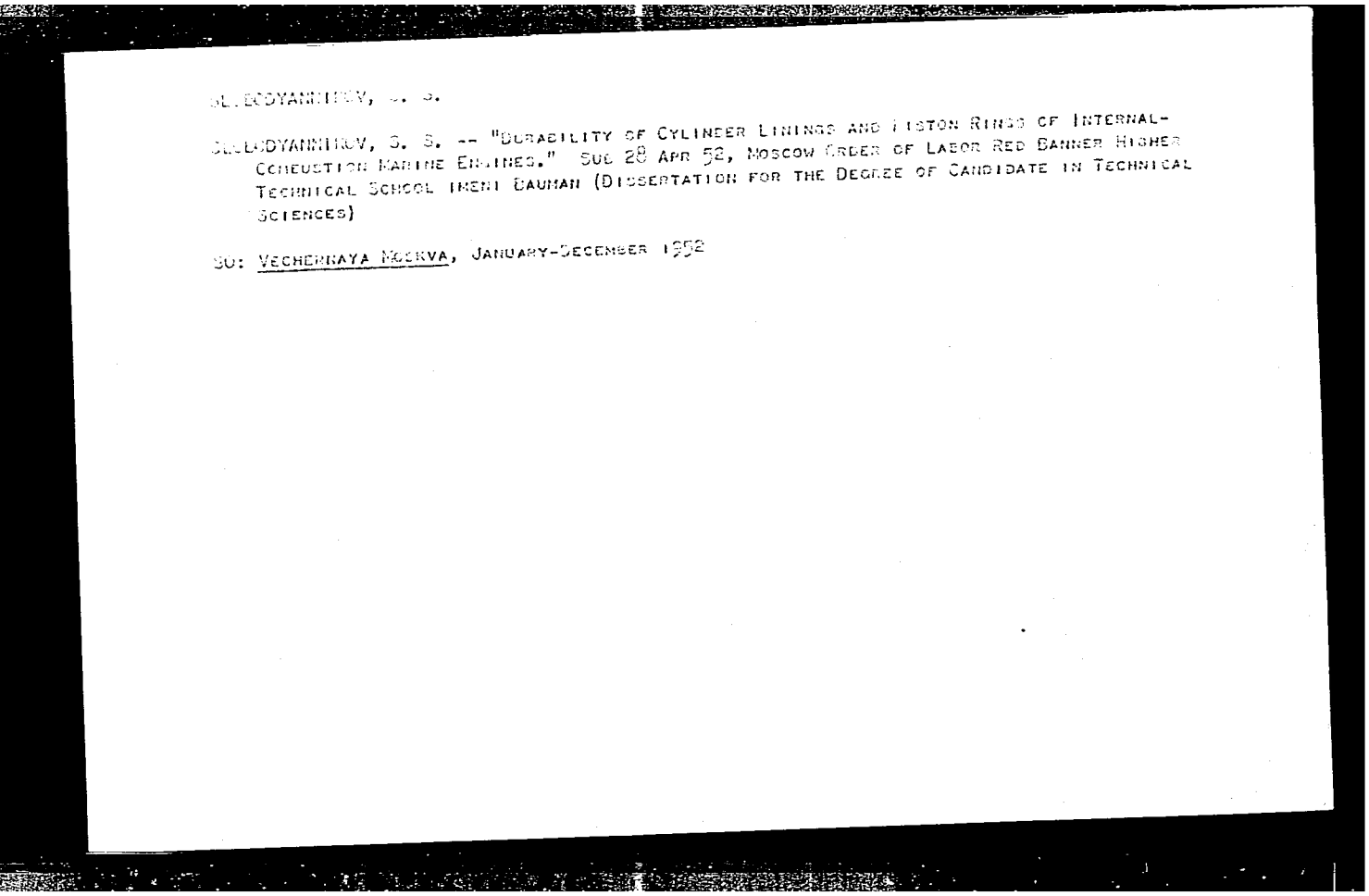
SUB CODE: 09, 18/ SUBM DATE: 12Mar66/ ORIG REF: 005/ OTH REF: 002

Card 1/1 egh

UDC: 536.2

SLOBODYANNIKOV, Sergey Stepanovich; YELIZAVETIN, M.A., kand.tekhn.nauk, nauchnyy red.; GAVRILOV, F.P., red.; RAKOV, S.I., tekhn.red.

[Ultrasonic processing of industrial products] Ul'trazvukovaia obrabotka promyshlennykh izdelii. Moskva, Vses.uchebno-pedagog. izd-vo Trudrezervizdat, 1958. 100 p. (MIRA 12:4)
(Ultrasonic waves--Industrial applications)



SLEDOYANNIKOV, S. S.

SLEDOYANNIKOV, S. S. -- "Durability of Cylinder Linings and Piston Rings of Internal-Combustion Marine Engines." Sub 28 Apr 52, Moscow Order of Labor Red Banner Higher Technical School imeni Bauman (Dissertation for the Degree of Candidate in Technical Sciences)

SO: Vechernaya Moskva, January-December 1952

SLOBODYANNIKOV, S. S.

Udlinenie sroka sluzhby detalei sudovykh mekhanizmov [Lengthening time of service for ship machinery parts]. Moskva, Morskoi tr..nsport, 1953. 268 p.

SO: Monthly List of Russian Accessions, Vol. 6 No. 9 December 1953

GARKUNOV, D.N., kandidat tekhnicheskikh nauk; SLOBODYANNIKOV, S.S., kandidat tekhnicheskikh nauk.

Effect of the hardening temperature of the strength and ductility of chromium-plated parts. Rech.transp. 13 no.1:35-36 Ja-F '53. (MLRA 6:11)
(Chromium plating)

KRAGEL'SKIY, I.V.; VINOGRADOVA, I.E.: SLOBODYANNIKOV, S.S., kandidat tekhnicheskikh nauk; POPOVA, S.M., tekhnicheskiy redaktor.

[Coefficients of friction; a reference manual] Koeffitsienty treniia; spravochnoe posobie. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1955. 188 p. (MLRA 8:8)
(Friction)

SLOBODYANNIKOV,S.S., kandidat tekhnicheskikh nauk

Metal fatigue from corrosion. Torf.prom. 32 no.3:20-22 '55.
(MLRA 8:6)

1. Moskovskiy torfyanoy institut.
(Corrosion and anticorrosives)

SOV/137-57-6-10869

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 6, p 210 (USSR)

AUTHOR: Slobodyannikov, S.S.

TITLE: Destruction of Metal Under the Combined Action of Stresses and an Aggressive Peat Medium (Razrusheniye metalla pri sovmestnom deystvii napryazheniy i agressivnoy torfyanoy sredy)

PERIODICAL: V sb.: Povysheniye iznosostoykosti i sroka sluzhby mashin. Kiyev-Moscow, Mashgiz, 1956, pp 112-114

ABSTRACT: An investigation is made of the independent and combined effects of fatigue (F) and corrosion (C) on specimens of Nr 45 steel. In studying the separate influence of these factors, the specimens are first placed in a corrosive medium (a suspension of peat and water) and then, after cleaning and drying, are subjected to the action of alternating bending stresses (AS) at a frequency of 1450 cps. The tests are run on a TsK-2 Kudryavtsev machine. Investigation of the C of metals subject to AS is done with the aid of a potentiometric circuit used to measure the electrode potentials of specimens of metal directly in the process of testing for F. It is found that the initial C has an insignificant effect upon the cyclic strength of metals.

Card 1/2

Destruction of Metal Under the Combined Action of Stresses (cont.)

However, the combined effect of an alternating load and the aggressive peat medium intensify the process of destruction of steel and sharply reduce cyclic strength. It is shown that, in a peat medium of pH 3.6 σ_w - 60%, while when pH is 2.5, σ_w is 37% of that of Nr 45 steel in air. It is observed that metal subjected to AS in a corrosive medium is characterized by a σ_w that is merely a matter of convention, as the horizontal segment of the σ-N curve is lacking. The metal fracture due to corrosion F is brittle in appearance, and no ductility is evident. The phenomenon of corrosion F is tied to a reduction in the electrode potential of steel due to disruption of the protective oxide film. Deep destruction of the steel sets in because of continually repeated failures of the protective film and removal of the C products under the effect of AS.

L.G.

Card 2/2

SLOBODYANNIKOV, S.S., inzhener.

Cavitation of hydropeat machinery. Torf.prom. 34 no.2:23-25 '57.
(MLRA 10:3)

1. Moskovskiy torfyanoy institut.
(Cavitation) (Steel--Testing) (Peat machinery)

25(1),(6);24(1) PHASE I BOOK EXPLOITATION SOV/2261

Slobodyannikov, Sergey Stepanovich

Ul'trazvukovaya obrabotka promyshlennykh izdeliy (Ultrasonic Processing of Industrial Articles) Moscow, Trudrezervizdat, 1958. 100 p. (Series: Novaya tekhnika i peredovyye metody truda) 5,000 copies printed.

Ed.: F.P. Gavrilov; Scientific Ed.: M.A. Yelizavetin, Candidate of Technical Sciences; Tech. Ed.: S.I. Rakov.

PURPOSE: This booklet is intended for instructors and foreman of educational institutions for labor reserves. It may also be useful to industrial personnel interested in the application of ultrasonics in industry.

COVERAGE: The author discusses the physical nature of ultrasound, generation of ultrasonic waves and the application of ultrasonics in metallurgy, casting, the metalworking industry, in the production of plastics, leather, rubber and glass, and in the quality control of products. Various types of ultrasonic transducers

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