"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

ACC NR: AP7005118 SOURCE CODE: UR/0007/66/000/008/0891/0899

AUTHOR: Vinogradov, A. P.; Surkov, Yu. A.; Chernov, G. M.; Kirnozov, F. F.; Nazarkina, G. B.
ORG: Institute of Geochemistry and Analytical Chemistry im. V. I. Vernadskiy, AN SSSR, Moscow (Institut geokhimii i analiticheskoy khimii AN SSSR)

TITLE: Measurements of gamma radiation of the lunar surface by the space station Luna-10

SOURCE: Geokhimiya, no. 8, 1966, 891-899
TOPIC TAGS: gamma spectrum, lunar satellite, earth crust, lunar surface, lunar radiation / Luna-10 lunar satellite

ABSTRACT:
During its first month of operation the lunar satellite "Luna-10" obtained six spectra of gamma radiation in the energy range from 0.3 to 3.1 MeV. In addition, at about 15 points it measured the total intensity of gamma radiation in the same energy range. The measurements covered extensive areas of the surface of both the seas and continents on both sides of the moon. It was found that the general level of gamma radiation of lunar rocks approaches the level of gamma radiation over the rocks of the earth's crust, somewhat exceeding the latter. The preliminary estimate of gamma radiation for the lunar surface is 20-30 μ curies. The principal contribution to lunar gamma radiation is from processes of interaction of cosmic rays with lunar matter (instantaneous gamma radiation and the decay of isotopes). About 90% of the total lunar gamma radiation can be attributed to these processes. Analysis

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makes it possible to identify in the lunar spectrum photopeaks from gamma quanta emitted at the time of interaction between cosmic particles and the principal rock-forming elements of the lunar surface — O, Mg, Al, Si, as well as gamma quanta emitted during the decay of cosmogenic isotopes. (The possibility of determining the relative content of these elements now is being studied.) Results of measurements over different regions of the lunar surface, including the seas and continents, did not reveal an appreciable difference in the intensity of gamma radiation over these regions (intensity variations do not exceed 40%). In the total intensity of gamma radiation of lunar rocks the percentage of radiation caused by decay of K, Th and U is approximately 10%. Comparison of the intensity of gamma radiation from decay of the natural radioactive elements K, Th and U with the results of calibration of the instrument against terrestrial rocks makes it possible to ascribe to lunar rocks concentrations of radioactive elements close to terrestrial rocks of basic composition (such as basalts). The data indicate that there are no areas of rocks with concentrations of radioactive elements such as terrestrial granites, and especially none with ore concentrations of K, Th and U. Orig. art. has: 3 figures and 3 tables. [JPRS: 38,460]

SUB CODE: 03,22,20 / SUBM DATE: 24Jun66 / ORIG REF: 002

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

ACC NR: AP7007599 SOURCE CODE: UR/0293/66/004/006/0871/0879

AUTHOR: Vinogradov, A. P.; Surkov, Yu. A.; Chernov, G. M.; Kirnozov, F. F.; Nazarkina, G. B.

TITLE: Preliminary results of measurements of gamma radiation of the lunar surface on the space station "Luna-10"

SOURCE: Kosmicheskiye issledovaniya, v. 4, no. 6, 1966, 871-879
TOPIC TAGS: lunar satellite, gamma spectrometer, cosmic radiation
SUB CODE: 22, 20,18

ABSTRACT: Experimental investigations of the intensity and spectral composition of gamma radiation of lunar rocks made using a gamma spectrometer carried aboard the automatic station "Luna-10" demonstrated that: 1) The general level of gamma radiation of lunar rocks approaches the level of gamma radiation over rocks of the earth's crust, somewhat exceeding the latter. According to a preliminary estimate, the intensity of the gamma radiation at the lunar surface is 20-30 μR/hour. 2) The principal contribution to lunar gamma radiation is from processes of the interaction of cosmic rays with lunar matter (instantaneous gamma radiation and the decay of cosmogenic isotopes). About 90% of the total lunar gamma radiation can be attributed to these processes. 3) Analysis made it possible to identify in the lunar spectrum photopeaks from gamma quanta emitted during the interaction of cosmic particles with the principal rock-forming elements of the lunar surface -- O, Mg, Al, Si -- and gamma quanta emitted during the decay of cosmogenic isotopes. 4) The results of measurements over different regions of the lunar surfaces, including the regions of the lunar "continents" and Seas" did not make

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ACC NR: AP7007599

possible detection of an appreciable difference in the level of intensity of gamma radiation over these regions (the changes of intensity do not exceed 40%). 5) In the total intensity of gamma radiation of lunar rocks the percentage of radiation caused by the decay of K, Th and U is not greater than 10%. 6) Comparison of the intensity of gamma radiation from the decay of natural radioactive elements K, Th and U with the results of instrument calibration against terrestrial rocks makes it possible to ascribe to lunar rocks concentrations of radioactive elements close to terrestrial rocks of basic composition of the basalt type. The collected data make it possible to exclude for those regions of the lunar surface where the measurements were made the existence of rocks with a content of the radioactive elements K, Th and U such as in terrestrial acidic rocks (granites) and especially rocks with ore concentrations of these elements. Orig. art. has: 3 tables and 3 figures. /JPRS: 39,718/

ORG: none

Card 2/2

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, Gennadiy Nikolayevich; DUBROVITSKAYA, N.I., doktor biol. nauk, otv. red.; TIKHOMIROVA, L.G., red.izd-va; LAUT, V.G., tekhn. red.

[N.P.Krenke and his theory of senescence and refuvenation] N.P.Krenke i ego teoriia stareniia i omolozheniia. Moskva, Izd-vo Akad. nauk SSSR, 1963. 115 p. (MIRA 16:5)
(Krenke, Nikolai Petrovich, 1892-1939)
(Ontogeny (Botany))

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, G. N.

"Growth and Development of Vegetative Hybrids of Wheat in Relation to the Characteristics of the Endosperm Mentor." Cand Biol Sci, Moscow State U, Moscow, 1953. (RZhBiol, No 1, Sep 54)

SO: Sum 432, 29 Mar 55

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, G.N.

USSR/General Biology - Genetics.

B-5

Abs Jour : Ref Zhur - Biol., No 7, 1958, 28581

Author : Chernov, G.N.
Inst : -
Title : Vegetative Hybridization of Grains.

Orig Pub : Tr. Przhevalskogo ped. in-ta, 1954, No 3, 123-134

Abstract : No abstract.

Card 1/1

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, G. S. (Noril'sk)

Gadget for bridge painting. Put' i put. khoz. 6 no.8:32 '62. (MIRA 15:10)

(Railroad bridges—Painting)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, G.S., starshiy inzh. (Noril'sk)

Modernized snow clearing train. Put' i put.khoz. 6 no.11:44 '62. (MIRA 16:1)

(Railroads--Snow protection and removal)

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31621
S/138/61/000/012/005/008
A051/A126

11.2214
15.9206

AUTHORS: Novikov, A.S., Tolstukhina, F.S., Chernov, G.V.

TITLE: Effect of fillers on structure and mechanical properties of Wheighton A vulcanizates

PERIODICAL: Kauchuk i rezina, no. 12, 1961, 30 - 35

TEXT: The effects of fillers on structure and mechanical properties at high temperatures were studied for vulcanizates of the fluorocopolymer Wheighton type. Hexamethylendiamine (GMDA) was used as the vulcanizing agent. The following fillers were investigated: aerosil, ultrasil, microsil, УС -170 (US-170) silica gel, КС -2 (KS-2), У -333 (U-333), А,АН-6 (A,AN-6), calcium fluoride and calcium silicate. The swelling method was used for the case of creep at high temperatures. The number of effective chains in the lattice per unit of volume was estimated according to the equation:

$$\nu = -\frac{1}{V_s} \cdot \frac{\ln(1-V_r) + V_r + \mu \cdot V_r^2}{V_r^{\frac{1}{3}}},$$

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where V_s is the molar volume of the solvent, V_r - volumetric fraction of the polymer in the swollen lattice connected with the equilibrium value of swelling Q_m by the relation

$$V_r = \frac{1}{1 + Q_m}, \quad \mu \text{ - Huggins Constant.}$$

The volume of the absorbed solvent was determined by dividing the difference between the weight of the swollen and dry sample into the density of the solvent. The molecular weight of the chain section between the points of the lattice of the vulcanizate (M_c) was calculated with:

$$M_c = \frac{1}{\nu} \cdot \rho_r,$$

where ρ_r is the specific weight of the polymer. It was established that the introduction of the filler changes the structure of the vulcanizate, increasing the molecular weight M_c of the vulcanizate lattice. The degree of increase of M_c depends on the filler type. The degree of transverse lacing affects the true tensility of the Wheighton A vulcanizates. In the region of dense and

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31621

Effect of fillers on structure and S/138/61/000/012/005/008
A051/A126

loosely spaced lattices, there is a drop in the tensility of the vulcanizates noted. The fillers were found to affect the life of the vulcanizates to a considerable degree. The creep of the vulcanizates, based on Wheighton A can be reduced by using fillers and by increasing the number of transverse bonds in the vulcanizates. The drop of the true tensility for vulcanizates with a high number of transverse bonds is explained by the difficulty encountered by the effects of orientation of the polymer chains. The creep was measured with a lever-type instrument, and the effect of temperature on it was investigated by simultaneous measurement of the true values of the residual deformations and by determining the change in structure during creep, according to the values of maximum swelling Q_m. An increase in temperature leads to an increase in the rate of deformation on a linear section. There are 4 tables, 4 figures and 3 references: 1 Soviet-bloc and 2 non-Soviet-bloc. The reference to the most recent English-language publication reads as follows: P.J. Flory, Chem.Phys., 18, 108 (1950)

ASSOCIATION: Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti (Scientific Research Institute of the Rubber Industry)

Card 3/3

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

PAVLOV, T.; CHERNOV, I., starshiy inzh.

Coal miners should not waste their free time. Sov.shakht. 10 no.5:27-28 My '61. (MIRA 14:9)

1. Predsedatel' Belovskogo gorkoma profsoyuza rabochikh ugol'noy promyshlennosti (for Pavlov). 2. Institut ekonomiki i organizatsii truda Sibirskogo filiala AN SSSR (for Chernov).
(Coal miners)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

KHARITONOV, Aleksandr Ivanovich; CHERNOV, I.

[Principal economic task of the U.S.S.R.] Osnovnaia ekonomicheskaia zadacha SSSR. Leningrad, 1958. 74 p. (MIRA 12:6)

(Russia--Economic policy)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, I.

For further improvement of work with personnel. Den. i kred. 16 no.1: 18-24 Ja '58. (MIRA 11:3)

(Banks and banking)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, I., inzh.

Readers' response to published articles. Sov.[redacted]ht. 10 no.12:30-31 D '61. (MIRA 14:12)

1. Institut ekonomiki Sibirskogo otdeleniya AN SSSR.
(Coal miners)
(Trade unions)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, I.

Hydrometeorological service for the Yenisey River fleet. Rech. transp. 20 no.9:39 S '61. (MIRA 14:9)

1. Nachal'nik sektora gidrologicheskikh prognozov Krasnoyarskogo Upravleniya gidrometeorologicheskoy sluzhby.
(Yenisey River--Inland navigation)
(Hydrometeorology)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, I., podpolkovnik

Automobile road is restored. Tyl i snab. Sov. Voor. Sil 21 no.11:66-67 N '61. (MIRA 15:1)

(Military roads)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, I.

State Bank control over the reduction of surplus materials and finished products in enterprises. Den.i kred. 18 no.2:26-29 F '60. (MIRA 13:1)
(Moscow--Banks and banking) (Industrial management)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, I.

3527. CHERNOV, I. Ispol'zovaniye Torfa Na Udobreniye. L'vov, Kn.-Zhurn. 12D., 1954. 32s. s ill. 20sm. (Peredovoy Opyt-vsem Kolkhoznmkam). 5,000ekz. 40k.-Na Uke. Yaz.--(54-56089) 631.87 (47.743)

SO: Knizhnaya Letopis', Vol. 3, 1955

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

BOLGOV, V. (Novosibirsk); CHERNOV, I. (Novosibirsk)

Workers' leisure time under conditions of a shortened workday. Vop. ekon. no. 2:158-160 F '61. (MIRA 14:2)
(Kemerovo Province--Leisure)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, I., starshiy inzh.

Leisure and its riches. Sov. shakht. 11 no.3:42-43 Mr '62. (MIRA 15:5)

1. Institut ekonomiki i organizatsii promyshlennogo proizvodstva Sibirskogo otdeleniya AN SSSR.
(Hours of labor) (Leisure) (Kuznetsk Basin--Coal miners)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV I. A.

11(4) PHASE I BOOK EXPLOITATION SOV/1319

Akademiya nauk SSSR. Bashkirskiy filial

Khimiya sera-organicheskikh soyedineniy, soderzhashchikhsya v neftyakh i nefteproduktakh; materialy II nauchnoy sessii (Chemistry of Sulfur-Organic Compounds Contained in Petroleum Products; Papers of the 2nd Scientific Session) v. 1. Ufa, Izd. Bashkirskogo filiala AN SSSR, 1958. 228 p. 1,500 copies printed.

Ed.: Sudarkina, K.I.; Editorial Board: Ayvazov, B.R., Mashkina, A.V., Obolentsev, R.D. (Resp. Ed.), Rozhdestvenskiy, V.P., and Shanin, L.L.; Tech. Ed.: Rakhimov, R. Sh.

PURPOSE: This book is intended for petroleum specialists of scientific research establishments, educational institutions, and petroleum refining plants.

COVERAGE: This collection is the first of a multivolume publication on the results of scientific research work carried out in the Soviet Union on the chemistry and technology of sulfur- and nitrogen-organic compounds during the period 1954-1955; and according to a coordinated research project outlined in 1956 by the sponsoring agency (Bashkir Branch, AS USSR).

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Malyavinskiy, L.V., and I.A. Chernov. Influence of the Copper Content in Fuel on the Performance of Motors 166

Automobile gasolines and diesel fuels obtained from sulfurous petroleum of high sulfur content were found to hinder motor performance. Data are plotted

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Supercharging makes it possible to increase

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

TITLE: Graphic analysis of the combined [illegible] of compressors

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

FAL'KOVICH, S.V.; CHERNOV, I.A. (Saratov)

"On similar solutions in transonic gas dynamics"

report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 January - 5 February 1964.

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L 13492-66 EWT(1)/EWP(m)/EWA(d)/FCS(k)/EWA(1) GS

ACC NR: AT6001785 SOURCE CODE: UR/0000/64/000/000/0063/0100

67
66
B+1

AUTHOR: Chernov, I. A.

ORG: Saratov State University (Saratovskiy gosudarstvennyy universitet)

TITLE: Self-similar solutions in transonic gas dynamics

SOURCE: Transzvukovyye techeniya gaza (Transonic gas flows); sbornik statey. Saratov, Izd-vo Saratovskogo univ., 1964, 63-100

TOPIC TAGS: gas dynamics, transonic flow, similarity theory, nozzle flow, mapping, partial differential equation

ABSTRACT: Some general properties of self-similar solutions of transonic flows, both plane and axisymmetric, are investigated in detail. The governing differential equation

$$-(\varkappa+1)\Phi_x\Phi_{xx}+\Phi_{yy}+\omega\frac{\Phi_y}{y}=0 \qquad (1)$$

is rewritten, using the Legendre transformation

$$\varphi(u, v) = ux+vy-\Phi(x, y)$$
$$x=\varphi_u, \qquad y=\varphi_v \qquad (2)$$

where $\omega = 1$ corresponds to the axisymmetric case and $\omega = 0$, to the plane flow case. Conditions for a similar solution are obtained from the following

$$\Phi=y^{2\alpha-2}q(\zeta), \quad \zeta=\frac{x}{y^{\alpha}} \qquad (3)$$

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$$\varphi = v^k g(\xi), \quad \xi = \frac{x}{v^n}, \tag{4}$$

where it is shown that the functions g and q must have the form

$$g(\xi) = \frac{(1-n)[\zeta q'(\zeta) - 3q(\zeta)]}{[(3n-2)q - n\zeta q']^{\frac{3n-2}{3n-3}}}$$

$$q(\zeta) = \frac{{}^2/_3 \xi g'(\xi) + (k-1)g(\xi)}{\left[kg(\xi) - \frac{2}{3}\xi g'(\xi)\right]^{\frac{n}{n-1}}}. \tag{5}$$

The main analysis is carried out in the (s, t) plane

$$s = \zeta^{-3} q, \quad t = \zeta^{-3} q'$$

$$\frac{dt}{ds} = \frac{2t^2 + (3n^2 - 5n + \omega n)t - s(3n-2)(3n-3+\omega)}{(n^2-1)(t-3s)} \tag{6}$$

instead of in the hodograph plane. It is shown that the t = t(s) curve can be determined if the function $\zeta = \zeta(\xi)$ is known. A complete description is then given of the integral curves of (6) for $\omega = 0, 1$ and $0 < n < \infty$. Next, for both the plane and the axisymmetric case, the extension of the t = t(s) curve through the singular point is investigated, and it is shown that a limit line exists if the integral curve in the (s, t) plane intersects the line $t = n^2$ distinct from point C (see Fig. 1). Self-similar solutions for three special cases are next investigated. The flow inside a nozzle is considered first. For n = 2, the governing ordinary differential equation is given by

$$q''(4\zeta^2 - q') - 10\zeta q' + 12q = 0 \tag{7}$$

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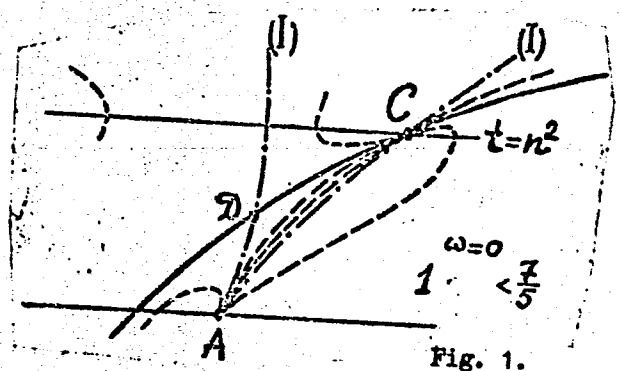

Fig. 1.

and for the case d = 0 the integral curve in the plane flow case is given by

$$s=\frac{1}{3}+\frac{3}{4}t\pm\sqrt{1+2t}\left(\frac{1}{3}-\frac{t}{12}\right), \qquad (8)$$

for the axisymmetric case, by

$$s=\frac{5}{8}t+\frac{1}{2}\pm\left(\frac{1}{2}-\frac{t}{8}\right)\sqrt{1+t}. \qquad (9)$$

The second special case is that of a local supersonic flow bounded by a shock wave from below. The (s, t) integral curves are then constructed for the point where the sonic line and the shock intersect. The third case is that of a plane transonic flow far from the surface of an object. In conclusion the author expresses deep gratitude

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

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ACC NR: AT6001785

to S. V. Fal'kovich for his help in writing this work. Orig. art. has: 37 equations and 30 figures.

SUB CODE: 20/ SUBM DATE: 21Jul64/ ORIG REF: 017/ OTH REF: 005

Card 4/4

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

ACCESSION NR: AP4018050 S/0140/64/000/001/0125/0133

AUTHORS: Fal'kovich, S. V. (Saratov); Chernov, I. A. (Saratov)

TITLE: Theory of self-modeling transonic flows

SOURCE: IVUZ. Matematika, no. 1, 1964, 125-133

TOPIC TAGS: transonic flow, self-modeling flow, limiting line, asymptotic shock wave, hodograph plane, ideal compressible fluid, self-modeling solution

ABSTRACT: The authors investigate certain general properties of self-modeling transonic flows illustrated in an example by F. I. Frankl' for sonic flow far from an arbitrary profile. The limiting line demonstrated by L. D. Landau and Ye. M. Lifshits (Mekhanika sploshny*kh sred, str. 531-548. GITTL, M., 1956) belongs to that branch of the solution which can be discarded on physical grounds. Then the remaining branch does not contain limiting lines and determines continuous flow in every physical plane. The peculiarity of this flow is that the positive x axis is the line on which the flow is situated. In order to use this solution for describing sonic flow far from a profile, it is necessary to construct an asymptotic shock wave. Orig. art. has: 7 figures and 48 formulas.

Card 1/2

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

L 44720-65 EWT(d)/EWT(m)/EPA(w)-2

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

ACCESSION NR: AP4027586 S/0040/64/028/002/0280/0284

AUTHORS: Fal'kovich, S. V. (Saratov); Chernov, I. A. (Saratov)

TITLE: Sonic gas flow about a body of rotation

SOURCE: Prikladnaya matematika i mekhanika, v. 28, no. 2, 1964, 280-284

TOPIC TAGS: sonic gas flow, gas flow, body of rotation, self-modelling problem, axisymmetric flow, self-modelling exponent, Guderley variable

ABSTRACT: K. Guderley and H. Yoshihara (An Axial-Symmetric Transonic Flow Pattern. Quart. Appl., Math. 1951, v. VIII, No. 4, Russk. per.: Guderley K. i Yosikhara X. Osesimmetrichny*ye transzvukovy*ye techeniya. Sb. "Mekhanika", 1953, vy*p. 2) used numerical methods to solve the self-modelling problem of axisymmetric transonic flow far from an arbitrary body. The authors assumed that to this solution there corresponds an exponent of the self-modelling property, equal to 4/7. In this present paper the authors present a particular family of self-modelling solutions which are algebraic on the s, t plane both for plane and axisymmetric flow, and they determine their corresponding exponents of the self-modelling property. The solution of Guderley and Yoshihara is contained in this family. It is shown

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ACCESSION NR: AP4027586

theoretically that the exponent of the self-modelling property of this solution is equal to 4/7. Orig. art. has: 36 formulas.

ASSOCIATION: Saratovskiy gosudarstvenny*y universitet (Saratov State University)

SUBMITTED: 10Dec63 DATE ACQ: 28Apr64 ENCL: 00

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

Card 2/2

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

ACC NR: AP6033202 SOURCE CODE: UR/0040/66/030/005/0848/0865

AUTHOR: Fal'kovich, S. V. (Saratov); Chernov, I. A. (Saratov)

ORG: none

TITLE: Self similar algebraic solutions to equations for two dimensional transonic gas flow

SOURCE: Prikladnaya matematika i mekhanika, v. 30, no. 5, 1966, 848-865

TOPIC TAGS: transonic flow, gas flow, dimensional flow, algebraic function

ABSTRACT: In the transonic velocity range the approximate equations describing gas flow possess an important class of self-similar solutions. Many properties of transonic flow, e.g., the nature of flow at a distance from the streamlined body, in Laval nozzles, etc., have been studied in the literature by using these solutions as the principal term. This paper investigates terms where the self-similar solutions are algebraic functions. Use of parametric representation of the desired variables made it possible in all cases to indicate the type of solution which is convenient in gasdynamic calculations. In the same way have been derived certain exact solutions of the Trichomi equations. These solutions may be used to study new properties of transonic flow: flow in Laval nozzles with interlocked ultransonic zones, flow in a nozzle whose contour includes a wall discontinuity, flow in the vicinity of the point

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ACC NR: AP6033202

of intersection of a sonic line with the boundary of a sonic stream, etc. The object examined is twodimensional nonvortical motion of an ideal compressible fluid whose velocity everywhere differs little from the speed of sound. In the hodographic plane the approximate system of equations describing this flow is

$$\frac{\partial\varphi}{\partial\theta}+\frac{\partial\psi}{\partial\eta}=0, \qquad \frac{\partial\varphi}{\partial\eta}-\eta\frac{\partial\psi}{\partial\theta}=0 \tag{1}$$

(ψ is the stream function, φ is the velocity potential, η is the velocity function which becomes zero at the critical velocity, and θ is the angle of inclination of the velocity vector). The self-similar solutions of Eq. (1) which are examined are

$$\psi=\rho^{k}f(\xi), \quad \varphi=\rho^{k+1/6}g(\xi); \quad \rho=\sqrt{\theta^2+{}^4/_9\eta^3}, \quad \xi={}^4/_9\eta^3/\rho^2. \tag{2}$$

Equation (1) is converted into

$$\xi(1-\xi)f''+[{}^2/_3-{}^7/_6\xi]f'+{}^1/_2k({}^1/_2k+{}^1/_6)f=0 \tag{3}$$

and the values of k are found for which algebraic solutions of Eq. (3) may be found. Orig. art. has: 85 formulas, 10 figures.

SUB CODE: 12,20/ SUBM DATE: 12Mar66/ ORIG REF: 014/ OTH REF: 009

Card 2/2

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, I. A.

"Catalytic decomposition of acetals. II. Catalytic decomposition of methylal and of methylene di-isoamylate" by M. M. Koton and I. A. Chernov (p. 700)

SO: Journal of General Chemistry (Zhurnal Obschei Khimii) 1946, Volume 16, No. 4-5

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, I. A.

10

The reactions of *o*- and *p*-ditolylmercury with phenols. VII. M. M. Koton and I. A. Chernov (Leningrad State Inst. Pediat. Med.). *J. Gen. Chem. U.S.S.R.* 19, No. 11, 2575-9(1949)(Engl. translation).—See *C.A.* 44, 3830c.
K. J. C.

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, I. A.
CA

Reaction of *o*- and *p*-ditolylmercury with phenols. VII. M. M. Koton and I. A. Chernov (Leningrad State Pediat. Inst.). *Zhur. Obshchei Khim.* (J. Gen. Chem.) 19, 2104-8(1949); cf. *C.A.* 44, 1043*i*.—$(o\text{-}MeC_6H_4)_2Hg$ (I) and the *p*-isomer (II) react with phenols analogously to Ph_2Hg; the reactions proceed probably via the radical mechanism and appear to be general for R_2Hg compds. At 150° the following % yields of Hg were obtained on heating equal wts. of phenols with I or II, resp.: pyrogallol 83.49, 71.71; hydroquinone 76.61, 63.85; 1-$HOC_{10}H_7$ 88.4, 49.11; resorcinol 77.6, 35.36; PhOH 56.9, 15.72; *p*-BrC_6H_4OH, *o*- and *p*-HOC_6H_4OH, and 2,4,6-Br_3(or $(NO_2)_3$)C_6H_2OH all failed to yield any Hg. The organomercury derivs. obtained in the reactions were: from II and *o*-$HOC_6H_4NO_2$, *p*-$MeC_6H_4HgC_6H_3(OH)NO_2$-(1,2), m. 225-7°, which yields MeC_6H_4HgCl with alc. HCl; II and *p*-$HOC_6H_4NO_2$ similarly gave *p*-$MeC_6H_4HgC_6H_3(OH)NO_2$-[1,2,5(?)]; m. 239° (from EtOH), as well as $(p\text{-}MeC_6H_4Hg)_2C_6H_3(OH)(NO_2)$, yellow, does not m. 250°, insol. in org. solvents; II and *p*-BrC_6H_4OH gave *p*-$MeC_6H_4HgC_6H_3(OH)Br$, m. 169-70°, yielding 3,4-$Br_2C_6H_3OH$ on bromination in KBr soln.; II and 2,4,6-$Br_3C_6H_2OH$ gave (5 hrs., 130°) *p*-$MeC_6H_4HgC_6H(OH)Br_3$, m. 189-7° (from EtOH); II and 2,4,6-$(O_2N)_3C_6H_2OH$ gave (3 hrs., 118°) yellow *p*-$MeC_6H_4HgC_6H(OH)(NO_2)_3$, decomp. 143-4° (from C_6H_6); I and *o*-$HOC_6H_4NO_2$ gave $(o\text{-}MeC_6H_4Hg)_2C_6H_3(OH)NO_2$, insol., infusible; I and *p*-BrC_6H_4OH gave $(o\text{-}MeC_6H_4Hg)_2C_6H_3(OH)Br$, pink infusible solid; I and 2,4,6-$(O_2N)_3C_6H_2OH$ gave *o*-$MeC_6H_4HgC_6H(OH)(NO_2)_3$, brown, decomp. 135-7°; I and *p*-$HOC_6H_4NO_2$ gave $(o\text{-}MeC_6H_4Hg)_2C_6H_3(OH)NO_2$, infusible yellow solid; I and resorcinol gave insol., infusible $(o\text{-}MeC_6H_4Hg)_2C_6H_2(OH)_2$.

C. M. Kosolapoff

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

Reaction of *o*- and *p*-ditolylmercury with organic acids. I. A. Chernov (Leningrad State Pediat. Med. Inst.). *Zhur. Obshchei Khim.* (J. Gen. Chem.) 20, 325-8 (1950).—The reactions yield MePh and acyl derivs. of the type RHgOCOR'; the *o*-isomer is more reactive. All reactions were run in sealed tubes. $(p\text{-}MeC_6H_4)_2Hg$ (I) (0.2 g.) and 1 ml. HCO_2H after 2 hrs. at 100° gave 62.5% *p-MeC₆H₄HgOCHO*, m. 220-2°; $(o\text{-}MeC_6H_4)_2Hg$ (II) reacts in 15-20 hrs. at room temp. yielding 62.5% *o-MeC₆H₄HgOCHO*, m. 88-9°. II and AcOH in 42 hrs. at room temp. yield 60.1% *o-MeC₆H₄HgOAc*, m. 92°. I and iso-$BuCO_2H$ after 3 hrs. at 150° gave 22% *p-MeC₆H₄HgOCOCH₂CHMe₂*, m. 100-2°, while II after 1 hr. at 100° gave 30% *o-analog*, m. 52°. I and lactic acid after 6 hrs. at 130° gave an unstated amt. of *p-MeC₆H₄HgOCOCH(OH)Me*, does not m. 250°, while II after 1 hr. at 100° gave an unstated amt. of the *o-analog*, m. 124°. I and $(CO_2H)_2$ in 3 hrs. at 130° gave 30% *p-MeC₆H₄HgOCOCO₂H*, m. 214-16°, while II in 1 hr. at 100° gave 20% *o-analog*, m. 161-3° (both reactions were run with addn. of a drop of H_2O to the reactants). I and BzOH in 6 hrs. at 150° gave 30% *p-MeC₆H₄HgOBz*, m. 213-15°, while salicylic acid gave in 6 hrs. at 130° 41% *p-MeC₆H₄HgOCOC₆H₄OH-o*, m. 190°; in the latter case II gave after 1 hr. at 100° an unstated amt. of the *o-analog*, m. 107-8°. Derivs. of I are generally insol., those of II are sol. in org. solvents.

G. M. Kosolapoff

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, I.A.

CA

10

Reaction of o- and p-ditolylmercury with organic acids. I. A. Chernov (Leningrad State Inst. Pediatric Med.). *J. Gen. Chem. U.S.S.R.* 20, 345-8(1950)(Engl. translation). See *C.A.* 44, 6308e. R. M. S

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, I. A.

USSR/Chemistry - Organic Mercury Compounds Jan 52

"Interaction of o-Ditolylmercury With Organic Acids," I. A. Chernov, Chair of Gen Chem, Leningrad State Pediatric Med Inst

"Zhur Obshch Khim" Vol XXII, No 1, pp 97-102

Studied reactions of o-ditolylmercury with 20 different org acids. Demonstrated that these reactions yield acyl derivs of general formulas $CH_3C_6H_4HgOCOR$ and $CH_3C_6H_4HgOCORCOOHgC_6H_4CH_3$ in form of cryst substances with definite mp and in most cases sol in org solvents.

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

L 46190-66 EWP(m)/EWT(1) WW

ACC NR: AR6000704 SOURCE CODE: UR/0124/65/000/009/B034/B034

AUTHOR: Chernov, I. A.

9

TITLE: Self-similar solutions in transonic gas dynamics

B

SOURCE: Ref. zh. Mekhanika, Abs. 9B222

REF SOURCE: Sb. Transzvuk. techeniya gaza. Saratov, Saratovsk. un-t, 1964, 63-100

TOPIC TAGS: self similar solution, transonic flow, gas dynamics, hodograph

ABSTRACT: The self-similar solutions of the system Fal'kovich-Karman equations are analyzed in detail as applied to the transonic flow range. Both the plane-parallel and the axially symmetric flows are investigated. For the plane-parallel flow, the relationship is established between the self-similar solutions in the plane of physical variables and the analogous solutions in the hodograph plane, whose study corresponds to the linear Tricomi equation. Formulas are introduced which permit continuous transition from the hodograph plane to the so-called "phase" plane-st introduced by Guderley and Yoshihara (Guderley, K.G., Yoshihara, H., Quart. Appl. Math., 1951, 8, No. 4, 333--339). Furthermore, basic consideration is given to the analysis of integral curves in the st-plane, which leads to arbitrary positive magnitudes of the self-similarity index. Conditions are introduced which generate limit lines, and the boundary conditions on the shock waves are considered. At the end of the paper, the known results which correspond to Laval nozzle flows are

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CHERNOV, I.G.

PROCESSES AND PROPERTIES INDEX

15

The problem of applying mineral fertilizers to cotton in Middle Asia. J. G. CHERNOV. *Khlopkovoe Delo* (*Cotton Ind.*) 9, 501-6(1930).—Fertilizer expts. were conducted on 20 different kinds of soils with a single fertilizer element and a combination of two or three. The soils responded to N and P, but the best results were obtained with a complete fertilizer. A comparison of various forms of N(KNO_3, NH_4NO_3, $(NH_4)_2SO_4$, $CO(NH_2)_2$ and $CaCN_2$) with superphosphate proved the superiority of the KNO_3, which gave a 31% yield increase. $(NH_4)_2SO_4$ gave 24% increase and the other forms of N about a 21% increase. Of the sources of P, double superphosphate proved to be the most economical, although pptd. phosphate was just as effective. J. S. J.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

ACC NR: AP6015611

SOURCE CODE: UR/0020/66/169/002/0325/0327

AUTHOR: Starodubtsev, S. V. (Academician AN UzSSR); Pozharov, S. L.; Chernov, I. G.; Knopov, V. M.

ORG: None

TITLE: Ionic composition of the positive column of the glow discharge in inert gases at increased pressures

SOURCE: AN SSSR. Doklady, v. 168, no 2, 1966, 325-327

TOPIC TAGS: ion, complex ion, positive ion, glow discharge, glow discharge ion composition

ABSTRACT: The present paper communicates some results of glow discharge studies in inert gases with the addition of mercury vapor, in the pressure range of from 5 to 50 mm Hg. Measurement were made with the use of a mass spectrometer constructed especially for the research on ionic processes at high pressures, described before by the authors (Izv. AN UzSSR, 4, 59; 1963). Glow discharge in helium and in argon was studied. The partial pressure of mercury was in both cases approximately 10^{-5} mm Hg. Helium underwent a preliminary purification by adsorption in liquid air cooled silica gel. Previous work by these writers (Doklady AN SSSR, 163, No.1, 155;1955), has established the development of conditions favorable to the occurence and stabilization of complex ions. These occured at pressures over 5 mm Hg. At lower pressures, the complex ions

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ACC NR: AP6015611

were, as a rule, not observed. Numerous results of the present research are discussed, with comments and interpretation of possible causes. The main point of interest is the discovery of a heavy complex ion, with a mass spectrometer record peak corresponding to mass number 404, and a 1% intensity relative to the Ar^+ peak. This heavy ion was identified as the Hg_2^+ molecular complex ion. A considerable content of ions with a mass number of 9 was also observed; this was interpreted as the He_2H^+ complex ion. Orig. art. has 9 formulas.

SUB CODE: 20/ SUBM DATE: 11Oct65/ ORIG REF: 002/ OTH REF: 007

Card 2/2

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV,I. G.

6815. Chernov, I. G. Million rubley dokhoda or ovoshchchnykh i bakhchevykh kul'tup. (kolkhozim. XIX parts" yezda, balakov. Rayona). Saratov, Kn. izd., 1954. 20 s. 21 sm. 2.000 ekz. 25 k. --(55-3087) P 635 st (47.871)

SO: Knizhnaya Letopis' No. 6, 1955

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

STARODUBTSEV, [illegible]; [illegible]HAROV, B.L.; CHERNOV, I.G.

Double focusing in mass spectrometers using a nonuniform magnetic field. Izv. AN Uz. SSR. Ser. fiz.-mat. nauk 9 no.4:40-44 '65. (MIRA 18:9)

1. Institut yadernoy fiziki AN UzSSR.

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

17(

SOV/177-58-5-18/30

AUTHORS: Mal'tsev, A.I., and Chernov, I.G., Lieutenant-Colonels of the Medical Corps

TITLE: The Treatment of Patients Suffering From Chronic Gastritis in the Novo-Senzharskiy Sanitarium (Lecheniye bol'nykh khronicheskim gastritom v Novo-Senzharskom sanatorii)

PERIODCIAL: Voyenno-meditsinskiy zhurnal, 1958, Nr 5, pp 74-75 (USSR)

ABSTRACT: The physicians of the Novo-Senzharskiy Sanitarium have developed a medical-protective system for removing the factors which cause a negative emotion in patients suffering from chronic gastritis. The system includes diet, hygienic gymnastics, physiotherapy and climatotherapy. Good results have been obtained.

Card 1/1

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

KHESTANOV, G.T., podpolkovnik meditsinskoy sluzhby; MAL'TSEV, A.I., podpolkovnik meditsinskoy sluzhby; CHERNOV, I.G., podpolkovnik meditsinskoy sluzhby

Compound treatment of chronic gastritis at the Novye Senzhary Sanatorium. Voen.-med. zhur. no.6:78 Je '61. (MIRA 14:8)

(STOMACH--INFLAMMATION)
(NOVYE SENZHARY--MINERAL WATERS)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

MAL'TSEV, A.I., podpolkovnik med.sluzhby; CHERNOV, I.G., podpolkovnik med. sluzhby

Compound treatment of ulcer patients by the use of Novyye-Senzhary mineral water. Sbor.nauch.trud.Kiev.okruzh.voen.gosp. no.4:159-164 '62. (MIRA 16:5)

(DUODENUM—ULCERS)
(NOVYYE SENZHARY DISTRICT--MINERAL WATERS)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

ACCESSION NR: AP 5018089

AUTHOR: [illegible] S.V. (Academ[illegible]
Chernov, T. G.

TITLE: Existence of the H_3^+ ion in
charge at high pressure

[illegible] v. 163,

[illegible] hydrogen [illegible]

[illegible]

discharge in hydrogen at higher pr[illegible]

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discovered the ion with the mass number [illegible] current intensity [illegible]

increase [illegible]

and increase

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of these two competing processes may account for the formation of a maximum in the

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L 39566-66 [illegible] IJP(c) GD-2

ACC NR: AP6018114 SOURCE CODE: UR/0166/65/000/004/0040/0044

AUTHOR: Starodubtsev, S. V.; Pozharov, S. L.; Chernov, I. G.

ORG: Nuclear Physics Institute, AN UzSSR (Institut yadernoy fiziki AN UzSSR)

TITLE: Double focusing in mass spectrometers with an inhomogeneous magnetic field

SOURCE: AN UzSSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, no. 4, 1965, 40-44

TOPIC TAGS: mass spectrometry, nonhomogeneous magnetic field, electrostatic field, ion beam

ABSTRACT: The use of an inhomogeneous magnetic field in mass spectrometry markedly enhances the dispersion and resolving power of instruments without changing the radius of ion trajectory and the slit width of source and receiver. However, owing to the presence of initial kinetic energies in the ions and the distribution of potentials in the ion source, the ions in the beam may get scattered with respect to energies and the lines may widen. This effect may be eliminated by adding a specially selected electrostatic field. FISHER (Zs. f. Physik, 133, 1952, 455) has described a mass spectrometer with first-order double focusing with combined electrostatic and magnetic fields. But such combining involves difficulties due to the need to overcome the boundary-field effect; moreover, it is not always convenient to have the

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ACC NR: AP6018114

receiver and source in the magnetic-field region. Hence, the authors investigated the conditions for first-order double focusing in the central plane for a tandem-type mass spectrometer with an inhomogeneous magnetic field and a homogeneous electrostatic field, with both fields deflecting the ion beam in the same direction. The formula for double focusing in such directions and speeds is derived, and a particular example is presented, showing how the difficulties involved in this solution can be overcome. Orig. art. has: 1 figure and 14 formulas. [JPRS]

SUB CODE: 20 / SUBM DATE: 23Jul64 / ORIG REF: 005 / OTH REF: 001

Card 2/2

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

L 00946-67 EWT(1) IJP(c) AT
ACC NR: AT6028507

SOURCE CODE: UR/0166/66/000/003/0049/0053

AUTHOR: Sharonnikov, S. V.; Knopov, V. N.; Pozharov, S. L.; Chernov, I. G. 77

ORG: Institute of Nuclear Physics AN UzSSR (Institut yadernoy fiziki AN UzSSR)

TITLE: Mass-spectrometric investigation of the anode parts of increased-pressure hydrogen glow discharge

SOURCE: AN UzSSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, no. 3, 1966, 49-53

TOPIC TAGS: gas discharge plasma, glow discharge, gas discharge spectroscopy, electric discharge ionization, hydrogen ion, electron recombination

ABSTRACT: To check on the efficiency of formation of heavy ion clusters in a gas-discharge plasma at pressures higher than used by other workers (0.1 - 1.0 mm Hg), the authors investigated the ions drawn out from the anode region of hydrogen discharge at pressures 5 - 18 mm Hg. The apparatus was described earlier (Izv. AN UzSSR, seriya fiz.-mat. nauk 1963, no. 4, p. 59). The ions were extracted through an opening in the anode (extraction channel 75 μ dia, 70 μ long). No stable ion current could be produced at pressures higher than 18 mm Hg. The obtained plot of the total ion current against pressure exhibited a periodic variation indicating that the glow discharge was stratified and that the strata moved relative to the anode with change in pressure. The measurements show that the most intense component of the current is due to H_3^+ at all pressures. H_1^+, H_2^+, and ions with masses 4 and 5 were also observed. The mass-5 cluster is positively identified as H_5^+, while the ion with mass 4 is identified as

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

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ACC NR: AP6028307

H_2D^+, but only tentatively, in view of its very low content. Plots of the various components against pressure and discharge current are presented and interpreted. The most favorable conditions for the formation of H_5^+ lie in the pressure range 5 - 9 mm Hg. The near-hyperbolic decrease of the H_5^+ component with increasing discharge current is evidence of effective recombination with electrons in the discharge. Orig. art. has: 5 figures, 1 formula, and 1 table.

SUB CODE: 20/ SUBM DATE: 03Mar65/ ORIG REF: 001/ OTH REF: 009

Card 2/2

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, I.I.

Hygienic evaluation of ice cream produced by Khar'kov enterprises. Gig.i san. no.11:31-35 N '53. (MLRA 6:10)

1. Khar'kovskaya oblastnaya sanitarno-epidemiologicheskaya stantsiya. (Khar'kov--Ice cream, ices, etc.) (Ice cream, ices, etc.--Khar'kov)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

BASKOVICH, TS.L.; CHERNOV, I.I.

Hygienic characterization of the food of trade school students. Gig. i san., no.8:48 Ag '54. (MLRA 7:9)

1. Iz Khar'kovskoy oblastnoy sanitarno-epidemiologicheskoy stantsii.
(SCHOOL CHILDREN--FOOD)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, I.I., inzh.

New semiautomatic line. Mashinostroitel' no.5:6-7 My '60. (MIRA 14:5)
(Taganrog--Combines (Agricultural machinery)) (Automation)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, I.I.

Semiautomatic production line at the Taganrog Combine Plant. Stan. i instr. 31 no. 6:35-36 Je '60. (MIRA 14:2)
(Taganrog--Combines (Agricultural machinery))

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

BARANOV, G.I.; CHERNOV, I.I.

New data on the structure of the main range of the central Caucasus. Izv. AN SSSR. Ser. geol. 30 no.6:64-71 Je '65. (MIRA 18:6)

1. Severo-Kavkazskoye geologicheskoye upravleniye, Glavnoye upravleniye geologii i okhrany nedr RSFSR, Tematicheskaya ekspeditsiya, g. Essentuki.

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, I. M.

"Observations on Local Weather Signs," Meteorologiya i Gidrologiya, Issue No. 1, 1949.

U-1442, 28 Aug 51

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, I. M.

6761. Chernov, I. M. Reshayushchaya sila. (O Zavishnyanskoy MTS Zabugskogo Rayona). L'vov, Kn.-zhurn. izd., 1954. 44 s. s. graf. 20 sm. 3.000 ekz. 55 k.--Na ukr. yaz.--(55-1634) 338.1 MTS (47.743)

SO: Knizhnaya Letopis' No. 6, 1955

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, Ivan Mikhaylovich; NAGORNYY, A.G.[Nahornyi, A.H.], red.; GULENKO, O.I.[Hulenko, O.I.], tekhn. red.

[Mechanization of growing and processing fiber flax] Mekhanizatsiia vyroshchuvannia ta pererobky l'onu-dovhuntsia. Kyiv, Derzhisil'hospvydav URSR, 1962. 164 p. (MIRA 16:4)
(Flax) (Agricultural machinery)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, I. M.

USSR/Physics

Card : 1/1 Pub. 22 - 18/48

Authors : Sokolov, A. A. and Chernov, I. M.

Title : The quantum theory on motion of a relativistic electron in an axially-symmetrical magnetic field

Periodical : Dok. AN SSSR 97/5, 823 - 826, August 11, 1954

Abstract : Quantum theory of a moving electron with velocities affecting its mass in a variable magnetic field is described. Seven references (1941-1954).

Institution : Moscow State University of im. M. V. Lomonosov

Presented by : Academician V. V. Shuleykin, May 18, 1954

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, Ivan Mikhaylovich; MILITSA, Valentina Borisovna; VITVITSKIY, M. [Vitvits'kyi, M.], red.; GRIFF, M. [Hriff, M.], tekhn.red.

[One owner] Odyn hospodar. L'viv, Knyzhkovo-zhurnal'ne vyd-vo, 1958. 23 p. (MIRA 13:2)

(Agricultural machinery)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, I.N.

Soldering hard-alloy plates with tableted solder. Stan. i instr. 34 no.11:36 N '63. (MIRA 16:12)

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[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] cross section, gold, bismuth, [illegible]

ABSTRACT. [illegible] gation was [illegible] to provide better data on the elastic scattering cross sections at all angles, and to check on the possibility, proposed by one of the authors (Sokolov and [illegible]

[illegible]

[illegible] Summ

[illegible] troscopy

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

ACCESSION NR: AP4 47927

[illegible] are grateful to V. M. Galitskiy for discussion of the work of Sokolov and Lebkova, to I. N. Sernikov and V. V. Tokarevskiy for advice on experimental techni[illegible]

Card 3/3

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

CHERNOV, I. S.

CU

The effect of boron on the increase of the tomato and cucumber crops. I. P. Gilyarovskii and I. S. Chernov *Ovoshchevodstvo* (U. S. S. R.) 1940, No. 11-12, 28-9.—The pos. effect of B on sugar beets, wheat, flax and mustard on alk. and limed soils is more pronounced on the yields of the seeds than on the vegetative mass. B also facilitates the absorption of P and N from the soil and their transformation into the org. form. Investigations with tomatoes and cucumbers showed that B (in the form of boracic and boraxl) increases the yields of tomatoes and cucumbers, facilitates the growth of tomatoes and cucumbers of better quality and shortens the time of their ripening.

W. R. Henn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, I.S.

Possibilities for the expansion of the textile industry managed by the Executive Committee of the Moscow City Soviet. Gor. khoz. Mosk 34 no.8:22-25 Ag '60. (MIRA 13:9)

1. Nachal'nik Upravleniya tekstil'noy i legkoy promyshlennosti Mosgorispolkoma.
(Moscow--Textile industry)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, I.S.; POYARKOV, A.A.; ZOTOV, V.A., kand. veter. nauk (Smolenskaya oblast'); KRYUCHKOV, I.I., starshiy veterinarnyy vrach

Prophylaxis of dictyocaulosis in cattle; a selection of articles. Veterinariia 41 no.4:45-48 Ap '65. (MIRA 18:6)

1. Upravleniya veterinarii Ministerstva sel'skogo khozyaystva RSFSR (for Chernov). 2. Nachal'nik veterinarnogo otdela Smolenskoy oblasti (for Poyarkov). 3. Zaveduyushchiy Rzhevskoy veterinarnoy laboratoriyey Kalininskoy oblasti (for Kryuchkov).

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, I.V.

The economy of workers' time as an important problem in the organization of labor in coal mines. Izv.Sib.otd.AN SSSR no.8:13-21 '61. (MIRA 14:8)

(Kuznetsk Basin—Coal mines and mining—Labor productivity)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, I.V.

Effect of powered transportation of miners to the longwall on their labor productivity. Ugol' 37 no.2:42 F '62. (MIRA 15:2)

1. Institut ekonomiki Sibirskogo otdeleniya AN SSSR.
(Coal mines and mining—Labor productivity)
(Mine haulage)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, I.V.

Some problems in legal regulation of labor in underground mining. Izv. Sib. otd. AN SSSR no.7:94-96 '62 (MIRA 17:8)

1. Institut ekonomiki i organizatsii promyshlennogo proizvodstva. Novosibirsk.

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, I.V.

Reduce the free time losses of workers in coal mines. Ugol' 37 no.3:44-45 Mr '62. (MIRA 15:2)

1. Institut ekonomiki Sibirskogo otdeleniya AN SSSR.
(Coal miners)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, I. V.

Dissertation defended for the degree of Candidate of Economic Sciences were defended at the Joint Scientific Council on the Economic Sciences and the Humanities; Siberian Branch

"Reserves of Free Time and the Organization of the Labor or Underground Workers."

Vestnik Akad. Nauk, No. 4, pp 119-145

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, I.Ye.

Coal extraction by slicing using headframes in thick steep seams of the Kuznetsk Basin. Ugol' 30 no.10:37-38 O '55. (MLRA 8:12)

1. Zapadno-Sibirskiy filial Akademii nauk SSSR
(Kuznetsk Basin--Coal mines and mining)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, I.Ye., nauchnyy sotrudnik.

First experience in using an expandable shield for working wide steep pitching seams of varying width. Ugol' 32 no.2:8-11 F '57. (MLRA 10:3)

1. Gorno-geologicheskiy institut Zapadno-Sibirskogo filiala Akademii nauk SSSR.

(Kuznetsk Basin--Mine timbering)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, I.Ye., nauchnyy sotrudnik

Working steep pitching seams of more than 8 meters and less than 3,5 m.in Kuznetsk Basin mines with use of plain shields. Ugol' 34 no.2:17-22 F '59. (MIRA 12:4)

1. Institut gornogo dela Zapadno-Sibirskogo filiala AN SSSR.
(Kuznetsk Basin--Coal mines and mining--Equipment and supplies)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, I.Ye.

Telescoping shields used in mining steep beds. Biul.tekh.-ekon.inform. no.4:3-5 '59. (MIRA 12:7)

(Coal mining machinery)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, I.Ye.

Results of testing nonsectional expansion shields in the Kuznetsk Basin. Trudy Inst.gor.dela Sib.otd.AN SSSR no.2: 60-82 '59. (MIRA 13:5)
(Kuznetsk Basin--Coal mines and mining--Equipment and supplies)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, I. Ye.

Operation of an expanding shield. Trudy Inst. gor. dela Sib. otd. AN SSSR no.3:48-60 '60. (MIRA 14:4)
(Mine timbering)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, I. Ye.

Laboratory and theoretical research to determine the solidity of the construction of expanding shields. Trudy Inst. gor. dela Sib. otd. AN SSSR no.3:61-68 '60. (MIRA 14:4)
(Mine timbering--Equipment and supplies)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, I. YE., CAND TECH SCI, "INVESTIGATION OF THE ~~WORK~~ performance OF EXTENSION-TYPE HEADING MACHINES IN the MINING of STEEP BEDS ~~OF VARIOUS HEIGHTS~~ with varying use, AS APPLIED TO CONDITIONS OF PROKOP'YEVSKO-KISILEVSKIY RAYON OF the KUZBAS." NOVOSIBIRSK, 1960. (MIN OF HIGHER AND SEC SPEC ED RSFSR, TOMSK ORDER OF LABOR RED BANNER POLYTECH INST IM S. M. KIROV). (KL, 3-61, 222).

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, I.Ye.

Result of investigations to determine the basic parameters of an expandable shield. Trudy Inst. gor. dela Sib. otd. AN SSSR no.5: 45-67 '64.

Effectiveness of using single, expandable shields in mining seams of 1.5 to 12 m. thickness. Ibid.:68-81

(MIRA 17:11)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

BARTON', Nikolay Emanuilovich; CHERNOV, Igor' Yefimovich; OSIPOV, L.G., kand. tekhn. nauk, retsenzent; PROFERANSOV, D.P., inzh., retsenzent; GRONDA, V.I., red.

[Architectural elements; parts of buildings] Arkhitekturnye konstruktsii; chasti zdanii. Moskva, Vysshaia shkola, 1965. 342 p. (MIRA 18:12)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, K.K.

Fuel Abstracts
May 1954
Other Prime
Movers

3831. INSTALLING AUTOMATIC CONTROL ON DIESEL PLANT. Basov, V.S., Egorov, F.S. and Chernov, K.K. (Energ. Byull. Minist. Neft. Prom. (Pyr Bull. Minist. Oil, Moscow), Dec. 1953, 1-8). An illustrated account of automatic devices which were added to 600 h.p. 500 rev/min Baldwin engines coupled to Westinghouse generators and used as standby plant. (L).

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, K.K.

AID P - 985

Subject : USSR/Engineering

Card 1/1 Pub. 28 - 8/9

Author : Chernov, K. K.

Title : Circuit diagram for semi-automatic synchronization of the diesel generator

Periodical : Energ. byul., #10, 29-31, O 1954

Abstract : Automatic control of the starting and stopping of diesel agregates (600 hp) at electric power stations is described on the circuit diagram. Original hand-operated synchronization was made semi-automatic by means of a common complex of relays and an individual relay for each of four generators. One diagram.

Institution : None

Submitted : No date

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

CHERNOV, K.K., inzh.

Data on remote control of substations. Elek.sta.29 no.3:56-58 Mr '58. (MIRA 11:5)
(Electric substations) (Remote control)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

L 41005-66 EWT(1)/EWT(m)/T DS

ACC NR: AP6018746 SOURCE CODE: UR/0057/66/036/006/1140/1143

59
57
B

AUTHOR: Udris, Ya. Ya.; Guseva, L. G.; Chernov, V. A.

ORG: All-Union Electrotechnical Institute im. V. I. Lenin, Moscow (Vsesoyuznyy elektrotekhnicheskiy institut)

TITLE: On some properties of a high voltage hollow anode glow discharge

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 6, 1966, 1140-1143

TOPIC TAGS: glow discharge, electric discharge, electrode, hollow anode, air, inert gas

ABSTRACT: The authors have investigated high voltage (3 to 25 kV) glow discharges in air and different inert gases at pressures from 0.001 to 0.1 mm Hg and currents from 0.0001 to 1 A between 6 to 35 cm diameter plane cathodes and plane or hollow anodes of the same diameter (the hollow anodes were from 15 to 100 cm deep). The current distribution on the plane end of a hollow anode was the same as on a plane anode, thus confirming the conclusion of G. W. McClure (Phys. Rev., 124, 696, 1961) that the glass tube confining the discharge in the case of plane electrodes becomes charged to approximately the anode potential and so gives rise to conditions approximating those within a hollow anode. The discharge current was found to be focused onto the central portion of the plane end of the hollow anode. The current to the cathode surface, on the other hand, was not concentrated in the central region of the electrode, the

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L 41005-66

ACC NR: AP6018746

2

current density was actually somewhat lower in the center of the cathode than at some distance from the center. The focusing of the current on the anode and its defocusing on the cathode were enhanced by a longitudinal magnetic field. The enhancement of the current focusing due to the field of a short solenoid depended strongly on the axial position of the solenoid. Particles were withdrawn from the discharge region through holes in the electrodes. Difficulty was experienced with discharges through the openings in the electrodes when the pressure in the regions beyond the electrodes was the same as in the interelectrode region, but such discharges could be avoided by maintaining a low pressure in the regions beyond the electrodes. From measurements of the particles withdrawn from the discharge region through holes in the electrodes it was concluded, in agreement with the findings of McClure (loc.cit.) and D.Kamke and F.W.Richter (Ann. d. Phys., 10, 360, 1963), that 75-80% of the energy of the hollow anode discharge is carried by the electron current to the anode. The authors thank V.L.Granovskiy (deceased) and B.N.Klyarfel'd for valuable advice and discussions. Orig. art. has: 3 figures.

SUB CODE: 20,09/ SUBM DATE: 22Oct65/ ORIG.REF: 003/ OTH REF: 002

Card 2/2

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

L 23737-66 EWT(m)/T

ACC NR: AP6014820 SOURCE CODE: UR/0367/65/001/004/0676/0680

AUTHOR: Azimov, S. A.; Bannik, B. P.; Vishki, T.; Seb, Do In; Gulyamov, U. G.; Rakhimbayev, B. G.; Chernova, L. I.

ORG: [Azimov, Gulyamov, Rakhimbayev, Chernova] Institute of Nuclear Physics, AN UzbSSR (Institut yadernoy fiziki AN UzbSSR); Joint Institute of Nuclear Research (Ob"yedinennyy institut yadernykh issledovaniy)

TITLE: Inelastic pp-interactions with low momentum transfer

SOURCE: Yadernaya fizika, v. 1, no. 4, 1965, 676-680

TOPIC TAGS: inelastic interaction, nuclear emulsion, proton, isobar

ABSTRACT: The nuclear emulsion method is used to study inelastic pp--interactions for energies of 2.26 and 9 GEV of a primary proton. The search for events in the emulsion was performed by accelerated inspection of traces. Energy distributions were obtained for slow protons. The events selected are of two types: pp-interactions and a small number of interactions connected with secondary processes in the nucleus. For the energy distribution all cases were taken with their weights K = 1/W, where W is the probability of registration. Both distributions were normalized for the complete observed path of primary protons R = 3694m. In the processing of the experimental data the relative output of the reaction was evaluated qualitatively with the formation of one or two isobars. The authors thank Van Shu-fen', T. Vishki, I. M. Gramenitskiy, V. G. Grishin, N. Dalkhazbav, R. M., Lebedev, A. A. Nomofilov, M. I. Podgoretskiy,

Card 1/2

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

L 23737-66

ACC NR: AP6014820

9

V. N. Strel'tsov for providing us the materials, which were so useful in this work. The authors also thank I. M. Gramenitskiy for his interest and assistance in the work; M. I. Podgoretskiy for the discussions; and E. G. Bubelev, A. Yuldashev, V. N. Strel'tsov, Yu. A. Troyan and V. G. Grishin for participating in the discussions and for their remarks. The authors offer further thanks to the laboratory workers of IYaF, AN UzbSSR and LVE OIYaI for carrying-out the review of photoemulsions and measurements; and A. T. Balandikov for help in carrying-out the calculations. Orig. art. has: 4 figures. [JPRS]

SUB CODE: 20 / SUBM DATE: 01Jul64 / ORIG REF: 006 / OTH REF: 001

Card 2/2 VLR

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5

L 22342-66 EWT(m)/EWP(w)/EWA(d)/T/EWP(t) IJP(c) MJW/JD/GS

ACC NR: AT6012397 SOURCE CODE: UR/0000/65/000/000/0243/0246

AUTHOR: Kornilov, I. I. (Doctor of chemical sciences; Professor); Shakhova, K. I.; Nuss, P. A.; Klimov, B. A.; Budberg, P. B.; Chernova, T. S.; Zuykova, N. A.

ORG: none

TITLE: Some mechanical and physical properties of AT13 alloy

SOURCE: Soveshchaniye po metallokhimii, metallovedeniyu i primeneniyu titana i yego splavov, 6th. Novyye issledovaniya titanovykh splavov (New research on titanium alloys); trudy soveshchaniya. Moscow, Izd-vo Nauka, 1965, 243-246

TOPIC TAGS: titanium, titanium alloy, aluminum containing alloy, zirconium containing alloy, molybdenum containing alloy, alloy mechanical property, alloy physical property /AT13 alloy

ABSTRACT: On the basis of experimental data on titanium alloys gathered at the Laboratory of the Chemistry of Metallic Alloys of the Institute of Metallurgy im. A. A. Baykov, a new, eight-component, high-strength weldable titanium alloy AT13 has been developed. The alloy liquidus and solidus temperatures were found to be 1800 and 1675C, respectively. The alloy structure consists mainly of the α-phase with a very insignificant amount of the β-phase. The α→β transformation occurs in the 1030-1050C range; no other transformation occurs in the 100—1000C range. At room temperature, AT13 alloy has a tensile strength of 127—129 kg/mm², a yield

Card 1/2 UDC: 669.295.001.5

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ACC NR: AT6012397

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strength of 120—125 kg/mm^2, an elongation of 4—6%, a reduction of area of 30—35%, an impact toughness of 3 kg·m/cm^2, and an HV hardness of 258 kg/mm^2. In the annealed condition the alloy has an elasticity modulus of 13,600 kg/mm^2, a shear modulus of 4850 kg/mm^2, and a Poisson ratio of 0.4. The alloy softens insignificantly at 500—600C, but the tensile and yield strengths drop sharply as the test temperature increases to 700C. The creep rate at 500 and 600C is low, but sharply increases at 800C. The alloy elongation and the coefficient of thermal expansion increase uniformly with increasing temperature. The alloy resistivity was 1.73 and 1.84 ohm·mm^2/m in the annealed and in the strained condition, respectively. AT13 has the highest electric resistance of all the alloys used for heating elements, i.e., Kh20N80T3 (Nichrome) or OKh27Yu5A (alloy no. 2) and special electric heater alloys MNMts3-12 (manganin) or MNMts40-1.5 (constantan). Further research on AT13 alloy is planned. Orig. art. has: 4 figures. [MS]

SUB CODE: 11/ SUBM DATE: 02Dec65/ ORIG REF: 007/ ATD PRESS: 4241

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APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308530007-5"