

Polish Technical Abst. 2383
No. 4, 1953
Metallurgy

3 pages

621.386.1:620.179:535.33
Cameras of Debye-Scherrer Type. X-Ray Powder
Proszkowe kamery rentgenograficzne typu Debye-Scherrer.
(Prace Inst. Metalurgii No. 2), Katowice, 1952, PWT,
7 pp., 12 figs.

The principal features of a good X-ray powder camera were reviewed. Many often contradictory demands made upon the powder camera made it necessary to prepare a camera which could satisfy all the various needs. A description and technical data are given of a camera made to the authors design. The 114.6 mm. dia. camera is distinguished by: precise fitting of film, easy exchange of collimating tubes, simple and quick centering of test places and small ray dispersion in the camera.

(2) 4
Determination of mullite in refractories by the x-ray method. Z. Zetepalli, *Publicat. Ministerul Petrol. 6, 314-31(1954)* (English summary).—A new, Bragg-Brentano type, focussing camera of Z.'s design was used for recording x-ray lines. Its construction reduces the effects of partial absorption and of the nonuniformity of the sample. The novel feature is an eccentrically rotating holder which permits the exposure of a large area of the sample. The samples were ground to a crystal size of 1 μ . As a reference material 10% of NaCl was admixed, and as a standard for comparison 95% pure mullite was used. The lines measured were: mullite, $d_{111} = 2.20$ A. and NaCl, $d_{200} = 1.00$ A. These lines have the least interference from other cryst. phases in a range 10-100% mullite. The measure of line intensity was taken with a microphotometer and was represented by the area comprised between the max. interference graph and the line of the mean blackening of the exposed film. The area was detd. by weighing the film. The estd. errors were about 14%. R. S. J.

ZIOLCWSKI, Z.

B. T. R.
June 1954
Ceramics and Concrete

7511* X-Ray Method of Quantitative Determination of Mullite in Refractories. Polish. Z. Ziolkowski. Instytutow Ministerstwa Hutnictwa, 1954, vol. 6, p. 311-323. Sources of possible error and degree of relative error. For a mullite content of 20 to 80% error was about 1%. Graphs, tables, photograph, radiograph. 10 ref.

11-11-54
mz

ZIOLKOWSKI, Z.

"A New Attitude Towards the Plan for the Development of Technics." p.2
(PRZEMYSŁ ROLNY I SPOŻYWCZY Vol. 7, no. 1, Jan. 1953 Warszawa, Poland)

SO: Monthly List of East European Accessions, LC, Vol. 3, no. 5, May 1954/Uncl.

ZIOLKOWSKI, Zdzislaw; RESPONDEK, Jozef; PRZONDO, Jan

Determination of ϵ - caprolactam by formaldehyde in technical solutions. Chem anal 8 no.2:273-278 '63.

1. Department of Chemical Engineering, Politechnika, Wroclaw.

ZIOLKOWSKI, Zdzisław; PRZONDO, Jan

Unitary hights of mass transfer in the pulsation column
with packing for the system: aqueous solution of NaCl -phenol -
diphenyl ether. *Chemia stosow* 5 no.4:527-550 '61.

1. Zaklad Inzynierii Chemicznej i Konstrukcji Apartatury,
Polska Akademia Nauk, i Katedra Inzynierii Chemicznej,
Politechnika, Wroclaw.

ZIOLKOWSKI, Z.

"July 22." p.233

(PRZEMYSŁ ROLNY I SPOŻYWCZY Vol. (7) no. 7, July 1953 Warszawa, Poland)

SO: Monthly List of East European Accessions, LC, Vol. 3, no. 5, May 1954/Uncl.

. ZIOMBROVSKAYA, Z.A.

Plenary session of the Illumination Engineering Society on the
lighting of schools and children's institutions. Gig. 1 san.
23 no.8:81-82 Ag '58 (MIRA 11:9)
(LIGHTING)

WYSOCKI, Eugeniusz; ZIOMBESKI, Henryk

Influence of various fats on the occurrence of changes in the teeth and parodontium in rats. Roczn panstw zakl hig 14 no.4:299-306 '63.

1. Department of Feeding Hygiene, State Institute of Hygiene, Warsaw.

ZIOMBSKI, Henryk

A device for the measurement of specific gravity of laboratory animals.
Acta physiol. polon. 13 no.3:441-445 '62.

1. Z Zakładu Higieny Żywności PZH w Warszawie Kierownik: prof. dr
A. Szczygiel.

(BODY WEIGHT)

(ADIPOSE TISSUE)

24669

P/Q21/60/000/011/003/006
A107/A125

9.4370

AUTHORS: Nalecz, Maciej, Doctor of Engineering and Ziomecki, Henryk, Master of Engineering

TITLE: Magnetic Induction Meter using the hall effect

PERIODICAL: Przegląd elektrotechniczny, no. 11, 1960, 469 - 473

TEXT: This device was developed by the Zakład Elektrotechniki Instytutu Podstawowych Problemów Techniki Polskiej Akademii Nauk IPPT PAN (Electrotechnical Engineering Department of the Institute of Basic Problems and Technique, Polish Academy of Sciences) and serves for direct measurement of magnetic induction. The advantages of this device, compared to the conventional flux meter are: there is no need to move the sensor in and out of the magnetic field during measurements; the small size of the sensor itself (4 x 2 x 0.2 mm), which permits accurate point-to-point field measurements... This device is suitable for measuring magnetic induction on constant and variable fields with frequencies up to 10¹² cps. The author gives an exhaustive explanation of the Hall effect and its use in the new device. The article describes only principle of operation and circuitry of this device for measuring magnetic induction in constant fields

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24669
P/021/60/000/011/003/006
A107/A126

Magnetic induction meter using the Hall effect

giving the characteristics of the sensor: size 6 x 12 x 0,27 mm; resistance of steering electrodes, $R_x = 140,5\Omega$; resistance of Hall electrodes, $R_H = 57\Omega$; permanent Hall unit, $R_H^x = 0,115$ mva Gs; proper resistance, $Q = 2,2\Omega$ cm and maximum steering, $I_{smax} = 35$ ma. In the second part of the article 3 foreign magnetic induction meters [Dr. Förster, Reutlingen, Germany; Siemens-Halske, Germany and Thomson-Houston, USA] are described. There are 9 figures and 1 Soviet-bloc reference.

ASSOCIATION: Zaklad Elektrotechniki, IPPT PAN (Electrical Engineering Department of the IPPN PAN)

Card 2/2

10
POLAND

WOJCIECHOWSKI, Jan; ZIOMEK, Jan

University of Lodz (Uniwersytet Lodzki) - (for both)

Warsaw, Przegląd geologiczny, No 7, July 1966, pages 319-21

"On the occurrence of sphalerite in siderites of ore-bearing series at Leagva."

ZIOMEK, M.J.

"Statystyka i sprawozdawczość" (Statistics and reports), by M.J. Ziomek.
Reported in New Books (Nowe Książki), No. 15, August 1, 1955

SHANDRENKO, G.I., starshiy nauchnyy sotrudnik; ZIOMENKO, A.I., starshiy nauchnyy sotrudnik; TIMOSHPOZ'SKIY, M., otvetstvennyy redaktor; SINYAVSKAYA, Ye.K., vedushchiy redaktor; ANDRZYEV, S.S., tekhnicheskiy redaktor.

[Time norms for the processing of scrap iron; blasting, pile hammering, flame and spear cutting, fagoting, crushing, and briquetting shavings] Normativy vremeni na razdelku doma chernykh metallov; podryvnoi sposob, koprovaia razdelka, ognivaia i noshnich-naia reska, paketirovanie, droblenie i briketirovanie struzhki. Khar'kov, Gos. nauchno-tekhn. izd-vo lit-ry po cherno i tsvetnoi metallurgii, 1954. 133 p. (MIRA 8:1)

1. Russia (1923- U.S.S.R.) Ministerstvo chernoy metallurgii. (Scrap metal industry) (Time study)

ZIOMBROVSKAYA, Z.A. (Moskva)

Determining illumination and eye fatigue by measuring visibility.
Gig.truda i prof.zab. 2 no.2:36-41 Mr-Ap'58 (MIRA 11:6)

1. Laboratoriya gigiyeny osveshcheniya Instituta obshchey i
kommunal'noy gigiyeny AMN SSSR.
(EYE--EXAMINATION)

KUCZYNSKI, Leonard, prof. dr; ZIOBROWSKI, Jerzy, dr inz.

The Department of Technology of the School of Economics in
Wroclaw. Przem ferment i rol 8 no.3:102-105 Nr '65.

1. Head, Department of Technology of the School of Economics in
Wroclaw (for Kuczynski). 2. Head, Section of Technology of
Fermentation of the Department of Technology of the School of
Economics, Wroclaw (for Ziobrowski).

ZIOMKOWSKI, S.

"Independence at once or gradually?"

p. 8 (Przemysł Gastronomiczny) Vol. 13, no. 1, Jan. 1958
Warsaw, Poland

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4,
April 1958

ZIONTEK, K.

"Protection of social property and the struggle against defective production. p. 19.
(GOSPODARKA, RYBNA, Vol. 5, No. 3, Mar. 1953 Warszawa, Poland)

SO: Monthly List of East European Accessions, L. C., Vol. 3, No. 4, April, 1954

ACCESSION NR: AP3004318

S/0033/63/040/004/0633/0642

AUTHOR: Zheleznyakov, V. V.; Zlotnik, Ya. Ya.

TITLE: On the polarization of radio waves which have passed through a region of a transversal magnetic field within the solar corona

SOURCE: Astronomicheskiy zhurnal, v. 40, no. 4, 1963, 633-642

TOPIC TAGS: solar microwave circular polarization, polarization change, characteristic parameter, interaction, phase integral, transversal field, Stokes lines

ABSTRACT: Solar microwave radiation consists of a chaotically polarized component and a circularly polarized component. The circular component is subject to change. The authors discuss Cohen's investigation of the polarization changes in which it was found that the characteristic parameter Q of the interaction of ordinary waves changes when Q is approximately equal to one. The authors study the interaction of ordinary waves in the plasma in a magnetic field by the method of phase integrals. The coordinate system is chosen in such a way that the transversal component does not depend upon the coordinates

Card 1/2

ACCESSION NR: AP3004318

and the longitudinal component depends only upon the z-axis. The electric field is a combination of real and imaginary parts, and the study is performed with a function which is expressed in phase integrals. The solution of the function shows that a strong interaction between ordinary and extraordinary waves can take place under the action of a transversal magnetic field only in a rarefied plasma. The solution of the function depends upon two constants in the phase integrals. These constants are invariable in regions limited by Stokes lines. The regions of Stokes lines are analyzed. Experimental measurements detected that the circular polarization amounts to only 40% for frequencies at which one wave transits totally into the other. Orig. art. has: 6 figures and 35 formulas.

ASSOCIATION: Radiofizicheskiy institut Gor'kovskogo gos. universiteta im. N. I. Lobachevskogo (Institute of Radio Physics, Gor'kiy State University)

SUBMITTED: 05Jul62

DATE ACQ: 20Aug63

ENCL: 00

SUB CODE: AS

NO REF SOV: 003

OTHER: 008

Card 2/2

PLEKHOV, N.D.; LUPAN, A.M.; ABRAMOV, L.S.; BOGDANOVSKIY, V.S.;
REZNICHENKO, V.I.; GREKOVA, Z.I.; GOLUB, P.I.;
ENIRZHEYEVSKIY, Ye.V.; BELOSHKURSKIY, P.I.; PODDUBNAYA,
N.A.; MIROSHNIKOV, P.P.; KORNEYEVA, L.P.; ZLOTNIKOV,
G.Z.; PAVLIS, G.F.; SKACHKOV, I.A.; SEDELEVA, Ye.P.;
POLTORATSKAYA, E.A., red.; LEUSHCHENKO, N.L., tekhn.red.

[Three-dimensional apartment house construction] Ob"amnoe
domostroenie. Kiev, Gosstroizdat USSR, 1963. 165 p.
(MIRA 17:2)

1. Nauchno-issledovatel'skiy institut stroitel'nykh kon-
struktsiy.

ZIOUZINE, I.

"Epreuve insulaire de London et la predisposition au mal de l'air en avion."
Ziouzine, I., (p. 493)

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii) 1940, Volume 18, no.5.

COUNTRY : Poland
CATEGORY : B-5
ABS. JOUR. : *ŹKhim.*, No. 22 1959, No. 77623
AUTHOR : Kozłowski, L. and Ziwołowski, Z.
INST. : Not given
TITLE : The Effect of Additions of Al_2O_3 , Mn_2O_3 , Cr_2O_3 , Bi_2O_3 , CoO , and NiO on the Structure and Magnetic Properties of Ferrites
ORIG. PUB. : *Przegląd Telekomun.*, 32, No 1, 5-10 (1959)
ABSTRACT : No abstract.

CARD: 1/1

ZIFALOV, YE. P.

Leather Industry

Making kid leather from sheepskins of fat steppe sheep. Leg. prom. 12, No. 9, 1952.

9. Monthly List of Russian Accessions, Library of Congress, December ¹⁹⁵² ~~XXXX~~, Uncl.

ZIPAYLOV, M.F.

[30 centners of winter wheat per hectare; practices of the Lenin
Collective Farm in Staryy Saltov District, Kharkov Province]
30 tsentneriv ozymoi pshenytsi z hektara; z dosvidu kolhoznu imeni
Lenina Starosaltivskoho raionu Kharkivskoi oblasti.. Kharkiv, Khar-
kivsko obl. vyd-vo, 1955. 33 p. (MIRA 10:4)
(Wheat)

L 17832-66 EWA(h)/EWP(x)/EWT(4)/EWT(n)/ETC(m)-6/EWP(w)/EWP(w) IJP(u) EKI/EW
ACR NR: AP6004073 NR 0040/65/029/005/0894/0901

AUTHORS: Vorovich, I. I. (Rostov-na-Donu) D. A. Lyva, V. Z. (Rostov-na-Donu)

ORG: none

TITLE: On the solution of nonlinear boundary value problems in the theory of elasticity by the method of transformation into Cauchy problems

SOURCE: Prikladnaya matematika i mekhanika, v. 29, no. 6, 1965, 894-901

TOPIC TAGS: Cauchy problem, boundary value problem, elasticity theory, nonlinear elasticity, numeric integration, digital computer, function, shell deformation

ABSTRACT: A method is described for transforming a boundary value problem in nonlinear elasticity into a Cauchy problem to allow for a direct numerical integration on digital computers. The method is applied to the problem of a shell deformed symbolically

$$A_i(u, v, w, p) = \dots \quad (i = 1, 2, 3)$$

it is required to determine a function $\Phi(u, v, w)$ which can be expressed as a function of the loading parameter p . This can be done by differentiating Φ with respect to p such that

2

Card 1/2

L 17837-66

ACC NR: AP6004073

$$\frac{d\Phi}{dp} - \sum_{n=1}^n \frac{\partial \Phi}{\partial C_{nk}} \frac{dC_{nk}}{dp} = 0$$

where C_{nk} are transformation constants. The above equation represents a set of linear ordinary differential equations in Φ and C_{nk} . The above analysis is applied to the deformation of a spherical dome under uniform loading conditions. The governing equations are given by

$$\rho\psi'' + \psi' - \frac{\psi}{p} = \theta \left(\frac{2H}{h} \rho + \frac{1}{2} \theta \right) \left(\psi - \frac{T_1 a^2 p}{E h^3} \cdot \theta + \frac{a}{h} \theta_1 \right)$$

$$\rho\theta'' + \theta' - \frac{\theta}{p} = -12(1-\mu^2)\psi \frac{2H}{h} \rho + \theta + 6(1-\mu^2)\rho_0 p^3 \left(\rho_0 = \frac{p_1^2}{E h^3} \right)$$

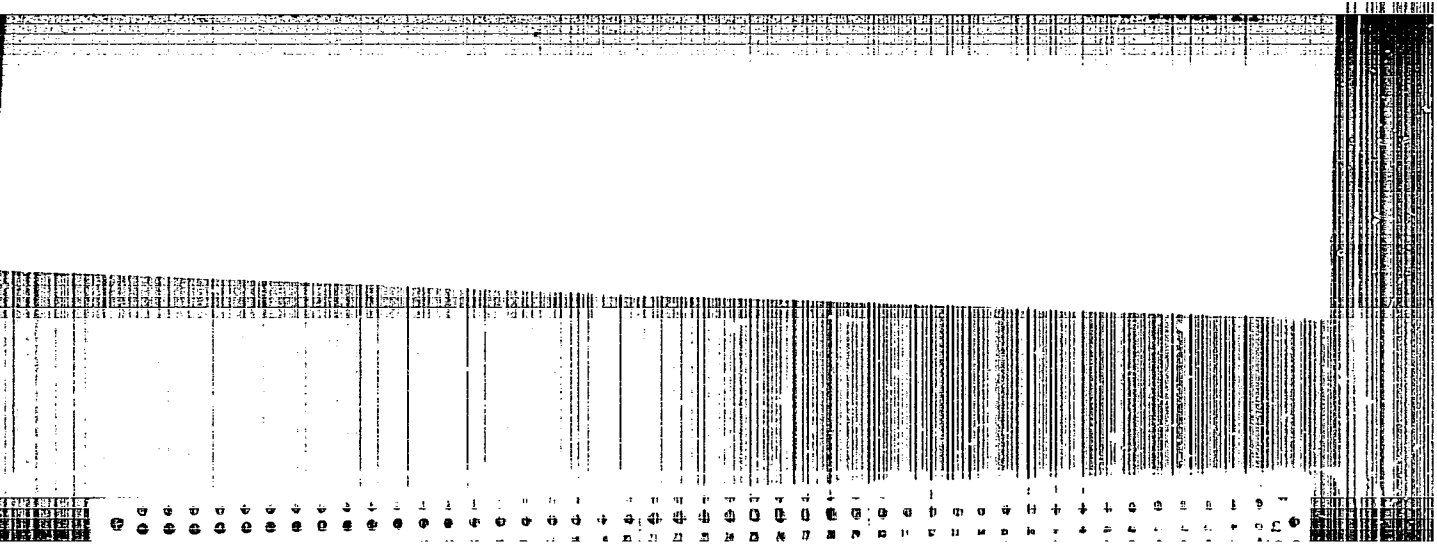
where Φ plays the role of the integral

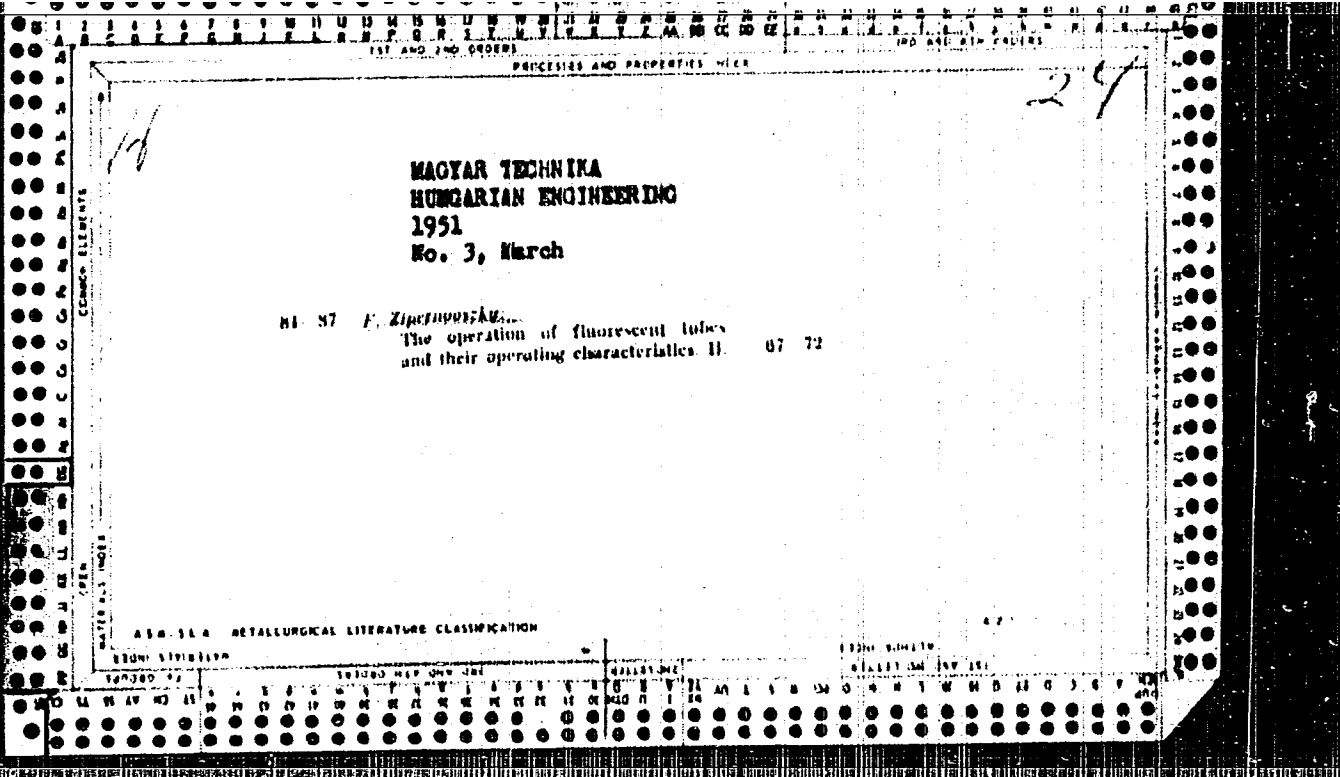
$$f = \int_1^p \theta dp$$

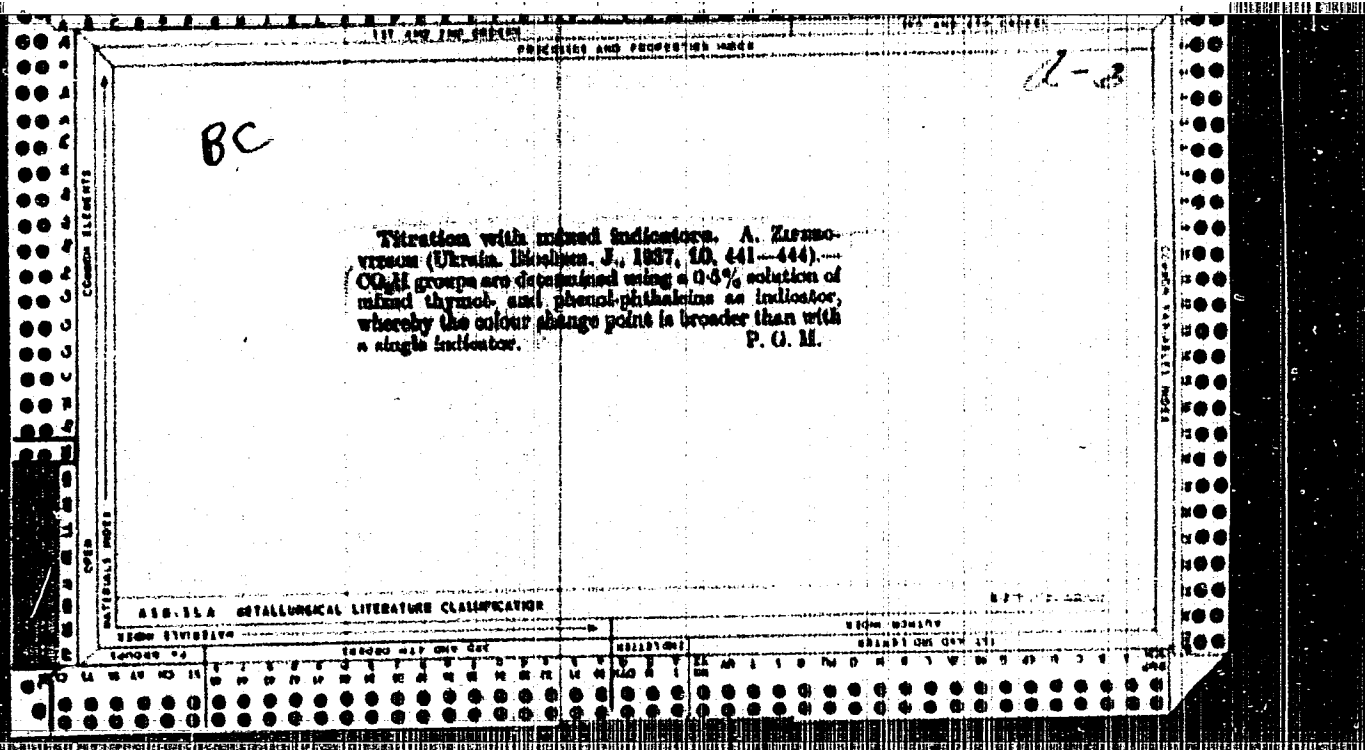
The resulting ordinary differential equations are solved numerically on the Minsk-12 digital computer using the Runge-Kutta integration scheme. Orig. art. has: 26 equations, 10 figures, and 1 table.

SUB CODE: 12, 10, 09 / SUBM DATE: 31 May 65 / ORIG REF: 010
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20. Part of face app...







PROCEDURE AND PROPERTIES INDEX

D-4

BC

This new type of steel is being
developed in the USSR. It is known as
(Ukrain. Decibel, T. 1022, 11, 52-53). The
analysis shows that the building up of the
steel is done considerably more than of other
steels, giving a higher strength. The
strength is about 100% higher than that of
A. T.

A 10-11A METALLURGICAL LITERATURE CLASSIFICATION

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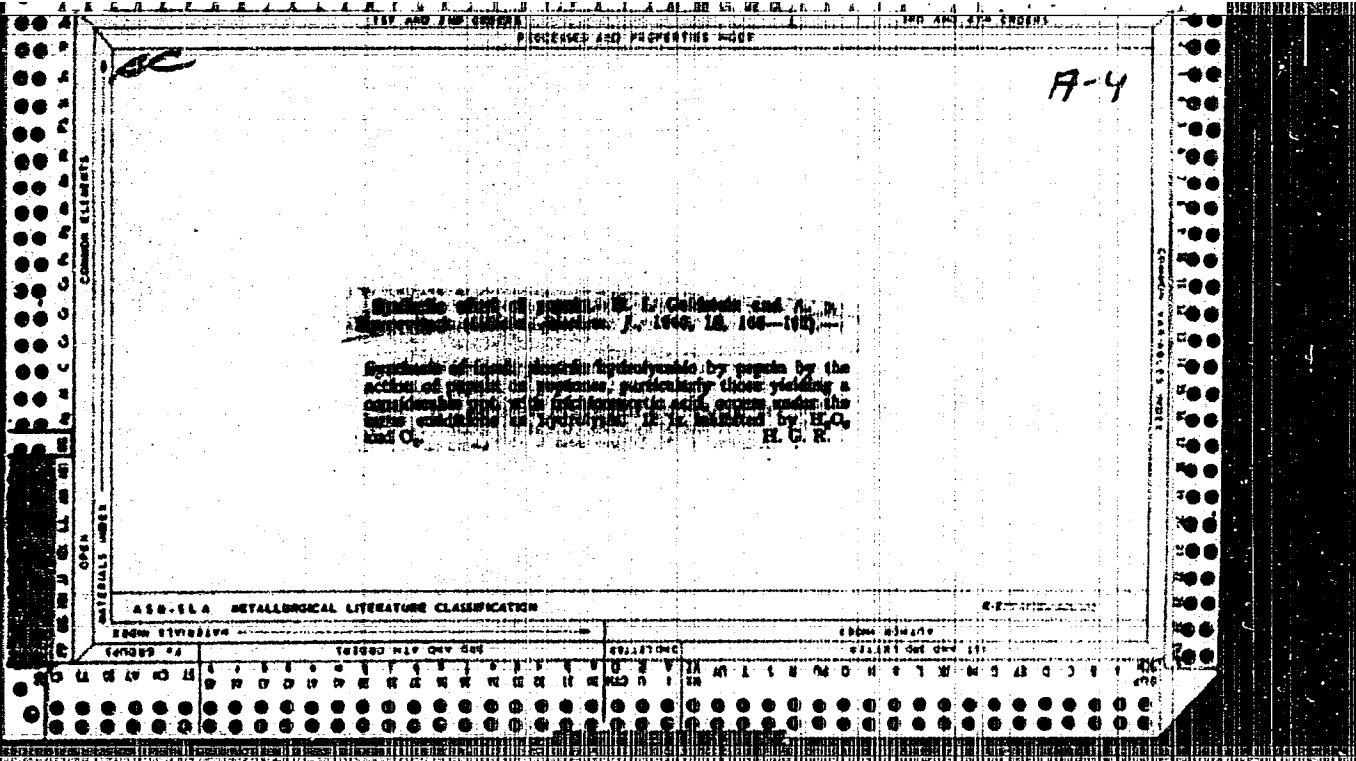
107 APR 1962 (REV. 10-1-58)
PROCEDURE AND CLASSIFICATION

BC

Determination of percentage in wet material and solution. A. 2.0 g. wet material (Ultras. Biochem. J., 1960, 25, 466). B. 2.0 g. wet material of conversion of percentage in wet material and solution to complete solution in 100% water. In determining percentage in wet material the final (HCl) should not be above the figure of 100%.

ASB-51A METALLURGICAL LITERATURE CLASSIFICATION

CLASSIFICATION	INDEX
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
30	30
31	31
32	32
33	33
34	34
35	35
36	36
37	37
38	38
39	39
40	40
41	41
42	42
43	43
44	44
45	45
46	46
47	47
48	48
49	49
50	50
51	51
52	52
53	53
54	54
55	55
56	56
57	57
58	58
59	59
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61	61
62	62
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77	77
78	78
79	79
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82	82
83	83
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85	85
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87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100



11

PRECISES AND PROPERTIES MORE

bc

a-4

Synthetic metal of phosphorus. A. S. Zimovitch (Ukrain. *Metall. J.*, 1961, 17, 172-200). A review. W. McC.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

GROUP	SECTION	SUBSECTION	CLASSIFICATION	REMARKS
1	2	3	4	5

24 1800 1482 2607

27642
S/194/61/000/002/031/039
D216/D305

AUTHORS: Zipir, A.D. and Yakovlev, V.F.

TITLE: Experimental basis of the method of multiple echo-pulses for the low-frequency analysis of liquids

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 2, 1961, 12, abstract 2 E97 (V sb. Primeneniye ul'traakust. k issled. veshchestva, no. 11, M., 1960, 107-122)

TEXT: In measurements of the absorption coefficient of ultrasound at frequencies 1 - 6 Mc/s, the following are the factors limiting the measurement accuracy: owing to weak absorption at these frequencies, long acoustic paths are required; the measurements have to be made inside the ultrasonic beam at a point where its divergence is not yet noticeable; diffraction losses have to be taken into account. A pulse method of measuring the absorption coefficient in poorly absorbing liquids has been evolved which utilizes

Card 1/2

27642

S/194/61/000/002/031/039
D216/D302

Experimental basis...

multiple echo-pulses. A pulse circuitry which utilizes the existing pulse instruments is described. The duration of the transmitted acoustic pulse - 10 - 15 μ sec, repetition frequency 150 c/s. The display at the CRO screen consists of several peaks with decreasing amplitudes. Since the pulses are reflected many times both from the reflector and from the crystal (radiator), it was necessary to establish whether the reflector repeats the pulse in the same way as the crystal. The experiment showed that the quartz is not a simple reflector, but rather a transducer of acoustical energy and this fact has been taken into account in actual measurements. Two methods of measuring the absorption coefficient by means of echo pulses are described: the measurement from the n-th pulse with varying distance and the measurement with fixed spacing between the quartz and reflector. The method has been proved using well-known liquids (toluene, benzene etc.). The experimental spread of results did not exceed 4 - 6%. 7 figures. 2 references.

Card 2/2

S/058/63/000/001/111/120
A052/A101

AUTHOR: Zipir, A. D., Yakovlev, V. F.

TITLE: Systematic error of the pulse method

PERIODICAL: Referativnyy zhurnal, Fizika, no. 1, 1963, 72, abstract 1Zh428
(In collection: "Primeneniye ul'trazvuk, k issled. veshchestva".
no. 15, Moscow, 1961, 49 - 53)

TEXT: A theoretical analysis is carried out by means of a spectral representation of a pulse. It is shown that the systematic error, introduced by the pulse method into the absorption coefficient measured by the amplitude decrease, pertaining to the signal carrier frequency, can be reduced to a value considerably less than the experiment errors, if utilizing signals of a definite length.

[Abstracter's note: Complete translation]

Card 1/1

ZIP, R. A. P.

24(1)	PHASE I BOOK EXPLOITATION	NOV/335P
Vserossiyskaya konferentsiya professorov i prepodavateley pedagogicheskikh institutov.		
Primeneniye ultrazvukovoy tekhniki k issledovaniyu veshchestva: trudy konferentsii, vyp. 8 (Application of Ultrasonics in the Study of Matter: Transactions of a Conference, Nr. 8) Moscow, Ind. MOPI, 1959. 170 p. 1,000 copies printed.		
Tech. Ed.: S. P. Zhilov.		
PURPOSE: The book is intended for physicists, particularly those specializing in the field of ultrasonics.		
COVERAGE: This is a collection of 12 articles dealing with problems of acoustics, ultrasonics, and molecular physics. References are given at the end of each article.		
	Fredvoditeley, A. S. Dispersion of Acoustic Waves in Rarefied Gases. Article I.	19
	Zipir, A. D., and V. F. Yakovlev. Pulse Method for Multiple Transformation of an Ultrasonic Signal in the Investigation of Liquid Media	63
	Ilgunas, V., and M. Yaronis. On the Theory of Interferometers With Variable and Constant Length	67
	Trelin, Yu. S. Some Results of Measurement of Ultrasonic Velocity in Gases by the Pulse Method	75
	Volarovich, M. P., and D. B. Belashov. Investigation of Ultrasonic Velocity in Nitrogen Under Pressures up to 1050 kg/sq cm	83
	Akhmetyanov, K. D., and M. G. Shirkovich. Ultrasonic Velocity in Compressed Vapors of Ethyl Alcohol and Determination of Heat Capacities C_p and C_v	93
	Peresvishko, I. I. Ultrasonic Propagation in Rarefied Gases	103
	Kuchera, P. On Some Conditions for Applicability of Raoult's Law for Solutions	115
	Shilyayev, A. S., and B. B. Kudryavtsev. Ultrasonic Velocity and Surface Tension in Ternary Liquid Systems	121
	Bessonov, M. B. Measuring Ultrasonic Velocity and Absorption in Solutions at High Temperatures	137

L 04088-67 EWP(k)/EAT(1)/T /

ACC NR: AR6023296

SOURCE CODE: UR/0058/66/000/003/H069/H069

AUTHOR: Zipir, A. D.; Yakovlev, V. F. 55
BTITLE: Use of multiple echo pulses for the measurement of absorption of ultrasound in liquids *q w*

SOURCE: Ref zh. Fizika, Abs. 3Zh483

REF SOURCE: Tr. 1-y Mezhd. nauchn. konferentsii po primeneniyu molekul. akust. k issled. veshchestva i v nar. kh-ve. Tashkent, 1964, 181-186

TOPIC TAGS: ultrasound absorption, liquid property, acoustic damping, absorption coefficient, acoustic measurement, error minimization

ABSTRACT: A study of the multiple echo signal observed in liquids has shown that it can be used for the measurement of absorption of ultrasound in liquids at frequencies less than 5 - 7 Mcs, where other ultrasonic methods are difficult to use. Measurements were made in the 2.3 - 9 Mcs range in benzene, toluene, and ethyl alcohol, the attenuation for which was measured by many authors. Comparison with the published data has shown good agreement and permits the conclusion that this method can be used to investigate liquids with absorption coefficients $(3 - 4) \times 10^{-3} \text{ cm}^{-1}$, which is one order of magnitude lower than the values that can be handled by the usual pulse methods, and corresponds on the high-frequency side to values which are amenable to measurement with the aid of the reverberation method. The measurements were made with an x-cut quartz of 3.5 cm diameter. By increasing the quartz dia-

Card 1/2

I. 04088-67

ACC NR: AR6023296

meter it is possible to broaden the frequency range. The measurement error decreases by a factor n compared with the error of the usual pulse method (n is the number of counted pulses). The measurement accuracy is 6 - 8% and increases with increasing frequency and attenuation to 3 - 5%. The path traversed by the pulse can amount to several meters, which greatly exceeds the Fresnel zone; if it is assumed that it is simply reflected from the reflector and from the receiver, then the correction for the divergence of the beam gives a value which is incompatible with the attenuation-measurement results. The authors therefore propose that re-radiation (re-broadcast) of the ultrasound signal occurs upon reflection from the quartz. Such an interpretation makes it possible to neglect the divergence of the beam on the additional path, and the attenuation in it greatly exceeds the attenuation due to the broadening, so that it can be disregarded. A. Shpil'kin. [Translation of abstract]

SUB CODE: 20

kh

Card 2/2

ZIP, A.D.

24(1) PHASE I BOOK EXPLOITATION SOV/3150

Vseosoyuznaya konferentsiya professorov i prepodavately pedagogicheskikh institutov

Primeneniye ultrazvukov i isledovaniya veshchestv, studiy konformatsii, vyznaniya i primeneniya ultrazvukov. Sovetskaya Akademiya Nauk, 1958. 7 (Application of Ultrasound for Analysis of Substances; Transactions of the All-Union Conference of Professors and Teachers of Pedagogical Institutes, Nr 7) Moscow, Izd. MOPi, 1958. 283 p. 1,500 copies printed.

Tech. Ed.: S. P. Zhitov; Eds.: V. P. Mozdrev, Professor, and B. B. Kudryatsev.

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

COVERAGE: 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 suspensions of varying concentration and number and type of components and the relationship between sound velocity and the compressibility of electrolytes; 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, saturation pressure and also ultrasonic investigation of the carbon content and petrographic state of coal; 4) industrial applications of ultrasonics, e. g. emulsification of reagents, cleansing of textile fibers and enhancing the acceptability of some synthetic fibers to dyeing, etc.; and 5) apparatus which produce ultrasonic waves. No personalities are mentioned. References accompany each article.

Yagovoy, M. M. Application of Ultrasonic Methods for Measurement of the Depth of a Tapered Surface Layer 169

Yakmelax, V. P. and A. D. Zigin. Elementary Theory of a Quartz Converter 185

Kal'yanov, B. I. Measurement of the Coefficient of Absorption of Ultrasound in the Critical Range of Methyl Acetate by the Pulse Method 201

Kal'yanov, B. I. Methodological Peculiarities of Investigating the Coefficient of Absorption of Substances in the Critical Range by the Pulse Method 207

Scholar, V. D. The Application of a Telescopic System for Measurement of the Speed of Ultrasound by the Optical Method 217

Burakov, Yu. M. and D. A. Strogalina. A Few Designs for the Measuring Member of a Rheometric Apparatus 221

Makshakov, Ya. S. and A. I. Litvinsk. A Demonstrator Pulse Generator With Ultrasonic Indicator 225

Kol'minov, A. N. Some Acoustic Experiments With the Application of Electroacoustic Apparatus 229

Kudryatsev, B. B. The Propagation of Sound in Liquids 257

Belitskiy, B. A. The Theory of Speed Dispersion and the Coefficient of Absorption of Ultrasound in Esters of Organic Acids 269

Akulov, M. S. The Theory of Phase Transitions With Two Curie Points 279

Card 6/7

ZIPPIR, A.D.

112-2-4764

TRANSLATION FROM: Referativnyy zhurnal, Elektrotehnika, 1957,
Nr 2, p. 327 (USSR)

AUTHORS: Zalivchiy, V.N., Zipir, A.D.

TITLE: Research by the Pulse Method Along the Saturation Line
on the Absorption of Ultrasound in Ortho- and Metaxylols
(Issledovaniye pogloshcheniya ul'trazvuka v orto- i
mitaksilolakh impul'snym metodom po linii nasyshcheniya)

PERIODICAL: Sbornik stud. nauch. rabot po yestv.-matem. tsiklu.
Mosk. obl. ped. in-t, 1956, Nr 1, pp. 32-38

ABSTRACT: The pulse method used differed from the methods de-
scribed previously. Here a quartz crystal generating bilateral
radiation and two (instead of one) reflectors disposed at fixed
distances along both sides of the crystal radiator were used.
Absorption was determined by comparing the amplitudes of the
pulses received from the reflectors. The absorption factor of the
orthoxytol was measured at the frequency 7.6 mc and in the tem-
perature interval 19.5° to 325°, and for metaxylol at the fre-
quency 15.1 mc and in the temperature interval 17° to 275°. It
was determined that the absorption factor relative to the square

Card 1/2

Research by the Pulse Method Along the Saturation Line (Cont.)

112-2-4764

of the frequency increases in the whole temperature interval. The space viscosity and that part of the absorption due to drift viscosity (Stokes absorption) were calculated from the experimental data. It was determined that qualitatively, absorption determined experimentally and absorption as calculated by the Stokes law methods did not agree in the whole temperature interval. The Stokes absorption was less than the absorption determined experimentally. In the entire temperature interval, absorption determined experimentally for metaxylol is somewhat higher than in the case of orthoxyiol at the same temperatures.

L.M.L.

ASSOCIATION: Moscow Oblast Pedagogical Institute (Mosk. obl. ped. in-t)

Card 2/2

ZIPIR, A. D. Cand Phys-Math Sci --- "The impulse method of multiple transformation of a supersonic signal in the study of liquids." Mos, 1961 (Min of Education RSFSR. Moskovskaya Oblast Ped Inst im N. K. Krupskaya). (KL, 4-61, 183)

Authors

Keshkin, N. I.; Zaitovhin, V. N.; Ziber, A. D.

Zipir A.D.

POLAND/Acoustics.

J

Abs Jour: Referat Zhur-Fizika, 1957, No 4, 10190

Author : Zalivchiy, V.N., Zipir, A.D.

Inst : Not given

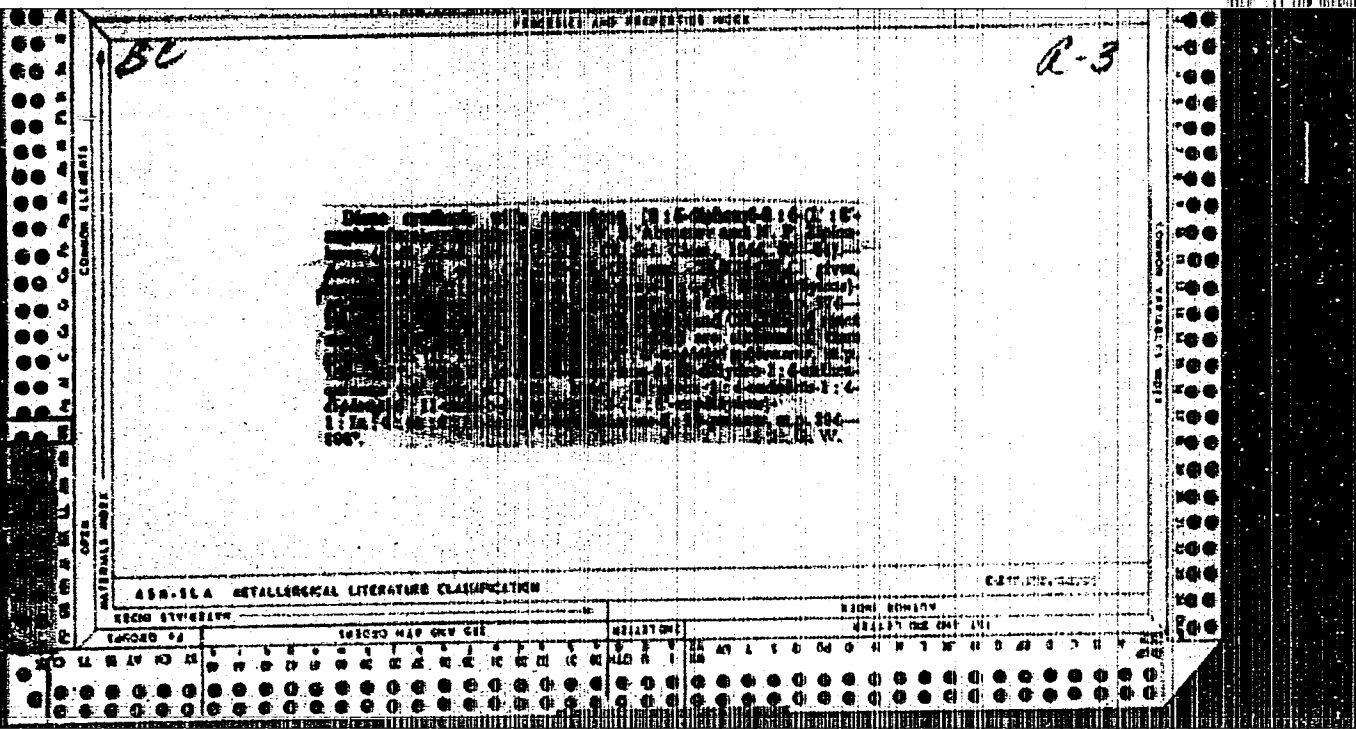
Title : Investigation of the Absorption of Ultrasound in Ortho and Meta Xylols by Pulse Methods, Using the Saturation Line.

Orig Pub: Sb. stud. nauchn. rabot po estestv. matem. tsiklu Mosk. obl. ped. in-t, 1956, 1, 32-38

Abstract: A pulse method was used to measure absorption of ultrasound in ortho and meta xylols. The measurements were in an autoclave based on the saturation line in the temperature interval from 20 to 300°.

It was established that over the entire temperature interval the experimental values of the absorption are one order higher than the Stokes values. The coefficient of absorption for meta xylol is somewhat greater than that of ortho xylol for equal temperatures.

Card : 1/1



ZIPER, A. V. and YAKOVIEV, V. E. F.

"Investigation of Phenomena Accompanying the Propagation of Ultrasound and Methods to be used in Work in this Field: Application of Multiple Reflection in the Investigation 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.

ZIPKA, FRANTISHEK

VARNKE, Gerbert [Warnke, Herbert] (Germanskaya Demokraticeskaya Respublika);
LOG-SOVINSKIY, I. [Log-Sovinski, J.]; ZIPKA, Frantisek [Zupka,
Franticek].

For the creation of an atom-free zone in Central Europe. Vsem. prof.
dvizh. no.4:2-4 Ap '58. (MIRA 11:5)

1. Predsedatel' ob'yedineniya svobodnykh nemetskikh profsoyuzov (for
Varnke). 2. Predsedatel' Tsentral'nogo soveta profsoyuzov Pol'shi
(for Log-Sovinskiy). 3. Predsedatel' Tsentral'nogo soveta profsoyuzov
Chekhoslovakii (for Zupka).

(World politics)

S/262/62/000/005/002/013

1007/1207

Authors: Zippel, Rudolf,
Liebig, Hans

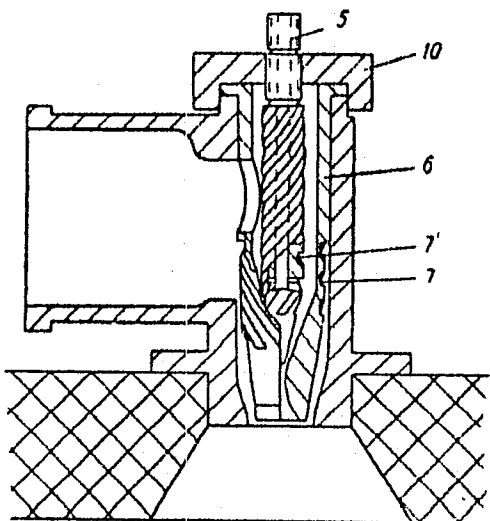
Title: ATOMIZING BURNER FOR LIQUID AND GASEOUS FUELS

Periodical. *Referativnyy zhurnal, otdel'nyy vypusk. 42. Silovye ustanovki*, no. 5, 1962, 18, abstract 42.5.85
(Patent of the German Democratic Republic, class 24b 8/03, no. 20898, 17.II.61)

Text: A patent has been granted for the design of an atomizing burner (fuel injector) ensuring efficient combustion of liquid and gaseous fuel (see figure). To shift combustion from liquid to gaseous fuel, the fuel-feeding tube (5) and the sleeve (6) intended for combustion of liquid fuel must be replaced by the corresponding feeding tube and sleeve for gaseous fuel. These components are replaced by removing the cover (10) screwed to the burner body. The helical channels (7) and (7') are designed for whirling the streams of primary and secondary air

Card 1/2

ATOMIZING BURNER.



S/262/62/000/005/002/013
1007/1207

[Abstractor's note: Complete translation.]

Card 2/2

Stakhanov, A.

Labor Productivity

Stakhanovites seek new ways of increasing production, V pom. profaktivu, 13, No. 7, 1952.

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

Textile Industry and Fabrics

Stakhanovites seek new ways of increasing production, V pom. profaktivu, 13, No. 7, 1952

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

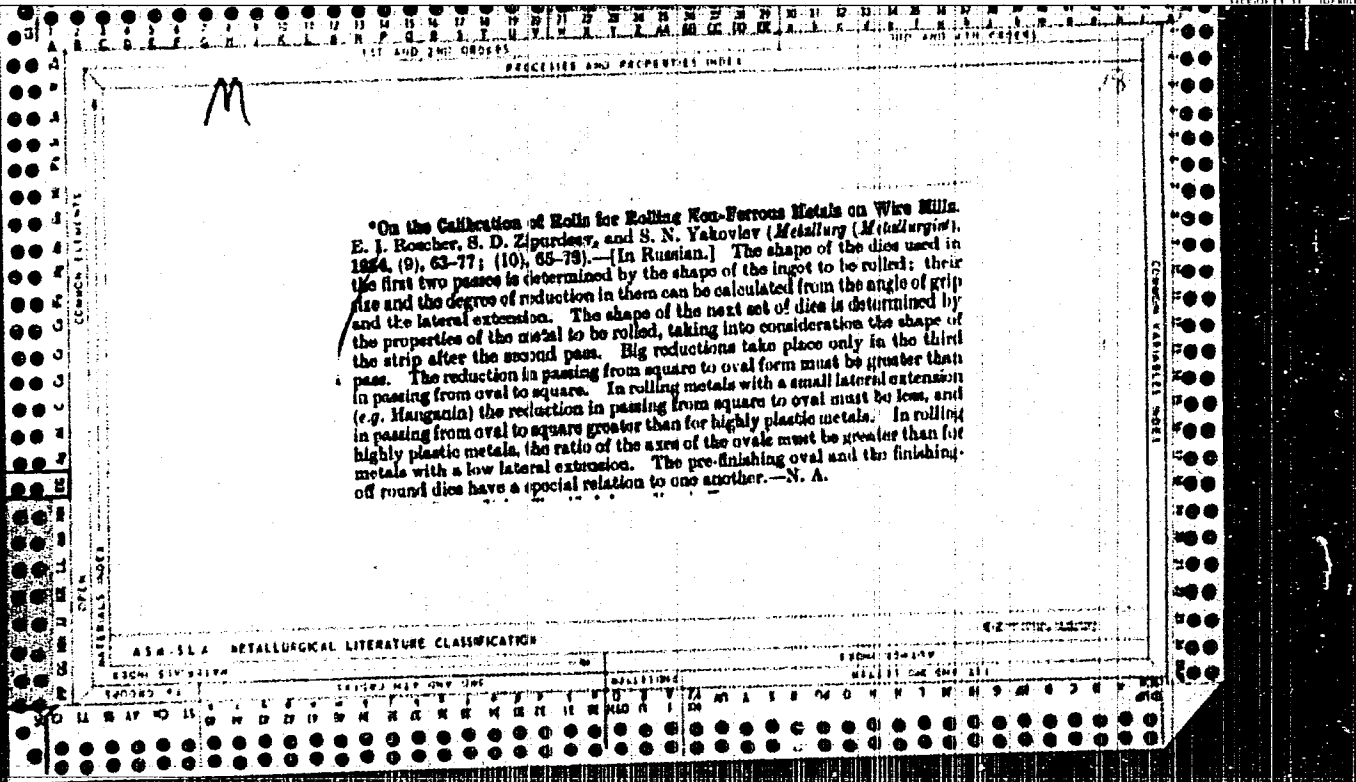
SCHMUCK, Adam; BAC, Stanislaw, prof. dr.; ZIPSER, Alina, mgr; LYKOWSKI,
Bonifacy, mgr; GORCZAKOWNA, Maria

Droughts and high precipitation in the Wroslaw Voivodeship,
1950-1959. Czasop geograf 33 no.4:411-440 '62.

1. Katedra Meteorologii i Klimatologii, Wyzsza Szkola Rolnicza,
Wroclaw.

ZIPUNOV, V.N., inzh.

Multichannel duplex apparatus of STM-62 and DT-61 remote control channels. Energetik 12 no.1:6-8 Ja '64. (MIRA 17:3)



PICKLING AND PICKLING MEDIA

19

M

*Removal of Surface Oxides by Pickling. F. N. Aleshin and S. D. Zhitnikov. (*Metallurgy (Metallurgiya)*, 1936, (2), 55-59).—[In Russian.] Pickling in sulphuric acid proceeds slowly for brasses, and does not effect sufficient removal of oxides for phosphor-bronze and Constantan. Addition of potassium nitrate considerably improves and intensifies the action of the pickle on brasses and phosphor-bronze, whilst further addition of sodium chlorate ensures a satisfactory cleaning of Constantan. The best temperature is 80°-100° C. To remove the copper sulphate film from the phosphor-bronze or Constantan a mixture of sulphuric and nitric acids is used.—N. A.

ASB-51A METALLURGICAL LITERATURE CLASSIFICATION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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PROCESSED AND PROPERTIES INDEX

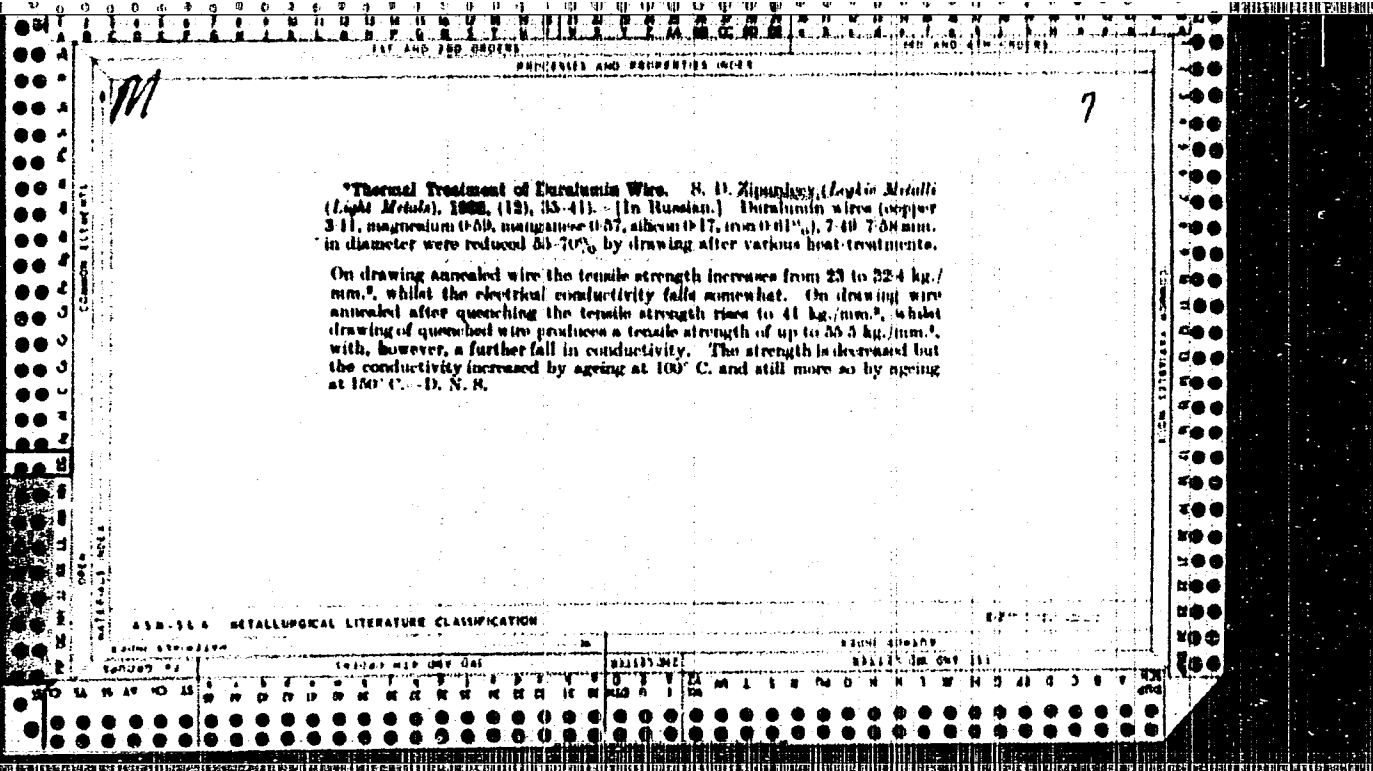
M

2

On the Manufacture of Alloys Possessing High Electrical and Heat Resistance. N. D. Zimin (Vestnik Inzhenerov i Tekhnichesk. 1933, (7), 304-306).--[In Russian.] A review of work on high-resistance alloys in Russian and foreign factories. --N. A.

ASAC 11A METALLURGICAL LITERATURE CLASSIFICATION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00
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*Thermal Treatment of Duralumin Wire. R. D. Zippunov, (*Legko Metalli (Light Metals)*, 1966, (12), 35-41). - [In Russian.] Duralumin wire (copper 3.1, magnesium 0.60, manganese 0.57, silicon 0.17, iron 0.01%), 7-10 7-84 mm. in diameter were reduced 33-70% by drawing after various heat-treatments.

On drawing annealed wire the tensile strength increases from 23 to 32.4 kg./mm.², whilst the electrical conductivity falls somewhat. On drawing wire annealed after quenching the tensile strength rises to 41 kg./mm.², whilst drawing of quenched wire produces a tensile strength of up to 35.5 kg./mm.², with, however, a further fall in conductivity. The strength is decreased but the conductivity increased by ageing at 100° C. and still more so by ageing at 150° C. - D. S. R.

117 AND 120 (REV. 11-59) 118 AND 121 (REV. 11-59)

PRICES AND PROPERTIES INDEX

M

18

*Experiments on the Working of Manganese into Wire. S. D. Zhigalov
(Metallurg (Metallurgy), 1933, (1), 83-92). (In Russian.) A large ingot of
53-54 kg. is cast at 1080°-1120° C. into a cast iron mould (temperature 120°
-150° C.) and hot-rolled at 700°-810° C. into a 7-mm. wire, which is finished at
550°-600° C. The wire is drawn at a speed of 35-40 up to 75-82 m./minute.
Hot-rolled and drawn wire of 3-4.5 mm. is annealed at 750°-800° C., and thin
wire (1.0 mm.) at 700°-730° C. The best pickle is 10-15% sulphuric acid at
40°-60° C. The changes in the properties of Manganese wire with annealing
temperature are given in tables and a diagram. -N. A.

A.S.G. S.L.A. METALLURGICAL LITERATURE CLASSIFICATION

SECTION 1										SECTION 2										SECTION 3										SECTION 4									
A										B										C										D									
1										2										3										4									
M																																							

Investigation of the Optimum Conditions of Crucible Melting and Casting of Duralumin. N. D. Zingulev and N. M. Nadejkin (*Metallurgy (Metallurgy)*). 1932, (8), 113-120; (9), 67-74; (10-11), 60-69; (12), 58-60. [In Russian.] The following defects in castings have been investigated: gas bubbles, oxide inclusions, dark spots of liquidation nodes, setting friability. From melting and casting tests on Duralumin bolts and sheet the following conditions have been evolved: A carefully cleaned and slag-free crucible is melted and batches of alloy, then with rods of aluminium, the charge is melted is complete, the bundles of clean scrap cuttings are added. When melting is complete, the temperature is raised to 740°-760° C., the crucible removed from the furnace, the surface of the metal cleaned of slag and impurities, and zinc chloride (0.10-0.15% by weight of the charge) added; the requisite addition of magnesium is then made and this is followed by a second zinc chloride (0.03-0.05%) treatment. The alloy is cast at 685°-705° C. Sheet moulds are cleaned with Chamotte brick, then dressed with chalk and pre-heated to 100°-180° C. before casting. Bolt moulds are dressed similarly, but pre-heated only to 40°-60° C. Pouring is done in a thin continuous stream along the narrow wall of the horizontally placed mould, which is gradually changed to the vertical during pouring. The cast ingots are removed after 5 minutes. N. A.

AVR. 31A METALLURGICAL LITERATURE CLASSIFICATION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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STR: AMM, A. N. -- "Case of Exchange during Slight Physical Effort."* (Dissertations For Degrees In Science and Engineering Defended at USSR Higher Educational Institutions)(29) Tbilisi State Medical Inst, Gruzmedgiz, Tbilisi, 1955

CC: Knizhnaya Letopis' No 29, July 1955

* For the Degree of Candidate in Medical Sciences

ZIRAKADZE, A.N.; MOISTRAPISHVILI, M.G.

Biological evaluation of sedatives and stimulants. Soob. AN
Gruz. SSR 33 no.1:219-224 Ja '64. (MIRA 17:7)

ZIRAKADZE, A.N.

Changes in general gas exchange during isolated electric stimulation
of a single skeletal muscle. Soob. AN Gruz. SSR 21 no.1:91-96
Jl '58. (MIRA 11:10)

1. Tbilisskiy gosudarstvennyy meditsinskiy institut. Predstavleno
chlenom-korrespondentom Akademii D.M. Gedevanishvili.
(RESPIRATION) (MUSCLE) (ELECTROPHYSIOLOGY)

ZIRAKADZE, M.I.

Geology of the Guliani-Aketi anticline in connection with prospects for finding Cretaceous sediments. Soob. AN Gruz. SSR 40 no.2:351-357 N '65. (MIRA 19:1)

1. Trest "Gruzneft'". Submitted May 7, 1965.

ZIRAKADZE, M.I.

Stratigraphy of Permian sediments in the Sagandzha-Baraasy inter-
fluve of the western Verkhoyansk Range. Mat.po geol.i pol.iskop.
IAk. ASSR no.2:74-80 '60. (MIRA 15:10)

(Verkhoyansk Range—Geology, Stratigraphic)

ZIRAKISHVILI, L.M.; CHIRGADZE, T.V.

Simplified mass dehelminthiazation of the population with
piperazine preparations in ascariasis. Med.paraz.i paran.bol.
no.3:288-291 '62. (MIRA 15:9)

1. Iz gel'mintologicheskogo otdeleniya (rukovoditel' - prof.
G.N. Gordadze) Nauchno-issledovatel'skogo instituta meditsin-
skoy parazitologii i tropicheskoy meditsiny imeni S.S. Virsa-
ladze (dir. - kand.med.nauk I.I. Topuriya) Ministerstva zdra-
vookhraneniya Gruzinskoy SSR.
(PIPERAZINE) (ASCARIDS AND ASCARIASIS)

ZIRAKISHVILI, L. M., LOMIDZE, N. L., MARUASHVILI, G. M., MGALOBELISHVILI, O. V.
and KUCHUKASHVILI, M. V.

"The Discovery of *Toxoplasma Gondii* in Rats in the Suburbs of Tbilisi."

Tenth Conference on Parasitological Problems and Diseases with Natural
Reservoirs, 22-29 October 1959, Vol. II, Publishing House of Academy of
Sciences, USSR, Moscow-Leningrad, 1959.

Institute of Medical Parasitology Tbilisi

GIGITASHVILI, M.S.; ZIRAKISHVILI, L.M.

Treatment of cases of ancylostomiasis with carbon tetrachloride through a duodenal tube. Med.paraz.i paraz.bol. 29 no.4:416-418 (MIRA 13:11)
Jl-Ag '60.

1. Iz Instituta meditsinskoy parazitologii i tropicheskoy meditsiny imeni S.S. Virsaladze Ministerstva zdravookhraneniya Gruzinskoy SSR (dir. instituta I.I. Topuriya, zav. klinicheskim otdeleniyem T.K. Zhordaniya).
(HOOKWORM DISEASE) (CARBON TETRACHLORIDE)

I 28338-66 EWT(1) IJP(c)

ACC NR: AP6013078

SOURCE CODE: UR/0048/10/030/004/0676/0078

AUTHOR: Zirap, V. E.; Vitol, I. K.

ORG: none

TITLE: Correlation between the optic and electric characteristics of crystal phosphors (Report: Fourteenth Conference on Luminescence held in Riga 16-23 September 1966)

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 4, 1966, 875-878

TOPIC TAGS: crystal phosphor, electric conductivity, potassium bromide, optic property, electric property

ABSTRACT: There have been relatively few theoretical and experimental studies of the relation between the optic (luminescence and absorption) and the electric (conductivity) properties of crystal phosphors. The present work was devoted to an extensive and comprehensive study of the electric conductivity of KBr (high purity), KBr:Ca, KBr:NaBr (mole percent 10^{-2} to 10^{-4}), and KBr:NaBr (mole percent 10^{-2} to 10^{-4}). There were obtained the temperatures of the glow curve peaks, the conductivity peaks and the bleaching peaks and the corresponding characteristics under photostimulation. The resultant experimental data are presented in a large table together with some comparative

Card 1/2

L 28338-66

ACC NR: AP6013078

2

results of other investigators. The results are largely consistent with the mechanism of electron-hole recombination as hypothesized and developed in the work of V.V. Antonov-Romanovskiy, Ch.B.Loshchik and his group, M.L.Kata, I.A.Parfilanovich and his associates, and other Soviet and foreign luminescence physicists (numerous references are cited). The tabulated data are discussed from the standpoint of correlation between the optic and electric properties: in some cases the correlation is obvious and strong; in other cases it appears to be weak or absent. The authors are sincerely grateful to Ch.B.Loshchik and I.A.Parfilanovich for discussions of some of the questions mentioned in the paper. Orig. art. has 1 figure and 1 table.

SUB CODE: 20/

SUBM DATE: 00/

ORIG RKF: 031/

OTH REF: 012

Card 2/2

ACCESSION NR: AT4016322

S/0000/62/000/000/0385/0389

AUTHOR: Zirap, V. E.

TITLE: Complex studies on the thermoluminescence and thermostimulated conductivity of alkali halide crystallophosphors

SOURCE: Vses. soveshch. po fiz. shchelochnogaloidn. kristallov. 2d, Riga, 1961. Trudy*. Fiz. shchelochnogaloidn. kristallov (Physics of alkali halide crystals). Riga, 1962, 385-389

TOPIC TAGS: luminescence, phosphor, crystallophosphor, alkali halide, alkali halide crystal, thermoluminescence, conductivity, thermostimulated conductivity, potassium chloride, potassium bromide

ABSTRACT: Extending the previous studies on the optical and electrical relaxation characteristics (the luminescence brightness I and the conductivity σ) for alkali halide crystallophosphors during thermal and photothermal deexcitation, the thermal luminescence and thermostimulated current in KCl, KCl - Tl and KBr - Tl have been investigated at 100 - 400K. A 10^{-6} mm vacuum cryostatic chamber, its temperature uniformly rising at a rate of $\beta_0 = 0.15 - 0.20^\circ/\text{sec}$, was used for the x-ray excitation and thermal and photothermal deexcitation of the $1.5 \times 13 \times 15$ mm specimens. The luminescence brightness

Card 1/2

CIP CODE: 121

ACCESSION NR: AT4016322

was measured by synchrodetection with a FEU-19 M photoelectron multiplier, and the thermostimulated current in the specimen was measured by the voltage drop in the inlet resistor of the electrometric direct current amplifier. The thermal luminescence curves for excited KCl, KCl - Tl and KBr - Tl showed several peaks between 100 and 400K accompanied by synchronous similar peaks on the thermostimulated current curves. The curves are given an extensive mathematical treatment. The ratio between the brightnesses of thermoluminescence and thermostimulated current is suggested as a characteristic of the course of a relaxation process. A conclusion is drawn that the luminescence of the examined crystallophosphors during thermal deexcitation is of recombination origin within the whole 100 - 400K temperature range. "The author expresses thanks to I. K. Vitol for guiding the work, Ch. V. Lushchik for considering some of the problems encountered, and I. K. Liyelpeter and V. Putny*n' for technical assistance." Orig. art. has: 1 table and 2 figures.

ASSOCIATION: None

SUBMITTED: 00

DATE ACQ: 06Mar64

ENCL: 00

SUB CODE: *OP, IC*

NO REF SOV: 010

OTHER: 007

Card 2/2

ZIRAP, V.E.

Use of combined electric and optical methods in studying relaxation
processes in alkali halide crystals. Izv. AN SSSR, Ser.fiz. 29
no.3:475-479 M_r '65. (MIRA 18:4)

VALBIS, Ya.A.; VITOL, I.K.; ZIRAP, V.E.

Mechanism of the excitation and de-excitation of the recombination
luminescence of alkali halide crystal phosphors. Izv. Ak. SSSR, Ser.
fiz. 25 no.3:377-379 Mr '61. (MIRA 14:2)
(Alkali halide crystals) (Phosphors)

20837

S/048/61/025/003/026/047
B104/B214

24,3500 (1138,1153,1395)

AUTHORS: Valbis, Ya. A., Vitol, I. K., and Zirap, V. E.

TITLE: Excitation and de-excitation mechanisms of the recombination luminescence of alkali halide crystal phosphors

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, v. 25, no. 3, 1961, 377-379

TEXT: This paper was read at the Ninth Conference on Luminescence (Crystal Phosphors) held in Kiyev from June 20 to June 25, 1960. The thermostimulated current, the thermoluminescence, and the spectrum of thermoluminescence were investigated by comprehensive experiments, and it was attempted to clarify some problems of the complicated relaxation processes in excited alkali halide crystals. The thermostimulated currents and thermoluminescence excited by X-rays in KCl and KBr crystals were investigated. The crystals were either unactivated or activated with thallium. In the temperature range 110-340°K, all peaks of one effect corresponded to those of the other. This fact is seen as a proof of the recombination nature of the afterglow in the crystal phosphors investigated.

Card 1/ 4

20837

Excitation and de-excitation ...

S/048/61/025/003/026/047
B104/B214

If this is correct one has : $I/\sigma = \eta \beta p / e u$ (1). Here, p is the hole concentration in the recombination centers, β the probability of recombination of a free electron with a localized hole, η the yield of luminescence produced by recombination, e and u the charge and mobility of an electron, I the intensity of luminescence, and σ the electrical conductivity. An experimental determination of the relation (1) can give information on a multi-stage relaxation mechanism. Fig. 1a shows graphically the dependence of the intensity of luminescence on temperature; the temperature dependence of the thermostimulated current and that of the quantity I/j are graphically shown in Fig. 1b and Fig. 1c, respectively. A step-like decrease of this ratio is seen in the temperature ranges 110-190°K and 270-330°K. It is surmised - and the surmise is supported by data already known - that electron recombination takes place in the first range, and hole recombination in the second. Fig. 2 shows the temperature dependence of the intensities of different luminescence bands (whose maxima lie at 2.6 ev, 3.0 ev, and 3.4 ev) of a KBr-Tl crystal (0.5 mole%). The curves (a) show the X-ray luminescence (measured by cooling the crystal) and the curves (b) the thermoluminescence (heating rate: 0.2 deg/sec). This diagram illustrates the effect of change of the

Card 2/4

20837

S/048/61/025/003/026/047
B104/B214

Excitation and de-excitation...

recombination mechanism on the luminescence spectrum. The nature of the luminescence centers is not known and would require new experiments for its clarification. Ch. B. Lushchik is thanked for a discussion, and I. I. Liyelpeter for help in the work. There are 2 figures and 16 references: 12 Soviet-bloc and 4 non-Soviet-bloc.

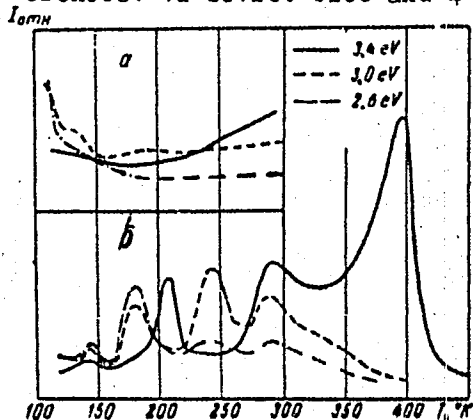


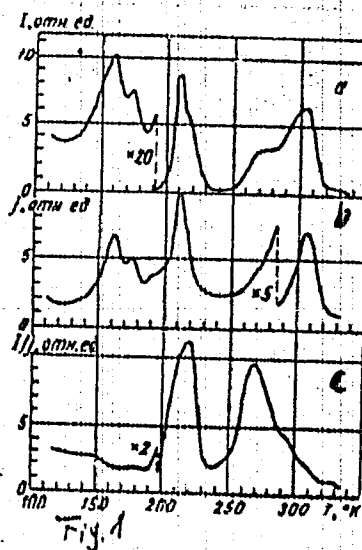
Fig. 2

Excitation and de-excitation...

20837
S/048/61/025/003/026/047
B104/B214

J

Card 4/4



ZIREK, Stanislaw; JONECKO, Antoni

Isolated fibrosis of the thyroid capsule. Polski przegl. chir. 33
no.5:477-480 '61.

1. Z I Kliniki Chirurgicznej Sl. A.M. w Zabrze Kierownik: doc.
dr S.Szyszko;

(THYROID GLAND dis)

ZIREKOVA, A.

"How the Work is Organized by our Store Brigade." Tr. from the Russian. p.17
(NARODNA KOOPERATSIIA No. 4, April 1953 Sofiya, Bulgaria)

SO: Monthly List of East European Accessions, Library of Congress, Vol. 2, No. 9,
Oct. 1953, Uncl.

PROCEDURES AND PREPARATION INDEX

EPITET -- EPITEZET
BUILDING -- ARCHITECTURE
 Vol. II. -- 1950
 No. 9-10, Sept.- Oct.

72 (037) (100)
 Review on Czechoslovakian and Polish
 architecture pp. 160-161

ASS-SLA METALLURGICAL LITERATURE CLASSIFICATION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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RECEIPTS AND PROPERTIES INDEX

LIST AND TWO GROUPS

EPITES E. ITESZET
BUILDING ARCHITECTURE
VOL 111--1951
No. 4, April

36

P. Zircz:
Czechoslovak review 251 255

ASB-SEA METALLURGICAL LITERATURE CLASSIFICATION

SEARCHED	INDEXED	SERIALIZED	FILED
APR 1952	APR 1952	APR 1952	APR 1952

30817

S/033/61/038/005/005/015
E133/E435

3, 1540 (1168)

AUTHOR: Zirin, G.

TITLE: Magnetic fields in solar prominences

PERIODICAL: Astronomicheskij zhurnal, v.38, no.5, 1961, 861-868
+ 1 plate

TEXT: The Zeeman structure of H_{β} is discussed and a system is worked out for the calibration of measurements of magnetic fields in prominences using H_{β} instead of an iron line in the system of the magnetograph of KAO previously described (Ref.1: N.S.Nikulin, A.B.Severnny and V.Ye.Stepanov, Izv.Krymsk. astrofiz. observ., v.19, 3, 1958; N.S.Nikulin, Izv.Krymsk. astrofiz. observ., v.22, 3, 1960). A slit width of 1.5 mm had been used for the narrow lines, but this was increased to 2.5 mm and then to 4 mm (0.46 Å) for use with H_{β} . However, as some light scattering appeared, both slit width and dispersion were reduced. Prominences were first identified in H_{α} , using the spectrograph, and then observed at several slit positions in H_{β} . Not all the observations were reproduceable. The Zeeman splitting of H_{β} has been considered by A.B.Severnny (Ref.2: Izv. Krymsk. astrofiz. observ., v.22, 67, 1960), but there is a slight error in his results. The author gives his own
Card 1/4

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Magnetic fields in solar ...

30817
S/033/61/038/005/005/015
E133/E435

results in the table where $\bar{\omega}_A$ is the transition probability and S the Landé factor. The shift of the σ components is given by Eq. (1) in A. The instrument was calibrated by comparing recordings at the centre and the limb of the Sun (this introduces a line shift, due to Doppler effect, ~ 2 km/sec). So long as the shift due to polarization is less than 0.4 \AA , the $H\beta$ profile can be considered as a Gaussian curve. Slight errors will occur if the line is not centred accurately on the slit. Spectra of a prominence taken on the 6th December 1960 (Ref. 2: as quoted above) indicated that the Doppler half width of the line is 0.5 \AA . This was used throughout the investigation, introducing another small error. The observations will also be affected by motions in the prominences. The author describes several sets of observations which gave positive results.

November 5, 1960. This was the brightest prominence of the series. The value measured for the field was 740 gauss, diminishing as the brightness decreased. (The height of this prominence was ~ 1500 km above the limb.)

November 7, 1960. Large quiescent prominence. Field ~ 100 gauss.

Height ~ 30000 km.

Card 2/

4

Magnetic fields in solar ...

30817
S/033/61/038/005/005/015
E133/E435

- November 8, 1960. Extensive active region. Field ~350 gauss.
- November 11, 1960. Large quiescent prominence. Field had values of up to 100 gauss from 40 observations. Height ~40000 km.
- November 19, 1960. Active prominence. Field ~100 gauss. In this case the field appeared to change sign.
- November 24, 1960. Two prominences were visible at the same time. One of these was investigated and had a field ~150 gauss.
- December 6, 1960. Active prominence. Field ~200 gauss. This was observed jointly with A.B. Severnyy and is described in Ref. 3: (Observatory).

It is concluded that prominences have magnetic fields. For active prominences this is ~200 gauss, for quiet prominences ~50 gauss. These fields must be force free. Acknowledgments are expressed to A.B. Severnyy and S.I. Gopasyuk for their assistance. There are 10 figures, 1 table and 3 Soviet references.

ASSOCIATION: Krymskaya astrofizicheskaya observatoriya
Akademii nauk SSSR (

SUBMITTED: March 15, 1961
Card 3/4

ZIRIN, G. A. MEDICA Sec.17 Vol.4/2 Public Health, etc. Feb 58

557. MEANS OF LOWERING THE INCIDENCE OF ILLNESS AMONG TEXTILE WORKERS. (Russian text) Zirin G. A. VRAC. DELO 1956, 7 (737-740)
By means of various prophylactic measures (anti-influenza vaccination, attention to microtrauma, increased number of showers, control of tare and instrument standards, use of special palm-protectors, control of drinking water and food, sanitary-educational work etc.) the incidence of illness with temporary loss of working capacity has been lowered considerably in the textile factories of the Vladimir region.

ZIRIN, G.A.

Ways of decreasing suppurative diseases and minor wounds among industrial workers. G.A. Zirin. Fel'd. i akush. no.11:48-50 N '55.
(MLRA 9;2)

1. Vladimirskiy rayzdravotdel.
(SKIN-DISEASES) (INDUSTRIAL MEDICINE)

ZIRJANOVA, T. A.

325. (Sodium-3-benzanthronylsulphonate as indicator.) I. S. Joffe, T. A. Zirjanova,
and V. N. Seslavin (J. Gen. Chem. Russ., 1944, 14, 965-967).

This salt (see A., 1948, II, 693) has acid-base indicator properties; the
transition from blue to yellow occurs at pH 11-3

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345 (Sodium 3-benzanthronylsulfonate as indicator.) I. S. Joffe, T. A. Zircaneva
and V. R. Saslavin (J. Gen. Chem. Russ., 1944, 14, 965-967).

This salt (see A. 1946, II, 596) has acid-base indicator properties: the transition
from blue to yellow occurs at pH 11.3.

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17

Common Elements

Materials Index

ABB-52 METALLURGICAL LITERATURE CLASSIFICATION

FROM: MICHIGAN

RESEARCH

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

Microalloying steels... E. H. Young...
 and V. H. Gilman...
 Reductive...
 yields...
 oil...
 in an...
 Treatment...
 the...
 by...
 by...
 11-7...

C-4

BL

✓ 216. (Sodium 1-hydroxy-2-naphthylsulfonate as indicator.) I. S. Joffe, T. A. Kirjanova, and V. R. Sedukhin (*J. Gen. Chem. Russ.*, 1944, 14, 831-837). This salt (*Chem. Abstr.*, 1944, 15, 896) has acid-base indicator properties; the transition from blue to yellow occurs at pH 11.3.