ITSKEVICH, YE.S

24.7600

AUTHOR: Itskevich, Ye. S.

TITLE: Specific Heat of Bismuth Telluride at Low Temperatures

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960,
             Vol. 38, No. 2, pp. 351 - 358

TEXT: The present paper reports on measurements of the specific heat of
p-type Bi_2Te_3 between 1.37 and 65°K. The preparation had been supplied
by the Institut poluprovodnikov AN SSSR (Institute of Semiconductors of
the AS USSR). It was recrystallized twice to increase its degree of
purity; a determination of impurities was omitted. Slices were split
off from a coarse-crystalline cylindrical block, and resistivity, ther-
mo-emf, and the Hall constant were measured on them. 135 measurements
of the specific heat of bismuth telluride were made between 1.37 and
64.8°K. No phase transitions were established. Fig. 1 illustrates mea-
surements made in the range of 1.37 - 20.0°K; the results obtained by
P. V. Gul'tyayev and A. V. Petrov are also shown in this diagram. Below

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Specific Heat of Bismuth Telluride at Low

2.3°K the results can be described by $C = \gamma T + 464.5(T/\theta)^3$, where
$\gamma = (17\pm8).10^{-5}$ joule.deg^{-2}/gram-atom, and $\theta = (155.5 \pm 3)$°K is the
Debye temperature at absolute zero. In the range between 2.5 and 8°K
the power exponent in the temperature dependence of the specific heat
is greater than 3. Fig. 3 shows the characteristic Debye temperature
between 1.37 and 50°K as a function of temperature. θ_D at first ex-
hibits a steep decline at low temperatures, runs through a minimum at
about 8°K, and again slowly rises with further rising temperature. Re-
sults of measurements on resistivity are compiled in Table 1. Fig. 4
illustrates the temperature dependence of resistivity in the range
2 - 300°K. Table 2 specifies absolute values of the emf and the Hall
constant R, Fig. 5 shows R(T) in Bi_2Te_3. The author applied the formula
$R = 3\pi/8ne$ or $n = 7.35\cdot10^{18}R^{-1}$, $n = 4.0\cdot10^{19}cm^{-3}$. The hole mass m at 2°K
was calculated from the concentration of holes and specific heat mea-
surements. $C_v - \gamma T = 3.86\cdot10^{-13} Vn^{1/3} (m/m_0)T$ [cal/gram-atom.grad] holds,
where V denotes the atomic volume, n is the number of holes per unit

Card 2/3

26548

S/076/61/035/008/012/016
B110/B101

10431,1273 1530

5.4800

AUTHOR: Itskevioh, Ye. S. (Moscow)

TITLE: Thermodynamic investigations at low temperatures. XII. Specific heat of bismuth telluride between 1.4 and 65°K. Enthalpy and entropy of Bi_2Te_3 at 298.15°K

PERIODICAL: Zhurnal fizicheskoy khimii, v. 35, no. 8, 1961, 1813 - 1815

TEXT: In view of the interest raised by anisotropic crystals, the author measured the temperature dependence of the specific heat of Bi_2Te_3 having a stratified crystal lattice. The method had been earlier described by the author (Zh. eksperim. i teor. fiz., 38, 351, 1960). Numerical values of specific heat, enthalpy, and entropy are given here. The temperature dependence of the specific heat below 10°K in Bi_2Te_3 differs from that of other laminar lattice structures. Below the cubic-law region attained at 8 - 11°K the specific heat is proportional to $T^{3.6}$. Only at $T < 2.5$°K it becomes again proportional to T^3. Conventional theories on laminar

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S/076/61/035/008/012/016
B110/B101

Thermodynamic investigations...

crystals would not lead one to expect this. Measurements are stopped at $8°K$ and the curve is extrapolated to absolute zero according to the cubic law with the Debye temperature $\Theta_d = 117°K$ corresponding to this region (while $\Theta_0 = \Theta_d (0) = 155.5°K$). In this way, the molar entropy was found to be $S_{8°K}^o = 1.04$ joules/degree (experimentally: $S_8^o = 0.90$ joules/degree). This is not to be explained by determination errors of entropy at the upper limit of measurement. Extrapolation must be done carefully, as the specific heat in the calculation of enthalpy and entropy is measured at $298.15°K$, or from $11°K$ on at best, and from $11°K$ to $0°K$ extrapolation bases on the simplest assumptions. In bismuth telluride, an extrapolation that would take account of the stratified lattice structure would cause a large error. According to the author (Dis., In-t fizioh. problem, M., 1957) the divergence between extrapolated and experimental values of CdI_2 and $CdBr_2$ at $11°K$ amounts to 25%. The figure presents the values measured by the author between 1.37 and $64.8°K$ as well as the values calculated by P. V. Gult'yayev., A. V. Petrov (Ref. 3: ZhFTT, 1, 368, 1959) between

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S/076/61/035/008/012/016
B110/B101

Thermodynamic investigations...

80 and $300^{\circ}K$. The table supplies only the values, obtained by means of graphic smoothing, of the molar specific heat between 1.5 and $65^{\circ}K$, because the 135 points obtained were irregularly distributed in the temperature range. By integration, for entropy and enthalpy of Bi_2Te_3 were obtained, the upper limit of measurement being $65^{\circ}K$:
$S_{65}^{o} = 84.76 \pm 0.32$ joules/deg.mole.. In order to calculate entropy and enthalpy at $298.15^{\circ}K$, integrated data were used in the same manner:
$S_{298.15}^{o} = 260.9$ joules/deg.mole; $H_{298.15}^{o} - H_o = 30908$ joules/mole.
However, both results are approximate values, and it is difficult to estimate their error limits. There are 1 figure, 1 table, and 3 Soviet references.

ASSOCIATION: Akademiya nauk SSSR Institut fiziki vysokykh davleniy
               (Academy of Sciences USSR, Institute of High-pressure
               Physics)

SUBMITTED: December 30, 1959

Card 3/5

·37863
S/056/62/042/005/006/050
B125/B108

24·7700

AUTHOR: . Itskevich, Ye. S.

TITLE: Electric resistivity of cerium at low temperatures and high
               pressures

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 42,
             no. 5, 1962, 1173 - 1182

TEXT: The temperature dependence of the resistivity of two cerium samples
was measured between 10 and 300°K at normal pressure and at pressures of
up to 10,000 kg/cm^2. The samples, contained less than 0.75% neodymium
and praseodymium each, less than 0.02% iron, and less than 0.001% cadmium,
lead, tin, and bismuth. Results are collected in Table 1 and Fig. 1. The
changes in resistivity after transitions induced by temperature or
pressure (10,000 kg/cm^2) are identical. The resistivity of the face-
centered cubic cerium lattice increases linearly with temperature between
50 and 300°K, with $\varrho_0^{-1}\Delta p/\Delta T = 3.12\cdot10^{-3}$ deg^{-1}. Between 10 and 40°K,
resistivity increases in proportion with T^2. The abnormal behavior of
resistivity at 12.5°K, found by other authors, was not confirmed by the

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Electric resistivity of...

S/056/62/042/005/006/050
B125/B108

present results. The branches of the cerium phase diagram probably are parallel below room temperature. The discontinuous change in ϱ in the .transition from the face-centered cubic cerium lattice to the cubic lattice vanishes at about 578°K. The resistivity of compressed face-centered cerium has the same temperature coefficient as the majority of the metals in a wide temperature range. There are 5 figures and 2 tables.

ASSOCIATION: Institut fiziki vysokikh davleniy Akademii nauk SSSR (Institute of the Physics of High Pressures of the Academy of Sciences USSR)

SUBMITTED: December 14, 1961

Card 2/Ι 2

L 14523-63   EWT(1)/EWP(q)/EWT(m)/BDS   AFFTC/ASD   JD/JG

ACCESSION NR: AP3005246   S/0056/63/045/002/0071/0082

                                                         63
AUTHOR: Gaydukov, Yu. P.; Itskevich, Ye. S.   58

TITLE: Effect of pressure on the Fermi surface of zinc and cadmium

SOURCE: Zhur. eksper. i teoret. fiziki, v. 45, no. 2, 1963, 71-82

TOPIC TAGS: pressurized-zinc-resistivity anisotropy, pressurized-zinc resistivity oscillation, pressurized-zinc magnetic resistance, pressurized-cadmium-resistivity anisotropy, pressurized-cadmium-resistivity oscillation, pressurized-cadmium magnetic resistance, pressurized-zinc Fermi surface

ABSTRACT: The anisotropy of electrical resistivity of zinc and cadmium single crystals was investigated in an 8700-oe magnetic field at a pressure of 7000 kg/cm². The dependence of the resistivity oscillations of zinc along the [0001] axis in a magnetic field under pressures up to 8000 kg/cm² was also studied. A specially designed pressure cylinder was used so that the experiments could be conducted under hydrostatic conditions. It was found that the magnetic resistance of Cd remains unchanged under pressure, but that of Zn decreases by about 20% if the current flow is in the basal plane of the crystal. When the direction of current is parallel to the [0001] axis, the magnetic resistance of both metals decreases

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L 14523-63
ACCESSION NR: AP3005246

by 35 to 40%. The resistivity oscillation period in zinc decreases as pressure increases, from 6.3×10^{-5} oe^{-1} at atmospheric pressure to 2.1×10^{-5} oe^{-1} at 8100 kg/cm^2. The magnitude of changes in the Fermi surface in zinc caused by uniform compression was estimated on the basis of the data obtained. The critical pressure at which the open cross sections disappear in the (0001) plane was about 50,000 kg/cm^2. "The authors thank Academician P. L. Kapitsa and Professor G. F. Vereshchagin for making possible this investigation and Professor N. Ye. Alekseyevskiy for his attention." Orig. art. has: 8 figures and 3 tables.

ASSOCIATION: Institut fizicheskikh problem AN SSSR (Institute of Physical Problems, AN SSSR); Institut fiziki vy"sokikh davleniy AN SSSR (Institute of Physics of High Pressures, AN SSSR)

SUBMITTED: 05Mar63   DATE ACQ: 06Sep63   ENCL: 00

                            NO REF SOV: 012   OTHER: 013

SUB CODE: PH

Card 2/2

L 17324-63   EWT(1)/EPR/EPF(c)/EPF(n)-2/EWP(q)/EWT(m)/EDS   AFTC/ASD/
IJP(C)/SSD   Ps-4/Pr-4/Pu-4   WW/JD
ACCESSION NR: AP3004907   S/0120/63/000/004/0148/0151

AUTHOR: Itskevich, Ye. S.

TITLE: High-pressure bomb for low-temperature investigations

SOURCE: Pribory-i tekhnika eksperimenta, no. 4, 1963, 148-151

TOPIC TAGS: bomb, high-pressure bomb, low-temperature bomb

ABSTRACT: A self-contained bomb is described which withstands up to 11,000
atm pressure and is intended for investigating electric and galvanomagnetic
properties of single crystals at low temperatures. To obviate the difficulty of
the lack of plasticity of the medium at low temperatures, the pressure is built up
in the bomb (by means of a hydraulic press) at room temperature, then fixed
mechanically, and then the bomb is transferred into a Dewar vessel. An oil-
kerosene mixture is used as a medium and beryllium bronze or steel for the
shell. The bomb pressure at 77K and 20K can be determined by a manganin

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ACCESSION NR: AP3004907

6.

resistance manometer calibrated at these temperatures. Measurements of the
electric resistance of gold single crystals proved that hydrostatic conditions do
exist in the bomb with variations in pressure and temperature. "In conclusion,
I wish to thank L. F. Vereshchagin for his constant interest in the project,
A. I. Likhter for his valuable advice and kindness in lending his outfit for cali-
brating the manganin manometer, and also V. A. Sukhoparov and A. F. Gavrilov
who played an important part in designing the bomb and in carrying out measure-
ments." Orig. art. has: 3 figures and 1 table.

ASSOCIATION: Institut fiziki vy*sokikh davleniy AN SSSR (Institute of High-
Pressure Physics, AN SSSR)

SUBMITTED: 27Aug62   DATE ACQ: 28Aug63   ENCL: 00

SUB CODE: PH   NO REF SOV: 005   OTHER: 001

Card 2/2

ITSKEVICH, Ye.S.; IL'INA, M.A.; SUKHOPAROV, V.A.

Effect of pressure on the transistion temperature to the super-
conductive state in Nb_3Sn and $Nb - Zr$ alloys.   Zhur. eksp. i teor.
fiz. 45 no.5:1378-1379 N '63.   (MIRA 17:1)

1. Institut fiziki vysokikh davleniy AN SSSR.

ITSKEVICH, Ye. S.; POPOVA, S. V.; ATABAYEVA, E. Ya.

Effect of pressure on the electric resistance of bismuth telluride.
Dokl. AN SSSR 153 no. 2:306-309 N '63.   (MIRA 16:12)

1. Institut fiziki vysokikh davleniy AN SSSR. Predstavleno
    akademikom I. V. Obreimovym.

ACCESSION NR: AP4039666   S/0181/64/006/006/1765/1768

AUTHORS: Itskevich, Ye. S.; Atabayeva, E. Ya.; Popova, S. V.

TITLE: The effect of pressure on the electrical resistivity of bismuth selenide

SOURCE: Fizika tverdogo tela, v. 6, no. 6, 1964, 1765-1768

TOPIC TAGS: electric resistance, bismuth selenide, quasihydrostatic, silver
chloride, high pressure chamber, temperature coefficient, catlinite, metallic
character

ABSTRACT: The authors studied the electrical resistivity of $n-Bi_2Se_3$ at various
pressures up to 10.4 kilobars and then between 30 and 150 kilobars. They found
that at a pressure of about 100 kilobars the resistance fell abruptly, indicating
a transition to the metallic state. The technique was similar to the one used for
Bi_2Te_3 as given by Ye. S. Itskevich, S. V. Popova and E. Ya. Atabayeva (DAN SSSR
153, 306, 1963). The specimen was cut from bars prepared at the Institut
poluprovodnikov AN SSSR (Institute of Semiconductors, AN SSSR). At room tempera-
ture it had a resistance of $5/6$ 10^{-4}ohm·cm and a temperature coefficient of -70

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ACCESSION NR: AP4039666

-80 microvolt/degree. Part of the specimens were prepared as mentioned above, and the others were coated with AgCl. The results of the experiments are given in Figs. 1 and 2 of the Enclosure. The authors thank L. F. Vereshchagin, corresponding member of the AN SSSR for his interest in this work, and V. A. Kuznostov and V. A. Sukhparov for taking measurements. Orig. art. has: 3 graphs.

ASSOCIATION: Institut fiziki vy*sokikh davleniy AN SSSR, Moscow (Institute of High Pressure Physics, AN SSSR)

SUBMITTED: 07Jan64   DATE ACQ: 19Jun64   ENCL: 02

SUB CODE: SS   NO REF SOV: 002   OTHER: 001

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Fig. 1. Effect of quasihydrostatic
pressure on the electrical conduc-
tivity of n-Bi$_2$Se$_3$ at room temper-
ature. (Sample coated with AgCl).
Curves 2, 15, and 23 represent
measurements on specimens 2, 15 and
23. Curves 2a and 23a represent
measurements on specimens 2 and 23
as the pressure was released. The
pressure scale is correct only for
increasing pressures.
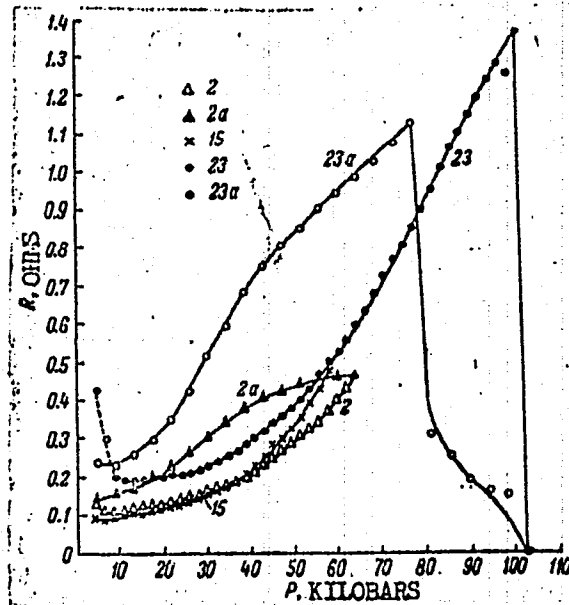
Card 3/4

ACCESSION NR: AP4039666   ENCLOSURE: 02

Fig. 2. Dependence of
electrical resistivity of
Bi_2Se_3 on quasihydrostatic
pressure, obtained by
method of Itskevich et al,
at room temperature.
Curves 11, 14, 17 and 19
represent measurements on
specimens 11, 14, 17 and
19. Curves 11a and 14a
represent measurements on
specimens 11 and 14 as the
pressure was released.
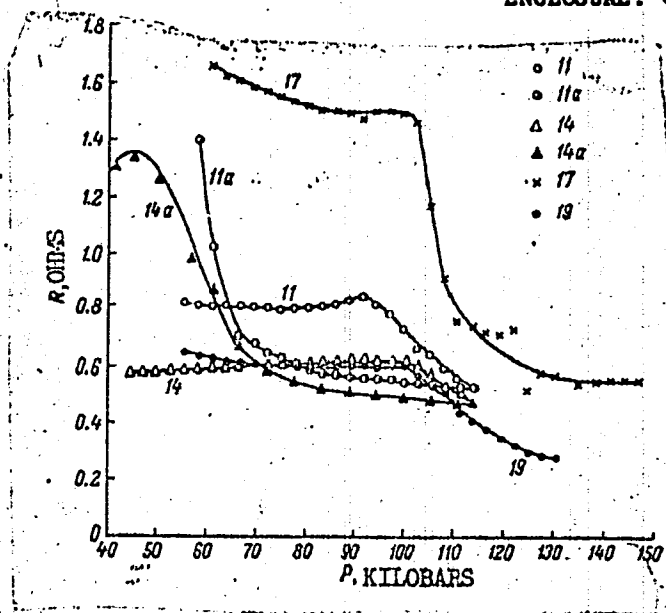
Card 4/4

ACCESSION NR: AP4041747   S/0181/64/006/007/2223/2225

AUTHORS: Vereshchagin, L. F.; Itskevich, Ye. S.; Atabayeva, E. Ya.;
Popova, S. V.

TITLE: On a new modification of Bi_2Se_3

SOURCE: Fizika tverdogo tela, v. 6, no. 7, 1964, 2223-2225

TOPIC TAGS: bismuth inorganic compound, polymorphism, metal struc-
ture, x ray diffraction study

ABSTRACT: This is a continuation of an earlier study (FTT v. 6, 000,
1964) of the electric resistivity of Bi_2Se_3 as a function of the
pressure in the interval up to 140 kbar at room temperature. Along
with the previously observed reversible transition to the metallic
state observed near 100 kbar at room temperature, an irreversible
polymorphic transition was observed at 800C and 120--65 kbar, to

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ACCESSION NR: AP4041747

a new phase Bi_2Se_3 II which is metastable under normal conditions. To confirm the polymorphic nature of the transition, the sample was annealed for 2 hours in pure helium (500C), and the reverse transition Bi_2Se_3 II → Bi_2Se_3 I was established by x-ray diffraction. The x-ray diffraction pattern has 40 lines which could be identified in a structure of the bismuth type (Bi_2S_3), orthorhombic cell, space group Pbnm (D_{2h}^{16}). The unit cell parameters of the new phase are a = 11.63 ± 0.03 Å, b = 11.76 ± 0.03 Å, and c = 4.06 ± 0.01 Å. The density determined by x-ray diffraction and pycnometrically is 7.8 and 8.0 ± 0.3 g/cm^3, respectively, confirming the correctness of the proposed structure. The resistivity of the new phase is 1.2--1.5 ohm-cm, and the temperature coefficient of resistivity is negative between 0 and 100C. The data confirm the correlation between the electric properties and the crystal structure inherent in compounds A_2B_3 of elements of groups V-VI. Data on the electric properties

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ACCESSION NR: AP4041747

of the new phase will be published in the future. "The authors
thank S. S. Kabalkina for help with the x-ray diffraction studies."
Orig. art. has: 2 tables.

ASSOCIATION: Institut fiziki vy*sokikh davleniy AN SSSR, Moscow
(Institute of High Pressure Physics, AN SSSR)

SUBMITTED: 19Mar64   ENCL: 00

SUB CODE: SS   NR REF SOV: 001   OTHER: 002

Card 3/3

ACCESSION NR: AP4043616   S/0056/64/047/002/0455/0463

AUTHORS: Brandt, N. B.; Gaydukov, Yu. P.; Itskevich, Ye. S.;
Minina, N. Ya.

TITLE: Effect of pressure on the oscillation effects in bismuth

SOURCE: Zh. eksper. i teor. fiz., v. 47, no. 2, 1964, 455-463

TOPIC TAGS: bismuth, quantum statistics, resistance, magnetic sus-
ceptibility, low temperature phenomenon, high pressure research,
Fermi surface

ABSTRACT: This is a sequel of an earlier study by two of the pre-
sent authors (Gaydukov and Itskevich, ZhETF, v. 45, 71, 1963) on
the effects of uniform compression on the quantum oscillations of
the electric resistance (Shubnikov-deHaas effect) of zinc. The
present study is devoted to the effective uniform compression on
the quantum oscillations of the magnetic susceptibility (pressures

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ACCESSION NR: AP4043616

1300--1600 kg/cm^2) and the electrical resistance (at 3000--7500 kg/cm^2) in bismuth at liquid helium temperatures. The test procedure is described. In addition, the influence of pressure on the deHaas-van Alphen effect was investigated using a procedure described elsewhere (N. B. Brandt, Ya. G. Ponomarev, PTE, no. 6, 114, 1961). The influence of uniform compression on the quantum oscillations of the electric resistance was measured by a method of Ye. S. Itskevich (PTE, no. 4, 148, 1963). The results showed a decrease in the oscillation frequency, amounting to 37% at 7500 kg/cm^2. The results are interpreted on the basis of a model wherein the Fermi surface of bismuth consists of one hole and three electron ellipsoids, and the test results on the two effects in bismuth are in good mutual agreement. An analysis of the influence of uniform compression on the Fermi surface shape and on other characteristics of bismuth at low temperatures is presented. The possibility that bismuth would go over into a dielectric state at low temperatures is discussed. "We thank L. F. Vereshchagin and A. I. Shal'nikov for

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ACCESSION NR: AP4043616

their interest in this work and V. A. Sukharov for help with the
experiments." Orig. art. has: 6 figures and 1 table.

ASSOCIATION: Moskovskiy gosudarstvenny*y universitet (Moscow State
University); Institut fiziki vy*sokikh davleniy Akademii nauk SSSR
(Institute of Physics of High Pressures, Academy of Sciences SSSR)

SUBMITTED: 17Mar64   ENCL: 01

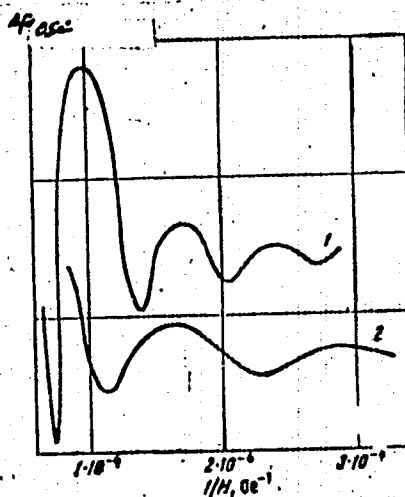SUB CODE: SS   NR REF SOV: 014   OTHER: 006

Card 3/4

ACCESSION NR: AP4043616

Dependence of oscillating part
of magnetoresistance on the
reciprocal magnetic field in-
tensity at 1.5K.

1 - p = 0
2 - p = 7500 kg/cm^2

Curves shifted vertically in
arbitrary fashion

ITSKEVICH, Ye. S.

"Change of Fermi-Surfaces of Metals Under Pressure"

Paper delivered at the High Pressure Conference, Le Creusot, France, 3-7 Aug 1965.

USSR Academy of Sciences, Moscow.

L 4083-66

ACCESSION NR: AP5021728   UR/0386/65/002/002/0067/0071

AUTHOR: Itskevich, Ye. S.; Voronovskiy, A. N.; Sukhoparov, V. A.

TITLE: Variation of low-frequency component of the electric-resistance oscillations of zinc in a magnetic field at a pressure of 16,000 kg/cm^2

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 2, no. 2, 1965, 67-71

TOPIC TAGS: zinc, electric resistance, high pressure research, pressure effect, transverse magnetic field, magnetoresistance, quantum oscillation

ABSTRACT: The strong influence of pressure on the frequency of the lowest-frequency quantum oscillations of the electric resistance of zinc in a transverse magnetic field, investigated earlier by one of the authors (Itskevich, with Yu. P. Gaydukov, ZhETF v. 45, 71, 1963), was studied further with the aid of a new bomb, capable of producing pressures up to 18,000 kg/cm^2 at helium temperatures. The new bomb is illustrated in Fig. 1 of the Enclosure. Its main advantages are that its container is self-sealing and that its moving parts are made of solid non-magnetic materials. Measurements were made without pressure and at 11,100 and 15,900 kg/cm^2 in fields ranging from 2000 to 11,000 oe. The results show conclu-

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ACCESSION NR: AP5021728

sively that the oscillations of the electric resistance of zinc decrease abruptly with increasing pressure, and are in good agreement with theoretical calculations based on the model of W. A. Harrison (Phys. Rev. v. 118, 1190, 1960). The results also confirm the existence of a needle-like electronic part of the Fermi surface of cadmium, which should become observable at the higher pressures attained in the present experiment. "The authors thank Professor L. F. Vereshchagin for continuous interest in the work." Orig. art. has: 3 figures, 1 formula, and 1 table.   [02]

ASSOCIATION: Institut fiziki vysokikh davleniy Akademii nauk SSSR (Institute of High-Pressure Physics, Academy of Sciences, SSSR)

SUBMITTED: 25May65   ENCL: 01

NO REF SOV: 003   OTHER: 006   SUB CODE: EM, MM

                                                               ATD PRESS: 4/27
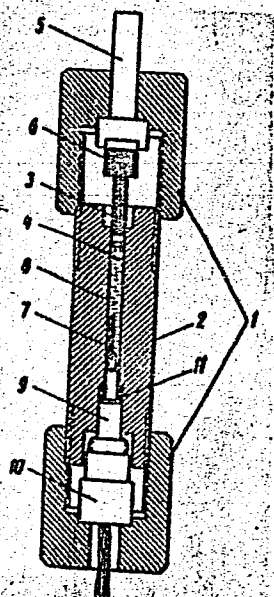
Card 2/3

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ACCESSION NR: AP5021728

Fig. 1. Diagram of bomb

1 - Locking nuts;
2 - bomb container;
3 - microlite piston;
4 - anvil and gasket;
5 - ram;
6 - bearing;
7 - sample;
8 - pressure transmitting medium;
9 - seal;
10 - seal bearing cylinder;
11 - gasket.

Card 3/3 BVK

L 14962-66   EPF(n)-2/EWP(k)/EWT(l)/EWT(m)/EWP(b)/EWA(d)/EWH(t)   IJP(c)   GG/
ACC NR: AP6002467 AT/WW/JD
                                    SOURCE CODE: UR/0386/65/002/011/0514/0519

AUTHOR: Itskevich, Ye. S.; Kuzhdaba, V. M.; Sukhoparov, V. A.; Shalyt, S. S.

ORG: Institute of High Pressure Physics, Academy of Sciences SSSR; Institute of
Semiconductors, Academy of Sciences SSSR

TITLE: Influence of hydrostatic pressure on the effective mass of electrons in InSb

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu.
Prilozheniye, v. 2, no. 11, 1965, 514-519

TOPIC TAGS: indium compound, antimonide, magnetoresistance, electron, pressure ef-
fect, magnetic field intensity

ABSTRACT: Data are given from an experimental study of the direct effect which hy-
drostatic pressure of up to 8000 kg/cm^2 has on the effective mass of electrons. The
experimental method was based on the new Gurevich-Firsov magnetophonon resonance
phenomenon. The specimen studied was a single crystal of n-type InSb with dimen-
sions of $2 \times 2.5 \times 16$ mm, a concentration of $8 \cdot 10^{13}$ cm^{-3} and a mobility of $7 \cdot 10^5$
cm^2/v-sec at 77°K. The relative reduction in the linear dimensions of the crystal
was no greater than 0.6% at maximum pressure. Curves are given showing the trans-

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L 14962-66
ACC NR: AP6002467

verse magnetoresistance as a function of magnetic field strength at various pres-
sures. Formulas are given for determining the effective mass of electrons from the
period of the oscillations and from the position of the individual maxima on these
curves. Calculations show a change in effective mass from 0.016 to 0.025 when the
pressure is changed from 1 kg/cm^2 to 8000 kg/cm^2. Since the width of the forbidden
zone in this pressure interval increases by a factor of 1.5, the experimental data
confirms the theoretical conclusion of direct proportionality between the effective
mass of electrons and the width of the forbidden zone for an InSb crystal in this
pressure interval. Orig. art. has: 3 figures, 3 tables.

SUB CODE: 20/   SUBM DATE: 20Oct65/   ORIG REF: 002/   OTH REF: 004

Card 2/2

L 44810-66   EWT(1)/EWT(m)/EWP(t)/ETI   IJP(c)   JD/WW

ACC NR: AP6032023   SOURCE CODE: UR/0386/66/004/006/0226/0230

AUTHOR: Itskevich, Ye. S.; Vornovskiy, A. N.

ORG: Institute of High Pressure Physics, Academy of Sciences, SSSR (Institut fiziki vysokikh davleniy Akademii nauk SSSR)

TITLE: Change of topology of the Fermi surface of cadmium under pressure

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 4, no. 6, 1966, 226-230

TOPIC TAGS: cadmium, Fermi surface, pressure effect, high pressure research, resistivity, galvanomagnetic effect

ABSTRACT: This is a continuation of earlier work (ZhETF v. 45, 71, 1963) on the angular dependence $\rho(\theta)$ of the resistivity of cadmium in strong magnetic fields. The measurements were made on four samples of pure cadmium ($\alpha = \rho_{300K}/\rho_{4.2K} \simeq (12 - 14)$) x 10^3) in a high-pressure chamber described elsewhere (PTE, 1967, in press). The sample axes were parallel to the [1120] direction. The measurements have shown that at pressures above 8 kbar and H ∥ [0001], an additional third maximum appears on the $\rho(\theta)$ curves, as against only two at lower pressures. The relative magnitude of this maximum is practically independent of the field intensity, but does depend on the temperature. The form of the maximum does not change when the temperature is lowered. When the pressure rose above 15 kbar, splitting of the new maximum was observed. This splitting apparently does not take place below 14 kbar, since the authors were unable

Card 1/2

Card 2/2

ACC NR: AP7001955   (A)   SOURCE CODE: UR/0120/66/000/006/0161/0164

AUTHOR: Itskevich, Ye. S.; Voronovskiy, A. N.; Gavrilov, A. P.; Sukhoparov, V. A.

ORG: Institute of Physics of High Pressures AN SSSR, Moscow (Institut fiziki vysokikh davleniy AN SSSR)

TITLE: High pressure (up to 18 Kbar) chamber for operation at liquid helium temperatures

SOURCE: Pribory i tekhnika eksperimenta, no. 6, 1966, 161-164

TOPIC TAGS: high pressure chamber, metal single crystal, liquid helium temperature, beryllium bronze, corundum microlite

ABSTRACT: Two models of a high-pressure (up to 18 kbar) chamber used for studying single crystals of metals and semiconductors in a magnetic field at liquid helium temperatures are described. The chambers (6.5 mm inside diameter) are made of heat-treated beryllium-bronze and the pistons are made of TSM-322 corundum-microlite heat treated to a hardness of 75—78Rc. The required pressure is created in the chamber at room temperature by a hydraulic press. The chamber is then sealed mechanically and placed in a Dewar vessel containing liquid helium. Pressure is measured by means of manganin and superconducting pressure gages. The magnitudes of anisotropy

Card 1/2   UDC: 539.89

ACC NR: AP7001955

of magnetic resistance and of quantum oscillations of electric resistance
of zinc, measured in the chamber, showed that the compression was close to
hydrostatic. The heat expansion of the materials used for chamber con-
struction were tested at temperatures from 77K to 20C. It was found that
the heat expansion coefficient of corundum-microlite is significantly
smaller than that of beryllium-bronze. Thus, using a second material in
the chamber should not lead to pressure losses when the temperature drops.
Orig. art. has: 4 figures and 1 table.

SUB CODE: 20/ SUBM DATE: 11Dec65/ ORIG REF: 003/ OTH REF: 003/
ATD PRESS: 5112

Card 2/2

ITSKHAKIN, V.D.; OBRAZTSOV, A.P.

Rock breaking with the help of a high-frequency electromagnetic
field. Obog. rud. 8 no.2:13-15 '63.   (MIRA 17:2)

112-1-621

Translation from: Referativnyy Zhurnal, Elektrotekhnika, 1957, Nr 1,
p. 104 (USSR)

AUTHOR: Itskhakin, V. I.

TITLE: Tuneable Inductance Coil for the Generation of High Voltages
             in Testing for High-Frequency Breakdown (Nastraivayemaya
             katushka induktivnosti dlya polucheniya bol'shikh naprya-
             zheniy pri ispytaniyakh na vysokochastotnyy proboy)

PERIODICAL: Inform.tekhn. sb. M-vo elektrotekhn. prom-sti SSSR, 1955,
             Nr 83, pp. 26-28

ABSTRACT: High-frequency high voltages are usually obtained by con-
             necting a high-voltage lengthening coil to the high-frequency
             oscillator; the coil together with the capacitance of the
             tested object creates an auxiliary circuit tuned into
             resonance with the oscillator frequency. The amplitude of
             the output voltage is controlled by changing the mutual dis-
             position of the coil of the output circuit of the high-
             frequency oscillator and of the special coupling coil. The
             highest attainable testing voltage is determined according

Card 1/2   to the formula $U = \sqrt{PQX_c}$, where U is the effective voltage

112-1-621

Tuneable Inductance Coil for the Generation of High Voltages in Testing for High-Frequency Breakdown (Cont.)

in volts; Q, the quality factor of the load circuit; P, the power in watts transmitted from the oscillator into the load circuit; X_c, the capacitive reactance of the load in ohm. Since the Q factor of the load circuit is determined on the whole by the Q factor of the lengthening coil, in their preparation high-priced coil-forms with terminal blocks made of radio porcelain are usually used. A simple and inexpensive lengthening coil with a coil-form made from ordinary 10 mm plywood was successfully developed. The coil has a Q factor of about 550, is mechanically resistant, and has an electric strength between the turns of about 8 kv with a frequency of 2000 kc. A table is given permitting a simple selection of structural parameters of the lengthening coils depending on the oscillator frequency and on the capacitance of the tested object. Inductance coils with a plywood coil-form are recommended for obtaining voltages up to 50 to 70 kv from the high-frequency oscillators operating in a range of intermediate and medium-length waves. For shorter waves the use of

Card 2/2   spoolless coils is recommended.   A.V.S.

AUTHOR: *ITSKHAKIN, V.I.*
Gorenshteyn, I.B., Candidate of Technical Sciences,   386
Itskhakin, V.I., Engineer and Merzheyevskiy, A.I., Candidate
of Technical Sciences.

ABSTRACT: In pulse radio technique artificial lines are being replaced
by delay cables. These are uniform co-axial cables with a
spiral internal conductor. They have a high inductance and
a somewhat higher capacitance than normal cables.
   The construction of delay cables is described. The inner
wire is wound on an insulating core usually of polyethylene.
When large delays are required a magnetic-dielectric core may
be used. There are two main types of delay cable, those with
thin layer insulation and an external wire which does not form
a closed circuit for annular currents and those with thick
layer insulation and closed circuit external wire. The thin
layer insulation is usually wound from one or two tapes of
polyethylene, fluoro plastic or styroflex some hundredths or
tenths of a millimetre thick. Thick layer insulation usually
consists of a solid polyethylene applied by extrusion. The
principal data on two types of cable manufactured in the
U.S.S.R. are tabulated The influence of cable design on the
electrical characteristics is examined. Magnetic dielectric
cores are mainly used in connection with colour television at

ITSKHOKI, YA. S.

Itskhoki, Ya. S. "A new method of calculating thevolt-second characteristics of insulation," Trudy Leningr. politekhn. in-ta im. Kalinina, 1948, No.3, p. 105-14.

SO: U-3736, 21 May 53,(Letopis 'Zhurnal 'nykh Statey, no. 16, 1949).

I t s K h o K i, Ya. S,

ITSKHOKI, YA. S.
    Impul'snaia tekhnika. Moskva, Sovetskoe radio, 1949, 295 p., illus.
    Bibliography: p. 292-293.
    Title tr.: Pulse engineering.

                        TK7835.I 85

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

ITSKHOKI, Yakov Semenovich; KUKUSHKIN,A.A., redaktor; KORUZEV, N.N.,
tekhnicheskiy redakter.

[Non-linear radio engineering] Nelineinaia radiotekhnika. Moskva,
Izd-vo "Sovetskoe radio,"1955. 507 p.   (MLRA 9:1)
        (Radio)

AUTHOR :   Itskhoki, Ya.S.

TITLE :   A-U Sci Conf dedicated to "Radio Day," Moscow, 20-25 May 1957.
           "Minimum Volume of a Pulse Transformer,"

PERIODICAL: Radiotekhnika i Elektronika, Vol. 2, No. 9, pp. 1221-1224,
             1957,   (USSR).

For abstract see L.G. Stolyarov.

ITSKHOKI, YA.S

108-10-8/11

AUTHOR: Itskhoki, Ya.S., Ordinary Member of the Society

TITLE: Smallest Measurements of Impulse-Transformers (Minimal'nyy ob"-
             yem impul'snogo transformatora)

PERIODICAL: Radiotekhnika, 1957, Vol. 12, Nr 10, pp. 66 - 84 (USSR)

ABSTRACT: A new method for technical calculation of heavy-type impulse
             transformers with a minimum of their metal (iron and copper)-
             volume is given. The author shows that constructions with 0,5 g
             per Watt of mean transformer power are possible. In order to
             realize this the usual method of calculation for impulse-trans-
             formers must be changed in such a way that the demands for the
             tolerable distortion of the impulse optimum must be replaced
             by that for reaching the minimum transformer weight. The method
             given here meets this demand. There are 4 tables, 12 figures
             and 5 Slavic references.

SUBMITTED: June 27, 1957

ASSOCIATION: Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi
             im. A.S. Popova

AVAILABLE: Library of Congress
Card 1/1

9(3)   PHASE I   BOOK EXPLOITATION   SOV/2745

Itskhoki, Yakov Semenovich

Impul'snyye ustroystva (Pulse Devices) Moscow, Izd-vo "Sovetskoye radio,"
    1959. 727 p. Errata slip inserted. No. of copies printed not given.

Ed.: N.G. Zabolotskiy; Tech. Ed.: N.N. Koruzev.

PURPOSE: This is a textbook for the course on "Pulse Devices" ("Pulse Technique")
    in radio engineering vuzes.

COVERAGE: The contents of this textbook correspond to the accepted program of the
    above course in several schools. The basic chapters of the book are devoted
    to a presentation of the methods of pulse shaping, amplifying and converting
    and to an analysis of corresponding pulse devices employing both vacuum
    tubes and semiconductor devices. Chapter 1 is devoted to investigating
    the basic methods of analysis of pulse processes; Chapter 2, to studying the
    transmission of pulses through linear systems. The book outlines the prin-
    ciples of operation of pulse devices and analyzes the processes occurring
    in them. Basic relationships are established with particular attention on
    the conditions for stability and reliability of operation of such devices as

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well as on the selection of proper operating conditions considering the
influence of unstabilizing factors. The method of presentation of the material,
instead of an encyclopedia approach with an analysis of numerous circuit
variants, consists in a thorough investigation of the most important components
and systems of the pulse technique, emphasizing methods of independent
selection and analysis of possible alternatives. The following persons par-
ticipated in writing the book: chapter 3 of the book was written by S.Ya.
Shats; chapter 10, paragraphs 2, 3, 5, 6, and 7 by V.V. Grigorin-Ryabov and
paragraph 8 by S.I. Viglin; chapter 11 was written by N.I. Ovchinnikov and I.A.
Boloshin. The author thanks the following persons for reviewing the manuscript:
L.D. Gol'dshteyn, A.A. Kharkevich, A.A. Kulikovskiy, V.N. Yakovlev, B.Kh.
Krivitskiy, N.I. Ovchinnikov, S.M. Nikulin and K.A. Smogilev. There are 285
references, 230 of which are Soviet, the remaining   mostly English.

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AVAILABLE: Library of Congress   JP/jb
                                                                                      1-8-60

Card 8/8

MORUGIN, L.A. Prinimal uchastiye LEZIN, Yu.S.; ITSKHOKI, Ya.S., prof.,
doktor tekhn. nauk, retsenzent; KRIZE, S.N., prof.,doktor tekhn.
nauk, retsenzent; SUKHANOV, Yu.I., red.; SHUROV, B.V., tekhn. red.

[Pulse systems with delayed feedback] Impul'snye ustroistva s za-
pazdyvaiushchei obratnoi sviaz'iu. Moskva, Izd-vo "Sovetskoe radio,"
1961. 207 p.   (MIRA 14:12)
      (Pulse techniques (Electronics)) (Delay lines)

S/109/62/007/001/002/027
D246/D301

6.9200

AUTHOR: Itskhoki,, Ya.S.

TITLE: Probability of n-overlapping of chaotic pulses of
random duration and the distribution of their over-
lapping length

PERIODICAL: Radiotekhnika, i elektronika, v. 7, no. 1, 1962,
16 - 24

TEXT: The present work gives a general distribution law and the
problem is worked out for pulses of random duration. The author
first finds the distribution law for two channels, assuming that
the length distributions are independent and the distribution of
the starting time is Poissonian. The expression is:

$$W(z) = \frac{1}{\overline{X_1} + \overline{X_2}}\left[2\Psi_1(z)\,\Psi_2(z) + f_1(z)\int_z^{x_{2m}}\Psi_2(x)\,dx + f_2(z)\int_z^{x_{1m}}\Psi_1(x)\,dx\right].\qquad (11)$$

where $\overline{X}_1$ and $\overline{X}_2$: mathematical expectation for X and Y, which take

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Probability of n-overlapping of ...

values x and y and $\Upsilon_i(z) = 1 - \int_0^z f_i(y)dy$ where $f_i(x_i)$: distributi-
on law for the duration (x_i) of pulses in a particular channel.
Using (11) and knowing $W_{n-1}(z)$ (for n-1 channels) one can obtain
$W_n(z)$. It essentially depends on $f_1(x_1)$. Then the author finds the
probability p_2 of overlapping pulses in two channels, when the du-
ration is regulated by the laws $f_i(x_i)$ (i = 1,2). The probability
for pulses of random duration in n channels can be found by averag-
ing p_n for duration x_i in all channels. This probability is deter-
mined solely by the average value of pulse duration and their ave-
rage repetition frequency:

$$p_n = \lambda^{n-1} \sum_{i=1}^{n} \frac{1}{\bar{x}_i} \prod_{i=1}^{n} \bar{x}_i. \tag{17}$$

Card 2/3

VLASOV, Viktor Fedorovich; Prinimal uchastiye OVCHINNIKOV, N.I.,
dots.; IZYUMOV, N.M., prof., retsenzent; ITSKHOKI, Ya.S.,
prof., nauchnyy red.; LARIONOV, G.Ye., tekhn. red.

[Course in radio engineering] Kurs radiotekhniki. Moskva, Gos.
energ. izd-vo, 1962. 927 p.   (MIRA 15:3)
                              (Radio)

GONOROVSKIY, I.S.; ITSKHOKI, Ya.S., doktor tekhn. nauk, prof.,
        retsenzent; VLASOV, V.F., kand. tekhn. nauk, dots.,
        retsenzent; LAPIS, A.A., kand. tekhn. nauk, dots.,
        retsenzent; ZABOLOTSKIY, N.G., red.

[Radio circuits and signals] Radiotekhnicheskie tsepi i sig-
naly. Moskva, Sovetskoe radio, 1963. 694 p.   (MIRA 17:5)

ITSKHOKI, Ya.S.

Choice of the duration of pulse normalisation in the initial treatment of radar pulse packs. Radiotekhnika 18 no.12:57-65 D '63.
(MIRA 17:1)

1. Deystvitel'nyy chlen Nauchno-tekhnicheskogo obshchestva radiotekhniki i elektrosvyazi imeni Popova.

GONOROVSKIY, I.S.; ITSKHOKI, Ya.S., doktor tekhn. nauk, prof.,
        retsenzent; VLASOV, V.F., kand. tekhn. nauk, dots.,
        retsenzent; LAPIS, A.A., kand. tekhn. nauk, dots.,
        retsenzent; ZABOLOTSKIY, N.G., red.

        [Radio circuits and signals] Radiotekhnicheskie tsepi i
        signaly. Izd.2., ispr. Moskva, Sovetskoe radio, 1964.
        694 p.   (MIRA 17:11)

ACCESSION NR: AP4040455   S/0108/64/019/006/0003/0010

AUTHOR: Itskhoki, Ya. S. (Active member)

TITLE: Frequency of false signal appearance at the output of the
initial processing device of radar pulse packets

SOURCE: Radiotekhnika, v. 19, no. 6, 1964, 3-10

TOPIC TAGS: radar, radar pulse packet, radar signal, false signal,
false signal frequency, pulse coincidence probability, probability
theory, logical circuit, noise packet

ABSTRACT: On the basis of the pulse-coincidence probability theory,
an all-purpose formula has been developed for calculating the average
frequency of false signals at the output of the selecting device of
the type k-out-of-m:

$$F_{fB} = C_{m-1}^{k-1} \frac{k}{T_n} p_{in}^{k} v^{k-1} \left(1 - \frac{k+3}{k} p_{in}v\right)^{m-k} \left(1 - \frac{k}{k-1} p_{in}v\right) \circ \qquad [1]$$

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ACCESSION NR: AP4040455

The formula is compared with known approximate semiempirical formulas
of the type

$$F_{fs} = P_{fs} \, \Delta f, \qquad\qquad [2]$$

where Δf is the energy landwidth of the receiver's IF amplifier and
P_{fs} is the probability of detecting the false signal (the noise pulse
packet), the beginning of which is fixed at a given azimuth position.
Formula [2] contains only the two magnitudes Δf and P_{fs}, both of
which are relatively easy to determine. However, formula 2 is based
on assumptions which are difficult to analyze and whose reliability is
questionable. V. N. Dymchishin [Radiotekhnika i Elektronika, v. 4,
no. 6, 1959] developed an analytical method of determining the aver-
age frequency of tripping (F_{av}) of a logical circuit of the k/m type,
but its usefulness is subject to objections because Dymchishin's
formula expresses the average rate of triggering the logical circuit
and not the rate of false signals. It is, therefore, necessary to
obtain a more accurate formula for determining the average frequency
of false signals. The author based his formula [1] on a logical cir-
cuit into which a random sequence of fixed rectangular noise pulses
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ACCESSION NR: AP4040455

enters whose duration is constant. The distribution along the time axis of the moments of pulse appearance is of the Poisson-type, and the average pulse-repetition rate is assumed to be known. It is also assumed that the fixed noise pulses are noncorrelated. The condition of triggering this logical circuit may be formulated as follows: the circuit responds when coincidence of not less than k pulses in m channels with a duration T_{min} is established. In order to find the average rate of false signals, the probability of only the first noise packet, which triggers the logical circuit during every detection, need be determined. The probability of forming a false signal is

$$P_{av, 1} = P_A q_B^{m-k} q_C,$$

from which the average frequency of false signal appearance is expressed as

$$F_{fs} = \nu_n P_{av,1} = \nu_n P_A q_B^{m-k} q_C,$$

where ν_n is the average frequency of appearance of fixed noise pulses,

Card 3/4

L 47070-65   EWT(1)/EWA(h)   Peb
ACCESSION NR: AP5010163   UR/0108/65/020/004/0050/0052

[illegible] (active member)

[illegible] functioning of a linearized dev [illegible] or

[illegible] no. 4, 965, 50-52

[illegible] converter

TOPIC [illegible] linearization of an analog-voltage / time interval
[illegible] N. Buriakov and A. M. T[illegible]enko (Radiotekhnika,
v. 19, no. 11, 1964). This simple and efficient method permits reducing the
[illegible] hundreds of one per cent however as a result

v. 19, no. 11, 1964). This simple and efficient method permits reducing the conversion nonlinearity to a few hundreds of one per cent; however, such a result presupposes a very accurate — to a few tenths of one per cent — selection of the ... ... resistor in the ... ... The present short article offers a more accurate ... ... of the author's empirical formula) for the above resistor and ... ... conditions that theoretically promise a further cutting of the ... ... error by 10%. Orig. art. has: 2 figures and 14 formulas.

Card 1/2

ACCESSION NR   / ENCL: 002

ASSOCIATION   Nauchno-tekhnicheskoye obshchestvo radiotekhniki i ektrosvyazi
              and Technical Society of Radio Engineering and Electrocommunication)

SUBMITTED   Jan   ENCL. 00   SUB CODE P, EC

NO REF SOV: 00   OTHER: 000

2/2

ITSKIN, S.A.

Potochnye metody raboty na mnogonomenklaturnykh uchastkakh mekhanicheskoi obrabotki. (Vestn. Mash., 1949, no. 6, p. (60-67)

Assembly-line methods in various sections of mechanical working.

DLC: TN4. V4

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

ITSKIN, Savelii Adol'fovich; METT, G.Ya.,.red.; SUKHAREVA, R.A., tekhn.red.

[Organization of technological services in machinery manufacturing
plants] Organizatsiia tekhnologicheskoi sluzhby na mashino-
stroitel'nom zavode. Moskva, Moskovskii dom nauchno-tekhn.pro-
pagandy, 1958. 42 p. (Peredovoi opyt proizvodstva. Seriia "Eko-
nomika i organizatsiia proizvodstva," no.6)   (MIRA 12:5)
    (Industrial organization)   (Machinery industry)

BERKHMAN, D.L., dotsent (Leningrad); ITSKINA, R.S. (Leningrad);
KAZARNOVSKAYA, O.S. (Leningrad); PERKHUROVA, A.I. (Leningrad);
ROTENFEL'D, M.Z. (Leningrad).

Treatment of tuberculous meningitis in adults. Klin.med. 31
no.12:31-36 D '53.   (MLRA 7:1)

1. Iz tuberkuleznogo otdeleniya bol'nitsy im. Kuybysheva.
        (Tuberculosis) (Streptomycin) (Meningitis)

ITSKO, D.A. (Leningrad, Nevskiy pr., d.72, kv.5)

Osteogenic sarcomas of the patella. Vop.onk. 5 no.4:485-488 '59.
                                                          (MIRA 12:12)
1. Iz rentgenologicheskogo otdeleniya (zav. - prof. L.M. Gol'dshteyn)
Instituta onkologii AMN SSSR (dir. - deystvitel'nyy chlen AMN SSSR
prof. A.I. Serebrov).
              (SARCOMA, OSTEOGENIC, case reports,
                  patella (Rus))
              (KNEE, neoplasms,
                  patellar osteogenic sarcoma (Rus))

ITSKOV, H. L.

ROZANOV, V.G.; SHIDAREV, I.M., redaktor; ITSKOV, A.I.; ORLOVA, V.V.,
tekhnicheskiy redaktor.

[The DT-54 tractor] Traktor DT-54. Moskva, Gos. izd-vo selkhoz.
lit-ry, 1952. 267 p. (Uchebniki i uchebnye posobiia dlia pod-
gotovki sel'skokhoziaistvennykh kadrov massovoi kvalifikatsii)
[Microfilm]   (MLRA 7:12)
        (Tractors)

ITSKOV, L.Ya.

Vibrating bunkers with an electromagnetic drive. Standartizatsiia
27 no.9:12-13 S '63.   (MIRA 16:10)

GERASIMENKO, I.I.; LIBIZOV, N.I.; NIKOL'SKAYA, B.S.; SATSYPEROV, P.A.
[deceased]; ITSKOV, N.Ya., kandidat sel'skokhozyaystvennykh nauk,
redaktor; TUROVA, A.D., doktor meditsinskiy nauk, redaktor;
ZHUKOV, G.I., redaktor; BEL'CHIKOVA, Yu.S., tekhnicheskiy redaktor

[Indian datura (D. innoxia Mill] Durman indeiskii. Pod red. N.IA.
Itskova i A.D.Turovoi. Moskva, Gos. izd-vo med. lit-ry, 1953. 77 p.
[Microfilm]   (MIRA 7:10)
        (Datura)

ITSKOV, N.Ya

ITSKOV, N.Ya.

Plants that contribute to the public health. Med.prom. 11 no.10:
22-28 O '57.   (MIRA 11:1)
          (BOTANY, MEDICAL)

ITSKOV, N.Ya.

Medicinal plants of India. Med.prom. 12 no.11:57-59 N '58
(MIRA 11:12)

(INDIA—BOTANY, MEDICAL)

ITSKOV, N.Ya.

Cultivation of principal medicinal plants. Trudy Bot.inst.Ser.6
no.7:275-279 .'59.   (MIRA 13:4)

1. Vsesoyuznyy institut lekarstvennykh i aromaticheskikh
rasteniy (VILAR), Moskva.
                (BOTANY, MEDICAL)

ITSKOV, N.Ya.; KIBAL'CHICH, P.N.

Most important medicinal plants in the scientific and popular medicine of India. Biul.glav.bot.sada no.43:88-93 '61. (MIRA 15:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut lekarstvennykh i aromaticheskikh rasteniy.
(INDIA--BOTANY, MEDICAL)

ITSKOV, P.I., kandidat meditsinskikh nauk

Significance of the circulation factor in the genesis of some forms of subfebrile condition. Terap.arkh. 28 no.3:59-66 '56.

1. Iz kafedry propedevtiki vnutrennikh bolezney (nach. chlen-korrespondent AMN SSSR prof. N.N.Savitskiy) Voyenno-meditsinskoy ordena Lenina akademii imeni S.M.Kirova.
          (FEVER
              subfebrile, circ. factor in genesis)
          (BLOOD CIRCULATION
              circ. factor in genesis of subfebrile fever)

ITSKOV, P.I., kand.med.nauk

Role of the functional state of the small peripheral vessels in
the development of prolonged subfebrility and methods for its
determination. Terap.arkh. 29 no.2:51-56 '57.   (MIRA 11:1)

1. Iz kafedry propedevtiki vnutrennikh bolezney (nach. - chlen-
korrespondent AMN SSSR prof. N.N.Savitskiy) Voyenno-meditsinskoy
ordena Lenina akademii imeni S.M.Kirova.
          (BLOOD VESSELS, physiology,
               small peripheral vessels in physiol. hypothermia (Rus))
          (BODY TEMPERATURE,
               hypothermia, role of small peripheral blood vessels
               (Rus))

1823. MINUTE BLOOD VOLUME IN PATIENTS WITH PROLONGED SUBFEBRILE
    TEMPERATURE OF UNKNOWN AETIOLOGY (Russian text) - Itskov
    P.I. - TER.ARKH. 1957, 29/11 (48-54) Tables 3
A study is made of some haemodynamic indices in 40 subjects which might indicate
the pathogenesis of prolonged subfebrile states of unknown origin. (a) The minute
volume was evaluated by Grolman's method using acetylene, or by Bremzer and
Ranke's method; the calculation was done by Savitsky's formula. In the majority
of the cases a 15%, 50% and even 100% increase was found. (b) The cardiac index
(ratio between the minute volume and 1 sq. m. of body surface) was likewise in-
creased in most patients. (c) The difference in oxygen between the arterial and
venous blood was slight (consequently, the O_2 requirements of the tissues were not
increased). (d) The basal metabolism was normal. (d) In the majority of patients a
peripheral vasodilatation and functional disturbances of the capillaries were en-
countered. (e) The endogenous temperature was normal. The conclusion of these
studies is that these subfebrile states are the result of peripheral circulation
disturbances, and not the consequence of an increased heat production in the body,
as believed by some authors. The increase in the minute volume is due to peri-
pheral circulation disturbances, which also explains some of the asymmetric tem-
peratures registered in these patients.   Goldenberg - Iassy

Chair Propadeutic Intravenous Diseases

Mil. Med. Acad. (near of Levin) in   *S. M. Kirov*

USSR/Human and Animal Physiology. Thermoregulation   T-3

Abs Jour : Ref Zhur - Biol., No 14, 1958, No 65055

Author   : Itskov P.I.
Inst   :
Title   : A Method for Measuring Gastruc Temperature

Orig Pub : Fiziol. zh. SSSR, 1957, 43, No 6, 586-588

Abstract : In order to measure gastric temperatures, use was made of a
           differential thermocouple which consists of two or several
           thermocouples connected in such a way that their e.n.f.'s
           were directed to meet each other. In order to make the
           entire arrangement more sensitive, six thermocouples were
           joined in series, with three in a group. It is more con-
           venient to employ a galvanometer with two windings on a
           carriage--one of the order of 100 ihms and the other of low-
           ohm winding (5 ohms). The compensatory e.m.f. was drawn
           from a potentiometer to the high-ohm winding and from the
           thermocouple to the low-ohm winding. Gastric temperature was
           measured in the basal metabolic state; a tube of the duodenal

Card   : 1/2

*Chair propedevtiki vnutrennikh boleznej,
Mil Med. OL Acad im S. M. Kirov)*

- Abs Jour : Ref Zhur - Biol., No 14, 1958, No 65055

type with the differential thermocouple was introduced into
a gasting subject to a length of 40 to 60 cm depending upon
the patient's size. It is important that the thermocouple
be approximately in the region of the gastric fundus. Data
obtained in examination of individuals with normal tempera-
tures showed that the gastric temperature did not exceed
$37.5°$, and more frequently was $37.4°$. The mean value of
fluctuations in auxillary temperature was $0.5°$. The gastric
temperature, according to the data of measurements made
over a period of 3 to 4 hours, was more stable than the
auxillary, oral and rectal temperatures. Measurement of the
gastric temperature with a thermoelectric apparatus with an
accuracy of $0.01°$ is a very convenient and precise method
of investigation--F.I. Mumiadze

Card   : 2/2

12

ITSKOV, P.I., dotsent, podpolkovnik meditskiskoy sluzhby

Subfebrile temperature in patients with neurocirculatory dystonia
with a hypertensive reaction. Voen.-med. zhur. no.5:19-22 My '60.
(MIRA 13:7)

(BODY TEMPERATURE)   (BLOOD—CIRCULATION, DISORDERS OF)

ITSKOV, P.I., polkovnik meditsinskoy sluzhby, dotsent

Prophylaxis and therapy of various forms of prolonged subfebrile
temperature. Voen.-med.zhur. no.1:38-41 Ja '61.   (MIRA 14:1)
(BODY TEMPERATURE)

ITSKOV, P.I., dotsent (Leningrad)

Subfebrile temperature in thyrotoxicosis. Probl.endok.i gorm.
7 no.4:73-77 '61.   (MIRA 14:8)

1. Iz kafedry popedevtiki vnutrennikh bolezney (nach. - deyst-
vitel'nyy chlen AMN SSSR zasluzhennyy deyatel' nauki prof. N.N.
Savitskiy) Voyenno-meditsinskoy ordena Lenina akademii imeni
S.M. Kirova.
          (THYROID GLAND--DISEASES) (BODY TEMPERATURE)

CHUMAK, Mariya Mikhaylovna; ITSKOV, Yakov Zakharovich; FUGINA, V.V., red.

[Work organization in a Central District Hospital; experience in the work of the Vizhnitsa Hospital in Chernovtsy Province] Organizatsiia raboty tsentral'noi raionnoi bol'nitsy; opyt raboty Vizhnitskoi bol'nitsy Chernovitskoi oblasti. Moskva, 1965. 191 p.
(MIRA 18:8)

ITSKOV, Ye.D., inzh.; MAKEYEV, A.V., inzh.; GUBERMAN, F.S., inzh.;
GURIN, M.A., kand. tekhn. nauk

The VP-25 vibratory-percussion machine for loosening frozen
grounds. Stroi. i dor. mash. 10 no.9:5-6 S '65.

(MIRA 18:10)

ITSKOV, Z.(Vol'sk)

Mixed repair crews. Stroi.mat. 3 no.2:19-21 F '57.   (MIRA 10:3)
(Vol'sk--Cement industries) (Machinery--Maintenance and repair)

ITSKOVA, A.I.

Hygienic evaluation of quality of water purified by various forms of ion-exchange resins. S. M. Drachev and A. I. Itskova (Acad. Med. Sci., Moscow). Gigiena i San. 1950, No. 2, 15-19.—Water desalted with ion-exchange resins (cationite KU-1, 888, and anionite EDE-10) does not contain any substances that may be harmful to warm-blooded organisms. The tests were run with white rats of both sexes.   G. M. Kototapad

ITSKOVA, A.I., kandidat meditsinskikh nauk

Basis for hygienic standards for wind protection measures. Gig. i
san. 21 no.9:11-18 S '56.   (MLRA 9:10)

1. Iz fiziologicheskoy laboratorii Instituta obshchey i kommunal'-
noy gigiyeny AMN SSSR.
        (CLIMATE, eff.
            cold wind eff., control in Russia)

Observations are reported on the effect of wind of high velocity at different atmos-
pheric temperatures on respiration, gas exchange and heat regulation in man. An
attempt is made to establish hygienic standards and certain recommendations are
put forward in connection with a series of individual and collective measures for
protection against wind.

ITSKOVA, A. I.,   RAFOPORT, K. A.,   SKVORTSOVA, N. N., DRACHEV, S. M.,
KONDROR, I. S.,   SOLTYSSKIY, YE. I.,   KOLTUNOVA, A. S.

"Hygienic Standardization of the Contnet of Mineral Salts in
the Drinking Water."

report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists
and Infectionists, 1959.

DRACHEV, S.M., prof.; ITSKOVA, A.I., kand.med.nauk; SOLOGUB, A.M.,
kand.med.nauk

Some hygienic problems of water supply in contitions of the
Far North. Gig.i san. 25 no.7:95-97 Jl '60.

1. Iz Instituta obshchey i kommunal'noy gigiyeny imeni A.N.   (MIRA 14:5)
Sysina AMN SSSR.
            (RUSSIA, NORTHERN—WATER SUPPLY)

ITSKOVA, A.I.; DRACHEV, S.M.

Hygienic requirements in organizing drinking water supply in the Far North. Probl. Sev. no.6:66-70 '62.

(MIRA 16:8)

1. Institut obshchey i kommunal'noy gigiyeny imeni A.N. Sysina AMN SSSR.

(RUSSIA, NORTHERN--WATER SUPPLY)

L   38697-66   EWT(m)/EWP(j)   RM

ACC NR: AP6021416

SOURCE CODE: UR/0413/66/000/011/0020/0020

INVENTOR: Mandel'baum, Ya. A.; Mel'nikov, N. N.; Itskova, A. L.

ORG: none

TITLE: Preparative method for higher dialkylphosphite. Class 12, No. 182151

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 11, 1966, 20

TOPIC TAGS: dialkylphosphite, methyl alcohol, higher alcohol

ABSTRACT: An Author Certificate has been issued for a preparative method of higher dialkylphosphites involving the treatment of phosphorus trichloride with a mixture of 1 mol methyl alcohol and 2 mols higher alcohol.   [BO]

SUB CODE: 07/ SUBM DATE: 14Jun62/

Card 1/1

UDC: 547.268'118.07

MANDEL'BAUM, Ya.A.; GRAPOV, A.F.; ITSKOVA, A.L.

Determination of phosphorus in organic compounds by photometry.
Zhur. anal. khim. 20 no.8:873-874 '65.
(MIRA 18:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh
sredstv zashchity rasteniy, Moskva.

ITsKOVA, G. P., Cand Med Sci — (diss) "Simple diaphyseal fractures of the lower leg bones and their treatment," Kharkov, 1960, 15 pp, 200 cop. (Kharkov State Medical Institute) (KL, 42-60, 116)

ITSKOVA, G.P.

Treatment of closed diaphyseal fracture of the leg bones. Ortop.
travm.i protez. 21 no.6:51-56 Je '60.
        (LEG—FRACTURE)   (MIRA 13:12)

Itskova, N. Ya.

IVANOV, S.L., doktor biologicheskikh nauk, professor; ITSKOVA, N.Ya.,
kandidat sel'sko-khozyaystvennykh nauk

[Squill] Morskoi luk. Pod red. N.IA. Itskova. Moskva, Gos. izd-vo
med. lit-ry, 1954. 52 p.
(Squill)   (NLRA 7:10)

MAKAROV, V.; MANDEL', O.; ITSKOVICH, A.; PANAYOTI, Yu.

Observation of eclipsing variable stars. Astron. tsir. no.187:16-17
D '57.
(MIRA 11:6)

1. Kollektiv nablyudateley Otdeleniya Vsesoyuznogo astronomo-
geodezicheskogo obshchestva, Odessa.
(Stars, Variable)

ITSKOVICH, A.

Productive capacity has been doubled. Grazhd.av. 18 no.8:2
Ag '61.
                    (Airplanes--Maintenance and repair)   (MIRA 14:8)

Subject	: USSR/Medicine	AID P - 2625
Card 1/2	Pub. 37 - 2/22	
Author	: Itskovich, A. A., Kand. Med. Sci., Honored Physician, RSFSR	
Title	: Investigation of the stimulation of the olfactory analyzer as a method for hygienic evaluation of air pollution	
Periodical	: Gig. i san., 8, 9-11, Ag 1955	
Abstract	: Describes tests performed for determining the sense of smell of 4 groups of subjects: workers and technicians of a coke plant, neighborhood residents, neighborhood schoolchildren, and workers of the Sanitation Institute not subjected to air pollution. The tests were made by the El'sberg-Levi instrument as modified by the Institute of Industrial Hygiene and Occupational Diseases, Acad. Med. Sci., USSR. It was demonstrated that the health-protecting zone of 1,000 m. established for coke plants is insufficient. Table. 5 refs., 1933 - 1952.	

Gig. i san., 8, 9-11, Ag 1955   AID P - 2625

Card 2/2   Pub. 37 - 2/22

Institution : Novosibirsk Scienfific Research Sanitation Institute

Submitted   : D 3, 1954

ITSKOVICH, A.A.; VINOGRADOVA, V.A.

Establishing permissible concentration of phenols in the
atmosphere. Okhr. prir. Sib. i Dal' Vost. no.1:139-145 '62.
(MIRA 17:5)

ITSKOVICH, A.A., inzh.

Met.ods of joining paneling with framework in aluminum and plastic
sandwich panels. Trudy TSNIISK no.24:374-396 '63.   (MIRA 17:1)