

LEV, Ye.S., kandidat tekhnicheskikh nauk; PETROV, B.A.; BRUK, M.V.

Detection of defects in metals in ship repairing yards. Rech.  
transp. 14 no. 7:27-29 J1 '55. (MIRA 8:10)  
(Metals--Defects) (Magnetic testing)

LEV, Ye. S.,

"Filtration of a Gas Through a Layer of Free-flowing Material (State of the Problem),  
p. 241, Aerodynamic and Heat Transfer Problems in Boiler and Furnace Processes; A  
Collection of Articles, Moscow, Gosenergoizdat, Moscow, 1958. 329 p.

Purpose: The book is intended for engineers and combustion specialists concerned  
with the design and operation of heating equipment and it is also for scientific  
workers and students of vtuzes.

"Aerodynamic Resistance of a Layer of Crushed Material, p. 298.

68270

SOV/81-59-10-35105

10.3000

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 10, p 253 (USSR)

AUTHOR: Lev, Ye.S.TITLE: The Aerodynamic Resistance of a Layer of Granulated Material

PERIODICAL: V sb.: Vopr. aerodinamiki i teploperedachi v kotel'no-topochn. protses-sakh. Moscow - Leningrad, Gosenergoizdat, 1958, pp 298-312

ABSTRACT: Experiments were carried out in a 600-mm high column with a cross section of 150 x 150 mm with blowing of air through layers of anthracite and cork particles as well as proso millet and mustard seeds with a size of 1.6 - 10.4 mm; the characteristic of the layers: height 40 - 200 mm, apparent specific gravity 327 - 1.580 kg/m<sup>3</sup>; porosity 0.396 - 0.70. In the experiments Re varied within the range of 2 - 2.400. It has been established that with an increase in the air speed beyond a certain value (resistance limit) the change of the layer resistance ceases to obey the quadrate law. The concept of the criterion of resistance has been introduced, at which the layer stability is perturbed:  $\gamma_{st} = (\Delta p_{lim} + h_{dyn. lim.}) / (H_{lay} \gamma_{sat})$ , where  $\Delta p_{lim}$  is the hydraulic resistance of the layer,  $h_{dyn. lim.}$  is the

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PHASE I BOOK EXPLOITATION

SOV/3994

Lev, Yevgeniy Semenovich, Candidate of Technical Sciences, and Marlen Vladimirovich Bruk, Engineer

Primeneniye radioaktivnykh izotopov dlya kontrolya kachestva svarnykh shvov stali malykh tolshchin (Using Radioactive Isotopes For Quality Control of Welded Joints Between Thin Steel Sheets) Leningrad, 1959. 40 p. (Series: Leningradskiy dom nauchno-tehnicheskoy propagandy. Obmen peredovym opytom. Seriya: Kontrol' kachestva produktsii, vyp. 12/13). 6,500 copies printed.

Sponsoring Agencies: Leningradskiy dom nauchno-tehnicheskoy propagandy; Obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy RSFSR.

Ed.: S. T. Tyumaneva, Engineer; Tech. Ed.: V. L. Gvirtz.

PURPOSE: This booklet is intended for metallurgists, skilled metalworkers, physicists, structural engineers, and other persons interested in the strength of materials.

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## Using Radioactive Isotopes (Cont.)

SOV/3994

**COVERAGE:** The booklet examines the technical possibility and economic expediency of using soft and medium gamma radiation in the quality control of welded joints between steel sheets 1-15 mm thick. Methods, materials, and technical data are reviewed. The data were compiled by personnel of the LIIVT Defectoscopy Laboratory to establish criteria for selecting suitable gamma radiation sources to replace less convenient (and often inaccessible) x-ray equipment. No personalities are mentioned. There are 16 figures, 19 tables, and 45 references: 40 Soviet, and 5 English.

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AVAILABLE: Library of Congress	

JA/rn/fal  
5/8/60

Card 3/3

GUSEV, Mikhail Nikolayevich, prepodavatel'; ZILIST, Petr Sigizmundovich, prepodavatel'; LEV, Yevgeniy Semenovich, prepodavatel'; LOPYREV, Nikolay Kirillovich, prepodavatel'; MARDENSKIY, Vladimir Prokop'yevich, prepodavatel'; NEMKOV, Petr Petrovich, prepodavatel'; NIKITIN, Gennadiy Mikhaylovich, prepodavatel'; SHELUCHENKO, V.M., dotsent, kand.tekhn.nauk, retsenzent; BELOV, N.M., inzh., retsenzent; GOLOVANOV, N.V., red.; VOLCHOK, K.M., tekhn.red.

[Technology of marine engineering and ship repairs] Tekhnologiya sudovogo mashinostroeniya i sudoremonta. Pod obshchei red. M.N. Guseva. Leningrad, Izd-vo "Rechnoi transport," Leningr.ctd-nis. Pt.2. [Technology of ship repairs] Tekhnologiya sudoremonta. (MIRA 13:4) 1960. 470 p.

1. Kafedra tekhnologii sudostroyeniya i sudoremonta Leningradskogo instituta vodnogo transporta (for Gusev, Zilist, Lev, Lopyrev, Mardenskiy, Nemkov, Nikitin).  
(Ships--Maintenance and repair)

S/032/60/026/011/034/035  
B015/B066

AUTHORS: Lev, Ye. S. and Bruk, M. V.

TITLE: Technical-economic Foundation of an Effective Application of Isotopes With Soft Radiation for the Quality Control of Weld Seams

PERIODICAL: Zavodskaya laboratoriya, 1960, Vol. 26, No. 11, pp. 1320-1322

TEXT: The authors calculated the efficiency and the prime cost in the quality control by means of gamma-radiography by using the following isotopes: Se<sup>75</sup>, Te<sup>127</sup>, Eu<sup>155</sup>, Tu<sup>170</sup>, Ir<sup>192</sup>, Co<sup>60</sup>, as well as X-rays. The efficiency depends on the time which is required for the preparative work and the control work itself (Table 3). The valuation of efficiency and the calculation of the costs of gamma-radiography with the above isotopes made by the authors, as well as practical work led to the conclusion that for thicknesses of 1 - 15 mm the best results are obtained with Eu<sup>155</sup>, that.

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Technical-economic Foundation of an  
Effective Application of Isotopes With Soft  
Radiation for the Quality Control of Weld Seams

S/032/60/026/011/034/035  
B015/B066

however, this isotope is still rather expensive. The isotopes  $Tu^{170}$  and  $Te^{127}$  have the disadvantage of a short lifetime, but may be recommended for measurements. The gamma-radiographs obtained with  $Se^{75}$  are less sensitive than those of the former isotopes.  $Ir^{192}$  may be used instead of  $Se^{75}$  and for thicknesses of 8-20 mm qualitatively good radiographs are obtained. Here, the sensitivity is 2.5 - 3% and the radiograph is 2.5 to 3.5 times less expensive than that with  $Se^{75}$ . For thicknesses of 1 - 5 mm the sensitivity obtained with  $Ir^{192}$  is too low and the radiation source has a comparatively short lifetime. The use of the isotopes according to Table 5 is recommended to obtain the maximum sensitivity with different thicknesses of the material. There are 5 tables and 1 Soviet reference. ✓

ASSOCIATION: Leningradskiy institut vodnogo transporta (Leningrad  
Institute of Water Transportation)

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Годовая производительность  
гаммаграфирования

S/032/60/026/011/034/035  
B015/B066

Изотопы	Количество снимков в год при контроле изделий толщиной				
	2 мм	3 мм	6 мм	8 мм	10 мм
Sc <sup>75</sup>	—	1840	1810	1720	1660
	—	3070	2840	2700	2520
Te <sup>127</sup>	1410	1290	1230	1000	—
	2000	1750	1500	1230	—
Eu <sup>154</sup>	1410	1290	1230	1000	—
	2000	1750	1500	1230	—
Tl <sup>170</sup>	1410	1290	1230	1000	—
	2000	1750	1500	1230	—
Ir <sup>192</sup>	—	1690	1660	1600	1530
	—	2640	2520	2400	2300
Co <sup>60</sup>	—	—	1400	1400	1380
	—	—	2060	1960	1900

Legend to Table 3 - Output per year in gamma-radiography, 1 = isotopes, 2 = number of radiographs taken per year in the control of articles of the thickness: (mm), 3 = the numerator contains the data for the work of one operator, the denominator those for two operators. Table 5 - Isotopes recommended, 1 = Metal thickness in mm, 2 = isotopes recommended, 3 = possible exchange, 4 = exchange less recommendable

Примечание. В числителе даны цифры при работе одного оператора, в знаменателе — при работе двух операторов.

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LEV, Yu., shturman

Determining the most probable position of the ship from  
three radio bearings taking into consideration the power  
of radio beacons and their distance from the ship. Mor.  
flot 24 no.2:22-23 F '64.  
(MIRA 18:12)

LEV, Ye. Ya.

**AUTHORS:** Mazurin, O. V., Pavlova, G. A.,  
Lev, Ye. Ya., Leko, Ye. K.

57-12-3/19

**TITLE:** An Investigation of Silicate Glasses with Electronic  
Conductivity (Silikatnyye stekla s elektronnoy provodimost'yu)

**PERIODICAL:** Zhurnal Tekhnicheskoy Fiziki, 1957, Vol. 27, Nr 12, pp. 2702  
-2703 (USSR)

**ABSTRACT:** In the investigations of alkali-free silicate glass conducted here special regard was given to the anomalously high electric conductivity of glass with iron oxides. The electric conductivity of such glass proved to be higher than that of analogous glass, which contained a corresponding amount of sodium oxide instead of iron oxide. The measurements were conducted with graphite electrodes according to the usual method (reference 7). The character of the conductivity was determined according to the "Tuband-method". Three glass samples, anode, a medium (control) and cathode samples were carefully ground to fit together and mounted between metal disks. A constant voltage was applied to the disks. A measured amount of current was passed through

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## An Investigation of Silicate Glasses with Electronic Conductivity.

57-12-3/19

the samples (at about 6000 C), which beforehand were weighed. A judgement can be given on the character of the conductivity by means of the change in weight. The results showed, that in the glass under investigation a practically pure electronic conductivity (experimental error  $1 \pm 2\%$ ) is met with, the magnitude of which is strongly dependent on the  $Fe_2O_3$  content and on the composition of the glass. It is shown, that although the glass sample no. 2 contained only 5% of  $Fe_2O_3$  it displayed a pure electron conductivity. From this it appears, that the lattice of amorphous boron-aluminium silicate represents no insurmountable obstacle for the electrons. (Glass sample number 2: 45 molar percent of  $SiO_2$ , 10 molar percent  $B_2O_3$ , 10 molar percent of  $Al_2O_3$ , 30 molar percent of  $CaO$ , 5 molar percent of  $Fe_2O_3$ ). It is conjectured, that probably, a partial or total electron conductivity is also characteristic for many silicate and borate glass types free from alkaline contents with a high resistance. There are 1 figure, 2 tables, and 12 references, 7 of which are Slavic.

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An Investigation of Silicate Glasses with Electronic  
Conductivity.

57-12-3/19

ASSOCIATION: Leningrad Institute of Technology imeni Lensovet  
(Leningradskiy tekhnologicheskii inst. im. Lensoveta).

SUBMITTED: April 24, 1957.

AVAILABLE: Library of Congress

Card 3/3

S/139/60/000/03/007/045

E140/E335  
16.1a.

**AUTHORS:** Mazurin, O.V. and Lev, Ie.Ia.

**TITLE:** The Influence of Alkali-metal Oxide Additions on the Electrical Properties of Alkali-free Glasses

**PERIODICAL:** Izvestiya vysshikh uchebnykh zavedeniy, Fizika, 1960, No 3, pp 43 - 51 (USSR)

**ABSTRACT:** This is a continuation of earlier work (Ref 1) - a study of alkali-free glasses - in which the effect of aluminium oxide on the electrical properties was investigated. It is important to know the effect of alkali-metal impurities in these glasses to estimate the required purity of the raw materials and the possibility of deliberate inclusions of alkali-metal oxide in the recipe to reduce the smelting temperature of the glass and improve its properties (mechanical, thermal, etc). A study of the literature (Refs 1-10) gives a basis for assuming a special form of interaction of lead silicates with alkali oxides leading to an increased electrical resistance.

Electrical resistance of the glasses studied was measured by the method described in an earlier paper (Ref 11).

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S/139/60/000/03/007/045

The Influence of Alkali-metal Oxide Additions<sup>E140/E335</sup> on the Electrical Properties of Alkali-free Glasses

It was found that borate glasses always have higher resistance than silicate, while borosilicates are intermediate. Introduction of aluminium into alkali-free glasses increases their resistance but the opposite effect occurs with borate glasses. A calcium-borate glass had the highest resistance, appreciably exceeding that of fused quartz. Up to about 5-8 mol.% the addition of alkali-metal oxides has practically no effect on the resistance, after which the resistance drops rapidly. It is assumed that at low concentrations the conduction mechanism remains that of alkali-free glass, while above the critical concentration the conduction mechanism is that of alkali-glass. There are 3 figures, 1 table and 20 references, 15 of which are Soviet and 5 English.

ASSOCIATION: Leningradskiy tekhnologicheskij institut imeni Lensovet (Leningrad Technological Institute imeni Lensovet) ✓

SUBMITTED: April 10, 1959  
Card2/2



20790

S/181/61/003/003/015/030  
B102/B205

26.2532

## AUTHORS:

Brach, B. Ya., Zhdanova, V. V., and Lev, Ye. Ya.

## TITLE:

Thermoelectric properties of the system HgSe - HgTe

## PERIODICAL:

Fizika tverdogo tela, v. 3, no. 3, 1961, 786-789

TEXT: The system HgSe - HgTe, which has very interesting thermoelectric properties, has so far been investigated very insufficiently, and the published data are contradictory because the system probably contained also free Hg. A very detailed study has now been made of the thermoelectric properties of very carefully prepared samples which contained no unreacted Hg any longer. Hg of the type P-1 (R-1) with a purity of 99.999%, Se with a purity of 99.999% produced by the factory "Krasnyy khimik", and bidistilled Te were used for the synthesis. The latter contained Al and Pb impurities which had been detected by spectrum analysis. The pure elements were fused in quartz ampoules (HgTe-660°C, HgSe-790°C). To obtain a complete reaction, the melts were kept at 500°C for 100 hr, after which no free Hg was found any longer. Specimens of a size of 0.8 - 0.9 cm<sup>2</sup> · 25 mm were subjected to a homogenizing heat treatment (200°C, 200 - 300 hours). Subsequently, they

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Thermoelectric properties ...

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S/181/61/003/003/015/030  
B102/B205

were subjected to X-ray and microstructural analyses. The electrical conductivity  $\sigma$ , the thermo-emf  $\alpha$ , and the Hall constant  $R$  of these specimens at room temperature were measured. Results: A study of the dependence of  $\sigma$  on the composition of the system has shown that  $\sigma$  has a broad maximum at a concentration of 50:50.  $\alpha$  was found to be a linear function of the concentration; it changes from  $-95 \mu\text{v}/^\circ\text{C}$  (HgSe) to  $-115 \mu\text{v}/^\circ\text{C}$  (HgTe). This low value of  $\alpha$  indicates either a nearly stoichiometric composition or degeneracy. A study of the deviation of the curve  $\alpha = f(\log n)$  from the theoretical one shows that there exists a partial degeneracy. Taking the latter into account, the authors calculated the carrier concentration ( $n$ ) from the Hall constant. Fig. 4 illustrates the dependence of carrier concentration and carrier mobility ( $u$ ) on the composition.  $u$  had been calculated from  $R$  and  $\sigma$ . Whereas  $n$  is almost equal for both pure HgSe and pure HgTe,  $u$  is 20,000 for pure HgSe, and 22,900  $\text{cm}^2/\text{v}\cdot\text{sec}$  for pure HgTe. The absence of a  $\lambda$ -point is indicative of the absence of a hyperstructure. Many specimens which had not been subjected to heat treatment, showed anomalously high values of  $u$  (at  $n \sim 3.1 - 3.9 \cdot 10^{17} \text{cm}^{-3}$ ): 28,000  $\text{cm}^2/\text{v}\cdot\text{sec}$  for 93% HgSe + 7% HgTe, 31,000  $\text{cm}^2/\text{v}\cdot\text{sec}$  for 80% HgSe + 20% HgTe, 32,000  $\text{cm}^2/\text{v}\cdot\text{sec}$  for 30% HgSe + 70% HgTe. Fig. 5 shows  $u = f(\log n)$  for specimens of different compositions.

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Thermoelectric properties ...

S/181/61/003/003/015/030  
B102/B205

The anomalous course of curves 2 and 5 can be ascribed either to a nearly stoichiometric composition or to the effect of impurities. It is known that the effective carrier masses for HgSe and HgTe are very small. The values calculated for different compositions (1) in mole% are listed in a table. The authors thank A. R. Regel' for his interest in the work, and L. S. Stil'bins and B. P. Mitrenin for discussions. Ye. I. Nikol'skaya is mentioned. A. I. Zaslavskiy and T. B. Zhukova carried out the X-ray structural analyses. There are 5 figures, 1 table, and 17 references: 10 Soviet-bloc and 7 non-Soviet-bloc.

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

SUBMITTED: July 8, 1960

X

Card 3/5

KOLOMOYETS, N.V.; LEV, Y<sup>o</sup>.Ya.; SYSOYEVA, L.M.

Nature of current carriers in GeTe. Fiz. tver. tela 5 no.10:  
2871-2876 0 '63. (MIRA 16:11)

1. Institut poluprovodnikov AN SSSR, Leningrad.

ACCESSION NR: AP4019827

8/0181/64/006/003/0706/0713

AUTHORS: Kolomojets, N. V.; Lev, Ye. Ya.; Sywcoysva, L. M.

TITLE: Electrical properties and a model of the valence band of germanium tellu-  
ride

SOURCE: Fizika tverdogo tela, v. 6, no. 3, 1964, 706-713

TOPIC TAGS: density state, semiconductor band structure, Fermi level, semiconduc-  
tor carrier, impurity concentration

ABSTRACT: The authors have noted anomalies in the concentration and temperature dependence of the basic electrical properties (thermoelectromotive force, Hall concentration, mobility, and electrical conductivity) of GeTe. On the basis of a single-band model, the anomalies may be associated with changes in effective mass with state and temperature. But the authors suggest a more likely model, reflecting the complex structure of the valence band. This model consists of two subzones within the band, displaced relative to each other, and having different density states. The scheme of this model is illustrated in Fig. 1 on the Enclosure. On the basis of this model it is easy to explain quantitatively the

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ACCESSION NR: APl,019827

anomalies indicated. The first segment, in which the electrical properties have normal dependence on state, corresponds to the Fermi level in subzone 1, when carriers of but a single kind participate in current transfer. The second segment corresponds to a position of the Fermi level when high-mobility holes are accompanied by low-mobility holes from subzone 2, which has a high density state. A change in Te content in this region is accompanied by a change in concentrations of high-mobility and low-mobility holes, and this is manifested in the anomalous dependence of electrical properties on state. Quantitative determinations of the basic parameters of the subzone appear reasonable. Orig. art. has: 6 figures and 6 formulas.

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

SUBMITTED: 29Jul63

DATE ACQ: 31Mar64

ENCL: 01

SUB CODE: EJ, 88

NO REF SOV: 001

OTHER: 003

Card 2/3

ACCESSION NR: APL019827

ENCLOSURE: 01

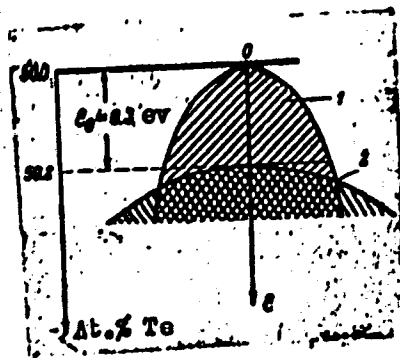


Fig. 1. Diagrammatic sketch of the valence band in germanium telluride.

Card 3/3

ANDREYEV, A.A.; SYBOYEN, L.M.; ISV, Ye.Ya.

Effect of high pressure on the electric properties of germanium  
telluride. Fiz. tver. tela 7 no.2:652-653 P '65.

(MIRA 18:8)

L. Institut poluprovodnikov AN SSSR, Leningrad.



L 2203-66 EWT(1)/EWT(m)/ETC/EWG(m)/T/EWP(t)/EWP(b)/EWA(h) LJP(c) RDW/JD/AT-  
 UR/01B1/65/007/007/2223/2226  
 ACCESSION NR: AP5017328

AUTHOR: Sysoyeva, L. M.; Lev, Ye. Ya.; Kolomojets, N. V. 7 44

TITLE: On the energy spectrum of the carriers in germanium telluride 20  
 13

SOURCE: Fizika tverdogo tela, v. 7, no. 7, 1965, 2223-2226 71 55

TOPIC TAGS: forbidden band, spectral energy distribution, electric conductivity, Hall effect, germanium compound, telluride

ABSTRACT: This is a continuation of earlier work by the authors on the electric properties of germanium telluride (FTT v. 6, 706, 1964). In the present investigation, both polycrystalline and single-crystal samples were studied, and the concentration interval was broadened from  $1.8 \times 10^{20}$  to  $1.8 \times 10^{21} \text{ cm}^{-3}$ . Plots were obtained for the Hall carrier density against the concentration of the introduced copper atoms, and of the thermal emf against the Hall carrier density. The fact that the electric properties exhibited a clear-cut dependence on the concentration has made it possible to calculate more accurately the parameters of the subbands at room temperature, namely the energy gap between the subbands  $\Delta E = (0.23 \pm 0.05) \text{ eV}$ , the effective mass of the heavy holes  $m_h^* = (4.0 \pm 0.5)m_0$ , and the effective mass of the light holes  $m_l^* = 1.15m_0$ . The temperature variations of the various electric parameters are discussed. The fact that the thermal emf decreases at

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ACCESSION NR: AP5017328

high temperatures while the electric and thermal conductivity increase indicates that carriers of opposite sign appear. The use of samples with lower carrier density has made it possible to determine more accurately the width of the forbidden band, namely  $0.27 \pm 0.03$  eV at absolute zero, for four concentrations in the interval  $1.8$  to  $6.3 \times 10^{20}$  cm<sup>-3</sup>. Orig. art. has: 2 figures and 2 formulas.

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

SUBMITTED: 01Dec64

ENCL: 00

SUB CODE: 88

NR REF BOV: 002

OTHER: 004

Card 2/2 DP

L 8164-66 EWT(1)/EWT(m)/ETC/ETG(m)/EWP(b)/EWP(t) IJP(c) RDW/JD  
ACCESSION NR: AP5019892 UR/0181/65/007/008/2558/2559

AUTHOR: Andreyev, A. A.; Sysoyeva, L. M.; Lev, Ye. Ya.

49  
66  
B

TITLE: Temperature dependence of the Hall effect and electric conductivity in germanium telluride

SOURCE: Fizika tverdogo tela, v. 7, no. 8, 1965, 2558-2559

TOPIC TAGS: germanium compound, telluride, electric conductivity, Hall effect, thermal emf, semiconductor carrier

21, 44, 55

ABSTRACT: To explain some anomalies observed in the behavior of the electric conductivity and thermal emf of germanium telluride, the authors measured the Hall coefficient in the interval from room temperature to 500C for three samples of GeTe with different carrier densities (2.5, 6, and  $11 \times 10^{20} \text{ cm}^{-3}$ ). The samples with  $11 \times 10^{20} \text{ cm}^{-3}$  was a single crystal. The measurements were made with alternating current and the measurement accuracy was ~3%. The results are shown in Figure 1 of the Enclosure. The sharp decrease in the Hall constant in the 300 - 400C region correlates with the phase transition in GeTe. Measurements of the temperature dependence of the electric conductivity increases upon melting and that the liquid has a positive temperature coefficient. This can be interpreted as a result of

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L 8164-66

ACCESSION NR: AP5019892

retention of the semiconductor properties in the liquid state. The change in the slope of the electric conductivity vs. temperature curve in the interval 350 -- 400C is interpreted as due to the appearance of carriers of the opposite sign. Orig. art. has: 2 figures.

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

SUBMITTED: 05Apr65

ENC: 01

SUB CODE: SS

NR REF SOV: 002

OTHER: 001

Card 2/3

L 8164-66  
ACCESSION NR: AP5019892

ENCLOSURE: 01

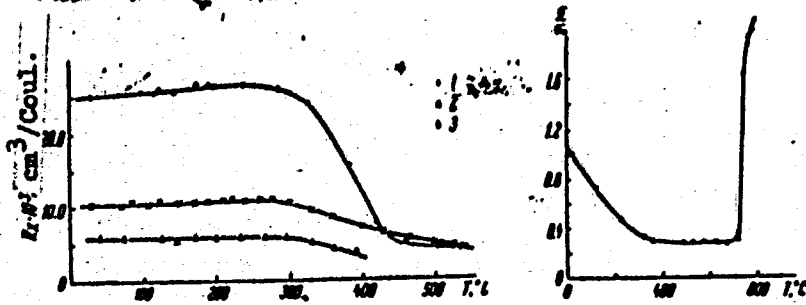


Fig. 1. Temperature dependence of Hall coefficient for samples with different carrier density (left) and for a sample with excess tellurium (right).

jw

Card 3/3

L 29973-66 EWT(m)/ETC(f)/EWP(t)/ETI IJP(c) RDW/JD

ACC NR: AP6012487

SOURCE CODE: UR/0181/66/008/004/1212/1216

AUTHORS: Sysoyeva, L. M.; Lev, Ye. Ya.; Kolomojets, N. V.

60  
B

ORG: Institute of Semiconductors, AN SSSR, Leningrad (Institut poluprovodnikov AN SSSR)

TITLE: Mechanism of carrier scattering in germanium telluride

27

SOURCE: Fizika tverdogo tela, 8, no. 4, 1966, 1212-1216

TOPIC TAGS: germanium compound, telluride, carrier scattering, hole mobility, carrier density, crystal defect, temperature dependence

ABSTRACT: Continuing their earlier work on this subject (FTT v. 7, 223, 1965 and v. 6, 706, 1964), the authors discuss the experimentally observed anomalous dependence of the carrier mobility in germanium telluride on the temperature and on the density, and conclude that although the mobilities of the light and heavy holes have the same temperature variation ( $\sim T^{-3/2}$ ), the difference in the effective masses of the two types of holes (by approximately one order of magnitude) gives rise to different temperature dependences of the mobilities and differences in the dependence of the mobility on the true carrier density. The anomalies are caused by the facts that at different densities the relative

Card 1/2

Card 2/2-10

ACC NR: AP6033552

SOURCE CODE: UR/0181/66/008/010/2925/2928

AUTHOR: Kolomojets, N. V.; Vinogradova, M. N.; Lev, Ye. Ya.; Sysoyeva, L. M.

ORG: Institute of Semiconductors, AN SSSR, Leningrad (Institut poluprovodnikov AN SSSR)

TITLE: Hall effect in semiconductors with two types of carrier

SOURCE: Fizika tverdogo tela, v. 8, no. 10, 1966, 2925-2928

TOPIC TAGS: Hall effect, semiconductor carrier, carrier density, temperature dependence, semiconductor band structure, *current carrier*

ABSTRACT: The purpose of the paper is to clarify the influence of the presence of two types of current carrier of the same polarity on the Hall coefficient when account is taken of the variation of the energy gap  $\Delta E$  with temperature, and to compare the calculated data with the experimental ones for p-type PbTe and for GeTe. The change in the Hall coefficient with decreasing fraction  $n_2$  of the heavier carriers (holes), due to the change in the temperature and simultaneous decrease in the gap  $\Delta E$  between the sub-bands is calculate for several carrier mobility ratios (5, 10, 20). The calculation shows that the Hall coefficient  $R_x$  should go through a maximum at a definite ratio  $n_2/n_1$ , amounting to 0.95 and 0.92 for GeTe and PbTe respectively.  $R_x$  increases with increasing temperature (corresponding to an increase in  $n_2/n_1$ ), in agreement with the experimental data, but at temperatures above 570K for GeTe and 400-450K for PbTe

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ACC NR: AP6033552

its experimental values begin to decrease, although theoretically it should reach a maximum at higher temperatures. The discrepancy is attributed to the appearance of carriers of opposite polarity, to a change in the overall carrier density due to the change in solubility of the dopin; metal, and to inaccuracies in the determination of the band parameters. Orig. art. has: 2 figures and 5 formulas.

SUB CODE: 20/ SUBM DATE: 15Feb66/ ORIG REF: 005/ OTH REF: 006

Card 2/2



ACC NR: AF6036782

(N)

SOURCE CODE: UR/0363/66/002/011/1925/1929

AUTHOR: Lov, Yo. Ya.; Sysoyeva, L. M. Kolomoyets, N. V.

ORG: Institute for Semiconductors AN SSSR (Institut poluprovodnikov AN SSSR)

TITLE: Effect of impurities on the concentration of current carriers and on the thermal resistance of the germanium telluride lattice

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 11, 1966, 1925-1929

TOPIC TAGS: germanium compound, telluride, current carrier, heat resistance, germanium semiconductor

ABSTRACT: The article reports the results of an investigation of density as a function of the composition and concentration of current carriers, and of the effect of additions of certain group I, III, and V elements on the concentration of current carriers and the thermal resistance of germanium telluride. The measurements of density were carried out in water and toluene on monocrystalline samples containing different amounts of excess tellurium, and which had a concentration of current carriers from  $2.0 \times 10^{20}$  to  $14.0 \times 10^{20} \text{ cm}^{-3}$ . The error in an individual measurement was  $\pm$  grams/cm<sup>2</sup>; to eliminate random errors, measurements were made on a series of samples with the same composition. The experimental results are given in a series

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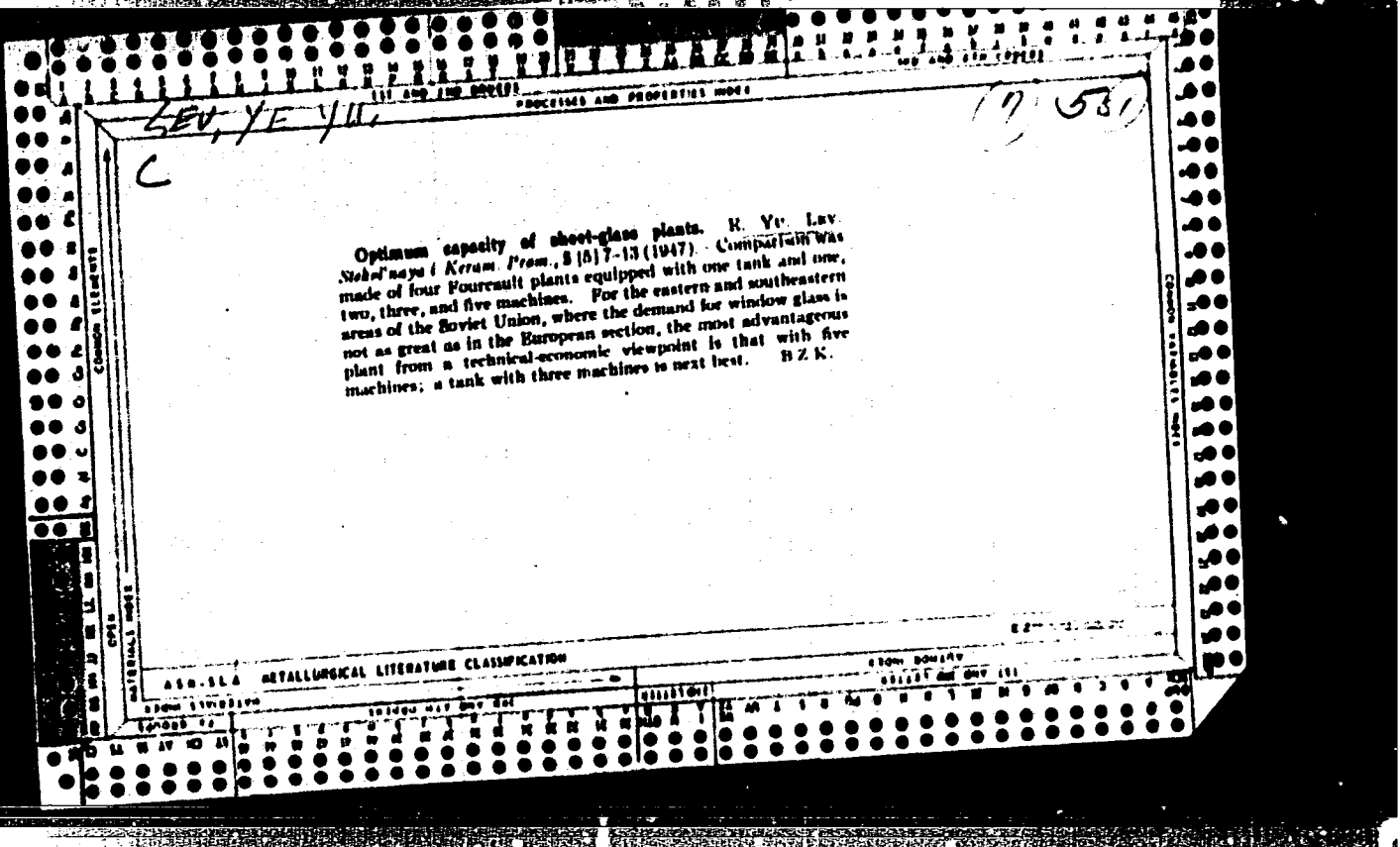
UDC: 546.289'241:541.12.03

ACC NR: AF6036782

of curves. On the basis of the data, the following conclusions were drawn: 1) based on measurements of the density of samples of known composition, it was found possible to determine directly the number of germanium vacancies and to determine the true concentration of current carriers; 2) it was established that in very dilute solutions the solution of impurities takes place only in the vacancies of the cation lattice; 3) the solubility of impurities in the vacancies is limited, and is always less than the concentration of vacancies; 4) in the presence of free vacancies, there is the possibility of solution of Cu, Sb, and Bi impurities in considerable amounts, by the displacement of germanium in the occupied places in the lattice; 4) the effect of impurities on the thermal resistance of the lattice can be explained from the point of view of the existence of a limited solubility of the impurities in the vacancies, and by the formation of new dissemination centers which subsequently replace the germanium. Orig. art. has: 4 figures.

SUB CODE: 11, 20/ SUBM DATE: 23Nov65/ ORIG REF: 004/ OTH REF: 003

Card 2/2



LEV, Ye.Yu.; SHNEYEROV, S.M.

Reorganizing the supply of raw materials is an urgent problem  
of the glass industry. Stek. 1 ker. 18 no. 3:1-3 Nr '61.  
(MIRA 14:5)

(Glass manufacture)

L 38604-65 EWT(1)/EWT(m)/T/ENP(t)/ENP(b)/EWA(c) TJP(n) JD

ACCESSION NR: AP5005321

S/0181/65/007/002/0652/0653

AUTHORS: Andreyev, A. A.; Sysoyeva, L. M.; Lev, Ye. Ya. 23/6TITLE: Effect of high pressure on the electric properties of germanium telluride 11SOURCE: Fizika tverdogo tela, v. 7, no. 2, 1965, 652-653 6TOPIC TAGS: germanium telluride, electric conductivity, thermal emf, Hall constant, effective mass, carrier mobility 21

ABSTRACT: The electric conductivity, the thermal emf, and the Hall constant were measured in single crystal germanium telluride at pressures up to  $10,000 \text{ kg/cm}^2$ . The carrier density in the investigated crystals fluctuated between  $9 \times 10^{20}$  and  $1.2 \times 10^{21} \text{ cm}^{-3}$ . The pressure dependence of the electric conductivity was measured both at room temperature and at higher temperatures up to  $200^\circ\text{C}$ , and the conductivity increased linearly with the pressure in the entire temperature interval. No temperature dependence of the effect was observed within an accuracy of 5%. The increase in electric conductivity per  $1000 \text{ kg/cm}^2$  was 2.5 and 3.0% for annealed and unannealed samples, respectively. The Hall constant was measured in only one sample, accurate to 10--15%, and remained independent of the pressure within this accuracy. The thermal emf decreased with increasing pressure, at approximately -1.0% per  $1000 \text{ kg/cm}^2$ . The results are interpreted as the consequence of the variation of the effective mass with pressure, using a theoretical procedure proposed by the authors earlier (FTT v. 6,

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L 38604-65

ACCESSION NR: AP5005321

705, 1964). The "effective mass of the state density" is shown to decrease at a rate of approximately -1.0% per 1000 kg, owing to the change in the gap between the conduction and valence bands. The authors also calculated the change in the variation of mobility with pressure from the electric-conductivity data, and the result (3.2% per 1000 kg/cm<sup>2</sup>) is in satisfactory agreement with the experimental value. "The authors thank A. A. Averkin and Ye. G. Strel'chenko for continuous interest in the work and for a discussion of the results." Orig. art. has: 1 figure and 3 formulas.

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

SUBMITTED: 04Jul64

ENCL: 00

SUB CODE: SS, EM

NR REF SOV: 002

OTHER: 000

Card

2/2 *llc*

LEV, Yu., shturman

Method of navigating with the ship's course directed toward a radio  
station. Mor. flot 24 no.9;18-19 S '64. (MIRA 18:5)

LEV, Yu., shturman

Some approximate methods of determining the ship's position.  
Mor. flot 25 no.3:19-20 Mr '65. (MIRA 18:4)



IEV, Yu., shturman

Some methods of navigating narrows. Mor. flot. 25 no. 12:  
18-19 D '65. (MIRA 18:12)

ACC NR: AP7000710 SOURCE CODE: UR/0308/66/000/012/0020/0021

AUTHOR: I. Yu. (Navigator)

ORG: none

TITLE: Selection of optimum methods for locating a ship's position by the use of radar

SOURCE: Morskoy flot, no. 12, 1966, 20-21

TOPIC TAGS: radar observation, radar navigation, shipborne radar, mean square error, error measurement

ABSTRACT: The accuracy in finding a ship's position with radar depends on the errors in direction-finding and in measuring distances. If the mean square error in direction-finding  $M_n$  exceeds the mean square error in measuring distances  $M_a$  ( $M_n > M_a$ ), the second method is more precise, and vice versa. The selection of optimum methods is illustrated by monograms for particular observed cases at given mean square errors  $M_n = \pm 1.0^\circ$  and  $M_d = \pm 0.25$  cable lengths [1 cable length = 608 feet]. The monograms are plotted from formulas based on equating the mean square errors in measuring distances to two orienting points and in direction-finding. The case of three orienting points is discussed. The proposed methods proved their high effectiveness. Orig. art. has: 3 figures and 2 formulas.

SUB CODE: 17/ SUBM DATE: none/  
Cord 1/1

UDC: 656.61.052:629.123:621.396.969.1

Bulk Data

LEV, YU. A.

~~YU LEV, A.~~

V. A. Breskin, A. YU LEV, D. P. Mil'man, "On compression of the frequency spectrum of binary messages by using a dynamic communication channel." Scientific Session Devoted to "Radio Day", May 1958, Trudrezarvinat, Moscow, 9 Sep. 58

Binary messages, i. e., messages containing two fixed levels (telegraphic, facsimile, wire photo, limited speech, etc.) are analyzed. Starting from the relations of C. SHANNON, the possible degree of spectrum compression of such messages is determined in principle when they are transmitted over communication channels.

The gain is computed which can be obtained, in principle, when transmitting binary messages by using a dynamic long-distance communication channel bank.

A method is proposed to increase the effectiveness of using communication channels to transmit binary messages with low probability of one of the states by transforming the frequency spectrum in the dynamic bank. The quantity of levels necessary to use this method is decreased at the cost of discarding certain slightly probable combinations of binary symbols and the possibility of start-stop transmitter-receiver synchronization is achieved.

LEV, Yu.D., starshiy leytenant

Using radio engineering equipment in navigation. Mor. sbor. 48  
no.1:60-63 Ja '65. (MIRA 18:4)

LEV, Yu.D., starshiy laytenant

Methods of finding the most probable position of a ship by several  
observations taking into account computation data. Mor. sber. 46 no.  
5:53-55 My 63. (MIRA 17:1)

LEV, Yu.D., starshiy leytenant

Calculation of hydrologic factors in using sonar in navigation. Mor.  
sbor. 47 no.1:64-67 Ja '64. (MIRA 18:7)

L 07399-67 FSS-2/EWT(1) WR

ACC NR: AP6018903

(N)

SOURCE CODE: UR/0375/66/000/002/0063/0065

AUTHOR: Lev, Yu. D. (Senior Lieutenant)

ORG: none

31  
R

TITLE: Methods of increasing the accuracy for determining the location of a ship by means of radar

SOURCE: Morskoy sbornik, no. 2, 1966, 63-65

TOPIC TAGS: radar tracking, ship, tracking radar

ABSTRACT: If the location of a ship S is determined with respect to two radar distances  $D_1$  and  $D_2$  up to orienting points A and B, the magnitude of the mean square error  $M_s$  at the obtained location can be calculated by the formula

$$M_s = \pm \frac{E\sqrt{2}}{\sin \theta}, \quad (1)$$

where E is the mean square error in measuring the distance and  $\theta$  is the angle of intersection of the position lines. Using the same orienting points A and B, the position of the ship can be determined as the most probable of two independent positions  $O_1$  and  $O_2$  obtained from bearings and distances up to the

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L 07399-67

ACC NR: AP6018903

orienting points. The most probable position in this case is found at segment  $O_1$  and  $O_2$  at point  $O$  which divides the segment into parts inversely proportional to the values of the squares of the mean square errors of positions  $O_1$  and  $O_2$ . In this case the mean square of positions  $O_1$  and  $O_2$  is calculated by the formula

$$M_{1(2)} = \pm \sqrt{E^2 + m^2 D_{1(2)}^2} \quad (2)$$

where  $m = m_b \text{ arc } 1^\circ$  ( $m_b$  is the mean square error in determining the radar bearing). The value of the mean square error of the most probable position of the ship  $O$  is determined from the expression

$$M_o = \pm \frac{M_1 M_2}{\sqrt{M_1^2 + M_2^2}} \quad (3)$$

This method of determining the position of a ship by means of radar is called the mean position method. It is assumed that  $D_1 = D$  and  $D_2 = SD$ , where  $D_1$  is the smaller of the two distances and  $S$  is a positive number. Then  $S = D_2/D_1$ .

If Eq. (3) is set up with this consideration, its right side is equated to that of Eq. (1), and the derived equation is solved relative to  $S$ , then

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$$S_{cal} = \sqrt{\frac{\frac{E^2}{m^2 D^2} (4 - \sin^2 \theta) + (2 - \sin^2 \theta)}{\sin^2 \theta \left(1 + \frac{m^2 D^2}{E^2}\right) - 2}} \quad (4)$$

where  $S_{cal}$  is the coefficient at which  $M_o = M_g$ . An analysis shows that if  $S = S_{cal}$ , then  $M_o = M_g$ , i.e., the accuracy of determining the position of the ship with respect to two distances and by the mean position method is identical;  $S > S_{cal}$ , then  $M_o > M_g$ , i.e., the position of the ship is more accurately determined by two distances;  $S < S_{cal}$ , then  $M_o < M_g$ , i.e., the position of the ship is more accurately determined by the mean position method. Orig. art. has: 7 formulas and 3 figures.

SUB CODE: 13,17/ SUBM DATE: none

Card 3/3 *la*

LEVA, Peter, inz.

Cemented metals and powder metallurgy; discussion. Stroj vyr 10 no.11:  
571 '62.

1. Kablo, n.p., Bratislava.

LEVA, R. Ya.

"The Synthesis of Olefinic and Paraffinic Hydrocarbons of forked structure. III. The reaction between the Hydrobromide of 2,4-Dimethylpentadiene and Alkyl-Magnesium Halides." by R. Ya. Leva and S. A. Egorova (p. 824)

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii) 1946, Volume 16, No. 6

RADUN, D.V., kand.tekhn.nauk; LEVACHEV, A.G., inzh.

Regulating the concentration of alkalies. Izv.vys.uob.ab.sav.energ.  
no.8:73-81 Ag '58. (MIRA 11:11)

1. Moskovskiy ordena Lenina energeticheskiy institut.  
(Alkalies)

25(5)

AUTHORS:

Radun, D. V., Candidate of Technical Sciences, Levachev, A. G., Chistyakov, V. S., Teper, M. Ye., Lurda, A. K.

06224

SOV/64-59-6-16/28

TITLE:

Automatic Control of the Work of Evaporating Apparatus for Electrolytic Lyes

PERIODICAL:

Khimicheskaya promyshlennost', 1959, Nr 6, pp 516 - 521 (USSR)

ABSTRACT:

An automatic control of the lye level in all evaporators, the removal of the lye and caustics by means of a pump with an automatic concentration control, and the salt separation by means of automatic centrifuges of the type "AG" permit continuous evaporation and the full automation of the evaporator. The lye concentration can be measured and controlled by determining the temperature of depression, i. e. the temperature difference between the boiling solution and the steam. The temperature of the boiling lye should be measured in an apparatus with forced circulation in the discharge flow, in apparatus with natural circulation and a suspension chamber between chamber and apparatus wall, and where the lye is

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Automatic Control of the Work of Evaporating Apparatus SOV/64-59-6-16/28  
for Electrolytic Lyes

06224

continuously pumped off from the pipes outside the apparatus. The temperature of the saturated steam should be best measured in special chambers (with adequate steam separation) contained in the evaporator units (Figs 3,4). In controlling the concentration it is recommended to adopt automatic control also for the pumping off of the pulp, which can be controlled by means of signals emitted by the concentration meters. An electric system (Fig 8) is recommended for the control of the evaporators. It makes use of electronic controls of the system VTI as well as of electromotive controls, or of a turning valve operated by the apparatus KDU-1. Inter alia, temperature measurements (Fig 2) obtained by means of an electronic bridge of the type EMP-209 are given. Mention is also made of a concentration meter operating on the basis of automatic electronic bridges of the type EMD-212, differential manometers of type DM-630, electronic controls VTI (type ER-III-54), pumps of types YaNZ 3/25 and AR-60, liquid level controls of type RUKTs-365, and pneumatic controls of the system AUS. Furthermore, reference is made to a scheme (Fig 6) for concentration control used in one of the plants. There are 9 figures and 1 table.

Card 2/2

RADUN, D.V. (S.S.S.R.); LEVACEV, A.G. [Levachev, A.G.] (S.S.S.R.); LOMAKIN,  
I.L. (S.S.S.R.)

Automation of an evaporation plant for electrolytic lys. Chem prum  
12 no.11:590-597 N '62.

RADUN, D.V., kand. tekhn. nauk; LEVACHEV, A.G., kand. tekhn. nauk; PETROGENKO,  
Yu.N., aspirant

Automation of the evaporator stations of chlorine plants. Trudy  
(MIRA 17:6)  
MEI no.48:31-43 '63.



KLIMOVA, T.K.; LEVACHEV, I.A.; STAROSTINA, A.V.; VITEZEVA, K.A.

Some data on tularemia in Archangel Province. Zhur. mikrobiol.,  
epid. i immun. 40 no.6:48-54 Je '63. (MIRA 17:6)

1. Iz Leningradskoy protivochumnoy portovoy i gorodskoy  
nablyudatel'noy stantsii.

LEVACHEV, M.M.; MISHUKOVA, Ye.A.; SIVKOVA, V.G.; SKULACHEV, V.P.

Energy metabolism in a pigeon under self-heating after hypothermia.  
Biokhimiia 30 no.4:864-874 J1-Ag '65. (MIRA 18:8)

1. Kafedra biokhimii zhovitnykh Gosudarstvennogo universiteta  
imeni M.V. Lomonosova, Moskva.

BERFZHNOY, A.I.; KULAGIN, P.G.; SVIRIDOV, V.A.; LEVCHENKOV, A.T.; TITARENKO, N.  
Kh.

Foam damper on an organosilicone base for clay muds. Barenie  
no.3:16-17 '64. (MIRA 18:5)

1. Ukrainskiy filial Vsesoyuznogo nauchno-issledovatel'skogo  
instituta prirodnogo gaza i trest "Poltavanaftegozrazvedka".

LEVCHENKOV, B. D.; Physician

"Preservation of Indications of the Point of Entry on the Skin and Clothing Under Conditions of External Influences in the Case of a Gunshot Wound."  
Thesis for degree of Cand. Medical Sci. Sub 31 Oct 49, Second Moscow State Medical Inst imeni I. V. Stalin.

Summary 82, 18 Dec 52, Dissertations Presented For Degrees in Science and Engineering in Moscow in 1949. From Vechernyaya Moskva, Jan-Dec 1949.

LEVCHENKOV, B.D.; ACHERKAN, N.N. (Moskva)

Fatal wound from an air gun. Sud.-med.ekspert. 2 no.2:47 Ap-  
Je '59. (MIRA 13:6)

(AIR GUNS)

PROZOROVSKIY, V.I.; LEVCHENKOV, B.D. "

Soviet forensic medicine in the seven-year plan. Sud.-med. ekspert.  
3 no.1:3-8 Ja-Mr '60. (MIRA 13:5)

1. Nauchno-issledovatel'skiy institut sudebnoy meditsiny (dir. -  
prof. V.I. Prozorovskiy) Ministerstva zdavookhraneniya SSSR.  
(MEDICAL JURISPRUDENCE)

PROZOROVSKIY, V.I.; ACHERKAN, N.N.; LEVCHENKOV, B.D.

Functional evaluation of the results of a forensic quantitative determination of alcohol in the blood of live persons and corpses.  
Sud.-med. ekspert. 4 no. 1:3-7 Ja-Mr '61. (MIRA 14:4)

1. Nauchno-issledovatel'skiy institut sudebnoy meditsiny (dir.-  
prof. V.I. Prozorovskiy) Ministerstva zdravookhraneniya SSSR.  
(CHEMISTRY, LEGAL) (ALCOHOL IN THE BODY)

LEVCHENKOV, B.D.

Review of A.K.Tumanov's book "Medicolegal examination of  
material evidence." Sud.med. ekspert. 6 no.3:58-59 JI-8'63.  
(MIRA 16:10)

(MEDICAL JURISPRUDENCE) (TUMANOV, A.K.)



PROZOROVSKIY, V.I.; LEVCHENKOV, B.D.

Medicolegal evaluation of intracranial hemorrhages. Sud.med.  
ekspert. '7 no.1:38-44 Ja-Mr'64 (MIRA 17:4)

1. Nauchno-issledovatel'skiy institut sudennoy meditsiny  
(dir. - prof. V.I.Prozorovskiy) Ministerstva zdravookhrane-  
niya SSSR.

PROZOROVSKIY, V.I.; LEVCHENKOV, B.D.

Once again about intracranial hemorrhages. Sud.-med.ekspert.  
7 no. 2:50-54 Ap-Je '64. (MIRA 17:7)

1. Nauchno-issledovatel'skiy institut sudebnoy meditsiny  
Ministerstva zdravookhraneniya SSSR, Moskva.

LEVCHENKOV, B.D.

Abstracts. Sud.-med. ekspert. 7 no. 2:57-61 Apr-Je '64.  
(MIRA 17:7)

LEVCHENKOV, R.D.

Medical jurisprudence in revolutionary Cuba; a conversation  
with Cuba's main medicolegal expert, Professor Jenaro Suarez,  
Director of the Institute of Medical Jurisprudence in Havana.  
Sud.-med. ekspert. 7 no.3:31-32 J1-S '6a.

(MIRA 17:10)

1. Nauchno-issledovatel'skiy institut sudobnoy meditsiny (dir. -  
prof. V.I. Prozorovskiy) Ministerstva zdaveokhraneniya SSSR.

LEVCHENKOV, B.D.

Abstracts. Sud.-med. ekspert. 7 no.3:59-62 J1-S '64.

(MIRA 17:10)

LEVCHENKOV, B.D.

Abstracts. Sud.-med. ekspert. 7 no.4:55-58 G-D 164  
(MIRA 18:1)

LEVCHENKOV, B.D.

Review of the transactions of the Chief Bureau of Medicolegal  
Expertise and the Department of Forensic Medicine of the Erivan  
Medical Institute. Sud.-med. ekspert. 8 no.2:45-46 Ap-Je '65.  
(MIRA 18:8)

ALEKSEYEV, G.P.; ANDON'YEV, V.S.; ARNGOL'D, A.V.; BASKIN, S.M.;  
BASHMAKOV, N.A.; BEREZIN, V.D.; BERMAN, V.A.; BIYANOV, T.F.;  
GORBACHEV, V.N.; GRECHKO, I.A.; GRINBUKH, G.S.; GROMOV, M.F.;  
GUSEV, A.I.; DEMENT'YEV, N.S.; DMITRIYEV, V.P.; DUL'KIN, V.Ya.;  
ZVANSKIY, M.I.; ZENKEVICH, D.K.; IVANOV, B.V.; INYAKIN, A.Ya.;  
ISAYENKO, P.I.; KIPRIYANOV, I.A.; KITASHOV, I.S.; KOZHEVNIKOV,  
N.N.; KORMYAGIN, B.V.; KROKHIN, S.A.; KUDOYAROV, L.I.;  
KUDRYAVTSEV, G.N.; LARIN, S.G.; LEBEDEV, V.P.; LEVCHENKOV,  
P.N.; LEMZIKOV, A.K.; LIPGART, B.K.; LOPAREV, A.T.; MALYGIN,  
G.F.; MILOVIDOVA, S.A.; MIRONOV, P.I.; MIKHAYLOV, B.V., kand.  
tekhn. nauk; MUSTAFIN, Kh.Sh., kand. tekhn. nauk; NAZIMOV, A.D.;  
NEFEDOV, D.Ye.; NIKIFOROV, I.V.; NIKULIN, I.A.; OKOROCHKOV, V.P.;  
PAVLENKO, I.M.; PODROBINNIK, G.M.; POLYAKOV, G.Ya.; PUTILIN, V.S.;  
RUDNIK, A.G.; RUMYANTSEV, Yu.S.; SAZONOV, N.N.; SAZONOV, N.F.;  
SAULIDI, I.P.; SDOBNIKOV, D.V.; SEMENOV, N.A.; SKRIPCHINSKIY, I.I.;  
SOKOLOV, N.F.; STEPANOV, P.P.; TARAKANOV, V.S.; TREGUBOV, A.I.;  
TRIGER, N.L.; TROITSKIY, A.D.; FOKIN, F.F.; TSAREV, B.F.; TSETSULIN,  
N.A.; CHUBOV, V.Ye., kand. tekhn. nauk; ENGEL', F.F.; YUROVSKIY,  
Ya.G.; YAKUBOVSKIY, B.Ya., prof.; YASTREBOV, M.P.; KAMZIN, I.V., prof.,  
glav. red.; MALYSHEV, N.A., zam. glav. red.; MEL'NIKOV, A.M., zam.  
glav. red.; RAZIN, N.V., zam. glav. red. i red. toma; VARPAKHOVICH,  
A.F., red.; PETROV, G.D., red.; SARKISOV, M.A., prof., red.;  
SARUKHANOV, G.L., red.; SEVAST'YANOV, V.I., red.; SMIRNOV, K.I.,  
red.; GOTMAN, T.P., red.; BUL'DYAYEV, N.A., tekhn. red.

(Continued on next card)



ALEKSEYEV, G.P.---(continued). Card 2.

[Volga Hydroelectric Power Station; a technical report on the design and construction of the Volga Hydroelectric Power Station (Lenin), 1950-1958] Volzhskaya gidroelektrostantsiya; tekhnicheskii otchet o proektirovanii i stroitel'stve Volzhskoi GES imeni V.I.Lenina, 1950-1958 gg. V dvukh tomakh. Moskva, Gosenergoizdat. Vol.2. [Organization and execution of construction and assembly work] Organizatsiia i proizvodstvo stroitel'no-montazhnykh rabot. Red. toma: N.V.Razin, A.V.Arnol'd, N.L. Triger. 1962. 591 p. (MIRA 16:2)

1. Deystvitel'nyy chlen Akademii stroitel'stva i arkhitektury SSSR (for Razin).

(Volga Hydroelectric Power Station (Lenin)--Design and construction)

TOPEL'BERG, D.G., kapitan dal'nego plavaniya; IKONNIKOV, D.N.,  
dots., reitsent; DOKUCHAYEV, A.N., kand. tekhn. nauk,  
dots., red.; LEUCHENIA, N.S., kand. fiz.-matem. nauk,  
dots., red.; KOLCHINSKII, M.L., red. izd-va; SHPAK, Ye.G.,  
tekhn. red.

[Electrical navigation instruments] Elektronavigatsionnye  
pribory. Moskva, Izd-vo "Morskoi transport," 1950. 428 p.  
(MIRA 16:8)

(Electricity on ships) (Nautical instruments)

DEMIDOVICH, V.N.; LEVCHENYA, N.S.; MAZIN, P.N.

Use of an electroluminescent matrix screen. Geofiz. prib. no.  
12:107-112 '62. (MIRA 17:5)

1. VMOLA.

LEVCHEV, B.

Prouchvane i proektirane na napoitelnite sistemi. Sofia, Zemizdat, 1953.

423 p. (Studying and planning irrigation systems, bibl., diags., tables)

So. East European Accessions List

Vol. 5, No. 9

September, 1956

LEVCHEV, B.

Utilizing the water of the Danube River for irrigation. p. 33

KHIDROTEKHNIKA I MELIORATSII, Sofia, Bulgara, Vol. 4, no. 2, 1959.

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The best possible utilization of the sewage water of Sofia.  
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KANAZIRSKI, Petur; DENCHEV, V.; LEVCHEVA, V.

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1. Iz Sanatoriuma Iskrets na Sofiiskia gradski naroden suvet. (Gl. lekar I. Popov)

(SURGERY OPERATIVE compl)  
(ANTICOAGULANTS ther)  
(THROMBOEMBOLISM prev & control)

LEVCHIK, A. P.

5

✓ Continuous-operating rectification columns for alcohol.  
B. I. Sokolov and A. P. Levchik (Alcohol Plant, P.  
Karkhnik). *Spirtovyi 1954*, 21, No. 4, 30-1 (1955).  
By periodically discarding the ether-aldehyde fraction in the  
continuous rectification of alc. (*ibid.* 19, No. 1, 33 (1953)),  
the EtOH could be improved to contain only 27 mg. esters/l.  
and 0.01% or less aldehydes and fusel oil.

W.I.  
①  
APR 1955



LEVCHIK A. P.

USTINNIKOV, B.A.; LEVCHIK, A.P.; NECHIPORENKO, A.A.

Wet grinding of grain in hammer mills. Spirt. prom. 24 no.1:34-35  
'58. (MIRA 11:3)

(Distilling industries)  
(Grain-milling machinery)

LEVCHIK, A.P.

Rational utilization of waste heat. Spirt. prom. 25 no.7:39-40  
'59. (MIRA 13:2)  
(Distilleries--Equipment and supplies) (Waste heat)

KRASNINOV, A.S., Kadi. tekhn. nauki SAMORODOV, Ye. P., Vaid. tekhn. nauki; SIDRENKO,  
I. A., Inst.; LEVCHIK, A. P., Inst.

Selecting the optimum parameters: equipment of continuous operation  
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ALEKSANDROV, Aleksandr Petrovich; KUZNETSOV, Aleksey Yakovlevich; MAYZEL',  
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red.

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Iz opyta montazha turboagregatov moshchnost'iu 150 Mvt. Mo-  
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TSULUKIDZE, Petr Platonovich; VAYNSHTEYN, G.M., inzh., red.; LEVCHIK,  
L.P., red.; LEBEDEVA, L.V., tekhn. red.

[Quality control of concrete work in construction of the arch  
dam of the Ladzhanuri Hydroelectric Power Station] Kontrol' ka-  
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(Ladzhanuri Hydroelectric Power Station—Concrete construction)

BELOV, Georgiy Vasil'yevich; RAYKH, I.Ya., inzh., red.; LEVCHIK, L.P.,  
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(Electric cutouts) (Electric lines--Overhead)



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MAR'YANSKIY, L.P., inzh., red.; LEVCHIK, L.P., red.;  
VELITSYN, B.L., tekhn. red.

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53 p. (MIRA 16:9)

(Electric welding)

GALOCHKIN, N.P.; VOL'FBERG, D.B., inzh., red.; LEVCHIK, L.P.,  
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BARON, Lazar' Izrailevich, prof., doktor tekhn. nauk; ROSSI, Boris Dominikovich; LEVCHIK, Stanislav Petrovich; IL'INSKAYA, G.M., tekhn. red,

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