"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

AVGUL', N.N.; KISELEV, A.V.; LYGINA, I.A.

Molecular-statistical evaluation of the change of thermodynamic functions in CH_4 adsorption on graphite. Izv.AN SSSR.Otd.khim. nauk no.8:1353-1357 Ag '62. (MIRA 15:8)

1. Institut fizicheskoy khimii AN SSSR.
(Methane) (Adsorption)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

S/069/63/025/002/001/010
A057/A126

AUTHORS: Avgul', N.N., Kiselev, A.V., Lopatkin, A.A., Lygina, I.A., Serdobov, M.V.

TITLE: Nature of adsorption by zeolites. Heat of adsorption of benzene and n-hexane vapors by zeolite type 13 X (13Kh)

PERIODICAL: Kolloidnyy zhurnal, v. 25, no. 2, 1963, 129 - 135

TEXT: The differential adsorption heats of benzene and n-hexane vapors on 13Kh zeolite crystals were measured calorimetrically. The measured adsorption heats are approximately twice as high as the corresponding heats of condensation. The initial heat of adsorption of benzene is by about 3 kcal/mole higher than that of n-hexane. Little change was observed in the heat of adsorption of benzene with the degree of adsorption, while a considerable rise occurs for n-hexane. This observation was made also with graphitized soot and explained by the interaction of the n-hexane molecules in the adsorption layer of the non-polarized soot surface. Discussing the possible arrangements of the benzene and n-hexane molecules in larger cavities of the zeolite, the authors state: There

Card 1/3

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are four sites in the cavity walls having cations in their centers which are favorable for the localization of benzene molecules. It can be assumed that the stretched and flexible n-hexane molecules depend less on the position of these cations. Hence, the adsorption of n-hexane is less localized in comparison to benzene. The adsorption on zeolites, however, is highly affected by the geometric and electronic structure of the adsorbed molecules, the geometry of the cavities, and the nature of the electric field of the adsorbent. The packing of molecules of the adsorbate in the zeolite cavities differs, therefore, from their packing in the liquid state. Thus Polyani's potential theory of adsorption cannot be applied to the adsorption of hydrocarbon vapors by zeolites. The state and packing of hydrocarbon molecules in zeolite cavities will find further explanations by experiments with n-alkanes with molecules of different lengths and their substitutes with various functional groups, plane molecules, and different electron structure, as well as adsorption experiments with small molecules (nitrogen, argon) after adsorption of highly adsorptive large molecules, which are loosely filling the cavities. There are 4 figures.

ASSOCIATION: Moskovskiy universitet, Khimicheskiy fakul'tet (Moscow University,

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

Nature of adsorption by zeolites. Heat of S/069/63/025/002/001/010
A057/A126

Chemical Department); Institut fizicheskoy khimii AN SSSR, Gruppa khimii poverkhnosti (Institute of Physical Chemistry of the AS USSR, Team for Surface Chemistry)

SUBMITTED: July 12, 1962

Card 3/3

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

AVGUL', N.N.; KIDELEV, A.V.; [illegible]

Standard thermodynamic characteristics of adsorption on a homogeneous surface and the activity coefficients of adsorbate in the adsorption layer. Zhur.fiz.khim. 38 no.8:2055-2058 Ag '64.

(MIRA 18:1)

1. Institut fizicheskoy khimii AN SSSR.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

AVGUL', V.T.; BAYKINA, V.M.; KHOKHLOV, A.S.

Automatic apparatus for countercurrent distribution. Zav.lab 26 no.10:1164-1166 '60. (MIRA 13:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.
(Scientific apparatus and instruments)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

4000

Apparatus for selecting liquid samples in chromatographic analysis. K. V. Chmutov and V. T. Avg[illegible] [illegible] ples from a chromatographic column. The apparatus is based on a carousel-type design with a variable period of rotation.

J. Reviar Reach

Institut fizicheskoy khimii Akademii nauk SSSR.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

AVGUL', V.T.

Automatic apparatus in chromatographic analysis. Trudy Inst. fiz. khim. no.6:189-201 '57. (MIRA 11:10)
(Chromatographic analysis)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

Avgul', V.T.

AUTHOR: Chmutov, K.V., Avgul', V.T. 32-9-25/43

TITLE: New Automatic Devices for Chromatographic Analysis (Novyye avtomaticheskiye pribory dlya khromatograficheskogo analiza)

PERIODICAL: Zavodskaya Laboratoriya, 1957, Vol. 23, Nr 9, pp.1115-1120 (USSR)

ABSTRACT: First, general considerations concerning the automatization of some stages of chromatographic analysis are dealt with. According to them, new constructions for devices for the taking of samples in a column-chromatography are described. The driving devices for the displacement of receivers, the feed-devices for the quantities of liquids, and the re-calculating scheme are described in detail. There are 10 figures and 8 Slavic references.

ASSOCIATION: Institute for Physical Chemistry AN USSR (Institut fizicheskoy khimii Akademii nauk SSSR)

AVAILABLE: Library of Congress

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APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

JOURNAL OF [illegible] CHEMISTRY

Vol XXXI, Nr 3, [illegible]

2 pp. 724-725

A NEW DEVICE FOR CHROMATOGRAPHIC ANALYSIS

[illegible] and [illegible]

Summary

A new device has been described for the collection of samples of liquids on chromatographic analysis. The arrangement is devoid of [illegible] and [illegible] to make.

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

3(4) 8(2)

AUTHOR: Avgul', V. T. SOV/76-32-10-36/39

TITLE: High-Sensitivity Relay (Vysokochuvstvitel'noye rele)

PERIODICAL: Zhurnal fizicheskoy khimii, 1958, Vol 32, Nr 10, pp 2461-2461 (USSR)

ABSTRACT: A highly sensitive relay with a working current of 0.25μA can be produced with the microammeter M91. Two variants are possible. In the first case the cover of the instrument (M91) is taken away and a 1 • 1 cm mirror is mounted to the scale. A light beam reflected by the mirror operates the photorelay. A diagram of this relay scheme with the photoresistance FSK-1 is given. The amperage in the relay and in the photoresistance amounts to 10-20μA, that of the light impulse of the light beam reflected by the mirror amounts to 3-4 mA (just as in the relay scheme of the type RP-4 or RP-5). In the second variant the cover of the instrument does not have to be taken away and no mirror is used. The photoresistance is illuminated with scattered light which is reflected by the white scale of the galvanometer. In this case the relay must be more sensitive and must operate with a current of up to 2 mA since

Card 1/2

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

High-Sensitivity Relay SOV/76-32-10-36/39

the light signal is weaker. If the relay is used within a thermocontrol unit chain the arrangement with a polarized relay may also be used (Ref 3). There are 1 figure and 3 references, 3 of which are Soviet.

ASSOCIATION: Akademiya nauk SSSR, Institut fizicheskoy khimii, Moskva (AS USSR, Institute of Physical Chemistry, Moscow)

SUBMITTED: May 4, 1958

Card 2/2

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

AVOUL', V.T.; YUDILEVICH, N.D.

Device for thermostatic chromatographic columns. Zav.lab. no.11: 1403 '59. (MIRA 13:4)

1. Institut fizicheskoy khimii Akademii nauk SSSR.
(Chromatographic analysis) (Thermostat)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

7(6) SOV/76-33-2-41/45

AUTHOR: Avgul', V. T.

TITLE: Methods and Techniques of Physicochemical Investigations (Metody i tekhnika fiziko-khimicheskogo issledovaniya). Immersion Densitometer (Densitometr pogruzheniya)

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 2, p 500 (USSR)

ABSTRACT: A densitometer is described which can be used for colorimetric measurements of aggressive liquids. The apparatus consists of two plexiglass rods whose lower ends are ground at a 45° angle and which act as conductors for the light beam, a (FESS-UI) photo element, and the light source (a small R-type lamp). The beam of light is emitted from the light source (Fig) to the under end of one of the plexiglass rods, where it penetrates a definite thickness (Δ) of the liquid to be measured, and then passes through the under end of the second plexiglass rod to the top of this rod, where the photo cell is located. The measuring instrument used was a micro ammeter of the type M 91 for which 10 μamperes correspond to r = 5000 Ω. The apparatus functions with an accuracy corresponding to that of analogous laboratory

Card 1/2

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

Methods and Techniques of Physicochemical Investigations. Immersion Densitometer

SOV/76-33-2-41/45

instruments of this type. There is 1 figure.

ASSOCIATION: Akademiya nauk SSSR, Institut fizicheskoy khimii, Moskva (Academy of Sciences USSR, Institute of Physical Chemistry, Moscow)

SUBMITTED: August 6, 1958

Card 2/2

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

AVGUL', V.T.; BATRUKOV, V.S.; CHMUTOV, D.V. (Moskva)

New model of a chromatographic collector. Zhur. fiz. khim. 34 no.2:460-461 F '60. (MIRA 14:7)
(Chromatographic analysis) (Chemical apparatus)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

AUTHORS: 1) Gorskiy, D. S., Avgul', V. T., Toporov, Yu. P.; 2) Usov, A. M., Yeliseyev, V. V.; 3) Silkin, Ye. A., Zasova, A. F.

S/032/60/036/03/060/064
B010/B117

TITLE: News in Brief

PERIODICAL: Zavodskaya laboratoriya, 1960, Vol 36, Nr 3, pp 381-382 (USSR)

TEXT: ad 1) It has been suggested by the authors to carry out the electric reversion of motors of the types SD-2 and SD-60 by changing the direction of the magnetic induction current generated by the stator of the electric motor. It is shown by means of a circuit diagram (Fig) how this has to be done.
ad 2) The design of the mounting support for tensile-strength testing machines of the types IM-12 and TsDM-100KhPu has been improved by the authors. The modifications realized are represented schematically (Fig) and described.
ad 3) A simple device (Fig) intended to be used for measuring the bending stress during impact bending tests has been developed by the authors. The device works with a cathode-ray oscillograph, and permits to attain an accuracy of measurement ranging from 0.005 to 0.01 mm. There are 3 figures.

Card 1/2

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

AVGUL', V.T.; YELOVICH, S.Yu. [deceased]; SEMENOVSKAYA, T.D.; CHMUTOV, K.V.
(Moskva)

Chromatographic column for the operation at high temperatures. Zhur. fiz. khim. 35 no. 4:946-947 Ap '61. (MIRA 14:5)

1. Akademiya nauk SSSR, Institut fizicheskoy khimii.
(Chromatographic analysis)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

SEMENOVSKAYA, T.D.; AVGUL', V.T.; CHMUTOV, K.V.

Liquid chromatography at high temperatures. Zhur. fiz. khim. 37 no.5:1160-1162 My '63. (MIRA 17:1)

1. Institut fizicheskoy khimii AN SSSR.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

AVGUL', V.T. (Moskva); CHMUTOV, K.V. (Moskva)

Chromatographic collector with capacitance pickup. Zhur.fiz.khim. 37 no.8:1907-1908 Ag '63. (MIRA 16:9)

1. Institut fizicheskoy khimii AN SSSR.
(Chromatographic analysis)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

YELOVICH, S.Yu. (Moskva) [deceased]; AVGUL', V.T. (Moskva); SEMENOVSKAYA, T.D. (Moskva)

Device for determining isotherms of sorption from solutions at temperatures above 100°. Zhur.fiz.khim. 37 no.8:1909 Ag '63. (MIRA 16:9)

1. Institut fizicheskoy khimii AN SSSR.
(Sorption)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

L 40708-65 EWT(m)/EWG(m) RM/HWH

ACCESSION NR: AP5012314 UR/0076/64/038/010/2520/2522

AUTHOR: Semenovskaya, T. D.; Avgul'v, V. T.; Chmutov, K. V.

19
18
B

TITLE: Influence of temperature of the shape of the front in ion-exchange chromatography

SOURCE: Zhurnal fizicheskoy khimii, v. 38, no. 10, 1964, 2520-2522

TOPIC TAGS: ion exchange chromatography, high temperature research, high temperature effect

ABSTRACT: In frontal ion-exhange chromatography at high temperatures, there is a substantial sharpening of the front with increasing temperature, which in turn provides the possibility of increasing the rate of the chromatographic processes. The diffusion coefficients of the Ni^{+2} ion in the grain of the resin KU-2 were calculated from the experimental effluent curves according to the Glueckauf equation for a stationary self-sharpening front. The role of the diffusion and hydrodynamic factors in the formation of the front at the temperatures 35, 90, and 180°C was demonstrated on the basis of the calculation: the diffusion rate exerts an appreciable influence on the shape of the front only at 35°C, the blurring of the front related to diffusion in the resin drops sharply as the temperature is raised to 180°C. However, the relative role of hydrodynamic

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L 40708-65

ACCESSION NR: AP5012314

factors not considered in the Glueckauf equation is magnified, which may lead to substantial deviations of the diffusion coefficients in the resin, calculated according to the experimental affluent curves, from their actual values. Orig. art. has: 7 formulas, 1 graph and 1 table.

ASSOCIATION: Akademiya nauk SSSR, Institut fizicheskoy khimii (Academy of Sciences SSSR, Institue of Physical Chemistry)

SUBMITTED: 01Apr64 ENCL: 00 SUB CODE: GC, TD

NO REF SOV: 001 OTHER: 003 JPRS

Card 2/2 MB

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

SHMYTOV, K.V.; KLIYENTOVSKAYA, M.M.; AVGUL', V.T.

Device for rapid sampling of liquids in the study of reaction kinetics. Zhur. fiz. khim. 39 no.5:1276-1277 My '65. (MIRA 18:8)

1. Institut fizicheskoy khimii AN SSSR.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

CHMUTOV, Konstantin Vasil'yevich; AVGUL', Vladimir Tomashevich; VLASOV, L.G., red. izd-va; ROMANOV, ~~G.N., tekhn. red.~~

[Automatic instruments in chromatographic column analysis] Avtomaticheskie pribory v kolonochnom khromatograficheskom analize. Moskva, Izd-vo Akad. nauk SSSR, 1961. 52 p. (MIRA 14:6)
(Chromatographic analysis)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

Augushevich, I. V.

Synthesis of trialkylhalodimethylsilanes

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

SHAPATINA, Ye. A.; MALASHENKO, L. P.; ORLOVA, M. A.; EDEMSKAYA, N. D.; AVGUSHEVICH, I. V.

Thermal decomposition of peat under conditions of high-speed heating. Trudy IGI 17:3-20 '62. (MIRA 15:10)

(Peat gasification)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

AVGUSHEVICH, I.V.; KARAVAYEV, N.M.

Chemisorption methods of determining acid groups in humic acids and coals. Dokl. AN SSSR 163 no.1:161-163 Jl '65. (MIRA 18:7)

1. Institut goryuchikh iskopayemykh, Moskva. 2. Chlen-korrespondent AN SSSR (for Karavayev).

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

AVGUSHEVICH, N. L. PA 34T50

USSR/Medicine - Tuberculosis, Jul/Aug 1947
Epidemiology
Medicine - Tuberculosis, Statistics

"The Struggle Against Tuberculosis in Moscow Oblast," N. L. Avgushevich, Moscow Oblast Scientific Research Institute imeni S. M. Shvaytsar (Director: Prof N. N. Grinchar), 4 pp

"Problemy Tuberkuleza" No 4

Short description of the work done by the anti-tuberculosis organization in Moscow oblast. Gives the number of clinics and prophylaxis stations and briefly states the number of physicians in the organization.

LC 34T50

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

[illegible], S. L., ed.

Meth[illegible] in the control of tuberculosis [illegible] N. I. Avgushevicha. Moskva, Krasnyi Voin, 1948. [illegible] p. ([illegible] nauch.-issl. tuberkuleznyi in-t im. S. M. Shvartsa)

DAFM

1. Tuberculosis research. 2. Tuberculosis-Treatment.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

A[illegible] N. I. 21/49773

USSR/Medicine - Tuberculosis, Diagnosis Sep/Oct 48
Medicine - Tuberculosis, Clinics

"Results of a Mass Inspection of a Populated Area (Pavlov-Posad, Moscow Oblast)," N. L. Avgushevich, Moscow Oblast Sci Res Tuberculosis Inst, 5½ pp

"Problemy Tuberkuleza" No 5

Describes preliminary organization, and actual inspection and analysis of data. Concludes that project should not be repeated except for special reason because of large expenditure of time and labor required.

LC 21/49773

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

AVGUSTINOVICH, N. I.

Tuberculosis - Prevention - Moscow Province

Result of activities of the Moscow Province Society for Prevention of Tuberculosis. Probl. tub. no. 4, 1952

Monthly List of Russian Accessions, Library of Congress, December 1952. Unclassified.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

AVGUSHEVICH, N.L.

"Materials on health education work on tuberculosis in preschool institutions" L.B. Auslendor. Reviewed by N.L. Avgushevich. Sov. zdrav. 14 no.6:60 N-D '55. (MLRA 9:2)

(TUBERCULOSIS) (AUSLENDER, L.B.)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

AVGUSHEVICH, P.A., kandidat meditsinskikh nauk.

Cataract operations in interprecinct city hospitals. M.L. Tsitovskii. Reviewed by P.A.Avgushevich. Vest.oft. 34 no.5:43-45 S-O '55. (MLRA 8:11)

(EYE--SURGERY) (CATARACT) (TSITOVSKII, M.L.)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

AVOUSHEVICH, F. I.

Taumi's modified method of dacryocystorhinostomy. Vest.oft.31 No. 2, 1952.

SO: MLRA, June 1952

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

AVGUSHEVITCH P.L.

EXCERPTA MEDICA Sec.12 Vol.11/9 Ophthalmology Sept 57

1482. AVGUSHEVITCH P.L. Med.Inst., Tekaloff. * The influence of i.v. procaine injections on the intra-ocular pressure (Russian text) VESTN.OFTAL. 1956, 3 (16-19)

In ophthalmic literature it has been suggested that in some cases of glaucoma i.v. injection of procaine reduces the ocular tension. The author investigated this question and came to a different conclusion. He gave 57 patients in various stages of the disease i.v. injections of 1-2 ml. 0.5-1% procaine. In no case did the procaine injection reduce the tension if miotic drops were not given at the same time. In many patients who received miotics the addition of i.v. procaine injections caused the tension to rise and the diurnal variations to increase. In persons with normal eyes i.v. procaine did not alter the tension curve. In a number of eyes suspected of glaucoma, an increase of tension followed after procaine injection just as after the usual provocative tests. It seems that i.v. procaine instead of being a therapeutic, deserves a place among the provocative tests.

De Haas - Arnhem

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

AVGUSHEVICH, P.L., kandidat meditsinskikh nauk

Effect of sulfonamides on regeneration processes in the cornea. Oft.zhur. 11 no.1:58-59 '56. (MLRA 9:9)

1. Iz kafedry glaznykh bolezney (zav. - prof. A.I.Volokonenko) Chkalovskogo meditsinskogo instituta.
(SULFONAMIDES) (CORNEA)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

AVGUSHEVICH, V. PA 43/49T102

USSR/Petroleum - Products Oct 48
Gas - Natural

"Review of A. Z. Dorogochinskiy's Book, 'Investigations of the Natural and Plant Petroleum Gases of Grozenskiy Oblast,'" V. Avgushevich, 1 p

"Neft Khoz" No 10

Very timely book, but its value is somewhat decreased by incomplete information in tables, particularly with reference to so-called industrial petroleum gases. If in subsequent printings this data is supplied, it will be a valuable work. Published in Georgia, 1947.

[redacted]

43/49T102

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

AVGUST, K.V.

Rupture of the esophagus and lung by a jet of compressed gas. Sud.-med.ekspert. 2 no.4:52-53 O-D '59. (MIRA 13:5)

1. Ul'yanovskoye oblastnoye Byuro sudebnomeditsinskoy ekspertizy (nachal'nik P.P. Yevdokimov).
(LUNG--WOUNDS AND INJURIES)
(ESOPHAGUS--WOUNDS AND INJURIES)

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Impulse sharp-focus x-ray tube for structure analysis. V. V. Argust, A. I. Bublik, and B. Ya. Pines. *Uchenye Zapiski Khar'kov. Univ.* 49, *Trudy Fiz. Odel., Fiz.-Mat. Fakul'tet* 4, 133-8(1953); *Referat. Zhur., Khim.* 1954, No. 60280.—Structural details are given. M. Hosch

Smw

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L 55909-65 EWT(m)/EWP(t)/EWP(b) IJP(c) JD/JG

ACCESSION NR: AP5008481 S/0078/65/010/003/0653/0656

AUTHOR: Skorik, N. A.; Kumok, V.N.; Perov, E.I.; Avgustan, K.P.; Serebrennikov, V.V.

TITLE: Citrate complexes of rare earth elements in acid solutions

SOURCE: Zhurnal neorganicheskoy khimii, v. 10, no. 3, 1965, 653-656

TOPIC TAGS: citrate complex, citrate ion, rare earth element, rare earth element ion, solubility product, lanthanum citrate, praseodymium citrate, neodymium citrate

ABSTRACT: A determination of β_1 and β_2 stability constants of LnCit and $LnCit_2^{3-}$ and of solubility products of $LnCit \cdot nH_2O$ precipitates for La^{3+}, Pr^{3+}, and Nd^{3+} was carried out at 0.10 ionic strength and 25C to obtain quantitative data on ionic equilibrium. The citrate ion in the presence of excess lanthanum was determined by a specially developed method (by absorption of the Cu^{2+} citrate complexes) with an SF-4 spectrophotometer. Solubility curves of $LnCit \cdot nH_2O$ as a function of pH, as well as solubility curves of $LaCit \cdot 3H_2O$, $PrCit \cdot 3.5H_2O$, and $NdCit \cdot 3.5H_2O$ in $NaClO_4$ - Na_3Cit solutions at pH 6.7-7.4 and in $NaClO_4$ - $Ln(ClO_4)_3$ solutions at pH 5.7 have

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been reinvestigated. The results have been reduced to zero ionic strength and presented in Tables 1 and 2 of the Enclosure. Orig. art. has: 1 formula and 2 tables.

ASSOCIATION: Kafedra neorganicheskoy khimii, Tomskiy gosudarstvennyy universitet im. V. V. Kuybysheva (Department of Inorganic Chemistry, Tomsk State University)

SUBMITTED: 16Sep63 ENCL: 02 SUB CODE: IC

NO REF SOV: 005 OTHER: 005

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GERSHOV, M.M.; AVGUSTAYTIS, L.M.; KRAUKLE, A.Ya.; LARCHENKO, V.P.

Dyeing rayon bands in light colors with continuous variation of shades. Leg. prom. 18 no.5:52-53 My '58. (MIRA 11:6)
(Dyes and dyeing--Rayon)

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AVGUSTAYTIS, L.M.

Inspiring results. Tekst.prom. 20 no.7:4-7 Jl '60. (MIRA 13:7)

1. Glavnyy inzhener Upravleniya legkoy promyshlennosti sovnarkhoza Latviyskoy SSR.
(Latvia--Textile industry)

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ALEKSEYEV, Ye.T.; KHOLOSTOV, F.Ya.; MIKHAYLOV, L.I.; AVGUSTAYTIS, L.M.

Practices in mechanization and automatization in the textile industry. Tekst.prom. 21 no.2:17-34 Ja '61. (MIRA 14:3)

1. Predsedatel' Ivanovskogo sovnarkhoza (for Alekseyev). 2. Zam. predsedatelya Mosoblsovnarkhoza (for Kholostov). 3. Zam.predsedatelya Leningradskogo sovnarkhoza (for Mikhaylov). 4. Zam.nachal'nika Upravleniya legkoy promyshlennosti sovnarkhoza Latviyskoy SSR (for Avgustaytis).

(Textile industry) (Automatic control)

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AUGUSTAYTIS, V.V., aspirant; SATKEVICHUS, E.B., aspirant

Regularities of torsional vibrations of the spindle unit of a machine tool in intermittent cutting. Izv. vys. ucheb. zav.; mashinostr. no. 10:169-177 '65 (MIRA 19:1)

1. Submitted September 30, 1964.

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AUGUSTIN, M.; DINULESCU, Elena; GAROIU, M.; DRAGUSANU, M.; BELIAIU, D.

Changes in the mobilization of free fatty acids after administration of heparin, in relation to age. Stud. cercet. endocr. 16 no.3:299-301 '65.

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Avgustirik, A. I. TESTING REFRACTORY MATERIALS AS TO STABILITY AGAINST SLAGS. *Keram. i Steklo*, 6 [6] 317-19 (1930).—A. discusses different methods of testing refractory materials for their stability to the action of slag used abroad and in U.S.S.R.

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1ST AND 2ND ORDERS

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BC

B-I-1

Rapid vacuum method for determining porosity. A. N. Atkuschnik and D. I. Smirnov (Keram. i Steklo, 1934, 10, No. 1, 33—34).—Procedure and apparatus are described. Ch. Abs.

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PROCESSES AND PROPERTIES INDEX

Working conditions of gypsum molds. A. I. Avgustinik and P. M. Bruslinskaya. *Kerum. i Stallo* 10, No. 4, 29-32(1934). M. V. Kondoidy

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Avgustinik, A. I. GENERAL COURSE IN REFRACTORIES TECHNOLOGY. Ontl, Leningrad, 1935. This student's course is based on the latest developments in the industry. The book is divided into two parts, the first devoted to grog refractories, the second to silica. Technical requirements, raw materials and their preparation, and molding, drying, and firing processes are discussed.

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AVGUSTINIK, A.

1ST AND 2ND ORDERS

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3RD AND 4TH ORDERS

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Determination of total content of salts in clays. A. Avgustinik. *Stroitel. Materialy* 1936, No. 1, 38-40. *Ceram. Abstracts* 15, 311(1936).—Heat a weighed sample for ¼ hr. at 50-60° with a double amt. of distd. water, add water to the slurry, and stir the latter for ¼ hr. Filter the clay suspension obtained through a ceramic filter (Chamberlain bacterial filter). Two detns. can be made in a working shift. M. W. B.

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

PROCESSES AND PROPERTIES INDEX

Methods for determining the hardness of glaze of chinaware and crockery. A. I. Avgustinik and L. M. Shchiglov. *Zavodskaya Lab.* 7, 330-9(1938). The Schor method gave the most satisfactory results. C. B.

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

Avgustinik, A. I., Krever, G. L., and D'akonov, V. M. ELECTRICITY FOR FIRING CERAMIC PRODUCTS. *Keram Shornik*, 1939 [4] 1-11.—The use of electric furnaces for firing ceramic products is discussed, and their advantages and disadvantages are given.

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Using high frequency current for drying ceramic products. A. I. Avgustinnik and P. M. Bruslinskaya. *Keram. Sbornik* No. 3, 33-9(1939).—Attempts to use high-frequency installations for drying various ceramic products were successful. M. V. Condoide

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PROCESSES AND PROPERTIES INDEX

Thixotropic solidification of clay masses. A. I. Avgustinnik. *Keramika* 1939, No. 9, 6-9. —Prolonged moistening of samples leads to their spontaneous solidification and influences considerably their mech. strength.

F. K. Stefanovsky

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The modulus of elasticity of clays and clay masses at constant moisture contents. A. I. Avgustinnik. *Keramika* 1910, No. 10, 43-6. The modulus of elasticity decreases considerably in the process of deformation.
E. E. Stefanowsky

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A. C. S.

Geology

Thixotropic solidification of clays. A. I. Avgustinnik. *Sbornik Trudov Leningrad. Tekh. Inst. YSPK*, 1940, No 3, pp. 51-70; *Khim. Referat. Zhur.*, 4 [4] 101 (1941).
M.Ho.

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Whiteware

A.C.S.

Action of high-frequency currents on the slip viscosity and rapidity of preparing bodies. A. I. Avgustinik and P. M. Bruslinskaya. *Keram. Sbornik*, No. 7, pp. 44-46 (1940); abstracted in *Chem. Zentr.*, 1941, II [24] 2983. —A report is given of tests in which porcelain slips were subjected to high-frequency currents and thermal treatment in a thermostat. The following conclusions were reached: The slip becomes less thick in the high-frequency field than in the heat field of the thermostat at the same temperatures and much less thick than under normal temperature conditions. The setting of the body in the plaster mold takes place much more quickly in the high-frequency field than in the heat field of the thermostat. It is evident that when a ceramic slip is subjected to a high-frequency current, not only is there a thermal effect, but also a heightened activity of the water molecules as well as a characteristic separation of the liquid and solid phases. See "Using...," *Ceram. Abs.*, 20 [9] 222 (1941). M.V.C.

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A C

Role of ions in the thixotropy of clay. A. I. Avgustinik. *Keram. Sbornik*, 1940, No. 11, pp. 20-24; *Khim. Referat. Zhur.*, 4 [7-8] 25-26 (1941).—For the basis of his views, A. accepts the electrochemical theory of Endell and Vageler. The negative charge on particles of clay is explained by the structure of its crystalline lattices. The basic units of this structure are $Si[O]_4$ tetrahedra arranged in lattices removed from each other by an appreciable distance. This permits intercrystalline swelling of these minerals which occurs because the "packets" move apart not unlike hinges, in consequence of which the aluminosilicate lattices are disturbed. This action occurs at the weakest links, i.e., at the points where the tetrahedra are joined by metallic atoms. It is at these points that alien ions from the dispersing medium penetrate into the lattice and replace cations from it. The difference in the diameters of these ions loosens the lattice considerably. The freed coordination bonds of Si tetrahedra bind the alien ions. The latter, however, do not arrange themselves in a monomolecular layer but rather diffuse and become surrounded by envelopes of the solvent (water) and by anions of the dissolved salts. The farther they are removed from the particle, the lesser is the density of the cations and the greater is that of the anions. A. shows how the nature of a typical colloid is affected by the nature of this diffused layer. By simple calculations for a fragment of a crystalline mica lattice, A. calculates the thickness of the solvated layer which is the average for most clay particles. He also calculates the average densities and pressure in the solvated envelopes of three different clays. Values given by other authors are quoted for comparison. The effect of the absorbed ions on the thixotropy of these clays was also investigated. The results confirm the disintegration of the aluminosilicate lattice by the cations which penetrate it. The effect of the cations is demonstrated by the displacement of the maxima of the thixotropy curves toward a higher moisture content and the curves themselves becoming more elongated. According to their effect on the extent of the thixotropy, the cations are arranged as follows: H > Na > K > Ca > Al. See "Thixotropic. . ." *Ceram. Abs.*, 22 [1] 20 (1943). M. Ho.

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AVGUSTINIK, A. I.

Avgustinik, A. I., and Ushakova, E. F. Kinetics of formation of mullite in clay materials upon burning. *Compt. rend. acad. sci. U.R.S.S.*, 48, 494-95 (1945).—Theoretical mullite formations are calculated from residues of burned clay which are insoluble in 20% HF. These indicate that 1200° is the optimum temperature for the development of centers in the crystallization of mullite.

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CA 19

Relations between chemical composition and properties in silicate systems. A. I. Avgustinik. *Trudy Leningrad. Tekhnol. Inst. im. Lensoveta* 1946, No. 12, 115-33; cf. *C.A.* 42, 1404a.—The amt. of the liquid phase present (X %) is calcd. from the lever rule (center of gravity rule for ternary systems), and applied to the different individual fields of primary crystns. To simplify study of the poly-component systems, idealized ternary systems are discussed, some of the foreign oxide components being assumed as accessories. The behavior of the silicate material at high temps. is then characterized by the curve of primary crystn. (or fusion curve) which indicates, by its slope, the increasing amts. of liquid phase as a function of increasing temp. The temp. of the beginning of deformation under a given load at high temp. (t_1) is reduced in proportion to the amt. of liquid formed with increasing temp., and can be derived by calcn. from the projection in the ternary diagram according to the center of gravity rule. The resulting deformation temp. is detd. by the equation $t_1 = 1970/X^{0.09}$ for a first approximation. The softening interval under load at high temp. is increased in proportion to the increasing amt. of liquid, and has a distinct max. for semiacid- and high-alumina bodies and fireclays. The refractoriness is reduced in proportion to the amt. of the liquid present. An estn. of this property for a given body can be given from its protection point in a distinct field of the ternary diagram. The mech. strength in service, the corrosion resistivity against metallurgical slags, and, for fireclay bodies, their thermal resistivity, increase as a function of the increasing vitrification, up to 25% glassy phases present. Mech. and dielec. strength of electro-porcelains (at room temp.) are also correlated with the amt. of glassy phases in the product. From Bowen's and Schairer's diagram of the ternary system K_2O-Al_2O_3-SiO_2 it is deduced that the amt. of a glass at 1050° is intimately combined with a corresponding increase or decrease of the mech. and dielec. properties. The mullite field in the system K_2O-Al_2O_3-SiO_2 comprises the compns. of the best technological properties as refractories, with an optimum along the line mullite-eutectic feldspar-tridymite-mullite (1050°). 0 diagrams and 8 tables. W. Eitel

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Kinetics of the Polymorphous Conversion of Silica in the Temperature Range 1200° to 1400°C. (In Russian.) A. I. Avgustinik and O. K. Kyrdevanidze. *Journal of Applied Chemistry* (U.S.S.R.), v. 19, nos. 10-11, 1946, p. 1189-1196.

The kinetics of the above conversion and also that of chalcedony, from 1200° to 1400°C., were investigated. Indicates the value of the constants thus obtained, for practical calculations in industries using silica.

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C

8-C-48

Relation between some properties of refractory silicate systems and their compositions. A. I. Avgustinik. *Огнеупоры*, 12 [4] 179-88 (1947). The relation between composition and some of the properties of refractory silicate systems can be expressed with the aid of the parameter L, which is the amount of liquid (vitreous) phase corresponding to the composition on a triangular phase diagram. The selection of this parameter is based on two assumptions: (1) The composition of the vitreous phase in the cooled product is identical with the eutectic composition of the liquid phase therein. Silicate systems are sufficiently viscous at high temperatures that a melt, which is formed in the ceramic body and which corresponds to the composition of the ternary eutectic, can cool without crystallizing. (2) It is necessary to eliminate the effects of factors such as the total grain surface of the fracting materials, closeness of their contact, and the degree of nonequilibrium heat-treatment. These factors can undoubtedly change the quantity of the liquid phase to a marked degree, but, as a rule, it will be a decrease compared with the theoretical. For a given composition the values of L can be read on the triangular phase diagram with the isotherms plotted, and "liquid curves" showing L(%) vs. temperature can be constructed for given compositions. To make the method applicable to 3 component systems, these are changed to 4 component systems by means of the Richter coefficients. On the basis of their coefficients and published data on the isothermal diagrams of the systems $CaO \cdot Al_2O_3 \cdot SiO_2$, $MgO \cdot Al_2O_3 \cdot SiO_2$, and $K_2O \cdot Al_2O_3 \cdot SiO_2$, "liquid curves" were constructed for twelve different refractories. The shape of the curve can be used to predict the properties of the material. A very steep curve indicates greater softening interval, small increase in liquid phase, and small deformation. The flatter the curve, the shorter is the softening interval, the greater the increase in L, and the greater the deformation. These deductions proved valid for the twelve refractories under consideration. Using twelve grog refractories having Al_2O_3 ranging from 29 to 40%, a curve was constructed showing the experimentally determined temperatures of initial deformation under load vs. the calculated initial percentage of L (after conversion from 5-component system to 3-component system $CaO \cdot Al_2O_3 \cdot SiO_2$). Despite considerable deviations (caused by technological differences in production), the curve can be used to predict the initial softening point from the initial L. A curve showing refractoriness vs. initial L for the same materials also shows a striking regularity. Curves showing initial L vs. initial softening were found to be valid for

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semiacid, Dinas, forsterite, magnesite, and high-alumina refractories. Grog products made under identical conditions and from the same clay and quartz but in varying proportions were fired at 1320 °C. and then tested for spalling, slag resistance, and compressive strength. The values of L in these products were found to range from 16 to 25%, and within this range the resistance to spalling, compression, and slag attack was found to increase with L. Hence, it should be possible to use this method to evaluate the technical properties of different compositions provided they are prepared under identical conditions. B.Z.K.

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AVGUSTINIK, A. L.

Heats of formation of oxides and silicates. A. L. AVGUSTINIK. *Zhur. Prikład. Khim.*, 20 [11] 32-30 (1947). On the basis of maximum work evolved during reactions, it is concluded that in homologous series of silicates their heats of formation should diminish with each newly combined molecule of Si or of the base. This is confirmed by data on the heats of formation of Li_2O, K_2O, Al_2O_3, CaO, and ZnO with one or more molecules of SiO_2. Similarly, it should be expected that the titanates and zirconates will also show diminishing heats of formation with each newly combined RO molecule. B. Z. K.

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HEAT OF FORMATION OF $BaO \cdot Al_2O_3$ FROM THE REACTION $BaSO_4$ Al_2O_3 FOR THE PREPARATION OF REFRACTORY CEMENT. A. I. Avgustinik and O. P. Mchedlov-Petrosyan. Zhur. Prikland. Khim., 20 [7] 584-90 (1947). -- The authors used the apparatus employed by Jander and Hoffmann (Ceram. Abstracts, 1932, Jan., p.62) but with a high temperature tungsten furnace of their own construction to measure the volume of the gas mixture liberated in the following reaction: $BaSO_4 + \gamma\text{-}Al_2O_3 = BaO \cdot Al_2O_3 + SO_2 + 1/2\ O_2 - q$. From this the authors calculated the heat of the reaction as - 143.54 kg.-cal./mole, from which the heat of formation of $BaO \cdot Al_2O_3$ according to the equation $BaO + \gamma\text{-}Al_2O_3 \rightarrow BaO \cdot Al_2O_3$ was found to be + 4.24 kg.-cal./mole.

B.Z.K.

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C

Kinetics of the reaction of barium sulfate with alumina in the solid phase. A. I. AVOUSTINIK AND O. P. MCHEDLOV-PETROSYAN. *Zhur. Prikkl. Khim.*, 20 [11] 1125-32 (1947).—Kinetics of reaction between $BaSO_4$ and Al_2O_3 were studied at 1200°, 1240°, 1300°, 1350°, and 1400° using sulfate:alumina ratios of 1:1, 2:1, and 3:1 with and without the addition of 5% CaF_2 and CaO. Progress of the reaction was judged from the volume of the liberated gases. With a 1:1 mixture the reaction proceeds noticeably above 1200°C., is accelerated greatly at 1300°, but does not reach completion at 1400°C. The reaction between the $BaSO_4$ and Al_2O_3 is impeded by the large energy of detachment, which was 170, 210, and 200 kg.-cal./mole for 1:1, 2:1, and 3:1 mixtures, respectively. The addition of 5% CaF_2 increased the contact between the particles and raised the energy of detachment somewhat. The addition of 5% CaO at low temperatures caused a sharp drop in the energy of detachment and, despite the decrease in contact between the particles, accelerated the reaction; with rising temperature the reaction was slowed down considerably. The reaction is considered essentially a surface type. Cf. *Ceram. Abstracts*, 1948, Aug., p. 190f. H. Z. K.

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[illegible], A. I.

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Some mineralizers of quartz. A. I. Avgustinik and O. K. Kurdevanidze. *Zhur. Prikl. Khim.*, 20 [12] 1218-[illegible] (1947). The inversion of quartz and chalcedony in the presence of some mineralizers was investigated to test the validity of the generally accepted view that mineralizers favor the formation of melts at high temperatures and lower their viscosities so that less stable crystalline phases dissolve therein and more stable phases crystallize out. The following materials were used: (1) vein quartz, analyzing SiO_2 98.98, Al_2O_3 0.30, Fe_2O_3 0.29, CaO 0.13, MgO 0.06, ignition loss 0.22%, specific gravity 2.65; (2) chalcedony, analyzing SiO_2 95.97, Al_2O_3 0.95, Fe_2O_3 0.30, CaO 0.89, MgO 0.19, SO_3 0.08, ignition loss 1.27%, specific gravity 2.58. The quartz and chalcedony were ground to pass a sieve of 1900 openings per cm.^{2} and mixed with 1% of finely ground Li_2CO_3, Na_2CO_3, Cu_2Cl_2, $AgNO_3$, $BaCO_3$, $SrCO_3$, NH_4VO_3, or graphite. These compounds were chosen because of (a) wide differences between the effective radii of the cations, (b) large charge and high energy characteristic, and (c) wide differences between the coefficients of active polarization of the cations. Each mixture was heated for 5 hr. to 1300° and 1400° and kept at the temperature for 1 and 2 hr. The calcined mixture was ground to pass a sieve of 3600 openings per cm.^{2}, and the inversion was determined from the sp. gr. measured in toluene. Calculations were made from $(100 - X)/2.58$ or $2.58 + X/2.30 = 100/d$, where X is percentage of inverted material and d is specific gravity. In addition, the inversion of quartz and chalcedony calcined for 2 hr. at 1400°C was determined petrographically. The new phase consists of metacristobalite. There was more of the isotropic phase in the inverted chalcedony than in inverted quartz. Without mineralizers the inversion of chalcedony is several times less intensive than that of quartz; the same was true with the mineralizers. This cannot be explained by the above-mentioned generally accepted view. No relationship was found between the mineralizing capacity of the cations and their activity. B. Z. K.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

AVGUSTINNIK, A.I.

Avgustinnik, A.I. "Kinetic formation of myllite in clay as a base for the innovation of curved firing of ceramic articles," in symposium: Syr'yevyye resursy tonkokeram. prom-sti SSSR i puti ikh ispol'zovaniya, Moscow-Leningrad, 1948, p. 139-48

SO: U-2888, Letopis Zhurnal'nykh Statey, No. 1, 1949

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

PROCESSES AND PROPERTIES INDEX

Properties of talc during heating. A. I. Avgustinik and V. S. Vigdergauz. *Ogneupory*, 13 [8] 218-27 (1948). The talc used in these experiments analyzed SiO_2 60.91, Al_2O_3 0.71, Fe_2O_3 1.39, CaO 1.88, MgO 29.20, alkali 0.85, and ignition loss 5.45%. Dehydration of talc was found to proceed in three periods: 120° to 200°, 350° to 500°, and 600° to 1050°. Of the total nonhygroscopic water in the talc, 5.1% is liberated in the third period; this water is present in the form of hydroxyls in $(OH)_4Mg_6Si_6O_{22}$. The remaining 0.4% of the water is in the form of molecules of H_2O; these molecules are supposedly distributed partly between the basal faces of the "packets" and partly within the "packets" and are liberated successively during the first two periods of dehydration ("packets" are formed by two sheets of the tetrahedrons $[SiO_4]^{4-}$). The talc does not decompose, during heating, into free oxides, but at 600°, simultaneously with the start of the main period of dehydration, there commences a regrouping of the ions within the talc lattice causing a gradual and partial splitting off of the silica, which becomes very soluble. The other portion of the silica remains bound to the MgO in the form of metasilicate. The optimum of this reaction occurs at 750° to 850°. Because the temperature of completion of the dehydration of the talc is considerably above the temperature of the optimum solubility of the SiO_2 and MgO, the bonds between the Mg ions and the tetrahedrons $(SiO_4)^{4-}$ are weaker and are ruptured before the bonds between the Mg ions and the hydroxyls in the talc lattice. After the rupture of these bonds, a part of the water of constitution continues to remain in the lattice; it is then assumed that the first changing phase from talc into clinoenstatite is metasilicate, possibly of the anthophyllite type, $(OH)_2Mg_7Si_8O_{22}$, which has the structure of the orthogonal amphibole with n_e = 1.599 and n_p = 1.584, and that the second changing anhydrous phase is metasilicate of the type of monoclinic amphibole, $Mg_8Si_8O_{22}$, with n_e = 1.618 and n_p = 1.606, which further recrystallizes into clinoenstatite. The total transformation is as follows:

talc $\xrightarrow{600°}$ β-metasilicate (orthogonal amphibole hydrous) $\xrightarrow{1000°}$ α-metasilicate (monoclinic amphibole anhydrous) $\xrightarrow{1200°}$ clinoenstatite

B. Z. K.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

AVGUSTINIK, A. I. FA12/49T20

USSR/Chemistry - Silicates Jul 48
Chemistry - Physical Chemistry, of Silicates

"Review of 'Physical Chemistry of Silicates' by A. I. Avgustinik," G. V. Kukolev, Prof, Dr Tech Sci, 4½ pp

"Ogneupory" Vol XIII, No 7

Book has many merits, but also indisputable defects. Besides discussing theoretical and practical aspects of silicate chemistry, author describes part played by USSR scientists in its development.

[redacted] 12/49T20

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

AVGUSTINIK, A.I.

AVGUSTINIK, A.I.; KUTATELADZE, K.S.

[redacted]

Technological testing of grog for the refractory plant of the Transcaucasian Metallurgical Industry [microfilm]. Trudy Inst. met. i gor. dela AN Gruz. SSR 2:281-287 '49. (MIRA 11:1)
(Refractory materials--Testing)
(Transcaucasia--Metallurgical plants)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

AVGUSTINIK, A. I.

27144. AVGUSTINIK, A. I. - K voprosu tekhnicheskikh svoystv glin v svete kolloidno-khimicheskikh vozzreniy. Ogneupory. 1949, No. 8, s.350-53. "Bibliogr: 6 Nazv.

SO: Letopis' Zhurnal'nykh Statey, Vol. 36, 1949

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

AV[illegible], A. [illegible].

32539. AV[illegible], A. [illegible], [illegible] SV[illegible]KOVA, [illegible] I. Kinetika de[illegible]dratayaii tal'ka. Zhurnal prikl. [illegible], [illegible], No 10, s. 105[illegible]-[illegible].

SO: Letopis' Zhurnal'nykh Statey, Vol. 44, Moskva, 1949

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

PROCESSES AND PROPERTIES INDEX

B

22

Technical Properties of Clay in the Light of Colloid-Chemical Concepts. (In Russian.) A. I. Avgustinik. Ogneupory (Refractories), v. 14, Aug. 1949, p. 350-353.

Critically reviews conclusions of the American investigators, Johnson and Norton, with regard to the above, as well as the recent work of the Russian scientist, Kukolev. Inaccuracies and erroneous concepts are pointed out.

ASM SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

AVGUSTINIK, A. I.

27145. AVGUSTINIK, A. I., KUTATELADZE, K. S., KAKABADZE, N. A. - Izucheniye dolomitov. Abano s tsel'yo polucheniya dolomitovogo poroshka dlya navarki dna martenovskikh pechey. Trudy (Gruz. Politekhn. In-t im. Kirova), No. 18, 1949, s.173-85.--Rezyume na gruz. Yaz.-Bibliogr: 6 Nazv.

SO: Letopis' Zhurnal'nykh Statey, Vol. 36, 1949

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

CA

2

Kinetics of the dehydration of talcum. A. I. Avgustinik and L. I. Sverchkova. *Zhur. Prikl. Khim.* (J. Applied Chem.) 22, 1059-62(1949).—The rate of thermal dehydration of talcum (SiO_2 61.36, Al_2O_3 0.72, Fe_2O_3 1.46, CaO 1.00, MgO 29.41, alkali 0.87, ignition loss 5.17%) powd. to 800 mesh/sq. cm., is best described by the equation of Jander, with the rate const. k (time in hrs.) = 1.1×10^{-5}, 5.3×10^{-5}, 2.4×10^{-4}, 2.0×10^{-3}, 2.2×10^{-3}, 8.4×10^{-3}, 1.3×10^{-1}, at 400, 500, 600, 700, 800, 900, 1000°, resp. The plot of log k as a function of the temp. shows 3 distinct portions, the 1st, below 600°, characterized by a const. temp. coeff. of ~1.6/100°, the 2nd, between 600 and 800°, with the temp. coeff. increasing to a max. of 11.0 at 800°, and a 3rd, between 800 and 1000°, with a decreasing temp. coeff. The activation energies in the 1st and 2nd interval are 18 and 42.3 kcal./mole, resp. The 1st value is close to 14.2 kcal., the heat content of 1 mole satd. H_2O vapor formed from the liquid at 600°. It consequently appears that the H_2O lost in the 1st temp. interval, about 6-7% of the total H_2O content of the mineral, is present in the free unbound state, the remainder, requiring a 2.5 times greater activation energy, being bound in the lattice in the form of OH groups. A decrease of the grain size from 0.15-0.2 to less than 0.06 mm. results in a shift of the thermographic exothermal max. from 975 to 925°. N. Thon

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

PROCESSES AND PROPERTIES INDEX

Mechanism of reactions in talc upon heating. A. I. Avgustinik, P. Z. Tandura, and L. I. Syrchikova. *J. Applied Chem* (U.S.S.R.), 22 [11] 1150-59 (1949).—Natural talc and mixtures of coprecipitated $Mg(OH)_2$ and $Si(OH)_2$ were calcined at temperatures up to 1350°C and then subjected to physico-chemical, X-ray, and crystallo-optical tests. On the basis of the results obtained, a matrix network was constructed to explain the mechanism of the reactions. It is assumed that (*a*) a displacement or shift in the network can proceed more easily, above all, along lines corresponding to the basal planes in the actual lattice (where the Van der Waals forces act) and (*b*) a shift can proceed along lines corresponding to the separation of the actual planar lattice into chains of amphibole 6-member rings as well as into chains of pyroxene half-rings. The mechanism of reaction proceeds according to the following stages: (1) At temperatures up to 600°C, there is a shift and drawing together of the packets along a line corresponding to the basal plane, with a flattening of the monoclinic angle. The water molecules (about 0.4% of the total water in the talc), which are present between the packets, can be freed and expelled. The structure of the packets remains the same. (2) This stage takes place at 700° to 900°C. It consists of an axial shift of the packets followed by rupture, with the formation of amphibole rings and a yield of about one-half the water of constitution. This stage corresponds to the formation in the talc of the first unstable phase or γ phase with n = 1.600 to 1.605. From the chemical viewpoint, this stage is characterized by increased leaching-out of Si^{4+} and Mg^{2+}. (3) This stage occurs chiefly at 1000° to 1200°C. It consists of a rupture and shift of half of the amphibole rings and is accompanied by the yield of the second half of the water of constitution. It increases the fibrousness of the structure and the inner surface as evidenced by the maximum hygroscopicity of the talc calcined at these temperatures and by the halt in the shrinkage at 1200° to 1250°C. This stage corresponds to the formation in the talc of the second unstable phase or β phase with n = 1.618 and is accompanied by the change of amorphous silica into cristobalite and the noticeable appearance of glass. (4) This stage occurs at 1250° to 1350°C and consists of a possibly reversible shift of chains from the pyroxene half-rings so as to produce a strong drawing together of the elements of the structure (strong shrinkage of talc). This corresponds to the structure of clinoenstatite or α phase with a somewhat incompleted lattice. The incompleteness of the structure is determined by the absence of the lines 4.31 and 2.10 on the X-ray diagram of talc fired at 1350°C; these lines are present in the case of clinoenstatite. These stages cannot be fixed by any constant temperature points of transformation; they are superimposed one on another so that the factors of time and temperature overlap within wide limits. The suggested method can be used widely in the chemistry of silicates.

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ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

Investigation of Tkvibuli refractory clays for glass furnace refractories. A. I. AVGUSTINIK AND K. S. KUTATELADZE. *Soobshcheniya Akad. Nauk Gruzinskoi S.S.R.*, 11 [10] 613-17 (1950).—Tests were made with Tkvibuli clay slate, Dzekh flint clay, and Tsekhlauri clay. Tkvibuli slate can be used without a bond for making refractory shapes without calcining to grog. The slate should be sorted to remove pyrite, particle size should not exceed 3 mm., and the firing should be done at 1400° to 1420°C. Tsekhlauri clay can be used as 15% bond for critical refractories. Only the DS grade of Dzekh clay is suitable for critical refractories. To obtain a strong body, DS material is mixed with 8 to 10% Tsekhlauri plastic clay and fired at 1400° to 1420°. For wall blocks, 45% 0.0 to 0.5 mm. and 55% 1 to 1.5 mm. is used, and for bottom blocks, 45% 0 to 0.5 mm. and 55% 1.5 to 2.5 mm. The shapes are formed by ramming. For feeder refractories, DS material (same size as for wall blocks) is cast in gypsum molds. The slip composition is flint clay 100, water 26 to 28, and calcined soda 0.2 part. The cast product is fired at 1320° to 1340°.

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

AVGUSTINIK, A. I.

Service of Dinas in reverberatory furnaces of copper smelters. A. I. AVGUSTINIK AND T. V. DEMIKHOVA *Ogneupory*, 15 [11] 511-18 (1950).—The study was limited to 6 smelters in the Kazakh S.S.R. in Central Asia, where the ores differ sharply from those handled at other smelters in the Soviet Union. The composition of the ores is not given; their nature can be judged from the slags, which analyzed SiO_2 29.23 to 54.17, Al_2O_3 4.90 to 13.22, FeO 21.27 to 49.08, CaO 3.69 to 14.70, MgO up to 1.57, S up to 2.32, ZnO up to 0.48, BaO up to 2.55, and Cu 0.37 to 0.53%. The greatest wear occurred in the second and third sections of the crown (from the furnace wall) and in the zones adjacent to the charging holes along the whole length of the furnace. The chief factors of wear of the crown are high temperature and chemical action of charge dust mixed with coal ash. During service, the Dinas acquires a zonal structure which is characterized by sharp differences in chemical composition and microstructure. The working section of the Dinas becomes enriched with up to 6% alumina and up to 2.5% iron oxides instead of the usual 0.3 to 0.4% and 1.5%. Low-melting eutectics formed on the working surface migrate into the brick, thus lowering the refractoriness of the working surface and facilitating the separation of some quartzite grains and the formation of drops. Microstructure depends upon the temperature regions in the furnace. The working surface was covered with a vitreous coating having a large [illegible] of mullite crystals which act as a shield against wear. [illegible] of a synthetic mullitized coating should serve as the [illegible] important measure to prolong the service of Dinas.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

USSR/Chemistry - Refractories Mar 51
Metallurgy - Dolomite

"Processes Taking Place in Dolomite During Calcination in the Range 400-1,100°C and the Production of Cement From It," V. I. Shishkina, A. I. Avgustinik, Inst of Refractories and Structural Materials, Acad Sci Kazakh SSR

"Zhur Prik Khim" Vol XXIV, No 3, pp 225-230

Investigates dolomite mined in Baykonur, Kazakh SSR.

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

CA

20

Processes occurring in dolomite when it is calcined in the 400-1100° range and its use in the production of cement. V. I. Shishkina and A. I. Avgustinik. *J. Applied Chem. U.S.S.R.* 24, 247-53(1951)(Engl. translation).—Between 470 and 700° $CaCO_3 \cdot MgCO_3$ dissoc. into $CaCO_3$, MgO, and CO_2. The recrystn. and dissocn. of the calcite constituent begins at about 750°. Dolomite calcined with or without clay is suitable for the production of a hydraulic cement. Sep. calcination of dolomite and clay at 700° and subsequent intergrinding give the best results. The compression strength after 7-day storage is about 66 kg./sq. cm.

Oscar Gulre

Inst. of Refractories + Structural Materials, AS Kazakh SSR

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

AVGUSTINIK, A. I.

USSR/Chemistry - Suspensions Apr 51

"Measurement of the Specific Surface of Highly Dispersed Material by the Torsion Balance Method," A. I. Avgustinik, V. D. Dzhansis

"Zhur Prik Khim" Vol XXIV, No 4, pp 433-438

Measures sp surface of highly dispersed materials (clays) using variant of bal method which employs Kiev Works torsion bal generally used to measure surface tension of solns. Method permits obtaining continuous curve of pptn. Using Stokes' eq, establishing relationship between dimensions of particles and their percentage content in solns, obtained verifiable results.

182T46

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

AVGUSTINIK, A. I., MCHEDLOV-PETROSYAN, O. P.

Thermodynamic investigation of the systems cadmium-zinc, cadmium-lead, cadmium-tin, bismuth-cadmium, tin-zinc, and lead-tin. Izv. AN SSSR Otd.khim.nauk No. 2, 1952.

SO: MIRA. August 1952.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

AVGUSTINIK, A. I.

3 Chem
(2)

Chemical Abstracts
Vol. 48 No. 5
Mar. 10, 1954
General and Physical Chemistry

Thermodynamics of mullite formation. A. I. Avgustinik and O. P. Mchedlov-Petrosyan. *Zhur. Prikład. Khim.* 25, No. 2, 216-18(1952).—Data are given on ΔH_{298} and ΔF_{298} as a function of temp. in the formation of mullite by use of the reactions (*a*) $Al_2O_3 + SiO_2 \rightarrow Al_2O_3.SiO_2$, (*b*) $3Al_2O_3 + 2SiO_2 \rightarrow 3Al_2O_3.2SiO_2$, (*c*) $3(Al_2O_3.2SiO_2) \rightarrow 3Al_2O_3.2SiO_2 + 4SiO_2$, (*d*) $Al_2O_3.2SiO_2 \rightarrow Al_2O_3.SiO_2 + SiO_2$, and (*e*) $3(Al_2O_3.SiO_2) \rightarrow 3Al_2O_3.2SiO_2 + SiO_2$. Comparison of (*a*) and (*b*) indicates that the formation of sillimanite, in comparison with mullite, is less probable. Judging from the shape of the *F*-temp. curve, the formation of sillimanite up to about 1200°K. is highly possible. Comparison of (*c*) and (*d*) indicates that above 1100°K. metakaolin should form mullite and not sillimanite, since variation in ΔF occurs most intensively for reaction (*c*). Mullite is formed in kaolin-bearing materials regardless of formation of metakaolin or decompn. of kaolin into oxides. Intermediate nonstoichiometric formations are not accounted for.

B. Z. Kamich

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

AVGUSTINIK, A.I.

(12)

Thermodynamics of mullite formation. A. I. Avgustinik and O. P. Mchedlov-Petrosyan. *J. Appl. Chem. U.S.S.R.* 25, 220-31(1952)(Engl. translation).—See *C.A.* 48, 2453c.
H. L. H.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

USSR/Chemistry - Ceramics; Refractories Mar 52

"Measurement of Dielectric Permeability and Loss as Method of Studying the Strength of Ion Bonds in Minerals After Their Calcining," A. I. Avgustinik, L. V. Kozlovskiy, Chair of Ceramics, Leningrad Technol Inst imeni Lensoviet

"Zhur Prik Khim" Vol XXV, No 3, pp 265-276

Assumed that any regrouping of the ions in the cryst lattice of a mineral during calcining must be accompanied by a change of bonding between the ions, which can be detd by measuring the dielec permeability. This was confirmed in investigation

207T32

USSR/Chemistry - Ceramics; Refractories Mar 52
(Contd)

carried out on pyrophyllites, talcs and caolins. Tabulates results and describes in detail. On the basis of results obtained, certain conclusions could be drawn in regard to the structure of the mullite lattice.

207T32

AVGUSTINIK, A. I.

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

USSR.

Microhardness and the coefficient of linear expansion of some glasses of the type of porcelain glass phases. A. I. Avgustinik and E. P. Fedorova. *J. Appl. Chem. U.S.S.R.* 26, 8[illegible]-6 (1953) (English translation).—For *C.A.* 48, 2000i.

H. L. H.

B1

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

AVGUSTINIK, A. I.

Journal of The American Ceramic Society June 1, 1954
Glass

3

(6)

Microhardness and coefficient of linear expansion of certain glasses of the type of porcelain glass phases. A. I. AVGUSTINIK AND N. P. FEDOROVA. *Zhur. Prikład. Khim.*, 26 [9] 920-30 (1953).—The glasses were made of (*a*) 50% feldspar and 50% quartz sand and (*b*) 90% feldspar and 10% kaolin; admixtures were CaO, ZrO_2, CaF_2, BaO, and Al_2O_3. There was a sharp increase in microhardness of the acid kaolin-quartz glass with the addition of CaO and BaO and of the alkaline feldspar-quartz glass with the addition of ZrO_2. Optimum concentration of CaO (3%) in acid glass and ZrO_2 (0.5%) in alkaline glass increases microhardness by 65% and 45%, respectively. In acid glass, 1% ZrO_2 increases microhardness by 25 to 30%. If the alkaline admixture cannot form a chemical compound in the alkaline glass, the coefficient of linear expansion increases 1.5 to 2 times; the coefficient remains practically the same and even decreases a little if the admixture can react chemically with the glass. Both ZrO_2 and Al_2O_3 are of practical importance in reducing the expansion coefficient. The dielectric losses of kaolin-quartz glass with various admixtures are held within the limits of 22 to 35 min., but for 1% CaO, a maximum appears in 27 min.

B.Z.Ky.

K-1-54

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

AVGUSTINIK, A. I.

USSR/Chemistry - Zirconium Jul 53

"Electrical Properties of Solid Solutions in the Systems Zirconium Dioxide - Magnesium Oxide and Zirconium Dioxide - Calcium Oxide," A. I. Avgustinik and N. S. Antselevich, Leningrad Technol Inst im Lensovet

(CA 48 no.1:15 '54)

Zhur Fiz Khim, Vol 27, No 7, pp 973-982

Studied X-ray and dielectric properties of the above solid solns in view of the fact that ZrO_2 is now widely used in the radioceramic industry. Solid solns of ZrO_2-MgO have a higher dielectric

271T12

const than heterogeneous mixts. The same holds true for ZrO_2- CaO. The dielectric consts of both solns drop rapidly with increasing temp. It is presumed that this is due to the relaxation of the loosely bound ions in the "loose" lattice of the solid soln.

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"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

AVGUSTINIK, A.I.; DEMIKHOVA, T.V.

Protective refractory coatings. Izv.AN Kazakh. SSR Ser.ger.dela, met. i stroimat. no.2:34-39 '54.
(Refractory materials) (MLRA 9:6)

APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4"

"APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000102610016-4

AVGUSTINIK, A.I.

USSR/ Chemistry - Enamels

Card 1/1 Pub. 104 - 7/14

Authors : Avgustinik, A. I., Prof.; and Metreveli, I. A.

Title : Boronless and leadless enamels for majolica

Periodical : Stek. i ker. 11/3, page 19, Mar 1954

Abstract : An account is given of how in the making of the variety of pottery known as majolia poor results were obtained in the glazing due to the low percentage of Cambrian clay in the available soils. To overcome this obstacle a theoretical calculation was made of the ingredients required and when these were used the glazing proved to be of high quality. The quantities and kinds of ingredients are stated. Illustration. Table.

Institution: .....

Submitted: .....

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AVGUSTINIK, A.I.; BABIN, P.N.

Rate of physical and chemical processes in firing dolomite bricks depending on the specific surface of the raw material. Ogneupory 19 no.6:271-276 '54. (MIRA 11:10)
(Firebrick) (Dolomite)

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Investigation of the mechanical properties of electrotechnical glazes. A. I. AVGUSTINIK AND L. M. BELOLIPETSKAYA. Zhur. Prikl. Khim. 27 [6] 671-73 (1954).—Seven high-melting feldspar glazes were tested. Modulus of elasticity ranged from 5710 to 7920 kg./mm.^{2}; ZnO decreased the modulus. Microhardness ranged from 526 to 622 kg./mm.^{2} when the surface was ground and polished with crocus and from 502 to 702 kg./mm.^{2} when the surface was fire-polished. Resistance to fracture varied from 824 to 1065 kg./sq. cm. Coefficient of linear expansion from 20° to 600°C. ranged from 2.00 to 5.31 × 10^{-6}. There is a nonlinear relationship between the resistance to fracture and the microhardness of the ground and polished specimens. B.Z.K.

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AVGUSTINIK, A. I.

4

MT The effect of valence and radius of the cation of mineralizers on the process of mulization. A. I. Avgustinik, M. F. Nazarenko, and V. A. Svirideko. [illegible] U.S.S.R. 27, 730-6(1954)(Engl. translation).—Ste C.A. 49, 5[illegible]d.

B. M. R.

(2)

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AVGUSTINIK, A. I.

USSR/Chemistry - Spectral Analysis

Card 1/1

Authors : Avgustinik, A. I., Setkina, O. N., and Fedorova, E. N.

Title : Analysis of the Thin Structure of a Porcelain Glass by Studying its Reflection and Absorption Spectra in Spectral Infrared Medium.

Periodical : Zhur. Fiz. Khim. Vol. 28, Ed. 4, 637-642, Apr 1954

Abstract : An analysis of hardness and the thin structure of porcelain glass by studying its infrared spectrum, is described. It was found that by adding certain chemical compounds to the glass, one can either increase or decrease the various physical characteristics of the glass. Six references; tables; graphs.

Institution : Lensovet's Technological Institute, Leningrad.

Submitted : June 6, 1953

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Determination of resistance to frost of bricks. A. I. Avgustinik and V. S. Vigdergauz. *Trudy Leningrad. Tekhnol. Inst. im. Lenovets* 29, 31-43(1954).—A discussion of inadequacy of the GOST 530-41 method (U.S.S.R. standards) for the detn. of frost resistance of bricks is given.

R. S. Lubomirski

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AVGUSTINIK, A. I. and ANTSELEVICH, N. S.

"Electric Properties of Solid Solutions of Barium Zirconate With Titanium Dioxide and Barium Titanate".
Tr. Leningr. Tekhnol. in-ta Im. Lensovieta, No. 29, pp 99-104, 1954

Compressed powders of $BaZrO_3$ and TiO_2 were tested. Radiograms showed that the lattice of $BaZrO_3$ dissolves at 1,500°C 20 mol.% TiO_2. On the $BaZrO_3$ lattice Zr^{4+} ions are partially substituted by Ti^{4+} ions which, due to their smaller size, should be more mobile. This assumption should lead to higher dielectric permeability of the specified solutions. Measurement on a frequency of 10^6 cycles confirmed this conslusion. (RZhFiz, No 10, 1955)

SO: Sum No 812, 6 Feb 1956

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YUSHKEVICH, Mikhail Osipovich; PEVZNER, R.L., doktor tekhnicheskikh nauk, professor, redaktor; AVGUSTINIK, A.I., doktor tekhnicheskikh nauk, professor, retsenzent; SEMOCHKIN, A.P., inzhener, retsenzent; ANTONEVICH, N.K., redaktor; ZALKIND, I.Ya., redaktor; GLEZAROVA, I.L. redaktor; LYUDKOVSKAYA, N.I., tekhnicheskiy redaktor.

[Technology of ceramics] Tekhnologiia keramiki. Pod red. R.L.Pevznera. Izd. 2-oe, perer. Moskva, Gos. izd-vo lit-ry po stroitel'nym materialam, 1955. 383 p. (MLRA 9:6)
(Ceramics)

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