

According to the Plan of the International Geophysical Year
Investigations by the Scientists of Georgia, the Kirghiz
Republic and of Tadzhikistan

100,8-1-6/4

various investigations of the International Geophysical Year for in the working-plan these stationary observations are carried out in the Geophysical Observatory Dushet and at the Station for Cosmic Radiation in Tbilisi. The observations are carried out since October 1st 1957 in a ionization chamber of the station Tbilisi. The observatory Abastumani carries out investigations concerning photo- and chromospheric formations on the sun and concerning the physical parameters of the upper atmosphere of the earth. A new telescope for solar investigations was set up in this observatory on the occasion of the Geophysical Year. The collaborators of AS Kirghiz SSR are to solve a series of important problems of modern glaciology by means of the example of glaciation of the Central Tyan'-Shan'. Both stationary and expeditionary investigations are carried out. The astronomic observatory Stalinabad of the AS Tadzhik SSR carries out investigations in the field of meteoric astronomy. The investigations are carried out by means of photographic, radiolocational and visual methods.

OTCERBAYEV, K.; OROZALIYEV, S.

The Son-Kul' depression. Izv. AN Kir. SSR. Ser. est. i tekhn. nauk
1 no.2:3-11 '59. (MIRA 13:9)

(Son-Kul' region--Geography)

OTORBAYEV, K.O.

Petr Petrovich Semenov Tian'-Shanskii. Izv.Kir.fil.Geog.ob-va
SSSR no.1:3-12 '59. (MIRA 13:5)
(Semenov-Tian'-Shanskii, Petr Petrovich, 1827-1914)

GRECHKO, Vsevolod Vasil'yevich; OTORBAYEV, K.O., otv. red.; ANOKHINA,
M.G., tekhn. red.

[Agriculture in Osh Province; economic and geographic
characteristics] Sol'skoe khoziaistvo Oshskoi oblasti; ekono-
miko-geograficheskaya kharakteristika. Frunze, Izd-vo Akad.
nauk Kirgizskoi SSR, 1962. 73 p. (MIRA 15:9)
(Osh Province--Agriculture)

BOL'SHAKOV, M.N.; VYKHODTSEV, I.V., doktor biol. nauk; NIKITINA, Ye.V., kand. biol. nauk; ZABIROV, R.D., kand. geogr. nauk; ISAYEV, D.I., kand. geogr. nauk; KASHIRIN, F.T.; KOROLEV, V.G., kand. geol.-min. nauk; LUNIN, B.A., kand. geogr. nauk; MAMYTOV, A.M., akademik; OTORBAYEV, K.O., kand. geogr. nauk; RYAZANTSEVA, Z.A., kand. geogr. nauk, st. nauchn. sotr.; UMURZAKOV, S.U.; YANUSHEVICH, A.I.; BLAGOOBRAZOV, V.A., red.; BEYSHENOV, A., tekhn. red.

[The nature of Kirghizistan; brief characteristic of its physical geography] Priroda Kirgizii; kratkaia fiziko-geograficheskaya kharakteristika. Frunze, Kirgizskoe gos. izd-vo, 1962. 296 p. (MIRA 16:7)

1. Geograficheskoye obshchestvo SSSR. Kirgizskiy filial.
2. Zaveduyushchiy Otdelom geografii AN Kirgizskoy SSR, predsedatel' Kirgizskogo filiala Geograficheskogo obshchestva SSSR (for Otorbayev).
3. Dekan geograficheskogo fakul'teta Kirgizskogo gosudarstvennogo universiteta (for Umurzakov).
4. Zamestitel' direktora instituta geologii AN Kirgizskoy SSR (for Korolev).
5. Rukovoditel' sektora geomorfologii Otdela geografii AN Kirgizskoy SSR (for Isayev).
6. Chlen-korrespondent, zaveduyushchiy sektorom Instituta geologii AN Kirgizskoy SSR (for Kashirin).

(Continued on next card)

BOL'SHAKOV, M.N.---(continued). Card 2.

7. Direktor Tyan-Shan'skoy vysokogornoy fiziko-geograficheskoy stantsii Otdela geografii AN Kirgizskoy SSR (for Zabiroy).
 8. Otdel geografii AN Kirgizskoy SSR (for Ryzantseva). 9. Chlen-korrespondent, direktor Instituta energetiki i vodnogo khozyaystva AN Kirgizskoy SSR (for Bol'shakov). 10. Zaveduyushchiy Otdelom pochvovedeniya AN Kirgizskoy SSR (for Mamytov). 11. Chlen-korrespondent, vitseprezident AN Kirgizskoy SSR (for Yanushevich).
 12. Zaveduyushchiy kafedroy fizicheskoy geografii Kirgizskogo gosudarstvennogo universiteta (for Lunin).
- (Kirghizistan--Physical geography)

KARTAVOV, M.; OTORBAYEV, E.

Economic and geographical studies of the Kirghiz S.S.R. Izv. AN Kir.
SSR. Ser. est. 1 tekhn. nauk 4 no. 4: 39-45 '62. (MIRA 16:4)
(Kirghizistan—Economic geography)

GRIGORENKO, P.G.; GLUSHKOVA, M.I.; OTGREBAYEV, K.O.

Natural conditions, hydrogeological characteristics, and ways
for the economic utilization of the Kugart Valley. Izv. AN Kir.
SSR. Ser. est. i tekhn. nauk 4 no.3:83-100 '62. (MIRA 15:11)
(Kugart Valley--Geology)
(Kugart Valley--Economic conditions)

OTORBAYEV, K.O.; LUNIN, B.A.

"The Kirghiz S.S.R.; economic and geographic characteristics" by
S.N. Riazantsev, V.F. Pavlenko. Reviewed by K.O. Otorbaev, B.A.
Lunin. Izv. Vses. geog. ob-va 94 no.4:352-353 J1-Ag '62. (MIRA 15:9)
(Kirghizistan—Economic geography)
(Riazantsev, S.N.) (Pavlenko, V.F.)

OTOREPEC, S.

Early and late frosts with special reference to their occurrences in
Vojvodina. (To be contd.) p. 36.
(Vasiona, Vol. 5, No. 1/2, Jan/June 1956, Beograd, Yugoslavia)

SO: Monthly List of East European Accessions (EKAL) Lc. Vol. 6, No. 8, Aug 1957. Uncl.

OTCREPEC. S.

The early and late frosts with special emphasis on their occurrences in Vojvodina. p. 110
(GLASNIK, Vol. 6 (1a 5) No. 3/4, 1956 (Published 1957)

SC: Monthly List of East European Accession (EEAL) LC Vol. 6, No. 12, Dec. 1957
Uncl.

20312

S/081/61/000/016/019/040
B143/B101

26.7195

AUTHORS: Otorodnikov, N. N., Lewin, V. Ya.

TITLE: Measurement accuracy of rapidly changing temperatures in gases by instruments with thermal inertia compensation

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 16, 1961, 141, abstract 16E25 (Tr. Kuybyshevsk. aviats. in-t, no. 8, 1959, 65 - 78)

TEXT: The authors mathematically analyzed the measurement conditions of non-stationary temperatures in gaseous media and the error occurring in temperature measurements with the aid of instruments with thermal inertia compensation. Different variants of the design of thermocouples that are used for measuring non-stationary temperatures were studied. Recommendations were made for the relatively best methods of producing and using thermocouples: volume heat capacity of the thermoelectrodes and their diameters must be equal, the thermoelectrodes must be butt welded without metallic regulus, the temperature influence of the ceramic on the hot joints and the transverse airflow at the ends of the thermoreceiver projecting from the ceramic must be eliminated. It was concluded from the

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2*312

S/081/61/000/016/019/040
B143/B101

Measurement accuracy of...

analysis results that the minimum error in non-stationary temperature measurements in gases may attain 10 - 15%. This is in contrast to the opinions of designers of instruments with thermal inertia compensation on the temperature measurement error of ± 2 with these apparatus.
[Abstracter's note: Complete translation]

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Card 2/2

OTCHOWSKI, P.

"Spring Order" in Weather Stations of the State Institute of Hydrology and Meteorology; We are Talking about Ourselves", P. 9. (CZSTW)
OPSEDIATCJA, Vol. 7, No. 5, Jan 1974, Warszawa, Poland)

SO: Monthly List of East European Associations, (ETAL), 10, Vol. 4,
No. 1, Jan. 1965, Incl.

OTOTT-KOVACS, Janos, dr.; BORDA, Ivan, dr.

Primary cancer of the liver complicated by spontaneous hemorrhage into the abdominal cavity. Orv. hetil. 96 no.27:762-754 3 July 55.

1. A Fovarosi Koskorhas IV. ker.(igazgato-foorvos: Devenyi Rudolf dr.) Fertozo Osztalyanak (foorvos: Darvas Gyorgy dr.) kozlemenye.

(LIVER, neoplasms,
with hemorrh.)

(LIVER, neoplasms,
with hemorrh.)

(LIVER, hemorrhage,
in cancer)

(HEMORRHAGE,
liver, in cancer)

[illegible]

^a The number of subjects who were included in each group was as follows: 10 in the control group; 10 in the low-dose group; 10 in the medium-dose group; 10 in the high-dose group.

5. Monday 11th March 1963

OTOVIC, N.

Using the courier unit of an air division. p. 481.

VAZDUHOPLOVNI GLASNIK. (Jugoslovensko ratno vazduhoplovstvo) Zemun, Yugoslavia
Vol. 11, no. 4, July/Aug. 1955.

Monthly List of East European Accessions (EEA1) LC, Vol. 8, no. 9, Sept. 1959

Uncl.

070755, 2.

HUNGARY/Physical Chemistry - Molecule, Chemical Bond.

R.

Abs Jour : Ref Zhur - Khimiya, No 14, 1958, 45707

Author : F. Sirokman, L. Ötövs

Inst : -

Title : Contribution to the Correlation of Steric Structure with
Dissociation Constants in Organic Compounds. II. Carboxylic Acids.

Orig Pub : Acta phys. et chem. Szeged, 1956, 2, No 1-4, 127-136

Abstract : The bibliographical data concerning the dissociation constants of carboxylic acids of various classes were studied with regard to the question of a correlation between their magnitudes and the peculiarities of the molecular stereochemistry. The steric effect of the 1st kind was revealed on the example of β -dialkylcrotonic and other acids. The presence of this effect results in a decrease of the acid strength, which is especially noticeable, if measurements were carried out in

Card 1/2

L 14033-66 EWT(1)/ETC(m)-6/ETC(1)/EWG(m) JW
ACC NR: AR5020040 SOURCE CODE: UR/0081/65/000/012/B053/E053

AUTHOR: Otpushchennikov, N.F.

ORG: none

TITLE: A basis for the Dobrotvetov empirical rule

SOURCE: Ref. zh. Khimiya, Abs. 12B353

REF SOURCE: Sb. Primeneniye ul'traakust. k issled. veshchestva. Vyp. 18, M., 1963, 253-256

TOPIC TAGS: thermodynamic characteristic, sound propagation, atom, atomic physics

TRANSLATION: On the basis of ^{21.44, 5}thermodynamic ratios a substantiation was found for the empirical rule: $c^2 A^{1/2} = K$, where c is the speed of sound in metals, l - the distance between atoms, A - the weight of the atom, and K the approximately constant value, whose calculated meaning is in satisfactory agreement with the test. A good agreement is noted between the data obtained by tests and the rules: $c^{1/4} = \text{const.}$ and $c^2 A \alpha = \text{const.}$ (α is the coefficient of linear expansion). B. Kudryavtsev.

SUB CODE: 20

Cord 1/1

OTPUSSHENNIKOV, N.F.

Temperature coefficient of the sound velocity and the thermal properties of liquids. Izv. vys. ucheb. zav.; fis. no. 108-116 '64.

Relation between the coefficient of adiabatic compressibility and the thermal properties of liquids. Ibid. 116-118 'MIRA 1964

1. Kurskiy pedagogicheskiy institut.

Absorption of ultrasonic vibrations in solids and liquids. N. F. OTTUCHEVSKIIKOV (Physikal. Z. Sovietunion, 1937, 12, 736-744).—A new method of measuring absorption of ultrasonic vibrations is described and is used to measure the absorption to Hg, H₂O, transformer oil, and varnish oil. H₂O has the least, and petroleum oil the greatest, absorption. The results differ from the values from Stokes' formula. Absorptions in steel, brass, NaCl, Cu, Sn, and glass were also measured.

and a 10

SA B 66

3798. Barkhausen-Kurz Oscillations in a "Free Anode" Circuit. N. P. Ogorodnikov. *J. Techn. Phys. U.S.S.R.* 9.1. pp. 80-88, 1969. In Russian.—The scheme of the "free anode" shows a number of substantial advantages over the usual Barkhausen-Kurz circuit. (1) The facility of exciting oscillations, as the oscillations set in under any suitable condition of operation, within a broad range of the latter, of the generator, a property B.K. circuits do not enjoy. (2) Comparatively much steadier change of wavelengths in the range between 94 and 78 cm. (3) Remarkable intensity of the oscillations. The dominating part acted by the grid circuit of the value in the B.K. oscillations is more thoroughly explained, in its relation to wavelength; intensity of the oscillations, and course of the curves $I_{osc} = f(E_g)$ and $I_{osc} = f(I_a)$, where I_{osc} is the intensity of the oscillations, I_a heating current, E_g variable grid tension (up to 500 V). It had been shown previously that the condition of Barkhausen-Kurz, $\lambda E_g = \text{const.}$, was satisfied within any separate range of oscillations, the value of the constant changing from one range to another. Finally, the conditions of generation of dwarf waves are stated. P. B. K.

ASD-56A METALLURGICAL LITERATURE CLASSIFICATION

5A

3733. Absorption of Supersonic Waves in Solid and Liquid Media. N. Otgushchennikov. *J. of Exp. and Theor. Physics, U.S.S.R.* 9, 2, pp. 229-232, 1959. In Russian.—Preliminary measurements on the absorption of supersonic waves in various media are reported. The absorption coefficients in liquids seem to be much greater than those calculated from Stokes' formula assuming the absorption to be due to internal friction. The absorption in metals is shown to be sensitive to their physical and chemical state.

A 53 H

ADDITIONAL METALLURGICAL LITERATURE CLASSIFICATION

OTPUCHCHENNIKOV, N.F.

USSR/Physics - Ultrasonics

Apr 52

"Method of Determination of Ultrasonic Velocity in Solids," N. F. Otpushchennikov, Kursk State Pedagogical Inst

"Zhur Eksper i Teoret Fiz" Vol XXII, No 4, pp 436-439

Presents new method of detg ultrasonic wave velocity in solid bodies. Applied method to velocity measurements of ultrasonics of 3.3 mc in aluminum, magnesium, glass, methylmetacrylate and ebonite. Indebted to Prof S. N. Rzhevkin. Received 14 Jul 51.

215T80

OTPUSSHCHENNIKOV, N. P.

USSR/Physics - Ultrasonics

Jun 52

"Propagation Velocity of Ultrasonic Wave in Metals,"
N. P. Otpushchennikov, Kursk Pedagogical Inst

"Zhur Eksper i Teoret Fiz" Vol XXII, No 6, pp 782,
783

The inconclusiveness of recent results made the
author perform measurements by his own method
("Zhur Eksper i Teoret Fiz" 22, 436, 1952.) This
letter is a supplement to his referred work; he
presents his results of measurements in 10 metals.
Letter to the editor, received 15 Dec 51.

2177101

USSR/Physics - Ultrasonic Waves

Nov 52

"A Procedure for Determining Absorption of Ultrasonic Waves in Metals," N. F. Otpuschnenikov

2367104

"Zhur Tekh Fiz" Vol 22, No 11, pp 1867-1870

Proposes a new method for determining the absorption of ultrasonic waves in metals. Presents data on subject absorption in the following substances: zinc, lead, tin, rosin, and methylmethacrylate. Measurements were conducted for the frequency 3.5x10⁶ cps.

2367104

Acknowledges aid of N. N. Andreyev, Corr Mem, Acad Sci USSR, and Prof L. M. Brekhovskikh. Cites related works of S. Ya. Sokolov, B. E. Korlin, I. Livshits, G. Parkhomovskiy, M. A. Iskovich.

OTPUŠCHENNIKOV, N. F.

2367104

OTPUSSHCHENNIKOV, A. F.

Propagation velocity of ultrasonic waves in rubber. N. R. Otpushchennikov and L. A. Shadrinskii. *Zhur. Tekh. Fiz.* 23, 83-84 (1953). The measurements of ultrasonic velocity were carried out at 18-20°, with the sound frequency 3225 cycles per sec. Five samples of rubber had the following compns.: butadiene-styrene copolymer (I), polybutadiene (II), and Nairit rubber (III), resp., and S (IV), mercapto-benzothiazole (V), ZnO (VI), C black (VII), kaolin (VIII), and stearic acid (IX). Sample (1) contg. I 100, IV 3, V 0.7, VI 5, and IX 0.5 part, had a velocity of 2902 ± 106 m./sec.; sample (2) (II 100, IV 3, V 0.7, VI 5, VII 10, and IX 0.5 part), 1447 ± 59 m./sec.; sample (3) (II 100, IV 3, V 0.7, VI 5, VIII 10, and IX 0.5 part), 1244 ± 50 m./sec.; sample (4) (III 100, IV 3, V 0.7, VI 5, and IX 0.5 part), 2988 ± 100 m./sec.; and sample (5) (III 100, IV 3, V 0.7, VI 5, and VII 50 parts), 2644 ± 97 m./sec., with the av. error 3.7%. Vulcanization of each of the first 4 samples was carried out at 4 atm. pressure for 20 min., sample (5) for 10 min. Nine references.

88

A. P. Kotloby

USSR .

129. Velocity of propagation of ultrasonic waves in solids. N. F. OLSHANSKIY. Letter in *Zh. ekspt. teor. fiz.*, 23, No. 11(7)127-8(1953) in Russian.

See also Abstr. 8743 (1952), 1418 (1953). Tabulates results of further measurements (for 8 solids: white marble, iron, white porcelain, cast iron, flint glass, polystyrene, rosin, and oak wood across the grain), the frequency being 3-55 Mc/s. The theoretical data found in the literature for iron, glass, polystyrene, and rosin agree well with measurements. D. LACHMAN

OTKRYSHCHENNIKOV, N. P.

U S S R .

Investigation of the propagation of ultrasonic waves in liquids by the wedge-shaped vessel method. N. P. Otkryshchennikov (Pedagog. Inst., Kursk). *Zhur. Eksp. i Teor. Fiz.* 33, 765-6 (1963). — In a wedge-shaped vessel made of 2.5-mm. glass plates 25 cm. by 2.5 cm. with a slope of 42°, the velocities of ultrasound waves of frequency $\nu = 3.66$ Mc./sec. at 20° were found to be: H₂O 1443 $\pm$ 10 m./sec., xylene 1362, castor oil 1408, glycerol 1914, turpentine 1265. P. H. Rabinovich.

USSR/Physics - Ultrasonics TRANSLATION, N. F.

PL-1

Card 1/1 Pub. 145-17/25

Author : Otpushchennikov, N. F.

Title : ~~Ultrasonic waves in Armco iron and plexiglas~~
Absorption of ultrasonic waves in Armco iron and plexiglas

Periodical : Zhur. eksp. i teor. fiz. 20, 371, March 1955

Abstract : The author presents the results of measurements of the coefficient of absorption of ultrasonic waves and velocity of propagation in Armco iron and plexiglas by the impulse method, in the range of frequencies 0.5 to 10 megacycles. Six references; e.g. N. F. Otpushchennikov, 1951, 23, 30, 1952.

Institution: Kursk Pedagogic Institute

Submitted : September 27, 1954

20(1) **PEACE ! BOOK EXPLOITATION** SCV/3150

Всероссийская конференция преподавателей педагогического института

Primeneniye ul'trasvukh i testirovaniya veshchestv; Izd. Voen-
frentil, Vp. 7 (Application of Ultrasonics for Analysis of
Substances); Translations of the All-Union Conference of Pro-
fessors and Teachers of Pedagogical Institutes, Nr. 7 Moscow,
Izd. MGPI, 1958, 283 p., 1,500 copies printed.

tech. Ed.: S. P. Zhilov; Eds.: V. P. Boldrev, Professor, and
S. B. Ludyartsev.

PURPOSE: This book is intended for physicists, technicians, aeronautical engineers and other persons concerned with ultrasonics.

OUTLOOK. The book contains twenty-eight articles which treat ultrasonic phenomena in five general categories: 1) Historical data on the development of ultrasonics in the Soviet Union over the past forty years; 2) the speed of sound in substances of varying concentration and number and type of components and the relationship between sound velocity and the compressibility of a polymer; 3) ultrasonic investigations of physical and chemical properties of materials and the determination of physical and chemical constants, e. g. density of aqueous solutions, adiabatic compressibility, molarity of solutions (with given temperatures), viscosity, surface tension, carbon content and metallic state of coal; 4) industrial applications of ultrasonics, e. g. a classification of the ability of some synthetic fibers to dyest, stiffen, 5) acoustic which produce ultrasonic waves. No personalities are mentioned. References accompany each article.

05
Compressibility of Solutions of Electrolytes
Mikhailov, I. G. and V. P. Lyubskaya. The Problem of the

Cartonov, L. M., A. G. Ginzburg, and L. V. Ginzburg, in
Investigation of the Physical and Chemical Properties of Aqueous
Solutions of Dimethyl Pyrimide in the Temperature Interval
from 20 to 90°C with the Ultrasonic and Other Methods, 75

Opentekstov, N. P. Investigation of the Effect of Ultra-
violet Radiation on the Stability of the Radical of Phos-
phorus in the Presence of Hydroperoxide in the Reaction of Phos-
phorus with Hydrogen Peroxide. *Chem. Abstr.* 1967, 66, 16
1616. (Zh. Fiz. Khim., 1966, 40, 1133; Russian.)

SECRETARY OF THE ARMY
WASHINGTON, D. C.

[illegible]

100-443887-100

William A. P. Davies is a member of the American Psychological Association and the American Psychiatric Association. He is also a member of the American Association of University Professors and the American Association of Teachers of Psychology. He is a past president of the American Psychological Association and the American Psychiatric Association. He is also a past president of the American Association of University Professors and the American Association of Teachers of Psychology. He is a past president of the American Psychological Association and the American Psychiatric Association. He is also a past president of the American Association of University Professors and the American Association of Teachers of Psychology.

Steeves, A. K. and Ye. I. Mar'ina. 1955. The
Influence of the Environment on the Development of the
Embryo of the Common Frog (*Rana temporaria*).
Tr. Gosnauk. 1955. 1: 1-10.

[illegible]

Abstracts of the American Psychiatric Association and Ultrasonography on the Psychotic and Hysterical Patients in the During Antipsychotic Therapy

Goryachev, O. V., M. A. Ostaplyeva and N. I. Gerasimov
Application of Ultrasonic Deflection

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OTPUKHCHENNIKOV, N. F.

"Propagation of Ultrasound Close to the Region of Solidification of Liquids."

report presented at the 6th Sci. Conference on the Application of Ultrasound in the investigation of Matter, 3-7 Feb 1958, organized by Min. of Education RSFSR and Moscow Oblast Pedagogic Inst. im N. K. Krupskaya.

MEMORANDUM FOR THE DIRECTOR

Subject: [Illegible]

1. [Illegible]

AUTHOR: Otychshynskiy, N.F.

SOV. PHYS. 14:10

TITLE: Velocity of Propagation of Ultrasound in Water Near Its Freezing Point
(0 K). *Velost' razbrozheniya d'zvukov v vode blizko k tseleto*
razvedeniya

ABSTRACT: *Velost' razbrozheniya d'zvukov*, 1958, Vol. 8, No. 3, pp. 3-30, USSR.

ABSTRACT: In a study of water in a wide range of temperatures the author found that near the freezing point the ultrasound velocity in water, as a function of density and the adiabatic compressibility passes through a maximum. The determination of the ultrasound velocity minimum was difficult to determine because of the low sensitivity of the apparatus used (Ref. 1). Later the author (Ref. 4) developed a more sensitive technique for measurement of the ultrasound velocity. Fig. 1 shows the schematic of Ref. 4 which includes a pulse generator 1, two quartz oscillators 2 and 3, an amplifier 4, a cathode ray tube 5, the output of the first amplification cascade 6 and the output of the second amplification cascade 7. The standard deviation of the measurement of the velocity is ± 0.1 m/sec. For linear expansion the velocity of sound is given by the formula:

$$v = v_0 \left[1 + \alpha \Delta T \right]$$

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where v_0 is the velocity of sound at the length of the cell with the sample and α is the coefficient of thermal expansion.

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Velocity of Propagation of Ultrasound in Water Near its Freezing Point

standard substance respectively. Δx is the ultrasonic wave length of the standard substance. Δt_1 is the displacement of the pulse produced by the standard substance. Δt_2 is the displacement of the pulse produced by the sample with respect to the pulse produced by the standard substance. The errors were of the order of 1.5 m/sec. The results of measurements in distilled water at 0.5 MPa at temperature from +20°C to 0°C are shown in Fig. 2. The two curves represent the ultrasonic velocity and the adiabatic compressibility. The velocity minimum occurs at +0.7°C and the compressibility maximum occurs at +2.0°C. The observed increase of the ultrasonic velocity in water

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Velocity of Propagation of Ultrasound in Water Near its Freezing Point

near its freezing point may be explained only by structural changes which were discussed by Frankel (Ref 2), who spoke of a pre-crystallization region. The extreme left of Fig 2 shows also that the initial stage of crystallization occurs at constant temperature of 0°C with a simultaneous rise of the ultrasonic velocity. There are 2 figures and 7 Soviet references.

ASSOCIATION: Karkiy gosudarstvennyy pedagogicheskii institut (Karek State Pedagogical Institute).

SUBMITTED: April 1964

Card 3/3

: 4300

S/058/62/000/0-4/02-1-1
A058/A101

AUTHORS: Stupashchennikov, N. F., Tutov, V. M.

TITLE: Ultrasonic propagation in supercooled liquids

PERIODICAL: Referativnyy zhurnal, Fizika, no. 4, 1962, 36-37, abstract no. 1
(V sb. "Primeneniye ul'trakust. k issled. veschestva", v. 1, Moscow, 1961, 79-87)

TEXT: Using the pulse method, the authors investigated sonic velocity in salol and thymol in a wide temperature range, including the region of the supercooled state. The experiment made it possible to observe with ease variations in sonic velocity smaller than 0.5 m/sec . Incident to transition through the melting temperature, both substances evince a jump of sonic velocity. This jump amounted to 4 m/sec in salol, and 5 m/sec in thymol. No change in the temperature coefficient of sonic vibration was observed incident to the said transition. The observed jumps were the same for transition from the supercooled state into the liquid state and from the liquid state into the supercooled state. The authors hold that the abrupt change observed in ultrasonic velocity incident

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Ultrasonic propagation in supercooled liquids

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AC58/A101

to transition through the melting point is an indication that there exists, in the supercooled state, a molecular modification different from that of the liquid state. There are 29 references.

I. Ratinskaya

[Abstracter's note: Complete translation]

Card 2/2

1000
S/139/62/000/003/004/015
E192/E382

AUTHOR: Otpushchennikov, N.F.

TITLE: A simple method of determining the velocity of ultrasonic waves in hard, high-absorption materials

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, no. 5, 1962, 71 - 74

TEXT: The method is based on an earlier idea of the author (Sb. "Primeneniye ul'traakustiki k issledovaniyu veshchestva" Izd. MOPI, Moscow, no. 7, 1958; no. 5, 1957; Akusticheskiy zhurnal, 4, 4, 367, 1958) of comparing two pulses propagating through a standard (known) substance and one to be measured. The equipment for such measurements is illustrated in Fig. 1. This consists of: 1 - a timer driver; 2 - amplifier; 3 - absorption tube; 4 - generator of high-frequency pulses; 5 - pre-amplifier; 6 - amplifier with detector; 7 - video amplifier; 8 and 9 - a triggered time-base generator consisting of a univibrator and a paraphase amplifier; 10 - oscilloscope; 11 - two piezo-electric transducers; 12 - the investigated material and 13 - a vessel with the standard substance. Distilled water, for which the Card 1/4

A simple method of

S/139/62/000/005/004/015
E192/E382

propagation velocity of ultrasonic waves is well known, is employed as the standard substance. If a plate of investigated material is inserted into the vessel across the propagation path of the ultrasonic waves, the pulse received at the screen of the oscilloscope tube is shifted. By assuming that the time base is linear, the propagation velocity in the measured substance is expressed by:

$$C = \frac{X_1 \cdot C_0}{X_1 - \Delta X}$$

where C_0 is the propagation velocity in distilled water, X_1 is the displacement of the pulse due to a "layer" of water equal to the thickness of the investigated plate and ΔX is the shift of the pulse due to the introduction of the plate of the hard substance into the vessel. The displacement:

$$X_1 = X_0 d$$

Card 2/4

S/139/62/000/005/004/015
E192/E382

A simple method of

where d is the thickness of the plate of the investigated substance and X_0 is the pulse displacement produced by a 1-mm thick "layer" of water. The method was used to measure the propagation velocity in substances such as sulphur, tin, lead and zinc. It was found that the experimental results were in agreement to within 2 - 3% with the data obtained by other authors. There are 1 figure and 1 table.

ASSOCIATION: Kurskiy pedagogicheskiy institut
(Kursk Pedagogical Institute)

SUBMITTED: May 15, 1961 (initially)
November 20, 1961 (after revision)

Card 3/4

S/139/62/000/005/010/015
E032/E314

AUTHOR: Otpushchennikov, N.F.

TITLE: On the relation between the velocity of sound and the physical parameters of a liquid

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, no. 5, 1962, 133 - 139

TEXT: The relation between the velocity of sound and physical parameters, such as thermal conductivity, volume-expansion coefficient, molecular weight, specific-heat ratio and temperature is established by using: 1) the thermodynamic relation between the velocity of sound in a liquid and the potential energy of molecular interaction in a liquid (B.B. Kudryavtsev, Akustich. zhurnal, 2, 1, 39, 1956; 2, 167, 1956); 2) the Lennard-Jones potential function

$$U = \frac{A}{r} - \frac{B}{r^{\mu}} \quad (4)$$

where A, B, C and μ are approximately constant and 3) the first law of thermodynamics. A further assumption is that most
Card 1/2

On the relation between

S/139/62/000/005/010/015
E032/E314

of the physical parameters involved are independent of temperature. An explicit formula is obtained in which the velocity of sound is given in terms of the above physical parameters. It is found that this formula gives the velocity of sound in a number of organic liquids to within 10% of the experimental values. Further developments of this theory will be published in a future paper. There is 1 table.

ASSOCIATION: Kurskiy gospedinstitut (Kursk Pedagogical Institute)
SUBMITTED: October 30, 1961

Card 2/2

Determination of the size of the α phase in the α/β Pb-30% Sn system

Fig. 1. The dependence of the rate of polymerization on the concentration of the monomer. The curves are calculated for the values of the parameters $k_1 = 10^4$ l./mole·sec, $k_2 = 10^3$ l./mole·sec, $k_3 = 10^2$ l./mole·sec, $k_4 = 10^1$ l./mole·sec, $k_5 = 10^0$ l./mole·sec, $k_6 = 10^{-1}$ l./mole·sec, $k_7 = 10^{-2}$ l./mole·sec, $k_8 = 10^{-3}$ l./mole·sec, $k_9 = 10^{-4}$ l./mole·sec, $k_{10} = 10^{-5}$ l./mole·sec, $k_{11} = 10^{-6}$ l./mole·sec, $k_{12} = 10^{-7}$ l./mole·sec, $k_{13} = 10^{-8}$ l./mole·sec, $k_{14} = 10^{-9}$ l./mole·sec, $k_{15} = 10^{-10}$ l./mole·sec, $k_{16} = 10^{-11}$ l./mole·sec, $k_{17} = 10^{-12}$ l./mole·sec, $k_{18} = 10^{-13}$ l./mole·sec, $k_{19} = 10^{-14}$ l./mole·sec, $k_{20} = 10^{-15}$ l./mole·sec, $k_{21} = 10^{-16}$ l./mole·sec, $k_{22} = 10^{-17}$ l./mole·sec, $k_{23} = 10^{-18}$ l./mole·sec, $k_{24} = 10^{-19}$ l./mole·sec, $k_{25} = 10^{-20}$ l./mole·sec, $k_{26} = 10^{-21}$ l./mole·sec, $k_{27} = 10^{-22}$ l./mole·sec, $k_{28} = 10^{-23}$ l./mole·sec, $k_{29} = 10^{-24}$ l./mole·sec, $k_{30} = 10^{-25}$ l./mole·sec, $k_{31} 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The author thanks Prof. V. A. Kozlovskiy and Prof. I. A. Kozlovskiy for their comments.
There are 11 figures in the text.

ASSOCIATE: Arkady Alexandrovich Ponomarev (Moscow Institute of Physics and Chemistry)

DATE: March 1, 1961

Cara -/-

TUTOV, V.M.; OTTUSECHENNIKOV, N.F.

Speed of sound and the inelastic properties of metals. Izv.
vys. ucheb. zav.; fiz. 8 no.6:172-174, 1965.

USSR 1965

1. Kurskiy pedagogicheskiy institut. Submitted July 21, 1964.

ОТПУШЕННИКОВ, В. П.

Has's empirical rule and its substantiation. Izv. vys. ucheb. zav.;
fiz. 8 no.2:179-180 '65. (MIRA 18:7)

1. Kurskiy gosudarstvennyy pedagogicheskiy institut.

L 6776-65 ENT(1)/EMP(k)/I Pf-A/P1-4

ACCESSION NR: AP4043881

S/0139/64/000/004/0191/0192

AUTHOR: Otpushchennikov, N. F.

TITLE: Simple method for a theoretical justification of the Lagemann rule

SOURCE: IVUZ. Fizika, no. 4, 1964, 191-192

TOPIC TAGS: ultrasonic propagation⁷¹ velocity, temperature dependence, liquid state, molar specific heat

ABSTRACT: The author derives by means of a semi-thermodynamical method the following formula for the temperature coefficient of sound velocity:

$$\frac{\Delta W}{\Delta T} = -\frac{n}{2} \sqrt{\pi T^3} \left(C_p - \frac{IR}{2M} \right).$$

($\gamma = C_p/C_v$, α -- coefficient of volume expansion, C_p -- specific

Card 1/3

L 6776-65

ACCESSION NR: AP4043881

heat at constant pressure, M -- molecular weight, R -- universal gas constant, i -- number of degrees of freedom of liquid molecules, m , n -- exponents in the Lennard-Jones potential function, C_v -- specific heat at constant volume). This formula was rigorously derived in the author's earlier papers (Izv. vuzov SSSR, Fizika no. 5, 133, 1962 and no. 3, 108, 1964). It is shown in this report that the empirical formula

$$\frac{\Delta W}{\Delta T} \cdot M^{1/2} = 39.0 \text{ m.g}^{1/2} / \text{sec. deg.}$$

derived by R. Lagemann et al. (Journ. Chem. Phys. v. 17, 369, 1949) is only a particular case of the formula derived by the author. It is shown further than the Lagemann rule will be satisfied only when the expression $(n/2)[\gamma m \alpha (2C_M - iR)/2]^{1/2}$, determined principally by the thermal properties of the liquid itself, has a constant value

Card 2/3

L 6776-65

ACCESSION NR: AP4043881

close to $40.0 \text{ m.g}^{1/2}/\text{sec.deg}$. The Lagemann rule is violated when the law for the temperature coefficient of the sound velocity, written in the form of the author's equation, does not hold in liquids. The formula derived by the author shows very good agreement with the experimental measurements. Orig. art. has: 3 formulas and 1 table.

ASSOCIATION: Kurskiy pedagogicheskiy institut (Kursk Pedagogical Institute)

SUBMITTED: 25Feb63

ENCL: 00

SUB CODE: GP, TD

NR REF SOV: 003

OTHER: 001

Card 3/3

ACCESSION NR: AP4041852

S/0139/64/000/003/0108/0116

AUTHOR: Otpushchennikov, N. F.

TITLE: Temperature coefficient of the velocity of sound and thermal properties of liquids

SOURCE: IVUZ. Fizika, no. 3, 1964, 108-116

TOPIC TAGS: sound velocity, temperature coefficient, thermal expansion coefficient, liquid state, molecular interaction

ABSTRACT: Inasmuch as the connection between the temperature coefficient of sound velocity ($\Delta W/\Delta T$) and the molecular-kinetic properties of a liquid in which the sound propagates have not yet been sufficiently investigated in detail, the author determines the connection between the specific heat C_p and the thermal coefficient of volume expansion α , using the existing connection between the sound distribution velocity and the potential energy of the interaction of

Cord 1/3

ACCESSION NR: AP4041852

the liquid, a Lennard-Jones potential function for the energy of the intermolecular interaction in the liquid and the first law of thermodynamics. The calculation is based on the hypothesis that the change in the velocity of sound with temperature in solids and liquids is due to the increase in the thermal motion of the atoms and molecules. A formula is obtained for calculating the value of the temperature coefficient of sound velocity in normal liquids. The validity of the formula was checked for a number of substances and the agreement was found good for most. "I thank Professor B. B. Kudryavtsev for a discussion of the results." Orig. art. has: 21 formulas and 1 table.

ASSOCIATION: Kurskiy pedagogicheskiy institut (Kursk Pedagogical Institute)

SUBMITTED: 17Jan63

ENCL: 01

SUB CODE: GP

NR REF SOV: 016

OTHER: 005

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2/3

ACCESSION NR: AP4041852

ENCLOSURE: 01

Calculated values of dn/dt

Substance	Chem. formula	$\frac{dn}{dt}$ m/sec ⁰ expt.	$\frac{dn}{dt}$ m/sec ⁰ theory	Calc. error, %
Benzene	C_6H_6	5.00	4.59	-8.2
Xylol(0)	C_8H_{10}	4.10	4.17	+1.7
Nitrobenzene	$C_6H_5NO_2$	3.8	3.66	-3.7
Chloroform	$CHCl_3$	3.6	3.24	-10.0
Aniline	C_6H_5N	4.6	4.37	-5.0
Acetone	C_3H_6O	5.5	5.47	-0.55
Ethylbenzene	C_8H_{10}	4.4	4.13	-6.1
Toluol	C_7H_8	4.06	4.31	+6.2
Ethylacetate	$C_4H_8O_2$	4.6	5.17	+12.4
Hydrogen sulfide	CS_2	3.2	3.12	-2.5
Carbon tetrachloride	CCl_4	3.0	3.24	+8.0
Dichlorethane	$C_2H_4Cl_2$	4.6	4.17	-9.3
Butyl alcohol	$C_4H_{10}O$	4.0	4.63	+15.8
Ethyl alcohol	C_2H_6O	3.6	4.78	+33.0
Methyl alcohol	CH_4O	3.3	5.2	+58.0

Card 3/3

OTPUSSHCHENNIKOV. N.F.; TUTOV, V.M.

Propagation of ultrasound in supercooled liquids. *Pris. ul'tra-*
akust. k issl. veshch. no.13:79-87 '61. (MIRA 16:6)

(Ultrasonic waves--Speed)
(Liquids--Acoustic properties)

OTPUKHCHENNIKOV, N.P.

Relation between the velocity of sound and the parameters
of a liquid. Izv. vys. ucheb. zav.; fiz. no.5:133-139
'62. (MIRA 15:12)

1. Kurskiy gosudarstvennyy institut.
(Sound—Speed)
(Liquids)

KEYS, N.V.; SINITSYN, A.A.; POZDNYSHEV, V.M.; SAMARIN, A.I.; YARTSEVA, T.W.;
Prinimali uchastiye: BENDOVSEIY, B.M.; CHUTCHEV, I.I.; KOMPANIYETS, E.W.;
~~OT~~USHCHENKO, W.I.; KHAJITONOVA, V.V.; TOROPOV, P.S.

Making ingot molds and other castings of cast iron with spheroidal
graphite at the Chelyabinsk Metallurgical Plant. Stal' 43 no.4:381-383
Ap '63. (MIRA 16:14)

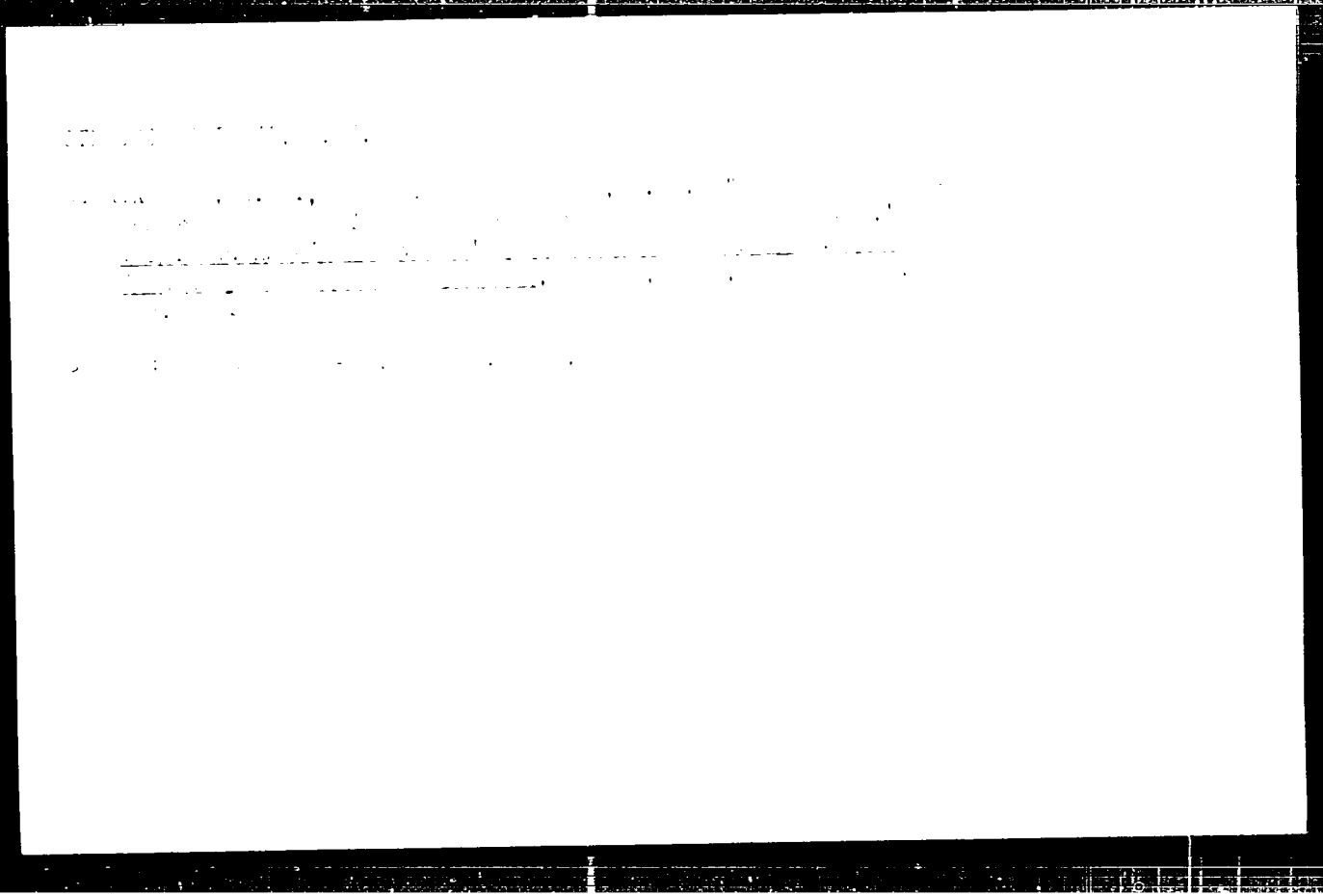
(Iron founding)

(Ingot molds)

OTIUSHOE NIKOV, N. S., Cand. Tech. Sci. (disc) "Influence of
Ground Refraction on Size of Horizontal Parallax Angle in
Range Finder," Leningrad, 1941, 3 p. (Leningrad Mining Inst.
25 copies (KL Sample 1, 1)).

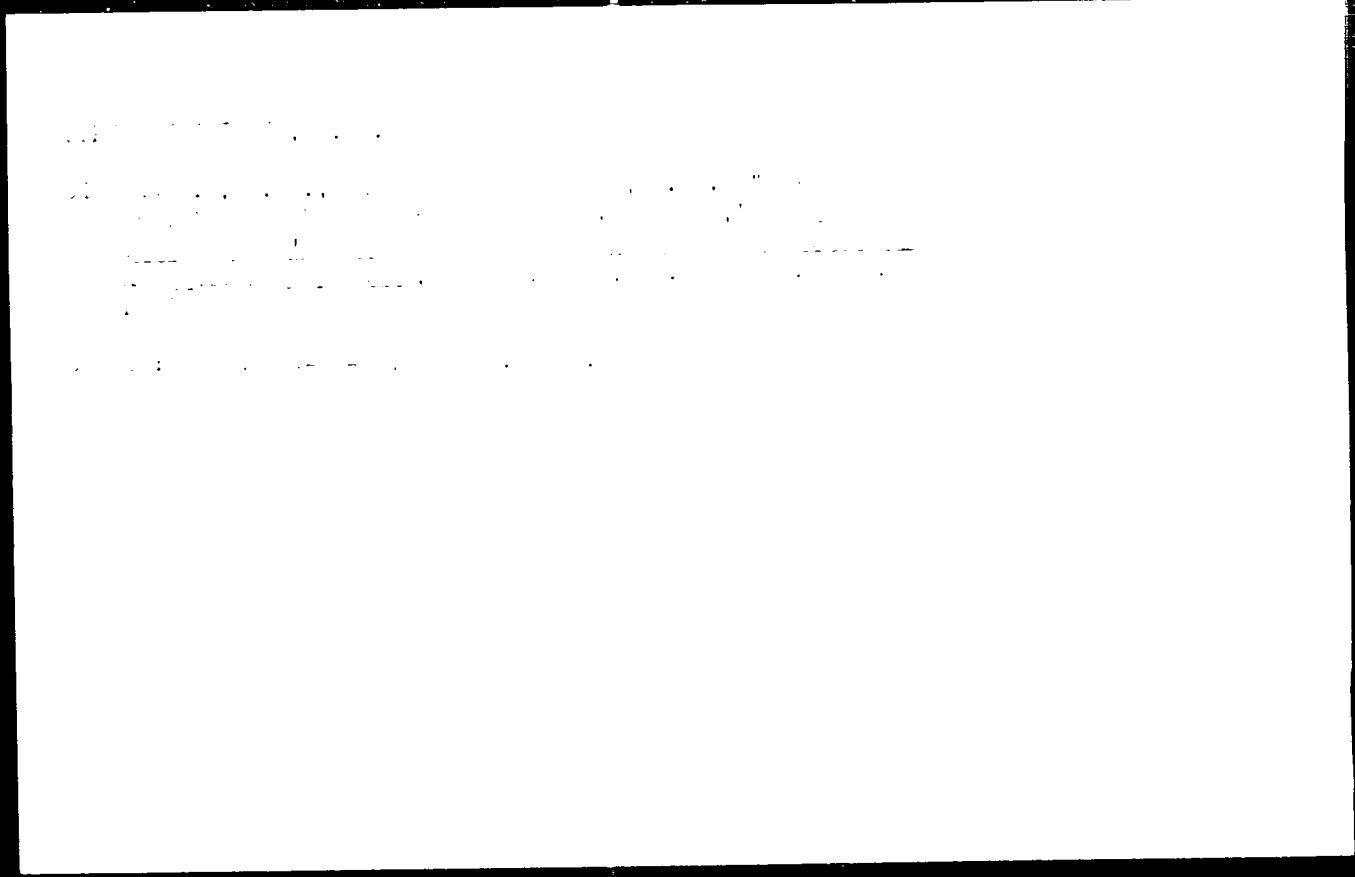
"APPROVED FOR RELEASE: 06/15/2000

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APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001238520019-0"



UNITED STATES OF AMERICA, 1971-1972

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CTFUSHCHEINIKOVA, Z. N. [Co-author]

See: SIGRIANSKII, A. M. "Effect of Spotting Fungi on the Yield and Seed Production of Red Clover," 1937.

SO: SIRA, SI 90-53, 15 December 1953

***Ultra-Sound Studies in Connection with Metals.** S. F. Otpustchikov
(Zavod' Lab. (Works' Lab.), 1937, 8, 600-1002, Chem. Zvest., 1938, 100, (1),
262).—[In Russian.] Describes an apparatus for detecting cracks and
cavities in metals by means of ultra resonance.— D. R. S.

2183. Absorption of Supersonic Vibrations in Solids and Liquid Media. N. P. Ognishchennikov. *Phys. Ziss. d. Sowjetunion*, 12, 6, pp. 734-744, 1937. In English.—A description of the method developed by the writer and some results of the absorption of supersonic oscillations in solid and liquid media are given. This method has several advantages over other methods. The values for the coefficient of absorption of the supersonic oscillations differ considerably from the results obtained by other writers. Of the four liquids under investigation water has the least, and vaseline oil the largest absorption of supersonic oscillations; qualitatively this may be explained by the viscosity coefficient of vaseline oil being greater than that of water. The absorption coefficient of supersonic oscillations computed by the Stokes formula greatly differs from the experimental values. AUTHOR.

2155. Absorption of Supersonic Vibrations in Solid and Liquid Media. N. F. Ospanbakhmurov. *Izv. Vys. d. Nauch. Ispyt.* 19. 6. pp. 120-144, 1947. (In English).—A description of the method developed by the writer and some results of the absorption of supersonic oscillations in solid and liquid media are given. This method has several advantages over other methods. The values for the coefficient of absorption of the supersonic oscillations differ considerably from the results obtained by other writers. Of the four liquids under investigation water has the least, and vaseline (of the largest absorption of supersonic oscillations), qualitatively this may be explained by the viscosity coefficient of vaseline (oil) being greater than that of water. The absorption coefficient of supersonic oscillations computed by the Stokes formula greatly differs from the experimental values. AUTHOR

Author

REF CODE: UR/0316/65/000

Abstract of a paper by V. A. Kargin, V. A. Kargin, and V. A. Kargin, *Journal of Polymer Science, Part A: Polymer Chemistry*, vol. 3, 1965, 48-51.

Subject: Elastomer with unsaturated rubber, butadiene styrene rubber, vulcanization, elastomer.

Abstract: The compatibility of ethylene-propylene elastomer SKEP with SKS butadiene-styrene rubber was investigated by comparing the physicochemical properties of the initial SKEP and of the vulcanizates obtained from it. The vulcanization was carried out for 60 min at 160°C. In the case of SKS, the elasticity, resistance to swelling, and the strength of the vulcanizate increased with the SKEP content of the mixture. The mixture of equal amounts of SKEP and SKS has better physical-mechanical properties than the mixtures taken individually. Sulfur cross-linking was found to be unsatisfactory for the mixture. Vulcanizates containing 70% SKEP and 30% natural rubber showed the best mechanical properties. The optimum conditions for vulcanization are a temperature of 160°C and a time of 60 min. Thus, it is shown that the compatibility of the system ethylene-propylene rubber SKEP with SKS butadiene-styrene and NK natural rubber is satisfactory for the preparation of blends.

Card 1/1 SUB CODE: 1. DATE: 11Sep64/ ORIG REF: 001/ OTH REF: 000

AKIMOVA, K.I.; OTRADINSKIY, Yu.A.

Calcium loss in bearing BK alloys during repeated melting.
Isol.splav.tsvet.met. no.2:140-144 '60. (MIRA 13:5)
(Babbit metal) (Founding)

OTRADOVEC, J., JIROUT, J., VYMAZAL, J., LEHOVSKY, M.

"Inverse" Foster Kennedy syndrome and an attempt to explain its pathogenesis. Cesk oftalm 19 no 4 227-23. JI 1981.

1. II oční klinika fakulty všeobecného lékařství KU v Praze,
prednosta akademik J. Kurz Neurologická klinika fakulty
všeobecného lékařství KU v Praze, prednosta akademik K. Henner.
(OPTIC ATROPHY) (SCOTOMA) (SENSORY DEPRIVATION)
(PAPILLEDEMA) (MENINGIOMA) (BRAIN NEOPLASMS)

OZBADOVEC, Jiri; ZICHA, Josef

Change in the ocular fundus after extraction of senile cataract.
Cesk.ofth.16 no.7:454-464 B'60.

1. II. oční klinika fakulty všeobecného lékařství, Karlovy university
v Praze, přednosta akademik prof.dr. Jaromír Kura.
(OCULAR FUNDUS pathol)
(CATARACT EXTRACTION)

MYSKA, V.; (TRAKAT), ...; ...

Mucocutaneous form of eosinophilic xanthomatous granuloma with severe corneal involvement in an adult male. *Ann. Ophth.* 1981; 3:360-368. S. 100.

1. J. Čech, klinická fakulta všeobecného lékařství karlovy univerzity v Praze (preinosta akademik J. Čech); III. interní a I. klinická fakulta všeobecného lékařství karlovy univerzity v Praze (preinosta akademik J. Čech); a IV. interní a klinická fakulta všeobecného lékařství karlovy univerzity v Praze (preinosta prof. dr. M. Flajš).

OTPAIOVE . . .

Kyrie eleison Kyrie eleison Kyrie eleison Kyrie eleison Kyrie eleison

OTRADOVEC, J.

Central chorioretinal changes in subacute sclerosing leuco-
encephalitis (van Bogaert). Cas. lek. cesk. 104 no. 25: 777-781.
25 July 65.

1. II. odd. klinika fakulty všeobecného lékařství Karlovy uni-
versity v Praze (prednosta: akademik J. Kurz).

OTRADNOV, D. (derevnya Kuznetsovo, Sverdlovskoy oblasti)

Use of nongenerating 1A1P and 1A2P electron tubes. Radio
no. 11:43 N '60. (MIRA 14:1)
(Electron tubes)

ZHOLKOV, S.; RKLITSOVA, T., master-povar; KARPENKO, V.; OTRADNOV, V.;
RKLITSKIY, M. (Yuzhno-Sakhalinsk); USPENSKIY, P.; BARSUKOVA, M.;
LARIONOVA, T.

Our plans for 1958. Obshchestv. pit. no.1:7, 11, 21, 31, 35, 39, 51.
Ja '58. (MIRA 11:3)

1.Zaveduyushchiy proizvodstvom stolovoy No.32 1-go Chelyabinskogo
tresta stolovykh (for Zholkov). 2. Direktor Moskovskoy shkoly
kulinarnogo uchenichestva (Karpenko). 3.Glavnyy inzhener Soyuzg
giprotorga (for Otradnov). 4.Zaveduyushchiy proizvodstvom stolovoy
No.2 "Dal'nevostochnik" (for Rklitskiy). 5. Direktor Moskovskogo
tekhnikuma obshchestvennogo pitaniya (for Uspenskiy). 6.Zaveduyushchaya
uchebnoy chast'yu Moskovskogo tekhnikuma obshchestvennogo pitaniya
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9 no.4:256-258 '54. (MIRA 8:1)
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Abstract : A biographical sketch is presented of V. Ya. Bunyakovskiy, a great Russian mathematician of the 19-th century. His principle work was devoted to the theory of numbers and the theory of probabilities.

Institution :

Submitted : September 2, 1954

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dr. Jiri Trapl, vedouci pediatrickeho vyskumu prof. dr.
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AUTHOR: Otradovec, J.

ORG: Second Ophthalmology Clinic/headed by Academician J. Kurz/, Faculty of General Medicine, Charles University, Prague (II oční klinika fakulty všeobecného lékařství KU)

TITLE: Chiasmatic and retrochiasmatic neuritis in disseminated sclerosis

SOURCE: Československa neurologie, v. 28, no. 5, 1965, 389-395

TOPIC TAGS: nervous system disease, man, vision

ABSTRACT: Study in two female patients aged 34 and 56 with disseminated sclerosis and visual difficulties. Scotomas appeared during the first attack and improved very slowly. A migration and evolution of the scotomas suggested that the lesion was located relatively distantly in the retrobulbar area of the nerve around the chiasma. [Based on Eng. abst.] [JPRS]

SUB CODE: 06 / SUBM DATE: none / ORIG REF: 003 / SOV REF: 001
OTH REF: 015

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