MALKOVA, D.; MARHOUL, Z.

Neutralization test with the virus of tick encephalitis on cells of a stable line of swine kidneys. Cesk. epidem. 11 no.6:364-369 N '62.

1. Vojensky ustav hygieny, epidemiologie a mikrobiologie v Praze.
(ENCEPHALITIS VIRUSES) (VIRUS CULTIVATION)
(NEUTRALIZATION TESTS)

CZECHOSLOVAKIA

GRESLIKOVA, M., MALKOVA, D. and SLONIM, D. [Virology Institute of CSAV, Bratislava.]

"[Tick-Borne Encephalitis. Part] 8. Preparation and Use of Vaccines."

Bratislava, Biologicke Prace, Vol 8, No 9, 1962; pp 62-65.

Abstract [English summary modified]: Preparation of 3 vaccines is described: 'Hypr' strain had undergone 45 mouse passages, highly virulent; Grotka strain was passaged more than 143 times in chick embryos after some passages in mice. Inactivation was by 0.08% formalin mixed with 10% brain suspension, kept for 20 days at 4° centigrade.

MALKOVA, D.

The effect of x-irradiation on the spread of tick-borne encephalitis virus through the regional lymphatic system. Acta virol., Engl. Ed., Praha 6 no.5:475-476 S '62.

1. Institute of Parasitology, Czechoslovak Academy of Sciences, Praha.
(ENCEPHALITIS, EPIDEMIC exper.) (RADIATION EFFECTS exper.)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031900046-6

MALKOVA, D.; MARHOUL, Z.

A neutralization test with tick-borne encephalitis virus in pig kidney cells. Acta virol. (Praha)[Eng]6 no.4:374 Jl '62.

1. Military Institute of Hygiene, Epidemiology and Microbiology, Prague, Czechoslovakia.

(TISSUE CULTURE) (ENCEPHALITIS virology)

MALKOVA, D.; SMEJKAL, F.

Effect of the tetracycline derivative TC-RL-5 on ornithosis virus in the lymphatic system. Acta virol. (Praha)[Eng] 6 no.4:357-363 Jl '62.

1. Military Institute of Hygiene, Epidemiology and Microbiology, Prague, and Research Institute of Antibiotics, Roztoky near Prague.

(TETRACYCLINE related cpds)
(MIYAGAWONELLA pharmacology)
(LYMPHATIC SYSTEM virology)

MALKOVA, Doubravka; SMEJKAL, F.

The role of the lymphatic system in the development of experimental ornithosis in mice after intranasal and intraplantar infection, in relation to the use of lymphotropic antibiotics. Folia microbiol 6 no.3:151-156 '61. (EEAI 10:8)

1. Military Institute of Hygiene, Epidemiology, and Microbiology, Prague(for Malkova)and 2.Institute of Antibiotics, Roztoky near Prague(for Smejkal)

(LYMPHATIC SYSTEM) (ORNITHOSIS) (ANTIBIOTICS)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031900046-6

MALKOVA, D.

Spread of tick-borne encephalitis virus in the body of a non-susceptible animal - rabbit. Acta virol.Engl.Ed.Praha 5 no.3:137-140 My '61.

1. Military Institute of Hygiene, Epidemiology and Microbiology, Praha.

(ENCEPHALITIS EPIDEMIC exper)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031900046-6

MALKOVA, D.; PALA, F.; SIDAK, Z.

Cellular changes in the white cell count, regional lymph node and spleen during infection with the tick-borne encephalitis virus in mice. Acta virol.Engl.Ed.Praha 5 no.2:101-111 Mr '61.

1. Military Institute of Hygiene, Epidemiology and Microbiology, Praha; Mathematical Institute of the Czechoslovak Academy of Sciences, Praha.
(ENCEPHALITIS EPIDEMIC virol)
(LEUKOCYTE COUNT)
(LYMPH NODES)
(SPLEEN)

MALKOVA, Doubravka; SMEJKAL, F.; CERVINKA, F.

Determination of the lymphotropic effect of neolymphin in mice, Folia microbiol 6 no.1:40-43. '60. (EEAI 10:5)

1. Military Institute of Hygiene, Epidemiology, and Microbiology, Prague(for Malkova). 2. Institute of Antibiotics, Roztoky near Prague(for Smejkal) 3. Microbiology Laboratory of the Institute for Clinical and Experimental Surgery, Prague(for Cervinka)
(LYMPHATIC SYSTEM) (ANTIBIOTICS) (NEOMYCIN)
(SODIUM METHACRYLATE)

MALKOVA, D.; SHMEYKAL, F. [Smejkal, F.]; CHERVINKA, F. [Cervinka, F.]

Establishment of the lymphotropic effect of neolymphin in mice. Antibiotiki 5 no. 5:44-48 S-O '60. (MIRA 13:10)

1. Voyennyy institut gigiyeny, epidemiologii i mikrobiologii, Praga, Issledovatel'skiy institut antibiotikov, Roztoki pod Pragoy i Mikrobiologicheskaya laboratoriya Instituta klinicheskoy i eksperimental'noy khirurgii, Praga.
(NEOMYCIN) (LYMPHATICS)

MALKOVA, D.

Participation of the lymphatic and blood circulations in the dissemination of tick-borne encephalitis virus to the organs of experimentally infected mice. Acta virol.Engl.Ed.Praha 4 no.5: 290-295 S'60.

1. Military Institute of Hygiene, Epidemiology and Microbiology, Prague.

(ENCEPHALITIS EPIDEMIC exper)

MALKOVA, D.

The role of the lymphatic system in experimental infection with tick-borne encephalitis. 2. Neutralizing antibodies in the lymph and blood plasma of experimentally infected sheep. Acta virol. Engl.Ed.Praha 4 no.5:283-289 S'60.

1. Military Institute of Hygiene, Epidemiology and Microbiology, Prague.

(ENCEPHALITIS EPIDEMIC immunol)
(ANTIBODIES)
(LYMPH immunol)

MAIKOVA, D.

The role of the lymphatic system in experimental infection with tick-borne encephalitis. I. The tick-borne encephalitis virus in the lymph and blood of experimentally infected sheep. Acta virol.Engl. Ed.Praha 4 no.4:233-240 Jl'60.

1. Military Institute of Hygiene, Epidemiology and Microbiology, Prague.

(ENCEPHALITIS virol)
(LYMPHATIC SYSTEM physiol)

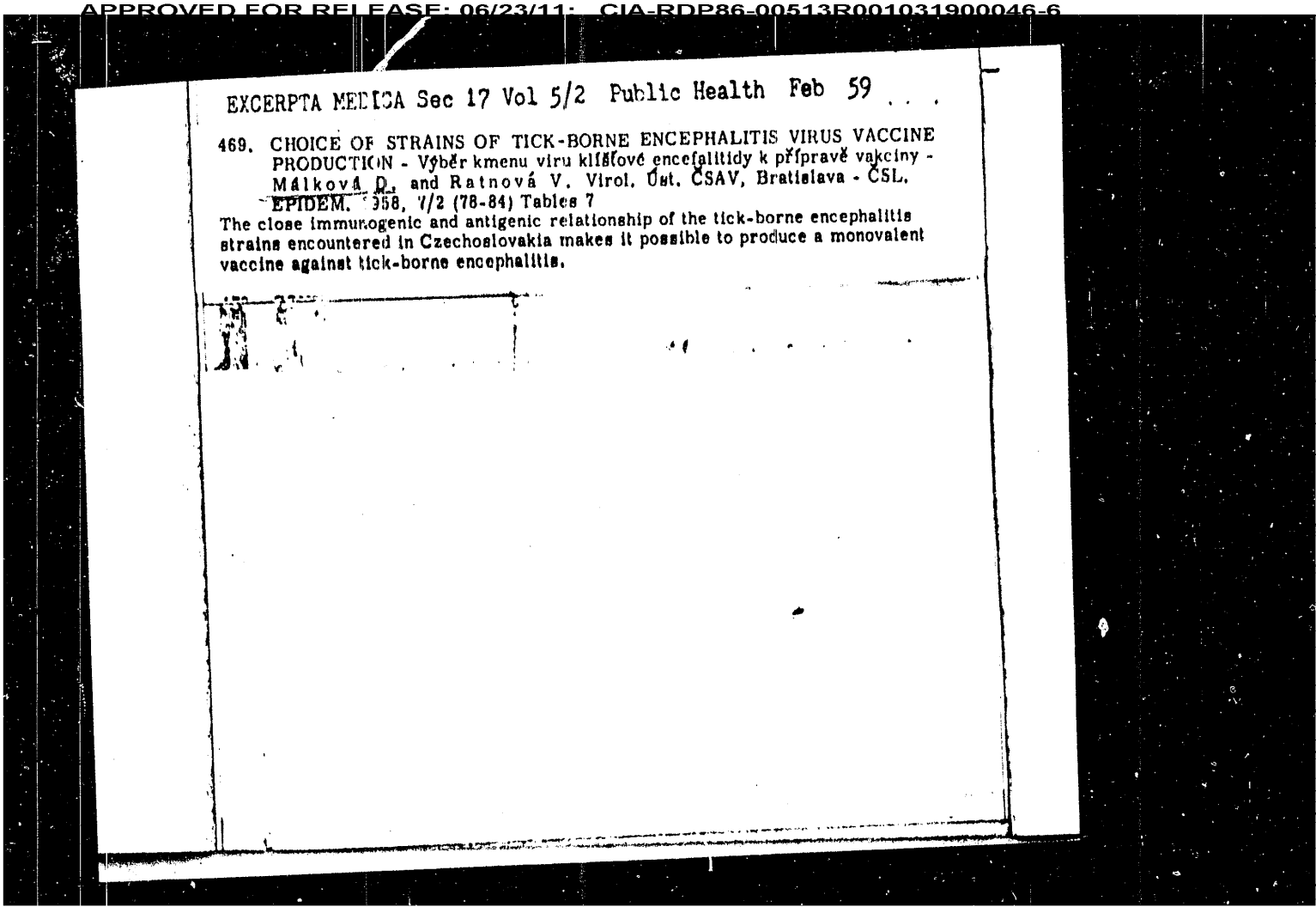
MALKOVA, D.; FRANKOVA, V.

The lymphatic system in the development of experimental tick-borne encephalitis in mice. Acta virol.Engl.Ed. 3:210-214 O '59.

1. Military Institute of Hygiene, Epidemiology and Microbiology, Prague.

(LYMPHATIC SYSTEM pathol)
(ENCEPHALITIS EPIDEMIC exper)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031900046-6



EXCERPTA MEDICA Sec 17 Vol 5/2 Public Health Feb 59 . . .

469. CHOICE OF STRAINS OF TICK-BORNE ENCEPHALITIS VIRUS VACCINE PRODUCTION - Výběr kmenu viru klíšťové encefalitidy k přípravě vakcíny - Málková D. and Ratnová V. Virol. Ust. ČSAV, Bratislava - ČSL. EPIDEM. 1958, 7/2 (78-84) Tables 7

The close immunogenic and antigenic relationship of the tick-borne encephalitis strains encountered in Czechoslovakia makes it possible to produce a monovalent vaccine against tick-borne encephalitis.

SHITIKOV, V.P.; VINOGRADOV, P.A.; TARUSINA, M.S.; Prinimali uchastiye: GAVSHINOVA, K.B.; ARSEN'YEVA, N.G.; GUDOK, V.V.; OVCHINNIKOV, S.G.; MALKOVA, A.P.

Increasing the heat and wear resistance of engineering asbestos friction materials. Kauch.i rez. 21 no.12:25-26 D '62. (MIRA 16:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut asbesto-tekhnicheskikh izdeliy, Yaroslavskiy zavod sinteticheskogo kauchuka i Yaroslavskiy zavod asbesto-tekhinicheskikh izdeliy.
(Rubber goods) (Asbestos)

[illegible], A.G., [illegible], A.G., [illegible], [illegible]; CHEBOTAREV, G.A., red., otv. red.

[Stellar positions and reduction constants for stars of the time service program for the epoch 1970.0.] Zvezdnye polozheniia i reduktsionnye postoiannye zvezd programmy sluzhby vremeni na epokhu 1970.0. [Leningrad, 1965]. 34 p. (Akademiia nauk SSSR. Institut teoreticheskoi astronomii. Biulleten' vol.[illegible], no.[illegible]. Supplement). (MIRA [illegible])

1. Direktor Instituta teoreticheskoy astronomii AN SSSR (for Chebotarev).

and K. G. Shumikhina; table for determining latitude by the altitude of the Polar Star - K. G. Shumikhina and P. A. Gutkina; preparation of manuscript for publication - V. G. Kudinova; review and edition of "Explanatory Notes", D. K. Kulikov. There are no references.

TABLE OF CONTENTS:

E. A. Mitrofanova (in charge), O. M. Gromova, G. A. Mazing, T. I. Mashinskaya, G. M. Poznyak, K. G. Shumikhina, and P. A. Gutkina; heliocentric coordinates of the large planets - O. M. Gromova, A. G. Mal'kova; reduction values (trigonometric system) - E. A. Mitrofanova, and K. G. Shumikhina; mean positions of stars - E. A. Mitrofanova, M. B. Zheleznyak, O. M. Gromova, K. G. Shumikhina, M. A. Fursenko; solar and lunar eclipses - E. A. Mitrofanova, M. A. Fursenko; planetary configurations - E. A. Mitrofanova, O. M. Gromova; ephemerides for physical solar observations - P. A. Gutkina, T. I. Mashinskaya; ephemerides for physical lunar observations - G. A. Mazing, P. A. Gutkina, K. G. Shumikhina; ephemerides of the illumination of the discs of Mercury and Venus - T. I. Mashinskaya, G. M. Poznyak; ephemerides for physical observations of Mars - G. M. Mazing, T. I. Mashinskaya; ephemerides for physical observations of Jupiter - T. I. Mashinskaya, E. A. Mitrofanova; Saturn's rings - G. A. Mazing, T. I. Mashinskaya; sunrise and sunset - A. I. Frolova; rising and setting of the moon - P. A. Gutkina and K. G. Shumikhina; altitudes and azimuths of the Polar Star - A. G. Mal'kova

information on the Sun, Moon, Earth, and planets, the Yearbook contains the ephemerides of the lunar crater Moesting A, which until 1960 were published by the Berliner Astronomisches Jahrbuch, [Berlin Astronomical Yearbook], and whose regular publication has now been undertaken by the Institute of Theoretical Astronomy of the USSR at the request of the Union's Committee on Ephemerides. The solar, lunar, and planetary coordinates in the Yearbook are based on data supplied by the British Nautical Almanac as stipulated by the Astronomical Union. The material in the Yearbook was compiled and prepared by the following scientists: computation of ephemerides of the lunar crater Moesting A on high-speed computer BEMS at the Vychislitel'nyy tsentr AN SSSR (Computer Center AS USSR) - D. K. Kulikov; reduction of solar and lunar ephemerides - A. G. Mal'kova and G. A. Mazing; computation of nutation on high-speed computer BEMS - D. V. Zagrebin, O. M. Gromova and A. Ya. Faletova; computation of reduction values of visible positions of ten-day and near-polar stars - M. B. Zheleznyak and M. A. Fursenko; preparation of original data on visible positions of ten-day and near-polar stars -

MAL'KOVA, A G

PHASE I BOOK EXPLOITATION SOV/5461

Akademiya nauk SSSR. Institut teoreticheskoy astronomii.

Astronomicheskiy yezhegodnik SSSR na 1962 g. (Astronomical Yearbook of the USSR for 1962) Moscow, Izd-vo Akademii nauk SSSR, 1960. 647 p. Errata slip inserted. 2,000 copies printed.

Sponsoring Agency: Institut teoreticheskoy astronomii Akademii nauk SSSR.

Resp. Ed.: M. F. Subbotin, Director of the Institute of Theoretical Astronomy of the Academy of Sciences USSR, Corresponding Member, Academy of Sciences USSR.

PURPOSE: This book is intended for astronomers and geophysicists.

COVERAGE: The Astronomical Yearbook of the USSR for 1962 has been compiled in accordance with changes proposed by the International Astronomical Union to member organizations at its meeting in 1958. In addition to usual

Card 1/16

L 43601-65

ACCESSION NR: AP5005381

measured in the temperature interval 2 to 300°K. No rigorous agreement between experiment and the two-zone conductivity model was observed. The HgTe single crystals were prepared by horizontal zone melting. An estimate is given of the temperature dependence of the natural concentration of charge carriers. The Hall mobility of the n-type sample at low temperatures exceeds 200,000 cm^2/sec. Orig. art. has: 7 figures and 1 table.

ASSOCIATION: Fiziko-tekhnicheskiy institut, Leningrad (Physicotechnical Institute)

SUBMITTED: 10Nov64 ENCL: 00 SUB CODE: EC, SS

NO REF SOV: 002 OTHER: 006

Card 2/2 mb

L 43601-65 EPA(s)-2/EWA(c)/EWT(m)/EWG(m)/EWP(b)/T/EWP(t) Pt-7 IJP(c) RDW/JD/JG

ACCESSION NR: AP5005381 S/0030/65/008/002/0613/0618

AUTHOR: Ivanov-Omskiy, V.I.; Kolomiyets, B.T.; Mal'kova, A.A.; Ogorodnikov, V.K.; Smekalova, K. P.

TITLE: Galvanomagnetic properties of mercury telluride

SOURCE: Physica status solidi, v. 8, no. 2, 1965, 613-618

TOPIC TAGS: galvanomagnetic property, mercury telluride, semiconductor, donor concentration, Hall coefficient, semimetal, single crystal, conductivity, Hall mobility

ABSTRACT: This paper reports the results of an investigation of the galvanomagnetic properties of HgTe carried out on purer p-type samples, and also the results of measurements made on an n-type single crystal with an excess concentration of donors $n = 4.5 \times 10^{16}$ cm^{-3}. This is a continuation of an earlier study in which the Hall coefficient and conductivity of p-type single crystals of HgTe at low temperatures were measured. It was on the basis of this study that the conclusion was made that HgTe is a semimetal. In the present investigation the conductivity, Hall coefficient, and change of resistance in a magnetic field were

Card 1/2

ACCESSION NR: AP4041377

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00

SUB CODE: SS,IC NR REF SOV: 001 OTHER: 007

Card 3/3

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031900046-6

ACCESSION NR: AP4041377

sample, and in some cases it changed sign at about 50°K. Infrared absorption coefficients and photosensitivity spectral distributions were also measured. Many of the data obtained are presented graphically. The concentration of current carriers in HgTe at low temperatures, as determined from the Hall and magnetoresistive effects, was found to be large (about 2×10^{16} cm^{-3} at 4.2°K) and to increase only slowly with increasing temperature. It is concluded that there can be no energy gap between the valence and conduction bands, and therefore, in agreement with Strauss et al. (A.J.Strauss, T.C.Harman, J.G.Mavroides, D.H.Dickey and M.S.Dresselhaus, Proc. Intern.Conf.Semicond.Phys.Exeter,1962), that HgTe is a semimetal rather than a semiconductor. The data are analyzed in terms of the band structure found by Strauss et al.(Loc.cit.) for solid solutions containing 14 to 17% CdTe, and it is concluded that the V_2 valence band overlaps the conduction band by approximately 0.13 eV at 300°K. The properties of the solid solutions were found to vary continuously with composition from those of a semimetal for large HgTe concentrations to those of a semiconductor for large CdTe concentrations. The critical CdTe concentration above which the material behaved as a semiconductor was approximately 30%. The behavior of the infrared absorption, as well as that of the photosensitivity, was in agreement with this conclusion. Orig.art.has: 10 formulas, 9 figures and 1 table.

Card 2/3

ACCESSION NR: AP4041377 S/0048/64/028/006/1057/1064

AUTHOR: Ivanov-Omskiy, V.I.; Kolomiyets,B.T.; Mal'kova,A.A.; Ogorodnikov,V.K.; Smekalova, K.P.

TITLE: Electric properties of single crystals of p-type HgTe and its alloys with CdTe /Report, Third Conference on Semiconductor Compounds held in Kishinov 16 to 21 Sep 1963/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.28, no.6, 1964, 1057-1064

TOPIC TAGS: semiconductor property, electric property, Hall constant, mercury telluride, cadmium telluride

ABSTRACT: Single crystals of HgTe and HgTe-CdTe solid solutions were prepared by Bridgman's method and annealed in mercury vapor. Electric conductivities, Hall constants, and magnetoresistances were measured, in some cases at temperatures as low as $2^{\circ}K$. The relation between the Hall constant of HgTe and the magnetic field was determined at $4.2^{\circ}K$. The relation between the Hall constant and the magnetoresistance was determined for HgTe at several temperatures and was found to be linear. The behavior of the Hall constant of HgTe at low temperatures varied from sample to

Card 1/3

ACCESSION NR. AP4034929

ASSOCIATION: Fiziko-tekhnicheskiy institut imeni A. F. Ioffe, AN SSSR, Leningrad (Physisotechnical Institut, AN SSSR).

SUBMITTED: 03Dec63	DATE ACQ: 20May64	ENCL: 00
SUB CODE: PH	NO REF SOV: 003	OTHER: 005

Card 3/3

ACCESSION NR: AP4034929

were studied with equipment described by B. T. Kolomiets and A. A. Mal'kov (FTT, 5, 1219, 1963). The photomagnetic effect was measured in magnetic fields of 500—20,000 oe, and the photoconductivity in electric fields of 5—15 v/cm. The experimental results are given in the text. Optical data indicate that specimens with a low HgTe content ($x>0.2$) are semiconductors, and those with a high HgTe content are semimetals. The photosensitivity of the specimens has a complex nature. In HgTe and in its alloys with a high HgTe content ($x<0.2$) the photosensitivity is caused by the Nerust effect; the bolometric effect is insignificant. Photoconductivity and the Kikoin-Noskov effect appear with an increase in the CdTe content; they prevail in specimens with $x>0.25$. Thus, specimens with a high HgTe content are semiconductors whose band width decreases with an increase in the HgTe content. The optical and semiconductive properties of alloys with a high HgTe content can be explained by the semimetallic nature of the conductivity. Orig. art. has: 2 formulas and 3 figures.

Card 2/3

ACCESSION NR: AP4034929 S/0181/64/006/005/1457/1461

AUTHOR: Ivanov-Omskiy, V. I.; Kolomiyets, B. T.; Mal'kova, A. A.

TITLE: Optical and photoelectric properties of HgTe, and its alloys with CdTe

SOURCE: Fizika tverdogo tela, v. 6, no. 5, 1964, 1457-1461

TOPIC TAGS: HgTe, HgTe--CdTe alloys, optical properties, photoelectric properties, photosensitivity

ABSTRACT: The nature of the photosensitivity of HgTe and of $Cd_xHg_{1-x}Te$ specimens is discussed on the basis of measurements of their optical and photoconductive properties. Experiments were conducted with p-type specimens with an acceptor concentration of 10^{17}—10^{18} cm^3 [sic] [10^{17}—10^{18} cm^{-3}]. Transmission and reflection were measured at 150 and 300C at 1—25μ on the IKS-12 spectrometer with the IPO-12 attachment, and the absorption coefficients were determined from the data obtained. The photoconductive properties

Card 1/3

S/181/63/005/004/044/047
B102/B186

Spectral distribution of absorption...

9 μ. The photoconductivity spectral curves, when compared with that of the photomagnetic effect, are somewhat shifted toward shorter wavelengths. There are 2 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR Leningrad (Physicotechnical Institute imeni A. F. Ioffe AS USSR, Leningrad)

SUBMITTED: December 20, 1962

Fig. 2. Ordinate: Photomagnetic emf. per unit energy, %.

Card 2/2

S/181/63/005/004/044/047
B102/B186

AUTHORS: Kolomiyets, B. T., and Mal'kova, A. A.

TITLE: Spectral distribution of absorption and of the photomagnetic effect in $Cd_xHg_{1-x}Te$ solid solutions

PERIODICAL: Fizika tverdogo tela, v. 5, no. 4, 1963, 1219 - 1220

TEXT: The Cd-Hg-Te system was chosen because of its narrow forbidden band (0.01 - 1.45 ev) and its great electron mobility. The transmission curves ($I/I_0 = f(\lambda)$) of single crystals of this alloy were measured in the wave length range 0.5 - 18 μ with plates of 70 - 100 μ thickness at room temperature for x = 0.5, 0.3, 0.2 and 0.1. Compared with the CdTe curve the other curves are shifted to greater λ with decreasing x, they become less steep and the saturation values attained are lower. HgTe Pure is opaque for this range of wave lengths. From x=1 to x=0.2 the absorption band edge is shifted from 0.8 to 8-9 μ. The spectral distribution of the photomagnetic effect (Fig. 2) was measured with an ИКС-12 (IKS-12) spectrophotometer at room temperature and H_{const} = 8 koe. The effect was observed between 1 and

Card 1/2

Electrical properties of monocrystalline HgTe and its alloys with CdTe.
V. I. Ivanov-Omskiy, B. T. Kolomiyets, A. A. Malkova, V. K. Ozorodnikov, K. P. Smekalova. (Presented by V. I. Ivanov-Omskiy--15 minutes).

Notes: HgTe in semi-metallic; at 4°K the band overlap is ~ 0.05 eV, μ_h/μ_e = 50 to 100.

Report presented at the 3rd National Conference on Semiconductor Compounds, Kishinev, 16-21 Sept 1963

Properties and Structure of Ternary Semiconductor Systems. IV. Electric and Photoelectric Properties of Solid Substitution Reactions in the System ZnTe-CdTe

SOV/57-28-8-7/37

Card 4/4

Properties and Structure of Ternary Semiconductor Systems. IV. Electric and Photoelectric Properties of Solid Substitution Reactions in the System ZnTe-CdTe

SOV/57-58-8-7/37

by the low solubility of Zn in ZnTe. The authors are disposed to explain the fact that the sign of the carriers remains unchanged when Zn atoms are introduced in excess into ZnTe just by this circumstance. B.V.Pavlov and V.A.Sladkova assisted in this work. There are 7 figures, 3 tables, and 24 references, 9 of which are Soviet.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN SSSR Leningrad (Physical and Technical Institute, AS USSR, Leningrad)

SUBMITTED: July 16, 1957

Card 3/4

Properties and Structure of Ternary Semiconductor Systems. IV. Electric and Photoelectric Properties of Solid Substitution Reactions in the System ZnTe-CdTe

SOV/57-28-8-7/27

variation of the lattice parameters with the composition and the monotonous modification of the conductivity and of the thermo e.m.f. The system InAs-InP exhibits a linear dependence of the width of the forbidden zone upon the lattice parameters and a monotonously varying conductivity and thermo e.m.f. The system ZnTe-CdTe is the second of such systems which shows such a variation of the forbidden zone. The values of the effective masses of the initial binary solutions of CdTe and ZnTe are close to each other. They amount to 0,34 and 0,2, respectively. Thus these data agree with the hypotheses of Weiss, Folberth and Herman (Refs 6,5,3) concerning the existence of a linear dependence of the width of the forbidden zone upon the composition of solid solutions exhibiting the same zonal structure. ZnTe, which has a forbidden zone with a width of 2,1 eV (which value agrees with the position of zinc telluride in the crystallochemical group of zincblende compounds) (Ref 24) possesses a considerable hole-conductivity of the order of 10^{-1} Ohm^{-1}.cm^{-1}. This is apparently caused by the fact, that the zinc telluride in all cases has a composition deviating from the stoichiometrical rate. This may be caused

Card 2/4

AUTHORS: Kolomiyets, B. T., Mal'kova, A. A. SOV/57-28-8-7/37

TITLE: Properties and Structure of Ternary Semiconductor Systems (Svoystva i struktura troynykh poluprovodnikovykh sistem). IV. Electric and Photoelectric Properties of Solid Substitution Reactions in the System ZnTe-CdTe (IV.Elektricheskiye i fotoelektricheskiye svoystva tverdykh rastvorov zameshcheniya v sisteme ZnTe-CdTe)

PERIODICAL: Zhurnal tekhnicheskoy fiziki, 1958, Nr 8, pp. 1662 - 1669 (USSR)

ABSTRACT: As was shown by Goryunova and Fedorova in reference 7, the system ZnTe-CdTe forms a continuous series of solid substitution solutions. This is a study of the electric and of the photoelectric properties intended to determine the correlation between the modifications of the composition and the lattice constant on the one hand and the electric properties on the other. The initial substances Cd, Zn, and Te were purified by a distillation in vacuo. The solid solutions were produced by a combined melting of these elements. The solid solutions of ZnTe-CdTe exhibit the same dependence of electric and of photoelectric properties upon variations in the composition as was found earlier in other solid substitution solutions. This includes the linear

Card 1/4

USSR / Physical Chemistry. Crystals. B-5

Abs Jour : Ref Zhur - Khimiya, No 8, 1957, 25950

Abstract : All the alloys of the system $xSb_2S_3 \cdot (1 - x)\ Bi_2S_3$ are metallic gray and do not differ from the initial binary components either by the crystallization character (needles), or by the structure. All the alloys are solid replacement solutions with semiconductor properties. The $\acute{e}$ of some of these alloys is considerably less than that of the initial substances, and their long-wave maximum of the spectral sensitivity is greater. See RZhKhim, 1956, 38869 for Part II.

Card : 2/2

B-5

MAL'KOVA, A. A.

USSR /Physical Chemistry. Crystals.

Abs Jour : Ref Zhur - Khimiya, No 8, 1957, 25950

Author : N.A. Goryunova, B.T. Kolomiyets, A.A. Mal'kova

Title : Properties and Structure of Ternary Semiconductor Systems. III. Conductivity and Photoconductivity in Systems of Thallium, Antimony and Bismuth Sulfides.

Orig Pub : Zh. tekhn. fiziki, 1956, 26, No 8, 1625 - 1633.

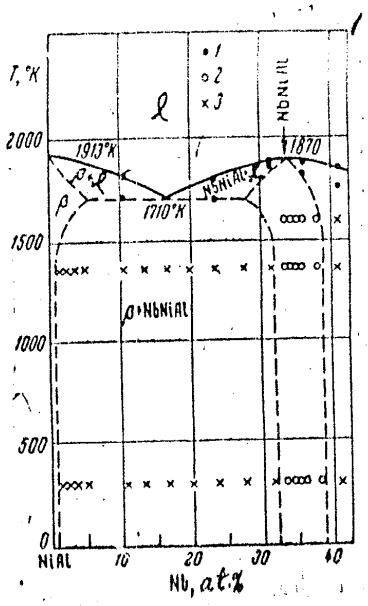
Abstract : It was established by the microstructural x-ray diffraction and the thermal analyses that only one chemical compound $Tl_2S.3Sb_2S_3$ of a narrow homogeneity region existed in the system $xTl_2S - (1 - x)Sb_2S_3$. All the alloys of this system are semiconductors of a photoconductivity σ_ϕ, which does not exceed the σ_ϕ of the initial binary components in respect of the absolute sensitivity, as well as of the spectral distribution, and of a conductivity σ, which is less than the σ of the initial binary compounds.

Card : 1/2

L 43101-66

ACC NR: AP6014119

Fig. 1. Phase diagram of the system NiAl--Nb (up to 40 at.% Nb): 1 - points obtained by thermal analysis; 2 - one-phase structure; 3 - two-phase structure.



Orig. art. has: 4 tables and 3 figures.

SUB CODE: 11/ SUBM DATE: 30Jul64

Card 2/2 MLP

L 43101-66 EWT(m)/EWP(w)/T/EWP(t)/ETI IJP(c) JH/JD/HW/JG

ACC NR: AP6014119 (A) SOURCE CODE: UR/0370/65/000/006/0132/0136

AUTHORS: Kornilov, I. I. (Moscow); Mints, R. S. (Moscow); Guseva, L. N. (Moscow); Malkov, Yu. S. (Moscow)

ORG: none

TITLE: Interaction of NiAl with niobium

SOURCE: AN SSSR. Izvestiya. Metally, no. 6, 1965, 132-136

TOPIC TAGS: nickel containing alloy, aluminum containing alloy, niobium containing alloy, alloy phase diagram

ABSTRACT: The phase diagram of the system NiAl-Nb was investigated. The microhardness and microstructure of the various phases and the superconductivity of the compounds NbNiAl and Nb_2NiAl were determined. The experimental results are summarized in graphs and tables (see Fig. 1). It was found that the Nb—Ni--Al system forms two intermetallic compounds, viz: NbNiAl and Nb_2NiAl. The compound Nb_2NiAl becomes superconductive at 4.2K, but the compound NbNiAl does not become superconductive at the temperatures investigated, i.e., down to 1.4K. The superconductivity experiments were performed at the laboratory of the Institute for Physics Problems, AN SSSR (Laboratory of N. Ye. Alekseyevskiy, corresponding member).

UDC: 669.715

Card 1/2

L 00823-67

ACC NR: AT6034456

an elongation of 10—20%, a reduction of area of 18—30%, and an impact strength of 6—12 mkg/cm^2. In view of high characteristics of ductility, some additional alloying can be used to increase strength.

SUB CODE: 11/ SUBM DATE: 10Jun66/ ORIG REF: 007/ ATD PRESS: 5103

Card 2/2 ls

L 08423-67 EWT(m)/EWP(t)/ETI IJP(c) JD/RW/GO/GD/JH

ACC NR: AT6034456 SOURCE CODE: UR/0000/66/000/000/0200/0201

AUTHOR: Mints, R. S.; Tsypkina, Ye. D.; Sipina, M. P.; Malkov, Yu. S.

ORG: none

TITLE: Wrought heat-resistant alloys of Nb-Ni-Al system

SOURCE: AN SSSR. Institut metallurgii. Svoystva i primeneniye zharoprochnykh splavov (Properties and application of heat-resistant alloys). Moscow, Izd-vo Nauka, 1966, 200-201

TOPIC TAGS: heat resistant alloy, niobium, nickel, aluminum, ~~niobium-nickel-aluminum alloy, nickel-aluminum compound, nickel-niobium compound,~~ alloy structure, property

ABSTRACT: The phases of the Ni-Ni_3Al-Ni_3Nb system have been investigated in a search for wrought heat-resistant alloys consisting of γ'-phase strengthened by niobium. Microstructure and x-ray diffraction analyses revealed the existence of three regions in the Ni-Ni_3Al-Ni_3Nb system at niobium contents of up to 20%: a single-phase region of a nickel-base γ-phase, another single phase region of Ni_3Al, and a two-phase $\gamma + \gamma'$ region. The most heat-resistant ternary alloys are located in the two-phase region. These alloys have a uniform, finely dispersed microstructure. One such alloy had a tensile strength of 106—119 kg/mm^2,

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ACCESSION NR: AT4007030

specimen before dilatometric investigation, and Ti after this process. The dilatometric curve shows that α'-β transformation of titanium occurs at 890C, and that the transformation of α-Ti into β-Ti is accompanied by a marked increase in volume, an endothermic effect and evolution of gaseous compounds at temperatures of 850-900C. Values are presented for the coefficients of linear and thermal expansion of wrought Ti in the temperature range 400-1100C. The kinetics of the sintering process were also studied. When a powdered specimen was pressed under a pressure of 800 kg/mm^2, the compact Ti obtained, with a specific gravity of 4.25 and Brinell hardness of 250 kg/mm^2, showed a microstructure qualifying the metal for coldworking. It was proved that isothermic sintering can be replaced with thermocyclic sintering by repeated cyclic heating and cooling. The optimal conditions for cyclic sintering can be determined by the dilatometer. Orig. art. has: 6 figures and 1 table.

ASSOCIATION: Institut metallurgii AN SSSR (Institute of Metallurgy, AN SSSR)

SUBMITTED: 00 DATE ACQ: 27Dec63 ENCL: 00

SUB CODE: ML NO REF SOV: 003 OTHER: 001

Card 2/2

ACCESSION NR: AT4007030 S/2598/63/000/010/0095/0099

AUTHOR: Mints, R. S.; Shelest, A. Ye.; Malkov, Yu. S.

TITLE: Dilatometric study of titanium

SOURCE: AN SSSR. Institut metallurgii, Titan i yego splavy*, no. 10, 1963. Issledovaniya titanovy*kh splavov, 95-99

TOPIC TAGS: thermal expansion, titanium thermal expansion, titanium powder sintering, titanium sintering, titanium isothermal sintering, titanium cyclic sintering, dilatometry, titanium dilatometry

ABSTRACT: Using the universal DTs-4 high-temperature vacuum dilatometer developed at the Institut metallurgii A. A. Baykova (Metallurgical Institute), the authors investigated the coefficient of thermal expansion in the temperature range 400-1100C and the kinetics of the sintering process of commercial grade VT-1 Ti. This device permits temperatures up to 2200C and rapid heating or hardening of the tested specimens (500 degrees/min). The linear thermal expansion was determined directly by an arrow indicator furnished with a timing device. A cross-section of this device is shown. Specimen rods were rolled, subjected to deformation in the temperature range 900-1100C, and hardened in air. The rate of heating or cooling was 30 degrees/minute. Analysis of the microstructure revealed the α' phase in the

Card 1/2

MINTS, R.S.; BELYAYEVA, G.F.; MALKOV, Yu.S.

Investigating the interaction between Ni_3Al and Ni_3Nb metallic compounds. Issl.po zharopr.splav. 8:79-84 '62. (MIRA 16:6)
(Intermetallic compounds) (Phase rule and equilibrium)

MINTS, R.S.; SAMSONOVA, N.N.; MALKOV, Yu.S.

Effect of the elements of the 5th group of the periodical table (V, Nb, Ta) on the properties of Fe_3Al. Dokl. AN SSSR. 144 no.6: 1324-1327 Je '62. (MIRA 15:6)

1. Institut metallurgii im. A.A.Baykova i Glavnyy nauchno-issledovatel'skiy institut pri Gosudarstvennom nauchno-ekonomicheskom soveta Soveta Ministrov SSSR. Predstavleno akad. I.I.Chernyayevym.

(Iron-alumium alloys) (Metals)

Interaction between the metallic ...

Fig. 2. Phase diagram of the system Ni_3Al - Ni_3Nb (α), composition - hardness (δ), composition - resistivity (β). Legend: (1) One-phase structure, (2) two-phase structure, (3) as-quenched, (4) annealed; abscissa: % by weight, ordinate bottom left: ohm·cm, ordinate center right: kgf/mm^2.

X

Interaction between the metallic ...

Institute of the Civil Air Fleet) by V. G. Chuprina under the supervision of Professor M. P. Arbuzov. Exact data of these studies has been published separately (M. P. Arbuzov, V. G. Chuprina, Issledovaniya po zharoprochnym splavam, 7, 1961). From the results obtained ' e phase diagram was constructed and hardness and resistivity were plotted against composition (Fig. 2). There are 2 figures and 1 table. The four most important English-language references are: A. Taylor, R. W. Floyd, J. Inst. Metals, 81, 25 (1952-1953); L. Vegard, Structure Reports, 11, 27 (1947-1948); J. H. Westbrook, J. Metals, Trans. Sec., 9, 7, 898 (1957); O. Kubashewski, A. Schneider, J. Inst. Metals, 75, 403 (1948-1949).

ASSOCIATION: Institut metallurgii im. A. A. Baykova (Institute of Metallurgy imeni A. A. Baykov)

PRESENTED: October 25, 1961, by I. I. Chernyayev, Academician

SUBMITTED: October 20, 1961

Card 2/4

S/020/62/143/004/018/027
B106/B138

18.1150

AUTHORS: Mints, R. S., Belyayeva, G. F., and Malkov, Yu. S.

TITLE: Interaction between the metallic compounds Ni_3Al and Ni_3Nb

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 143, no. 4, 1962, 871-874

TEXT: Continuing earlier work, the authors studied this interaction by thermal, metallographic and X-ray structural analyses, and hardness and electrical resistivity measurements. The microstructure was studied in the as-cast state, after quenching from various different temperatures ($1200^{\circ}C$ - 5 hr, $1000^{\circ}C$ - 100 hr, $800^{\circ}C$ - 300 hr, $600^{\circ}C$ - 750 hr), and after slow cooling. 10% oxalic acid was used as the etching medium. Electrical resistivity was measured potentiometrically, hardness on a Vickers tester (10 kg). Nickel-filtered cobalt K_{α} radiation was used for the X-ray phase analyses of powder specimens in a Debye camera. X-ray structural analysis of Ni_3Al - Ni_3Nb alloys was conducted at the same time at the Kiyevskiy institut grazhdanskogo vozdushnogo flota (Kiyev

Card 1/3

A study of the interaction...

amounts of Ni_3Nb are added; the maximum values are: of p-128-130 ohm.cm x 10^6 for the alloy containing 35-45% Ni_3Nb (i.e., the single phase alloy at the limit of solubility of the Ni_3Nb); of Hy - 444 kg./sq.mm. for the alloy containing 50% Ni_3Nb after tempering at 1100° and annealing (i.e., the two-phase alloy with a minimum amount of the second phase). Photomicrographs showing the microstructure of the various alloys are presented. There are 3 figures and 1 table.

Card 3/3

A study of the interaction...

poweder method, using the NiCo K_α radiation was applied in the x-ray analysis, and conventional techniques were used in the other cases. The stoichiometric composition Ni_3Al crystallizes at 1390-1400°; alloys containing less than 40% Ni_3Nb are composed of a single phase, viz., a Ni_3Al - based solid solution. Alloys containing >40% Ni_3Nb (except pure Ni_3Nb) show the presence of two different crystalline lattices - a face-centered-cubic one (Ni_3Al-based solid solution, a=3.562 Å in the case of pure Ni_3Al), and a rhombic one (Ni_3Nb-based solid solution, a=5.090 Å, b=4.234 Å, c=4.524 Å in the case of pure Ni_3Nb). The eutectic composition is 30% Ni_3Al, 70% Ni_3Nb, crystallization temperature = 1280°. Both the electric resistivity (ρ) and the hardness (H_v) increase with increasing Ni_3Nb to a certain maximum, and decrease if further

Card 2/4 3

S/659/62/008/000/011/028
I048/I248

AUTHORS: Mints, R.S., Belyaeva, G.F., and Malkov, Yu.S.

TITLE: A study of the interaction between the intermetallic compounds Ni_3Al and Ni_3Nb

SOURCE: Akademiya nauk SSSR. Institut metallurgii, Issledovaniya po zharoprochnym splavam. v.8. 1962. 79-84

TEXT: Various methods (thermal, metallographic, and x-ray, diffraction analysis, and hardness and electric resistivity measurements) were used in a study of the interaction between Ni_3Al and Ni_3Nb, and the results are presented graphycally, within the coordinates structure vs. hardness, structure vs. electric resistivity, and as the phase diagram for the system at 600-1500°. The

Card 1/4

MINTS, R.S.; BELYAYEVA, G.F.; MALKOV, Yu.S.

Phase diagram of the system $Ni_3AL - Ni_3NB$. Zhur.neorg.khim. 7 no.10:2382-2387 O '62. (MIRA 15:10)
(Intermetallic compounds) (Nickel alloys)

MAL'KOV, Yu. I. Shestkov, Ya. A.

PHASE I BOOK EXPLOITATION SOV/6181

Ural'skoye soveshchaniye po spektroskopii. 3d, Sverdlovsk, 1960. Materialy (Materials of the Third Ural Conference on Spectroscopy) Sverdlovsk, Metallurgizdat, 1962. 197 p. Errata slip inserted. 3000 copies printed.

Sponsoring Agencies: Institut fiziki metallov Akademii nauk SSSR. Komissiya po spektroskopii; and Ural'skiy dom tekhniki VSNTO.

Eds. (Title page): G. P. Skornyakov, A. B. Shayevich, and S. G. Bogomolov; Ed.: Gennadiy Pavlovich Skornyakov; Ed. of Publishing House: M. L. Kryzhova; Tech. Ed.: N. T. Mal'kova.

PURPOSE: The book, a collection of articles, is intended for staff members of spectral analysis laboratories in industry and scientific research organizations, as well as for students of related disciplines and for technologists utilizing analytical results.

COVERAGE: The collection presents theoretical and practical problems of the application of atomic and molecular spectral analysis in controlling the chemical composition of various materials in ferrous and nonferrous metallurgy, geology, chemical industry, and medicine. The authors express their thanks to G. V. Chentsova for help in preparing the materials for the press. References follow the individual articles.

TROSHIN, P.V., kand.tekhn.nauk, dotsent; FEDOTOV, M.P., inzh.; SOKOLOV, Yu.P., inzh.; BORISOV, B.G., kand.tekhn.nauk; MALKOV, Yu.A., inzh.; SOROKIN, A.F., doktor tekhn.nauk, prof. [deceased]; ZUYEV, A.I., kand.tekhn.nauk; KOPTELOV, Yu.K., kand.tekhn.nauk; YERSHOV, Yu.G., inzh.; BROVKIN, L.A., kand.tekhn.nauk, dotsent; POTOSKUYEV, M.P., kand.tekhn.nauk, dotsent; PYATACHKOV, B.I., kand.tekhn.nauk, dotsent; ROMANOVA, T.M., kand.tekhn.nauk, dotsent

Abstracts of completed research works contracted for the national economy. Sbor. nauch.trud. TEI no.10 [illegible] '62.
(MIRA 16:9)

YUSHKOV, V., inzh.; KUSHNER, M., inzh.; MAL'KOV, Yu., inzh.

Pulse selector. Radio no.7:54 Jl '65. (MIRA 18:9)

MAL'KOV, Ye.M.; KOSYREVA, V.G.

Determination of gamma amounts of cadmium in natural waters.
Zav. lab. 31 no.11:1327 '65. (MIRA 19:1)

1. TSentral'naya laboratoriya Gosudarstvennogo geologicheskogo komiteta UzSSR.

L 13129-66

ACC NR: AP6000215

more trivial, since the condition under which it is derived is phenomenological and does not follow from more general requirements. The limitation finally obtained is given in the form $d\sigma/do < 538\ q_s^2/t^2$ (the notation is standard), and has the same angle dependence as the upper limit derived by Kinoshita et al. (proportional to the reciprocal of the angle squared). Author thanks V. B. Gribov for remarks. Orig. art. has: 20 formulas.

SUB CODE: 20/ SUBM DATE: 04Jul65/ ORIG REF: 002/ OTH REF: 003

Card 2/2 HW

L 13129-66 EWT(1)
ACC NR: AP6000215 SOURCE CODE: UR/0056/65/049/005/1558/1561

22
21 B

AUTHOR: Malkov, Ye. I.

ORG: Physicotechnical Institute im. A. F. Ioffe, Academy of Sciences SSSR (Fiziko-tekhnicheskiy institut Akademii nauk SSSR)

TITLE: Limitation on the elastic scattering cross section in the region of the diffraction peak. 21,44,55

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 5, 1965, 1558-1561

TOPIC TAGS: scattering cross section, elastic scattering, scattering amplitude, particle diffraction

ABSTRACT: Unlike earlier investigators (M. Froissart, Phys. Rev. v. 123, 1053, 1961, or T. Kinoshita et al., Phys. Rev. Lett. v. 10, 460, 1963), the author obtains for the upper bound of the elastic scattering amplitude in the region of the diffraction peak an expression that contains no unknown constant, by making use of the fact that in the region of the diffraction peak the real part of the amplitude is smaller than the imaginary constant. The obtained limitation is more stringent with respect to the energy dependence than the estimate of Kinoshita et al. (it has no logarithmic factor). On the other hand, this limitation is

Card 1/2

ACCESSION NR: AP4042388

nauk SSSR (Physicotechnical Institute, Academy of Sciences SSSR)

SUBMITTED: 27Dec63 ENCL: 00

SUB CODE: NP NR REF SOV: 002 OTHER: 005

3/3

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031900046-6

ACCESSION NR: AP4042388

than exponential, then the unitarity condition stipulates that they be expressed in terms of the part containing singularities in two variables, accurate to terms corresponding to S and P waves in three channels. It is thus impossible to add to a two-particle amplitude satisfying the unitarity condition in three channels the functions with poles in one variable without violating unitarity. It is shown in particular that the only entire function that satisfies the unitarity condition and increases at infinity at a slower than exponential rate is a constant. The results obtained are a generalization of the result of M. Froissart (Phys. Rev. v. 123, 1053, 1961). By way of an example, an expression is obtained for the single integrals and for the subtraction polynomial of the Mandelstam representation in terms of double spectral functions. "I wish to thank I. M. Shmushkevich for valuable remarks." Orig. art. has: 51 formulas.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe Akademii

ACCESSION NR: AP4042388 S/0056/64/047/001/0188/0199

AUTHOR: Malkov, Ye. I.

TITLE: Connection between single integrals of the Mandelstam representation and double spectral functions

SOURCE: Zh. eksper. i teor. fiz., v. 47, no. 1, 1964, 188-199

TOPIC TAGS: particle interaction, scattering amplitude, spectral correlation function, spectral energy distribution

ABSTRACT: The paper discusses the connection between the poles of a two-particle amplitude expressed in terms of two variables and the poles of the amplitude as a single-variable function, and also the connection between those parts of the amplitude that have poles in only one variable (s, t, or u) in the finite part of complex space and the part having singularities in one variable only. It is shown that if the former increase at infinity at a rate slower

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88466

Electromagnetic Radiation Emitted in Collisions Between Particles With Close Values of the Specific Charge e/m

S/056/60/039/006/057/063
B006/B063

frequencies and low energies of the colliding particles. I. Kh. Lemberg and A. P. Grinberg are thanked for discussions. There are 7 references: 6 Soviet and 1 German.

ASSOCIATION: Leningradskiy fiziko-tekhnicheskiy institut Akademii nauk SSSR (Leningrad Institute of Physics and Technology, Academy of Sciences USSR)

SUBMITTED: July 30, 1960

Card 3/3

88465

Electromagnetic Radiation Emitted in Collisions Between Particles With Close Values of the Specific Charge e/m

S/056/60/039/006/057/063
B006/B063

($\hbar\omega \ll E = \mu v^2/2$; μ- reduced mass of the colliding particles; v - their relative velocity), the radiation intensity or the corresponding cross section can be calculated in a classical manner. In doing so, the particle trajectories without radiation are calculated first, and then the radiation accompanying the particle motion. For dipole radiation, this has already been done by L. D. Landau, Ye. M. Lifshits, and others. Here, the case of quadrupole radiation is investigated in a classical manner. The e/m values of the colliding nuclei are supposed to be similar but not equal, and allowance is made for dipole radiation and the interference between dipole and quadrupole radiations. In this case, magnetic dipole radiation is never observed. The particles are assumed to have a non-relativistic velocity. Expressions are derived for the differential bremsstrahlung cross section for charged particle collisions in the case of predominating quadrupole radiation. The formulas obtained for angular and energy distributions and the radiation polarization, which make allowance for quadrupole and dipole radiations and their interference, are used to study the limiting cases of high and very low frequencies. It has been shown that classical approximation yields useful results for low radiation

Card 2/3

88465

q

S/056/60/039/006/057/063
B006/B063

24.2500

AUTHORS: Malkov, Ye. I., Shmushkevich, I. M.

TITLE: Electromagnetic Radiation Emitted in Collisions Between Particles With Close Values of the Specific Charge e/m

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 39, No. 6(12), pp. 1837-1846

TEXT: The bremsstrahlung occurring in electron-electron collisions has been theoretically studied in Born approximation which, however, is sufficient only at high velocities. For v/c it has been studied by means of Coulomb wave functions, in which case the results obtained are applicable only to dipole radiation. The radiation occurring in electron-electron collisions or, quite generally, in collisions of particles with equal e/m, has mainly a quadrupole character, and the velocities of the particles (e.g., nuclei) are such that Born approximation cannot be used; $(Z_1 Z_2 e^2/\hbar v \gg 1)$. If, in addition to this condition, also the energy of the radiation quanta is small compared to the kinetic energy of the nuclei

Card 1/3

ACC NR: AM6023941

TABLE OF CONTENTS [abridged]:

SUB CODE: 18// SUBM DATE: 16Feb66/ ORIG REF: 108/ OTH REF: 116

Card 2/2

ACC NR: AM6023941 Monograph UR/

Broder, D. L.; Zaytsev, L. N.; Komochkov, M. M. Mal'kov, V. V.; Sychev, B. S.

Concrete in the shielding of nuclear installations (Beton v zashchite yadernykh ustanovok) Moscow, Atomizdat, 1966. 239 p. illus., biblio., tables. 2050 copies printed.

TOPIC TAGS: accelerator, concrete, nuclear engineering, nuclear radiation, radiation shielding, reactor shielding

PURPOSE AND COVERAGE: This book is intended for designers of nuclear devices and readers working in the nuclear industry. Methods and techniques for swift evaluation of various nuclear shieldings are presented. Approximate methods of calculating concrete shieldings are covered in the following sequence: the determination of emitted radiation and its distribution, of the distribution of radiation fluxes along the thickness of the shield, and of the permissible radiation levels beyond the shield. Particular attention is given to the shieldings of high-power accelerators. Prof. A. N. Komarovskiy and Docent V. B. Dubrovskiy provided advice, and A. V. Kudryavtseva, A. M. Tugolukov, V. S. Kiselev, and P. A. Lavdanskiy cooperated.

Card 1/2 UDC: 621.039.538

L 09873-67

ACC NR: AP6032250

concretes with a very small amount of water or those entirely without combined water, such as heat-resistant concretes. [Authors' abstract]

SUB CODE: 06, 11/ SUBM DATE: none/ ORIG REF: 005/ OTH REF: 003/

Card 2/2

L 0[illegible]73-67 [illegible] IJP(c) JD/[illegible]

ACC NR: AP6032250 (A) SOURCE CODE: UR/0097/66/000/007/0032/0034

AUTHOR: Zaytsev, L. N. (Candidate of technical sciences); Lavdanskiy, P. A.; Mal'kov, V. V.; Sychev, B. S.

ORG: none

TITLE: Role of boron-containing concretes as nuclear reactor shields

SOURCE: Beton i zhelezobeton, no. 7, 1966, 32-34

TOPIC TAGS: boron, concrete, nuclear shielding, biological shielding

ABSTRACT: The addition of boron to biological shielding made from ordinary concrete reduces its thickness by 27% when the content of chemically combined water is low, and by 23% when the amount of water in the concrete is 75 kg/m^3 (with a dosage ratio of $D_1^o/D_2^o = 10^{-3}$). Maximum reduction in shielding thickness due to the addition of boron to heavy concrete for ore-filled concrete with a volumetric weight of 3200 kg/m^3 is 3% (when the ratio between the dosages is $D_1^o/D_2^o = 10^{-1}$). Thus, the addition of boron is not economically advantageous, since it results in only a small savings in concrete. Exceptions are reinforced

Card 1/2 UDC: 666.974

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031900046-6

L 06454-67

ACC NR: AP6024543

2

be made of hydrogen-containing material to reduce the effect of accumulation of intermediate neutrons in heavy materials. The authors thank Z. Tsisek and A. P. Chervatenko for help with the experiments. Orig. art. has: 3 figures and 3 formulas.

SUB CODE: 18/ SUBM DATE: 22Feb66/ ORIG REF: 005

Card 2/2 pla

L 06454-67 EWT(m)/EWP(t)/ETI IJP(c) JD/JR

ACC NR: AP6024543 SOURCE CODE: UR/0089/66/021/001/0056/0057

AUTHOR: Zaytsev, L. N.; Komochkov, M. M.; Mal'kov, V. V.; Cherevatenko, Ye. P.; Sychev, B. S.

ORG: none

TITLE: Attenuation of high-energy neutron fluxes by heterogeneous shields

SOURCE: Atomnaya energiya, v. 21, no. 1, 1966, 56-57

TOPIC TAGS: reactor shielding, reactor neutron flux, neutron absorption

ABSTRACT: The authors present results of experimental investigations of the distribution of neutron fluxes of varying energy groups in layered shields. The investigations were made with the OIYaI synchrocyclotron in a neutron flux obtained by bombarding a beryllium target with 660-Mev protons. The geometry of the experiment is described elsewhere (Atomanaya energiya v. 12, 525, 1962). The neutron fluxes were registered with threshold detectors of In^{115}, P^{31}, and C^{12}, which were briefly described earlier (Atomnaya energiya v. 20, 323, 1966). X ray films of individual gamma dosimeters were also used. The following shield combinations were used: iron - water, iron - heavy concrete, and water - iron - water. An analysis of the measured attenuation produced by these shields leads to the conclusion that the presence of the first layer does not influence the character of attenuation of the neutron flux in the second layer. Secondary effects connected with resonant neutrons produced at the boundary of the two materials are discussed. It is recommended that the second layer

Card 1/2

UDC: 621.039.512.45

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031900046-6

L 41035-66

ACC NR: AP6013725

3

of iron without the addition of hydrogen is not expedient. The authors are deeply indebted to V. S. Kiselev for his help in the calculation of the buildup factors of intermediate neutrons, and to V. P. Afanas'yev and V. M. Nazarov for making available the calibrated high-energy and intermediate-energy neutron detectors. Orig. art. has: 7 formulas, 2 figures, and 3 tables.

SUB CODE: 18/ SUBM DATE: 29Jun65/ ORIG REF: 004/ OTH REF: 001

Card 2/2

L 41035-66 EWT(m)/T

ACC NR: AP6013725 (A) SOURCE CODE: UR/0089/66/020/004/0323/0327

AUTHOR: Sychev, B. S.; Mal'kov, V. V.; Komochkov, M. M.; Zaytsev, L. N.

ORG: none

TITLE: The passage of high energy neutrons through iron-water mixtures

SOURCE: Atomnaya energiya, v. 20, no. 4, 1966, 323-327

TOPIC TAGS: neutron shielding, neutron diffusion, neutron detector, neutron flux

ABSTRACT: The accumulation of slow neutrons ($E < 1$ MeV) during the passage of high energy neutrons through iron and iron-water mixtures was determined experimentally and theoretically. A set of 20 mm thick 980 x 980 mm steel plates was placed into a 1000 x 1000 x 2000 mm metal container located in the synchrocyclotron chamber of the OIYaI. Concrete blocks shielded the device from scattered radiation. Neutrons were generated by 170, 250, 350, 480, and 660 MeV protons. The paper presents the characteristics of the three detectors used, the attenuation of the neutron flux generated by high energy protons, the relaxation length of high energy neutrons (for various energies of primary protons and differing concentrations of water), the buildup factors of intermediate neutrons, and the thickness of iron-water shielding of varying hydrogen content for a 200-fold attenuation. An analysis of the results shows that the use

Card 1/2 UDC: 621.039.512.45

L 28845-66

ACC NR: AP6013737

groups were tested in the concrete containing 0.35wt.% of hydrogen. In addition, the behavior of intermediate neutrons was investigated for 0.7 and 1 wt.% of hydrogen content. A table is presented giving neutron attenuation lengths (λ, kg/m^2) for concrete of 1500 to 5000 kg/sq m thickness with respect to various energy levels of protons bombarding a beryllium target. The table contains also the calculated ratio λ/λ_{in} (where λ_{in} is the length of inelastic interaction with neutron nuclei of energy higher than 100 Mev). The authors conclude that the attenuation of high-energy neutrons (several hundred Mev) is characterized by the relaxation length defined by the equation: $\lambda \approx (1,3 \pm 0,1)\lambda_{in}$. The factors characterizing the accumulation of intermediate neutrons in concrete with various hydrogen contents are also presented in a table. Orig. art. has: 2 tables and 1 graph.

SUB CODE: 18,20 / SUBM DATE: 18Nov65 / ORIG REF: 003 / OTH REF: 000

Card 2/2 CC

L 28845-66 EPF(n)-2/EWA(h)/EWP(j)/EWT(m)/ETC(f)/EWG(m)/EWA(1) RM

ACC NR: AP6013737 (A) SOURCE CODE: UR/0089/66/020/004/0355/0356

AUTHOR: Sychev, B. S.; Mal'kov, V. V.; Komochkov, M. M.; Zaytsev, L. N.

ORG: None

TITLE: Passage of high-energy neutrons through a heavy concrete shielding

SOURCE: Atomnaya energiya, v. 20, no. 4, 1966, 355-356

TOPIC TAGS: neutron energy distribution, neutron shielding, nuclear shielding, concrete

ABSTRACT: The authors present in a brief form the results of their experiments, conducted in the OIYaI synchrocyclotron laboratory, on shielding consisting of a series of slabs (53 mm thick). The slabs are made of heavy (hematite) concrete having a density of 3480 kg/cu m. The chemical composition of concrete slabs is given, being expressed in percent by weight. The content of hydrogen is 0.35wt.%. The experimental data characterizing the neutron attenuation for different energy groups are plotted for various concrete thicknesses (up to 4000 kg/sq m). The neutron groups include high-energy neutrons (E≥20 Mev), fast neutrons 2 to 20 Mev), intermediate neutrons (E about 1.44 ev). These three

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UDC: 621.039.512.45

L 1928-66

ACCESSION NR: AP5023779

sections on the boron and iron content of concretes. Orig. art. has: 3 figures and 4 tables.

ASSOCIATION: none

SUBMITTED: 20Jul64 ENCL: 00 SUB CODE: NP, MT

NO REF SOV: 009 OTHER: 005

2/2

L 1928-66 EWT(m)/EPF(n)-2/EWG(m)/EWA(h)/EWA(1) DM

ACCESSION NR: AP5023779 UR/0089/65/019/003/0303/0307
621.039.538.7

AUTHOR: Zaytsev, L. N.; Lavdanskiy, P. A.; Mal'kov, V. V.; Sychev, B. S.

TITLE: Shielding parameters of concretes

SOURCE: Atomnaya energiya, v. 19, no. 3, 1965, 303-307

TOPIC TAGS: concrete, neutron shielding, radiation shielding, neutron absorption, neutron cross section, gamma ray absorption

ABSTRACT: On the basis of literature data, a survey of the shielding parameters of concretes is given in the form of graphs and tables. The chemical composition of the basic materials used as fillers for concretes and some of their shielding parameters are tabulated. Another table lists the mass attenuation factors for γ radiation (which are the same for most of these materials except water, borate ore, boron carbide, baryta, and steel). A nomogram for the calculation of removal cross sections of fast neutrons in concretes and a table of macroscopic neutron removal cross sections of the elements included in the composition of the concretes are given. Other illustrated relationships are the variation of the inelastic interaction cross section of ultrafast neutrons with the iron content of concretes, and the dependence of thermal neutron absorption cross

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L 05669-67 EEC(k)-2/EWT(1)/FSS-2 SCTB TT/DD/GW

ACC NR: AM6000751 Monograph UR/

47
8

Malkov, V. M., comp.

Cosmonaut Pavel Belyayev (Kosmonavt Pavel Belyayev) [Vologda] Severo-zapadnoye knizhnoye izd-vo, 1965, 141 p. illus., photos. 15,000 copies printed.

TOPIC TAGS: space walk, space flight, manned spacecraft, astronaut/ Voskhod-2 manned spacecraft

PURPOSE AND COVERAGE: This book is intended to inform the general reader about various details concerning the Voskhod-2 space flight, to relate the personal flight experiences of each of the astronauts (Belyayev and Leonov), and present biographical note on P. Belyayev. It consists of a collection of articles and broadcast reports by various correspondents, which are arranged in three parts.

TABLE OF CONTENTS:

SUB CODE: 22,07 SUBM DATE: 12May65/

Card 1/1

MALKOV, V.M.; VIKULOV, S.V., red.; DRUGOV, V.I., red.; LOGINOV, V.I., red.; MIKHAYLOV, A.D., red.; SHOROKHOV, A.N., red.; PARAMONOV, B.P., red.; ROMANOV, A.A., red.; NEVZOROV, V.T., red.; KHMEL'NITSKIY, A.S., red.;

[Volga-Baltic Sea Waterway] Volgo-balt. Vologda, Severo-Zapadnoe knizhnoe izd-vo, 1965. 381 p. (MIRA 18:10)

MALKOV, V.M., KIHARDINA [illegible]
MIKHAYLOV, [illegible] SHOROKHOV,
A.N., red.

[Astronaut Pavel [illegible] Pavel Belyaev.
Vologda, Sever[illegible] 196[illegible]
(MIRA [illegible])

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031900046-6

ACCESSION NR: AT4034321

which seem to be a universal tool for calculational problems of this sort. Consideration of the boundary conditions leads to the expressions:

$$T_t = -(1-\mu^2)pr_0\cos^2\gamma(\cos\beta-\sin\beta)e^{\beta},$$
$$M_n = -(1-\mu^2)cpr_0\cos^2\gamma(\cos\beta+\sin\beta)e^{\beta}. \quad (4.14)$$

which are seen to differ somewhat from the analogous expression of Estrin, due to the fact that the direction of national diminution of the solution is identified with the direction of the normal to the contour. "The author thanks K. F. Chernykh for posing the problem and also for his advice and help in its solution." Orig. art. has: 3 figures and 17 formulas.

ASSOCIATION: Matematiko-mekhanicheskiy fakul'tet Leningradskogo universiteta (Department of Mathematics and Mechanics, Leningrad State University).

SUBMITTED: 00 DATE ACQ: 30Apr64 ENCL: 00

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

Card 2/2

ACCESSION NR: AT4034321 S/2753/64/000/003/0146/0152

AUTHOR: Mal'kov, V.M.

TITLE: Calculation of cylindrical shells with transverse cuts

SOURCE: Leningrad. Universitet. Matematiko-mekhanicheskiy fakul'tet. Issledovaniya po uprugosti i plastichnosti, no. 3, 1964, 146-152

TOPIC TAGS: shell, cylindrical shell, circular shell, shell calculation, machine design, thin shell, elasticity

ABSTRACT: A series of articles has been devoted to the investigation of cylindrical shells with boundaries not coinciding with linear curves. (M. I. Estrin. Raschet tsilindricheskoy obolochki, zakreplennoy po kosomu konturu. Izv. AN SSR, OTN, mekhaniki i mashinostr., vol. 2, 1952; A. van der Neut. Bending at the oblique end section of cylindrical shells. IUTAM, Proceedings of the symposium on the theory of thin elastic shells. Delft, 1959, North-Holland publishing company, Amsterdam). The present article develops a simpler and more precise solution to the probelm of calculating circular cylindrical shells constructed with transverse cuts, than that given in the paper by Estrin. In calculating the end effect, a system of parallel coordinates is used

Card 1/2

MALKOV, Vladimir Mikhaylovich; MINEYEV, Viktor Andreyevich; PUDOZHGORSKIY, V.K., red.; SOKOLOVA, S.I., tekhn.red.

[Across the North; guidebook] Po severu; putevoditel'. Vologda, Vologodskoe knizhnoe izd-vo, 1960. 334 p.

(MIRA 13:12)

(Russia, Northern--Guidebooks)

MALKOV, V.M.

Organizing year-round accumulation of local fertilizers.
Zemledelie 7 no.1:85-87 Ja '59. (MIRA 12:1)

1. Glavnyy agronom Molodechnenskoy rayonnoy inspektsii po sel'-
skomu khozyaystvu.
(Peat)

MINEYEV, Viktor Andreyevich; MALKOV, Vladimir Mikhaylovich; LYADOV, F.A., red.

[Vologda Province; characteristics of its geography and economy] Vologodskaia oblast'; ekonomiko-geograficheskaia kharakteristika. Vologodskoe knizhnoe izd-vo, 1958. 319 p. (MIRA 12:1)
(Vologda Province--Economic conditions)

MALKOV, Vladimir Mikhaylovich; PETUKHOV, P.I., redaktor; SHATSKIY, L.I. tekhnicheskiy redaktor; VESELOVSKAYA, A.A., tekhnicheskiy redaktor

[Through our native district; a historical and geographical sketch of Vologda Province] Po rodnomu kraiu; istoriko-geograficheskii ocherk o Vologodskoi oblasti. Vologda, Obl. knichnaia red., 1956. 422 p. (MLRA 10:5)
(Volodga Province)

MALKOV, V. K.

The right road has been chosen. Zemledelie 8 no.10:79-80 O '60.
(MIRA 13:10)

1. Glavnyy agronom Inspektii po sel'skomu khozyaystvu Molodechnenskogo rayona, BSSR.
(Molodechno District--Field crops--Fertilizers and manures)

MAGNITSKIY, K.P.; MALKOV, V.K.

Plants-Chemical Analysis

Quick method for determining phosphorus in plants. Sov. agron. 10 no. 10, 1952.

9. Monthly List of Russian Accessions, Library of Congress December 1952 ~~1953~~. Unclassified.

MALKOV, V. K.

"The Influence of Soil Reaction Upon Washing Out Magnesium,"

SO: Pochvovedeniye, No. 10, 1949.

MAL'KOV, V.G.

Principal problems in increasing the production of steel in metallurgical plants of the Ukrainian S.S.R. Met. i koks. prom. no.1:20-23 Ja-F '64. (MIRA 17:10)

MAL'KOV, V.G., inzh.; PRILEPSKIY, V.I., inzh.; DUBROV, V.S., inzh. V rabote prinimali uchastiye: KHIL'KO, M.M., inzh.; MERSHCHIY, N.P., inzh.; CHETVERIKOV, V.Ya., inzh.; KUROV, I.N., inzh.; RATNER, B.R., inzh.; BUBYCHEV, G.D., inzh.; ALFEROV, K.S., inzh.; PAVLENKO, I.M., inzh.; FINKEL'SHTEYN, M.M., inzh.; PLUZHKO, N.F., inzh.; SAMSONOV, T.F., inzh.; BABENKO, N.N., inzh.; LAD'YANOV, N.I., inzh.; TUPIL'KO, V.S., inzh.

Deoxidizing and alloying 25G2C steel with ferromanganese and ferrosilicon in 200-ton ladles. Stal' 20 no.9:803-806 S '60. (MIRA 13:9)
(Steel, Structural--Metallurgy)

137-58-6-11685

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 6, p 67 (USSR)

AUTHOR: Mal'kov, V.G.

TITLE: Oxygen Applications in Open-hearth Steelmaking (Primeneniye kisloroda v martenovskom proizvodstve)

PERIODICAL: Tr. Nauchno-tekhn. o-va chernoy metallurgii, 1957, Vol 18, pp 292-293

ABSTRACT: As a result of the use of O_2 at the Makeyevka plant, the smelting of steel increased by 10.2%, the time per heat dropped by 1 hr. 10 min, and the fuel consumption by 10%. Owing to the shortage of O_2 it was used only in large furnaces and, by and large, during the second half of each campaign, with the purpose of maintaining more rhythmical operation in the department. Experiments in direct oxidation of the bath, in which O_2 is introduced through a hole in the backwall, are presented.

M.M.

1. Open hearth furnaces--Performance 2. Oxygen--Applications
3. Steel--Production

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MALKOV, V. D. (Kurgan, ul. Koli Myagotina, d. 214, kv. 14)

Hamartomas of the lungs. Grud. khir. 4 no.3:105-108 My-Je '62.
(MIRA 15:7)

1. Iz khirurgicheskogo otdeleniya (zav. - kandidat meditsinskikh nauk Ya. D. Vitebskiy) Kurganskoy oblastnoy bol'nitsy (glavnyy vrach L. V. Protsenko)

(LUNGS—TUMORS)

MORGENSHTERN, V.S.; MAL'KOV, V.A.

Calculation method for waste water neutralizers. Khim. volok. no.6:51-54 '64. (MIRA 18:1)

1. Leningradskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta iskusstvennogo volokna.

G is the liquid consumption, p_0 is the pressure in the gas cushion, p_1 is the steam pressure in the pipe. The stability is brought about by a decrease in pressure behind the elastic volume. A change in pressure before the elastic volume does not affect the stability. The results were experimentally verified on a model constructed according to the theoretical considerations. There are 3 figures.

ASSOCIATION: Politekhnicheskiy institut, g. Chelyabinsk (Polytechnic Institute, Chelyabinsk)

SUBMITTED: August 2, 1962

S/170/63/006/001/007/015
B187/B102

21.1000

AUTHORS: Morozov, I.I., Mal'kov, V.A.

TITLE: Effect of elastic volumes on the stability of the working process in steam generating pipes

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, v. 6, no. 1, 1963, 54-58

TEXT: The stability of steam production in the pipe of a heat exchanger with elastic input volume, having a gas cushion and a steam collector at the output, is studied for the simplest types of pipes. The conditions and the results published in the paper by I.I. Morozov (IFZh,no.8,1961) are used. The system of equations which describes this process, as given in that paper, is linearized. With the aid of the perturbation calculus and after a Laplace transformation the characteristic equation for the system is derived. Making a further simplification (absence of the steam collector at the end of the output) the following condition is obtained as a necessary and sufficient criterion for the stability of the system on a constant interface between liquid and steam:

$$\frac{\dot{G}}{2(p_0-p_1)} \left(\frac{\partial \dot{G}}{\partial p}\right)^{-1} < 1$$

Card 1/2

MAL'KOV, V.A.

Branch conference on the purification of industrial wastes from synthetic fiber plants. Khim.volok. no.2:77-78 '62. (MIRA 15:4)

(Textile fibers, Synthetic--Congresses)
(Sewage--Purification)

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ACC NR: AN6032753 (N) SOURCE CODE: UR/9008/66/000/244/0002/0002

14
B

AUTHOR: Mal'kov, V. (Captain-Lieutenant; Auditor)

ORG: Military-Political Academy im. V. I. Lenin (Voyenno-politicheskoy akademii)

TITLE: The facts demand an investigation [the abuse of incentives in the Soviet navy]

SOURCE: Krasnaya zvezda, no. 244, 19 Oct 66, p. 2, cols. 1-5

TOPIC TAGS: submarine, naval psychology, military personnel

ABSTRACT: An investigation of the application of disciplinary regulations determining the nine types of incentive measures, was carried out on board a Soviet submarine. The official "thank you," simply written down in a man's record, was found to account for 60% and 70% of incentive measure among regular service men and extended servicemen, respectively. Photographing of deserving persons, requiring some ceremonial, accounted for only 3%, while granting of two to ten days of extra leave accounted for 19%. Such leave is frequently granted to men who have been punished, even several times. The signing of 64% of the incentive measures by the commander himself was criticized, as leaving to little authority to subordinate officers. A general laxity in the application of the rules was noted.

Card 1/1 egk SUB CODE: 05, 13/ SUBM DATE: none/