"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

POLLAK, S.Ye., kand. med. nauk

Experience in treating secondary amenorrhea with copper electrophoresis. Akush. i gin. 40 no.2:121-123 Mr-Ap '64. (MIRA 17:11)

1. Kafedra akusherstva i ginekologii (zav. - prof. A.M. Mazhbits) Novokuznetskogo instituta usovershenstvovaniya vrachey.

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

Section B

80.

3701. The properties and applications of magnetic amplifiers. V. POLLAK. *Elektr. Obz.*, 13, 77–86 (*April*, 1952) *In Czech.*

A brief survey. The questions of the best choice of core material and quality of rectifier are discussed. Magnetic amplifier operation is explained by means of an idealized magnetization characteristic. Finally, two special-purpose amplifiers are discussed. A.

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

POLLAK, V., dr., inz.

Technical equipment for gas and power industry dispatching systems. Paliva 43 no.4:101-105 Ap '63.

1. Ustav pro vyzkum paliv, Bechovice.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

POLLAK, V.

Load-dispatching networks, p.136.
(Slaboproudy Obzor, Vol. 18, No. 3, Mar. 1957, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, No. 9, Sept. 1957. Uncl.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

POLLAK, V.

3

6328. INFORMATION THEORY AND TELEMETERING

V. Pollak

Slaboproudý Obzor, Vol. 18, No. 5, 309-15 (1957). In Czech.

Information theory is applied to the evaluation of the frequency-modulated pulse systems which are used for telemetering on high-voltage lines. It is shown that, for an ideal case, the relationship between the permissible error φ %, bandwidth Δf, signal-to-noise ratio S/N, and the necessary minimum time constant T is expressed as

$$T \geq \lg_e(100/T\varphi)/\Delta f \lg_e(1 + S/N)$$

but in actual systems

$$T \geq 100/4 f_r \varphi$$

where f_r is the mean pulse repetition frequency. Derivation of the formulae is given in the Appendix.

R.S.Sidorowicz

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

L 33033-66

ACC NR: AP6024225 SOURCE CODE: GE/0009/65/074/004/0147/0150

AUTHOR: Pollak, Viktor (Doctor of engineering; Prague)

ORG: none

49
B

TITLE: Some characteristics of nervous transmission in the light of the information theory

SOURCE: Hochfrequenztechnik und Electroakustik, v. 74, no. 4, 1965, 147-150

TOPIC TAGS: nervous system, neurology, information theory, cybernetics

ABSTRACT: The transfer functions of the peripheral nervous system in particular and of the entire nervous system in general were discussed in the light of information theory. Analogous technical processes were reviewed and a scheme illustrating the physiological nerve setup was devised. The function of nervous transmission was described in terms of pulse-frequency modulation. Techniques by means of which nervous transmission may be studied were reviewed. Orig. art. has: 4 figures. [JPRS]

SUB CODE: 22, 09 / SUBM DATE: 09Feb65 / ORIG REF: 001

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

JANDA, Vladimir; POLLAK, Viktor

A stimulator for clinical electromyography. Slaboproudy obzor 22 no.4:221-225 Ap '61. (EEAI 10:6)

1. Neurologicka klinika Lekarske fakulty Karlovy university; Ustav pro vyzkum paliv, Praha-Bechovice
(Electromyography)

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

23638

G/009/61/070/002/003/004
B109/B221

6,7800
9,8300

AUTHOR: Pollak, Viktor, Doctor of Technical Sciences (Prague)

TITLE: Multiple telemetering with frequency grading and time grading

PERIODICAL: Hochfrequenztechnik und Elektroakustik, v. 70, no. 2, 1961, 54-60

TEXT: In the introduction, the author analyzes the problems encountered in multiple telemetering with frequency or time grading, limiting himself to the telemetering systems which are at present most important for power supply, viz., the pulse-frequency and the frequency-variation systems. The analysis shows that time grading will offer better results as far as the signal-to-noise ratio, range, and cost are concerned, when three and more values are transmitted. Although it can be used for pulse-frequency systems only with difficulties, these were overcome lately and one has been able to develop sets which are ready for production. The author describes the following devices. A) 24-channel test system TESLA (grading on the side of the signal) It consists of the following units (Fig. 4): 1) transmitter; 2) receiver; a - low-pass filter (3200 cps);

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Multiple telemetering with frequency

b - modulator; c - class C amplifier; d - band-pass filter; e - h-f oscillator; f - counting stage to insert the synchronizing pulse; g - telemetering pickup; h - counting stage as distributor; i - pulse generator (4000 cps); j - frequency divider 1:6 to produce the starting pulses for the individual counting devices; k - receiving amplifier; l - demodulator; m - amplitude separator for synchronizing pulses; n - blocking oscillator to form pulses; o - bandpass filter (4000 cps); p - bandpass filter (333 cps); q - phase corrector; r - pulse generator; s - synchronization control; t - magnetic amplifier; u - receiver of telemetering signals; 3) channel maximum pulse frequency of the telemetering system used (25 cps); scanning frequency, 166 cps; pulse frequency on the line, 4000 cps; h-f band-width, 6400 cps. The six-linked counting chains of relays of the cyclic distributor are stepped on by 4000-cps control pulses. Synchronization is effected by synchronizing pulses of a larger amplitude, which are transmitted at the beginning of every cycle. B) The system Polytel (developed by the firm of Siemens, Austria) scanning frequency, 200 cps; the 8-section set described in Ref. 3 (Eigl, H.: Polytel, ein Zeitstaffelsystem für Impulsfrequenz-Fernmessung. Elektrotechn. u. Masch.-Bau 1959/VI, Jahrgang 76) has a pulse

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

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B109/B221

Multiple telemetering with frequency ...

frequency of 1600 cps on the line and a h-f bandwidth of 2500 cps. Distributor: eight-linked delay network chain with connected gate circuits. Synchronous information by pulses of triple width. C) 6-channel test set "TESLA" (suitable for grading operation): The construction uses independently operating components of six channels each, which are transmitted with frequency grading. In order to reduce the bandwidth radically, the scanning frequency was reduced to the same extent, and only the positive edge of the measuring pulses was used (reduction of the modulation index to one-half). In place of the simple frequency-divider circuit at the transmitter input a special storage circuit in the form of a bistable flip-flop circuit was used, in which the front edge of every incoming signal is stored. By the next incoming scanning impulse the storage device is emptied and reactivated. On the receiver side a MMV responds at the arrival of a transmission pulse which prolongs the scanning pulse to 20 ms according to a maximum signal frequency of 25 cps. In this way, the scanning frequency could be reduced to 27 cps, and the bandwidth corresponding to six channels to about 300 cps, whereby delay corrections became superfluous also in the case of cable lines. The set is still in the design stage. Fig. 6 (transmitter): a - gate circuit; b - storage

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G/009/61/070/002/003/004
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Multiple telemetering with frequency ...

stage; o - telemetering transmitter; d - distortion stage; e - phase divider; f - phase corrector; g - band-pass filter for the synchronization frequency; SM - to the transmitter of the transmission unit; SY - from the receiver to be synchronized. There are 6 figures and 5 references: 3 Soviet-bloc and 2 non-Soviet-bloc.

SUBMITTED: August 1, 1960

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APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

POLLAK, VIKTOR

CZECHOSLOVAKIA/Radio Physics - Statistical Phenomena in Radio Physics I-2

Abs Jour : Ref Zhur - Fizika, No 6, 1958, No 13750

Author : Pollak Viktor
Inst : Not Given
Title : Theory of Information and Telemetering

Orig Pub : Slaboproudy obzor, 1957, 18, No 5, 309-315

Abstract : The theory of information makes it possible to estimate various telemetering systems from the point of view of economic utilization of the bandwidth and of the time. A relationship is derived between the error, the time constant, and the repetition frequency of pulses in a telemetering system, based on the calculation of the number of transmitted pulses. It is shown that the products of these three quantities has a minimum. In such a system, the amount of transmitted information is proportional to the logarithm of the time consumed in transmission, while in an ideal system the amount of information should depend linearly on the time. Using s special coding it is possible to approach a linear system. The

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

Pollak, V.

Information theory and telemetering p. 309

(Slaboproudy Obzor. Vol. 18, no. 5, May 1957. Praha, Czechoslovakia)

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

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

POLLAK, V.

Importance of low-voltage technique for the automatization and telemechanization of industry. p. 258.

SDELOVACI TECHNIKA. Vol. 4, no. 9, Sept. 1956

Praha, Czechoslovakia

SOURCE: East European List (EEAL) Library of Congress, Vol. 6, No. 1, January 1957

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

POLLAK, V.

Pollak, V. Significance of communication engineering for the power industry. p.107

So: Monthly List of the East European Accession, (EEAL), LC. Vol. 4, no: 10, Oct. 1955

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

POLLAK, V.

Frequency planning and its importance in high-voltage networks. p. 263
SLABOPROUDY OBZOR, Vol. 15, no. 6, June 1954, Prague.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 5, No. 6 June 1956 Uncl.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

POLLAK, Viktor, inz.,dr.

Signal-to-noise ratio in frequency modulation. Slaboproudy obzor 22 no.1:36-40 '61. (EEAI 10:5)

1. Ustav pro vyzkum paliv, Praha-Bechovice.
(Frequency modulation)

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

POLLAK, Viktor

Viktor Pollak (Prague), "Einige Probleme der Fernmesstechnik im Lichte der Nachrichtentheorie," Hochfrequenztechnik und Elektroakustik (leipzig), 66/1, July 1957, pp. 19-25.

Received on 13 March 1957.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

POLLAK, V.

CZECH

621.315.052.63 : 621.395.44

2697. An experimental 24-channel equipment, employing time division multiplex, for the h.f. transmission of telemetering signals on very-high-voltage lines. V. POLLAK. *Slaboproudý Obzor*, 16, *No.* 1, 12–19 (1955) in Czech.

The equipment consists of a transmitter and a receiver and was developed by Tesla-Elektronik in Czechoslovakia [see Abstr. 3976 (1953)]. Its performance during 1 year's operation on a 110 kV line was satisfactory. The transmitter employs a repetition frequency of 166 c/s per channel and a master frequency of 4·0 kc/s. Switching is performed by electronic scale-of-two circuits, the channels being combined into four groups of six channels each. Synchronizing pulses having an amplitude 50% greater than that of the signal pulses are used for controlling the receiver. The equipment employs magnetic transducers for the amplification of the signals in the receiver. R. S. SIDOROWICZ

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

POLLAK, V.

Experimental 24-channel time-multiplication telemetering system for high-frequency transmission. p. 12.
SLABOPROUDY OBZOR, Praha, Vol. 16, no. 1, Jan 1955.

SO: Monthly list of East European Accessions, (EEAL), LC, Vol. 4, no. 10, Oct. 1955, Uncl.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

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Adhesive. Zoltán Pollák. Hung. 112,817, Sept. 2, 1935. NaOH (18.5 g.) is dissolved in 30 g. water, and 1 kg. curds and 200 g. water are added. A good adhesive for paper or wood is obtained.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

POLLARD, E.

Bibliography. E. Pollard and V. Davidson. "Applied nuclear physics". Translated by M. N. Flerova under the editorship of L. A. Artsimovich. State Publication of Technico-Theoretical Literature 1947. 328 pp. publ. in 10,000 copies. P. 1186.

A five-page review of the book: Applied Nuclear Physics by E. Pollard and V. Davidson.

SO: Journal of Applied Chemistry (USSR) 21, No. 11 (1948)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

Biology & Medicine

N.S.A

6263

THE INACTIVATION OF DRY PENICILLIN BY DEUTERON BOMBARDMENT. Marguerite Davis and Ernest Pollard. Arch. Biochem. Biophys. 37, 112-16(1952) May.

Dry penicillin is inactivated by deuterons if bombarded very heavily. Assuming that the random arrival of one primary ionization inactivates the molecule an inactivation volume of 700 A^3 is found. The actual molecular volume is 400 A^3. The inactivation volume is thought to be too large because of action of the various forms of energy in a primary ionization on more than one molecule. (auth)

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Thirteen references. C. H. Lenn

The strength of metals under combined alternating stresses. H. J. Gough and H. A. Pollard. *Proc. Inst. Mech. Engrs.* (London) 131, 3-103(1935). This is a completed part of an investigation of the general criteria governing the failure of metals under combined stresses. A specially designed high-speed *fatigue machine* was used

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

PROCESSES AND PROPERTIES INDEX

M.

333. GRINDING AND COMBUSTION OF LENGEROV BITUMINOUS COAL IN FURNACES PROVIDED WITH UNIT-TYPE MILLS. Tollayk, M. I. (Sovet. Kotloturbostroenie, 1946, No. 4, 18-23; Chem. Abstr., 1947, 41, 1411).

The coal is typical of many U.S.S.R. bituminous coals. The results of an extensive study of its grinding properties and of its combustion are detailed.

METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

POLLER, L. V.

692 Sanitarnoye Blogoustroystvo Kolkhozov, MTS I Sovkhozdv. (Na Pod Izd.) Kuybyshev, Kn. Izd, 1954. 52 s. s ill.; 2 L Plan. 20 sm. 10,000 Ekz. 1 r.- (54-54915) 614.79

SO: Knizhnaya, Letopis, Vol. 1, 1955

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

POLLER, Lev Vladimirovich; CHERNIKOV, A.P., red.; BUL'DINA, N.A., tekhn.red.

[Sanitary provisions for field camps on collective farms] Sanitarnoe blagoustroistvo polevogo kolkhoznogo stana. Moskva, Gos.izd-vo med.lit-ry, 1957. 52 p. (MIRA 11:12)
(Farm buildings)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6"

POLLER, V.P., inzh.

Exploratory-production water wells. Transp.stroi. 13 no.9:64-65 S '63. (MIRA 16:12)

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

POLLER, V.P., inzh.; IVANOV, Yu.G., inzh.

Engineering geophysics in investigations. Transp. stroi. 12 no.8:32-34 Ag '62. (MIRA 15:9)
(Prospecting—Geophysical methods) (Railroad engineering)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

POLLERTOVA, M.

8

7

3580. Chelatometric determination of calcium, magnesium and sulphate in alkali chlorides and brines. Z. Hostálek and M. Pollertová (High School Chem. Technol., Prague, Czechoslovakia). *Chem. Průmysl*, 1956, 6 (7), 271–274.—This method, developed for the rapid control of industrial brine and alkali chloride, is based on a known chelatometric method used in water analysis. Results of the chelatometric determination are very precise down to the following limits—Ca, 1 mg; Mg, 1 mg; and Na_2SO_4, 70 mg per litre. J. BOSWART

KM for MT

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

Pollertova, Milena

CZECHOSLOVAKIA/Inorganic Chemistry - Complex Compounds. C.

Abs Jour : Ref Zhur - Khimiya, No 9, 1957, 30273

Author : Host'alek Zdenek, Pollertova Milena
Inst :
Title : Laboratory Method for the Preparation of Highly Pure Calcium Carbonate

Orig Pub : Chem. prumysl, 1956, 6, No 11, 472-473.

Abst : Description of a method for preparing calcium carbonate containing more than 99.99% $CaCO_3$, by using technical quicklime and ordinary tap water.

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

POLLI, L.

"A note on a candidate's thesis."

p. 518 (Sotsialistlik Pollumajandus) Vol. 12, no. 11, Nov. 1957
Tallinn, Estonia

SO: Monthly Index of East European Accessions (EEAI) LC. VOL. 7, nc. 4,
April 1958

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

POLLI, L.A.

Forest drainage in Estonia. Trudy Inst. lesa 49:75-81 '59.
(MIRA 13:2)

1.Glavnoye upravleniye lesnogo khozyaystva Ministerstva sel'skogo khozyaystva Estonskoy SSR.
(Estonia--Forests and forestry) (Estonia--Drainage)

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

POLLIAK, YU. G.

YU. G. POLLIAK, "On the possibility of continuous and inertialess recovery of the curve shape of a process with a limited frequenc. spectrum according to data of discrete measurements." Scientific Session Devoted to "Radio Day", May 1958, Trudrezervizdat, Moscow, 9 Sep. 58

The possibility, in principle, of reproducing the curve shape of a process with a bounded frequency spectrum according to the date of exact discrete measurements made at equidistant "past" time intervals is given a foundation. Conditions are formulated which are sufficient to realize this possibility. Appropriate extrapolation and interpolation formulas are obtained as particular cases of a general formula to perform an arbitrary linear operation on the process.

The results obtained are applicable to investigate apparatus operating according to the data of discrete measurements in real time.

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

POLLINGHER, B., dr.; PINTILIE, St, dr.; KOROPITZER, I., dr.

Clinical picture of the Landry type of encephalomyelitis in the course of development of disseminated lupus erythematosus. Neurologia (Bucur) 10 no.1:29-32 Ja-F'65.

1. Lucrare efectuata in Clinica de neurologie, Iasi.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

POLLINGHER, B., dr.; MERLING, M., dr.

Hemibulbar hemorrhage in a syphilitic patient. Anatomoclinical observations. Neurologia (Bucur) 10 no.2:133-137 Mr-Ap'6.

1. Lucrare efectuata in Clinica de neurologie, Iasi.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

NEGOITA, C., conf.; BERNEAGA, Ortansa, dr.; NICULESCU, Paula, dr.; POLLINGHER, B., dr.; HERSCOVICI, Rasela, dr.; PINTILIE, St., dr.

Problem of the diagnosis of secondary arterial hypertension. Med. intern. 15 no.2:191-197 F '63.

1. Lucrare efectuata in Clinica I medicala, Institutul de medicina, Iasi (director: prof. Gh. Tudoranu).
(HYPERTENSION) (HYPERTENSION, RENAL) (DIAGNOSIS)
(KIDNEY DISEASES) (RENAL ARTERY OBSTRUCTION) (ADRENAL GLAND DISEASES)
(COLLAGEN DISEASES) (VASCULAR DISEASES)

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

H

Country : CZECHOSLOVAKIA
Category : Chemical Technology. Chemical Products (Part 4). Lacquers. Paints. Coatings
Abs. Jour. : Ref Zhur-Khim, 1959, No 7, 25538
Author : Pollinszky, K.; Ochsenfeld, V.; Jonge, J. de;*
Institut. : -
Title : Comments on the Technical Process of the Manufacture of Paris Blue
Orig Pub. : Chem. zvesti, 1957, 11, No 2, 98-106

Abstract : During the examination of the composition of the white mass that appears as an intermediate product in the production of Paris blue, it was found that the white mass has the composition $K_2Fe[Fe(CN)_6]$ and adsorbs $FeSO_4$. The amount of $FeSO_4$ adsorbed on the white mass depends on the concentration of the original solutions. In the process, well-known regularities of adsorption

* Szigeti, G.

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

Country : [illegible]
Category : Chemical Technology. Chemical Products (Part 4). Lacquers. Paints. Coatings.
Abs. Jour. : Ref Zhur - Khim., No 7, 1959

Author :
Institut. :
Title :

Orig. Pub. :

Abstract : The quality of the pigment improves with increase of the K content, which depends on the composition of the white mass. The greater the K content, the brighter the pigment, the greater its covering capacity and the lighter its shade. -- V. Orlatsov

Card: 3/3

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

Synthetic ammonia industry. G. Pollit. *J. Chem. Ind.* (Moscow) 7, 1581-7 (1930).—Data pertaining to world production of nitrogen and ammonia are given.

Robert Schlesser

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

POLLNER, Gyorgy; PASZTOR, Emilne

Use of succinylcholine in electroshock therapy. Ideg. szemle 11 no.4: 114-117 Oct 58.

1. Az Orszagos Ideg- es Elmegyogyintezet (Igazgato: Maria Bela dr.) kozlemenye.

(SUCCINYLCHOLINE, ther. use
adjuvant in electroshock ther. (Hun))
(SHOCK THERAPY, ELECTRIC
adjuvant succinylcholine (Hun))

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

COUNTRY : Poland
CATEGORY : h-6

ABS. JOUR. : RZKhim., No. 16 1959, No. 57571

AUTHOR : Pawlikowski, S., Chomiakow, A., Pollo, I., and*
INST. : Not given
TITLE : The Explosive Properties of AN-Lime Meal Mixtures

ORIG. PUB. : Przemysl Chem, 13, No 12, 697-699 (1957)

ABSTRACT : The authors have investigated the explosive properties of cast and mechanically mixed AN (I)-lime meal (II) mixtures. The NH_4NO_3 content of I was 99.9%. The II used contained 55.1% CaO. Grain fractions of 0.50-10.75 mm, 0.20-0.50 mm, and < 0.20 mm and II < 0.75 mm [omission?] were tested. The II content in the mixtures was varied from 0 to 40%. The blasting action (BA) of the mixtures was measured with a Tsybul'skiy pendulum, and a Kast [sic] drop test apparatus was

CARD: 1/2 *Okon, N.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

POLLO, I.; PAWLIKOWSKI, S.

The improvement of anticorrosive properties of bituminous coatings of underground pipelines. p.73

Nafta. (Instytut Naftowy)
Krakow, Poland. Vol.15, no.3, Mar.1959

Monthly List of East European Accessions Index, (EEAI) LC, Vol.8, no.6
June 1959
Uncl.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

L 18875-63 EWT(1)/EWP(q)/EWT(m)/BDS/ES(w)-2 AFFTC/ASD/ESD-3/AFWL/
IJP(C)/SSD Pab-4 JD

ACCESSION NR:AP3006626 S/0076/63/037/009/2087/2093

69
68

AUTHORS: Pollo, I.; Mal'tsev, A. N.; Yeremin, Ye. N.

TITLE: Equilibrium Concentrations of Nitrogen monoxide in the glow discharge. 6. Effect of feed composition on the formation of nitrogen monoxide in a narrow diameter reactor

SOURCE: Zh. fizicheskoy khimii. v. 37, no. 9, 1963, 2087-2093

TOPIC TAGS: equilibrium concentration, glow discharge, feed concentration, current strength, pressure effect

ABSTRACT: Paper deals with formation of nitrogen monoxide in a Silica tube of 3 mm diameter in narrow part of tube, which was 30 mm long and 60 mm between stainless steel electrodes. Under all conditions, the yield of NO in the narrow reactor was higher then that obtained in the large-diameter-reactor, and with a feed of stoichiometric composition reached 15.5%. In a range of low pressures and current strengths, the yield of nitrogen monoxide is directly proportional to product of pressure by current, but for higher values of p and C, this relation can be expressed in the form of an exponential equation. The strength of

1/2

Card

2/2

Card

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

POLLO, I.: PAWLIKOWSKI, S.: JANICKI, J.

The protective effect of bituminous coatings on concrete in an ammonium-salt medium. P 24

POLAND

BUDOWNICTWO PRZEMYSLOWE. (Ministerstwo Budownictwa) Warszawa. Vol. 6, no. 1, Jan. 1957

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

Uncl.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

Pollo, I. ; Starczewski, M. ; Pawlikowski, S.

Experiments on using native andesite mortar in nitric acid solutions. p. 105.

PRZEMYSL CHEMICZNY. (Ministerstwo Przemyslu Chemicznego i Stowarzyszenie Naukowo-Techniczne Inzynierow i Technikow Przemyslu Chemicznego) Warszawa, Poland. Vol. 38, no. 2, February, 1959.

Monthly list of East European Accessions (EEAI) LC, Vol. 8, no. 8, August, 1959.

Uncl.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

POLLO, I.; PAWLIKOWSKI, S.

The development and the technology of acid-resistant silica cements. p. 141.

PRZEMYSL CHEMICZNY. (Ministerstwo Przemyslu Chemicznego i Stowarzyszenie Naukowo-Techniczne Inzynierow i Technikow Przemyslu Chemicznego) Warszawa, Poland. Vol. 38, no. 3, Mar. 1959.

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

Uncl.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

POLLO, I.; MAL'TSEV, A.N.; YEREMIN, Ye.N.

Steady state concentrations of nitric oxide in the glow discharge. Part 6: Effect of the composition of initial mixture on the formation of nitric oxide in a narrow reactor. Zhur. fiz. khim. 37 no.9:2087-2093 S '63. (MIRA 16:12)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

AUTHOR : Pawlikowski, S.; Pollo, I.
INST. : -
TITLE : Improvement of the Anticorrosion Properties of Bituminous Coatings of Pipelines Laid in the

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6"

PERIOD. PUB. : Nafta, 1959, 15, No 3, 73-76

ABSTRACT : To improve the anticorrosion properties of bituminous coatings applied by the cold process, used for the protection of underground steel installations including pipelines, it is recommended to add to the coating applied ~10% of calcium cyanamide. The action of the latter is increased by the addition of 0.5% of activated carbon black.-- V. Levinson

*Protection

CARD: 1/1

H-7

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

POLLO, I.

4195 666.92 : 620.193.41

Pawlikowski S., Pollo I., Biarczewski M. Acid-Resistant Silica Mortars.

„Kwasoodporne zaprawy krzemionkowe". Przemysł Chemiczny. No. 5, 1950, pp. 266--275, 4 figs., 20 tabs.

A discussion of the principles of applying acid-resistant mortars with special reference to silica mortars. Different opinions are given concerning the mechanism of binding mortars treated with water--glass, and the influence was investigated of the amount of acceleration of binding and of the kind of water-glass on the mechanical properties of mortars. An explanation is offered for the different behaviour of mortar containing sodium water-glass in the presence of nitric acid and of sulphuric acid. The possibility is discussed of utilizing indigenous raw materials for preparing acid-resistant mortars. Several tests were made of tensile strength and of adhesion of the most important mortars used in Poland.

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

POLLO, I.

South of Bochnia. p. 14. TURYSTA. (Polskie Towarzystwo Turystyczno-Krajoznawcze) Warszawa. No. 3, Mar. 1955.

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

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

POLLO, I.

"Magorka." P. 14 (TURYSTA. No. 6, June 1954; Warszawa, Poland.)

So: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 4, April 1955, Uncl..

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

POLLOCK, Martin, Dr.

Dr. Martin Pollock's report on his trip to Hungary in the periodical Nature. p.6. MUSZAKI ELET. (Muszaki es Termeszettudomanyos Egyesuletek Szovetsege) Budapest. Vol 11, no. 6, Mar 1956.

SOURCE: EEAL, Vol 5, no. 7, July 1956.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

CA

11 f

A histamine-like substance in the post-partum rabbit uterus. Boris Krichesky and Wm. Pollock. *Am. J. Physiol.* 130, 319-26(1940).—Saline extn. of post-partum rabbit uteri, taken within 12 hrs. after delivery, contain a toxic substance lethal to nonpregnant animals. The toxic factor is probably histamine or a histamine-like substance. It resembles histamine in physiol. properties and is readily inactivated by incubation with histaminase. The presence of histamine or a histamine-like substance in the full term and post-partum rabbit uterus is discussed in relation to events leading to parturition, i. e., color change, edema, muscle contractions and post-partum hemorrhage. E. D. Walter

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

POLAND/Chemical Technology - Chemical Products and Their Application, Part 1. - Corrosion, Protection Thereof. H-4

Abs Jour : Ref Zhur - Khimiya, No 14, 1958, 47157

Author : S. Pawlikowski, I. Pollo, E. Bonarek
Inst : -
Title : Corrosion Resistance of Domestic Coal Materials in Sulfite Solutions.

Orig Pub : Przem. chem., 1957, 13, No 11, 669-672

Abstract : The technological process of manufacturing coal (C) and graphite (G) materials at the electrode factory at Racibuzh (Poland) is described. The chemical resistance and the resistance to temperature changes of graphite materials is considerably higher than those of coal materials. The determination of some physical-chemical properties and chemical resistance was carried out for 1/ non-impregnated C, G and C-G materials, and

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

Pollo, I.

POLAND/Chemical Technology - Chemical Products and Their Application, Part 1. - Corrosion, Protection Thereof. H-4

Abs Jour : Ref Zhur - Khimiya, No 14, 1958, 47157

Author : S. Pawlikowski, I. Pollo, E. Bonarek
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Title : Corrosion Resistance of Domestic Coal Materials in Sulfite Solutions.

Orig Pub : Przem. chem., 1957, 13, No 11, 669-672

Abstract : The technological process of manufacturing coal (C) and graphite (G) materials at the electrode factory at Racibuzh (Poland) is described. The chemical resistance and the resistance to temperature changes of graphite materials is considerably higher than those of coal materials. The determination of some physical-chemical properties and chemical resistance was carried out for 1/ non-impregnated C, G and C-G materials, and

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

POLAND / Chemical Technology. Chemical Products and Their Application. Corrosion. Corrosion Control. H-4

Abs Jour: Ref Zhur-Khimiya, No 1, 1959, 1613.

Author : Pawlikewski, S., Pollo, I., Starczewski, M.
Inst : Not given.
Title : The Corrosiveness of Certain Soils in Silesia.

Orig Pub: Przem. chem., 1958, 37, No 2, 109-113.

Abstract: The results of investigation dealing with the degree of agressiveness of soils from the southern regions of Upper-Silesian industrial Okrug showed that measurement of pH and specific resistance of soils does not furnish complete characteristics enabling one to evaluate their corrosive properties. -- V. Kashcheyer.

Card 1/1

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

PAWLIKOWSKI, Stefan, prof. dr inz.; POLLO, Iwo, dr inz.

Certain problems of protection of underground installations from corrosion. Nafta Pol 19 no.12:278-280 D'63.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

POLLO, Iwo

Studies on the decomposition kinetics of nitroic oxide in electric discharge. Wiad chem 16 no. 4:270-275 Ap 62.

1. Politechnika Slaska, Gliwice.

POLLO, IWO

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6"

POLAND/Chemical Technology, Chemical Products and Their Application, Part 1. - Corrosion, Protection from Corrosion.

Abs Jour: Referat. Zhurnal Khimiya, No 10, 1958, 32862.

Author : Stefan Pawlikowski, Iwo Pollo, Jerzy Węgiel.
Inst : Krakow Institute of Mineral Oil, Polytechnical Institute of Silesia.
Title : Calcium Cyanamide - Inhibitor of Steel Corrosin in Aqueous Solutions.

Orig Pub: Zesz. nauk. Politechn. slaskiej, 1957, No 12, 107-128.

Abstract: The Krakow Mineral Oil Institute studied the influence of calcium cyanamide (I) on the corrosion rate (CR) and the change of the irreversible electrode potential (P) of iron (0.3% of C) in distilled and tap water and in a series of salt solutions taking into consideration the conditions of underground corrosion. This study

Card : 1/3

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Pollo, Iwo.

H-4

POLAND/Chemical Technology, Chemical Products and Their Application, Part 1. - Corrosion, Protection from Corrosion.

Abs Jour: Referat. Zhurnal Khimiya, No 10, 1958, 32863.

Author : Stefan Pawlikowski, Iwo Pollo, Jerzy Szymański.
Inst : Polytechnical Institute of Silesia.
Title : Influence of Hydrolytic Dissociation Products of Calcium Cyanamide on Inhibition of Iron Corrosion Process in Aqueous Solutions.

Orig Pub: Zesz. nauk. Politechn. slaskiej, 1957, No 12, 129-140.

Abstract: The study of the influence of calcium cyanamide (I) and of products of its hydrolysis on the change of the irreversible electrode potential (P) and the corrosion (C) of iron in: 1/ distilled water, 2/tap water, 1.5%-ual melamine solution, 2%-ual $[H_2(CN)_2]_2$ solu-

Card : 1/3

10

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

COUNTRY : POLAND

CATEGORY : Chemical Technology. Chemical Products and Their Applications. Ceramics. Glass. Binding*

ABS. JOUR. : RZKhim., No. 23 1959, No. 82910

AUTHOR : Pawlikowski, S.; Pollo, I.; Starczewski, M.

INST. : -

TITLE : Investigation of a Possibility of Employing Indigenous Andesite in the Manufacture of Acid-Resistent Solutions.

ORIG. PUB. : Przem. chem., 1959, 38, No 2, 105-107

ABSTRACT : No abstract.

*Materials. Concrete.

CARD: 1/1

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

1A

The properties of the tar of the gas plant of the city of Tallinn. A. PUKSOV AND J. POLLUMAN. *Tehnika Ajakiri* 9, 169-70(1930); *Chem. Zentr.* 1931, I, 1205.—The gas plant in Tallinn (Reval) uses a mixt. of 87.5% gas coal and 12.5% burning shale in horizontal retorts. The tar has dis 1.257, H_2O 1.1, fixed C 28, ash 0.043, phenols and water-sol. substances 0.0055, substances distg. up to 170° 2.8%. Tar from pure burning shale contains C 88.6, H 6.2, O + N + S 5.2, phenols 3.5, no acids, naphthalene 5.5, pyridine 0.3, anthracene 2.2, fixed C 27, H_2O 1.1, light oils 2.1%. Both tars can be used well for tarring roofs. ALFRED BURGER

METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

SOV/72-59-6-7/18

15(2)

AUTHORS: Vilnis, K. K., Pollyak, V. V., Soskova, V. D.

TITLE: A Device for Taking Samples From Deep Frit Layers (Pribor dlya vzyatiya glubinnykh prob steklomassy)

PERIODICAL: Steklo i keramika, 1959, Nr 6, pp 32 - 35 (USSR)

ABSTRACT: The authors of this article discuss the disadvantages of ordinary devices for taking frit samples which do not allow to take pure samples from deep frit layers. On the basis of investigations performed by the teplotekhnicheskaya laboratoriya Instituta stekla (Laboratory for High-temperature Research of the Glass Institute) a new construction of the device as well as a new method for the afore-mentioned purpose were worked out. The new method is based on the principle that the glass frit is sucked in on a certain level by creating vacuum with an injector. The general view, the longitudinal section, and the injector of the device are illustrated in figures 1,2, and 3 and then described. There are 3 figures.

Card 1/1

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

POLLYAK, M., kand. tekhn. nauk

Full utilization of the Baltic region slate. Stroi. mat. 2 no.10:5-7 O '56. (MIRA 12:3)
(Building materials) (Baltic Sea region--Slate)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

21

Grinding and combustion of Lengerov bituminous coal in furnaces provided with unit-type mills. M. I. Pollyak. *Steel. Kollodurbostroenie* 1946, No. 4, 18-23. The coal is typical of many U.S.S.R. bituminous coals. The results of an extensive study of its grinding properties and of its combustion are detailed. M. Hosch

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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19

Development of Combustion of Fuel in "Compartments." (In Russian.) I. K. Barshtein and M. J. Pollyak. *Kotloturbostroenie* (Boiler and Turbine Manufacture), Oct. 1947, p. 18-23.

Analyzes above development and indicates possibilities for further improvement. Basic principles are explained and a series of applications of such furnaces with preliminary combustion of powdered coal are indicated. Includes diagrams.

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(11)

26

The influence of moisture permeability and swelling on corrosion-preventing properties of films. S. V. Yakubovich and R. I. Podlyuk. *Byull. Obmena Opyt. Lakokrasochnoi Prom.* **1939**, No. 3, 43-6.—A study of moisture permeation and swelling and their effect on corrosion-preventing properties of the films brought the following conclusions: Free films taken off amalgamated tin plate cannot be used for swelling studies. Films formed on standardized cigarette paper give best results for moisture permeability and swelling studies. Glur's method should be further refined by using a definite amt. of P_2O_5 at a definite distance from the film. A method of detn. of swelling of pigmented films was developed. Pigmented and unpigmented films show inverse relations of swelling to moisture permeability. Swelling and moisture permeability are lower for unpigmented films, the nature of the pigment is important. Corrosion-preventing properties of pigmented films are independent of moisture permeability and of swelling. Moisture permeability is the sole factor in detg. corrosion-preventing properties of unpigmented films.

David Achmy

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1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

26

Plant control of degree and quality of grinding of ground paints. S. V. Yukubovich and R. I. Poliyak. *Byull. Obmena Opyt. Lakokrasochnoi Prom.* 1960, No. 7, 28-32. -- Various methods for detn. of quality of pigment dispersion in ground paints are discussed. The recommended control method is the microscopic examn. and measurement of pigment aggregates. G. M. Koolaiuoff

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

BC

C-4

1946. Application of polarography to study of pre-[illegible] processes in [illegible] engines. V. J. Stern and S. Pollak (Trans. All-Union Conf. Anal. Chem., 1946, 2, 600—614).—(Ethyl and hydroxyethyl) [illegible] and (methyl and ethyl) hydroperoxides are reduced in 0·1N-LiCl at −0·05 to −0·5 v., H_2O_2 is reduced at −0·7 v., formaldehyde at −1·6 v., and higher (acet- and prop-)aldehydes at −1·6 v. All these compounds, except formaldehyde, can be determined polarographically. For analysis of mixtures polarography must be supplemented by chemical analysis. In the products of intermediate oxidation of fuel in an internal-combustion engine, H_2O_2, an org. peroxide, saturated aldehydes, and an unsaturated compound reduced at −1·4 v. are detected. J. J. B.

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1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

BC

a-3

Polarographic analysis of mixtures of aldehydes and peroxides. V. Sommer and S. Polljak (J. Gen. Chem. Russ., 1940, 10, 21—30).—The negative reduction potentials of certain peroxides and aldehydes in 0·1N-LiCl are: MeO_2H and EtO_2H 0·25—0·3, $(OH\cdot CH_2)_2O_2$ 0·25, Et_2O_2 0·5, H_2O_2 0·75, CH_2O 1·[illegible]—1·6, MeCHO and EtCHO 1·75—1·8. The polarographic determination of these substances and of their mixtures is described. R. T.

COMMON ELEMENTS

COMMON VARIABLES INDEX

OPEN

MATERIALS INDEX

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MATERIALS INDEX

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Fe GROUPS

3RD AND 4TH ORDERS

2ND LETTER

1ST AND 2ND LETTER

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

Ca

21

Application of the polarographic method to the study of the precombustion processes in internal-combustion engines. V. Ya. Shtern and S. Poliyak. *Trudy Vsesoyuz. Konferentsii Anal. Khim.* 2, 603-78(1943).—Tests of the method of polarographic analysis showed that the limits of the neg. reduction potentials of peroxides (0.25-0.75 v.) differ widely from those of aldehydes (1.55-1.8 v.), that CH_2O can be detd. in a mixt. with other aldehydes, that the total content of higher aldehydes can be detd. Gases were drawn from an engine by means of the Kogarko valve at various stages of the cycle, condensed by cooling, dissolved in water, and analyzed chemically and polarographically. H_2O_2, an org. peroxide of an undetd. structure, a substance, with a wave at −1.4 v., of a nonperoxide structure (possibly an unsatd. aldehyde), and satd. aldehydes were detected.

W. R. Henn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

Polarographic analysis of mixtures of aldehydes and peroxides. V. Shtern and S. Pollyak. *Acta Physicochim. U. R. S. S.* 11, 797-814(1939)(in English); *J. Gen. Chem.* (U. S. S. R.) 10, 21-30(1940). The reduction potentials of aliphatic aldehydes and peroxides and H_2O_2 were detd. by the Heyrovsky method with dropping Hg electrode. The results of the detn. of various mixts. of aldehydes and peroxides in 7 different electrolytes are tabulated and discussed. The measurements in 0.1 N LiCl, with the preliminary expulsion of O with H or N from water used in prepg. the solns., give the best results, because under these conditions no decompn. of the peroxides takes place and the sepn. of CH_2O from higher aldehydes is easily effected. The neg. reduction potential of H_2O_2 is 0.8 v.; of alkyl hydroperoxides (MeOOH and EtOOH) 0.4 v.; of $(CH_2OH)O_2$ 0.6 v., and of Et_2O_2 0.8 v. (cf. Dobrinskaya and Nelman, *C. A.* 33, 6198[3]).

Chas. Blanc

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

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4754. APPLICATION OF THE POLAROGRAPHIC METHOD TO THE STUDY OF THE PRECOMBUSTION PROCESSES IN INTERNAL COMBUSTION ENGINES. Shtern, V. Ia. and Pollyak S. (Trudy Vsesoyuz. Konferentsii Anal. Khim, 1943, 2, 603-14; Chem Abstr. 1945, 39, 3896). Tests of the method of polarographic analysis showed that the limits of the neg. reduction potentials of peroxides (0.25-0.75v) differ widely from those of aldehydes (1.55-1.8v). that CH_2O can be detd. in a mixt. with other aldehydes, that the total content of higher aldehydes can be detd. Gases were drawn from an engine by means of the Kogarko valve at various stages of the cycle, condensed by cooling dissolved in water, and analysed chemically and polarographically. H_2O_2, an org. peroxide of an undetd. structure a substance, with a wave at 1.4v., of a nonperoxide structure (possibly an unsatd. aldehyde), an sa d. aldehydes were detected).

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3RD AND 4TH ORDERS

19

Manufacture of rosaline glass in tank furnaces. G. Yu. Zhukovskii and V. V. Polyak. *Keram. i Steklo* 13, No. 12, 6-13(1937).—It was found that: (1) acid glass compos. contg. small quantities of alk. earth oxides (up to 6%) are preferable for obtaining pure rosaline glasses. (2) It is advisable to replace part of the Na_2O (from 2.0 to 2.5%) by K_2O, although not absolutely necessary. (3) A lower concn. of Se is preferable to a high one from the viewpoint of purity of the color. Twenty g. of Se is entirely sufficient for 100 kg. of glass mass. (4) An addn. of saltpeter is necessary. (5) The addn. of As has no marked results on the purity of color in the limits of the concn. of Fe oxide used in the expts. It is possible that in glasses having less Fe_2O_3, As is a sufficiently powerful agent to neutralize the effect of Fe. (6) The addn. of Sb_2O_3 is very useful from the point of view of the stabilization of the color in subsequent thermal operations. (7) The glass should contain the least possible amt. of Fe and any measure to lower its concn. (raw materials, refractories, etc.) is of the utmost importance. (8) The production of pure rosaline glass contg. Se requires a high temp., at least 1420°, and a weakly oxidizing atm. (9) The effect of the type of tank furnace has not been studied; however, tanks of low depth are preferable. (10) Rosaline glass is more suitable for pressed ware than for blown ware. (11) Repeated heating of the glass affects its color. (12) The annealing temp. of rosaline glass should be from 475° to 480°. (13) A uniform distribution of temp. in the annealing furnace and a strict conformance to the curve of annealing are necessary. The following factors should be studied further: (*a*) effect of furnace type and flows on the coloring of rosaline glass; (*b*) quant. study of the ratios of various degrees of oxidation of Se in dependence on melting, working and annealing; (*c*) conditions for obtaining rosaline colors in glass with a variable iron content; (*d*) effect of chlorides, particularly common salt, on the stabilization of rosaline color. M. V. C.

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3RD AND 4TH ORDERS

19

Bubbles and seeds in glass melted in tank furnaces. G. Yu. Zhukovskii and V. V. Pollyak. *Stekolnaya Prom.* 14, No. 7, 11-14(1938). The formation of bubbles and seeds in glass melted by the Foucault method in Russia is discussed. M. V. Condoide

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CA

17

Factors influencing the formation of bubbles and seeds in aluminomagnesia glass melted in a sulfate soda batch. G. Yu. Zhukovskii, V. V. Pollyak and M. P. Orlova. *Stekolnaya Prom.* 14, No. 6, 26-30(1939); cf. *C. A.* 33, 1894[7].—The results of expts. show that (1) The addn. of sulfate to the batch of an aluminomagnesia glass (corresponding to 0.5% Na_2O in the glass) improves purification. (2) The addn. of sulfate and coal at first affects purification but later improves it. (3) The increase of the concn. of SO_3 in the furnace atm. hampers purification. (4) Severe cooling lowers the no. of bubbles. (5) Repeated heating of sulfate glass after cooling produces "secondary" bubbles whose quantity is proportional to the sulfate content in the glass batch. (6) The increase of the concn. of SO_2 in the furnace atm. increases the amt. of the sulfate dissolved in the glass. M. V. Condoide

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A. E. S.

Formation of bubbles in Fourcault canals. G. Yu. Zhukovskii and V. V. Pollyak. *Stekol'naya Prom.*, **1940**, No. 2, 12-16; *Khim. Referat. Zhur.*, **1940**, No. 7, 80; *Chem. Abs.*, **36**, 5623 (1942).—In 222 samples of glass taken from nine machines, SO_2, CO_2, O_2, CO and N were determined. Air bubbles predominated in the samples investigated. The source of these bubbles was the refractory material of the Fourcault canal and boat. Denser refractories do not cause the formation of bubbles. Bubbles containing SO_2 and CO_2 were formed as the result of secondary decomposition of the residue, carbonates and sulfates, from the second heating of the glass batch. The number of bubbles in the glass mass can be decreased by changing the heating régime and the construction of the Fourcault canal so that no second heating of the glass batch is necessary. See *Ceram. Abs.*, **19** [3] 63 (1940).

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C

INCREASING THE TAKE-OFF OF SULFATE GLASS MELT. V. V. Pollyak and I. O. Tomashevich. Stekol'naya i Keram. Prom., 1944, No. 9, pp. 1-6. — An investigation was made at the Chagodoshchensk plant to determine the cause for the drop in take-off of molten glass when a changeover was made from soda to sulfate charge (Fourcault process). The composition of the sulfate was Na_2SO_4 79.15 to 92.9, $CaSO_4$ 2.62 to 9.19, $MgSO_4$ 0.93 to 4.81, and moisture 6.32 to 40.39%. Reducing agents were charcoal (4.30 to 48.83% moisture and 2.79 to 8.82% ash) and brown coal (15.50 to 38.72% moisture and 20.67 to 37.77% ash). By reducing the moisture in the charge prior to feeding to 5 to 10%, the take-off of molten glass was increased from 400 to 550-570 kg./m.^{2} per day. It is essential that the reducing agent be stable and of high quality; the coefficient of reduction should be calculated on the basis of SO_3 for all the sulfates instead of for the Na_2SO_4 only. B.Z.K.

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C

Preparation of soda-sulfate melt and its use in glass-melting. I. M. Boguslavskii, V. V. Pollyak, G. M. Nishevich, and S. Ya. Rap. Abstracted in *Stekol'naya i Keram. Prom.*, 1945, No. 4-5, p. 20.—It was proposed to use in glassmelting a modified Leblanc melt comprising a mixture of soda and sulfate which was obtained by the incomplete reduction of the sulfate to the sulfide and the carbonization of the latter by the decomposition of the added $CaCO_3$. In contrast to the Leblanc melt, the modified melt was to have Na_2O and CaO in the proportions in which they are used in normal Fourcault charges, and the ratio of soda to sulfate was to be 1:1. The melt was selected on the basis of a glass composition of SiO_2 73, CaO 12, and Na_2O 15%, in which $Na_2O/CaO = 1.25$. The glass melt obtained did not differ in coloration from that obtained from a sulfate charge. The absolute content of the sulfides that will produce a colorless glass melt can vary within large limits and does not by itself cause the coloration. The glass becomes colored only when the relation between the sulfides and the free undecomposed sulfates is shifted to give an excess of sulfides not oxidized by the sulfate. The coefficient of reduction of the sulfate should not exceed about 50 to 52%. A homogeneous and uncolored glass is formed from charges containing this melt at 1300°, which is a lower temperature than that for soda-sulfate and soda charges. The transmissivity is lowered by increasing the content of Fe oxides, but with the correct ratio of sulfides and sulfate in the melt this will not be the cause of the sulfide coloration.

B.Z.K.

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PROCESSES AND PROPERTIES INDEX

Briquetting of sulfate charge. S. Ya. Raf, V. V. Pollyak, and G. M. Nishevich. *Stekol'naya i Keram. Prom.*, 1945, No. 6, pp. 1–3.—Sulfate charge based to give a glass melt of SiO_2 72.5, R_2O_3 0.5, CaO 8, MgO 3, and R_2 16% was used to prepare briquettes with 2, 3, 4, 6, 8, 10, and 12% water under pressures of 20, 50, 100, 200, 400, 500, 750, and 1000 kg./cm.^{2}. Briquettes of good mechanical strength were obtained with pressures of 500 to 750 kg./cm.^{2}. Optimum water content is 6 to 8%. The use of special binders had no noticeable effect on strength. Grain size had no effect on mechanical strength. Cullet should not be used to prepare the briquettes. The briquettes should be allowed to harden for 2 to 3 days before use.

B.Z.K.

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BOLLYAK, V. V.

Pollyak, V. V. - "Ways of increasing the productivity of bath furnaces," Trudy Tekhn. konf-tsii rabotnikov stekol. prom-sti, Moscow, 1948, p. 170-74

SO: U-3600, 10 July 53, (Letopis 'Zhurnal 'nykh Statey, No. 6, 1949).

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13

22

Action of Accelerators of the Melting of Glass at High Temperatures. (In Russian.) L. I. Buneeva, V. V. Pallyak, and I. D. Tykachinski. *Steklo i Keramika* (Glass and Ceramics), v. 6, Feb. 1949, p. 3-5.

A series of accelerators, such as F_2, B_2O_3, F_2 + B_2O_3, etc. and the relation of their accelerating properties to temperature of fusion (1350, 1400, 1425, and 1450°C.) were investigated. Results for different types of glass are tabulated.

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C

Selecting optimum method of charging glassmelting furnaces.

By I. Gir, V. V. Polyak, and I. D. Tyrachinskii. *Stekla i Keramika*, 6 [8] 10-14 (1949). In selecting a method of charging a glassmelting furnace, the most important factor to be considered is the specific surface of the charge being subjected to direct action of the heat of the flame and brickwork. The value of the specific surface of the charge in relation to the melting area can be used to evaluate the effectiveness of various charging methods. On this basis, comparison was made of different methods without considering the practicability of their application. Optimum methods thus determined are (*a*) small heaps and (*b*) longitudinal layers with breaks. To meet these optimum conditions, it is proposed to (1) change the table of the Thin Layer Feeder into a rammer suitable for heaps and longitudinal layers and to permit continuous and periodic operation; (2) feed the charge directly onto the glass melt in the pocket of the tank furnace instead of onto the table; and (3) arrange the feed bunkers so that their outlets will be directly over the axes of the heaps and layers of the charge.

B Z K

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1ST AND 2ND ORDERS

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C

Influence of individual factors upon the rate of glassmelting. D. L. Gik and V. V. Polyak. *Steklo i Keram.*, 6 [10] 3-7 (1949). Soda charge briquettes (some with 25% cullet) of various shapes and having densities of 1.72 to 2.02 gm./cc. were made with water glass and were then subjected to experimental melting at 1125° to 1140°C. in the end chamber of the machine canal on a refractory plate and in the melt itself. The rate of melting was not affected by density changes, addition of cullet, and inclination of the briquettes at angles of 25 to 45°. The chief factor which determined the rate of melting was the specific active surface (cm.²/gm.) which was being developed by the charge per unit of melting area. Active surface includes both that which is subjected to the direct action of the heat radiation and that which is in contact with the melt. An increase in the weight and height of the briquettes increased the active surface per unit melting area, raised the effectiveness of the active surface per unit weight, and resulted in more effective utilization of the melting area of the furnace. B.Z.K.

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22

Prevention of the Formation of Alkali Bubbles and Discoloration of the Glass in Tank Furnaces. (In Russian.) I. L. G. Gol'denberg. II. V. V. Pollyak, A. G. Repa, and I. D. Tykachinskii. *Steklo i Keramika* (Glass and Ceramics), v. 6, Nov. 1949, p. 11-17.

In Part I, heating the glass mass in a slightly acidic atmosphere is recommended. Introduction of solid reducing agents in amounts depending on the amount of SO_4 present is also recommended. In Part II, alkali-bubbles representing inclusions of fused sulfate are distinguished from gaseous sulfate bubbles. Investigation revealed that the general cause of alkali-bubble formation is supersaturation of the glass mass by free, undissociated sulfate, and its liberation in the form of alkali inclusions. Data are tabulated.

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B

22

Recent Translations of Russian Papers of Interest to the Glass Industry. *Glass Industry*, v. 30, Oct. 1949, p. 556-557, 582.

Presents condensed versions of "Action of Accelerators in the Melting of Glass at High Temperatures," L. I. Buneeva, V. V. Pollyak, and I. D. Tykachinskii, *Steklo i Keramika* (Glass and Ceramics), v. 6, Feb. 1949, p. 3-5; "Heat Transfer by Radiation in Heated Glass," V. V. Rodnikova, same journal, v. 6, Mar. 1949, p. 10-14 (both previously abstracted); and an article on the manufacture of hardened glass in the USSR by G. V. Potoskaya, same journal, v. 6, Jan. 1949, p. 5-4 (not previously abstracted).

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CA

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Use of domestic sodium sulfate for glass melting. L. I. Bunceva, V. V. Pollyak, and I. D. Tykachinskii. *Stekło i Keram.* 7, No. 12, 19-20(1950).—Use of domestic sodium sulfate instead of Aral Sea sulfate retarded the fining process, especially elimination of boil. This was found to be due to practically complete lack of $CaSO_4$ and moisture in the domestic sulfate. Two measures were successful: (1) use of domestic and Aral Sea sulfate in ratio of 1:1 and the addn. of 6% moisture to the charge or (2) addn. of 0.5% CaO (as $CaSO_4$) to the domestic sulfate only. B. Z. Kamich

1950

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CA

11

Melting technical glass at the L'vov glass works. D. L. Gik and V. V. Pollyak. *Stekla i Keram.* 8, No. 3, 3-6 (1951).—The quality of vertically drawn tech. glass was improved by lowering the Na_2O content to 14.5-15.0%; the required Al_2O_3 was made up by the addn. of feldspar without impairing the quality of the glass. Reduction in content of Na_2O should be compensated by the addn. of B_2O_3; it is also desirable to replace 1.0-1.5% Na_2O with an equiv. amt. of K_2O (1.52% K_2O for 1% Na_2O). Failure to add B_2O_3 results in prolongation of glassmelting. Whenever the diathermacy of the glass was increased, regardless of the means employed to attain this, the fining was impaired and boil appeared. These defects could be eliminated by resorting to higher temps. but, because of the quality of the refractories, it was necessary to operate at low temps. (1420°) in order to eliminate stones, schlieren, and cords. Surface bubbles on the sheet were eliminated by (1) firing the debiteuse block under conditions which exclude reaction between the gas medium and the surface of the block and (2) cooling the block (on the side on which bubbles form) by deepening the longitudinal cut-out in the block or by lowering a cooler. Such cooling of the block results in premature "aging" of the machine and in possible crystn. on the lips of the slit; at these glass works, it was necessary to renew the sheet every 70-75 hrs. For quality glass, the following compn. is recommended: SiO_2 72.0-72.5; Al_2O_3 + Fe_2O_3 1.5-1.8; CaO 7.5-8.0; MgO 3.5; B_2O_3 1; Na_2O + K_2O 14.5-15.0%. Any increase in CaO+MgO over 11.5% sharply impairs crystn. properties. In drawing glass without a debiteuse block, the amt. of Na_2O + K_2O can be reduced to 14%.

B. Z. Kamich

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POLLYAK, V.V.

Glass Manufacture

Effect of optical and viscous heterogeneity of molten glass on the quality of glass. Stek. i ker., 9, No. 7, 1952.

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

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

V.V. POLLYAK

High-transparency glass from continuous tanks. K. T. BONDAREV, V. A. DUBROVSKII, V. V. POLLYAK, AND I. E. SHAPIRO. *Steklo i Keram.*, 10 [12] 4-11 (1953). In a continuous tank of ordinary construction fired with clean producer gas, glass having a transparency of over 90% was obtained. FeO content was within the limits of 0 to 10% of the total Fe compounds in the glass. High transparency was made possible by the use of oxidizers; the optimum oxidizer was a mixture of equal amounts (0.05 to 0.075%) of As_2O_3 and Sb_2O_3. Fe_2O_3 in the glassmelt was 0.08%. Cf. *Ceram. Abstr.*, 1953, Nov., p. 189f. B.Z.K.

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V. V. Pollyak

2

Formation of open bubbles on surface of vertically drawn sheet glass. V. V. Pollyak. *Steklo i Keram.*, 10 [12] 12-14 (1953).—The causes of open bubbles should be sought in the conditions under which the surface of the sheet forms, regardless of the method of shaping. D.S.K.

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

POHLYAK, V.V.

Accelerating the melting of glass by using chemically active additives. I. D. Tykachinskii, L. I. Buneeva, V. V. Pollyak, A. G. Repa, E. P. Danil'chenko, and A. N. Afanas'ev. *Trudy VNIIS* 1953, No. 32, 3–10; *Referat. Zhur., Khim.* 1954, No. 18745.—The effect was studied of F and Ti compds., B, Ba, Mn, and Al oxides, NH_4 phosphates, chlorides, and some combined additives on the melting of alumino-magnesia charge of vertically drawn sheet glass. The various addns. affected the processes at the different stages of glassmaking. In addn. to standard procedures, specially devised tests were also used; these included detn. of the rate of vitrification by dissocn. in H_2SiF_6, detn. of temp. of the appearance of the vitreous phase from the appearance of luminescence, a method based on the ability of some glasses contg. admixts., e.g. U, to luminesce when irradiated by ultraviolet light. F and B compds., Ba sulfate, and Ba carbonate appreciably hasten the melting of glass. The industrial utilization of these additives is outlined.

M. Hosch

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POLLYAK, V.V.

BARDIN, Anatoliy Nikolayevich; GLEZAROVA, I.L., redaktor; SARKIN, I.G., zasluzhennyy deyatel' nauki, professor, redaktor; MEDVEDEV, N.M., kandidat khimicheskikh nauk, redaktor; IVANOV, L.V., inzhener, redaktor; CHURILOVSKIY, V.N., doktor tekhnicheskikh nauk, professor; KAPUSTINA, T.P., kandidat tekhnicheskikh nauk, dotsent; ROMANOVA, L.V., kandidat tekhnicheskikh nauk, dotsent; BOKIN, P.Ya., inzhener; POLLYAK, V.V., kandidat tekhnicheskikh nauk, redaktor; PANOVA, L.Ya., tekhnicheskiy redaktor.

[Technology of optical glass] Tekhnologiia opticheskogo stekla. Moskva, Gos. izd-vo lit-ry po stroitel'nym materialam, 1955. 494 p. (Glass, Optical) (MLRA 9:1)

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

POLLYAK, V.V.

Selection of optimum composition for window glass. L. G. GOL'DENBERG AND V. V. POLLYAK. *Steklo i Keram.*, 12 [12] 11-16 (1955).—"Dolomite" glass is the most satisfactory for the debiteuse method of vertical drawing. If the raw materials contain admixtures (K_2O, etc.), the glass composition can be changed so that the maximum rate of growth of crystals in the glass does not exceed 0.6 to 0.7 μ/min. and the temperature of the lower limit of crystallization is not below 800°. 4 figures, 6 references.

B.Z.K.

2

Matter

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POLLYAK, V.V.

ORLOVA, M.P.; POLLYAK, V.V.; TYKACHINSKIY, I.D.

Speeding up the melting process is a powerful means for increasing the productivity of glass furnaces. Stek. i ker. 14 no.9:1-4 S '57. (MIRA 10:10)

1.Vsesoyuznyy nauchno-issledovatel'skiy institut stekla.
(Glass manufacture)

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341820006-6

POLLYAK, V.V.; GRICHEVSKAYA, R.I.; STABROVSKAYA, P.A.

Using luminiscent indicators for the study of surface flow of the glass batch in tank furnaces. Trudy VNIIStekla no.37:44-49 '57.
(Glass manufacture) (MIRA 11:1)
(Luminescent substances)

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POLLYAK, V.V.

72-11-9/9

AUTHOR: Pollyak , V.V.

TITLE: The Development of the Glass Science in the Course of 40 Years (Razvitiye nauki o stekle za 40 let)

PERIODICAL: Steklo i Keramika, 1957, Nr 11, pp. 28 - 32 (USSR)

ABSTRACT: In the years 1918 - 1919 the first research institutes for glass and ceramics were founded and in 1922 they were transformed into the Institute for Silicates. In 1930 this institute was split up into two others: one for glass and one for ceramics. In 1943 the Institute for Glass Fiber was separated. In the years 1948 - 1950 all work on the physical chemistry of glass was united in the reestablished Institute for the Chemistry of Silicates. The support from the scientific research organization for the reconstruction and the development of glass industry began with the creation of a domestic raw material basis for glass production as well as for the production of fire-proof materials. In addition to this there has been the solution of the difficult lye problem which still is acute nowadays. Furthermore, the following problems are mentioned and described in detail which were solved by means of scientific organizations or which are being

Card 1/2

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The Development of the Science on Glass in the Course of 40 Years 72-11-9/9

investigated:

1.) The development of the production of optical glass as well as of Fresnel lenses.
2.) The use of glass in various economic fields.
3.) The acceleration of the glass-melting process.
4.) The creation of new fire-proof materials.
5.) The investigation of the possibilities to accelerate and perfect the methods of glass molding.
6.) The development of new kinds of glasses as well as of new methods of its preparation.
7.) The development of progressive methods of thermal and mechanical glass working.
8.) The development of glass fiber production and of its possibilities of use.
9.) The development of glass sculptures and of foam-glass.
10.) The investigation of physical-chemical systems of silicate-technology, of the glass structure etc. There are 2 figures.

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VILNIS, K.K.; POLLYAK, V.V.; STEPANENKO, M.G.

Most satisfactory temperature conditions for the melting end of glass tank furnaces. Stek. i ker. 15 no.4:1-5 Ap '58. (MIRA 11:5)

1. Institut stekla.

(Glass furnaces)

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72-58-6-1/19

AUTHOR: Pollyak, V.V.

TITLE: On the Optimal Temperature Regime of Glass Smelting From a Layer That Contains Sodium Sulfate (Ob optimal'nom temperaturnom rezhime varki stekla iz shikhty, soderzhashchey sul'fat natriya)

PERIODICAL: Steklo i Keramika, 1958, [illegible], Nr 6, pp. 1-4 (USSR)

ABSTRACT: The necessity of a high melting- and mass temperature was established by the work of K.K.Vilnis, V.V.Pollyak and M.G.Stepanenko (Ref). This is of particular importance for layers containing considerable quantities of sodium sulfate and sulfur compounds. As may be seen from fig. 1, the amount of the so-called alkali blowing increases in glass with a reduction of the melting temperature and vice versa, as is shown by V.T.Slavyanskiy's paper (Ref 1). Fig. 2 shows the influence exercised by mass temperature upon the solubility of sodium sulfate. The order in which reactions take place during the melting of glass from a layer of sodium was established by Ye.P.Danil'chenko, A.G.Repa, M.A.Bezborodov, L.A. Zhunin (Ref 2). I.I.Kitaygorodskiy and his collaborators found that an increase of the melting temperature of a layer of sulfate by 400° accelerates the forming of silicates by 2.5 times.

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Figure 3 gives data concerning the influence exercised by temperature, critical intervals, and the gas milieu upon the content of free sodium sulfate in the glass mass. Fig.4 shows the influence exercised by the temperature factor upon the modification of the weight per unit of volume of the glass mass. Fig. 5 shows that by adding quartz sand to the ready glass mass the quantity of Na_2SO_4 it contains is diminished in the case of an increase of concentration of SiO_2, viz. at the ratio of 0.03% SO_3 for each additional percent of SiO_2. The interaction between sulfur gas and the carbonates and silicates of the layer leads to the formation of free sulfate (see the paper by I.I.Kitaygorodskiy and Ya.A.Shkol'nikov) (Ref 2). It may be seen from what has been said above that, if the layer contains a considerable quantity of sodium sulfate, high melting- and glass-mass temperatures are indispensable. There are 5 figures, and 10 references, 5 of which are Soviet.

ASSOCIATION: Institut stekla (Glass Institute)

1. Glass--Production 2. Glass--Temperature factors 3. Sodium sulfate--Temperature factors 4. Sulfur compounds --Temperature factors

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SOV/72-59-11-5/1[illegible]

15(2)

AUTHORS: Vaynshteyn, A. L., Pronin, B. G., Pollyak, V. V.

TITLE: Optimum Chemical Composition of Vertically Drawn Glass by Means of Boats

PERIODICAL: Steklo i keramika, 1959, Nr 11, pp 12-17 (USSR)

ABSTRACT: Professor I. I. Kitaygorodskiy in 1935 was the first scientist in the Soviet Union to suggest an aluminum-magnesia composition for drawn glass. Table 1 gives the development of the composition of vertically drawn glass in the plants of the USSR. Here, particular mention is made of the papers by A. P. Zak, S. I. Ioffe, Myullenzifon (Footnote 1), and M. V. Okhotin, I. G. Bazhbeuk-Melikova (Footnote 2). Previously, the problem had been dealt with by L. G. Gol'denberg, V. V. Pollyak (Footnote 3), as well as M. V. Okhotin, R. S. Levina (Footnote 4) and N. V. Solomin (Footnote 5). In table 2, the plants are listed which use the so-called dolomite layers, which are characterized by a certain CaO- and MgO-correlation. On the strength of investigation results, the authors of this paper suggest that the plants producing plate glass should switch over to a uniform composition of the glass, which has proved successful at the Lisichansk window glass factory. This plant uses a boat

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Optimum Chemical Composition of Vertically Drawn Glass by Means of Boats SOV/72-59-11-5/12

which is shown in the figure. On the suggestion of workers of the Lisichansk factory, the authors of the present paper and A. T. Leonova, this plant, in 1958, operated with the following chemical composition of glass: 71.85% SiO_2; 2.04% R_2O_3; 4.36% MgO; 6.6% CaO; 10.96% MgO+CaO; 14.83% Na_2O+K_2O; 0.3% SO_3. Table 3 lists the production figures of this plant for 1957-59. The factory imeni Oktyabr'skaya revolyutsiya also achieved favorable results with this composition. The change-over of the plate-glass factories to the production of glass of this chemical composition permits improvements in the melting process, an increase in the output of furnaces and machines without any additional expenditure, and a simplification of the work in the various departments of the glass-works. Thus thousands of tons of soda and sodium sulphate can be saved for national economy. There are 1 figure, 3 tables, and 5 Soviet references.

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