SVISTOVA, G.V.

Comprehensive physico-geographic excursions with seventh-grade students. Uch. zap. MGPI no.159:12-16 '60. (MIRA 16:9)

L 10761-66 EWT(1) IJP(c) WW

ACC NR: AP5022748 SOURCE CODE: UR/0181/65/007/009/2871/2873

AUTHOR: Svistova, Ye. A.; Bekker, F. F.; Li Pin-tsung

ORG: Moscow State University im. M. V. Lomonosov (Moskovskiy gosudarstvennyy universitet)

TITLE: Transverse resistance and Hall effect in p-germanium in strong magnetic fields in the 78-300°K temperature range

SOURCE: Fizika tverdogo tela, v. 7, no. 9, 1965, 2871-2873

TOPIC TAGS: germanium semiconductor, semiconductor research, strong magnetic field, Hall effect

ABSTRACT: Magnetoresistance and the Hall effect are studied in gallium-doped germanium with ρ = 5 and 18 $\Omega \cdot$cm (at room temperature) in pulsed magnetic fields of up to 400,000 oersteds between 78 and 300°K. Copper wires 30 μ in diameter were soldered to diffused indium contacts on germanium specimens with dimensions of 5 × 1.5 × 1 mm. All contacts were ohmic. The magnetic field was directed along axis [111], and the current was perpendicular to this direction. The signals corresponding to changes in the resistance and Hall emf in the magnetic field were fed to the vertical deflection plates of an oscilloscope and the relationship between these effects and time was recorded. Curves are given for transverse magnetoresistance in specimens with re-

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ACC NR: AP5022748

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sistivity of 18 ohm·cm as a function of magnetic field strength at various temperatures and for mobility as a function of absolute temperature at various field strengths and resistivities. A linear relationship was observed between magnetoresistance and field strength in strong magnetic fields (>100 oersteds), which contradicts the saturation effect predicted in classical theory. Explanations for this are given in other papers (P. N. Argyres, *Phys. Rev.*, 104, 900, 1956; 109, 1115, 1958; C. Herring, *J. Appl. Phys.*, 31, 11, 1960). For mobility without a magnetic field, the authors found that $\mu_0 \sim T^{-2.3}$. The exponent was also close to -2.3 in a strong magnetic field at high temperatures. However, the exponent decreases with a reduction in temperature and at about 220°K, the law is $\mu_0 \sim T^{-1.5}$. This indicates carrier scattering by acoustic phonons alone without scattering by optical phonons. In conclusion, the authors are grateful for consultation and constant interest in the work to A. I. Shal'nikov, M. O. Kostryukova and V. L. Gurevich. Orig. art. has: 2 figures.

SUB CODE: 20/ SUBM DATE: 24Apr65/ ORIG REF: 004/ OTH REF: 003

Card 2/2

L 36247-66 EWT(d)/EWT(l)/EWT(m)/EWP(t)/ETI IJP(c) WW/JD

ACC NR: AP6023637 SOURCE CODE: UR/0386/66/004/001/0027/0032

AUTHOR: Brandt, N. B.; Svistova, Ye. A.; Tabiyeva, G. Kh.

ORG: Physics Department of the Moscow State University im. M. V. Lomonosov (Fizicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta)

TITLE: Magnetoresistance of bismuth in fields up to 450 kOe at helium temperatures

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye v. 4, no. 1, 1966, 27-32

TOPIC TAGS: bismuth, magnetoresistance, electric resistance, pulsed magnetic field, glavanomagnetic effect, carrier density, semiconductor carrier

ABSTRACT: Results are reported of an investigation of the electric resistance of single-crystal samples of bismuth in a transverse magnetic field of intensity up to 450 kOe at liquid-helium temperature, with primary purpose of obtaining information on the character of the carrier dispersion in bismuth. Earlier investigations at helium temperatures were made at lower field strengths (up to 100 kOe). The magnetic field was produced by a pulse method and the difficulty connected with the destruction of the sample by interaction between the eddy currents and the field was eliminated by superimposing a constant field on the pulsed one. Samples of different shapes and different thermal coefficients of resistivity were tested. In all cases the plots showed a monotonic increase of the magnetoresistance with the field, following a quadratic law up to 25 - 35 kOe, nearly linear from 25 - 35 to 200 kOe, followed by

Card 1/2

SVISTUKHINA, Z. V.

Skin - tuberculosis

Unusual case of giant molluscum contagiosum., Vest. oft., 30, no. 5, 1951.

9. MONTHLY LIST OF RUSSIAN ACCESSIONS, Library of Congress, March 1952. Uncl.

SVISTUKHINA, Z.V.

Cysteine in the treatment of cataracts. Uch.zap. GNII glaz. bol. no.8:96-100'63. (MIRA 16:9)

1. Glaznoye otdeleniye 1-y gorodskoy klinicheskoy bol'nitsy imeni N.I.Pirogova Moskvy.
(CATARACT) (ELECTROPHORESIS)
(CYSTEINE)

SVISTUN, A.N.

Stresses in the frame of a MAZ-525 motortruck. Sbor. nauch. rab. Bel. politekh. inst. no.60:141-146 '57. (MIRA 13:2)
(Motortrucks--Frames)

SVISTUN, A.S., Cand Med Sci -- (diss) "Effect of treatment of goiter on the basal creatine metabolism and the antitoxic function of the liver in children." Mukachevo, 1958, 15 pp (Kiev Order of Labor Red Banner Med Inst im Academician A.A.Bogomolets) 200 copies (KL, 42-58, 118)

SVISTUN, A.S., kand.med.nauk (Mukachevo)

Prevention of goiter among schoolchildren of Mukachevo. Vrach. delo no.11:149 N '61. (MIRA 14:11)

1. Zakarpatskiy nauchno-issledovatel'skiy institut okhrany materinstva i detstva.

(MUKACHEVO—GOITER)

SVISTUN, T.

SILAKOVA, G.; SVISTUN, T.

Conference on the Problem of Hypothermy. Ukr.biokhim.zhur. 29 no.1: 124-125 '57. (MLRA 10:5)
(HYPOTHERMIA)

SVISTUN, T.I.

Secretion of bile into the duodenum during muscular activity involved in walking and running [with summary in English]. Fiziol.zhur. [Ukr] 3 no.4:54-59 Jl-Ag '57. (MLRA 10:9)

1. Institut fiziologii im. O.O.Bogomol'tsya AN URSR, laboratoriya fiziologii travlennya.
(BILE) (EXERCISE)

Svistun, T. I.

SILAKOVA, G.; SVISTUN, T. I.

In the Kiev branch of the Ukrainian Society of Physiologists, Biochemists, and Pharmacologists. Visnyk AN URSR 28 no.9:77-78 S '57. (MIRA 11:1)

(Ukraine--Learned institutions and societies)

SVISTUN, T.I.[Svystun, T.I.]; SILAKOVA, A.I. [Sylakova, A.I.]

In the Kiev division of the Ukrainian Society of Physiologists, Biochemists, and Pharmacologists. Fiziol.zhur. [Ukr.] 4 no.1:133-134 Ja-F '58. (MIRA 11:3)
(PHYSIOLOGY)

VOROB'YEV, A.M. [Vorobiov, A.M.], (deceased), MORGUN, Ye.G. [MORHUN, IE.H.]
SVISTUN, T.I. [Svystun, T.I.], SHOSTKOVSKAYA, I.V., [SHOSTAKIVS'KA, I.V.]

Secretory activity of the stomach and pancreas and gastric evacuation during excitation and inhibition of the cerebral cortex [with summary in English]. Fiziol.zhur. [Ukr] 4 no.4:435-441 Jl-Ag '58 (MIRA 11:10)

1. Institut fiziologii im. A.A. Bogomol'tsa AN USSR, laboratoriya fiziologii pishchevareniya.
(STOMACH)
(PANCREAS)
(CEREBRAL CORTEX)

MORGUN, Ye.G.; SAKUN, P.A.; SVISTUN, T.I.; STANETS, M.P.

Effect of gamma rays in small doses on the secretory and motor functions of the stomach in dogs [with summary in English]. Med.rad. 4 no.1:31-35 Ja '59. (MIRA 12:2)

1. Iz laboratorii biofiziki i laboratorii fiziologii pishchevareniya Instituta fiziologii imeni A.A. Bogomol'tsa AN USSR.

(COBALT, radioactive,
eff. of gastric secretion & motility (Rus))
(STOMACH, effect of radiations,
radiocobalt, on motility (Rus))
(GASTRIC JUICE,
secretion, eff. of radiocobalt (Rus))

SVISTUN, T.I. [Svystun, T.I.]

Secretory activity of the stomach in a moving animal. Fiziol. zhur.[Ukr.] 5 no.1:39-45 Ja-F '59. (MIRA 12:5)

1. Institut fiziologii im. A.A.Bogomol'tsa AN USSR, laboratoriya fiziologii pishchevareniya.
(STOMACH--SECRETIONS) (ANIMAL LOCOMOTION)

SVISTUN, T.I. [Svystun, T.I.]

External secretory function of the pancreas during animal locomotion. Fiziol.zhur. [Ukr.] 5 no.6:750-755 N-D '59. (MIRA 13:4)

1. Institut fiziologii imeni A.A. Bogomol'tsa Akademii nauk USSR, laboratoriya fiziologii pishchevareniya.
(PANCREAS) (EXERCISE)

SVISTUN, T.I. [Svystun, T.I.]

Periodic secretion in the small intestine during muscular activity of the animal. Fiziol. zhur. [Ukr.] 7 no.1:47-53 Ja-F '61.
(MIRA 14:1)

1. Laboratory of the Physiology of Digestion of the A.A.Bogomoletz Institute of Physiology of the Academy of Sciences of the Ukrainian S.S.S.R., Kiyev.

(INTESTINES—SECRETION) (EXERCISE)

SVISTUN, T.I.

In the Kiev branch of the Ukrainian Physiological Society.
Fiziol. zhur. [Ukr.] 7 no.3:437-438 My-Je '61. (MIRA 14:5)
(KIEV—PHYSIOLOGICAL SOCIETIES)

SVISTUN, T.I.

Secretory function of gastric glands under different conditions of muscular activity. Trach.delo no.3:138-140 Mr '63.
(MIRA 16:4)

1. Laboratoriya fiziologii pishchevareniya (rukovoditel' - prof. N.I.Putilin) Instituta fiziologii imeni A.A.Bogomol'tsa AN UkrSSR.

(STOMACH--SECRETIONS) (EXERCISE)

SVISTUN, T.I. [Svystun, T.I.]

Secretion of the gastric glands on a mixed diet during a period of muscle activity of various intensities. Fiziol. zhur. [Ukr.] 9 no.2:215-220 Mr-Ap '63. (MIRA 18:3)

1. Laboratoriya fiziologii pishchevareniya Instituta fiziologii im. A.A. Bogomol'tsa AN UkrSSR, Kiyev.

SVISTUN, V., elektrik.

Reconditioning battery plates. Avt.transp. 32 no.2:34 F '54. (MLRA 7:6)
(Automobiles--Batteries)

30(2) SOV/21-59-4-17/27

AUTHOR: Svistun, V.I.

TITLE: On a Find of an Anomalous Mammoth Skull

PERIODICAL: Dopovidi Akademii nauk Ukrains'koi RSR, 1959, Nr 4, pp 416-419 (USSR)

ABSTRACT: About 20 bones of a mammoth were found in the coarse-grained gravelly sands of the ravine alluvium of a sand pit, by M.T. Bilek, in 1957. Among the bones there was a mammoth skull, represented by the upper and the lower jaws and by a fragment of the occipital bone. The find site was 4x16 m, 8-10 m deep, located at the village of Tereshki, Skvirskiy rayon, Kiyevskaya oblast'. Professor I.G. Pidoplichko established the geological age of the bones as being of the Middle Holocene era. According to N.L. Korniyets, the mammoth might have died at an age of 40-50 years. The author examined the find site and the bones and in this article describes the geological structure

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On a Find of an Anomalous Mammoth Skull

of the find site and the features of the found bones. There are 4 photos.

ASSOCIATION: Institut zoologii AN UkrSSR (Institute of Zoology of the AS UkrSSR)

PRESENTED: By V.G. Kas'yanenko, Member of the AS UkrSSR

SUBMITTED: December 9, 1958

SVISTUN, V.I. [Svystun, V.I.]

Study of mammoth remains in the village of Taburishche, Kirovograd Province. Dop.AN UESR no.8:1111-1114 '60. (MIRA 13:9)

1. Institut zoologii AN USSR. Predstavleno akademikom AN USSR V.G. Kas'yanenko.
(Kirovograd Province--Mammals, Fossil)

SVISTUN, V.I. [Svystun, V.I.]

Diagnostic signs of skulls in the subspecies of the gigantic deer of the genus Megaloceros. Dop. AN URSR no.8:1085-1087 '65.
(MIRA 18:8)

1. Institut zoologii AN UkrSSR.

DANILOVA, Ye. I. [Danilova, IE. I.]; SVISTUN, V.I. [Svystun, V.I.]

Discovery of fossil human bones in allyvial deposits near the Dneprodzerzhinsk Hydroelectric Power Station. Dop.AN URSR no.5:669-673 '61. (MIRA 14:6)

1. Institut zoologii AN USSR. Predstavleno akademikom AN USSR V. G. Kas'yanenko [Kas'ianenko, V.H.].
(Romankovo (Dnepropetrovsk Province)—Man, Prehistoric)

SVISTUN, V.I. [Svystun, V.I.]

Age-related variability of horns in the giant deer Megaloceros giganteus ruffi Nehr. Dop. AN URSR no.12:1634-1638 '61. (MIRA 16:11)

1. Institut zoologii AN UkrSSR. Predstavleno akademikom AN UkrSSR A.P. Markevichem [Markevych, O.P.].

SVISTUN, V.I. [Svystun, V.I.]; DIDKOVSKIY, V.Ya. [Didkovs'kyi, V.IA.]

New find of Dinotherium remains in the Ukraine. Dop. AN URSR no. 12:1635-1637 '64. (MIRA 18:1)

1. Institut zoologii AN UkrSSR. Predstavleno akademikom AN UkrSSR V.G.Kas'yanenko [Kas'ianenko, V.H.].

SVISTUNENKO, A.I.

Intra-arterial infusion of therapeutic substances according to data from an all-Union survey. Khirurgiia 32 no.7:45-48 Jl '56. (MIRA 9:11)

1. Iz khirurgicheskogo otdeleniya Molodechnenskoy gorodskoy bol'nitsy (zav. A.I.Svistunenko, nauchnyy rukovoditel' - zav. kafedroy khirurgii Belorusskogo gosudarstvennogo instituta usovershenstvovaniya vrachey prof. A.M.Boldin)

(BONE DISEASES, ther.
procaine penicillin, intra-arterial admin.)
(PENICILLIN, ther. use
bone dis., intra-arterial admin.)

SVISTUNENKO, A. N., Cand Med Sci -- (diss) "Therapeutic Significance of the Intra-Arterial Administration of Antibiotics with Novocain in Acute Inflammatory Processes and Open Trauma of the Extremities." Rostov-on-Don, 1957. 20 pp (Rostov-on-Don State Med Inst), 200 copies (KL, 50-57, 120)

SVISTUNENKO, V. F.

"Vesuvianites from the Dzhamzkoye Deposit," Dok. AN, 68, No. 2, 1949. Mbr. Kiev State Univ. im. T. G. Shevchenko,-c1949-

SVISTUNOV, A

NIKISHIN, T. (Toguchin, Novosibirskaya oblast'); LEVITSKIY, G.(L'vov); SVISTUNOV, A.(Chelyabinsk); DOL'NIKOV, I.(Vladimir).

They fulfill their duty. Pozh.delo 3 no.2:24 F '57. (MIRA 10:4)

(Fire prevention)

SVISTUNOV, A.; GRINEV, A. (Chelyabinsk)

Watch team became outstanding. Pozh.delo 4 no.12:11 D '58.
(MIRA 11:12)

(Fire departments)

PIKALOV, A. (Aktyubinsk); VORONKOV, A. (g.Dorogobuzh); GRIGORYAN, L.; GRINEV, A. (Chelyabinsk); SVISTUNOV, A. (Chelyabinsk)

On the fighting stand. Pozh.delo 5 no.7:27 Jy '59. (MIRA 12:9)

1. Starshiy inspektor Upravleniya pozharnoy okhrany Armenii (for Grigoryan).

(Firemen)

KHEYFETS, L.; PETRICHENKO, S.; GOGIN, N.; SVISTUNOV, A. (Chelyabinsk)

Readers letters. Pozh.delo 5 no.11:31-32 N '59. (MIRA 13:4)

1. Nachal'nik Otdela gosudarstvennogo pozharnogo nadzora Upravleniya pozharnoy okhrany Saratovskogo oblispolkoma (for Kheyfets). 2. Starshiy rayonnyy pozharnyy inspektor, selo Mlinovo, Rovenskaya oblast' (for Petrichenko). 3. Nachal'nik Leningradskoy pozharno-tekhnicheskoy vystavki (for Gogin).
(Fire prevention) (Fire extinction)

SVISTUNOV, A.

Fire prevention in factories is a public responsibility.
Pozh. delo 7 no. 2:9-10 F '61. (MIRA 14:2)
(Factories--Fires and fire prevention)

SVISTUNOV, A. (Chelyabinsk)

Competition is the basis of progress. Pozh.delo 8 no.5:15 My '62. (MIRA 15:5)

(Chelyabinsk Province—Fire departments)

SVISTUNOV,A.

...in order to fight with fires. Voen. znan. 40 no.12:25 D '62 (MIRA 18:1)

1. Nachal'nik shtaba protivopozharnoy sluzhby grazhdanskoy oborony, Chelyabinsk.

SVISTUNOV, A. M.

4089 SVISTUNOV, A. M.

Sbornye kleenye nesushchie konstruktsii pokrytiy promyshlennykh i sel'skokhozyaystvennyu zdaniy iz shpengel'nyu sistem. Kiyev, 1954, 16 s. 20 sm. (M-vo vyssh. obrazovaniya SSSR. Kiyevskiy ihzh. - stroit. in-t). 110 ekz. B. ts. - (54-56924)

SVISTUNOV, A. M.

"Prefabricated, Glued Supporting Structures for Roofs of Industrial and Agricultural Buildings Consisting of Sprengel Systems." Cand Tech Sci, Kiev Construction Engineering Inst, Min Higher Education USSR, Kiev, 1954. (KL, No 3, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)

SO: [illegible] No. 556, 24 Jun 55

SVISTUNOV, A. M.

OPEN-HEARTH FURNACES

c/1963

1964

SVISTUNOV, G.A., inzh.

Unit for feeding bitumen onto roofs. Stroi. i dor. mash. 8 no.11:28-29 N '63. (MIRA 17:1)

SVISTUNOV, G., inzh.

Methods for working frozen ground. Na stroi. Mosk. 2 no.12: 7-9 D '59 (MIRA 13:3)
(Frozen ground) (Earthmoving machinery)

SVISTUNOV, G.A.; POKONOV, N.Z.

Use of remote control in boring. Energ.biul. no.7:28-32 Jl '53. (MLRA 6:7)

(Remote control) (Petroleum--Well boring)

SVISTUNOV, G.A., inzh.

Mechanized working of frozen ground. Gor.khoz.Mosk. 33 no.11:23-26 N '59. (MIRA 13:2)
(Frozen ground) (Earthmoving machinery)

SVISTUNOV, G.A., inzh.

Industrial methods for making construction elements in vertical NIAT molds. Stroi. i dor. mashinostr. 5 no.6:28-31 Je '60. (MIRA 13:7)

(Concrete slabs)

SVISTUNOV, G.A., inzh.; CHEKALIN, Yu.G., inzh.

Butt welding of reinforcement by means of friction. Stroi. i dor. mashinostr. 5 no.8:33-34 Ag '60. (MIRA 13:8)
(Electric welding) (Reinforced concrete)

SVISTUNOV, G.A., inzh.; CHESKALIN, Yu.G.

Pneumatic wrench of a new type. Mont.i spets.rab.v stroi. 22 no.8:30 Ag '60. (MIRA 13:8)

1. Spetsial'noye konstruktorskoye byuro Mosstroya, i VZISI.
(Wrenches)

SVISTUNOV, G.A., inzh.; MANUKYAN, M.M., inzh.; POLUHNEVA, V.I., inzh., red.

[Heating frozen ground with devices operating on diesel fuel] Otogrev merzlovo grunta ustanovkami na dizel'nom toplive; opyt organizatsii Glavmosstroia. Moskva, Gos.izd-vo lit-ry po stroit., arkhit. i stroit. materialam, 1961. 16 p. (MIRA 14:12)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut organizatsii, mekhanizatsii i tekhnicheskoy pomoshchi stroitel'stvu. Byuro tekhnicheskoy informatsii. 2. Glavnyy nauchnyy konsul'tant po mekhanizatsii i energorabotam v stroitel'stve Moskovskoy vystavki novoy stroitel'noy tekhniki 1960 g. Vystavki dostizheniy narodnogo khozyaystva SSSR (for Svistunov). 3. Rukovoditel' gruppy Spetsial'nogo konstruktorskogo byuro "Mosstroy" (for Manukyan).
(Frozen ground)

SVISTUNOV, G.A., inzh.; SADOVSKIY, L.A., inzh.

New machines. Stroi i dor. mash. 8 no.12:27-29 D'63 (MIRA 17:7)

SVISTUNOV, G.A.

New road machinery. Avt. dor. 27 no.9:30-31 S '64. (MIRA 17:11)

SVISTUNOV, G.A., inzh.

Machine tool for purifying ruberoid. Mekh. stroi. 20 no.10:20 O. '63. (MIRA 16:10)

SVISTUNOV, G.A., inzh.; CHERKASOVA, V.P.

Cutting and drilling concrete and reinforced concrete. Stroi. i dor. mash. 10 no.8:25-28 Ag '65. (MIRA 18:9)

SVISTUNOV, G.A., inzh.

New transformer substations for the power supply of construction sites. Elek. sta. 36 no.10:82 O '65. (MIRA 18:10)

SVISTUNOV, I. A.

"Generalization of the Experience Gained in the Forced Execution of Horizontal Workings in the Copper Pyrite Mines of the Urals." Cand Tech Sci, Sverdlovsk Mining Inst imeni V. V. Vakhrushev, Min Higher Education USSR, Sverdlovsk, 1954. (KL, No 5, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Instiutions (12)
SO: Sum. No. 556, 24 Jun 55

SVISTUNOV, I. A.

6305. Svistunov, I. A. Obobshcheniye opyta forsirovannogo provedenniya gorizontal'nykh vyrabotok na medno-kolchedannykh rudnnkakh urala Sverdlovsk, 1954. 16 s. s graf; 1 l. graf. 21sm. (M-vo Vyssh. obrazovaniya SSSR. Sverdl. gornyy in-t im. v. v. vakhrusheva). 100 ekz. B. Ts. - /54-58163/

SO: Knizhamya Letopis' 1, 1955

SVISTUNOV, I.B.

Effect of peripheral inflammatory processes on monosynaptic reflexes. Trudy Inst.norm.i pat.fiziol. AMN SSSR 7:79-80 '64. (MIRA 18:6)

1. Laboratoriya eksperimental'noy patologii nervnoy sistemy (zav. - prof. S.I.Frankshteyn) Instituta normal'noy i patologicheskoy fiziologii AMN SSSR.

L 08277-67 - EWT(1) SCTB DD/GD

ACC NR: AT6036474 SOURCE CODE: UR/0000/66/000/000/0025/0026

AUTHOR: Altukhov, G. V.; Yegorov, A. D.; Polyakova, A. P.; Svistunov, I. B.; Skuratova, S. A.

ORG: none

TITLE: Quantitative evaluation of changes in the latent period of conditioned motor reflexes as a function of the number of stimuli and the intervals between them

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 25-26

TOPIC TAGS: conditioned reflex, space physiology, human physiology, behavior pattern

ABSTRACT: Quantitative evaluation of the length of the latent period in human conditioned motor reflexes was made using different light and sound stimuli with intervals of 0.5, 2.5, 5, and 10 sec between them. Series of stimuli with equal or different probabilities of provoking a reaction were used. Tests were conducted on an "Emotsiya" apparatus. Twelve subjects, men and women aged 20—35 yrs, were used in 320 experiments. Results showed that increase in the number of stimuli

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leads to increase in the average length of the latent period, with stimuli of equal or different probability. This statistically reliable increase is described by the equation of the second order parabola:

a) stimuli of equal probability--

$$t_{lp} = 0{,}2136 + 0{,}1832\ x - 0{,}0173\ x^2;$$

b) stimuli of different probability --

$$t_{lp} = 0{,}2525 + 0{,}1545\ x - 0{,}0140\ x^2,$$

where t_{lp} is the length of the latent period, and x is the number of stimuli. The length of the latent period also changed depending on the intervals between stimuli. The shorter the interval, the shorter the length of the latent period (on the average). This relationship is expressed by a linear equation:

$$t_{ep} = 0{,}4053 + 0{,}0116\ z,$$

where z is the length of the interval between stimuli. [W. A. No. 22; ATD Report 66-116]

SUB CODE: 06,05 / SUBM DATE: 00May66

Card 2/2 vmb

SVISTUNOV I. M.

4505. RAMONOV. A. N. Ratsionalizatsiya protesson kovki. (opyt kuznetsov leningr. Korovskogo zavoda). L., 1954. 16S. S chert. 21 sm. (Usesoyaz o-vo po rasprostraneniyu prohit i mauch faniy. Lenigr. Dom nauch tekhn progagendy. Lenigr. Oto-niye usespyaz. nauch. inzh. teckhn. O-va mashinostroiteley. hom. kuznetsov n shtampovshchikov listok navatora. No. 28 (267). 3.800 EKZ. 50K. --Sost. ukazany v kontse terksta. -- (S4=15076zh)

SO: Knizhaya Letopis, Vol. 1, 1955

SVISTUNOV, Ivan Mikhaylovich, kuznets ; YEMEL'YANOVA, Ye.V., red.; RODCHENKO, N.I. tekhn.red.

[Honorable profession] Pochetnaia professiia. [Leningrad] Lenizdat, 1956. 62p (MIRA 11:9)
(Forging)

L 51510-65 EWT(1)/EWP(e)/EPA(e)-2/EWT(m)/EPF(c)/EWI(l)/EPR/EPA(w)-2/T/EEC(b)-2/EPA(bb)-2/EWP(b) Pab-10/Pr-4/Ps-4/Pt-7/Pi-4 IJP(c) WW/GG/WH

ACCESSION NR: AP5015315 UR/0266/65/000/009/0074/0074
531.717.11

AUTHOR: Svistunov, I. V.; Bondarenko, N. L. 73 B

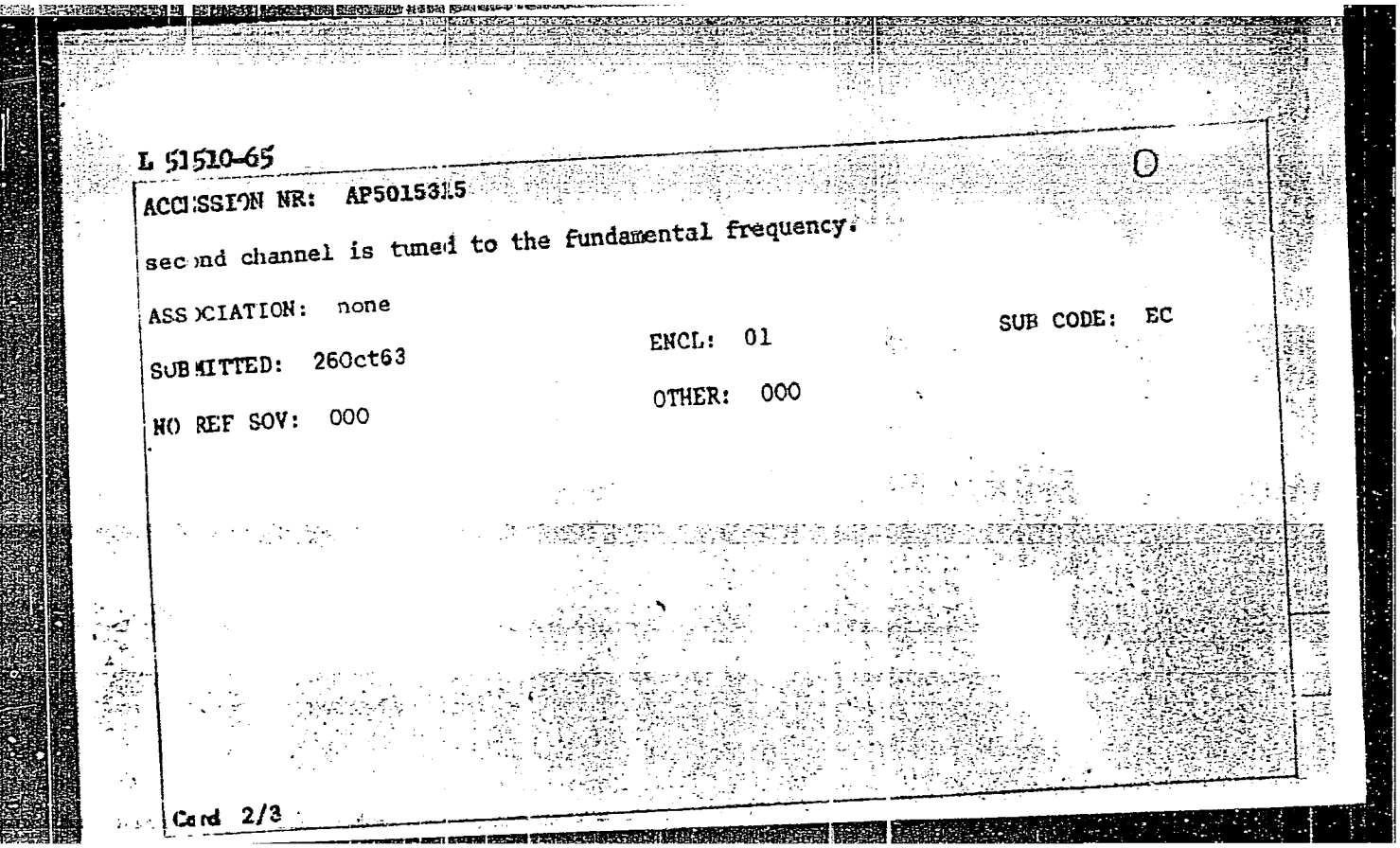
TITLE: An instrument for measuring the thickness of thin nonmagnetic and nonmetallic coatings on a ferromagnetic base. Class 42, No. 170695

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 9, 1965, 74

TOPIC TAGS: electronic measuring device, nonmetallic material, thin film, thickness gauge

ABSTRACT: This Author's Certificate introduces an instrument for measuring the thickness of thin nonmagnetic and nonmetallic coatings on a ferromagnetic base. The device contains an oscillator, measuring and compensation bridges, a resonance amplifier, a differential stage, two detectors, a summation unit and a meter. The effect of changes in permeability of the base on the accuracy of measurements is eliminated by connecting the measuring bridge with inductive pickups and balancing elements to the inputs of a two channel resonance amplifier. The first channel of the amplifier is tuned to the third harmonic of the oscillator frequency, and the

Card 1/3



L 51510-65

ACCESSION NR: AP5015315

second channel is tuned to the fundamental frequency.

ASSOCIATION: none

SUBMITTED: 26Oct63 ENCL: 01 SUB CODE: EC

NO REF SOV: 000 OTHER: 000

Card 2/3

L 51510-65

ACCESSION NR: AP5015315 ENCLOSURE: 01

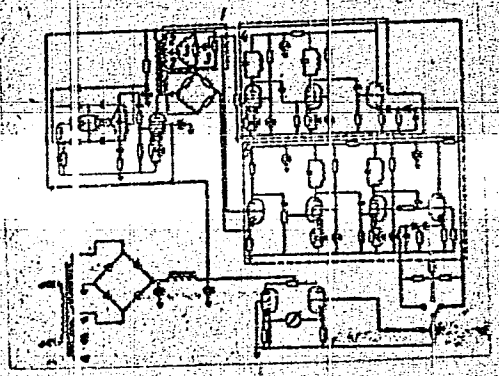


Fig. 1. 1--measuring bridge; 2--inductive pickups; 3--balancing elements; 4--first channel of the two-channel resonance amplifier; 5--second channel of the amplifier

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SVISTUNOV, N.I.

"Apparatus for Controlling Rate of Blood Transfusion," by N. I. Svistunov (Leningrad), Chair of Medical Supply (head, A. P. Khrenov, Colonel of Medical Service), Military Medical Academy imeni S. M. Kirov, Vrachebnoye Delo, No 11, Nov 56, p 1207

An "indicator" apparatus for controlling the rate of blood transfusion is described. It consists of a penicillin flask and two needles for the transfusion of blood. The rubber cap of the flask is pierced by the two needles in such a manner that the tip of one of the needles remains above the fluid level while the tip of the second needle is submerged. The cannula of the first needle is connected by means of a rubber tube with the upper tube of the flask and the fluid is forced through it, while air is admitted through the second needle.

As the level of the blood in the flask decreases, the vacuum which is formed in the "indicator" will absorb air in the form of bubbles passing through the fluid of the "indicator." From the number of bubbles one can judge the rate of the blood being transfused into the recipient.

The apparatus can be used in rural areas, and it is easily washed, disinfected, and sterilized.

Sum 1274

SVISTUNOV, N.I. (Leningrad, Vyborgskaya nab., d.9/16, kv. 18

A device for the removal of remaining blood from the Filatov blood transfusion set. Vest.khir. 77 no.7:83 Jl '56. (MLRA 9:10)

1. Iz kafedry meditsinskogo snabzheniya (zav. - A.P.Khenov) Voyenno-meditsinskoy ordena Lenina akademii im. S.M.Kirova.
(BLOOD TRANSFUSION, appar. and instruments
device for removal of remaining blood in blood transfusion system fater A.N.Filatov)

BREYDO, I.S.; SVISTUNOV, N.I.

High obliteration of the abdominal aorta. Zdrav. Bel. 5 no.5:58 My '59
(MIRA 12:8)

1. Iz khirurgicheskogo otdeleniya (zaveduyushchiy - P. A. Klindukhov) Leningradskoy bol'nitsy imeni S. Perovskoy (glavnyy vrach K. A. Shelomentseva).
(ABDOMINAL AORTA--DISEASES)

SVISTUNOV, N.I.

Fourth conference of young Leningrad surgeons. Vest.khir. 82 no.4:147-151 Ap '59. (MIRA 12:6)
(SURGERY--CONGRESSES)

SVISTUNOV, N.I.

AVIDON, D.B., kand.med.nauk; BAIROV, G.A., kand.med.nauk; BUTIKOVA, N.I., dotsent, kand.med.nauk; BOYKOV, G.A., kand.med.nauk; VERESHCHAGINA, L.N., kand.med.nauk; GONCHAROVA, M.N., prof., doktor med.nauk; ZHOLOBOV, L.K., vrach; ZEMSKAYA, A.G., kand.med.nauk; KAYSAR'YANTS, G.A., dotsent, kand.med.nauk; KOLESOV, A.P., doktor med.nauk; KONDRAT'YEV, A.P., kand.med.nauk; KORCHANOV, G.I., kand.med.nauk; KUTUSHEV, F.Kh., kand.med.nauk; LEVINA, O.Ya., kand.med.nauk; LYANDRES, Z.A., prof., doktor med.nauk; MOROZOVA, T.I., kand.med.nauk; MIRZOYEVA, I.I., kand.med.nauk; PANUSHKIN, V.S., kand.med.nauk; RASTORGUYEV, A.V., vrach; RUDAKOVA, T.A., kand.med.nauk; SAVITSKAYA, Ye.V., kand.med.nauk; SVISTUNOV, N.I., vrach; CHISTOVICH, G.V., kand.med.nauk; YAKOVLEVA, T.S., vrach; MARGORIN, Yevgeniy Mikhaylovich, prof., red.; DOLETSKIY, S.Ya., red.; VERESHCHAGINA, L.N., red.; RULEVA, M.S., tekhn.red.

[Operative surgery on children] Operativnaia khirurgiia detskogo vozrasta. Leningrad, Gos.izd-vo med.lit-ry Medgiz, Leningr.otd-nie, 1960. 475 p. (MIRA 13:12)

(CHILDREN--SURGERY)

SVISTUNOV N. I.

Sivstunov, N. I.; Lazareva, K. N.; Fedorovskiy, S. M.; Khromov, B. M. (Prof.); Garvin, L. I. (Docent); Kazantseva, N. D.; Khodneva, E. A.--Leningrad

"The Treatment of Burns According to Data of Leningrad Hospitals.

report submitted for the 27th Congress of Surgeons of the USSR, Moscow, 23-28 May 1960.

SVISTUNOV, N. I.(Leningrad, D-25, Nevskiy prosp., d. 90/92, kv. 35)

Surgical anatomy of the coronary arteries of the heart in subjects of different age. Grud. khir. no.2:21-25 '62. (MIRA 15:4)

1. Iz kafedry operativnoy khirurgii i topograficheskoy anatomii (zav. - prof. Ye. M. Margorin) Leningradskogo pediatricheskogo meditsinskogo instituta i khirurgicheskogo otdeleniya Leningradskoy ob"yedinennoy bol'nitsy imeni S. Perovskoy (glavnyy vrach Z. A. Nakhimova)

(CORONARY VESSELS)

SVISTUNOV, N.M.

Treatment of infectious mastitis in sheep. Veterinariia 33 no.6: 36 Je '56. (MLRA 9:8)

1. Glavnyy veterinarnyy vrach plemennogo ovtsevodcheskogo sovkhoza "Proletarskiy".
(Sheep--Diseases and pests) (Udder--Diseases)

SVISTUNOV, N. M. (Chief Veterinary Surgeon of the base-model farm "Proletarskii", Rostov oblast')

"Experience in rendering the farm sanitary in respect to sheep brucellosis"

Veterinariya, vol. 39, no. 7, July 1962 p. 38

SVISTUNOV, N.M.

Practices in ridding farms of brucellosis in sheep. Veterinariia 39 no.7:38-39 Jl '62. (MIRA 18:1)

1. Glavnyy veterinarnyy vrach oporno-pokazatel'nogo khozyaystva "Proletarskiy", Rostovskoy oblasti.

SOV/149-58-4-15/26

AUTHORS: Ageyenkov, V.G.,
Romanov, A.S.,
Svistunov, N.V.

TITLE: Matte Smelting as a Method of Recovering Gold from Rich Sulphide Concentrates (Plavka na shteyn kak sposob izvlecheniya zolota iz bogatykh sul'fidnykh kontsentratov)

PERIODICAL: Izvestiya Vysshikh Uchebnykh Zavedeniy, Tsvetnaya Metallurgiya, 1958, Nr 4, pp 109-118 (USSR)

ABSTRACT: As a result of the growing practise of enriching the gold-bearing ores, substantial quantities of rich sulphide concentrates, often containing a large (10-18%) proportion of copper, are produced by various mining concerns of East Siberia. Since recovery of gold from this type of material by the conventional methods (i.e. amalgamation or cyaniding) is difficult, these concentrates are sent to various copper-smelting works in the Urals, where gold is recovered by copper matte smelting. Although no objections can be raised to this process on technical grounds, the practise as such is very wasteful and uneconomical owing to: (i) Very high costs of transport; (ii) considerable

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Matte Smelting as a Method of Recovering Gold from Rich Sulphide Concentrates

losses of the concentrates in transit (while loading and unloading) and (iii) increased proportion of gold lost in the waste slags produced in large quantities when the gold-bearing concentrates are smelted with a much larger proportion of copper bearing material. It has been suggested that this problem could be solved more economically by building (e.g. in the Chitin region) a special, small smelting works for processing the Siberian concentrates with the siliceous gold-bearing ores from the Taseyevodeposits (at present also smelted in the Ural works) used as a flux. However, before realisation of such a project could be considered, a number of technical problems had to be solved and the object of laboratory experiments described in the present article was to evaluate (in terms of the maximum attainable recovery of gold) the practicability of matte smelting process for treating the Siberian concentrates, determine the

Matte Smelting as a Method of Recovering Gold from Rich Sulphide Concentrates

case of gold from 85 to 97.9%). However, under these conditions variation of the matte yield was accompanied by variation of the composition of the slag which in turn affected the degree of gold recovery. Consequently, in the next series of tests in which various quantities of matte of known composition were added to the charge, the composition of the slag was maintained practically constant while the matte yield varied between 14 and 25%. Under these conditions recovery of gold increased from 97.1 to 99% and its content in the slag decreased from 3.8 to 1.6 g/ton (Table 3, Fig.2). Fig.3 shows how recovery of gold and copper varied when both the yield and composition of matte were varied: In this case the relationship between recovery of gold and the matte yield was quite different. When the yield decreased (i.e. when the copper content of the matte increased from 14 to 55%) recovery of gold increased from 97.1 to 99.06%. (This effect was attributed to

Matte Smelting as a Method of Recovering Gold from Rich Sulphide Concentrates

the fact that the richer the matte, the larger proportion of metallic copper it contains. Since gold is easily soluble in copper and since it is believed that no gold is present in the sulphide phase, enrichment of the matte results in higher recovery figures.) In the last series of experiments the effect of the sulphur content in the slag on the magnitude of gold losses was examined (Fig.4). When the amount of sulphur present in the slag increased from 0.2 to 1.0%, the losses of gold increased from 2 to 12 g/ton of slag. These results indicated that practically all gold lost in the slag was contained in the matte inclusions, the presence of which - in the form of large globules or emulsified particles - was confirmed by microscopic examination (Fig.5 and 6). The highest concentration of the matte inclusions was observed near the matte-slag interface and near the slag surface. Matte inclusions in the lower portion of the slag layer were attributed to insufficiently long duration of the

Matte Smelting as a Method of Recovering Gold from Rich Sulphide Concentrates

slag and 0.9-1.0 ton of the Taseyevoore could be treated with each ton of the Siberian concentrates. There are 7 figures, 3 tables and 2 Soviet references.

ASSOCIATION: Severokavkazskiy Gornometallurgicheskiy Institut. Kafedra Metallurgii Blagorodnykh i Redkikh Metallov (North Caucasian Mining-Metallurgical Institute, Chair for Metallurgy of Noble and Rare Metals)

SUBMITTED: 21st April 1958.

Card 7/7

AGEYENKOV, V.G.; SVISTUNOV, N.V.

Recovery of gold and arsenic from unyielding ocherous ores.
Izv.vys.ucheb.zav.; tsvet.met. 2 no.4:88-96 '59.
(MIRA 13:1)

1. Severokavkazskiy gornometallurgicheskiy institut. Kafedra metallurgii blagorodnykh i redkikh metallov.
(Gold--Metallurgy) (Arsenic--Metallurgy)

MIKHIN, Ya.Ya.; SVISTUNOV, N.V.

Present state and ways to further improve flowsheets for gold recovery from ores. Izv. vys. ucheb. zav.; tsvet. met. 4 no.5: 133-138 '61. (MIRA 14:10)

1. Severokavkazskiy gornometallurgicheskiy institut, kafedra metallurgii blagorodnykh i redkikh metallov.
(Gold--Metallurgy)

ANISIMOV, S.M.; SVISTUNOV, N.V.; ASTAKHOVA, Ye.P.

Gold flotation out of pure quartz placer ores. TSvet. met. 38 no.11:45-50 N '65. (MIRA 18:11)

NOVOSELOV, R. D., kand. med. nauk; SVISTUNOV, O. A., assistent

Anatomical and functional (speech) results of radical uranoplasty in congenital cleft palate. Trudy KGMI no.2:123-128 '60. (MIRA 15:7)

1. Iz kafedry khirurgicheskoy stomatologii - zav. kafedroy dotsent P. V. Naumov.

(PALATE, CLEFT)

SVISTUNOV, O.A., assistent

Use of a longitudinal osteotomy in treating a unilateral micro-genia. Trudy KGMI no.10:429-431 '63. (MIRA 18:1)

1 Iz kafedry khirurgicheskoy stomatologii (zav. kafedroy dotsent P.V.Naumov) Kalininskogo gosudarstvennogo meditsinskogo instituta.

GUBANOV, A.; KISTAUBAYEV, K.; GROMADCHENKO, A. (stantsiya Shaktnaya); VOLOSOVICH, A., brigadir; MASLOV, T.; TEL'TSOVA, A. (g.Ivanovo); SVISTUNOV, Y.; KOVALEV, V.; KISELOV, V. (g.Priozersk, Leningradskoy oblasti); ANISIMOV, P.; KUTAYTSEV, Ye.

Editor's mail. Sov.profsoiuzy 16 no.17:44-50 S '60. (MIRA 13:8)

1. Predsedatel' mestnogo komiteta upravleniya sovkhoza imeni Stalina, Krasnodarskogo kraya (for Gubanov). 2. Zaveduyushchiy avtoklubom Yuzhno-Kazakhstanskogo obkoma profsoyuza rabochikh i sluzhashchikh sel'skogo khozyaystva i zagotovok, g.Nal'chik (for Kistaubayev). 3. Chlen komiteta profsoyuza gil'zonabivnogo tsekha fabriki "Dukat," Moskva (for Volosovich). 4. Predsedatel' mestkoma passazhirskogo avtotransportnogo transporta, g. Nal'chik (for Maslov). 5. Instruktor kul'turno-massovogo otdela Leningradskogo oblsovprofa (for Svistunov). 6. Redaktor gazety "Azovstal'stroyevets," g. Zhdanov (for Kovalev). 7. Nachal'nik otdela kadrov Ul'yanovskogo sel'skokhozyaystvennogo instituta (for Kutaytsev). 8. Starshiy instruktor Tyumenskogo oblastnogo soveta profsoyuzov (for Anisimov).

(Trade unions)

SVISTUNOV, V., assistent; TSYGANOV, S.

Expand and improve food supply to the fields. Obshchestv. pit. no.7:27-28 Jl '62. (MIRA 15:10)

1. L'vovskiy torgovo-ekonomicheskiy institut (for Svistunov).
2. Starshiy instruktor otdela obshchestvennogo pitaniya Vinnitskogo oblastnogo soyuza potrebitel'skikh kooperativov (for TSyganov).

(Vinnitsa Province--Restaurants, lunchrooms, etc.)

KOGARKO, S.M., doktor tekhn.nauk; BORODULIN, A.A.; BOKHON, Yu.A.; KOMAROV, V.N.; LYAMIN, A.G.; MIKHAYLOV, V.A.; SVISTUNOV, V.G.

Propagation of the chemical reaction zone in acetylene in large diameter pipes. Khim.prom. no.7:496-501 Jl '62. (MIRA 15:9)

1. Institut khimicheskoy fiziki AN SSSR i Gosudarstvennyy institut po proyektirovaniyu zavodov kauchukovoy promyshlennosti.
(Acetylene) (Gas pipes) (Combustion)

L 4885-66 EWT(l)/EWT(m)/EWP(w)/EWP(i)/T/EWP(t)/EWP(b) IJP(c) JD/GG
ACCESSION NR: AP5021142 UR/0386/65/002/001/0017/0021

AUTHOR: Dmitrenko, I. M.; Yanson, I. K.; Svistunov, V. M.

TITLE: Interaction of the alternating Josephson current with resonant modes in a superconducting tunnel structure

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 2, no. 1, 1965, 17-21

TOPIC TAGS: superconductivity, tunnel diode, volt ampere characteristic, tin

ABSTRACT: This is a continuation of earlier work by the authors (ZhETF v. 47, 2091, 1964 and v. 48, 976, 1965), where it was shown that the voltage-current characteristics of superconducting-film tunnel structures, which clearly display the Josephson effect, also exhibit small steps characterized by the fact that the change of the current through the tunnel junction occurs at almost constant voltage on the junction, and is accompanied by emission of photons of frequency corresponding to the frequency of the alternating Josephson supercurrent. In the present article the authors propose a simple model, in which the steps result from excitation of resonant electromagnetic oscillations in a tunnel structure when alternating Josephson current flows between the films, and present experimental data confirming this model. The calculations are carried out for the propagation of electromag-

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L 4885-66

ACCESSION NR: AP5021142

/3

netic waves in a layer of oxide between superconducting tin films. The condition for the resonance of the electromagnetic waves in the region forming the tunnel junction between the films is determined. The experiments were carried out on tunnel structures of the type Sn-I-Sn (I = insulator 10--20 Å thick), similar to those described in the earlier work, as well as more complicated ones, such as in Fig. 1 of the Enclosure. The observed maximum values of the direct Josephson current were 0.8--0.95 of the theoretically predicted value. The experimental results show that for each tunnel structure there is a discrete set of voltages $V_p^{(n)}$, at which steps appear when a constant magnetic field on the order of 1 Oe is applied parallel to the film. They also indicate that a strong interaction between the alternating Josephson current and the resonant mode of the strip resonator formed by the tunnel junction occurs in the tunnel structure. This is the mechanism that causes the effective coupling between the alternating Josephson current and the electromagnetic field, and this in turn has made it possible to observe directly the photon emission earlier. "The authors thank V. I. Verkin for continuous interest in the work, and I. O. Kulik and Yu. F. Komnik for useful discussions." Orig. art. has: 3 figures and 3 formulas.

ASSOCIATION: Fiziko-tekhnicheskiy institut nizkikh temperatur Akademii nauk Ukrainskoy SSR (Physicotechnical Institute of Low Temperatures, Academy of Sciences, Ukrainian SSR)

Card 2/4

L 4885-66

ACCESSION NR: AP5021142

SUBMITTED: 18May65 ENCL: 01 SUB CODE: SS, EM

NR REF SOV: 002 OTHER: 007

Card 3/4

L 4885-66
ACCESSION NR: AP5021142

ENCLOSURE: 01

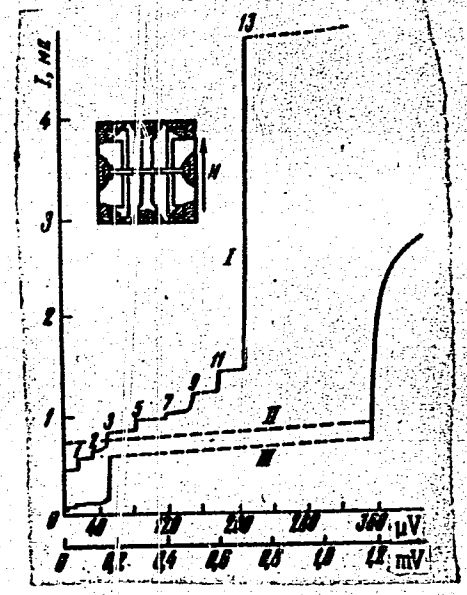

Fig. 1. Voltage-current characteristics of Sn-I-Sn tunnel junction: 1 - initial section (H = 1.12 Oe); 1, 2, 3, ... - numbers of steps; II - total volt-ampere characteristic (H = 0); III - the same (H = 1 Oe). The current scale for II and III should be increased by a factor of 10.

Card 4/4

L 23034-65 EWT(1)/EEC(f)/EWA(d)/EEC(b)-2 IJP(c) GG

ACCESSION NR: AP5001832 S/0056/64/047/006/2091/2094

AUTHORS: Yanson, I. K.; Svistunov, V. M.; Dmitrenko, I. M.

TITLE: Experimental observation of the tunneling of Cooper pairs between thin layers of superconducting tin

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 47, no. 6, 1964, 2091-2094

TOPIC TAGS: superconductivity, Cooper pair, tin, tunneling effect, thin film, tunneling current, Josephson current

ABSTRACT: The superconducting tunneling current (STC) predicted theoretically by B. D. Josephson (Phys. Lett. v. 1, 251, 1962) was observed to flow between two tin films about 2000 Å thick separated by an oxide layer of about 10 Å. This current flowed at zero voltage and stopped when its magnitude reached a certain value that depended on the magnetic field, temperature, and geometry of the junc-

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L 23084-65
ACCESSION NR: AP5001832

tion. Observation of the effect was made possible by the attainability of very thin and very homogeneous oxide layers, making a tunnel junction with resistivity of [illegible] ohm-mm^2 at 4.2K feasible. [illegible] temperature range 1.5—4.2K. The [illegible] dependence on the magnitude of the critical current whenever the field becomes a multiple of 1.4 Oe, with maxima that decrease monotonically with increasing field, and with a period corresponding to the value of the quantum of magnetic flux in the superconductors. The temperature dependence of the STC and the singularities of the current-voltage curves of the tunnel structure are due to the tunneling of the superconducting electrons and to [illegible] tunneling. The dependence of the critical current on the temperature and on the magnetic field was investigated. Some of the anomalies in the results remain unclear. "The authors thank Yu. F. Komnik for valuable suggestions during the preparation of the film structures." Orig. art. has: 4 figures. [02]

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L 23084-65
ACCESSION NR: AP5001832

ASSOCIATION: Fiziko-tekhnicheskiy institut nizkikh temperatur Akademii nauk Ukrainskoy SSR (Physicotechnical Institute of Low Temperatures, Academy of Sciences, UkrSSR)

SUBMITTED: 24Jul64 ENCL: 00 SUB CODE: SS

NO REF SOV: 001 OTHER: 011 ATD PRESS: 3173

Card 2/3

L 47360-65 EWT(l)/EWT(m)/EWP(b)/EWP(t) IJP(c) GG/JD

ACCESSION NR: AP5008760 S/0056/65/048/003/0976/0979

34

31

B

AUTHOR: Yanson, I. K.; Svistunov, V. M.; Dmitrenko, I. M.

TITLE: Experimental observation of the tunnel effect for Cooper pairs with photon emission

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 48, no. 3, 1965, 976-979

TOPIC TAGS: superconductivity, tunnel effect, Cooper pair, photon emission, tin, tin oxide

ABSTRACT: The article describes an experiment aimed at observing photon emission upon occurrence of alternating superconduction current in a structure of the type Sn—SnO_2—Sn. Tin films of width 1.17 mm and thickness ~2000 Å were evaporated on a glass substrate at a right angle, and a thin oxide layer was formed between the films. The structure was placed in a rectangular waveguide parallel to its side wall, one of the films being parallel to the wave propagation vector in the guide. A small constant magnetic field was applied in the same direction. The entire system was placed in a liquid-helium cryostat, and the volt-ampere characteristic of the structure was plotted on an automatic potentiometer at 1.57K for various

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L-47360-65

ACCESSION NR: AP5008760

values of the magnetic field. The step observed in the response of a tuned detector, and field 1.5 Oe at a bias of 19.8 μV corresponding to a wavelength of the order of 3 cm, together with other steps observed at nearly the same voltage for various magnetic fields, is interpreted as direct experimental proof of the possibility of Cooper pairs tunneling between two superconductors with emission of photons. An inverse experiment, where the tunnel structure was irradiated by an external microwave generator, was also performed and yielded similar evidence. "The authors thank B. I. Borovday for help in preparing the tunnel structure and Yu. F. Komnik for a useful discussion." Orig. art. has: 2 figures and 1 formula.

ASSOCIATION: Fiziko-tekhnicheskiy institut nizkikh temperatur AN UkrSSR (Physicotechnical Institute of Low Temperatures AN UkrSSR)

SUBMITTED: 09Dec64 ENCL: 00 SUB CODE: GP, NP

NR REF SOV: 001 OTHER: 003

Card 2/2 CC

NESVIT, S.M.; NYUN'KO, O.I.; SVISTUNOV, V.Ye., inzh., retsenzent;
SYTNIK, N.A., inzh., red.

[Horizontal forging machines and their automation] Gorizontal'no-kovochnye mashiny i ikh avtomatizatsiia. Moskva, Mashinostroenie, 1964. 322 p. (MIRA 17:10)

20256
S/148/60/000/011/013/015
A161/A030

1.1700 also 1045, 1413

AUTHORS: Bernshteyn, M. L.; Tung Su-kuei, Svistunov, Z.V.

TITLE: The effect of workhardening on the fine structure of the EI437 alloy

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Chernaya metallurgiya, no.11, 1960, 125 - 132

TEXT: The Moscow Steel Institute has studied the effect of workhardening on the heat-resistant ЭИ437 (EI437) alloy. The composition of the specimen's was: (%) 0.05 C; 0.04 Mn; 0.46 Si; 20.8 Cr; 2.4 Ti; 0.8 Al; 0.004 S; 0.007 P; 0.05 Ce; 0.05 Fe; 0.04 Cu; the content of harmful impurities (Pb, Sb, As, Bi and other) was not beyond the amount permissible. Workhardening was applied to blanks cut from rolled 35 mm diameter rods, quenched from 1080°C (and soaked for 8 hours) and cooled in air, then aged at 700°C for 50, 500, 5000 and 50,000 minutes. One part of the blanks was cold rolled with 25 - 50 % reduction, one part cold drawn with the same reduction, and one part left unworkhardened. The structure was studied with

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The effect of workhardening on the . . .

an optic and an electronic microscope, and with an X-ray camera. The article includes photo micrographs and graphs showing the measured variations of hardness and electric resistance, and of the structure block dimensions and microstresses. It was stated that the workhardened metal was not homogeneous. [Abstractor's note: Photomicrographs in the abstract are cuts from the original in the article.] The numerical data obtained are the following:

The working	Hardness H_V	Blocks size D 10^{-8}, cm^2	Distortions of 2nd order 10^{-3}
Quenching only	150	1500	0.88
Quenching + rolling (with 25% reduction)	267	670	1.40
Quenching + rolling (with 50% reduction)	340	220	1.64
Quenching + drawing (with 50% reduction)	380	370	2.18

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