"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

FRIDRICH, E.

Guinea-pig mineral metabolism. Jan Štěpán, Eduard Fridrich, Jaroslav Masopust, and František Musil (Ústav lékařské chem., Plzeň, Czech.). *Časopis Lékařů Českých* 93, 610-16(1954).—A case of Hg poisoning in a mine where $HgCl_2$-impregnated timber was used formed the starting point of the investigation. Six groups of 4 guinea-pigs each were fed the same diet. Duration of expt. was 140–180 days. Groups I and VI were given water from the mine (high Ca, Fe, presence of Hg); groups II, III, and V tap water; group IV tap water with 10^{-4} g. $HgCl_2$/cc. added; group III was kept in an atm. of Hg vapors; groups V and VI were infected with tuberculosis. Wt. curves, relative wts. of various organs, postmortem exams., histological findings, results of emission-spectroscope exams. of various organs and of the water fed are reported. Group I showed fragility of liver and kidney, groups I and IV reduction of adrenal cortex. Relative wt. of lungs, brain, heart, and kidneys was greatly increased in group III. The tuberculous animals (group V, VI) which showed the longest survival had more Fe in their livers and traces of vanadium in lungs and brain. Cu was lowered in tuberculous guinea pigs. P, Li, Zr, V, and Mo were found in the organs although absent from drinking water.

Ivo M. Hais

3

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

STEPAN, J.; VORTEL, V.; FRIDRICH, E.

Aluminum in guinea pig organs in normal & pathological conditions. Cas. lek. cesk. 97 no.6-7:214-217 14 Feb 58.

1. Ustav lekarske chemie university Karlovy, pobocky v Plzni (prednosta doc. J. Stepan) Ustav pathologicke anatomie VLA J. Ev. P. v Hradci Kralove (prednosta prof. Fingerland) Vyzkumny ustav organickych synthes Pardubice Rybitvi.

(PNEUMONIA, metab.
aluminum in guinea pigs (Cz))
(PERICARDITIS, metab.
same)
(ALUMINUM, metab.
in pericarditis & pneumonia in guinea pig (Cz))

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CZECHOSLOVAKIA/EAST GERMANY

HERINGOVA, A., KOLDOVSKY, O., NOACK, R., SCHENK, G., JIRSOVA, V., BRANA, H., CHYTIL, F., FRIDRICH, M., Institute for Care of Mother and Child, Physiological Institute, Microbiological Institute, Czechoslovak Academy of Sciences (Ustav pro Peci o Matku a Dite, Fysiologicky Ustav, Mikrobiologicky Ustav CSAV) Prague; Nutrition Institute (Institute fur Ernahrung) Rehbrucke.

"Activity of Beta-Galactosidase of Jejunum Homogenate and Isolated Fractions of Microparticles in 14 Day Old Rats."

Prague, Ceskoslovenska Fysiologie, Vol 15, No 2, Feb 66, pp 89-90

Abstract: The jejunum homogenate has maximum activity at pH 3.5, the microparticle fraction at pH 5.5. It appears that two beta-galactosidases are present in the jejunum. The two show different affinity for various substrates. 1 Figure, 4 Western, 1 Czech reference. Submitted at "16 Days of Physiology" at Kosice, 29 Sep 65.

1/1

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

FRIDRIKH, A.V.

New types of bulldozers for the mechanization of peat winning and road construction; results of their testing. Sbor.nauch. trud.Bel.politekh.inst. no.65:171-182 '59. (MIRA 13:5)

(Bulldozers) (Peat)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

FRIDRIH, K.

Removing stoppages of spiral breech-blocks in artillery weapons. p. 423.
VOJNO-TEHNICKI GLASNIK. Beograd. Vol. 4, no. 6, June 1956

SOURCE: East European Accessions List, (EEAL), Library of Congress,
Vol. 5, no. 12, December 1956

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

FRIDRIKH, K. (g.Senets (Chekhoslovakiya))

Machine for cutting desinewed meat. Mias.ind.SSSR 31 no.2: 48 '60. (MIRA 13:8)

(Meat cutting)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

FRIDRIKH, Z., Cand Tech Sci -- (diss) "Some problems in the theory of adjustable discretization of continuous signals." Moscow, 1960. 12 pp; (Ministry of Higher and Secondary Specialist Education RSFSR, Moscow Order of Lenin Power Inst); 250 copies; price not given; (KL, 26-60, 138)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

FRIDRIH, Zvonimir, major dr.

Carbon monoxide poisoning in motorized units. Voj. san. pregl., Beogr. 11 no.11-12:727-729 Nov-Dec 54.
(CARBON MONOXIDE, pois.
in motorized units)
(POISONING
carbon monoxide, in motorized units)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

FRIDRIKH, A.R.; KARPOVA, N.L., red.; MEDVEDEVA, M.A., tekhn.red.

[General cultural work among railroad employees; from the practice of trade-union organizations and cultural organizations of railroad transport] Kul'turno-massovaia rabota sredi zheleznodorozhnikov; iz opyta raboty profsoiuznykh organizatsii i kul'turno-prosvetitel'nykh uchrezhdenii zheleznodorozhnogo transporta. Moskva, Vses.izdatel'sko-poligr.ob"edinenie M-va putei soobshcheniia, 1960. 102 p. (MIRA 13:6)
(Railroads--Employees--Education and training)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

FRIDRIKH, A.V., inzhener; KRASNIKOV, A.B. inzhener.

Large-capacity D-351 tank trucks for bitumenous materials. Stroi. i dor. mashinostr. no.2:9-10 F '57. (MLRA 10:3)
(Tank trucks)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

FRIDRIKH, L.

Color combination curves of normal trichromats found by direct ("energy") measurements [with summary in English]. Biofizika 2 no.1:124 '57. (MLRA 10:3)

1. Institut biologicheskoy fiziki AN SSSR, Moskva
(COLOR SENSE) (COLORIMETRY)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

Country : USSR
Category : Human and Animal Physiology. T
Sense Organs. Eyesight.
Abs. Jour. : Ref Zhur-Biol., No 23, 1958, 106864

Author : Fridrikh, L.
Institut. : ~~Inst. Biol. Phys.~~, AN SSSR, Moscow.
Title : The Participation of Rod Vision in the Mechanics of the Light Adapted Human Eye.

Orig Pub. : Biofizika, 1957, 2, No 3, 342-347

Abstract : The author used a colorimeter of his own construction which works by the "substitution principle": both object and comparison fields are projected upon the same sector of the retina with one change of fields , occurs after a considerable time interval elapsed. Field brightness amounts to 400 mcb. For the extrafoveal sectors of the retina, field equalization were obtained by using not three but four basic colors. One of these "four-dimensional" equa-

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

Country : USSR
Category : Human and Animal Physiology. T
Sense Organs. Eyesight.
Abs. Jour. : Ref Zhur-Biol., No 23, 1959, 106064

Author :
Institut. :
Title :

Orig Pub. :

Abstract : (cont)

the same combination of four colors was recognized to equal the presented color for the entire retina with the exception of its pigmented center (about 2°). Using such methods, color equations were found which were valid for the entire retina for 10 different λ between 450 and 650 mmu. The addition curves, calculated on the basis of extrafoveal equations, concurred sufficiently in terms of exactness with addition

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E041/E321

AUTHOR: Fridrikh, Z.

TITLE: The Non-uniform Quantization of Continuous Signals

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiofizika, 1960, Vol 3, Nr 2, pp 316 - 327 (USSR)

ABSTRACT: This new method of quantizing is based on the theory of approximation to functions. The interval between sampling points is related to the order of the approximating polynomial by the permissible error in approximation, while the samples are taken, not of instantaneous values of the signal but of the approximating function. The normal location of an analogue-to-digital converter in an information link is shown in Figure 1, while Figure 2 shows the converter in more detail. The block A/D transforms the instantaneous value of a signal into a corresponding discrete value; the block YY controls the instant of sampling and is commanded by both source and receiver of information at the ends of the link. With uniform quantization the block YY is driven by a train of pulses of fixed frequency. A disadvantage is that the processed signal is characterised by large fluctuations. This may be

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E041/E321

The Non-uniform Quantization of Continuous Signals

overcome by further treatment of the signal or, as here, by non-uniform quantization. The only other non-uniform method used so far has been amplitude quantization. The approximation theory used here is to be found in Refs 6-8. The quantization of a signal lasting a time T consists of dividing this interval into uncorrelated sub-intervals τ_i (i = 1, 2, ..., N) during which the original signal is replaced by an approximating function. The equivalence may be represented either by the simple sum of all the segments, as in Eq (2) or as a finite part of a generalized Fourier series, as in Eq (4). In automatic control[9] and recording systems the criteria by which the approximation is affected are: Eq (5) uniform approximation; Eq (6) quadratic approximation; Eq (7) integral approximation. The block YY in Figure 2 must carry out the following operations cyclically: 1) calculate continuously the best approximate function; 2) evaluate the error in approximation continuously; 3) compare the error with that which is permissible and terminate the cycle at the instant of equality. How these operations are carried out

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E041/E321

The Non-uniform Quantization of Continuous Signals

for the three criteria mentioned above is explained in the subsequent three sections. For uniform approximation two cases are examined: zero-degree polynomial (as in Figure 4) and a first-degree function (as in Figure 5). The algorithms used for deriving the approximate functions for these two cases are deduced in Appendix 1. The corresponding procedures for polynomials of higher degree are much more complicated and have not been found. The integral approximation suffers from the need to undertake extensive arithmetic and to store a lot of information. The quadratic approximation is defined in terms of a least-squared error in Eq (18). The method is more suitable when the approximating polynomial is of high degree. The problem of reconstituting the information is briefly discussed and it is concluded that non-uniform quantization is most useful when there is a natural delay at the receiving end. The summary lists the advantages as: increased information density; constancy of transmission error; economy in recording. The disadvantages are: the need for continuous monitoring of

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E041/E321

The Non-uniform Quantization of Continuous Signals

the signal; complication in the quantizing controller YY ; delays introduced in the system; the need for synchronizing the reconstitution of the information; complicated reproducing equipment. There are 5 figures and 12 Soviet references.

ASSOCIATION: Moskovskiy energeticheskiy institut (Moscow Power Institute)

SUBMITTED: November 23, 1959

Card 4/4

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3rd AND 4TH ORDERS

26

B

Elektrokinetic Characteristics of Capillary Systems. I. Surface Conductivity. (In Russian.) I. I. Zhukov and D. A. Fridrikhsberg. *Kolloidnyi Zhurnal* (Colloid Journal), v. 11, May-June 1949, p. 163-171.

Surface conductivities of colloidion and ceramic diaphragms in solutions of various concentrations were studied. It was found that the relation of conductivity of a solution in the pores of a diaphragm to conductivity of the surrounding solution may attain very high values. The phenomenon of "capillary superconductivity" was also noted and investigated. Experimental method is described and data are tabulated. 11 ref.

COMMON ELEMENTS

MATERIALS INDEX

COMMON VARIABLES INDEX

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

CA

Chemistry Faculty.

Changes of the transference numbers of ions in porous membranes. I. I. Zhukov and D. A. Fridrikhsberg (Univ., Leningrad). *Kolloid. Zhur.* 11, 395-400(1949); cf. *C.A.* 45, 7[illegible].—The difference between the transference no. of cation in bulk (n) and in the membrane is $\Delta = (\varphi - 1)n + [(t - \varphi n)\varepsilon_s]/(\varepsilon + \varepsilon_s)$; φ represents the effect of the electrosmotic movement of the soln. in the membrane, t is the transference no. in the double layer, ε_s is the surface cond., and ε is the bulk cond. This equation is more general than Bikerman's (*C.A.* 29, 3579[illegible]). In very fine pores $\varphi = 1$ and both specific surface cond. $\varkappa$ and t are independent of the electrolyte concn. and of the pore radius r. In these instances, $(1/\Delta) = [1/(t - n)] + r\varepsilon/2\varkappa(t - n)$. Expts. confirmed that $1/\Delta$ is a linear function of ε. When the KCl concn. varied between 0.001 and 0.01 N, $\varkappa$ was 2.0-2.1 $\times 10^{-10}$ ohm for collodion membranes having r between 4 and 24 mμ, 1 $\times 10^{-10}$ for collodion made pos. with nigrosine (r = 20 mμ), and 1.2-1.4 $\times 10^{-10}$ for ceramic membranes having r of 116 and 134 mμ. The t was 0.91 for collodion, 0.89 for collodion + nigrosine, and 0.96 for ceramic material; within the double layer, the current is carried mainly by one kind of ion. For KCl and collodion, the transference no. in the membrane was 0.50 + 0.164(0.40 + $\varepsilon r \times 10^{-9}$), and for KCl and ceramic material it was 0.50 + 1.196(2.6 + $\varepsilon r \times 10^{-9}$). The Δ was detd. by potentiometric titration of the anodic and cathodic compartments with $AgNO_3$.

J. J. Bikerman

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

FRIDRIKHSBERG, A.A.

CA

2

Electrokinetic characteristics of capillary systems. III. The electrokinetic potential. I. I. Zhukov and D. A. Fridrikhsberg (Univ. Leningrad). *Kolloid. Zhur.* 12, 25-31(1950); cf. *C.A.* 44, 3338d.--The streaming potential of 0.001-0.01 *N* KCl in collodion membranes (pore radius r = 4-257 mμ) and ceramic membranes (r = 110-270 mμ) was detd. The ζ-potential was greater the greater r and had a max. at small concns. c. When ζ was corrected for surface cond., both the dependence of ζ on r and the max. of ζ disappeared. The dependence of c corresponding to max. ζ on surface cond. is calcd.

J. J. Bikerman

Leningrad Order Lenin State Univ. im. A.A. Zhdanov, Chemistry Faculty, Sci. Res. Chemical Inst.

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

MISHCHUK, N. N.; FRIDRIKHSBERG, D. A.

Method of quantitative evaluation of capillary permeability in electrophoresis of urticariogenic substances. Vest. vener., Moskva no.5:35-37 Sept-Oct 1951. (CLML 21:1)

1. Prof. Mishchuk. 2. Of the Biophysical Laboratory (Head — Senior Scientific Associate D. A. Frindrikhsberg), Leningrad Scientific-Research Institute of Physiotherapy and Health Resort Therapy (Director — Prof. N. N. Mishchuk), State Institute for the Advanced Training of Physicians.

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

USSR

Studies of electroösmosis on isolated and living skin of animals and humans. D. A. Fridriksberg and S. S. Tolskachev. *Uchenye Zapiski, Leningrad. Gosudarst. Univ. im. A. A. Zhdanova* No. 150, *Ser. Khim. Nauk*, No. 10, 128-33 (1951).—In expts. on rabbits, piglets, and human subjects, with use of solns. of NaCl, KCl, $CaCl_2$, $MgSO_4$, $AlCl_3$, HCl, HOAc, Iodol, codeine phosphate, platyphylline, methylene blue, and other substances, at various concns., it was shown that in live skin (as distinguished from isolated skin), movement of materials takes place exclusively by ionophoresis, and not at all by electroösmosis. Tests were conducted in the c.d. range 0.2-0.5 ma./cm.^{2} In expts. with $AlCl_3$, platyphylline, and methylene blue, an anomalous reversal of current was attributed to overcharging the skin.

C. H. Fuchsman

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

USSR

The determination of the transference number of ions (ionophoresis) on isolated and living skin of animals and humans. D. A. Fridrikhsberg and S. S. Tolkachev. *Uchenye Zapiski, Leningrad. Gosudarst. Univ. im. A. A. Zhdanova* No. 150, *Ser. Khim. Nauk.* No. 10, 137-53(1951).—The values of the ionophoretic transference no. (n) were detd., by use of diaphragms of isolated skin (I) and living skin (II). The results were independent of the source of the skin (rabbits, piglets, humans). For I the n values were: Cl^- (in 0.01*N* NaCl), 0.52 ± 0.03; Na^+ (in 0.01*N* NaCl), 0.48 ± 0.03; Mg^{++} (in 0.1*N* $MgSO_4$), 0.44 ± 0.02; Cu^{++} (in 0.1*N* $CuSO_4$), 0.10 ± 0.04; methylene blue cation (0.1% methylene blue, with or without addns. of glucose or alc.), 0.002 ± 0.001-0.004 ± 0.003, codeine cation (in 0.5-2% codeine phosphate), 0.08-0.12 ± 0.02; lydol cation (in 0.5% lydol), 0.005-0.10; platyphylline cation (in 5% platyphylline), 0.008. II shows asymmetric characteristics. The values for n in II are: Cl^- (in 0.01*N* NaCl), 0.68 ± 0.02; I^- (in 0.02*N* NaI and 0.003-0.03*N* KI), 0.51 ± 0.02-0.58 ± 0.03; Na^+ (in 0.01*N* NaCl and 0.02-0.1*N* $NaNO_3$), 0.66 ± 0.04-0.67 ± 0.02; Mg^{++} (in 0.1*N* $MgSO_4$), 0.43 ± 0.02; codeine cation (in 0.5% codeine phosphate), ≤0.28; dionin cation (in 1-3% dionin), 0.18 ± 0.03.

C. H. Fuchsman

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

BATUNER, L.M.; POZIN, M.Ye.; PROTASOV, A.M., redaktor; FRIDRIKHSBERG, D.A., redaktor; ERLIKH, Ye.Ya., redaktor.

[Mathematical methods in chemical technology] Matematicheskie metody v khimicheskoi tekhnike. Pod obshchei red.M.E.Pozina. Leningrad, Gos.nauchno-tekhn. izd-vo khim. lit-ry, 1953. 447 p. (MLRA 7:2)

(Chemistry) (Mathematics)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

FRIDRIKHSBERG, D.A.; GUTMAN, K.M.

Electrophoresis through collodion membranes. Koll.zhur. 15 no.4:299-307 '53. (MLRA 6:8)

1. Leningradskiy gosudarstvennyy universitet imeni A.A.Zhdanova. Kafedra kolloidnoy khimii. (Cataphoresis) (Collodion)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

FRIDRIKHSBERG, D.A.

USSR.

Electrophoresis through collodion membranes. D. A. Fridrikhsberg and K. M. Gutman. *Colloid J. U.S.S.R.* 16, 150(1954)(Engl. translation).—See *C.A.* 48, 8822k. Reply to Teman. *Ibid.* 161. H. L. H.

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

FRIDRIKHSBERG, D. A.

1

Comments on "Electrophoresis through collodion membranes" by D. A. Fridrikhsberg and K. M. Gutman. Miroslav Tomin (Inst. Agrochem. Technol., Bratislava, Czech.). *Kolloid. Zhur.* 16, 152(1954).—The results of T. and G. (*C.A.* 47, 11886a) probably are due to the inhomogeneity of the membrane; the liquid moves from right to left through some, and from left to right through other pores. Reply to Tomin. D. A. Fridrikhsberg and K. M. Gutman (A. A. Zhdanov State Univ., Leningrad). *Ibid.* 16, 153.—The effect described by T. probably accounts for 10% of the total effect. J. J. Bikerman

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

GRIGOROV, Oleg Nikolayevich, professor; KARPOVA, I.F.; KOZ'MINA, Z.P.; FRIDRIKHSBERG, D.A.; KELAREV, L.A., redaktor; IVANOVA, A.V., tekhnicheskiy redaktor

[Manual of experiments in colloid chemistry] Rukovodstvo k prakticheskim zaniatiiam po kolloidnoi khimii. [Leningrad] Izd-vo Leningradskogo univ., 1955. 211 p. (MLRA 9:10)
(Colloids)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

BATUNER, L.M.; POZIN, M.Ye., professor; PROTASOV, A.M., redaktor; FRIDRIKHSBERG, D.A., redaktor; FOMKINA, T.A., tekhnicheskiy redaktor

[Mathematical methods in chemical technology] Matematicheskie metody v khimicheskoi tekhnike. Izd. 2-oe, dop. Pod obshchei red. M.E.Pozina. Leningrad, Gos.nauchno-tekhn. izd-vo khim. lit-ry, 1955. 481 p. (MLRA 9:7)

(Mathematics) (Chemistry, Technical)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

GRIGOROV, O.N.; KOZ'MINA, Z.P.; MARKOVICH, A.V.; FRIDRIKHSBERG, D.A.; ZHUKOV, Ivan Ivanovich [deceased]; REBINDER, P.A., akademik, otvetstvennyy redaktor; KREMLEV, L.Ya., redaktor izdatel'stva; OKERBLOM, M.N., redaktor izdatel'stva; RAVDEL', A.A., redaktor izdatel'stva; KIRNARSKAYA, A.A., tekhnicheskiy redaktor

[Electrokinetic characteristics of capillary systems; a monographic collection of experimental studies] Elektrokineticheskie svoistva kapilliarnykh sistem; monograficheskii sbornik eksperimental'nykh issledovanii. Vyp.pod rukovodstvom I.I.Zhukova ego uchenikami. Moskva, 1956. 352 p. (MLRA 9:11)

1. Akademiya nauk SSSR. Otdeleniye khimicheskikh nauk. 2. Chlen-korrespondent AN SSSR. (for Zhukov)
(Electrocapillary phenomena)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

FRIDRIKHSBERG, D.A.

USSR/Physical Chemistry - Colloid Chemistry. B-14
Disperse Systems

Abs Jour : Referat Zhur - Khimiya, No 2, 1957, 4057

Author : Fridrikhsberg D.A., Ginzburg A.A.
Title : Investigation of Colloid-Chemical Processes in Clayey Solutions and Their Use in Strengthening Borehole Walls

Orig Pub : Zh. prikl. khimii, 1956, 29, No 7, 996-1006

Abstract : By means of model experiments on filtration of clayey solutions (CS), hydrophilized by an addition of alkaline coal extract, through a layer of quartz sand of different degree of dispersion, a study has been made of the causes of CS losses during sinding of boreholes. On filtration of CS through soil having very small interstices a clayey crust is formed which has very low permeability to water as a result of which the CS is retained in the borehole whereas in soils with large interstices no such crust is formed and loss of water is associated,

Card 1/3 - 253 -

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USSR/Physical Chemistry - Colloid Chemistry. Disperse Systems B-14

Abs Jour : Referat Zhur - Khimiya, No 2, 1957, 4057

essentially, with a "removal of CS into the stratum". This removal of CS is shown to increase with increasing degree of dispersion and to decrease sharply with increase of static shear stress Θ . Minimum pressure P_o at which begins a flow of CS through a layer of sand of thickness ℓ , with an effective radius of particles R, is determined by the following equation derived by the authors:
$P_o = (2\ell/0.414)(\Theta/R)$ dn/cm^2, which has been confirmed by results of the experiments with models. To decrease the removal of CS the authors propose to coagulate them directly within the sand layer by pumping a solution of a fixing agent into the borehole after loss of CS is detected. Effective fixing agents are 1% solutions of $CaCl_2$ and $FeSO_4$, which increase the viscosity of CS

Card 2/3 - 254 -

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USSR/Physical Chemistry - Colloid Chemistry. B-14
Disperse Systems

Abs Jour : Referat Zhur - Khimiya, No 2, 1957, 4057

within the soil by 30-40 times; following fixation a layer of sand 8 cm thich retains CS up to a pressure of 0.25 atmosphere. In seacoast areas it is recommended to utilize as fixing agent sea water saturated with lime.

Card 3/3 - 255 -

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

FRIDRIKHSBERG, D.A.

2

Colloid-chemical processes in drilling fluids and their utilization in casing up drilling holes [illegible] and A. S. Gurzburg. [illegible] 93: 1950 (English translation [illegible]

MT

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

FRIDRIKHSBERG, D. A.

2

Electrophoretic deposition of the dispersed phase in clay suspensions. D. A. Fridrikhsberg and Se-Yuan Tsai. A. Zhdanov State Univ., Leningrad. Zhur. Prikkl. Khim. 29, 1656-64(1956).—The theory of electrophoresis [illegible] veloped for conditions of flow perpendicular and longitudinal with respect to the anode. Expts. with these types of appr. were made to det. the effect of desalting, stabilizers (NH_4 and water-glass d. 1.60), concn. of suspension, c.d., rate of feed, and the character of the clay deposited on the anode. The exptl. results supported the theoretical equations. For practical purposes the best conditions were stabilizers NH_4 or water glass 0.7-1 g./kg. clay; c.d. 100-25 amp./sq. m.; rate of flow of the suspension 15-20 l./min./sq. m. of anode surface. Under these conditions from a 10% suspension of clay contg. 1 g./kg. of salt about 0.7 tons/day/sq. m. was obtained at an expense of 150-250 kw.-hrs./ton, and from a 30% suspension about 2 tons at the expense of 50-80 kw.-hrs./ton.

I. Benedictus

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

Fridrikhsberg, D.A.

TSYGIR, Ye.N.; FRIDRIKHSBERG, D.A.

The effect of foreign ("parasitic") ions on the process of ionophoresis [with summary in English]. Vest. LGU 12 no.16:103-116 '57. (MIRA 10:11)

(Electrophoresis)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

Fridrikhsberg, D.A.

Electrophoresis through membranes. D. A. Fridrikhsberg and K. M. Gutman. Uchenye Zapiski Leningrad Gosudarst. Univ. im. A. A. Zhdanova No. 211, Ser. Khim. Nauk No. 15, 40–63(1957).—Electrokinetic characteristics (ζ-potential, transport nos., surface cond.) of colloidal membranes in aq. solns. of complex org. ions (Congo red, methylene blue), high-mol.-wt. compds. (albumin, [illegible]) colloidal solns. (Au sol) are described. The dyes studied are dissocd. into ions in dil. aq. soln. The theoretical assumption that electrophoresis of complex org. ions and sols through a membrane is suppressed by the electroosmotic current of liquid until a complete closing occurs is proved experimentally. Current yield is increased 10–15 times in an app. without transport as compared to one with transport. Exptl. study of "electroosmotic component" of the variation of transport no. in membranes proves the theory. Complex org. ions (dyes, etc.) and colloid particles through membranes should be electrodialyzed in a hermetically closed dialyzer. This gives a better current yield.

A. I. [illegible]

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

FRIDRIKHSBERG, D. A.

SAMARIN, Yu.N.; FRIDRIKHSBERG, D.A.; TOKLACHEV, S.S.

Physical and chemical study of ionophoresis. Report No.: Electrophoresis of dionin. Vop.kur.fizioter. i lech.fiz.kul't. 22 no.4: 3-7 Jl-Ag '57. (MIRA 10:11)

1. Iz Leningradskogo instituta fizioterapii i kurortologii (dir. - kandidat meditsinskikh nauk G.S.Antonov)
(ELECTROPHORESIS) (MORPHINE)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

FRIDRIKHSBERG, D.A.; GINZBURG, A.A.

Colloidal and chemical processes in clay solutions and their utilization in reinforcing up drilling holes. Zhur.prikl.khim. 29 no.7:996-1006 Jl '57. (MIRA 10:10)

1.Kafedra lolloidnoy khimii Leningradskogo gosudarstvennogo universiteta im. A.A. Zhdanova.
(Oil well cementing) (Clay)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

RUTSKOV, Aleksandr Pavlovich,; FRIDRIKHSBERG, D.A., red.; ERLIKH, D.Ya.,tekhn.red.

[Short course of colloidal chemistry] Kratkii kurs kolloidnoi khimii. Leningrad, Gos. nauchno-tekhn. izd-vo khim. lit-ry, 1958. 279 p. (MIRA 11:12)

(Colloids)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

FRIDRIKHSBERG, D. A.; TELETOV, S. G.; and GRIGOROV, O. N.;

"The electrokinetic properties of colloids in connection with their coagulation by electrolytes."

report presented at the Fourth All-Union Conference on Colloidal Chemistry, Tbilisi, Georgian SSR, 12-16 May 1958 (Koll zhur, 20,5, p.677-9, '58, Taubman, A.B)

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

SOV/54-59-3-16/21

5(4)

AUTHORS: Fridrikhsberg, D. A., Gadkin, L. R.

TITLE: Investigation of the Flow Potential and Surface Conductivity in Organic Liquids and Their Aqueous Solutions

PERIODICAL: Vestnik Leningradskogo universiteta. Seriya fiziki i khimii, 1959, Nr 3, pp 99 - 105 (USSR)

ABSTRACT: The measurement of the ζ-potential and the surface activity is of importance for both the theoretical treatment of the electrochemical properties of suspensions and for the control of technological processes. The Soviet author Berkman is mentioned in connection with a review on publications of the existing methods of measurement. The present paper deals with the investigation of the flow potential of the substances $BaCO_3$ (powdery) and the liquid phases of the systems: methyl alcohol - water, acetone - water, methyl alcohol - acetone, ethyl alcohol - water, methyl alcohol - water - $BaCO_2$. All systems are saturated as regards $BaCO_3$. Further investigations dealt with the aqueous $BaCl_2$-solutions (0.1, 0.01, 0.003 and 0.001 n). Flow potential and resistance of the diaphragm were measured

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

Investigation of the Flow Potential and Surface Conductivity in Organic Liquids and Their Aqueous Solutions SOV/54-59-3-16/21

on an apparatus which is also used by Zhukov and Kryukov and in other research work of the Kafedra kolloidnoy khimii (Chair of Colloidal Chemistry). Figure 1 shows the scheme of the surface potential measuring device, and figure 2 the amplifier scheme for measuring high resistances. A direct dependence of E on pressure P (Fig 3) resulted from the measurement of the flow potential E. The specific conductivity of the liquid in the diaphragm pores was determined from the resistance of the diaphragm and the diaphragm in a determined solution κ, the efficiency coefficient α and the specific surface conductivity κ_s. The table contains the values obtained for a number of systems. On this basis the ζ-potential was calculated according to the Helmholz-Smolukhovskiy equation. D and η were taken from the table (Refs 16,17). As D and η cannot be measured in an electric double-layer, it is not possible to determine the ζ-potential in dependence on the medium. Also the values for ζ given in this paper are only for purposes of orientation. The value E/P, on the other hand, proved to depend on its composition in all media investigated, and the following rule was observed: The smaller the water content of the solutions, the higher

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was the flow potential. Thus, the liquids are not so well conductive, and the potential difference due to counter-flow, drops. Surface conductivity drops at low water content, and the efficiency coefficient passes through a minimum. This is explained in the following way: due to decreasing surface dissociation also α and κ_S decrease (Figs 4,5,6). As the value κ_V (referred to the volume) decreases even more rapidly, α increases again with further decreasing water content as a result of ratio

$$\alpha = \frac{\kappa_V + \kappa_S}{\kappa_V}$$

. The mutual dependence has to be investigated even more closely in the case of anhydrous systems. There are 6 figures, 1 table, and 17 references, 5 of which are Soviet.

SUBMITTED: July 5, 1959

Card 3/3

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

FRIDRIKHSBERG, D.A.; GUDKIN, L.R.

Streaming potential and surface conductivity investigations in organic liquids and their aqueous solutions. Vest.LGU 14 no.16: 99-105 '59. (MIRA 12:10)
(Organic compounds--Electric properties)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

FRIDRIKHSBERG, D.A.; BOL'SHAKOVA, Yu.S.; LIPSHITS, T.S.

Relation between the specific electric conductivity and the porosity of soils. Koll.zhur. 22 no.3:357-364 My-Je '60. (MIRA 13:7)

1. Leningradskiy universitet im. A.A.Zhdanova.
(Soil research)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

FRIDRIKHSBERG, D.A.; GERASIMOVA, N.G.; POPKOVA, L.P.

Surface conductivity study in the region of the isoelectric state. Koll. zhur. 22 no.4:489-496 Jl-Ag '60. (MIRA 13:9)

1. Leningradskiy universitet im. A.A.Zhdanova, Kafedra kolloidnoy khimii.
(Ions--Migration and velocity) (Isoelectric point)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

FRIDRIKHSBERG, D.A.; SIDOROVA, M.P.

Relationship between the phenomenon of induced polarization and the electrokinetic properties of capillary systems. Vest.LGU 16 no.4:57-69 '61. (MIRA 14:3)
(Polarization (Electricity))
(Capillarity)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

LIN GUAN-TSAN [Ling Kuang-ts'ang]; FRIDRIKHSBERG, D.A.

Study of surface conductance depending on temperature, solution composition, and its concentration. Vest. LGU. 18 no.16:77-87 '63.

Study of electrokinetic potential depending on temperature, solution composition, and its concentration. 88-93

(MIRA 16:11)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

KARPOVA, I.F.; SMIRNOVA, V.N.; FRIDRIKHSBERG, D.A.

Electrokinetic properties of copper ferrocyanide precipitates obtained under various conditions. Vest. LGU 19 no.4:99-104 '64. (MIRA 17:3)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

FRIDRIKHSBERG, D.A.; BARKOVSKIY, V. Ya.

Surface conductance, ζ-potential, and adsorption on barium sulfate membranes. Koll. zhur. 26 no.6:722-729 N-D '64 (MIRA 18:1)

1. Leningradskiy universitet imeni A.A. Zhdanova.

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

GRIGOROV, O.N., prof.; KARPOVA, I.F.; KOZ'MINA, Z.P.; TIKHOMOLOVA, K.P.; FRIDRIKHSBERG, D.A.; CHERNOBEREZHSKIY, Yu.M.; MYASNIKOVA, L.B., red.

[Manual on laboratory work in colloid chemistry] Rukovodstvo k prakticheskim rabotam po kolloidnoi khimii. Izd.2., perer. i dop. Moskva, Khimiia, 1964. 330 p. (MIRA 18:3)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

ABRAMOVA, N.A., nauchn. sotr.; BEL'CHENKO, G.V., kand. tekhn. nauk; BERENBLIT, V.V., nauchn.sotr.; VASIL'YEV, V.P., kand.khim. nauk; DOBYCHIN, D.P., doktor khim. nauk; IOFFE, B.V., dokt. khim.nauk; KAMINSKIY, Yu.L., nauchn.sotr.; KARPOVA, I.F., kand. khim. nauk; KOPYLEV, B.A., doktor khim. nauk; LUTUGINA, N.V., kand. khim. nauk; MATEROVA, Ye.A., kand. khim. nauk; MORACHEVSKIY, Al.G., kand. khim. nauk; MORACHEVSKIY, An.G., kand. khim. nauk; NIKEROV, A.E., kand. khim. nauk; PAL'M, V.A., kand. khim. nauk; RABINOVICH, V.A., kand. khim. nauk; SOKOLOV, P.N., kand. khim. nauk; FRIDRIKHSBERG, D.A., kand. khim. nauk; TSYGIR, Ye.N., nauchn. sotr.; SHAGITSULTANOVA, G.A., kand. khim. nauk; SHKODIN, A.M., doktor khim. nauk; YATSIMIRSKIY, K.B.; GRIGOROV, O.N., doktor khim. nauk, red.; ZASLAVSKIY, A.I., kand. khim. nauk, red.; MORACHEVSKIY, Yu.V., prof., red.; RACHINSKIY, F.Yu., kand. khim. nauk, red.; POZIN, M.Ye., doktor tekhn. nauk, red.; PORAY-KOSHITS, B.A., doktor khim. nauk, red.; PROTASOV, A.M., kand. fiz.-mat. nauk, red.; ROMANKOV, P.G., red.

[Handbook for the chemist] Spravochnik khimika, 2. izd., perer. i dop. Moskva, Khimiia. Vol.3. 1964. 1004 p. (MIRA 18:1)

1. Chlen-korrespondent AN SSSR (for Romankov). 2. Deystvitel'nyy chlen AN Ukr.SSR (for Yatsimirskiy).

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

FRIDRIKHSBERG, D.A.; PAVLOVA, L.S.

Relation between the diffusion coefficients and the electrokinetic properties of membranes. Koll. zhur. 27 no.1:113-120 Ja-F '65. (MIRA 18:3)

1. Leningradskiy universitet imeni Zhdanova, Khimicheskiy fakul'tet.

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

NIKOL'SKIY, B.P., glav. red.; GRIGOROV, O.N., doktor khim. nauk, red.; PORAY-KOSHITS, B.A., doktor khim. nauk, red.; POZIN, [redacted] nauk, red.; ROMANKOV, P.G., red.; FRIDRIKHSBERG, D.A., kand. khim. nauk, red.; RABINOVICH, V.A., kand. khim. nauk, red.; RACHINSKIY, F.Yu., kand. khim. nauk, red.; ZAYDEL', A.N., doktor fiz.-mat. nauk, red.; ZASLAVSKIY, A.I., kand.khim. nauk, red.; MORACHEVSKIY, Yu.V., prof., red.; GRIVA, Z.I., red.; KOTS, V.A., red.; TOMARCHENKO, S.L., red.

[Chemist's handbook] Spravochnik khimika. 2., izd., perer. i dop. Moskva, Khimiia. Vol.4. 1965. 919 p. (MIRA 19:1)

1. Chlen-korrespondent AN SSSR (for Nikol'skiy, Romankov).

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

FRIDRIKHSEN, V.; ZHDANOV, A.

Effect of the degree of heating on the double skin defect in aluminum-killed low-carbon steel. Metallurg 7 no.5:26 My '62. (MIRA 15:5)

1. Novosibirskiy metallurgicheskiy zavod.
(Steel ingots--Defects) (Rolling (Metalwork))

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FRIDRIKHSEN, V.K.; PAL'MINA, K.B.; TRET'YAKOV, A.V.

Changes in the mecharical properties of metals during cold rolling. Prokat. proizv. no.2:14-20 '60. (MIRA 14:11)
(Metals--Cold working)
(Rolling(Metalwork))

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

S/028/61/000/005/003/004
D210/D306

AUTHORS: Ivanov, F.D. and Fridrikhsen, V.K.

TITLE: Remarks on the standard specifications for metal production

PERIODICAL: Standardizatsiya, no. 5, 1961, 33-36

TEXT: Components made of structural alloy steel are subjected to special types of heat treatment which are designed to take the utmost advantage afforded by the alloying elements. The authors wonder whether it is expedient in such a case to lay down a lower limit of UTS for the following annealed steel sheet: 65 G, 10 G2A, 12G2A, 25KhGSA and 30KhGSA, standard specifications GOST 1542-54 and GOST 2672-52. These specifications do not take into account the relationship between mechanical properties and thickness of sheet, annealed in bell furnaces. However, as it is known that the plasticity of cold-rolled and annealed steel sheet increases with a decrease in thickness, the heat treatment given must be appropriate

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for the thickness of the sheet in order to ensure the properties required by the standard specification for a particular sheet steel. This often entails lengthy and complicated heat treatment operations. Often a sheet is produced which fulfils the requirements of the standard specification, but is found to be non-uniform in its properties in different directions. In order to make the standard specifications more realistic, only the maximum UTS and minimum percentage elongation should be laid down. If, however, the minimum UTS is also quoted, then the above specifications should be altered so as to take into account the dependence of the mechanical properties on the sheet thickness. Another point discussed by the authors is grain size specifications. The lower limit of grain size set out in GOST 914-56 for cold rolled sheet for deep drawing is point 9 on the grain size scale; for hot-rolled sheet of the same deep drawing group, point 10 grain size is permissible. However, it is evident that in the first case the recrystallization characteristics of still steel have not been taken into consideration. On the other hand, if a

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production process is well established, certain tests (e.g. exposure of pipe and rims of sheet by the Ericson test, bend testing of thin carbon-steel, etc.), laid down in the specifications, could be safely omitted as they tend to show up the best properties of manufactured goods. Works experience has shown that it is advisable to test only those standard probes which show up the worst, and not the best, properties of the metal. Such a reduction in control testing would reduce consumption of metal and labour to a considerable extent. There are 2 figures and 2 tables.

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L 61488-65 EWP(e)/EWT(m)/EWP(i)/EWA(d)/EWP(t)/EWP(k)/EWP(z)/EWP(b)/EWA(c)
Pf-4 IJP(c) MJW/JD/HW

ACCESSION NR: AP5017690 UR/0133/65/000/007/0647/0649
669.141

AUTHOR: Belorusov, S. N.; Ivanov, F. D.; Kolekhsayev, V. Ya.; Lashko, N. F.; Sokolova, Z. N.; Fridrikhsen, V. K.

TITLE: Experimental manufacture of composite structural steel sheets with a ductile inner layer

SOURCE: Stal', no. 7, 1965, 647-649

TOPIC TAGS: structural steel, high strength steel, steel plate, steel sheet composite plate, composite sheet, composite steel strength, composite steel ductility/3VK composite steel, 5VK steel

ABSTRACT: Composite three-layer sheets of 3VK structural steel were made by hot rolling packs assembled from 100—120 x 650 x 2500 mm slabs of Cr-Ni-Mo structural steel, thinner slabs (25—45 x 650 x 2360 mm) of the same steel with a somewhat lower content of carbon and alloying elements, and an 8—10 mm layer of iron powder between the slabs. The assembled packs held under a pressure of 160t (1.57 Mn) were tack welded, and then welded along the entire perimeter. The welded packs, 125, 145, or 175 mm thick, were hot rolled to a thickness of 19—20 mm in the roughing train and then to a thickness of 2.5—4.0 mm in the finishing train. The thicknesses of individual layers in the pack were 120, 8, and 40 mm and in the finished

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ACCESSION NR: AP5017690

2

sheets(4.10 mm thick) 3.06, 0.06, and 0.98 mm. Thus the reductions of the heavy and the light slabs were almost the same: 39.2 and 41.0, respectively. The tensile strength of composite 3VK sheets cold rolled to a thickness of 2.5 mm, austenitized at 880, quenched and tempered at 190C, was 162 kg/mm^2, i.e., about 95% of the tensile strength of heat-treated steel of the heavy layer. However, composite 3VK steel had a true strength 25% higher, a reduction in area 60% higher, and a notch toughness 3—4 times higher (15—20 instead of 4—6 kg.m/cm^2). Higher resistance to brittle fracture of composite structural steels was especially pronounced in static and dynamic low-temperature tests. For example, the σ_T/σ_B ratio (where σ_T is the tensile strength of specimens with an artificial sharp crack and σ_B is the tensile strength of smooth specimens equal to 165—170 kg/mm^2) for 3VK steel was 0.84 and 0.52 at 20 and -196C, respectively. The corresponding figures for 30KhGSA cast steel heat treated to the same σ_B were 0.72 and 0.20. Orig. art. has: 3 figures and 3 tables. [MS]

ASSOCIATION: none

Bi metals, Cladding

SUBMITTED: 00 ENCL: 00 SUB CODE: MM

NO REF SOV: 000 OTHER: 000 ATD PRESS: 4052

Card 2/2

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FRIDRIKHSEN, V.K., inzh.; SOKOLOVA, Z.N., inzh.; Prinimali uchastiye: SOKOLOV, Ye.V., inzh.; BULAT, S.I., inzh.; TANIN, R.V., inzh.; KURBATOV, G.A., tekhnik; BURKOVA, T.D., tekhnik; LADYKA, M.A., laborant

Rolls on a semicontinuous hot rolling strip mill. Stal' 22 no.9:817-821 S '62. (MIRA 15:11)

(Rolls (Iron mills))

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FRIDRIKHSON, E. [Fridrihsons, E.]

Rotation of crops in the Baltic countries. Zemledelie 26 no.5:72-74 My '64. (MIRA 17:6)

1. Zamestitel' direktora po nauke Mezhotnenskoy selektsionno-opytnoy stantsii.

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

ACC NR: AP6031127 SOURCE CODE: UR/0197/66/000/008/0119/0126

AUTHOR: Germane, S. K.; Kimenis, A. A.; Popova, N. A.; Fridrikhson, E. Ya.

ORG: Institute of Organic Synthesis, AN LatSSR (Institut organicheskogo sinteza AN LatSSR)

TITLE: Toxicology of the new herbicide phenzaone (chlorazan) 1-phenyl-4-amino-5-chloropyridazone-6

SOURCE: AN LatSSR. Izvestiya, no. 8, 1966, 119-126

TOPIC TAGS: herbicide, toxicology, animal experiment, weed killer, pyridine, phenyl compound, mouse, rabbit

ABSTRACT: Results of a toxicological study of 1-phenyl-4-amino-5-chloropyridazone-6 showed that it possessed low toxicity for mice feeding upon it or receiving it interperitoneally. Field tests on rabbits showed that irritating amounts of the compound did not affect growth nor cause pathological changes in organs and tissues of rabbits. [WA-50; CBE No. 12]

SUB CODE: 06/ SUBM DATE: 10Mar66/ ORIG REF: 006/ OTH REF: 006/

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

FRIDRIKHSON, R.

"Latvia" radio-phonograph combination. Radio no.4:53-56 Ap '60. (MIRA 13:8)
(Phonograph) (Radio--Receivers and reception)

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

FRIDRIKSON, Ya[Fridriksons, J.]; KLYUCHINSKAYA, L.

Criminal and criminal procedure codes of the Latvian S.S.R., a new stage in the development of Latvian law. Vestis Latv ak no.9:21-30 '61.

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

BASHKIREV, A.G.; ROMASHKAN, V.S.; FRIDSHTAND, D.A.

Decoding of conflicting signals in a noncontact telemechanic device for natural gasl fields. Avtom. i prib. no.4:58-60 O-D '63. (MIRA 16:12)

1. Institut avtomatiki Gosplana UkrSSR.

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

BASHKIREV, A.G.; ROMASHKAN, V.S.; FRIDSHTAND, D.A.

Decoding noncorrespondence signals in a contactless remote-control device for gas fields. Gaz. delo no.10:43-45 '63. (MIRA 17:4)

1. Institut avtomatiki Gosplana UkrSSR.

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

FRIDSHTAND, D.A., inzh.

Checking the accordant connection of the armature and compensation circuit of d.c. machines. Elek.sta. 29 no.8:86 Ag '58. (MIRA 11:11)

(Electric machinery--Direct current)

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

L 22133-65 EEC-4/EEC(k)-2/EWA(h)/EWT(d)/EWT(1) Pg-4/Pk-4/Pl-4/Po-4/Pq-4/Peb ASDA-5
RM

ACCESSION NR: AP5001743 S/0302/64/000/004/0045/0047

AUTHOR: Luchenitser, I. A.; Mochalova, V. S.; Svyatskaya, N. V.; Fridshtand, D. A.; Shchedrov, N. I.

TITLE: Digital-indicator-type measuring instrument operating on demand

SOURCE: Avtomatika i priborostroyeniye, no. 4, 1964, 45-47

TOPIC TAGS: measuring instrument, digital measuring instrument

ABSTRACT: The blueprint of a 12-parameter (selected out of 600) measuring instrument is described. The instrument comprises two principal parts: (a) a switch panel with pushbuttons, relays, and a supply unit and (b) a digital instrument panel with digital converters and indicators. Three pulse generators with 100, 80, and 60 kc are provided. These characteristics are expected: time of digital conversion of one parameter, 10 msec; time of serving 12 channels, 2 sec; maximum error, 1.1%. A "laboratory hookup for two channels was stable

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

L 22133-65

ACCESSION NR: AP5001743

in operation." Orig. art. has: 2 figures.

ASSOCIATION: Institut avtomatiki Goskomiteta po priborostroyeniyu Gosplana SSSR (Institute of Automation, State Committee on Measuring Instruments, Gosplan SSSR)

SUBMITTED: 00 ENCL: 00

SUB CODE: IE NO REF SOV: 000 OTHER: 000

Card 2/2

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

ACCESSION NR: AP5009039 S/0302/65/000/001/0048/0049

AUTHOR: Bashkirov, A. G.; Fridshtand, D. A.

TITLE: Transistor-circuit operation indicator

SOURCE: Avtomatika i priborostroyeniye, no. 1, 1965, 48-49

TOPIC TAGS: operation indicator, neon tube indicator

ABSTRACT: A new transistor-operation indicator is described in which a miniature neon bulb is connected to the secondary of a square-loop ferrite transformer whose primary is supplied from a 2--3-kc multivibrator or blocking oscillator; a part of the secondary is connected to the transistor collector circuit. Normally, the pulse voltage at the neon bulb is insufficient for lighting it; with an additional hysteresis-loop bias supplied by the collector current, the secondary voltage rises high enough to light the bulb. Technical data for Soviet-made components is given. Orig. art. has: 2 figures.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: EC

NO REF SOV: 00 OTHER: 00

Card 1/1

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

L 62255-65 EWT(d)/EED-2/EWP(1) IJP(c) GG/BB

ACCESSION NR: AP5016090 UR/0302/65/000/002/0039/0041
621.314.283

AUTHOR: Luchenitser, I. A.; Fridshtand, D. A.; Shchedrov, N. I.

TITLE: Transistorized analog-to-digital converter

SOURCE: Avtomatika i priborostroyeniye, no. 2, 1965, 39-41

TOPIC TAGS: analog to digital converter

ABSTRACT: The development of a new analog-to-digital converter is reported. The measurand (voltage) is converted into a time interval by a transistor sawtooth generator and a balance detector. The fixed-frequency pulses are applied to a scaler which yields code digits. These technical characteristics are reported: input voltage, 0—2.5 v; time of conversion of one parameter, 10 msec; pulse-generator frequency, 100 kc; conversion sensitivity, 2.5 mv; discrete error, ±0.05%; fundamental conversion error at 20±3C is ±0.5%; additional error per 10C is ±0.3%; input resistance, 1 Mohm. The converter is intended for "on-demand" telemetering systems and similar applications. Orig. art. has: 2 figures and 1 table.

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

L 62255-65

ACCESSION NR: AP5016090

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: DP, EC

NO REF SOV: 001 OTHER: 000

Card 2/2

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

FRIDSHTEIN, I.L.

CA

30

Separation of bivinyl and pseudobutylene. I. L. Fridshtein, A. P. Tyul'neva and M. K. Safonova. *Sintet. Kauchuk* 4, No. 3, 13-19(1935).—The sepn. of bivinyl from pseudobutylene on a com. scale is effected best by treating solns. contg. 200-250 kg. of Cu_2Cl_2 per cu. m. with neutral Cu_2Cl_2. The bivinyl absorption is carried out at 10 to 15° and normal pressure, whereby the bivinyl discharged with pseudobutylene does not exceed 2.5-3.5%. The sepn. of bivinyl from Cu_2Cl_2 takes place on heating to 80°, and the sepd. bivinyl has a concn. of 85-98%. The oxidized Cu_2Cl_2 is easily reduced with HCl and Cu shavings. This method can be used for the sepn. of bivinyl from solns. contg. at least 5% of bivinyl. The app. is described. A. A. Boehtlingk

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

LITVIN, O.B.; FRIDSHTEYN, I.L.

Butadiene from n-butane and n-butene. Khim.prom. no.8:486-494 D '55. (MLRA 9:5)

(Butadiene) (Butane) (Butene)

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FRIDSHTEYN, I.L.

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

LITVIN, Oskar Borisovich; FRIDSHTEYN, I.L., red.; SHPAK, Ye.G., tekhn.red.

[Fundamentals of the technology of synthetic rubber] Osnovy tekhnologii sinteza kauchukov. Moskva, Gos.nauchno-tekhn.izd-vo khim.lit-ry, 1959. 544 p. (MIRA 12:10)
(Rubber, Synthetic)

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

Irrdshte
IRIDSHTEYN, I. L. PHASE I BOOK EXPLOITATION SOV/5153

Garmonov, I.V., and B. S. Kortkevich, Resp. eds.

Sintez monomerov dlya proizvodstva sinteticheskogo kauchuka (Synthesis of Monomers for the Production of Synthetic Rubber) Leningrad, Goskhimizdat, 1960. 250 p. Errata slip inserted. 4,500 copies printed.

Sponsoring Agencies: Gosudarstvennyy komitet Soveta Ministrov SSSR. Upravleniye SK i neftekhimii. Giprokauchuk i VNIISK.

Eds.: S.A. Zonis and Ye. I. Shur; Tech. Ed.: T.A. Fomkina.

PURPOSE: This book is intended for scientists, engineers, and technicians working in the synthetic rubber, plastics, and petroleum refining industries, and in scientific research institutes affiliated with these industries.

COVERAGE: The book contains articles which report on research carried out at the Nauchno-issledovatel'skiy institut sinteticheskogo kauchuka imeni Akademika S.V. Lebedeva (Scientific Research Institute for Synthetic Rubber imeni Academician S.V. Lebedev) and the Gosudarstvennyy proyektnyy i nauchno-issledovatel'skiy institut promyshlennosti sinteticheskogo kauchuka

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(State Scientific Research and Design Institute of the Synthetic Rubber Industry) in the synthesis of isoprene, styrene, acetylenes, acetaldehyde, and other initial products for synthetic rubber production. The articles also discuss methods of extracting these products from their preparatory media. No personalities are mentioned. References accompany individual articles.

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

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Kofman, L.S., V.S. Vinogradova, and V.M. Lukashina. Separation of Diene Hydrocarbons by Chemisorption With Water-Pyridine Solutions of Salts of Monovalent Copper. Report III. Separation of Isoprene With Cuprous Nitrate Solutions 103

Kofman, L.S., V.S. Vinogradova, and V.M. Lukashina. Separation of Diene Hydrocarbons by Chemisorption With Water-Pyridine Solutions of Salts of Monovalent Copper. Report IV. Separation of Isoprene With Cuprous Acetate Solution and the Purification of Hydrocarbons From Pyridine 113

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Korotkevich, B.S., Shendrik, M.V. Listopadov, N.N. Chernov, and N.P. Vinogradova. Development of an Industrial Method of Producing α-Methyl Styrene by the Dehydrogenation of Isopropyl Benzene in an Adiabatic Reactor 162

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

Gorin, Yu.A. Vapor Phase Hydration of Acetylene Into Acetaldehyde on Catalysts Not Containing Mercury 216

Gorin, Yu.A., I.K. Gorn, and A.Ye. Kalaus. On Acetylene-Water and Acetylene-Alcohol Combination Reactions Under the Influence of Solid Catalysts 232

Fridshteyn, I.L., and V.N. Vvedenskiy. Hydration of Impurities of Unsaturated Compounds in Primary Butyl Alcohol at Normal Pressure 240

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80938

S/064/60/000/02/01/025
B022/B005

5.3300

AUTHORS: Fridshteyn, I. L., Podol'skaya, F. I., Bondarenko, N. I., Vaynshteyn, G. I., Chechik, Ye. I.

TITLE: Single-step Method of Producing Isoprene From Isopentane and Isopentane-isoamylene Mixtures

PERIODICAL: Khimicheskaya promyshlennost', 1960, No. 2, pp. 89 - 95

TEXT: Isoprene can be produced from isopentane by catalytic dehydrogenation according to the one- and two-step method. The characteristics and the execution of the two-step method of producing isoprene from isopentane are described, the composition of catalysts, and of the complex product mixtures is indicated. The dehydrogenation of isopentane and of the isopentane-isoamylene mixtures to isoprene was carried out on an industrial catalyst for dehydrogenation of n-butane developed by the VNIISK (All-Union Scientific Research Institute of Synthetic Rubber) with the use of a negative pressure attained by the introduction of a rarefying gas (nitrogen, benzene, methane, etc.). The compounds used as initial products are indicated, and the ЦИАТИМ-51 (TsIATIM-51) apparatus for low-temperature fractionation of the

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80938

Single-step Method of Producing Isoprene From Isopentane and Isopentane-isoamylene Mixtures

S/064/60/000/02/01/025
B022/B005

contact gas is mentioned. The equilibrium content of isopentane, isoamylenes, and isoprene at various temperatures and pressures (Table 1, Fig. 1), the influence of temperature on the dehydrogenation of isopentane (Table 2, Fig. 2), and the equilibrium content of isopentane, isoamylenes, and isoprene at various temperatures and compositions of the initial mixture, and a pressure of 2 at (Table 3, Fig. 3), are indicated. Besides, the composition of the decomposition products of isopentane is given in the form of a table. The equilibrium content of isopentane, isoamylenes, and isoprene at 0.3 at (Table 4), the equilibrium content of isopentane, isoamylenes, and isoprene for a mixture $C_5H_{10} + C_5H_{12}$ (30:70) (Fig. 4), the influence of temperature on the isoprene yield (Table 5), the influence of dilution with nitrogen on the dehydrogenation of the mentioned isoamylene-isopentane mixture (Fig. 5), and the influence of temperature on the yield in diene hydrocarbons (Fig. 6), were observed. The dehydrogenation of isoamylene-isopentane mixtures containing different quantities of isoamylenes (Table 6), the influence of volume velocity on the dehydrogenation of an isoamylene-isopentane mixture (30:70) (Table 7), the influence of contact time on the dehydrogenation of the corresponding isoamylene-isopentane

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80938

Single-step Method of Producing Isoprene From Isopentane and Isopentane-isoamylene Mixtures

S/064/60/000/02/01/025
B022/B005

mixture (Fig. 7), and the influence of hydrogen on the dehydrogenation of the mixture mentioned (Fig. 8), are shown. The catalyzate obtained by dehydrogenation of the isoamylene-isopentane mixture was fractionated on a periodic fractionating column with an efficiency of 70 theoretical plates to narrow fractions, the composition of which is indicated (Table 8). The influence of various rarefying gases on the dehydrogenation of the isoamylene-isopentane mixture is shown in Table 9. The results mentioned in the paper suggest that it is possible to carry out the dehydrogenation of isopentane and its mixtures with isoamylenes and isoprene at reduced pressure (in the presence of various rarefying gases). The isoprene yield of this method, computed for the decomposed isopentane, is 67-75% by weight. There are 8 figures, 9 tables, and 17 references: 6 Soviet and 11 American.

Card 3/3

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

FRIDSHTEYN, I.L.; ZIMINA, N.A.; VANYASHINA, K.A.

Effect of reduction and oxidation on the activity of alumina-chromium oxide catalysts. Part 1: Reduction of the catalysts. Kin. i kat. 2 no.1:103-111 Ja-F '61. (MIRA 14:3)

1. Institut Giprokauchuk.
(Alumina) (Chromium oxide)(Reduction, Chemical)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

FRIDSHTEYN, I.L.; ZIMINA, N.A.

Effect of reduction and oxidation on the activity of alumina-chromia catalysts. Part 2: Oxidation of catalysts. Kin.i kat. 4 no.2: 286-293 Mr-Ap '63. (MIRA 16:5)

1. Gosudarstvennyy institut po proyektirovaniyu zavodov kauchukovoy promyshlennosti.
(Chromium catalysts) (Oxidation)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

FRIDCHTEYN, I.L.; KAMLYUK, L.M.; ROZANOV, V.N.

Skeleton isomerization of n-pentenes on natural aluminosilicates. Neftekhimiia 4 no.5:680-686 S-O '64. (MIRA 18:1)

1. Gosudarstvennyy proyektnyy i nauchno-issledovatel'skiy institut promyshlennosti sinteticheskogo kauchuka.

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

ANDRIANOV, K.A.; SIPYAGINA, M.A.; FRIDSHTEYN, T.I.

Reactions of tetrakis (methylphenylsiloxanohydroxy)titaniums and silanes with trimethyl- and triphenylchlorosilanes. Izv. AN SSSR. Ser.khim. no.9:1672-1675 S '63. (MIRA 16:9)

1. Institut tonkoy khimicheskoy tekhnologii im. M.V.Lomonosova.
(Titanium organic compounds) (Silane)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

FRIDSHTEYN, V. and PASKIN, B.

Opyt eksploatatsii avtopoezdov. [Experience in exploitation of auto-trains]. (Avtomobil' 1941, no. 1, p. 11-13). DLC: TL4, A87

SO: Soviet Transportation and Communication, A Bibliography, Library of Congress, Reference Department, Washington, 1952, Unclassified.

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

FRIDSHTEYN, V.

From the practice of operating buses on interurban routes.
Avt. transp. 34 no.7:14-18 Jl '56. (MLRA 9:10)

1. Glavnyy inzhener Moskovskogo avtotransportnogo khozyaystva.
(Motorbus lines)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

FRIDSHTEYN, V.

First experience with operating the ZIL-127 bus. Avt. transp. 34 no.10:12-14 O '56. (MLRA 9:12)

1. Glavnyy inzhener Moskovskogo avtotransportnogo khozyaystva.
(Motorbuses)

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6"

"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

FRIDVALSZKY, L.

Some problems concerning the organization of the leaf epidermis of Alium Cepa L. In German. p. 221.
(Acta Biologica. Vol. 7, no. 2/3, 1957. Budapest.)

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

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"APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000513720016-6

HUNGARY

FRIDVALSZKY, Lorand; Eotvos Lorand University, Institute of Applied Botany and Tissue Development (ELTE --Eotvos Lorand Tudomanyegyetem --, Alkalmazott Novenytani es Szovetfejlodestani Intezet), Budapest.

"The Ultrastructure of Chloroplasts, Their Function and Some Other Problems of Functional Plant Ultrastructure Research."

Budapest, A Magyar Tudomanyos Akademia Biologiai Tudomanyok Osztalyanak Kozlemenyei, Vol VI, No 1-2, 1963, pages 9-30.

Abstract: The author discusses the recent advances made in morphology, mainly because of the development of electronmicroscopy. In the chapter on chloroplasts, the photosynthetic apparatus and its three main groups are discussed. Submicroscopic and molecular studies on chloroplasts and structural findings are presented, accompanied by numerous pictures and graphs. The plasmatic connection between cells and the movement of plasma is also discussed. The article was presented at the Structure and Function Symposium held in Tihany, Hungary, 2-3 July 1962. All Western references.

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