REGULIN, Vasiliy Vasil'yevich; SKUBA, I.A., red.

[Manufacture of pneumatic tires] Proizvodstvo pnevmaticheskikh shin. Izd.2., perer. i dop. Moskva, Khimiia, 1965. 502 p. (MIRA 19:1)

LEVKOVA, N.A., dotsent; SKUBA, N.D.

Lymphoepitheliomas or Schmincke's disease. Vest.otorin. no.6: 40-43 '61. (MIRA 15:1)

1. Iz kafedry patologicheskoy anatomii (zav. - dotsent N.A. Levkova) meditsinskogo fakul'teta Uzhgorodskogo universiteta.
(NASOPHARYNX—TUMORS)

LEVKOVA, N.A.; SKUBA, N.D.

Sarcomas of the uterus. Akush. i gin. 39 no.4:46-49 Jl-Ag'63
(MIRA 16:12)

1. Iz kafedry patologicheskoy anatomii (zav. - prof. N.A. Levkova) Uzhgorodskogo universiteta.

SKUBA, N.D.

Age-related aspects of quantitative changes in deoxyribonucleic acid under conditions of reparative regeneration of the myocardium. Vop. geron. i geriat. 4:130-135 '65. (MIRA 18:5)

1. Institut gerontologii AMN SSSR, Kiyev.

SKUBA, V.N., inzh.; [illegible], A.F., inzh.; [illegible], L.[illegible], tekh.

Devices for controlling the bearing capacity and tension of roof bolting. Bezop. truda v prom. 8 no.12:52-53 D '64. (MIRA 17:11)

1. Noril'skiy gornometallurgicheskiy kombinat.

ZAKUBA, V.N., gornyy inzh.; CHEBOTAYEV, A.F., gornyy inzh.

Effect of the tightening of anchors and the type of supports on the stability of an anchored roof. Ugol' 40 no.4:34-37 Ap '65. (MIRA 18:5)

1. Noril'skiy gornometallurgicheskiy kombinat.

ZAPOL'SKIY, V.G.[Zapol's'kyi, V.H.], kand. arkhit. dots.;
SKUBCHENKO, G.M.[Skubchenko, H.M.], inzh.-arkht.,
dots.; BEDILO, O.T.[Biedilo, O.T.], dots., otv. red.;
POLUBICHKO, B.V., red.

[Buildings on automobile roads] Budynky na avtomobil'nykh
dorihakh. L'viv, Vyd-vo L'vivs'koho univ., 1964. 155 p.
(MIRA 18:8)

S[illegible]Y, P.S.

Raschet diffuzorov na nebatelei na osnovanii ucheta koefitsienta treniia. (Vestnik vozdushnogo flota, 1937, v.11, no.9, p.42-[illegible], illus., diagrs.)

Title tr.: Design of supercharger diffusers taking into account the friction coefficient.

TL30A.T4 1937

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

SKUBACHEVSKIY, G. S., Cnad. Tech. Sci., Prof.

Balancing Aviation Engines. 1942.

Head of the Department of Aircraft Engine Design at the Moscow Aviation Institute "Sergo Ordzhinikidze". In 1951-52, served as Chairman of the Sub committee on Turbojet, Turboprop and Piston Engine Construction of the Scientific Commission on Aviation Terminology of the USSR Academy of Sciences. Specialist in structural analysis of jet engines.

PHASE I Treasure Island Bibliographic Report 00000117

Call No.: TL701.5715

BOOK

Authors: SKUBACHEVSKIY, G.S., and KHRONIN, D.V.

Full Title: AIRCRAFT PROPELLER-ENGINE MOUNTS

Transliterated Title: Vintomotornye ustanovki samoletov.

Publishing Data

Originating Agency: None

Publishing House: State Publishing House of the Defense Industry (Oborongiz).

Date: 1946 No. pp.: 235 No. copies: 7,000

Editorial Staff

Editor: None Technical Editor: None

Editor-in-Chief: None Appraiser: None

Text Data

Coverage: Various systems of aircraft propeller-engine mounts and their specifications are discussed, and their parts and methods of calculation described. Some problems of function and operation are explained.

Purpose: Approved by the Board of Education of the Ministry of the Aircraft Industry as a textbook for students of aeronautical institutions of higher learning. It was edited in conformity with the program of the Moskva Aviation Institute im. Sergo Ordzhonikidze.

Facilities: Moskva Aviation Institute im. Sergo Ordzhonikidze and the Central Aero-Hydrodynamical Institute im. N.E. Zhukovskiy

No. Russian and Slavic References: 46.

Available: Library of Congress

SKUBACHEVSKIY, G. S., Editor

Atlas of Parts and Units of Aviation Engines. 1950.

SKUBA VHECSK

SKUBACHEVSKIY, Gleb Semenovich

Academic degree of Doctor of Technical Sciences, based on his defense, 27 June 1955, in the Council of the Moscow Order of Lenin Aviation Inst imeni S. Ordzhonikidze, of his dissertation entitled: "Aviation gas turbine motors, construction and computation of components." (Textbook for higher educational institutions.)

Academic degree and/or title: Doctor of Sciences

SO: Decisions of VAK, List no. 24, 26 Nov 55, Byulleten' MVO SSSR, No. 20, Oct 57, Moscow, pp 22-24, Uncl. JPRS/NY-471

SKUBACHEVSKIY, G. S.

PHASE X TREASURE ISLAND BIBLIOGRAPHICAL REPORT AID 759 - X

Call No.: AF684925

BOOK
Author: SKUBACHEVSKIY, G. S.
Full Title: AVIATION GAS TURBINE ENGINES, DESIGN AND CALCULATION OF PARTS
Transliterated Title: Aviatsionnyye gazoturbinnyye dvigateli, konstruktsiya i raschet detaley

PUBLISHING DATA
Originating Agency: None
Publishing House: State Publishing House of the Defense Industry (Oborongiz)
Date: 1955 No. of pp.: 548 No. of copies: Not given
Editorial Staff: None
Others: 16 members of the Moscow Institute of Aviation are mentioned in the introduction as having helped the author in writing this book.

PURPOSE AND EVALUATION: A textbook for aviation institutions of higher learning. The author takes three engines as his principal examples of gas turbine designs, namely the RD-10, RD-20 and RD-45. These engines are respectively identical with the Junkers Jumo (axial compressor, individual combustion chambers), BMV (Bayerische Motor Werke, axial compressor, annular combustion

chamber), and Rolls Royce Nene I, (centrifugal compressor, individual combustion chambers) and date from before 1946. Diagrams of other parts and some corresponding data are often identical with those published in the Atlas tipovykh skhem vozdushno-reaktivnykh i turbo-vintovnykh dvigateley (Atlas of Typical Layouts of Jet-engines and Turboprops) by Zaikin, A. Ye., 1950. This atlas was compiled exclusively from articles published in British aviation periodicals in 1946-47. In this book of interest are: 1) specifications of engine construction materials, found at the end of almost all chapters, 2) calculation of the vibration of blades in chapters III and IV, 3) calculation of the vibration of combustion chambers in chapter VIII, 4) determination of stresses and calculation of gears in chapter XII, 5) analysis of wear and defects of parts to be found scattered in several chapters.

TEXT DATA

Coverage: This book contains: 1) fundamentals of the design of aviation gas turbines, 2) information on operating conditions of parts, 3) calculations of strength and vibrations of parts, 4) specifications and requirements of materials. Examples of

NIKITIN, Yu.M.; TUMANSKIY, S.K., doktor tekhn.nauk, retsenzent; SOYFER, A.M., kand.tekhn.nauk, dotsent, retsenzent; ZHUKOV, K.A., inzh., retsenzent; SKUBACHEVSKIY, G.S., prof., doktor tekhn.nauk, red.; YANOVSKIY, I.L., inzh., red.; KHRUSTALEVA, A.A., red.izd-va; ORESHKINA, V.I., tekhn.red.

[Designing elements of parts and units of aircraft engines] Konstruirovanie elementov detalei i uzlov aviatsionnykh dvigatelei. Pod red. G.S.Skubachevskogo. Moskva, Gos. nauchno-tekhn.izd-vo Oborongiz, 1961. 287 p. (MIRA 14:12)
(Airplanes--Engines)

SKUBACHEVSKIY, Gleb Semenovich; TUMANSKIY, S.K., doktor tekhn. nauk, retsenzent; ZHIRITSKIY, G.S., doktor tekhn. nauk prof., retsenzent; STRUNKIN, V.A., kand. tekhn. nauk dots., retsenzent; SHTODA, A.V., prof., nauchn. red.; POPOV, A.V., red.

[Aircraft gas turbine engines; design and construction of parts] Aviatsionnye gazoturbinnye dvigateli; konstruktsiia i raschet detalei. Izd.2., perer. i dop. Moskva, Mashinostroenie, 1965. 451 p. (MIRA 19:1)

1. Chlen-korrespondent AN SSSR (for Tumanskiy).

L 44279-66 EWT(m)/T WW/DJ

ACC NR: AP6005370 (A) SOURCE CODE: UR/0413/66/000/001/0117/0117

INVENTOR: Perel'man, R. G.; Skubachevskiy, G. S.; Polikovskiy, V. I.; Ivanov, G. A.

ORG: none

TITLE: Hydrostatic bearing. Class 47, No. 177711

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 1, 1966, 117

TOPIC TAGS: ~~bearing,~~ hydrostatic bearing, bearing stability

ABSTRACT: This Author Certificate introduces a hydrostatic bearing with grooves and a control mechanism for feeding the lubricating fluid to the friction surfaces. For greater reliability and ease of construction the control mechanism is two grooves tapering toward each other whereby the intake groove is more tapered than the outlet groove (see Fig. 1). Orig. art. has: 1 figure.

UDC: 621.822.5

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Combustion Chambers of Jet Engines (Cont.)

describing the elements of kinetics and mechanism of chemical reactions, selfignition, and propagation of the flame in the flow. They review the fundamentals of thermodynamics of jet engine combustion chambers, examine thermal and hydraulic losses, and describe the design and working processes of jet engine combustion chambers. The hydraulic analysis section of Chapter VII was written by Docent G. M. Gorbunov of the Moscow Aviation Institute. For further study the authors recommend works of L. N. Khitrin and G. F. Knorr. The authors thank Docent G. M. Gorbunov and Engineer P. I. Shevchenko for their advice and valuable comments in reviewing the manuscript. The book is based on Soviet materials. There are 12 Soviet references including one translation.

TABLE OF CONTENTS:

DOROFEYEV, Vitaliy Mitrofanovich; LEVIN, Veniamin Yakovlevich. Prinimali uchastiye: YEREMIN, S.K., inzh.; KONDRUSEV, V.S., inzh.; LAKSHTOVSKIY, A.A., kand. tekhn. nauk, retsenzent; SKUBACHEVSKIY, L.S., inzh., red.; SHEYNFAYN, L.I., red.; GARNUKHINA, L.A., tekhn. red.

[Testing ram-jet engines] Ispytaniia vozdushno-reaktivnykh dvigatelei. Moskva, Gos. nauchno-tekhn. izd-vo Oborongiz, 1961. 220 p. (MIRA 15:2)
(Airplanes—Ram-jet engines)

ACCESSION NR: AT4041485 S/2535/64/000/157/0097/0102

AUTHOR: Skubachevskiy, L. S. (Engineer)

TITLE: Determination of combustion efficiency in chambers using air preheated by the combustion of hydrocarbons

SOURCE: Moscow. Aviatsionny*y institut. Trudy*, no. 157, 1964. Issledovaniya rabochego protsessa v kamerakh sgoraniya gazoturbinny*kh dvigateley (Studying the working processes of gas turbine engine combustion chambers), 97-102

TOPIC TAGS: jet aircraft, combustion chamber, afterburner, combustion, thrust augmentation, aviation turbine

ABSTRACT: When combustion is carried out with preheated air containing combustion products (e.g., in afterburner chambers), the accuracy of the calculated combustion efficiency of the afterburner depends on whether the combustion efficiency in the preheating combustion chamber is taken into consideration. Equations are derived for determining the error in the afterburner combustion efficiency when the efficiency of the preheating chamber is not taken into account. It is shown

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ACCESSION NR: AT4041485

that the error increases with a decrease in the completeness of combustion in the preheating chamber, a decrease in the air excess factor in the preheating chamber, or an increase in the oxidizer excess in the afterburner chamber. When a serially produced combustion chamber (giving maximum combustion efficiency at an air excess factor of 4) is used for preheating the air, incomplete combustion must be taken into account whenever the air excess factor in this chamber is larger or smaller than 4. Orig. art. has: 4 figures and 6 formulas.

ASSOCIATION: none

SUBMITTED: 00 ATD PRESS: 3057 ENCL: 00

SUB CODE: PR NO REF SOV: 003 OTHER: 000

Card 2/2

SKUBYTHVSKIY, L.S., kand.

Determining the completeness of the [illegible] in chambers for preliminary heating of the working fluid by burning hydrocarbon fuels. Trudy MAI no.157.93-102 '64. (MIRA 17:10)

SLONIM, D.; MARES, I.; DREVO, M.; CINNEROVA, O.; MICHL, J.; technical assistance: HOLATOVA, M.; KOUDELKOVA, M.; KRAUSOVA, V.; SKUBAL, J.; ZLABOVA, Z.

Some experiences with the preparation of inactivated poliomyelitis vaccine in Czechoslovakia. IV. The preparation of the vaccine. Acta virol. Engl. Ed. Praha 5 no. 3:178-187 My '61.

1. Institute of Sera and Vaccines, Prague.

(POLIOMYELITIS immunol)

SKUBALA, R.

Gospodarka Zbozowa - Vol. 6, no. 4, Apr. 1955.
For expansion of the activities of trade-unions. p. 1.

Lowering prime costs in cooperative mills. p. 28.

SO: Monthly list of East European Accessions, (EEAL), LC, Vol. 4, No. 9, Sept. 1955 Uncl.

SKUBALA, S. (Pol'skaya Narodnaya Respublika); VUAZE, V. [Voise, W.] (Pol'skaya Narodnaya Respublika)

Study of the history of science in the Polish Academy of Sciences. Vop. ist. est. i tekh. no.6:226-228 '59. (MIRA 12:6)
(Poland--Science)

SKUBALA, S. (Varshava)

Works of the Polish science historians. Vop.ist.est.i tekh. no.12:253-254 '62. (MIRA 15:4)
(Bibliography--Poland--Science)
(Poland--Science--Bibliography)

SKUBALA, Z.

"A session in honor of Jan Sniadecki on the occasion of his 200th birthday anniversary in Krakow, November 20-21, 1956."

p. 165 (Kosmos. Serbia B: Przyroda Nieozywiona) Vol. 3, no. 2, 1957 Warsaw, Poland

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

SKUBALA, Zofia

350th anniversary of Jan Heweliusz. Nauka Pol 9 no.4:197-202 O-D '61.

1. Polska Akademia Nauk, Zaklad Historii Nauki i Techniki.

SUCHODOLSKI, Bogdan, prof.; SKUBALA, Zofia

From the works of the Laboratory of History of Science and Technology. Nauka polska 10 no.6:69-84 N-D '62.

1. Kierownik Zakladu Historii Nauki i Techniki, Polska Akademia Nauk, Warszawa, Palac Kultury i Nauki (for Suchodolski).

SUCHODOLSKI, Bogdan, professor, SKUBALA, Zofia

Research Center for the History of Science and Technology; organization and range of activity. Review Pol Academy 8 no.1:27-37 Ja-Mr '63.

1. Director of the Research Center of Science and Technology, Warsaw, corresponding member of the Polish Academy of Sciences. (for Suchodolski)

SKUBALA-TOKARSKA, Zofia

"On the move into space" by Tadeusz Przypkowski. Reviewed by Zofia Skubala-Tokarska. Kwart hist nauki i tech 8 no.2:274-275 '63.

SKUBALA-TOKARSKA, Zofia

Plenary session of the Committee of History of Science and Technology, Polish Academy of Sciences. Kwart hist nauki i tech 9 no.3/4:431-433 '64

SKUBARENKO, N., inzhener.

Building bl[illegible] [illegible]ing concrete with coarse ground admixtures.
Stroi. mat., izdel. i konstr. 1 no.10:33 O '55. (MLRA 9:1)
(Building blocks)

SKUBARENKO, N. (g. Zhdanov)

Increasing the water resisting property of a mixture of gypsum and concrete by modification of its basic components. Stroi. mat., izdel. i konstr. 2 no.8:27-28 Ag '56. (MLRA 9:10)

1. Mladshiy nauchnyy sotrudnik Zhdanovskogo filiala YuZhNII.
(Concrete)

CHUMAKOV, Yu.M., SKUBARENKO, N.N.

Practice of preparing gas lime at the Lugansk Plant for cellular concrete elements. Stroi. mat. 10 no.6:10-11 Je '64. (MIRA 17:10)

1. Direktor Luganskogo kombinata yacheistobetonnykh konstruktsii (for Chumakov). 2. Glavnyy tekhnolog Luganskogo kombinata yacheistobetonnykh konstruktsii (for Skubarenko).

CHUMAKOV, Yu.M.; SKUBARENKO, N.N.

Large air-entrained concrete elements made with a mixed binder. Stroi. mat. 9 no.2:19-22 F '63. (MIRA 16:2)

1. Direktor Luganskogo kombinata yacheistobetonnykh konstruktsiy (for Chumakov). 2. Glavnyy tekhnolog Luganskogo kombinata yacheistobetonnykh konstruktsiy (for Skubarenko).
(Air-entrained concrete)

SKUBAY, M.S.

Something on the work of the Odessa Pharmacy Depot. Farmatsev. zhur. 16 no.3:66-67 '61. (MIRA 14:6)

1. Zaveduyushchiy aptechnym skladom g. Odessy.
(ODESSA—DRUGS)

RUDNITSKIY, A., kand. arkhitektury; SEREDYUK, I., arkhitektor; SKUBCHENKO, G., arkhitektor

Maintenance of buildings of few stories. Zhil. stroi. no.6:21-24 '59. (MIRA 12:10)
(Lvov--Apartment houses--Maintenance and repair)

GATKIN, Natan Grigor'yevich, kand. tekhn. nauk; GERANIN, Vsevolod Aleksandrovich, kand. tekhn. nauk; KARNOVSKIY, Mark Il'ich, doktor tekhn. nauk; ZARENIN, Yu.G., kand. tekhn. nauk, retsenzent; SKUBCHENKO, S.A., inzh., red.; BEREZOVYY, V.N., tekhn. red.

[Integrators in measuring systems] Integratory v sistemakh izmereniia. Kiev, Gostekhizdat USSR, 1963. 138 p. (MIRA 17:1)

(Radio measurements) (Radio filters)
(Pulse circuits)

L 16155-63 BDS/EWP(q)/EWT(m) AFFTC/ASD JD

ACCESSUON NR: AR3005151 S/0058/63/000/006/D020/D020

SOURCE: RZh. Fizika, Abs. 6 D120

AUTHORS: Fel'tsan P. V.; Zapesochny*y, I. P.; Skubenich, V. V. 56

TITLE: Further study of the excitation functions of helium 21

CITED SOURCE: Dokl. i soobshch. Uzhgorodsk. un-t, Ser. fiz.-matem, i istor. n., no. 5, 1962, 38-40

TOPIC TAGS: helium, fine structure, excitation functions, ortho-helium, para-helium, pressure dependence

TRANSLATION: The excitation functions were measured for the following He lines (in Angstroms): 5047(2'P--4'S), 4438 (2'P--5'S), 4169(2'P--6'S), 4921(2'P--4'D), 4387 (2'P--5'D), 4143 (2'P--6'D), 4009 (2'P--7'D), 5016 (2'S--3'P), 3964 (2'S--4'P), 5875 (2^3P--3^3D), 4471 (2^3P--4^3D), 4713(2^3P--4^3S), 3888(2^3S--2^3P). The additional maxima for the para- and ortho-helium lines were clarified. For the 5016 and 4888 A lines, the excitation functions were measured for different pressures of the investigated gas (3×10^{-4}-- 5×10^{-2} mm Hg). It is established

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ACCESSION NR: AR3005151

that the pressure influences appreciably the change in the intensity at pressure above 5 x 10^{-3} mm Hg. A shift of the maxima of the excitation-function curves is observed for these lines.

DATE ACQ: 15Jul63 SUB CODE: PH ENCL: 00

Card 2/2

FEL'TSAN, P.V., ZAPESOCHNYY, I.P.; SKUBENICH, V.V.

Further study of the excitation functions of helium. Dokl. i soob. UzhGU. Ser. fiz.-mat. i ist. nauk no.5:38-40 '62. (MIRA 17:9)

KISHKO, S.M.; SKUBENICH, V.V.

Studying carbon dioxide bands during electronic excitation. Izv. AN SSSR. Ser. fiz. 27 no.8:1049-1051 Ag '63. (MIRA 16:10)

1. Kafedra optiki Fiziko-matematicheskogo fakul'teta Uzhgorodskogo gosudarstvennogo universiteta.

L 04763-67 EWT(l)/EWT(m)/T/EWP(t)/ETI IJP(c) AT/JD

ACC NR: AP6025976 SOURCE CODE: UR/0051/66/021/001/0140/0141

AUTHOR: Zapesochnyy, I. P.; Skubenich, V. V.

ORG: none

TITLE: On excitation cross section levels of molecular nitrogen due to electron collisions

SOURCE: Optika i spektroskopiya, v. 21, no. 1, 1966, 140-141

TOPIC TAGS: excitation cross section, excitation energy, excited electron state, molecular physics, molecular theory, nitrogen

ABSTRACT: The authors report on the experiments designed to determine the absolute excitation cross section levels for a series of important molecular nitrogen states. The excitation of nitrogen was due to the collisions with slow electrons. The intensity of radiation due to the various molecular systems of N_2 was compared to a reference light source. Based on the experimental data the authors conclude that: 1) the maximum excitation cross sections for the molecular nitrogen are in the order of 10^{-16} to 10^{-17} cm^2, thus exceeding several times the cross sections for the low levels of helium atoms; 2) the levels of the neutral N_2 molecule are most effectively excited by an electron beam of 10 to 20 ev. A two-fold increase in beam energy reduces the excitation of this level by an order of magnitude. Conversely, the level N_2^+ has a

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LYASHCHENKO, V.I.; SKUBENKO, A.F.

Measuring the Hall effect at liquid oxygen temperatures. Nauk. zap. Kiev. un. 9 no.2:17-20 '50. (MLRA 9:12)

(Hall effect) (Low temperature research)

SKUBENKO, A.F.

Electrical and photoelectric properties of single crystals of antimony selenide and sulfide. Part 1: Method of growing single crystals of Sb_2S_3. Ukr. fiz. zhur. 5 no.6:781-790 N-D '60. (MIRA 14:3)

1. Kiyevskiy gosudarstvennyy universitet im. T. G. Shevchenko.
(Antimony selenide crystals—Growth)
(Antimony sulfide crystals—Growth)

27303
S/181/61/003/008/033/034
B111/B102

9.4177

AUTHORS: Lyashenko, V. I., and Skubenko, A. F.

TITLE: Effect of impurities upon the properties of Sb_2S_3

PERIODICAL: Fizika tverdogo tela, v. 3, no. 8, 1961, 2499-2501

TEXT: In insufficiently purified Sb_2S_3 single crystals, the authors found an additional maximum in the spectral distribution of the photoelectric current due to impurities, and also a growth of the dark current with time. If a 10-v potential is applied to the specimen, the current drops due to polarization; at 20 v, the current first drops due to polarization, and then it rises again with time. At 30 and 50 v, only a rise of current will be observed. This rise is not observable with alternating currents. It is also of interest to study this effect in synthetic Sb_2S_3 single crystals. The temperature dependence of the maximum rise of conductivity was studied; from the slope of the curve, the activation energy was found to be $\Delta u = 0.48$ ev, and the width of the forbidden band = 1.55 ev. Then, for comparison, high-purity Sb_2S_3 crystals were produced, and the $I_{ph}(\lambda)$

Card 1/2

SKUBENKO, A.F., inzh.

Simple temperature regulator with two settings. Izv. vys. ucheb. zav.; energ. 4 no.8:67-69 Ag '61. (MIRA 14:8)

1. Chernigovskiy gosudarstvennyy pedagogicheskiy institut. Predstavlena kafedroy fiziki.

(Temperature regulators)
(Electric furnaces--Equipment and supplies)

/185/61/006/001/003/011
D210/D305

9,4177 (1114, 1482)

AUTHOR: Skubenko, A.F

TITLE: Electrical and photoelectric properties of antimony selenide and sulphide monocrystals II Electrical and photoelectric properties of antimony selenide

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 6, no 1, 1961, 40-48

TEXT: Some electrical, photoelectric and optical properties of high-purity Sb_2Se_3 monocrystals were studied because of comparative lack of data on these monocrystals and because of contradictions between reported results. The author studied the temperature dependence of the photoconductivity spectral response in the range -110 - +120°C, the temperature dependence of the electrical resistivity between room temperature and 200°C, as well as the absorption of light within the wavelength region 950-2500 mμ. The techniques of preparing Sb_2Se_3 and of growing monocrystals by zone melting have been described by the author (Ref. 12: Ukr. fiz. zh. - in the press).

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3/185/61/006/001/003/011
B210/B305

Electrical and photoelectric

The results obtained are shown in Fig. 1 . For all samples, independent of their degree of purity, photocurrent maxima at a given temperature were the same; at room temperature the photoresponse maximum was at 970 mμ . The red end of photoconductivity response was taken to be the wavelength at which photocurrent was 50% of its maximum value. This wavelength was denoted by $\lambda_{\frac{1}{2}}$ and at room temperature it lay at 1050 mμ . Below room temperature $\lambda_{\frac{1}{2}}$ shifted towards shorter wavelengths. Cooling did not affect the photocurrent maximum which remained practically constant. Increase of temperature to 50-55°C displaced $\lambda_{\frac{1}{2}}$ toward long wavelengths and a further increase of temperature shifted $\lambda_{\frac{1}{2}}$ towards short wavelengths, i.e. 50-55°C was the inversion point of the temperature dependence of the forbidden energy band (energy gap). The relative photocurrent maximum increased rapidly on increase of temperature and passed throught its maximum at 50-55°C. Fig. 3 gives the dependence of lnρ on T^{-1} for samples subjected to 18 molten-zone passages (curve 1), 12 such passages (curve 2) and no molten-zone treatment (curve 3). The sample not subjected to zone purification exhibited impurity

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Electrical and photoelectric

conduction up to 200°C; the slope of its resistivity curve represents an activation energy of 0.65-0.70 eV. In samples subjected to many zone passages intrinsic conduction began at 50-70°C. An analysis of curves 1 and 2 in Fig. 3 gave the energy gap at 0°K: ΔE_d^o = 1.42 eV. Curves 1 and 2 show also two other slopes corresponding to activation energies of 0.65 and 1.00 eV respectively. The optical absorption curve of Sb_2Se_3 is also given separately. It is concluded that the photocurrent maximum at 970 mμ represents the fundamental absorption edge. The energy gap determined from the value of λ_1 (the red end of photoconductivity response) rises on lowering of temperature: $\Delta E_d = \Delta E_d^o - \beta T$, where $\beta = 6.5 \times 10^{-4}$ ev/deg, and T is the absolute temperature. From this equation the energy gap at room temperature can be determined: $\Delta E_d = 1.16$ eV. This value is quite close to the energy gap deduced from photoconductivity measurements ($\Delta E_{ph} = 1.18$ eV) and from the absorption edge ($\Delta E_0 = 1.19$ eV). The temperature dependence of the energy gap and of the photoconductivity response suggests that the energy bands in Sb_2Se_3 are quite complex and the recombination mechanism very complicated. In the

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intrinsic conduction region the dark resistivity was found to obey $\rho = \rho_0 \exp(\Delta E_d^0/2kT)$. Acknowledgements are made to Professor V. I. Lyashenko for his direction of this work and advice. There are 4 figures and 14 references: 7 Soviet-bloc and 7 non-Soviet-bloc. The four most recent references to English-language publications read as follows: J. Black, E. Conwell, L. Seigle, C. Spenser, J. Phys. Chem. Solids, 2, 240, 1957; J. G. Breithwaite, Proc. Phys. Soc., 64, 274, 1951; T.E. Jonson, L. Girdart, Bull. Am. Phys. Soc., 3, 232, 1958; A. Rose, Proc. IRE, 43 (12), 1850, 1955.

ASSOCIATION: Kyyivs'kyy ordena Lenina derzh. univerytet im. T. H. Shevchenka (Kiyev Lenin-Order State Univeristy im. T. H. Shevchenko)

SUBMITTED: March 28, 1960

Card 4/5

28437
S/185/61/006/002/009/020
D210/D304

24.7700
26.2421

AUTHORS: Lyashenko, V.I., and Skubenko, A.F.

TITLE: Increase of electrical conductivity of antimony sulphide with time

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 6, no. 2, 1961, 202 - 206

TEXT: The relatively infrequent phenomenon of increase in the conductivity of semiconductors is largely unexplained. In this article the authors describe an experimental study made on antimony sulphide which has a conductivity rise time of a few hours. The measurements were carried out on single crystals, the crystallinity being verified by X-ray analysis. The electrodes were made by vacuum deposition of gold and the current was measured using an electrometer, or occasionally, a sensitive mirror galvanometer. Measurements were made over a voltage range of 10 to 80 V and a temperature range of 30 to 80°C. It was found that the increase in

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Increase of electrical ...

time and the ultimate current depend on the applied potential. There is a critical potential below which no rise occurs, and at 10 V there was a fall in current with time. This behavior is shown clearly in Fig. 2, where a potential of 10 V (2.3 V/cm) was applied for 77 minutes and then switched off. The direction of current flow was instantly reversed, the magnitude falling off slowly to zero. Increase in temperature resulted in higher maximum current and a faster rise time, and the current increase $\Delta\sigma$ was found to obey the relation $\Delta\sigma_{max} = \Delta\sigma_0 \exp(-\Delta U/kT)$ the activation energy being constant ($\Delta U = 0.48$ eV) for different applied potentials and samples of different purity. The rate of increase of $\ln(\Delta\sigma_{max} - \Delta\sigma)$ with time was found to be linear, indicating an exponential law. Some typical time constants are: $\tau_0 = 13.4$ min for 80°C, 80 V; $\tau_0 = 63.9$ min for 50°C, 50 V and for 50°C, 80 V. Measurements carried out under vacuum and in air showed no difference. There was no rise of current with time using alternating current and the cur-

Increase of electrical ...

rent increase was smaller for purer samples. In order to explain these phenomena the authors discarded any possibility of temperature rise or p - n transitions with a channel effect. Such current increase could be caused by growth of dendrites as is observed for copper sulphide; however, this was not the case as no difference was observed in current rise across and along a long crystal after prolonged passage of current. The authors, therefore, concluded that the observed phenomenon must be due to an increase of current carriers. This can be explained by an increase in the concentration of holes on electrolysis of impurities if these impurities are centers of attachment for the holes. If these impurities were discharged on the electrodes, then on removal of the potential their rediffusion would be very slow, however, these impurities are not discharged then the internal potential will revert them in the same order of time as they were oriented which is the observed case. Undischarged ion impurities create also a space charge which has been verified experimentally by measuring the potential along the sample before the passage of current and after a long passage

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Increase of electrical ...

of current. The authors feel that the ion space charge near the electrodes may also form something similar to the end effect observed on cadmium sulphide. A more accurate mechanism and the nature of the impurities will be given in a future publication. There are 5 figures and 4 Soviet-bloc references.

ASSOCIATION: Instytut fizyky AN URSR, Kyyivs'kyy derzhavnyy universitet im. T.H. Shevchenka (Physics Institute AS Ukr SSR, State University of Kiyev im. T.H. Shevchenko)

SUBMITTED: June 30, 1960

Card 4/5

9.4179 (1114)
26.2532

27965
S/185/61/006/004/008/015
D274/D303

AUTHOR: Skubenko, A.F.

TITLE: Electrical and photoelectrical properties of antimony selenide and sulfide single-crystals III Electrical and photoelectrical properties of Sb_2S_3

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 6, no. 4, 1961, 505-512

TEXT: Single crystals of Sb_2S_3, obtained by zone melting, were investigated. The method of growing the single crystals is described by the author (Ref. 17: Same periodical, v. 6, no. 1, 1961). The Sb_2S_3 single-crystals were studied by a method analogous to that used by the author in the study of antimony selenide (Ref. 20: Same periodical, v. 5, no. 6, 1960). The spectral distribution of the photocurrent was investigated on many specimens of various degrees of purity. Figures show the temperature dependence of the photocurrent for various specimens. The electrical conductivity

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Electrical and photoelectrical...

was measured up to 200°C only (this owing to the vaporization of Sb_2S_3 which was also noted by other investigators); for measuring the conductivity σ, initial galvanometer-readings were taken into account. A figure shows the temperature dependence of the conductivity. Further, some results of optical measurements are given (complete results will be published separately). Thus, the absorption curve k and the dispersion curve n are shown. Sb_2S_3 single-crystals have a photocurrent-maximum at a wavelength λ = 710 mμ which corresponds to the eigenabsorption of the crystal. Specimens which underwent only a few zone-passes, showed an additional maximum at λ = 760 mμ (due to impurities). The activation-energy of the impurities was 1.5 eV. The energy-width of the forbidden zone, determined from the long-wave critical value of the photo-effect was ΔE_{ph} = 1.63 eV (at room temperature), and its temperature coefficient β = - $6.5 \cdot 10^{-4}$ eV/deg. The shift in the maximum and in the long-wave critical value of the photo-effect (with increasing temperature) towards longer wavelengths, is a sign of reduced width of the forbidden zone. The photo-current increases with

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Electrical and photoelectrical...

temperature: at low temperatures - slowly, and from room temperature up to 120°C - much faster. The temperature dependence of the electrical conductivity was investigated over a temperaute range of 10-200°C. The curves of this dependence exhibit two characteristic parts. The upper part (at high temperatures) is related to intrinsic or mixed conductivity. For specimens which passed through 12-20 zones, the intrinsic conductivity predominates at temperatures of 80-100°C. The lower part is related to impurity conductivity. From the slope of the curve in the region of intrinsic conductivity, the thermal width of the forbidden zone is found, $\Delta E^{o}_{th} = 1.74$ eV at 0°K. Using the temperature coefficient β, the width of the zone at room temperature is found, $\Delta E_{20} = 1.55$ eV. From optical measurements (of specimens which passed through 18 zones), the activation energy of impurity levels was found to be $\Delta E^{i}_{p} = 0.08$ eV which corresponds to an absorption band in the far-infrared (approximately 20 μ). Moss's relation $\frac{n^4}{\lambda_{\frac{1}{2}}} = 77$ was corroborated

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S/185/61/006/004/008/015
D274/D303

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for Sb_2S_3. From the known value n = 2.75, $\lambda_{\frac{1}{2}}$ was determined and compared with the long-wave (red) critical value of the spectral distribution of the photocurrent. The agreement was satisfactory, (750 and 760 mμ, respectively). The obtained experimental results show that Sb_2S_3 single-crystals are a typical semiconductor with a conductivity (for pure specimens) of $1 \cdot 10^{-7}$ to $5 \cdot 10^{-8}$ ohm^{-1} cm^{-1} at room temperature; the single crystals are photosensitive over a wide range of wavelengths and have a complex mechanism of photo-transitions. There are 5 figures and 20 references: 12 Soviet-bloc and 8 non-Soviet-bloc. The 4 most recent references to English-language publications read as follows: S. Ibuki, S. Ioshimatsu, J. Phys. Soc. Japan, 10, no. 7, 549, 1955; J. Black, E. Conwell, L. Seigle and L. Spenser, Phys. and Chem. Solids, 2, no. 3, 240, 1957; S. Forgue, R. Goodrich a. A. Cope, RCA Rev., 12, 335, 1951; T.S. Moss. Proc. Phys. Soc. 63, 167, 1950.

ASSOCIATION: Kyyivs'kyy derzhavnyy universytet, kafedra napiv-providnykiv (Kiyev State University, Department for

Card 4/5

27965
S/185/61/006/004/008/015
D274/D303

Electrical and photoelectrical...

Semiconductors)

SUBMITTED: October 17, 1960

Card 5/5

3.236
S/181/62/004/002/023/051
B101/B102

24.3950 (1035,1137,1144)

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

TITLE: Optical properties of Sb_2S_3 single crystals

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

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

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

Optical properties of Sb_2S_3...

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

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

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

Card 2/3

L 8822-65 EWT(1)/EWT(m)/T/EEC(b)-2/EWP(q)/EWP(b) IJP(c)/ASD(a)-5/AD(mp)-2/ESD(gs)/ESD(t)/RAEM(t) RDW/JD

ACCESSION NR: AP4043095 S/0185/64/009/007/0744/0748

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

TITLE: Optical properties of Sb_2Se_3 single crystals

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

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

ABSTRACT: The absorption, reflection, and transmission were measured for antimony-selenide (Sb_2Se_3) single crystals in the infrared part of the spectrum ranging from 500 to 9500 cm^{-1}. In addition, the refraction index was calculated, and the dispersion curve was plotted. As a result, one fundamental absorption band and three supplementary bands of impurity origin were found on the absorption curve. An energy width $\Delta E = 1.18$ ev of the forbidden zone was determined at the edge ($\lambda = 1.05\ \mu$) of the fundamental absorption band. The first supplementary absorption band, with a flat maximum on the side of longer waves, lies within a wide range of 4.55—2.7 μ. This band contains a

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

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

SUBMITTED: 11Sep63 ATD PRESS: 3100 ENCL: 00

SUB CODE: SS, OP NO REF SOV: 006 OTHER: 001

LINNIK, Yu.V.; SKUBENKO, B.F.

Asymptotic distribution of third-order integral matrices.
Vest. LGU 19 no.13:25-36 '64 (MIRA 17:8)

SKUBENKO, B.F.

A symptotic distribution and ergodic properties of entire points on a one-sheet hyperboloid. Dokl. An SSSR 135 no.4:794-795 '60.
(MIRA 13:11)

1. Leningradskoye otdeleniye Matematicheskogo instituta im.V.A. Predstavleno akademikom I.M.Vinogradovym. Steklova AN SSSR.
(Surfaces) (Hyperboloid)

SKUBENKO, B. F.

Asymptotic distribution of integral points on a single-cavity hyperboloid, and ergodic theorems. Izv. AN SSSR. Ser. mat. 26 no.5:721-752 S-O '62. (MIRA 15:10)

(Hyperboloid) (Aggregates)

LINNIK, Yu.V.; SKUBENKO, B.F.

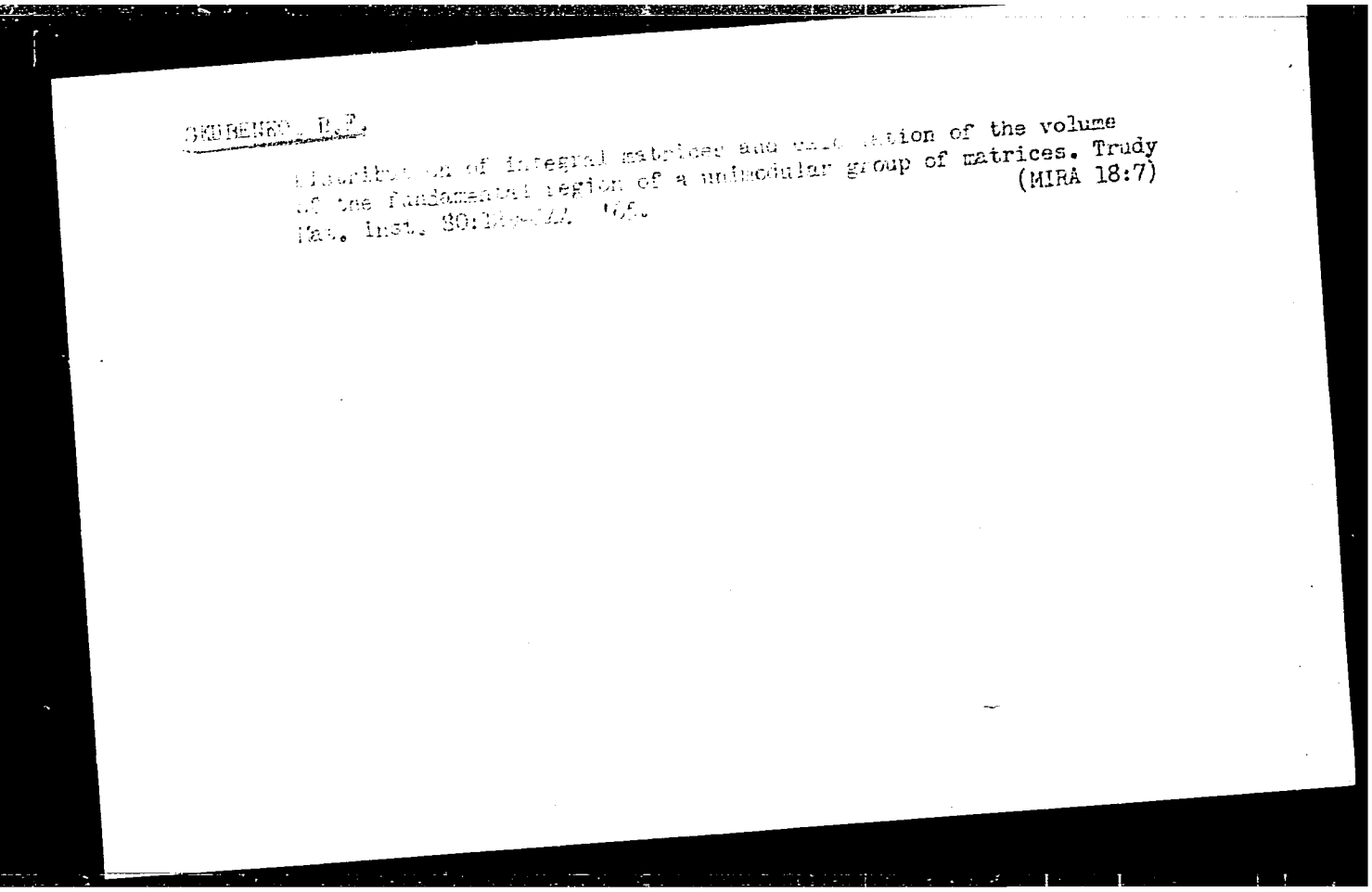
Asymptotic behavior of third-order integral matrices. Dokl. AN SSSR 146 no.5:1007-1008 O '62. (MIRA 15:10)

1. Chlen-korrespondent AN SSSR (for Linnik).
(Matrices)

SKUBENKO, B.F.

Asymptotic behavior of integral matrices of the nth order and the integral invariant of a group of unimodular matrices. Dokl. AN SSSR 153 no.2:290-291 N '63. (MIRA 16:12)

1. Predstavlena akademikom I.M.Vinogradovym.



SKUBENKO, B.F.

Distribution of integral matrices and determination of the volume of the fundamental region of a unimodular group of matrices. Trudy Mat. inst. 30:[illegible]. '49. (MIRA 18:7)

SKUBIC, Tomislav

Elastostatic problems of a plane. Obz mat fiz 7 no.1:9-20 Mr '60. (EEAI 9:8)

(Elasticity) (Functions)

SKUBIC, Tomislav

Discrete potential. Obz mat fiz 7 no.4:151-157 '60. (EEAI 10:5)

1. Oddelek za tehnisko fiziko.
(Potential, Theory of)
(Harmonic analysis)

SKUBIC, Tomislav (Ljubljana)

Solving biharmonic equation with the functions of complex variables. Ves mat fiz Srb no.12:33-40 '60.

SKUBIC, Tomislav

Mechanical properties of ice. Ob mat fiz 9 no.2:82-85 Ag '62.

1. Institut za matematiko, fiziko in mehaniko.

SKUBIC, T.

"Introduction to the programming for electronic digital computers" by J. Maichl. Reviewed by T. Skubic. Elektr vest 30 no. 8/9:252 '62/'63.

SKUBIC, Tomislav

Computing Center of the Institute of Mathematics, Physics and Mechanics of the University of Ljubljana. Obz mat fiz 11 no.4: 145-149 D '64.

HUFLER, L.; [illegible], F.; MIKLAVZIC, U.; POHIZ, R.; GOSAR, P.; GRUDEN, M.; DOBEIC, J.; [illegible], F.; VIRANT, J.; VUCVIC, J.; JURES, P.; GERLANC, I.; [illegible], P.; SKUBIC, F.; MAGAJNA, B.; MERSIC, M.; LEONARDIS, S.; PIRKMAJER, E.; [illegible], M.

New books and periodicals. Elektr vest 17 no.1/2:46-56 Ja-F '64.

SKUBINJSKI, W., Mgr.

Socialized pharmacies in service of the labor. Farm. polska 10 no.7:178-181 July 54.
(PHARMACY,
in Poland)

Warsaw, Medycyna Weterynaryjna, Vol 18, No 2, February 1962.

(continued)

Wojewodztwo of Warsaw," Czeslaw MARANSKI; p 92.

11. "Distribution of Glycogen and Vitamin C in the Liver of Cows in Cases of Parasitic Cirrhosis Hepatis," Adam KANIOLKA of the Chair of Pathological Anatomy (Katedra Anatomii Patologicznej) of the Faculty of Veterinary Science (Wydzial Weterynarji) of the Higher School of Agriculture (Wyzsza Szkola Rolnicza) at Lublin (Director: Prof. Dr. Tadeusz ZULINSKI); pp 93-99 (English summary).

12. "Two Cases of Poisoning of Cattle with the Insecticide 'Trix 30'," Marian ZAUBER; p 99.

13. "Mycostatin in the Treatment of Aspergillosis of Chicks," Tadeusz DWORZYNSKI; pp 99-100.

14. "Examination of Vaginal Smears in Sheep," Alina LADA of the Experimental Biology Division (Dzial Biologii Eksperymentalnej) of the Zootechnical Institute (Instytut Zootechniki) Laboratory of Breeding Biology (Pracownia Biologii Rozrodu) at Balice (Director: Prof. Dr. M. KAROWICZ); pp 100-105 (English summary).

15. "Actual State of Scientific Studies in Veterinary Institutes in the Soviet Union," Stanislaw KRAUSS, Abdon STRTSZAK, and Tadeusz KOWSZEWICZ; pp 105-109.

16. "Evaluation of Milk Productivity of Cows in Poland," Jerzy KWASIBORSKI; pp 109-113.

17. "Effect of Anisocoide on the Growth of L. Intestinalis," Stanislaw SCHELLER; pp 113-114.

18. "Veterinary Publications During 1961-1962," Zbigniew WOJTANOWICZ; pp 115-117.

1107

— 2/2 —

SKUBISZEWSKI, Feliks; ZAKRYS, Marian; OLEKSY, Tadeusz

Treatment of urolithiasis. Urol.polska 7:43-53 1954.

1. Z II Kliniki Chirurgicznej A.M. w Lublinie. Kierownik: prof. dr F. Skubiszewski.

(CALCULI, urinary, ther.)
(URINARY TRACT, calculi, ther.)

SKUBISZEWSKI, Feliks

Procedure in acute bleeding from gastric or duodenal ulcers. Polski przegl. chir. 30 no.5:484-485 May 58.
(PEPTIC ULCER, hemorrh.
surg. (Pol))

SKUBISZEWSKI, Feliks; ZAKRZ, Mieczyslaw

Total gastrectomy in gastric cancer. Polski przegl. chir. 33 no. 7/9: 729-731 '61.

1. Z II Kliniki Chirurgicznej AM w Lublinie Kierownik: prof. dr F. Skubiszewski.
(STOMACH NEOPLASMS surg) (GASTRECTOMY)

SKUBISZEWSKI, Feliks; MISIUNA, Pawel; MICHALAK, Jerzy; OLEWINSKI, Tadeusz

Prostatic adenoma. Pol. tyg. lek. 19 no.28:1094-1096
13 - 20 Jl'64

1. Z II Kliniki Chirurgicznej Akademii Medycznej w Lublinie; kierownik: prof. dr. med. Feliks Skubiszewski.

S/181/63/005/003/043/046
B102/B160

AUTHORS: Isupov, V. A., and Smolenskiy, V. N.

TITLE: Elastic and piezoelectrical properties of cadmium pyroniobate in strong electric fields

PERIODICAL: Fizika tverdogo tela, v. 5, no. 3, 1963, 957-959

TEXT: $Cd_2Nb_2O_7$ is the only ferroelectric known at present with pyrochlorine structure. It has already been found that the ε-maximum at -80 - -90°C does not correspond to a Curie point but to a phase transition (cubic at room temperature, pseudocubic below this). Furthermore, $\varepsilon(T)$ displays inflection points at -68, -47, and -12°C. To test the reality of these phase transitions the elastic and piezoelectrical properties of disc single crystals were determined by Mason's dynamic method with a constant displacement field E applied to the specimen. At E=0 the $\varepsilon(T)$ maximum was between -84 and -97°C. At the temperature Θ_2 (10 - 12° above the temperature maximum Θ_1 of $\varepsilon(T)$)

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the curves had a step. At the ε(T)-maximum the s(T) curves have a sharp minimum (cf. Fig. 1; s is Young's modulus). When E is raised from 7 to 9 kv/cm the depth of the s(T) troogh decreases and then increases again; with rising E, s_{min} shifts to lower temperatures, at E=18.5 kv/cm this shift causes an inflection point. This minimum is connected with the low-temperature (-118°C) field dependence of the dielectric hysteresis. At lower fields (~22 kv/cm) the hysteresis looks like that of a ferroelectric, at ~44 kv/cm the rate of polarization rise increases, and at 60 kv/cm a second saturation may be observed. The s(T) minimum may thus be brought into relation with a transition from a state with low to one with high spontaneous polarization. The piezomodulus d_{31} at E=1 kv/cm and -150°C, is $-0.35 \cdot 10^{-6}$CGSE; near θ_1 it is $-1.2 \cdot 10^{-6}$CGSE. There are 2 figures.

ASSOCIATION: Institut poluprovodnikov AN SSSR, Leningrad (Institute of Semiconductors AS USSR, Leningrad)

SUBMITTED: November 17, 1962

Elastic and piezoelectrical ...

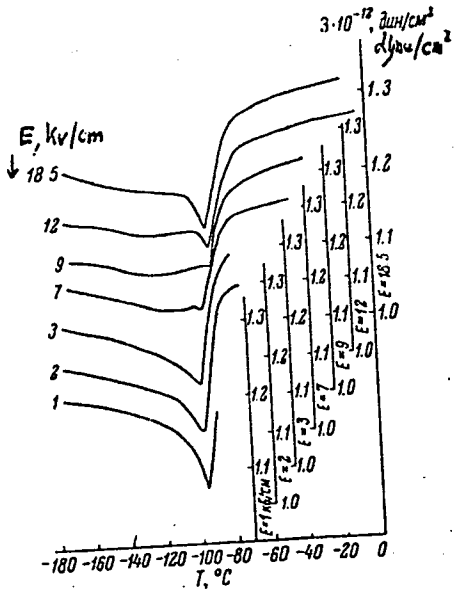

Fig. 1

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SKUBKO, P.

It will be a fine day. Sov.shakht. 11 no.4:9-10 Ap '62. (MIRA 15:3)

(Kalinino--Coal preparation plant)

SKUBKO, P.

His heart prompted him. Nauka i zhyttia 12 no.11:16 N '62.
(MIRA 16:1)

(Mining machinery)

SKUBKO, R.

SKUBKO, R.

"Basic principles of nautical astronomy". A.A. Rachkov. Reviewed by R. Skubko. Mor. i rech. flot 14 no. 7:32-3 of cover Jl '54. (Nautical astronomy) (Rachko, A.A.) (MLRA 7:7)

SKUBKO, R., kand.voyenno-morskikh nauk

Tables for evaluating the accuracy of determining the location of a ship by equal altitude position lines. Mor. flot 20 no. 12:18-21 D '60. (MIRA 13:12)
(Nautical astronomy)

VORONOV, V.G., inzh.; SKUBKO, V.A.

Use of a transformer with magnetizing shunt for regulating the voltage of a d.c. generator. Prom.energ. 17 no.7:7-10 Jl '62. (MIRA 15:7)

(Electric generators) (Electric transformers)

L 11398-63 EWT(m)/BDS/ES(w)-2 AFFTC/ASD/SSD Pab-4
S/120/63/000/002/004/041

62
61

AUTHOR: Grishayev, I. A., Kondratenko, V.V., Petrenko, V.V., Popov, A. T., and Skubko, V. A.

19

TITLE: Extractor for linear electron accelerators of up to 90 Mev energy

PERIODICAL: Pribory i tekhnika eksperimenta, March-April 1963, v. 8, no. 2, 26-28

TEXT: The article discusses design, experimental investigation, and adjustment of a system for achromatic parallel extraction of a beam of electrons from a linear accelerator. This system makes possible one or two 90° bends in the beam. The extractor provides at least 50 percent efficiency, is capable of beam-energy mono-chromatization of up to

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L 11398-63 S/120/63/000/002/004/041

Extractor for linear electron...

$\Delta\mathcal{E}/\mathcal{E} = \pm$ 0.003, and has an energy passband of $\Delta\mathcal{E}/\mathcal{E} = \pm$ 0.05 at 50 percent efficiency. Detailed specifications are given. There are two figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN USSR (Physico-Technical Institute, Academy of Sciences Ukrainian SSR)

SUBMITTED: November 29, 1961

ja/eb
Card 2/2

BIDASYUK, A.G.; SKUBLESKIYV, Ye.; MIKHEL'MAN, A.I.

Dewaxing oil-well pipes using ultrasonic methods. Neft. i gaz. prom. no.2:49-51 Ap-Je '64. (MIRA 17:9)

SMYK, M.M.; SKUBLEVSKIY, Ye.M. (Luganak-Stanislav)

Effect of ultrasound on thermal inflammation. Pat. fiziol. i eksp. terap. 4 no.3:27-31 My-Je '60. (MIRA 13:7)

1. Iz kafedry patologicheskoy fiziologii (zav. -- prof. M.M.Smyk) Luganskogo meditsinskogo instituta i kafedry fiziki (zav. -- prof. Ye.M. Skublevskiy) Stanislavskogo meditsinskogo instituta.
(BURNS AND SCALDS)
(ULTRASONIC WAVES--PHYSIOLOGICAL EFFECT)

SKUBLEVSKIY, Ye.M., prof.

Ultrasonic microcalorimeter for the study of liquids. Sbor. trud. TSNIICHM no.34:88-93 '63. (MIRA 17:4)

SKUBLEVSKIY, Ye.M.; MIKHEL'MAN, A.I.

Plastic-dynamic theory of the motion of solidifying petroleum in a round pipe in a ultrasonic field. Izv. vys. ucheb. zav.; neft' i gaz 6 no.10:79-81 '63. (MIRA 17:3)

1. Ivano-Frankovskiy filial L'vovskogo politekhnicheskogo instituta.

SKUBLICKI, Tadeusz

Certain properties of conveyer belts. Polimery tworz wielk 9 no.5:206-209 My'64.

1. Laboratory of Hose and Conveyer Belts, Institute of the Rubber Industry, Warsaw.

ZAYEV, Ye. Ye.; SKUBNEVSKAYA, G.I.; MOLIN, Yu.N.

Paramagnetic shifts in the nuclear magnetic resonance spectra of Co(II) pyridinates. Zhur. strukt. khim. 6 no. 4:639-641 Jl-Ag '65 (MIRA 19:1)

1. Institut khimicheskoy kinetiki i goreniya Sibirskogo otdeleniya AN SSSR, g. Novosibirsk. Submitted January 13, 1965.