

S/058/63/000/002/058/070
A160/A101

The effect of the ultrasonic action on...

field h lead to a development of various structures. The structure obtained by the action of the ultrasound may be eliminated by a superposition of the field h, and vice versa. During an increase of the ultrasound intensity, a displacement of some boundaries takes place in the beginning - and also a simultaneous shifting of the domains on the whole. Individual domains begin to fractionate. Subsequently, this appearance intensifies and leads to the fact that the visible picture on the surface of the sample becomes washed-out.

N. Smol'kov

[Abstracter's note: Complete translation]

Card 2/2

S/275/63/000/001/026/035
D413/D308

AUTHORS: Laptev, D. L., Cherkashin, V. S. and Drokin, A. I.

TITLE: The effect of ultrasonic action on the domain structure of silicon iron

PERIODICAL: Referativnyy zhurnal, Elektronika i yeye primeneniye, no. 1, 1963, 10-11, abstract 1V 78 (In collection: Primeneniye ul'traakust. k issled. veshchestva, no. 15, M., 1961, 189-194)

TEXT: The authors have investigated the effect of ultrasonic vibration and an alternating magnetic field on the domain structure of silicon iron subjected to various magnetizing fields. The ultrasonic vibration was applied to the specimen by a 20 kc/s ultrasonic oscillator and a magnetostriction vibrator. The domain structure was observed by a technique using the meridional magneto-optical Carr effect. The variation in domain structure was observed visually, photography being taken after the vibration was switched off. Photographs are given of the change in domain structures after and

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The effect of ...

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before ultrasonic treatment (at various magnetic fields, under various initial magnetic conditions etc.). Their work lead the authors to the following results: (1) Ultrasonic action leads to disintegration of the basic structure both in the absence and in the presence of a magnetizing field. (2) Ultrasonic shaking and 'shaking' of the specimen by an alternating magnetic field lead to different structures. The structure obtained by ultrasonic action can be removed by applying an alternating magnetic field and vice versa. (3) Independent of the initial state, other conditions being the same, ultrasonic action always leads to the same structure. (4) Visual observations during the ultrasonic treatment have shown that as the sound intensity is gradually increased the first effect is the displacement of some boundaries and the simultaneous shift of domains as a whole, while individual domains start to disintegrate. Then these effects intensify up to the point where at maximum sound intensity the picture visible on the surface of the specimen appears washed-out. As the sound intensity is decreased, a definite structure gradually establishes itself. The structures are shown in photographs. 5 figures, 7 references. [Abstracter's note: Complete translation.]
Card 2/2

GORA, Barbara; LAPTIEW, J.P.

Polish wheat varieties in the U.S.S.R. Postepy nauk roln 9 no.5:89-91 S-0 '62.

LAPTIN, M.; PRUTSKIY, A.

Conference of Moscow economists. Vop. ekon. no.2:152-157 F '63.
(MIRA 16:3)

(Moscow—Industrial management—Congresses)

AKOL'ZIN, P.A., doktor tekhn. nauk; LAPTINA, L.N., inzh.

Corrosion effect of phosphation conditions of boiler water.
Teploenergetika 11 no.10:7-11 0 '64. (MIRA 18:3)

1. Vsesoyuznyy teplotekhnicheskiy institut.

L 51472-65 EWT(d) Pg-4 IJP(c)

ACCESSION NR: AP5011079

UR/0250/65/009/004/0219/0220

AUTHOR: Laptinskiy, V. N.

11
13
B

TITLE: Concerning one method of successive approximations

SOURCE: AN BSSR. Doklady, v. 9, no. 4, 1965, 219-220

TOPIC TAGS: differential equation, successive approximation, recurrence formula

ABSTRACT: The author describes a new variant of constructing an approximate analytic solution of the system of differential equations

$$dx^i/dt = p_1^i x^1 + p_2^i x^2$$

(i = 1, 2) with specified initial conditions. It is based on the use of the scheme

$$dx_n^i/dt = p_1^i x_n^1 + p_2^i x_{n+1-j}^1$$

and the n-th approximation $x_n^1 = x_n^1(t)$ is constructed from the preceding one by

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ACCESSION NR: AP5011079

means of quadratures. This method is called by the author the triangle method and it is shown by means of an estimate that its convergence is more rapid than the standard Picard-Lindelof method or the more recent methods of P. Bajesay (Period. Polytechn. Electr. Engng., 1959, No. 3, 217-231) or that of A. N. Yerugin (IFZh, 1961, v. 4, No. 5, 111-114). This report was presented by N. P. Yerugin. Orig. art. has: 5 formulas.

ASSOCIATION: Belorusskiy gosudarstvennyy universitet in. V. I. Lenina (Belorussian State University)

SUBMITTED: 30 March 64

ENCL: 00

SUB CODE: MA

NR REF SOV: 001

OTHER: 003

:ci:

Card 2/2/110

31236
S/181/62/004/002/023/051
B101/B102

24.3950 (1035, 1137, 1144)

AUTHORS: Skubenko, A. F., and Laptiy, S. V.

TITLE: Optical properties of Sb_2S_3 single crystals

PERIODICAL: Fizika tverdogo tela, v. 4, no. 2, 1962, 449 - 453

TEXT: Lamellas 0.65 - 0.1 mm thick, which had been cut from Sb_2S_3 single crystals purified by zone melting, were polished and examined in infrared light. The optical investigations were carried out with an MKC-6 (IKS-6) spectrometer, and an MKP-1 (IKR-1) needle was used as a source of radiation. The radiation was measured with a thermocouple, and the reflection was measured according to M. P. Lisitsa and Yu. P. Tsyashchenko (PTE, no. 4, 108, 1959). Transmission and reflection curves are shown in Fig. 1. The brittleness and porosity of thin specimens made it impossible to examine the self-absorption edge thoroughly; however, the forbidden band width was found to be 1.72 ev. Light polarization showed no change in the transmission curve, nor exerted temperature variations from +20 - -150°C any effect. It is concluded that the infrared absorption by free carriers

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X

Optical properties of Sb_2S_3 ...

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S/181/62/004/002/023/051
B101/B102

within this temperature range is caused by the interaction of electrons with impurities or by another mechanism, and depends only slightly on acoustic lattice vibrations. Absorption by free carriers owing to scattering by acoustic lattice vibrations sets in at $14 - 15\mu$. The absorption band of $9.1 - 10\mu$ corresponds to an activation energy of $0.12 - 0.13$ eV and is attributed to a system of impurity levels. The refractive index is nearly constant ($2.7 - 2.75$) and increases to 3.1 within the absorption band. Sb_2S_3 is a semiconductor with predominantly covalent bonds.

M. P. Lisitsa, Doctor of Physics and Mathematics, is thanked for guidance and for a discussion. There are 5 figures and 13 references: 7 Soviet and 6 non-Soviet. The four most recent references to English-language publications read as follows: J. Black, E. Conwell, L. Seiglea, C. Spenser, Phys. a. Chem. Solids, 2, 240, 1957; F. Mooser, W. C. Pearson, Phys. a. Chem. Solids, 7, 65, 1958; R. Bube, J. Appl. Phys., 31, 315, 1960; S. Ibuki, S. Iochimatsu, J. Phys. Soc. Japan, 10, 549, 1955. ✓

ASSOCIATION: Chernigovskiy gosudarstvennyy pedagogicheskiy institut
(Chernigov State Pedagogical Institute)

Card 2/3

34236
S/181/62/004/002/023/051
B101/B102

Optical properties of Sb_2S_3 ...

within this temperature range is caused by the interaction of electrons with impurities or by another mechanism, and depends only slightly on acoustic lattice vibrations. Absorption by free carriers owing to scattering by acoustic lattice vibrations sets in at $14 - 15\mu$. The absorption band of $9.1 - 10\mu$ corresponds to an activation energy of $0.12 - 0.13$ eV and is attributed to a system of impurity levels. The refractive index is nearly constant ($2.7 - 2.75$) and increases to 3.1 within the absorption band. Sb_2S_3 is a semiconductor with predominantly covalent bonds.

M. P. Lisitsa, Doctor of Physics and Mathematics, is thanked for guidance and for a discussion. There are 5 figures and 13 references: 7 Soviet and 6 non-Soviet. The four most recent references to English-language publications read as follows: J. Black, E. Conwell, L. Seiglea, C. Spenser, Phys. a. Chem. Solids, 2, 240, 1957; F. Mooser, W. C. Pearson, Phys. a. Chem. Solids, 1, 65, 1958; R. Bube, J. Appl. Phys., 31, 315, 1960; S. Ituki, S. Iochimatsu, J. Phys. Soc. Japan, 10, 549, 1955. ✓

ASSOCIATION: Chernigovskiy gosudarstvennyy pedagogicheskiy institut
(Chernigov State Pedagogical Institute)

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Optical properties of Sb_2S_3 ...

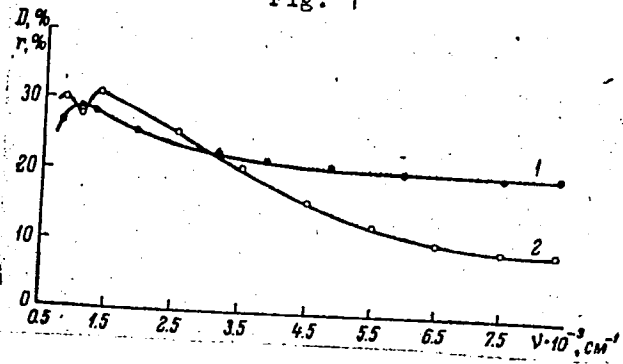
S/181/62/004/002/023/051
B101/B102

SUBMITTED: September 11, 1961

Fig. 1. Transmission and reflection curves of Sb_2S_3 ; $d = 0.63$ mm; $t = 20^\circ C$.

Legend: (1) reflection; (2) transmission.

Fig. 1



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L 8822-65 EWT(1)/EWT(m)/T/EEG(b)-2/EWP(q)/EWP(b) IJP(c)/ASD(a)-5/AD(mp)-2/
ESD(gs)/ESD(t)/RAEM(t) RDW/JD S/0185/64/009/007/0744/0748
ACCESSION NR: AP4043095

AUTHOR: Skubenko, A. F.; Lapfily, S. V.

TITLE: Optical properties of Sb₂Se₃ single crystals B

SOURCE: Ukrayins'kyy fizy*chny* zhurnal, v. 9, no. 7, 1964, 744-748

TOPIC TAGS: antimony selenide single crystal, crystal absorption, antimony selenide, crystal reflection, crystal transmission

ABSTRACT: The absorption, reflection, and transmission were measured for antimony-selenide (Sb₂Se₃) single crystals in the infrared part of the spectrum ranging from 500 to 9500 cm⁻¹. In addition, the refraction index was calculated, and the dispersion curve was plotted. As a result, one fundamental absorption band and three supplementary bands of impurity origin were found on the absorption curve. An energy width ΔE = 1.18 eV of the forbidden zone was determined at the edge (λ = 1.05 μ) of the fundamental absorption band. The first supplementary absorption band, with a flat maximum on the side of longer waves, lies within a wide range of 4.55—2.7 μ. This band contains a

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ACCESSION NR: AP4043095

2

whole spectrum of energy levels. It superimposes three maxima of 0.28, 0.32 and 0.36 ev, which were detected on single crystals of the same purity by means of the thermostimulated currents method. Two other bands (2.7—1.67 μ) have sharp maxima at $\lambda = 2.49$ and 2.24 μ with activation energies $E = 0.5$ and 0.58 ev. With a decrease in temperature, the absorption in the bands increases. The temperature coefficient of the change in the forbidden band width $\beta = -7.2 \times 10^{-4}$ ev/deg was calculated from the temperature shift of the transmission curve. The change in the forbidden band width is due to a change in atomic lattice vibrations. The refraction index slowly increases toward the band of inherent absorption from 3.7 to 4.1. Orig. art. has: 4 figures and 3 formulas.

ASSOCIATION: Ky*yivs'ky*y derzhuniversity*tet im. T. G. Shevchenka (Kiev State University); Chernigivs'ky*y pedinsty*tut (Chernigov Pedagogical Institute)

SUBMITTED: 11Sep63

ATD PRESS: 3100

ENCL: 00

SUB CODE: SS, OP

NO REF SOV: 006

OTHER: 001

Card 2/2

CA
LAPTINA, A.A.

Comparison of action of vitamin A and carotene on sensitivity to light of a dark-adapted eye. A. A. Laptina. *Fiziol. Zhur. S. S. S. R.* 35, 463-4(1949). The effect of daily administration of 1-2 mg. vitamin A or 2-4 mg. carotene upon visual threshold was detd. (15-min. exposure to a screen held at illumination by 300-candlepower bulb, followed by 1-2 min. dark period, followed in turn by sensitivity detns.). The most effective improvement was found in 1.7-1.9 mg. dosage of vitamin A or 3.4-3.7 mg. carotene. In a 45-min. adaptation period no difference was found at the termination of the test period as to age effects, but in the initial adaptation period the younger specimens (20-30 yrs.) showed a higher degree of sensitivity than the older group. The activity of vitamin A was approx. double that of carotene. G. M. Kosolapoff

VORONETS, N.S.; LAPINSKAYA, Ye.S.

New data on the age of *Inoceramus* of the retrorsus Keys group.
Dokl. AN SSSR 96 no.1:145-146 My '54. (MLRA 7:5)

1. Nauchno-issledovatel'skiy institut geologii Arktiki, Leningrad.
Predstavleno akademikom D.V.Nalivkinym.
(Lena Valley--Mollusks, Fossil) (Mollusks, Fossil--Lena Valley)

LAPTINSKAYA, E. S.

USSR/ Geology

Card 1/1 Pub. 22 - 30/49

Authors : Voronets, N. S., and Laptinskaya, E. S.

Title : New data on the Lower Jurassic era deposits of the Anabarsk region

Periodical : Dok. AN SSSR 100/5, 955-956, Feb 11, 1955

Abstract : New geological data are presented regarding the Lower Jurassic era deposits discovered in the Anabarsk region of USSR. Six references: 2 Russian and USSR, 1 German, 1 English and 2 French (1842-1936).
Table.

Institution :

Presented by : Academician D. V. Nalivkin, November 23, 1954

LAPTINSKIY, V.N.

A method of consecutive approximations. Dokl. AN BSSR 9 no. 4:
219-220 Ap '65 (MIRA 19:1)

1. Belorusskiy gosudarstvennyy universitet imeni Lenina.
Submitted March 30, 1964.

SKUBENKO, A.F.; LAPTIY, S.V.

Optical properties of Sb_2Se_3 single crystals. Ukr. fiz. zhur. 9
no.7:744-748 J1 '64. (MIRA 17:10)

1. Kiyevskiy gosudarstvennyy universitet im. Shevchenko i Chernigovskiy pedagogicheskiy institut.

LAPTIYENKO, V.A.

Saw mounted on the "ID" handcar. Put' 1 put. khoz. no.7:13 JI '57.
(MLRA 10:8)

1. Zamestitel' nachal'nikadstantsii, stantsiya Ventspils [Latvia].
(Railroads--Equipment and supplies)

LAPTYEV, I.

Procurement system for livestock requires reorganization.
Mias. ind. SSSR 29 no.2:34-36 '58.

(MIRA 11:5)

1. Upravlyayushchiy Rossoshanskoy skotozagotovitel'noy kontroy.
(Meat industry)

PARIYSKAYA, L.V.; KOGAN, F.N.; KALACHEVA, A.P.; CHEREDNICHENKO, G.S..
Prinimali uchastiye: PASHNINA, V.I.; KOROBKOVA, T.N.; BURYA-
KOVA, G.I.; AGASHKINA, N.S.; ANTOKHINA, G.N.; ANUROVA, V.Ya.;
BOBINA, M.L.; YERMAKOVA, Z.P.; YEFREMOV, Yu.A.; POLUTSKAYA,
L.G.; SHISHKINA, V.G.; LAPTIYEV, P.P., otv.red.; ROGOVSKAYA,
Ye.G., red.; SERGEYEV, A.N., tekhn.red.

[Agroclimatic reference book on Chita Province] Agroklimate-
cheskii spravochnik po Chitinskoj oblasti. Leningrad, Gidrometeor.izd-vo, 1959. 131 p.
(MIRA 13:2)

1. Chita. Gidrometeorologicheskaya observatoriya. 2. Starshiy inzhener-agrometeorolog Chitinskoy gidrometeorologicheskoy observatorii (for Pariyskaya). 3. Chitinskaya gidrometeorologicheskaya observatoriya (for Kogan, Kalacheva, Cherednichenko). (Chita Province--Crops and climate)

COUNTRY : USSR
CATEGORY : General Biology B
Genetics. Plant Genetics.
ABS. JOUR. : RZhBiol., No. 3, 1959, No. 9731
AUTHOR : Laptsevich, G. P., Kuleshov, N. N. *
INST. : Ukrainian Scientific Research Institute of
TITLE : The Degree of Heterosis in Maize Hybrids
in Relation to Their Growth Conditions.
ORIG. PUB. : Byul. Ukr. n.-i. in-ta rasteniyevodstva,
selektiv. i genet., 1958, No 2, 96-98
ABSTRACT : The experiments were performed against two
backgrounds: with and without irrigation.
Under the conditions of irrigation the Uspokh
(Success) and VIP-25 hybrids produce a larger
ear than parent forms while according to its
weight the VIP-42 hybrid's ear does not sur-
pass the ears of parent forms in these con-
ditions. Against the background of non-irri-
gation the Uspokh and VIP-25 hybrids reduce
their ear's weight less than their parent
forms. It was determined that under the

Card: 1/2
*Plant Growing and Genetics.

YUR'YEV, V. Ya., otv. red. [deceased]; STRONA, I.G., kand. sel'khoz. nauk, zam. otv. red.; VOL'F, V.G., red.; POLYAKOV, I.M., red.; LAPTSEVICH, G.P., red.; KIREYEV, F.N., red.; POKID'KO, A.I., red.; POTOTSKAYA, L.A., tekhn. red.

[Scientific problems in seed production, the study and the inspection of seeds] Nauchnye voprosy semenovodstva, semenovedeniya i kontrol'no-semennogo dela; sbornik materialov. Kiev, Izd-vo Ukr. akad. sel'khoz. nauk, 1962. 203 p. (MIRA 16:5)

1. Soveshchaniye po organizatsii nauchno-issledovatel'skoy raboty v oblasti semenovodstva, semenovedeniya i kontrol'no-semennogo dela. Kharkov, 1961. 2. Ukrainskiy nauchno-issledovatel'skiy institut rasteniyevodstva, selektsii i genetiki (for Strona). (Seed industry)

LAPTSEVICH, I. F.

(MCI) 84(4,5) **ISSUE 3 BOOK REVIEWS** **09/1959**

Uchenye Zapiski Kazanskogo Universiteta. Seriya Fiziko-Matematicheskie Nauki, 1959, 2. (Translations of the Institute of Physics and Mathematics, Kazan State Academy of Sciences, Pt 2) Kazan, 1957. 603 p. Irregularly issued. 750 copies printed.

Ed.: B. I. Stepanov, Academician, USSR Academy of Sciences; Ed. of Publishing House: S. Muriba; Vol. Ed.: I. Vakhovskiy.

NOTE: This book is intended for mathematicians, physicists, and graduate students in mathematics and physics.

CONTENTS: This book contains a series of articles on recent contributions by members of the Institut Fiziko-Matematiki (Institute of Physics and Mathematics) of the Academy of Sciences, USSR, in the fields of mechanics, kinematics, optics and spectroscopy and on the applications to physics of analysis, tensor analysis, linear groups, theory of adjoints, and differential equations. The

first article contains a brief account of the work of the Institute, including names of scientists and publications connected with it, facilities, scientific accomplishments, and fields of interest.

Translations of the Institute (Cont.) **09/1959**

Bocher, E. A., B.S. L'vashchevaya, and I.F. Laptsevich. Dispersion Filters for the Infrared Region of the Spectrum	211
Isakov, B. V. Surface Theory of a System in the Neighborhood of an Equilib. Point	221
Podinov, J. I. On Certain Matrix Representations for Three-dimensional Systems	230
Smirnov, I. P. Analytic Theory of Nonlinear Systems of Ordinary Differential Equations	235
Byzant, V. L. On the Proof of the Possibility of Constructing a Canonical Form with Equal Coefficients and Number of Nodes	249
Suprunenko, B. A. Two Theorems on Reducible Nilpotent Linear Groups	255
Papay, V. T. (Dobson) Determination of the Weight of a Function of Adjunct Polynomials Using Polynomial Adjustment Method	260

BORISEVICH, N.A.; KHVASHCHEVSKAYA, Ya.S.; LAPSEVICH, I.F.

Dispersion filters for the infrared spectral region. Trudy Inst.
fiz. i mat. AN BSSR no.2:214-223 ' 57. (MIRA 12:1)
(Light filters) (Infrared rays)

LARTSEVICH, I. F.

24(7)-24(0)
AUTORE:

Stepanov, B. I., Academician AS
Belorusshaya SSR 307/50-59-1-9/57

TITLE:

Investigations by Belorussian Scientists in the Field of
Spectroscopy and Luminescence (Zabyty beloruskikh nauchnykh
po opticheskoy i lyuminitsentstsi)

PERIODICAL:

Vestnik Akademii nauk SSSR, 1959, Nr 1, pp 68-76 (USSR)

ABSTRACT:

These investigations are being carried out at the Institut
fiziki i silikatov (Institute of Physics and Mathematics)
and the fizicheskii fakul'tet Beloruskoy universiteta
(Physics Department, Belorussian University) under the direct-
ion of B. I. Stepanov, A. P. Sevchenko, M. A. Yel'yashovich,
Academician AS SSSR, M. Y. Fedorov, Corresponding Member,
Academy of Sciences USSR. In the field of theoretical spectro-
scopy, the investigations by P. A. Apasovskiy, B. I. Stepanov
and others are mentioned. Further, the following in-
vestigations are indicated:

- A. P. Prishvalko, B. I. Stepanov developed a theory of
dispersion light filters.
- B. I. Stepanov, M. S. Evashchikovskaya, I. P. Lapisashchik
and others investigated the properties of optical filters for the
infrared range.
- A. P. Prishvalko analyzed the accuracy and the field of
application of existing determination methods of optical
constants of dispersed and not dispersed materials.
- I. G. Zakharenko, A. A. Labuda, Yu. G. Markovskiy obtained
important results concerning the kinetics of one single
spark discharge (spectral intensity and discharge structure).
- A. A. Lashchuk, V. S. Burdakov examined the absorption
of elements in spectrum analysis, and explained the methods
for their elimination.
- G. V. Kozlovskiy suggested a series of methods to eliminate
interferences of third elements.
- G. V. Kozlovskiy, M. P. Krivosheyn succeeded in working out a
combined method of heavy metal analysis in ordinary pentallin.

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- I. A. Borisevich, V. V. Kobzarevskiy, A. I. Skuzman examined the
absorption spectra of various products.
- M. A. Borisevich, Y. I. Lapisashchik, I. P. Lapisashchik examined
a series of structural peculiarities of alcohol oxides.
- M. A. Borisevich worked out a luminescence method for the deter-
mination of the germinating power of the seed of some kinds
of trees.
- A. Ye. Frolovdruk obtained good results by the use of lumines-
cence analysis in dermatology.
- B. I. Stepanovskiy examined the absorption spectra of the
albuminoid polysaccharide compounds.
- P. A. Apasovskiy suggested methods for analyzing albuminoid
compounds in the blood.
- M. M. Pavlyuchenko, G. A. Lazareko, carried out an extensive
spectrophotometrical examination of the formation of molecular
and complex compounds in solutions.
- B. A. Sevchenko spectroscopically examined the structure of
various silicas.
- B. I. Stepanov, A. M. Prigodnyy carried out theoretical investigat-
ions of the vibrational spectra of various silicate crystals.

Card 6/6

AID P - 3380

Subject : USSR/Hydr Eng
Card 1/1 Pub. 35 - 11/16
Author : Lapturev, N. V., Eng.
Title : On local washouts in the tailwater
Periodical : Gidr. stroi., 6, 37-40, Je 1955
Abstract : The author criticizes M. S. Vyzgo's article (this
Journal 1954, No. 5) pointing out erroneous statements
and presents his own analysis in a table on the com-
putation of washouts in the tailwater, at the down-
stream toe, and for dams without a reinforced down-
stream apron. Two diagrams. Six Russian references,
1947-1954.
Institution : None
Submitted : No date

LAPTUREV, N.V., inzh. (g.Frunze)

Fergana-type water intake and its possible improvement. Gidr. 1
mel. 13 no.2:37-46 F '61. (MIRA 14:9)

(Hydraulic engineering)

LAPTUREV, N.V.

LAPTUREV, N.V.

Calculation and scale of conjugate depths in a hydraulic jump.
Trudy Inst. vod. khoz. i energ. AN Kir. SSR no.4:101-110 '57.
(MIRA 10:12)

(Hydraulic jump)

LAPTIYENKO, V.A.

Grinding machine with a gasoline motor. Put' i put.khoz. 4
no.10:29 0 '60. (MIRA 13!9)

1. Zamestitel' nachal'nika distantsii, st. Ventspils, Latviyskoy
dorogi.

(Railroads--Equipment and supplies)

(Grinding machines)

LAPU, Edita

A practical method for molding the rod-type castings. *Livarnstvo* 9
no.48:134-135 J1 '62.

1. Fabrika "25. maj", Kikinda.

LAPUCHA, Ryszard, mgr inż.

Approximate method of determining the principal dimensions of an annular combustion chamber with fuel evaporation and preliminary computing to gasodynamic characteristics. Inst lotn prace no. 21:15-20 '63.

JAROSINSKI, Jozef, mgr inz.; LAPUCHA, Ryszard, mgr inz.

Combustion in turbulent flow. Pt. 1. Techn lotn 19 no.6:
150-154 Je '64.

ACCESSION NR: AP4042748

P/0008/64/000/007/0176/0181

AUTHOR: Jarosinski, Jozef; Lapucha, Ryszard

TITLE: Combustion in a turbulent flow

SOURCE: Technika lotnicza, no. 7, 1964, 176-181

TOPIC TAGS: turbulent combustion, flame propagation, flame velocity

ABSTRACT: This is a continuation of an article on two models of turbulent combustion. Here, the authors describe the methods used in detecting turbulence, determining its characteristics, and investigating the effect of individual parameters on flame propagation velocity. The effects of laminar flame propagation velocity u_l , velocity fluctuation u' , pressure p , excess air a , temperature T , high-frequency spectrum bands, and Reynolds number on the flame propagation velocity u_t were calculated from the formula $u_t = B \times u_l^m \times u'^f$ and plotted. Inasmuch as scientists give different values to B , m , and f , the relationships $u_t = f(u', u)$, $u_t = f(u', a)$, $u_t = f(u)$, and $u_t = f(Re)$ were calculated by various methods of Soviet scientists. The data show that 1) the turbulent combustion velocity is higher for grates giving greater velocity fluctuations in high-frequen-

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ACCESSION NR: AP4042748

cy spectrum bands, 2) the increase in the Re number increases the turbulent flame propagation velocity, 3) most of the hydrocarbons have the highest turbulent combustion velocity when a equals 0.7 to 1, and 4) the turbulent combustion velocity increases with increase in pressure and initial temperature. Orig. art. has: 20 figures.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 00Jun64

ENCL: 00

SUB CODE: FP

NO REF SOV: 008

OTHER: 003

Card 2/2

JAROSINSKI, Jozef, mgr inz.; LAPUCHA, Ryszard, mgr inz.

Combustion in turbulent flow. Pt. 2. Techn lotn 19 no. 7:
176-181 J1 '64.

L 26102-66 T WE

ACC NR: AT6015513

SOURCE CODE: PO/2532/65/000/025/0024/0039

AUTHOR: ~~Lapucha, R.~~ Lapukha, R. (Master of arts; Engineer)

48

ORG: none

B+1

TITLE: Formation processes of two-phase combustible mixtures

SOURCE: Warsaw. Instytut lotnictwa. Prace, no. 25, 1965, 24-39

TOPIC TAGS: fuel injection, combustion theory

ABSTRACT: A survey is presented, based on Soviet and Western literature, of the present state of knowledge of the process accompanying the formation of a combustible mixture. The physico-chemical, aerodynamic, and hydraulic processes taking place in a combustion chamber between injection and ignition are covered. Problems of droplet formation, their breakup and motion, as well as mixing and evaporation of fuel // the spectrum of atomization, fuel injection and breakup of fuel jets are covered. Orig. art. has: 28 figures and 19 formulas. [AV]

SUB CODE: 21/ SUBM DATE: none/ ORIG REF: 001/ OTH REF: 017/ SOV REF: 022

ATD PRESS: 4263

Card 1/1 CC

UDC: 621.43.019

2

GERSHBERG, Anatoliy Yevgen'yevich; LAPUK, A.G., red.

[Television camera tubes using the photoconductive effect (vidicons)] Peredaiushchie televizionnye trubki, ispol'zuyushchie vnutrenniy fotoeffekt (vidikony). Moskva, Energiia, 1964. 239 p. (MIRA 17:11)

22

ca

Heat-treatment of oil sands to increase the oil yield.
 И. И. Лазик. *Архивханитар Нефтьне Казе*. 1930.
 No. 12, 10-15.--The most efficient method of recovering
 oil from a sand is the creation of an underground combustion
 area which moves progressively through the sand.
 To increase the temp. of a sand by injecting hot air is un-
 economical. The problem is treated mathematically.
 A. A. Boehlingk

ASME-31A METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND LETTERS

3RD AND 4TH LETTERS

5TH AND 6TH LETTERS

7TH AND 8TH LETTERS

9TH AND 10TH LETTERS

11TH AND 12TH LETTERS

13TH AND 14TH LETTERS

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LAPUK, B. B.

PA 9 T71

USSR/Gas, Natural
Petroleum, Well drilling

Apr 1947

"Concerning the Distribution of Pressures in Gas
Deposits," B. B. Lapuk, 7 pp

"Neftyanoye Khozyaystvo" Vol 25, No 4

Mathematical treatment of pressure and pressure
drop in fields and oil wells. Diagrams and tables
showing relationship between gas pressure and
variables in underground and well conditions.

9T71

Lapuk, B. B.

Lapuk, B. B. The motion of a real gas in a porous medium.
Doklady Akad. Nauk SSSR (N.S.) 58, 377-380 (1947).
(Russian)

Source: Mathematical Reviews, 1948, Vol 9, No. 5

Handwritten mark

LAPUK, B. B.

PA 52T89

USSR/Physics
Filtration
Cases

Oct 1947 ✓

"Approximate Solution of the Problems Concerning the Nonsteady Radial Filtration of Gases According to the Law of Darcy," B. B. Lapuk, 4 pp

"Dok Akad Nauk SSSR" Vol LVIII, No 1

Presents ordinary argument for simple steady flow adapted to the case of unsteady flow, involving averages. Compares experimental and theoretical results. Submitted by Academician L. S. Leybenzon, 5 Apr 1947.

52T89

LAPUK B. B.

PA 49T98

USSR/Physics

Oct 1947

Gases - Adsorption
Porous Materials

"Movement of Real Gases in a Porous Material," B. B. Lapuk, 4 pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LVIII, No 3

Lapuk discusses results of experiments he conducted to determine approximate method to solve steady and unsteady movement of gases in porous material, allowing for variations of their properties in stratified conditions. Explains conditions for stabilized filtration of real gases, as well as unstabilized radial filtration of real gases in porous material. Submitted by Academician L. S. Leybenzon, 5 Apr 1947.

49T98

LAPUK, B. B.; SHCHELKACHEV, V. N.

Podzemnaya gidravlika [Subsurface Hydraulics], Moscow-Leningrad, 1949.

No. 444, 16 Aug 55

166T28

LAPUK, B. B.

USSR/Geophysics - Filtration

1 Jul 50

"Approximate Solution of the Two-Dimensional Problem
of the Displacement of Gas by Incompressible Water,"
B. B. Lapuk

"Dok Ak Nauk SSSR" Vol LXXIII, No 1, pp 33-36

Describes iteration procedure for determining be-
havior of a water-bearing contour as gas is re-
moved from a gas well. Assumes gas is ideal and
filtration is isothermic and follows Darcy's law.
Submitted 17 Apr 50 by Acad L. S. Leybenzon.

166T28

LAPUK, B. B.

L76T103

USSR/Physics - Filtration 1 Aug 50

"Magnitude of Index n in Filtration Regime of Homogeneous Fluids and Gases," B. B. Lapuk, V. A. Yevdokimova

"Dok Ak Nauk SSSR" Vol LXXIII, No 4, pp 675-677

Shows, in region crit for Darcy's Law, index n is function of Reynold's number, $n(Re)$, according to data of exptl investigations into dependence of coeff lambda of hydraulic resistance upon Re. Subject problem for simultaneous existence of different regimes was 1st considered by V. N. Shchelkachev in his book: "Podzemnaya Neftyanaya

USSR/Physics - Filtration (Contd) 1 Aug 50

176T103

Gidravlika" (Underground Oil Hydraulics), Moscow/Leningrad, 1944, and by B. B. Lapuk in his "Teoreticheskiye Osnovy Razrabotki Mestorozhdeniy Prirodnykh Gazov" (Theoretical Bases of Working Deposits of Natural Gases), 1948. Submitted 7 Jun 50 by Acad L. S. Leybenzon.

176T103

IAPUK, B. B. and YEVDOKIMOVA, V. A.

"Determination of Gas-Deposit Parameters From Well-Test Data in USSR,"
Dok. AN SSSR, Vol 73, No 6, 1950, pp 1, 141-1, 142.

Translation W-15116, 14 Nov 50

LAPUK, B.B.; BRUDNO, A.L.; SOMOV, B.Ye.

Cones of bottom water in oil fields. Neft. khoz. 39 no.5:
45-50 My '60. (MIRA 14:9)
(Oil field brines)

LAFUK, B.B.; BRUDNO, A.L.; SOMOV, B.Ye:

Bottom water cones in gas pools. Gaz.prom. 6 no.2:8-12 :61.
(MIRA 14:4)

(Gas, Natural)

TSAYGER, M.A.; Primali uchastiye: LAPUK, B.B., prof.; TREBIN, F.A., prof.

Solution to the problem of one-dimensional unsteady flow of gas through porous media with the aid of the M-2 high speed digital computer. Gaz.prom. 6 no.4:1-9 '61. (MIRA 14:3)
(Gas, Natural)

LAPUK, B.B.; KRUSHKOV, S.N.

Determination of the ultimate recovery from water-free wells and
ultimate pressure decline in gas wells with bottom waters. Azerb.
nefti. khoz. 40 no. 3:22-25 Mr '61. (MIHA 14:5)
(Gas, Natural)

2

LAPUK, B.B., MINSKY, YE.M., TREHIN, F.A.

Scientific principles of the development of gas fields in the USSR

Report to be submitted for the Sixth World Petroleum Congress,
Frankfurt, 16-26 June 63

LAPUK, B.B.; ABUTALIYEV, E.B.

Method for the approximate analytic solution of a problem of nonstationary gas flow to a line of wells in a reservoir of varying thickness. Izv.vys.ucheb.zav.; neft' i gaz 6 no. 12: 91-96 '63. (MIRA 17:5)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti im. akademika I.M.Gubkina.

LAPUK, B.B.

Using the methods of nuclear physics to determine the ultimate yield of wells and the maximum depression in gas and oil pools with bottom water and in gas- and oil and oil-and-gas fields. Trudy MINKHIGP no.42:60-70 '63.

Degree and nature of drilling in gas pools with bottom water. (MIRA 17:3)
Ibid.:83-97

SOMOV, B.Ye.; LAPUK, B.B.; BULAVINOV, L.B.

Effect of the shape of the specific drainage area on the determination of the ultimate water-free yield of oil (gas) in oil and gas fields with bottom water. Trudy MINKHIGP no.42:98-106 '63. (MIRA 17:3)

GARIFULLINA, N. Kh.; ZAKIROV, S.N.; LAPUK, B.B.; TREBIN, F.A. (Moscow):

"The solution of problems of underground hydrogasdynamics by numerical methods".

report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 Jan - 5 Feb 64.

LAPUK, B.B.; ZAKIROV, S.N.

Taking into consideration the reservoir nonuniformity in problems
of oil, gas, and water flow. Neft. khoz. 42 no. 5:19-5/ Mv :64.
(MIRA 17:5)

IAPUK, B.B.; VLADIMIROV, V.A.

Nonstationary gas flow to well lines. Gaz. prom. 8 no.102-11
'63 (MIRA 1707)

LAFUK, B.B.; ZAKIROV, S.N.; GARIFULLINA, N.Kh.

Nonsteady flow of real gas in a deformed nonuniform bed to wells operating under given output conditions. Izv. vys. ucheb. zav.; neft' i gaz 7 no.3:81-86 '64. (MIRA 17:6)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti imeni akademika Gubkina.

LAPUK, B.B.; GARIFULLINA, N.Kh.; ZAKIROV, S.N.

Solving inverse problems of underground gas-dynamics by numerical methods taking into consideration the real properties of the gases and the porous medium. Izv. vys. ucheb. zav.; neft' i gaz 7 no.7: 65-70 '64. (MIRA 17:9)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti im. akad. I.M. Gubkina.

LAPUK, B.B.;PETROV, V.N.; GUREVICH, G.R.

Nonsteady flow of real gases. Gaz. prom. 9 no.9:3-7 '64.

(:IRA 17:10)

LAPUK, B.B.; ABUTALIYEV, E.B.

Calculating the gas flow to ring banks of wells in a layer of varying thickness. Vop. vych. mat. i tekhn. no.2:67-84 '64.

Approximate analytic solution of the problem involving unsteady plane-radial and plane-parallel diffusion of gas. Ibid.:85-94 (MIRA 18:12)

LAPUK, B.B.; ABUTALIYEV, E.B.; VLADIMIROV, L.A.

Unsteady gas flow in a stratum of variable depth. Izv. AN Uz.
SSR. Ser. tekhn. nauk 8 no.3:25-35 '64.

(MIRA 17:11)

1. Institut mekhaniki s vychislitel'nym tsentrom AN UzSSR.

LAPUK, B.B.; SAVCHENKO, V.P.; TREBIN, F.A.

Scientific fundamentals of the development of gas and
gas-condensate fields. Neft. khoz. 42 no.9/10:132-137
S-O '64.

(MIRA 17:12)

LAPUK, B.B.; LUNTS, A.I.; ZAKIROV, S.H.; GARIFULLINA, H.Kh.

Generalized method for calculating problems of underground
gas-hydrodynamics by numerical methods. Izv. vys. ucheb. zav.;
neft' i gaz 8 no.1:87-90 '65.

(MIRA 18:2)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlen-
nosti imeni akademika I.M. Gubkina.

PAYBAKOV, N.K.; LAIKH, R.R.; TRESIN, F.A.

Overall solution of the problem of the development of a group of gas-condensate (gas) fields as a unit based on a study of fields in Krasnodar Territory. Gaz. prom. 20 no.6:5-12 '65.

(MIRA 18:6)

LAPUK, I.

Facts and figures on the improvement of the living standards of
the population in Czechoslovakia. Biul. nauch. inform.: trud
i zar. plata 5 no.7:51-54 '62. (MIRA 15:7)
(Czechoslovakia---Cost and standard of living)

LAPUK, I. A.

112-2-4871

TRANSLATION FROM: Referativnyy zhurnal, Elektrotehnika, 1957,
Nr 2, p. 347 (USSR)

AUTHOR: Lapuk, I.A.

TITLE: Measuring Mechanical Resistance by the Reciprocity
Method (Izmereniye mekhanicheskogo soprotivleniya
metodom vzaimnosti)

PERIODICAL: Tr. Vses. gos. n.-i. in-ta radioveshchat. priyema i
akustiki, 1955, Nr 4, pp. 64-69

ABSTRACT: A method for measuring the mechanical resistance of a
converter in a tube on the basis of the reciprocity theorem is
explained. The method consists of measuring the no-load voltages
generated by the converters in the tube. The following converter
pairs are inserted consecutively into the tube in order to make
the measurements: 1) a radiator and a calibrated converter;
2) a radiator and an auxiliary converter; 3) the auxiliary con-
verter and the calibrated converter. Starting from the reciproc-
ity theorem and a known no-load acoustic resistance value of
the auxiliary converter, an expression is derived for the sen-
sitivity modulus of the calibrated converter. An expression is

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112-2-4871

Measuring Mechanical Resistance by the Reciprocity (Cont.)

given for the acoustic resistance of any converter. For the case of equivalent calibrated and inverted converters, a simpler expression is given for the acoustic resistance Z_x of convert-

ers:
$$Z_x = 2 \frac{e_1 e_3}{e_2 i} \frac{1}{M^2} 10^{-7} \text{ acoustic ohms where } e_1, e_2,$$

and e_3 are the no-load voltages in the three cases indicated above in which measurements were made at those frequencies where these values are maximum; M is the sensitivity of the calibrated converter; i is the current in the radiator coil. The data from the experimental checking of this formula for two type МД-35 microphones are given. The error constitutes ± 10 per cent.

N.Ya.K.

Card 2/2

BABYKIN, B.P.; SCHER, V.A.; LAPUK, I.M.

Polymerization of butadiene by catalysts based on carbonyl metals of group VI of the periodic system of elements. Dokl. AN SSSR 165 no.1:95-98 N 155. (MIRA 18:10)

I. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S.V.Lobodova. Submitted March 29, 1965.

L 7648-66 EWT(m)/EPF(c)/EWP(j) RM
ACC NR: AP5025036 SOURCE CODE: UR/0286/65/000/016/0084/0084

AUTHORS: Babitskiy, B. D.; ⁴⁴Korner, V. A.; ⁴⁴Lavuk, I. M.; ⁴⁴Lobach, M. I.; ⁴⁴Ghesnokova, N. N. ⁴¹
^B

ORG: none

TITLE: Method for obtaining cis-1,4-polybutadiene rubber. ⁴⁴ Class 39, No. 173948 ^B
[announced by All-Union Scientific Research Institute for Synthetic Rubber im.
academician S. V. Lebedev (Vsesoyuznyy nauchno-issledovatel'skiy institut
sinteticheskogo kauchuka)] ⁴⁴

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 16, 1965, 84

TOPIC TAGS: rubber, butadiene, polymer, polybutadiene rubber, catalyst, ^{polymer}
^{ization}

ABSTRACT: This Author Certificate presents a method for obtaining cis-1,4-polybutadiene rubber by thermal polymerization of butadiene in the presence of a catalyst. The catalyst consists of tetranickelcarbonyl and metal-containing compounds. The metal-containing compounds used are transition metal salts of group V or VI soluble in hydrocarbons, for instance, vanadium tetrachloride, vanadium

Card 1/2

UDC: 678.762.2

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AGC NR: AP5025036

oxytrichloride, or hexachlorotungsten.

SUB CODE: 11/

SUBM DATE: 18Apr64

m
Card 2/2

L 13473-66 ENT(m)/ENP(j)/T RM

SOURCE CODE: UR/0020/65/165/001/0095/0098

ACC NR: AP5027842

AUTHORS: Babitskiy, B. D.; Kormer, V. A.; Lapuk, I. M.

ORG: All-Union Scientific Research Institute for Synthetic Rubber im. S. V. Lebedev
(Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka)

TITLE: Polymerization of butadiene by catalysts based on the metal-carbonyls of group VIII metals in periodic table of elements

SOURCE: AN SSSR. Doklady, v. 165, no. 1, 1965, 95-98

TOPIC TAGS: polymer, polymerization, catalytic polymerization, butadiene, nickel compound, cobalt compound

ABSTRACT: The effect of nickel and cobalt carbonyls $Ni(CO)_4$, $Co_2(CO)_8$, $(C_5H_5NiCO)_2$ on the polymerization of butadiene in the presence of different Lewis acids and of $AlCl_3$, $AlBr_3$, $TiCl_4$, $TiBr_4$, TiI_4 , VCl_4 , $VOCl_3$, $MoCl_5$, and WCl_5 was studied. The polymerization was carried out in benzene or heptane solutions at a temperature of 50C over a period of 17 hours. The yield of polymer and its microstructure in terms of the fractions of cis- and trans-butadiene monomers in the chain are tabulated. It was found that the catalytic activity of the metal carbonyls and the stoichiometry of the reaction depend on the nature of the Lewis acid. A suggestion is made that the catalytic systems studied here are related to π -allyl and π -cyclopentadienyl nickel

UDC: 66.095.26+678.762

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ACC NR: AP5027842

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complex systems previously described by B. D. Babitskiy, T. G. Golenko i dr. (DAN, 161, 4, 1965). The authors thank I. A. Zarovaya for participating in this investigation. This paper was presented by academicien B. A. Dolgoploskiy on 29 March 1965. Orig. art. has: 1 table and 2 equations.

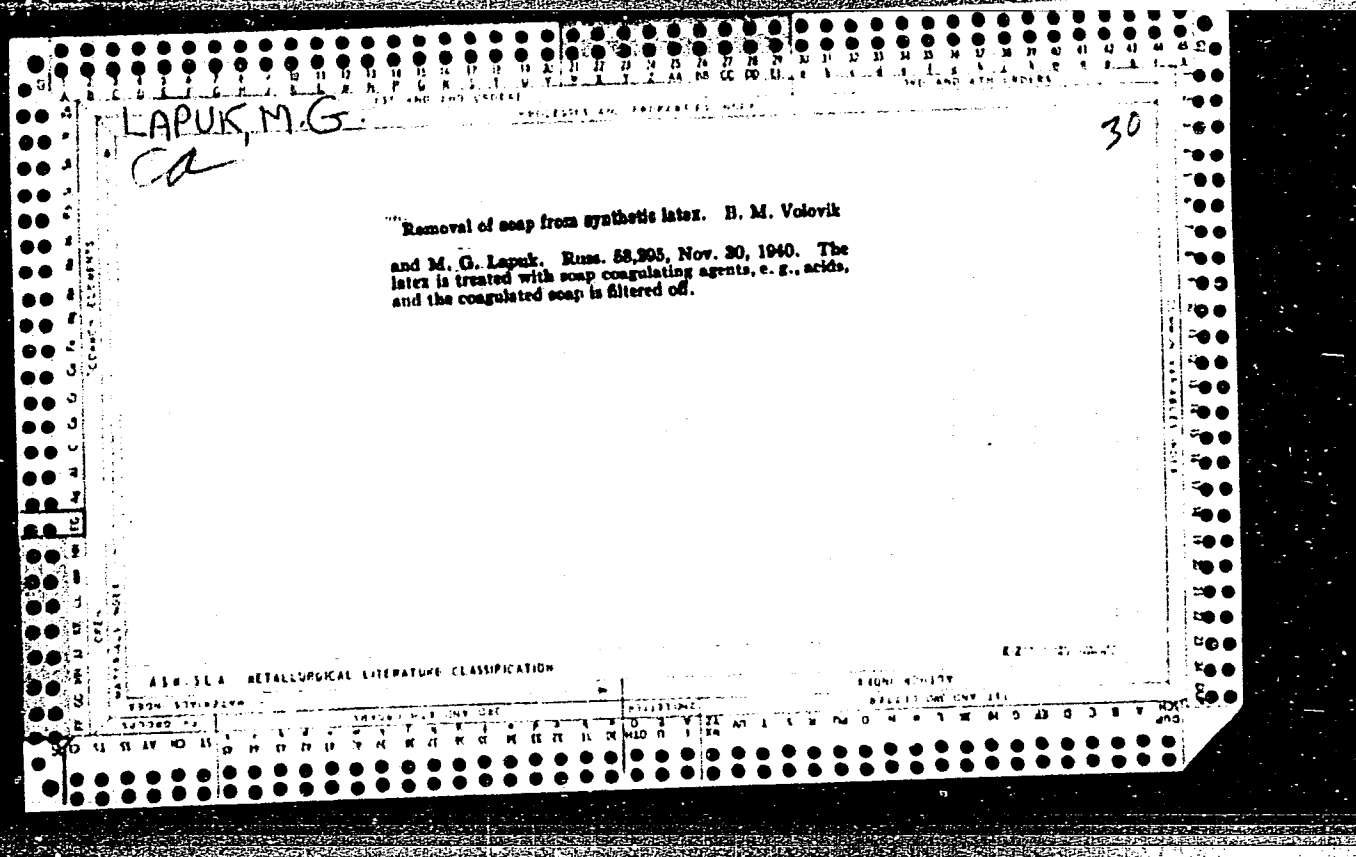
SUB CODE: 11/

SUBM DATE: 23Mar65/

SOV REF: 003/

OTH REF: 012

Card *SR* 2/2



64-58-3-2/20

AUTHORS: Kalaus, A. Ye., Lapuk, M. G., Vikulova, T. D.

TITLE: Tubular Reactor for the Continuous Polymerization in Emulsions
(Trubchatyy reaktor dlya nepreryvnoy polimerizatsii v emul'siyakh)

PERIODICAL: Khimicheskaya Promyshlennost', 1958, Nr 3, pp 5 - 10 (USSR)

ABSTRACT: An arrangement is described in which an improvement of the heat emission is reached by using cooled reaction tubes instead of a battery of water-jacketed reactors, thus regulating the stability of the emulsion and the coefficient of the heat transfer with the running-through velocity of the reaction mass. The polymerization can be made according to two basic schemes, the whole arrangement can be started as a totality, or the polymerization can take place in parts of the arrangement. The mixture is guaranteed by circulating pumps which show certain advantages in construction and in operation in the second case. The schematic representation of such a battery of test reaction tubes is given. In the tests in one case an intermixture in

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Tubular Reactor for the Continuous Polymerization in
Emulsions

64-58-3-2/20

all four sections took place with the circulating pumps, in the other case in the first section only. Comparative tests of polymerization were made in apparatus with periodic effect and with continuous effect in the test tube arrangement at different temperatures and with different characteristic physical-chemical values of the rubber. The obtained experimental results are given in tabular form and show among other that there is no difference in the characteristic physical-chemical values of the rubber obtained according to the two methods with equal recipes, but that on the other hand the obtained emulsion is more stable in the second case, and that in both cases no formation of coagulum was observed. The experiments that were made with the tube arrangement when only one circulating pump was busy showed that the transformation depth of the monomers is a little smaller, but that the characteristic values of the rubber are the same as those of the working methods mentioned above, but that on the other hand the regulation of temperature is aggravated and that a separation of coagulum takes place. The given data show that a decrease of the diameter of the tubes can shorten the duration of the polymerization,

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Tubular Reactor for the Continuous Polymerization in
Emulsions

64-58-3-2/20

and with that also an essentially greater capacity of production was observed in the continuously working system compared to reactors working discontinuously. Tests for the determination of the coefficient of effectiveness at the increase of the number of reactors at continuous polymerizations were made by the collaborators of the VNIISK N. A. Fermorov, A. L. Klebanskiy and N. Ya. Tsukerman. There are 3 figures, 7 tables.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka imeni akademika S. V. Lebedeva (All-Union Scientific Research Institute for Synthetic Rubber imeni S. V. Lebedev, Member, Academy of Sciences, USSR)

1. Polymerization--Test results
2. Synthetic rubber--Processing
3. Industrial equipment--Performance
4. Heat transfer

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06216

SOV/64-59-6-8/28

15(8) 24(8)

AUTHORS:

Kalaus, A. Ye., Lapuk, M. G., Vikulova, T. D.

TITLE:

Determination of the General Coefficients of Heat Transfer in Tube Reactors for the Polymerization in Emulsions

PERIODICAL:

Khimicheskaya promyshlennost', 1959, Nr 6, pp 491 - 494 (USSR)

ABSTRACT:

Reference is made to a paper previously published by the authors (Ref 1), from which it can be seen that due to the accumulation of the coagel on the vessel surface as well as the change in the latex viscosity also the heat transfer coefficient in the reaction vessel changes during polymerization. This is also seen from the respective data given by VNIISK and found in publications (Refs 2-4) (Table 1). In this connection the general heat transfer coefficient as a function of the rate of flow of the reaction liquid and the transformation intensity of the monomers at polymerization temperatures between 5 and 8° (some experiments at 13-15°) was determined. The experiments were conducted in a tube reactor (Fig 1). The reaction mixture was transported by means of a circulating pump (maximum output 20 m³/h). The linear rates of flow of the emulsion in the reactor were determined at various pump outputs (Table 2). The amount of the heat set free during the mixing by means of the pump was determined by means of water and latex SKS-20A, respectively,

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Determination of the General Coefficients of Heat Transfer in Tube Reactors for the Polymerization in Emulsions SOV/64-59-6-8/28

for various flow velocities (Table 3). The measurement results obtained for the general heat transfer coefficients at various experimental conditions (Table 4), at varying degrees of transformation of the monomers (Table 5), at different flow velocities (Table 6), and at a polymerization temperature of 13-15° also (Table 7) permit the following statements: At a polymerization temperature of 5-8° and a flow velocity of 0.014-0.048 m/sec. the general heat transfer coefficient is 90-123 kcal/m².hour.°C. A temperature rise to 13-15° results in a 6-8% increase in the value of the heat transfer coefficient. The general heat transfer coefficient is but little affected by an increase in the degree of transformation of up to 40% (from 140 to 134 kcal/m².hour.°C); a further increase to 70%, however, causes a considerable reduction in the value of the heat transfer coefficient (from 134 to 100 kcal/m².hour.°C). There are 3 figures, 7 tables, and 4 references, 1 of which is Soviet.

Card 2/2

SHVACHKIN, Yu. P.; BERESTENKO, M. K.; LAPUK, V. Kh.

Potential antimetabolites. Part 3: Synthesis of aminonitro-
pyrimidines based on nucleophilic substitution reactions.
Zhur. ob. khim. 32 no.12:3893-3897 D 462.

(MIRA 16:1)

1. Moskovskiy gosudarstvennyy universitet imeni M. V. Lomonosova.

(Pyrimidine) (Substitution(Chemistry))

KAVERZNEVA, Ye.D.; LAPUK, V.Kh.

Reaction of ovomucoid with hydroxylamine. *Biochimia* 29 no. 1:
138-141 Ja-F '64. (MIRA 18:12)

1. Institut organicheskoy khimii imeni Zelinskogo AN SSSR,
Moskva. Submitted June 8, 1963.

MATVEYEVA, R.A.; LAPUK, Ya.I.; STEPANOV, V.M.

Colorimetric method for determining the activity of chymotrypsin and trypsin. Izv. AN SSSR. Ser.khim. no.3:501-504 Mr '64.

(MIRA 17:4)

1. Institut khimii prirodnykh soyedineniy AN SSSR i Institut biofiziki AN SSSR.

BORISOV, V.V.; LAPUK, Ya.I.; MELIK-ADAMYAN, V.R.; SHUTCFEVUR, N.Ye.;
ANDREYEVA, H.S.

X-ray diffraction study of pepsin. Dokl. AN SSSR 156 no. 2:
363-364 My '64. (MIRA 17:7)

1. Institut biologicheskoy fiziki AN SSSR. Predstavleno akademikom
M.M. Shemyakinym.

NIKITINA, Ye.T.; LAPUKHINA, G.P.

Causative agent of black bacterial mottling in tomatoes on the farms
of the Alma-Ata suburban zone. Trudy Inst. mikrobiol. i virus. AN
Kazakh. SSR 4:140-145 '61. (MIRA 14:4)
(BACTERIA, PHYTOPATHOGENIC) (TOMATOES--DISEASES AND PESTS)

LAPUKHOV, A.S.; FYLOV, G.M.

Correlation between crystal orientation and veinlike accumulation
of crystals in experiments in a fissureless vein formation. Geol.
i geofiz. no.10:113-122 '64. (MIRA 18:4)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR,
Novosibirsk.

LAPUKHOV, A.S.

Characteristics of the structure of the dynamometamorphism of
rocks and ores in the Salair ore zone. Geol. i geofiz. no.12:
56-71 '64. (MIRA 18:6)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR,
Novosibirsk.

COUNTRY : USSR M-1
CATEGORY :
8
ABB. JOUR. : RZbiol., No. 19, 1957, No. 86954
AUTHOR : Lamukhov, S. Ya.
INST. : Kirgiz State Pedagogical Correspondence *
TITLE : The Problem of Field Culture at the best
Fiber State Farms of Chuyskaya Valley.
ORIG. PUB. : Uch. zap. kirg. gos. znan. ped. inst,
1957, No 3, 125-160
ABSTRACT : No abstract.

CARD: 1/1

* Institute.

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S/194/62/000/002/025/096
D230/D301

AUTHORS: Lapunov, A. A. and Szestopał, G. A.
TITLE: Algorithmic interpretation of the control processes
PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika,
no. 2, 1962, abstract 2-2-92e (Roczn. Polsk. towarz.
mat., Ser. 2. Wiadom. mat., 1961, 4, no. 2, 187-202)

TEXT: The advent of digital computers has expanded the range of problems, for which the solutions require mathematical investigation methods. The basis for the new approach to the diverse fields of science and technology are the concepts of control systems and control processes. For this reason it is now necessary to establish one point of view in investigating the control processes. The field concerned with the investigation of the general conformity with the laws peculiar to the control systems and control processes is called cybernetics. This paper is concerned with the exposition of certain sections of cybernetics; in particular, with the description of algorithms transforming the information. Certain principles,

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basically common to all control systems, are considered and examples are given. The description of these systems by means of functional algorithms is given and the concept of the logical algorithm presentation is introduced. A control system consists of two basic devices: Controlling, and the controlled device linked with each other. The master device transmits signals to the controlled device, causing changes in its state. Frequently the master device can receive signals from the controlled device (by feedback), containing information about the condition of the latter. In addition, both the master and the controlled devices can receive outside information some of which can be stored for further processing; thus, the realization of the process is accomplished by circulating the information between the various parts of the control system. A control process commences when the master device receives some initial information and it consists of storing, conversion, transmission and reception of information. This general scheme is exemplified on control systems, in which the conversion of energy is performed by a machine or man; the question arises: Should the machine be, in general, entrusted with the problem of the information conversion

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usually performed by man? It would then be possible, in the first place, to automate complex controlling processes and, in the second place, in order to study various processes occurring in nature, to model these processes on the corresponding controlling machines. It is emphasized that there are machines existing capable of converting very complex information for various purposes and process modelling peculiar to living organisms. One of the main fields of cybernetics is the algorithmic recording of successive information conversion for control processes from start to finish; in this, the sequence of the performed operation, the logical condition of their realization and the results obtained are taken into account. The aggregate of the elementary operations for conversion of information, and the selected logical conditions stipulating the sequence of their operation for the full solution of the stated problem is called the algorithmic solution of this problem. Thus, when it is possible to create an algorithm representing the controlled process and to realize this algorithm by means of a digital computer, the information conversion for the controlled process required can be performed by a machine. It is possible to design an algorithm for

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any process. The possibility of formulating an algorithm for a given control process forms the subject of a new branch of science, called operation analysis. In order to form an algorithm, the so-called logical algorithmic design is prepared, in which Roman capital letters A, B, C denote separate elementary operators and index letters p, q the logical condition considered. At the beginning of each logical conditions an arrow thus \uparrow is written, and at the end an arrow thus \downarrow is written. Hence, the logical algorithmic design is an expression consisting of an aggregate of elementary operations (a, B, ...), logical conditions (p, q, ...), following each other, and arrows ($\uparrow\downarrow$) showing their interdependence. Examples of the formation of the logical algorithmic design for certain control processes are given. Logical algorithmic designs play an important part in realizing a given algorithm by means of digital computers, i.e. in its programming. For this reason, in preparing the logical algorithmic design solving a given problem is prepared first; subsequently, a list of commands, or sub-programs, is prepared for the machines which should ensure the realization of

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successive operations and the logical circuit conditions. [Ab-
stracter's note: Complete translation.]

Card 5/5

LAPUR, F. A. Eng.

Concrete

Automatic concrete plants. Vest. Mash. 32 No. 3, 1952.

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

L 41118-66 EWP(t)/ETL/EWP(1-) JD

ACC NR: AP6030205

SOURCE CODE: RU/0017/65/000/007/0372/0373

AUTHOR: Oprea, O. (Doctor); Florian, I. (Engineer); Lapusan, A. (Physician);
Giusca, R. 32
BORG: [Oprea; Florian; Lapusan] "Tractorul" Works, Brasov (Uzinele "Tractorul");
[Giusca] Geological Committee, Bucharest (Comitetul Geologic)

TITLE: Method of determining the dimensions of silicogenous powders

SOURCE: Metalurgia, no. 7, 1965, 372-373

TOPIC TAGS: metal casting, silicon

ABSTRACT: A description of the method used at the Tractorul Works to determine the dimensions of the silicogenous powder in the molding sand. The determination is based on the suction of a large volume of air and on suspension filtration by means of a device consisting of a series of crucibles with filtering plates. Orig. art. has: 2 figures. [Based on authors' Eng. abst.] [JPRS]

SUB CODE: 13 / SUBM DATE: none / ORIG REF: 002

Card 1/1 11b

UDC: 621.742.47

0978 1047

LAPUSAN, III.

RUMANIA

GLIGORE, V., Professor; BACIU, Tr., MD; GHERMAN, Gr., MD;
DIMITRESCU, I., MD; GHEORGHIEV, I., MD; FLOREA, E., MD;
BLAJAN, St., MD; SAVA, E., MD; TRAITA, P., MD; LAPUSAN, M.,
Hospital attendant; PETEANU, N., MD.

1. Medical Clinic II, Cluj (Clinica a II-a medicala Cluj) - (for
first five); 2. Polyclinic No. 1, Cluj (Policlinica Nr. 1,
Cluj) - (for next five); 3. Bontida Precinct (for
Peteanu).

Bucharest, Viata Medicala, No 8, 15 Apr 63, pp 513-518.

"The Role of Certain Occupational Factors in the Aetiopathogeny
of Ulcerous Diseases of Tractor Operators and Car Drivers."

(11)

LAPUSCA, A., ing.

Results obtained in the reduction of wood consumption at the
nonferrous ore mines of the Barza group. Rev min 15 no.1:8-11
Ja '64.

LAPUSAN, I., dr.; ALLEA, M., dr.

Quantitative indicators of the anti-epidemic section Microbiologia (Bucuresti) no.2:97-116 Mr-Apr '64.

1. Lucrare efectuata la Institutul de igiena si protectia muncii, Bucuresti.

LAPUSCA, E.A., ing.; KHEIL, D.O., ing.; ILICA, D.D., ing.

Utilization of technical pyridine in the floating of cinnabar ores.
Rev min 15 no.10:499-501 0 '64.