"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ARTYUSHKOV, V.N.

Effective position in taking roentgenograms when using the Baltin prosthesis. Vest.rent.i rad. no.6:70-72 N-D '53. (MLRA 7:1)

1. Iz Ukrainskogo nauchno-issledovatel'skogo instituta glaznykh bolezney im. professora Girshmana (direktor - chlen-korrespondent Akademii meditsinskikh nauk SSSR professor I.I.Merkulov), iz kafedry rentgenologii (zaveduyushchiy - professor A.A.Lemberg) Ukrainskogo instituta usovershenstvovaniya vrachey (direktor - dotsent I.I.Ovsiyenko).
(Radiography) (Eye--Foreign bodies)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ARTYUSHKOV, V. N. Cand Med Sci -- (diss) "Methods of Roentgenological Determination and Localization of Foreign Bodies in Various Segments of the Eyeball." Khar'kov, 1957. 10 pp 22 cm. (Khar'kov Medical Inst), 200 copies (KL, 25-57, 117)

- 120 -

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ARTYUSHKOV, V.N.

CHUDAKOV, M.I., kandidat meditsinskikh nauk; ARTYUSHKOV, V.N.

Cholecystography using the Russian preparation "bilitrast."
Vrach. delo no.3:311 Mr '57 (MLRA 10:5)

1. Kafedra obshchey khirurgii (zav.-prof. S.L. Minkin) Khar'kovskogo meditsinskogo instituta i klinicheskaya dorozhnaya bol'nitsa Yuzhnoy zheleznoy dorogi.
(GALL BLADDER--RADIOGRAPHY)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ARTYUSHKOV, V.N.

EXCERPTA MEDICA Sec.14 Vol.11/10 Radiology Oct 57

1787. ARTYUSHKOV V.N. and TARLOVSKY A.J. *On the technique of X-ray examination in stomatological practice (Russian text) VESTN. RENTGENOL. RADIOL. 1957, 32/1 (77-80) Illus. 9

The projections now used in radiography in stomatological practice picture the distribution of the process chiefly in the distal-proximal and apico-caudal directions. Roentgenological data on the development of a process towards the oral vestibule are frequently unobtainable. In the search for more convenient projections the authors resorted revisional roentgenoscopy of the tumour localization area, directing the beam at a tangent to the part of the jaw under investigation. At the same time they employed inflation of the cheeks for purposes of artificial contrasting. At their request the patient moved the air bubble along the vestibule of the oral cavity, setting it at any desired point along the alveolar edge of the jaw. Having chosen the best projection, they performed roentgenography at voltage of 40-45 kv. and a current power of 25 ma. The contrast method employed allowed the authors to define the distribution of a process originating both from bone and the soft tissues.

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ARTYUSHKOV, V.N., dotsent

Neurofibroma of the bulb of the duodenum. Vest. rent. i rad. 35 no. 5:75-76 S-O '60. (MIRA 13:12)

1. Iz kafedry rentgenologii i meditsinskoy radiologii (zav. - prof. A.A. Lemberg) Ukrainskogo instituta usovershenstvovaniya vrachey (dir. - dotsent I.I. Ovsiyenko).
(DUODENUM--TUMORS)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ARTYUSHKOV, V.N., dotsent (Khar'kov)

Gastric double-contrast method in the roentgenodiagnosis of neoplastic and inflammatory processes. Sov.med. 25 no.2:123-127 F '61. (MIRA 14:3)

1. Iz kafedry rentgenologii i meditsinskoy radiologii (zav. - prof. A.A.Lemberg) Ukrainskogo instituta usovershenstvovaniya vrachey (direktor - dotsent I.I.Ovsiyenko).
(STOMACH—TUMORS) (DIAGNOSIS, RADIOSCOPIC)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ARTYUSHKOV, V.N., dotsent

X-ray indications of intraorbital and extraorbital tumors. Vest. rent. i rad. 38 no.6:34-37 N-D '63. (MIRA 17:6)

1. Iz kafedry rentgenologii i meditsinskoy radiologii (zav.-prof. A.A. Lemberg) Ukrainskogo instituta usovershenstvovaniya vrachey (rektor - dotsent I.I. Ovsiyenko).

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

SOURCE CODE: UR/0387/66/000/008/0008/0021

ACC NR: AP6029664

AUTHOR: Artyushkov, Ye. V.

ORG: none

TITLE: Nature of the change with depth in viscosity of the upper mantle

SOURCE: AN SSSR. Izvestiya. Fizika Zemli, no. 8, 1966, 8-21

TOPIC TAGS: upper mantle, seismic wave, geology

ABSTRACT: Some characteristics of the postglacial uplift of the Earth's crust in Fennoscandia are considered which indicate that the uplift is of an isostatic rather than platform nature. The principal considerations that lead to this conclusion are that the rate of uplift in its initial stage exceeded the characteristic rates of platform motion by at least one order of magnitude and that the characteristic dimensions of the uplift area of Fennoscandia greatly exceeds the dimensions typical of platform regions. The problem of the change with depth in mantle viscosity is analysed on the basis of the relations that govern the flow of an incompressible highly viscous fluid and the results of a discussion concerning the nature of the development of the isostatic uplift of Fennoscandia. The analysis leads to the conclusion that in the upper mantle of the Earth there exists a waveguide (at a depth of roughly 80 to 200 km) in the form of a stratum characterized by a low rate of propagation and anomalous absorption of seismic waves, and also a stratum (about 300 km thick) characterized by low viscosity (astenosphere). It is seen that over

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ACC NR: AP6029664

distances of the order of several hundred kilometers, isostasy was established owing to the yielding of rock material in the astenosphere. An analysis of the stresses and the associated elastic strains created in the Earth due to disturbance of isostatic equilibrium shows that these strains did not play any significant role in the uplift of Fennoscandia. The author is indebted to Ye. N. Lyustikh, V. A. Magnitskiy, and Yu. A. Meshcheryakov for valuable advice. Orig. art. has: 16 formulas and 6 figures.

SUB CODE: 08/ SUBM DATE: 06Jul65/ ORIG REF: 009/ OTH REF: 011

Card 2/2

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

24(3)

SOV/56-36-2-54/63

AUTHORS: Karchevskiy, A. I., Artyushkov, Ye. V., Kikoin, L. I.

TITLE: The Isotopic Shift of the Curie Point in the Hydride and Deuteride of Uranium (Izotopicheskiy sdvig tochki Kyuri v gidride i deyteride urana)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959, Vol 36, Nr 2, pp 636-637 (USSR)

ABSTRACT: The detection of the ferromagnetism of uranium hydride and uranium deuteride (Refs 1, 2, 3) made it possible to investigate the isotopic shift of the Curie (Kyuri) temperature. One of these possibilities is given by the fact that the distance between the uranium ions is different in the 2 above-mentioned compounds. There are several methods which permit a sufficiently precise determination of the Curie temperature in ferromagnetics. The authors of the present paper investigated the temperature dependence of the remanent magnetization of samples of uranium hydride and uranium deuteride in order to obtain preliminary results concerning the shift of the Curie point. The remanent magnetization of the samples was measured by an astatic magnetometer. The

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authors prepared more than 20 samples of uranium hydride and uranium deuteride. For any investigated sample, a difference was observed between the Curie temperatures of uranium hydride and uranium deuteride. This shift practically does not depend on the degree of purity of the original uranium and it is, therefore, not caused by chemical impurities. Typical curves for the temperature dependence for the remanent magnetization are shown in a figure. According to this figure, the difference of the Curie temperatures of uranium hydride and deuteride amounts to 4°, and the mean error amounts to 0.5°. The shift $\Delta\Theta$ of the Curie temperature therefore is equal to $\Theta_{UH_3} - \Theta_{UD_3} = \Delta\Theta = +(4.0 \pm 0.5)^{\circ}K$. The absolute value of the Curie temperature cannot be found according to the method described in this paper. The Curie point deduced by extrapolation from the temperature dependence of the remanent magnetization of a given sample practically does not depend on external influences. The authors suggest investigating the absolute value of the Curie temperature of uranium hydride and uranium deuteride, and they thank Academician I. K. Kikoin for suggesting the problem discussed in this paper and for his

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

The Isotopic Shift of the Curie Point in the Hydride and Deuteride of Uranium SOV/56-36-2-54/63

help. There are 1 figure and 4 references, 2 of which are Soviet.

SUBMITTED: November 18, 1958

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

L 41509-65 EWT(1)/EWP(m)/EWA(d)/FCS(k)/EWA(1) Pd-1
ACCESSION NR: AP4044518 S/0294/64/002/004/0525/0534

AUTHORS: Artyushkov, Ye. V. (Moscow); Morozov, A. I. (Moscow)

10
B

TITLE: On the longitudinal instability in one-dimensional conducting gas flow

SOURCE: Teplofizika vysokikh temperatur, v. 2, no. 4, 1964, 525-534

TOPIC TAGS: compressible flow, magnetic field, fully ionized plasma, longitudinal instability, isothermal flow, adiabatic gas flow, thermal diffusion, heat convection, acoustic vibration, hydrodynamic equation

ABSTRACT: The stability of longitudinal oscillations in compressible, electrically conducting gas under a transverse magnetic field was studied analytically. The flow is assumed to be inviscid and in a channel slowly varying in cross section. Furthermore, the gas is assumed to have finite electric and thermal conductivities. The analysis is carried out by means of expansions in the small parameter λ/L where λ - oscillation wavelength, L - length of channel. The hydrodynamic equations are written for a fully ionized gas with $T_i = T_e$, ohmic and viscous dissipations are neglected and the equations are then nondimensionalized by means of the parameters

$$\frac{x}{L} = \xi, \quad \frac{tc_0}{L} = \tau, \quad \frac{v_0}{c_0} = V,$$

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ACCESSION NR: AP4044518

where c_* - flow velocity in critical section. The oscillations in the various parameters in the channel are described by functions of the form $F = F(\xi)\exp(i\beta\tau)$ where $\beta = \omega L/c_*$. Two limiting cases are considered only: 1) diff[illegible] on terms much higher than convection terms in the energy equation and $H_1/H_0 \sim \sim \beta$, $\beta \gg 1$ (H - magnetic field); 2) the amplitude of hydrodynamic pressure oscillations much larger than the amplitude of magnetic pressure oscillations. These two cases are studied under the assumption of quasi-isothermal and quasi-adiabatic oscillations. In the former, $T_1/T_0 \sim 1/i\beta$ and solutions are obtained for $V = 0$ and $V_0 \gg c_T$ ($c_T^2 = \gamma RT_0/M$) up to order $1/i\beta$ in the expansion. The instability condition appears under $c_A \gg c_T$ ($c_A^2 = H_0^2/4\pi\rho_0$) and is given by

$$\sqrt{\gamma}\, H_0' > \frac{\gamma - 1}{\gamma}\frac{c_T^2}{c_A^2} Pe_T + Re_T.$$

For the quasi-adiabatic approximation, $T_1/T_0 \sim \rho_1/\rho_0$, the stability criterion is given by

$$\frac{H_0'}{Re_T} > \frac{1}{\gamma - 1} \quad \text{и} \quad \frac{H_0'}{Re_T} < \frac{1}{\gamma - \pi(\gamma - 1)}.$$

This indicates that instability arises from waves travelling against the flow as well as along the flow. Several examples are given to illustrate these points.

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

L 41509-65
ACCESSION NR: AP4044518

Orig. art. has: 46 equations and 3 figures.

ASSOCIATION: none

SUBMITTED: 13Jan64

SUB CODE: ME, GP NO REF SOV: 001 ENCL: 00

OTHER: 001

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Card 3/3

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ARTYUSHKOV, Ye.V.

Radiative heat transfer inside an infinitive cylinder and between two infinite cylinders. Teplofiz. vys. temp. 2 no.5: 758-764 S-O '64. (MIRA 17:11)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

PHASE I BOOK EXPLOITATION SOV/5125

Artyushov, Veniamin Pavlovich, Admiralty Navy-Yard Worker

Opyt avtomaticheskoy gazovoy rezki (Experience in Automatic Gas Cutting) Leningrad, Sudpromgiz, 1960. 62 p. 6,000 copies printed.

Ed.: T.A. Kliorina; Tech. Ed.: A.I. Kontorovich

PURPOSE: This booklet is intended for gas-cutting operations in shipbuilding and in other industries.

COVERAGE: The author, who is a gas cutter-innovator at the Admiralteyskiy zavod (Admiralty Navy Yard), describes the experiences of a team of gas cutters working with MDFKS, "Reks", 18 RA, "Messer", and 2 RA gas-cutting machines. Advanced and efficient gas cutting of steel with the use of automatic and semiautomatic equipment is described. No personalities are mentioned. There are no references.

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ARTYUSHKOV, Ye.V.

Possible origin and general chracteristics of the development of convective instability in sedimentary rocks. Dokl. AN SSSR 153 no.1:162-165 N '63. (MIRA 17:1)

1. Predstavleno akademikom L.A. Artsimovichem.

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ARTYUSHKOV, Ye.V.

Basic forms of convective structures in sedimentary rocks. Dokl. AN SSSR 153 no.2:412-415 N '63. (MIRA 16:12)

1. Predstavleno akademikom L.A.Artsimovichem.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ACCESSION NR: AP4042468

S/0294/64/002/003/0411/0423

AUTHOR: Artyushkov, Ye. V. (Moscow)

TITLE: Processes of radiant heat exchange between two infinite parallel plates

SOURCE: Teplofizika vy*sokikh temperatur, v. 2, no. 3, 1964, 411-423

TOPIC TAGS: thermal radiation, heat exchange, radiative transfer, heat source, black body radiation, reflected radiation, nonlinear equation, nonlinear equilibrium equation

ABSTRACT: The processes of radiant heat exchange between two nonuniformly heated infinite parallel plates are investigated. It is assumed that heat transfer proceeds only by radiation and that the angular distribution of radiation of all surfaces obeys Lambert's law. Discussion is limited to the one-dimensional problem (see Fig. 1 on the Enclosure). Letting the subscript $i = 1$ and 2 denote the plates A and B respectively, ε_i is the blackness coefficient of the interior surface, $\bar{\varepsilon}_i$ is that of the exterior surface, and c_i is the specific heat per unit area. The distance between the plates is taken as the unit of length. The general equation describing the change of temperature in plate A is

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ACCESSION NR: AP4042468

$$c_1 \frac{\partial T_1(x, t)}{\partial t} = -(1 + \bar{\varepsilon}_1)\sigma T_1^4(x, t) + \frac{1}{2}\int_{-\infty}^{\infty} \frac{\sigma T_2^4(\xi, t)\,d\xi}{[1 + (x - \xi)^2]^{3/2}} + Q_1(x, t)$$

, where σ is the Stefan-Boltzmann constant, the interior surfaces are assumed perfectly black $\varepsilon_1 = \varepsilon_2 = 1$, and Q_1 describes any heat sources in the plate. An analogous expression is obtained for plate B by interchanging the subscripts 1 and 2 and the coordinates x and ξ. Since these equations are nonlinear, consideration is limited to two special cases in which they can be reduced to linear equations and solved using Fourier transforms. For the first case there are no heat sources $Q_1(x, t) = Q_2(\xi, t) = 0$ and for simplicity $\bar{\varepsilon}_1 = \bar{\varepsilon}_2 = 0$, $c_1 = c_2 = c$. The temperature deviations T_1 and T_2 from some average temperature T_0 under the assumption $T_1/T_0 \ll 1$, $T_2/T_0 \ll 1$ are given by

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$$T_1(x, \tau) = T_0 + \frac{1}{\pi}\int_0^\infty f(k, \tau)\cos kx\,dk,$$

$$T_2(\xi, \tau) = T_0 + \frac{1}{\pi}\int_0^\infty \varphi(k, \tau)\cos k\xi\,dk,$$

$$f(k, \tau) = \left\{\frac{a(k)+b(k)}{2}\exp[\theta(k)\tau] + \frac{a(k)-b(k)}{2}\exp[-\theta(k)\tau]\right\}\exp[-\tau];$$

$$\varphi(k, \tau) = \left\{\frac{a(k)+b(k)}{2}\exp[\theta(k)\tau] - \frac{a(k)-b(k)}{2}\exp[-\theta(k)\tau]\right\}\exp[-\tau],$$

where a(k) and b(k) are the Fourier coefficients of the initial temperature perturbations,

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

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$$\theta(k) = \frac{1}{2}\int_{-\infty}^{\infty} \frac{\cos ku\, du}{(1+u^2)^{3/2}} = kK_1(k)$$

and $\tau = t/t_0$; $t_0 = c/4\sigma T_0^3$. The behavior of the solutions for the particular initial conditions $T_1(x) = T_0 + a\cos kx$, $a \ll T_0$, $T_2(\xi) = T_0$ is discussed in detail and the corrections required when $c_1 \neq c_2$, $\bar{s}_1 \neq 0$, $\bar{s}_2 \neq 0$, are indicated. The second case is the steady-state temperature distribution with heat sources. For simplicity it is assumed that $Q_1(x)$ and $Q_2(\xi)$ are periodic functions with period L and Fourier coefficients a_n and b_n respectively. The solution is

$$T_1^4(x) = T_0^4 + \frac{a_0}{2} + \sum_{n=1}^{\infty} \frac{a_n + \theta_n b_n}{1-\theta_n^2} \cos\frac{2\pi n}{L} x,$$

$$T_2^4(\xi) = T_0^4 + \sum_{n=1}^{\infty} \frac{b_n + \theta_n a_n}{1-\theta_n^2} \cos\frac{2\pi n}{L} \xi,$$

where $\theta_n = \theta(n)$. The specific case where $Q_1(x) = Q_0$ in bands of width l whose centers are separated by the distance

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ACCESSION NR: AP4042468

L and $Q_1(x) = 0$ elsewhere and $Q_2(\xi) = -Q_0 \frac{l}{L}$ is treated in considerable detail. The method of solution is also indicated when portions of the plates are held at fixed temperatures. The first case (with no heat sources) is reconsidered with "gray" plates, i.e., with $\varepsilon_1 = \varepsilon_2 = \varepsilon < 1$. The same expressions are obtained for T_1 and T_2 with

$$\tau_1 = t/t_{10};\ t_{10} = \frac{c}{4\varepsilon\sigma T_0^3}\gamma;$$

$$f(k, \tau_1) = \left\{\frac{a(k)+b(k)}{2}\exp[\varepsilon\theta_1(k)\tau_1] + \frac{a(k)-b(k)}{2}\exp[-\varepsilon\theta_2(k)\tau_1]\right\}\exp[-(1-\varepsilon\theta_1(k))\tau_1];$$

$$\varphi(k, \tau_1) = \left\{\frac{a(k)+b(k)}{2}\exp[\varepsilon\theta_1(k)\tau_1] - \frac{a(k)-b(k)}{2}\exp[-\varepsilon\theta_2(k)\tau_1]\right\}\exp[-(1-\varepsilon\theta_1(k))\tau_1].$$

With mirror reflection

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APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ACCESSION NR: AP4042468

$$\theta_1(k, \varepsilon) = \sum_{n=1}^{\infty} (1-\varepsilon)^{2n-1} 2nkK_1(2nk),$$

$$\theta_2(k, \varepsilon) = \sum_{n=1}^{\infty} (1-\varepsilon)^{2(n-1)} (2n-1) kK_1[(2n-1)k]$$

and for diffuse reflection

$$\bar{\theta}_1(k, \varepsilon) = \sum_{n=1}^{\infty} (1-\varepsilon)^{2n-1} [kK_1(k)]^{2n},$$

$$\bar{\theta}_2(k, \varepsilon) = \sum_{n=1}^{\infty} (1-\varepsilon)^{2(n-1)} [kK_1(k)]^{2n-1}.$$

As before, the corrections required when $\varepsilon_1 \neq \varepsilon_2$ are discussed in detail. The author thanks A. I. Morozov for formulation of the problem and valuable advice. Orig. art. has: 112 equations and 11 diagrams.

ASSOCIATION: none

SUBMITTED: 16Jan64

SUB CODE: TD

NO REF SOV: 000

ENCL: 01

OTHER: 00

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ACCESSION NR: AP4042468

ENCLOSURE: 01

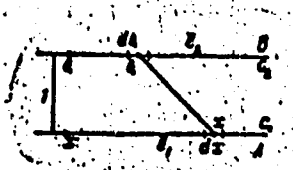

Fig. 1. Coordinates for one-dimensional heat exchange problem.

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L 41509-65 EWT(1)/EWP(m)/EWA(d)/FCS(k)/EWA(1) Pd-1
ACCESSION NR: AP4044518 S/0294/64/002/004/0525/0534

AUTHORS: Artyushkov, Ye. V. (Moscow); Morozov, A. I. (Moscow)

TITLE: On the longitudinal instability in one-dimensional conducting gas flow

SOURCE: Teplofizika vysokikh temperatur, v. 2, no. 4, 1964, 525-534

TOPIC TAGS: compressible flow, magnetic field, fully ionized plasma, longitudinal instability, isothermal flow, adiabatic gas flow, thermal diffusion, heat convection, acoustic vibration, hydrodynamic equation

ABSTRACT: The stability of longitudinal oscillations in compressible, electrically conducting gas under a transverse magnetic field was studied analytically. The flow is assumed to be inviscid and in a channel slowly varying in cross section. Furthermore, the gas is assumed to have finite electric and thermal conductivities. The analysis is carried out by means of expansions in the small parameter λ/L where λ - oscillation wavelength, L - length of channel. The hydrodynamic equations are written for a fully ionized gas with $T_i = T_e$, ohmic and viscous dissipations are neglected and the equations are then nondimensionalized by means of the parameters

$$\frac{x}{L} = \xi, \quad \frac{tc_s}{L} = \tau, \quad \frac{v_0}{c_s} = V,$$

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ACCESSION NR: AP4044518

where c_* - flow velocity in critical section. The oscillations in the various parameters in the channel are described by functions of the form $F = F(\xi)\exp(i\beta T)$ where $\beta = \omega L/c_*$. Two limiting cases are considered only: 1) diffusion terms much higher than convection terms in the energy equation and $H_0/H_0 \sim 1/\beta$, $\beta \gg 1$ (H - magnetic field); 2) the am[illegible] [illegible] $V_0 \gg c_T$ ($c_T^2 = \gamma RT_0/M$) up to order $1/i\beta$ in the expansion. The instability condition appears under $c_A \gg c_T$ ($c_A^2 = H_0^2/4\pi\rho_0$) and is given by

$$\sqrt{\gamma}\, H_0 > \frac{\gamma - 1}{\gamma}\frac{c_T^2}{c_A^2} Pe_T + Re_T.$$

For the quasi-adiabatic approximation, $T_1/T_0 \sim \rho_1/\rho_0$, the stability criterion is given by

$$\frac{H_0}{Re_T} > \frac{1}{\gamma - 1} \text{ or } \frac{H_0}{Re_T} > \frac{1}{\gamma - n(\gamma - 1)}$$

This indicates that instability arises from waves travelling against the flow as well as along the flow. Several examples are given to illustrate these points.

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

L 41509-65
ACCESSION NR: AP4044518

Orig. art. has: 46 equations and 3 figures.

ASSOCIATION: none

SUBMITTED: 13Jan64 ENCL: 00

SUB CODE: ME, GP NO REF SOV: 001 OTHER: 001

Card 3/3

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ARTYUSHKOV, Ye.V. (Moskva); MOROZOV, A.I. (Moskva)

Longitudinal stability of the one-dimensional flow of a conducting gas. Teplofiz. vys. temp. 2 no.4:525-534 Jl-Ag '64. (MIRA 17:9)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

L 10713-65 EWT(1)/EPF(c)/EPF(n)-2/EPR/T [illegible]

AUTHOR: Artyushkov, Ye. V.

TITLE: Radiation heat transfer processes in an infinite cylinder and between two infinite cylinders

SOURCE: Teplofizika vy*sokikh temperatur, v. 2, no. 5, 1964, 758-764

TOPIC TAGS: heat transfer, radiation heat transfer, transient heat transfer

ABSTRACT: The transient radiation heat transfer within an infinite cylinder and between two coaxial, infinite cylinders was considered theoretically. One-dimensional temperature change (along the cylinder axis) was assumed in both cases. For the single cylinder, the inside radiation surfaces were assumed completely black; for the coaxial cylinders the surfaces between cylinders were assumed black, while the inside surface of the inner cylinder was assumed to be a mirror. The temperature distribution as a function of time was derived as

$$c\frac{\partial T(z,t)}{\partial t} = -\sigma(1+\bar{\varepsilon})T^4(z,t) + \int^{\infty} \sigma T^4(z',t)G(z-z')dz'$$

where

$$G(z-z') = \frac{1}{2}\left\{2 - 3\frac{|z-z'|}{(1+|z-z'^2|)^{1/2}} + \frac{|z-z'|^3}{(1+|z-z'|^3)^{1/2}}\right\}$$

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

L 10713-65

ACCESSION NR: AP4047381

for the single cylinder, and as

$$c_1\frac{\partial T_1(z,t)}{\partial t} = -(1+\varepsilon)\sigma T_1^4(z,t) + \int_{-\infty}^{\infty}\sigma T_2^4(\zeta)G_1(z-\zeta)d\zeta + \int_{-\infty}^{\infty}\sigma T_1^4(z')G_2(z-z')dz',$$

$$c_2\frac{\partial T_2(\zeta,t)}{\partial t} = -\sigma T_2^4(\zeta,t) + \int_{-\infty}^{\infty}\sigma T_1^4(z)G_1(\zeta-z)dz$$

where

$$G_1(\zeta-z) = \frac{2}{\pi}\int_0^{\arccos\rho}\frac{(1-\rho\cos\varphi)(\cos\varphi-\rho)d\varphi}{[(\zeta-z)^2+1+\rho^2-2\rho\cos\varphi]^{1/2}},$$

$$G_2(z-\zeta) = \frac{2\rho}{\pi}\int_0^{\arccos\rho}\frac{(1-\rho\cos\varphi)(\cos\varphi-\rho)d\varphi}{[(z-\zeta)^2+1+\rho^2-2\rho\cos\varphi]^{1/2}},$$

$$G_2(z-z') = \frac{2}{\pi}\int_0^{\pi/2}\frac{(1-\cos\varphi)^2d\varphi}{[(z-z')^2+2(1-\cos\varphi)]^{1/2}}.$$

for the coaxial cylinders. In these equations c, c_1, and c_2 are the specific heats

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

L 20713-65

ACCESSION NR: AP4047381

of a "unit" length of cylinder which is assumed as two times the cylinder radius. Comparison of some solutions of these equations with those derived by Ye. V. [illegible] Teplofizika vysokikh temperatur, 2, No. 3, 1964) for parallel flat plates showed that the heat transfer processes in cylinders are generally slower than those between flat plates. The author thanks A. I. Morozova for her help. Orig. art. has: 3 figures and 4 formulas.

ASSOCIATION: none

SUBMITTED: 16Jan64 ENCL: 00

SUB CODE: TD NO REF SOV: 001 OTHER: 000

Card 3/3

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

ARTYUSHOVA, A.A.

112

The secretion of gastric juice during scurvy. P. K. Menshikov and A. A. Artiushova. *Voprosy Pitaniya* 3, No. 3, 66-8(1934); *Chem. Zentr.* 1935, II, 1055-6.—During scurvy the secretion of gastric juice is greatly reduced. This effect is not lessened simultaneously with other symptoms of the disease when vitamin C is added to the diet, indicating an incomplete action of the vitamin C. This reduction in gastric secretion must be considered in the treatment of scurvy patients. M. G. Moore

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ARTYUSHOVA, A.A.; LUK'YANOV, V.S.; PREBRAZHENSKIY, A.P.

Combined treatment of Addison's disease with streptomycin and adrenal cortex preparation. Klin.med., Moskva 18 no.11:88-90 Nov 50. (CIML 20:5)

1. Moscow.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

Aru, F.A.

MAYOROV, F.P.; ARU, F.A.

Studies on evolution and physiology of motor speech disorders in cerebro-cranial injuries. Zh. vysshei nerv. deiat. 1 no. 5:654-659 Sept-Oct 1951. (CIML 23:3)

1. Institute of Physiology imeni I. P. Pavlov of the Academy of Sciences USSR.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ARU, L.Kh. [Aru, L.]; MIKK, Kh.T. [Mikk, H.]

Serological identification of vegetative proteins. Fiziol.rast. 12 no.1:182-184 Ja-F '65. (MIRA 18:3)

1. Tartuskiy gosudarstvennyy universitet.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ARU, L. Kh.

"The Morphogenesis of Sunflower Plants Which Have Been Raised From Seeds With Grafted Cotyledons." Cand Biol Sci, Tartu State U, Min Higher Education USSR, Tartu, 1954. (KL, No 1, Jan 55)

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

SO: SUM No. 556, 24 Jun 55

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

MIKHAYLOV, O.F.; ARU, L.Kh.

Change of the cotyledons of plant embryo as a method for vegetative hybridization. Agrobiologiia no.1:49-54 Ja-F '62. (MIRA 15:3)

1. Tartuskiy gosudarstvennyy universitet.
(Grafting)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ARUGYUNYAN, M.R., inzh. (Moskva); KOSSOV, O.A., kand.tekhn.nauk (Moskva)

Static characteristics of thyristor excited d.c. drives.
Elektrichestvo no.12:58-63 D '65.
(MIRA 18:12)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ARUIN, L.I. (Moskva); RYFF, M.G. (L'yepaya)

Change in the sorptive properties of central nervous system and adrenal gland tissues during the convulsive action of strychnine, corazole and oxygen. Arkh. pat. no.1:47-53 '64. (MIRA 17:11)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

L 42188-65 EWG(a)-2/EWG(c)/EWG(j)/EWG(r)/EWG(v)/EWT(1)/T(v)-1 Pb-4/Pn-5
AFFTC/AFMDC/AMD/APGC DD

ACCESSION NR: AT5010608 UR/3147/64/003/000/0132/0137 36 B+1

AUTHOR: Arutin, L. I.; Ryff, M. G.

TITLE: Sorption properties of the nervous system and internal organs of white mice during convulsive effects of oxygen

SOURCE: AN SSSR. Institut evolyutsionnoy fiziologii. Funktsii organizma v usloviyakh izmenennoy gazovoy sredy, v. 3, 132-137

TOPIC TAGS: oxygen effect, excess oxygen pressure, in vivo staining, sorption property, nervous system, internal organ, cerebral cortex, adrenal gland

ABSTRACT: In order to determine fine changes which take place in the central nervous system and in certain internal organs under conditions of increased oxygen pressure, a technique of staining living tissues was employed. Experiments were performed on white mice in a pressure chamber. Two hours before the experiment was begun the animals were deprived of food and water. Oxygen pressure was increased to 4.2—4.3 atm during 1—2 min. Carbon dioxide in the chamber varied from 0.3 to 0.5% during the experiment. Under these conditions the onset of convulsions took place between

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the 11th and 18th minute. Convulsions were induced in control groups by means of strychnine or corazol. In most cases the entire organism was stained by introduction of a solution of neutral red into the abdominal cavity of the animals. At the end of the experiments all animals were decapitated simultaneously.

The method of staining living tissues makes it possible to detect early cytophysiological changes in various parts of the central nervous system and the adrenals during the toxic action of oxygen. Quantitative evaluation of these changes established the following phases of sorption properties of the various parts of the nervous system: 1) during the preconvulsive period, the sorption properties of the brain are reduced; 2) during convulsions, the sorption properties are significantly increased; and 3) during the post-convulsive period, the sorption properties decline once more. Of all the parts of the central nervous system examined, the greatest changes were observed in the cortex of the cerebral hemispheres. Investigation of the sorption properties of the adrenals indicated that development of oxygen toxicity is accompanied by distinct changes in the sorption of the stain during various phases of toxic action of oxygen. This apparently indicates the significant role that adrenals play in pathogenesis of oxygen toxicity.

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L 42188-65

ACCESSION NR: AT5010608

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: LS, PH

NO REF SOV: 021

OTHER: 000

APD PRESS: 3240-F

Card 3/3

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ARUIN, L.I.; ZYKOVA, N.I.

Hamartoma of the main bronchus. Probl. tub. no.2:90-92 '64.
(MIRA 17:12)

1. Kafedra patologicheskoy anatomii (zav. - chlen-korrespondent AMN SSSR prof. A.I.Strukov) I Moskovskogo ordena Lenina meditsinskogo instituta imeni Sechenova i 12-ya protivotuberkuleznaya bol'nitsa Moskovskogo otdela zdravookhraneniya.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ARUIN, L.I. (Moskva)

Adrenal cortex in rheumatic fever; histological and histochemical changes. Arkh. pat. no.11:23-31 '64. (MIRA 18:11)

1. Kafedra patologicheskoy anatomii (zav. - chlen-korrespondent AMN SSSR prof. A.I. Strukov) I Moskovskogo ordena Lenina meditsinskogo instituta.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ARUIN, L.I.

Changes in the adrenal cortex in patients deceased following heart surgery for acquired valvular defects. Eksper. khir. i anest. no.1:51-55 '65. (MIRA 18:11)

1. Kafedra patologicheskoy anatomii (zav. - chlen-korrespondent AMN SSSR prof. A.I. Strukov) I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M. Sechenova.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

KLIMENKO, G.A.; SERGEYEV, O.I., ARUIN, L.I.

Adrenal cortex in cardiac insufficiency; functional and morphological examination. Kardiologiia 5 no.2:51-56 Mr-Ap '65. (MIRA 18:7)

1. Kafedra gospital'noy terapii (zav. - deystvitel'nyy chlen AMN SSSR prof. A.L.Myasnikov) i kafedra patologicheskoy anatomii (zav. - chlen-korrespondent AMN SSSR prof. A.I. Strukov) I Moskovskogo meditsinskogo instituta imeni I.M. Sechenova.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ARUIN, L.I. (Moskva)

Combination of Kaposi's sarcoma of the lymphatic nodes with chronic lymphatic leukemia. Arkh. pat. 27 no.1:81-84 '65.

(MIRA 18:4)

1. Kafedra patologicheskoy anatomii (zav. - chlen-korrespondent AMN SSSR zasluzhennyy deyatel' nauki prof. A.I.Strukov) I Moskovskogo ordena Lenina meditsinskogo instituta imeni Sechenova.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

USSR/Human and Animal Morphology (Normal and Pathological) Nervous System S

Abs Jour : Ref Zhur - Biol., No 7, 1958, No 31216

Author : Arugoykin S.A.
Inst : Not Given
Title : On the Problem of the Innervation of Lungs.

Orig Pub : Zinath. rakstu krajums. Rigas med. inst. Sb. nauchn. rabot. Rizhsk. med. in-t, 1957, 7, 88-100

Abstract : Respiratory tracts and lungs of 9 cats were studied after preliminary stimulation of the lungs by acetone vapors over the course of several hours. It was shown that the respiratory tracts and lungs contain a great quantity of free and a lesser quantity of encapsulated terminals. In the connective tissue of the trachea and bronchus, ganglia and separated ganglion cells are found. Terminal ramifications of medullated fibers and in connective tissue with small thickenings or penetrate into the epithelia. In the wall of the bronchus, encapsulated bodies, receptors in the form of a cluster, yolk, tuft, and

Card : 1/2

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

1ST AND 2ND ORDERS

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3RD AND 4TH ORDERS

M

ARUINA, A.S.

10

*Rapid Determination of Silicon in Silumin. A. S. Aruina (*Zavod. Lab.* (*Works' Lab.*), 1937, 6, (5), 628).—[In Russian.] 0·5 grm. Silumin is dissolved in 1 grm. Na_2O_2 and 2 c.c. H_2O, treated with hydrochloric acid, evaporated, and silicon determined, as usual, as SiO_2.—D. N. S.

COMMON ELEMENTS

COMMON VARIABLES INDEX

MATERIALS INDEX

OPEN

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AUTHOR INDEX

1ST AND 2ND LETTER

3RD AND 4TH ORDERS

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ARDINA, A.S.

BC

B-I-1

Rapid volumetric determination of cadmium in cyanide electrolytes. A. S. ARDINA (Zaved. Lab., 1938, 7, 798).—5 ml. of aq. $K_2Cd(CN)_4$ are diluted to 100 ml., and 5 ml. of saturated aq. Na_2S are added to the boiling solution. The ppt. of CdS is collected, washed, and shaken with 25 ml. of 0·1N-I in KI, excess of which is titrated. R. T.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ARUINA, A.S.

B-1-9

PROCESSES AND PROPERTIES INDEX

Determination of zinc and cadmium in yellow glasses. A. S. Aruina (Zavod. Lab., 1939, 8, 105—106).—After elimination of Si (as SiF_4) and Ba (as $BaSO_4$), $CS(NH_2)_2$ and $NH_4[Cr(NH_3)_2(CNS)_4]$ are added to the glass solution in ~N-H_2SO_4. The ppt. consists of $Cd(CS(NH_2)_2)_2[Cr(NH_3)_2(CNS)_4]_2$. Zn is ppt'd. in the filtrate by means of H_2S. J. J. B.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ARUINA, A.S.

7

Ferrocyanide method of determining zinc in the presence of iron in zinc electrolytes. A. S. Aruina, *Zavodskaya Lab.* 8, 865-6(1939).—Dil. 20 ml. of the Zn electrolyte to 250 ml. and take 25 ml. for analysis. Add 5 10% soln. of $Na_4P_2O_7$ to give a clear soln., then 10 ml. of 20% H_2SO_4, 3 g. $(NH_4)_2SO_4$, 3 drops of 1% diphenylamine soln. and titrate slowly with $K_4Fe(CN)_6$ while shaking until the blue coloration changes to green-yellow. The titer of $K_4Fe(CN)_6$ is detd. with pure metallic Zn. Expts. have shown that the pyrophosphate forms a stable complex with the Fe which prevents its reaction with the ferrocyanide. The method is suitable for the analysis of $ZnSO_4$ baths.
B. Z. Kamich

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

1ST AND 2ND ORDERS

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3RD AND 4TH ORDERS

ARUINA, A.S.

DETERMINATION OF SMALL QUAN ITIES O CARBON IN MLYBENUM AND TUNGSTEN. A.S. ARUINA (ZAVOD. LAB., 1946, 12, 411-414; C. Abs. 1947, 41, 1173)-- (In russian) In the simple method described, the CO2 formaed by combustion is absorbed in special Rehbery absor rs conta intag KOH, and the excess alkali is back-titrated with HCl in the presience of phenolphthalien. The combustion is carried out in a tubular furnace at 1000°C.

COMMON ELEMENTS

OPEN

MATERIALS INDEX

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ARUINA, A. S.

M

11

Determination of Zinc by the Vacuum-Distillation Method. A. S. Arulina and Yu. A. Chernikhov (*Zavod. Lab.*, 1947, 13, (1), 33-37).—(In Russian). The method of determining Zn by distillation in hydrogen and *in vacuo* was tested on artificial mixtures of Ni and Zn and on nickel brass. Comparison was made with gravimetric, volumetric, and colorimetric methods of determining Zn, and the accuracy and rapidity of the distillation method was demonstrated.—D. A.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ARUINA, A. S.

A.S. Aruina. Determination of carbon oxide in the air by means of the absorption spectrum. P. 1263

The Erisman Central
Scient. Res. Inst. of
Sanitation

SO: Factory Laboratory, No. 10, 1950

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ARUINA, A.S.

Determination of carboxyhemoglobin in the blood. Gigiena i Sanit. '53, No.4, 50-1. (MLRA 6:4)
(CA 47 no.21:11301 '53)

1. TSentral'. Nauch.-Issledovatel'. Sanit. Inst. im. Erismana.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ARUINA, A. S.

USSR

6.5-84

551.510.41:546.49

Aruin, A. S., Opredelenie rtuti v atmosfernom vozdukhe. [Determination of mercury in the atmosphere.] *Gigiena i Sanitariia*, No. 5:46, May 1954. DLC—After pointing out the deficiencies in N. G. POLEZHAEV's method for determining mercury in the atmosphere, the author describes the method developed by M. A. PETROV. This method is based upon the reactions of the mercury ion with Reinecke salt to form in acids an insoluble compound having the composition $NH_4(CNS)_4Cr(NH_3)_2$. The procedure underlying this method is described in detail. *Subject Headings:* 1. Mercury in the atmosphere 2. Mercury measurement.—*I.L.D.*

Iz nauchno-issledovatel'skogo sanitarnogo instituta im Erismana.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ARUKAEVU, K.M.

Geometric method for determining distances over water surfaces without the need for traveling over the water. Meteor.i gidrol. no.10:55-56 O '56. (MLRA 9:12)

(Distances--Measurement)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

OJASTE, Kalju; REIER, Alfred; MENS, Kaisa; ARUKAEVU, M., red.

[Crystallography, mineralogy, petrology] Kristallograafia, mineraloogia, petrograafia. Tallinn, Eesti Riiklik Kirjastus, 1964. 462 p. [In Estonian]

(MIRA 18:1)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ARUKSAAR, H.; LIIDEMAA, H.; MARTIN, I.; MÜRK, H.; NEI, I.; PÕIKLIK, K., REHEMAA, V., red.

[General meteorology and agrometeorology] Üld- ja agrometeoroloogia. Tallinn, Eesti Raamat, 1964. 765 p. [In Estonian] (MIRA 18:7)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ARUKÜLA, Heino, kand. tekhn. nauk; KASESALU, Helmut, gor. inzh.; KUUSIK, Jaan, gor. inzh.; PAALME, Guido, gor. inzh., retsenzent; VIILUP, Väino, gor. inzh., retsenzent; REHEMAA, H., red.; PEDARI, J., tekhn.red.

[Mining engineering] Kaevuritööd. Tallinn, Eesti Riiklik Kirjastus, 1963. 393 p. (MIRA 16:12)
(Mining engineering)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ARUKYULA, Kh. Kh.

Arukyula, Kh. Kh.

"Determination of the Basic Elements of a System of Working the Estonian Oil Shale Deposit." Min Higher Education USSR. Leningrad Order of Lenin and Order of Labor Red Banner Mining Inst. Leningrad, 1955. (Dissertation for the Degree of Candidate in Technical Sciences.)

SO; Knizhnaya letopis' No. 27, 2 July 1955

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ARUKYULA, Kh.Kh. [Arukula, H.]; SAAREST, K.R.

Effect of the location of cross-cut on the work productivity of conveyors in the Kivioli mine. Khim. i tekh. gor. slan. i prod. ikh perer. no.11:110-116 '62. (MIRA 17:3)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ARZHAKOV, S.A.; SLOMINSKIY, G.L.; ARULIN, V.I.

Temperature and pressure dependence of the specific volume of polymers. Part 2. Vysokom.soed. 6 no.2:253-257 F '64. (MIRA 17:2)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ACCESSION NR: AP4017636 S/0190/64/006/002/0253/0257

AUTHORS: Arzhakov, S. A.; Slonimskiy, G. L.; Arulin, V. I.

TITLE: The dependence of the specific volume of polymers on temperature and pressure. 2. Polymethylmethacrylate plasticized by dibutyl phthalate

SOURCE: Vy*sokomolekulyarny*ye soyedineniya, v. 6, no. 2, 1964, 253-257

TOPIC TAGS: polymer, polymethylmethacrylate polymer, plasticizer, dibutyl phthalate, specific volume, pressure, critical pressure, heat expansion, vitrification, vitreous state, high-elasticity state

ABSTRACT: In an earlier publication by S. A. Arzhakov, G. L. Slonimskiy, B. P. Shtarkman, and V. A. Kargin (Vy*sokomolek. soyed., 5, 1854, 1963) it was shown that the vitrification temperature of polymethylmethacrylate (PMMC) registered a sharp rise at pressures above 1000 kg/cm^2. The present investigation studied what effect the plastification of PMMC with 5 and 20% of dibutylphthalate (DBP) would have on the specific volume of the polymer, as related to temperature and pressure. The heat expansion of the PMMC polymer, plasticized with 5% DBP, was recorded at constant pressures within a 50-5000 kg/cm^2 range at temperatures up to 350C, as presented in Fig. 1 on the Enclosure. As in the case with the nonplasticized PMMC

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ACCESSION NR: AP4017636

polymer, the V - T curve of the plasticized PMMC polymer shows a sharply defined bend between the two straight-lined sections, separating the glassy and the high elastic states. With increased pressure, the V - T curve shifts into a region of smaller specific volumes. Similar curves were also obtained with the PMMC polymer containing 20% DBP. A comparison with corresponding curves of the nonplasticized PMMC polymer revealed a lowering of the pressure above which the glass transition temperature sets in. This is explained by the fact that the plasticizer fills some of the free spaces within the polymer, which seem to be exhausted at a pressure of 2000 kg/cm^2. Orig. art. has: 6 charts.

ASSOCIATION: none

SUBMITTED: 29Nov62 DATE ACQ: 23Mar64 ENCL: 01

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

Card 2/3

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

TETERUK, G.I.; ZAVYAZKIN, P.G.; ALIYEV, T.M.; ALIYEV, A.G.; MELIK-SHAKHNAZAROV, A.M.; AMULIS, B.K.; BARTENEV, G.M.; YEL'KIN, A.I.; KOSTIN, V.I.; KHARKHARDIN, S.I.; SERGEYEV, A.I.; VARTANOV, S.Kh.; PRIMANCHUK, L.I.; MOLODTSOV, A.A.; SHMELEV, N.V.; ROVINSKIY, M.I.; ABRAMOV, N.N.; YEROFEYEV, L.V.; RYAKHIN, V.A.; ZELENIN, A.N.; BERKMAN, I.L.

Patent certificates for Soviet inventions. Stroi. truboprov. 9 no.5: 35-36 My '64. (MIRA 17:9)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ARUMEEL, E.; KLESMENT, L.

Chemical composition of the nonaromatic part of Kivioli chamber furnace gas benzine. p. 180.

EESTI LOODUS (Eesti NSV Teaduste Akadeemja)Tartu, Estonia. Vol. 8, no. 3, 1959.

Monthly List of East European Accessions (EEAI), LC, No. 4, July, 1959.
Uncl.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

EYZEN, O. [Eisen, O.], kand. tekhn. nauk; ARUMEYEL, E. [Arumeel, E.]; EYZEN, Yu. [Eisen, J.]; RAUDE, Kh. [Raude, H.]; PYDER, I. [Poder, I.]; KIRRET, O.; LAKHE, L. [Lahe, L.]; VYANIKVER, M. [Vanikver, M.]

Determining the individual composition of the middle fractions of oil-shale tar by the gas chromatographic and the spectrum analysis methods. Izv. AN Est. SSR. Ser. fiz.-mat. i tekh. nauk 13 no.2:135-142 '64.

(MIRA 17:9)

1. Institut khimii AN Estonskoy SSSR. 2. Chlen-korrespondent AN Estonskoy SSR (for Kirret).

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

EYZEN, O. [Eisen, O.], kand. tekhn. nauk; ÄRUMEYEL, E. [Arumeel, E.]

Determination of the chemical composition of shale gasoline of tunnel kilns by gas chromatography. Izv. AN Est. SSR. Ser. fiz.-mat. i tekh. nauk 13 no.1:36-46 '64 (MIRA 18:1)

1. Institut khimii AN Estonskoy SSR.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

RANG, S.A.; ARUMEYEL', E.Kh. [Arumeel, E.]; EYZEN, O.G. [Eisen, O.]

Chemical composition of light fraction of shale tar from a unit with a solid heat carrier. Khim.i tekh.topl.i masel 6 no.4:40-43 Ap '61. (MIRA 14:3)

1. Institut khimii AN Estonskoy SSR.
(Oil shales)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

EYZEN, O.G. [Eisen, O.]; RANG, S.A.; ARUMEYEL, E.Kh. [Arumeel, E.]

Chemical composition of the paraffin-naphthene portion of the fraction boiling at 150-215°C from shale tar. Khim. i tekh. topl. i masel 8 no.5:38-42 My '63. (MIRA 16:8)

1. Institut khimii AN Estonskoy SSR.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

EYSEN, O. [Eisen, O.], kandidat tekhnicheskikh nauk; ARUMEEL, E.; IOONSON, V. [Joonson, V.]

Application of gas chromatography in determining the chemical composition of the light-shale extraction products. Eest tead akad tehn fuus 9 no.2:113-120 '60. (EEAI 9:12)

1. Institut khimii, Akademii nauk Estonskoy SSR.
(Shale) (Chromatography)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

L 31990-65 EWT(m)/EPF(c)/T Pr-4/Pb-4 AS(mp)-2/AEDC(b) WE/GS
ACCESSION NR: AT4048194 S/0000/64/000/000/0179/0185

23
B+1

AUTHOR: Eysen, O. G.; Arumeyol, E. Kh.

TITLE: Application of gas chromatography to the determination of the chemical composition of Estonian shale gasoline

SOURCE: Vsesoyuznaya nauchno-tekhnicheskaya konferentsiya po gazovoy khromatografii, 2d, Moscow, 1962. Gazovaya khromatografiya (Gas chromatography): trudy* konferentsii. Moscow, Izd-vo Nauka, 1964, 179-185

TOPIC TAGS: shale oil, shale oil chromatography, olefin chromatography, gas chromatography, petroleum refining

ABSTRACT: Estonian shale oil is rich in olefins and poor in paraffins and aromatics. The gas chromatography of such products has not been extensively described in the literature, but a chromatograph for such purposes has been designed by the Institut khimii (Chemical Institute) AN Estonian SSR for temperatures ranging from room to 140 C. A catharometer with a platinum filament 0.05 mm in diam. and a recording EPP-9 potentiometer were used. The column length was 3 to 6 m, external diameter 6mm; the carrier gas was H_2; the solid carrier was diatomaceous brick, treated with hot HCl and

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L 31990-65
ACCESSION NR: AT4048194

granulated to 0.2 - 0.3 mm. The best results were obtained using acetonylacetone as the stationary phase. Data on the separating capacity of this compound are given in terms of relative retaining volumes. Selectivity factors were also computed. The selectivity of acetonylacetone approaches that of the known β, β' - dihydroxydipropionitrile but the selectivity in diene separation by acetonylacetone is superior. Chromatography at higher temperatures (180-200C) presents some difficulties. In this case β'-thiodipropionitrile (20% of the carrier weight) was used as the stationary phase. Its retention volumes and selectivity factors are similar to those of hydroxydipropionitrile. Numerous tables and diagrams are including showing the separation of aromatic from aliphatic compounds and of olefins from paraffins. For higher temperatures, the Institute has synthesized nitriles of higher molecular weight to be used as the stationary phase. Orig. art. has: 5 figures and 3 tables.

ASSOCIATION: None

SUBMITTED: 16Jul64 ENCL: 00 SUB CODE: GC, FP

NO REF SOV: 002 OTHER: 003

Card 2/2

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

TAKHCHI, L.D.; ARUNGAZYYEV, V.Yu., kandidat meditsinskikh nauk, zaveduyushchiy; SHEVCHENKO, I.T., professor, doktor meditsinskikh nauk, direktor.

Myxoma of the lower jaw. Stomatologiia no.4:51-52 Jl-Ag '53. (MLRA 6:9)

1. Rentgenodiagnosticheskoye otdeleniye Kiyevskogo rentgeno-radiologicheskogo i onkologicheskogo instituta (for Arungazyyev and Takhchi). 2. Kiyevskiy rentgeno-radiologicheskiy i onkologicheskiy institut (for Shevchenko). (Jaws--Tumors)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ARUNOV, R.I.

Lubricant for spinning looms. R. I. Arunov. U.S.S.R. 106,036, June 25, 1957. The lubricant is prepd. by adding 2% of erucic acid or 2% of a mixt. of erucic acid, sulfurized fatty acids, and chlorinated hydrocarbons to a highly refined mineral oil at 60° [illegible]

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APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ANDELKOVIC, C.; DZOKIC, D.; PODBREZNIK, F.; ARUNOVIC, M.; CVETKOVIC, M.; SAVIC, S.; ARSENIJEVIC, M.; MIGLEVSKI, V.; GANSEL, L.; KOCEVAR, F.

Review of periodicals; textile industry. Bul sc Youg 9 no.4/5: 152 Ag-O '64.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ARUNTYUNYAN, R.N., inzh.; BUNTMAN, A.D., inzh.; SHNEYDER, D.G., inzh.

New types of wells for vacuum water lowering under complex hydrogeological conditions. Energ. stroi. no.33:44-47 '63. (MIRA 17:8)

1. Nauchno-issledovatel'skiy institut osnovaniy i podzemnykh sooruzheniy Akademii stroitel'stva i arkhitektury SSSR (for Arutyunyan). 2. Gidrospetsproyekt (for Buntman, Shneyder).

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

AP4010322 S/0048/64/028/001/0202/0205

AUTHOR: Arurzanayn, B.A.

TITLE: Law of approach to saturation of magnetostriction of Elinvar alloys and determination of the magnetostriction constants [Report, Symposium on Questions of Ferro- and Antiferromagnetism held in Krasnoyarsk, 25 June - 7 July 1962]

SOURCE: AN SSSR: Izvestiya. Seriya fizicheskaya, v.28, no.1, 1964, 202-205

TOPIC TAGS: magnetostriction, magnetostriction constants, magnetic saturation, saturation magnetostriction, ferromagnet, Invar, Elinvar, iron chromium nickel alloy

ABSTRACT: The formula deduced some years ago by G.P.D'yakov (Doklady AN SSSR, 68, 33, 1949) for the law of approach to saturation of magnetostriction of polycrystalline ferromagnets is modified by the author for the specific case of Elinvar alloys, which have a complex chemical composition and exhibits a number of anomalous elastic properties. The derived formula is a series in powers of $1/H^{1/2}$. The validity of the law was checked experimentally by measurement on a sample of Elinvar alloy turned from a forged rod and vacuum annealed for 4 hours at 1050-1100°C. The val-

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AP4010322

ues of the magnetostriction constants λ_{111} and λ_{100} deduced from the experiments are positive and are close to the values given by the calculations. Orig.art.has: 14 formulas and 1 figure.

ASSOCIATION: Institut fiziki Sibirskogo otdeleniya, Akademii nauk SSSR (Institute of Physics, Siberian Division, Academy of Sciences, SSSR)

SUBMITTED: 00 DATE ACQ: 10Feb64 ENCL: 00

SUB CODE: PH NR REF SOV: 007 OTHER: 002

Card 2/2

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

AP4010323

S/0048/64/028/001/0206/0210

AUTHOR: Ayurzanayn, B.A.

TITLE: Investigation of saturation magnetization and magnetostriction in Elinvar alloys subjected to plastic deformation /Report, Symposium on Questions of Ferro- and Antiferromagnetism held in Krasnoyarsk 25 June to 7 July 1962/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.28, no.1, 1964, 206-210

TOPIC TAGS: saturation magnetization, saturation magnetostriction, ferromagnetism, paraprocess, magnetic moment, rotation, Elinvar, iron nickel chromium alloy, work hardening

ABSTRACT: The effects of plastic deformation on the saturation magnetization I_s and the saturation magnetostriction λ_s of ferromagnetic metals and alloys are complex. Experiments to date have revealed few consistent regularities, and there are no theories that adequately explain the observed effects. In the present paper there are considered the changes in the λ_s versus H, λ_s versus T and I_s versus H curves resulting from strong plastic deformation (up to 94% reduction in compression) in the case of Elinvar alloy specimens having the composition 37% Ni, 7.8%Cr,

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AP4010323

less than 1% ordering impurities (remainder Fe). The specimens were reduced by cold drawing. Measurements were carried out on specimens in both the unannealed (hard drawn) state and after annealing for 3 hours under vacuum at 1050-1100°C. The values of the magnetization were measured by the conventional ballistic method using differential coils; the magnetostriction was measured by means of strain gages. The results obtained for I_s and λ_s are shown in Figs.1 and 2 of the Enclosure. Other figures in the text show the variation of the magnetostriction of different specimens as a function of temperature. Among the inferences following from the experimental results are the following: plastic deformation at first increases I_s and then (beyond 80-88% reduction) reduces the saturation magnetization. High temperature annealing does not alter the character of the variation of I_s with the degree of plastic deformation. The saturation magnetostriction under the influence of plastic deformation in the region of 8-88% reduction in the case of both annealed and not annealed specimens undergoes substantial changes which, however, exhibit no direct correlation with the changes in I_s. Annealed Elinvar specimens are characterized by linear variation of λ_s with temperature even in the case of specimens subjected to great deformation. Orig.art.has: 4 figures.

Card 2/3

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

AP4010323

ASSOCIATION: Institut fiziki Sibirskogo otdeleniya, Akademii nauk SSSR (Institute of Physics, Siberian Division, Academy of Sciences, SSSR)

SUBMITTED: 00 DATE ACQ: 10Feb64 ENCL: 01

SUB CODE: PH NR REF SOV: 006 OTHER: 003

Card 3/3

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ARUSHANOV, G

AUTHOR: Arushanov, G. 107-58-5-22/32

TITLE: Recording of TV Programs on Motion Picture Film (Zapis' televizionnykh programm na kinoplenku)

PERIODICAL: Radio, 1958, Nr 5, pp 41 - 43 (USSR)

ABSTRACT: The author considers two methods for recording TV programs. TV recordings on magnetic tape represent difficulties because the reproducible frequencies range from 25 cycles to 4 megacycles (as used in the RCA system). The author then describes in more detail the recording of TV programs on motion picture film. The first steps in this direction were made by NIKFI in 1939. In 1955/56, the electronics laboratory of NIKFI developed such a device, under the supervision of P. Tager and N. Tel'nov. In the final model, a video signal multiplication method by means of impulse-brightening was used. The generator of the brightening impulses is a trigger amplifier in which the signal of the required shape and amplitude is formed. For synchronizing the brightening impulses with the TV picture and the opening and shutting of the motion picture camera shutter, the electronic circuit of the brightening impulse generator is controlled by a synchrosignal and by signals of a magnetic transducer coupled mechanically with

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Recording of TV Programs on Motion Picture Film 107-58-5-22/32

the rotor of the synchronous motor of the motion picture camera. Figure 1 shows a block diagram of the device. Figure 2 shows a general view of the device. The sound is recorded separately by "KZM-4" tape recorders, specially converted for this purpose. The film and the tape recording are then processed in the same way as ordinary motion picture film, i.e. one copy with both pictures and sound track is produced. Various TV programs have been successfully recorded with this device.
There are two figures.

AVAILABLE: Library of Congress

Card 2/2

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ARUSHANOV, G.G.

Lower limit for the back scattering cross section. IAd. fiz. 2 no.5:938-939 N '65. (MIRA 18:12)

1. Institut fiziki AN UzbSSR.

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ARUSHANOV, G.G.

Calculation formulas of the Molière theory of multiple-valued scattering. Izv. AN Uz. SSR. Ser. Fiz.-mat. nauk no.1:81-83 '61. (MIRA 14:3)

1. Fizik-tekhnicheskiy institut AN UzSSR.
(Scattering(Physics))

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

ARUSHANOV, G.G.

Theory of the Compton effect. Izv. AN Uz. SSR. Ser. fiz.-mat. nauk no. 2:88-89. '61. (MIRA 14:5)

1. Fiziko-tekhnicheskiy institut AN UzSSR.
(Compton effect)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

AZIMOV, S.A.; ARUSHANOV, G.G.; ZAYNUTDINOV, Kh.; KARIMOV, R.; MASAGUTOV, V.S.; ESTERLIS, M.Kh.

Scattering of μ-mesons in lead in the pulse range (1 ÷ 5) Bev/c. Izv. AN Uz.SSR. Ser. fiz.-mat. nauk 3:61-67 '61. (MIRA 14:8)

1. Fiziko-tekhnicheskiy institut AN UzSSR. 2. Chlen-korrespondent AN UzSSR (for Azimov).

(Mesons--Scattering)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

AZIMOV, S.A.; ARUSHANOV, G.G.; ZAYNUTDINOV, Kh.; KARIMOV, R.; MASAGUTOV, V.S.; ESTERLIS, M.Kh.

Scattering of 1 - 5 bev/c μ-mesons in lead. Zhur.eksp.i teor.fiz. 41 no.1:56-59 Jl '61. (MIRA 14:7)

1. Fiziko-tekhnicheskiy institut AN Uzbekskoy SSR.
(Mesons--Scattering) (Cloud chamber)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

24.6700

38393
S/166/62/000/002/007/008
B112/B104

AUTHORS: Azimov, S. A., Arushanov, G. G., Yuldashev, A. A.

TITLE: High energy proton-proton scattering

PERIODICAL: Akademiya nauk Uzbekskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, no. 2, 1962, 76-81

TEXT: The authors reach the following conclusion: The general quantum-mechanical scattering theory for identical particles shows that the experimental data for p-p scattering at energies of 3 and 8.5 Bev can be sufficiently explained if purely imaginary amplitudes of the elastic p-p scattering are admitted. There are 2 figures and 2 tables.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN UzSSR (Physicotechnical Institute AS UzSSR)

SUBMITTED: August 29, 1961

Card 1/1

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

24.1.600

40058

S/166/62/000/003/006/010
B163/B104

AUTHOR: Arushanov, G. G.

TITLE: On a relation between photon scattering from a nucleon and the photoproduction of π-mesons.

PERIODICAL: Akademiya nauk Uzbekskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, no. 3, 1962, 56 - 64

TEXT: The contribution $\Delta\sigma$ of the photo-production of pions to the differential cross section for photon scattering from a nucleon is calculated. In earlier calculations, Minami and Yamaguchy (Progr. Teor. Phys. 17, 651, 1957) neglected all matrix elements except that which corresponds to the magnetic dipole transition with I = 3/2, whilst A. M. Baldin and V. A. Petrun'kin (ZhETF), 32, 1570, 1957) took account only of dipole transitions and restricted themselves to energies below 300 Mev. Making use of experimental data on the photoproduction of pions, the total and differential cross sections for scattering of photons from a proton are here calculated in the energy region from 150 to 400 Mev, taking account of electric as well as magnetic dipole transitions and electric quadrupole transitions.

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APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102310006-8

On a relation between photon ... S/166/62/000/003/006/010
B163/B104

It is found that the contribution of the electric dipole transition to the total and differential cross section which was neglected in Minami's and Yamaguchi's paper is by no means small especially in the resonance region. The electric quadrupole transition contributes something to the differential scattering cross section but not to the total cross section. Figs. 1 and 2 give the results and a comparison with experimental data. Three further experimental values of differential scattering cross sections at angles other than 90°, taken from the paper by Yamagota et al. (Bull. Am. Phys. Soc., sec. 11, 1,350, 1956), are found to agree satisfactorily with the calculations. Experimental data on pion photoproduction from neutrons are not yet sufficient for corresponding calculations to be made about those. It is estimated, however, that in the resonance region (250 - 400 Mev), the contribution $\Delta\sigma$ from pion photoproduction is nearly the same for protons and neutrons. There are 2 figures and 1 table.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN UzSSR (Physicotechnical Institute of the AS UzSSR)

SUBMITTED: December 24, 1961

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Fig. 1. Differential (curve 1) and total (curve 2) Compton scattering cross sections. The experimental points are taken from the paper by Yamagota and others.
Legend: Abscissa: Energy E in Mev, Ordinate left:

$$\left.\frac{d\sigma}{d\Omega}\right|_{90^\circ} \cdot 10^{32}\ \mathrm{cm}^2,\ \text{right:}\ \frac{\int \Delta\sigma\, d\Omega}{\sigma_{\text{Thomson}}}$$

Fig. 2. Angular dependence of $\Delta\sigma$ (contribution to differential cross section from photo-production of pions) at an energy of 320 Mev with $\varepsilon = 0.2$ (ε is the ratio of electric quadrupole matrix element to magnetic dipole matrix element).

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On a relation between photon ...

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Fig. 1.

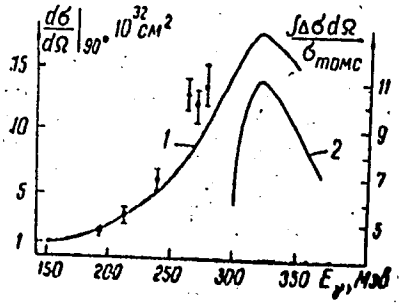
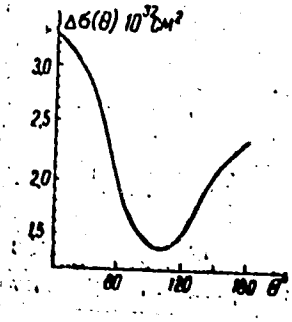


Fig. 2.



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AUTHORS: Arushanov, G. G., Kotov, Ya. P.

TITLE: Photon scattering from a freely moving electron

PERIODICAL: Akademiya nauk Uzbekskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, no. 3, 1962; 70 - 74

TEXT: The differential cross section for the scattering of polarized and nonpolarized photons from a free electron moving with velocity v is calculated. In principle this cross section can be derived from the well known cross section formula for the electron at rest by way of a Lorentz transformation, but here the square of the modulus of the matrix element is calculated directly. Feynman's method is applied in second approximation of the perturbation theory. The differential cross section for the scattering of a polarized photon is

$$\frac{d\sigma}{d\Omega} = \frac{r_o^2 \omega_2^2 E_o^2}{(pk_1)^2} \left\{ \left[(pe_1)(pe_2) \frac{1}{(pk_1)} - \frac{1}{(pk_2)} + \left(\frac{(pe_1)(k_1 e_2)}{(pk_1)} \right. \right. \right.$$

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$$+ \frac{(pe_2)(k_2e_1)}{(pk_2)}\Bigg)\Bigg]^2 + \frac{C}{(pk_1)(pk_2)}$$

where k_1, e_1, k_2 and e_2 are the four-component momentum and polarization before and after scattering, r_0 the classical electron radius, ω_1 and ω_2 the photon energies before resp. after scattering, E_0 the electron rest energy, and $C = \frac{1}{4}\cdot(k_1k_2)^2 + (e_1e_2)^2(pk_1)(pk_2) + 2(e_1e_2)\left[(pe_1)(pe_2)(k_1k_2) - (pe_1)(k_1e_2)(pk_2) - (pe_2)(k_2e_1)(pk_1)\right]$. Some special cases are treated in which the expressions are much simplified, (such as forward scattering, initial directions of electron and photon perpendicular, limiting cases $v \to 0$, $v \to c$, non-relativistic approximation) and the cross section for non-polarized photons is obtained by summation over the initial and final polarisation states. If the electron is initially moving the case $\omega_2 > \omega_1$ also is possible.

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