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On the propagation of the ...

b) the derivatives of the order (m - 1) of u(x) satisfy the condition $|D^{(m-1)}u| \leq A|x|^{-q}$, where q is integral $\geqslant 0$, A = const ;

c) a certain derivative of u(x) of the order μ has a discontinuity in 0 (u - solution of (1)). Under these assumptions it holds the

theorem : If the equation (1) is not elliptic and if p is sufficiently large then it holds $p - \mu < n - 1$ for an odd n and $p - \mu < n$ for an even n.

[Abstracter's note : Complete translation.]

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21 (3)

AUTHORS: Kogan, A. M., Petrov, G. G., Chudov, L. A., Yampol'skiy, P. A.

SOV/89-7-4-6/28

TITLE: The Tissue Dose of Neutrons

PERIODICAL: Atomnaya energiya, 1959, Vol 7, Nr 4, pp 351-362 (USSR)

ABSTRACT: The present paper deals with the determination of the dosimetric properties of medium-energy neutrons, viz, for thermal neutrons and for neutrons with the energies of 100 ev; 1; 30; 240; 500 kev, and 1 Mev by using the results obtained by means of computers and those of experimental work performed by A. M. Kogan et al (Refs 6, 7). A broad beam of monoenergetic neutrons impinges perpendicularly upon the plane surface of a semi-infinite space, which is filled with a biological tissue. The neutrons impinging upon the tissue surface are partly reflected or scattered, or they are absorbed by the tissue, on which occasion they transfer their energy to the tissue. The main part of the neutrons is absorbed and is scattered within the first 10-15 cm of the tissue. A table shows the chemical composition of the tissue investigated by the authors. The following reactions of neutrons with energies of up to 1 Mev with the tissue elements are possible: (1) Elastic scattering

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on the hydrogen nuclei. (2) Elastic scattering on heavy nuclei (carbon, nitrogen, oxygen). (3) Absorption on hydrogen nuclei with radiation of a γ-quantum having an energy of 2.19 Mev. (4) Absorption on nitrogen nuclei according to the reaction $N^{14}(n,p)C^{14}$ (the energy of the proton here amounts to 0.62 Mev). (5) Radiation capture on nitrogen according to the reaction $N^{14}(n,\gamma)N^{15}$, where, in the case of each capture, an energy of 10.8 Mev is radiated. In the first part of the present paper the energy is calculated which is left over by the neutrons in the tissue in the case of elastic scattering. For this purpose, Boltzmann's kinetic equation was solved by employing numerical methods by means of the electronic computer of the AS USSR. For the determination of the total neutron dose it is necessary, in addition, to take the neutron dose produced in the capture of neutrons into account. Computations are followed step by step. Two tables contain data concerning the flux of the thermal neutrons as well as the distribution of the absorbed energy and the energy albedo. In the tissue, neutrons with energies of 1 Mev and less are mainly scattered on hydrogen. The spatial energy distributions of the recoil

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protons in 1 cm^3 paraffin and in a tissue agree with respect to range units, and the absolute values are proportional to the density of hydrogen nuclei in these substances. In the next two parts the tissue dose due to the recoil protons of the reaction $N^{14}(n,p)$ and the dose due to absorption of γ-radiation are calculated. For the purpose of determining the biological dose the amount of the tissue dose must be multiplied by the coefficient of the relative biological efficiency (according to the nature of the radiation). According to the authors' opinion, 5 is the most suitable value to select for this coefficient. From the maximum values of the biological doses corresponding to the depth of the tissue, the relative values of the biological harmfulness per flux unit of neutrons of various energies were then calculated. There are 10 figures, 4 tables, and 20 references, 5 of which are Soviet.

SUBMITTED: April 2, 1959

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21(8)

SOV/89-7-4-17/28

AUTHORS: Kogan, A. M., Petrov, G. G., Chudov, L. A., Yampol'skiy, P. A.

TITLE: The Reflection by Paraffin and Water of Neutrons With Different Energies

PERIODICAL: Atomnaya energiya, 1959, Vol 7, Nr 4, pp 385-386 (USSR)

ABSTRACT: In the course of the solution of the problem of the biological effect of neutrons it is of great importance to know such quantities as characterize the reflection of neutrons of different energies by a tissue. Besides, the dependence of the reflection coefficient on the geometrical conditions of the beam must be known. The authors therefore carried out measurements of the amount and the angular dependence of neutron reflection by a tissue-like substance within a wide energy interval. In these experiments the ratio between the flux of neutrons of all energies coming from the medium and the inciding flux of the neutrons to be investigated was determined. It was thus necessary to find out what portion of the total number of inciding neutrons is absorbed in the substance. The authors employed two methods for measuring reflection: The first method

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is used for neutron sources of small dimensions (nearly punctiform) and is based upon the following: In a large container filled with water, on the center of which the source was located, the radial distribution of the density of the absorption was measured by means of manganese foils. Integration of foil activity over the entire volume of the container then made it possible to determine the strength of the source in relative units, which are connected with the activity of the standard foil. By means of this method the reflection of neutrons of a polonium-beryllium source (mean energy 5 Mev) and of the photo-neutrons of a sodium-beryllium source (0.83 Mev), a sodium-deuterium source (0.22 Mev) and of an antimony-beryllium source (25 kev) on paraffin was measured. For measurements carried out on the reactor a second method was employed. For the relative determination of the inciding flux a collimated neutron beam from the reflector of a nuclear reactor was introduced into a device, which, for the neutrons, plays the part of an absolutely black body. This device had the shape of a thin-walled tube ending in a hollow sphere which is surrounded by a thick layer of a weak aqueous solution of manganese chloride. The activity of the solutions was determined from the standard samples of

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metallic manganese. The results of all measurements are given by the following tables:

Neutron energies	Paraffin reflection coefficient	Neutron energies	Reflection coefficient of water
5 Mev	0.06	2.7 kev	0.47
0.83 Mev	0.12	130 ev	0.56
0.22 Mev	0.19	5 ev	0.71
25 kev	0.38	thermal	0.58

The dependence of the reflection coefficient on the angle of incidence of the neutrons:

Neutron energies	Angle of incidence					
	0°	15°	30°	45°	60°	75°
5 Mev	0.06	0.110	0.21	0.32	0.50	0.74
0.22 Mev	0.19	-	-	0.44	0.61	-
5 ev	0.71	-	0.74	-	0.80	-
thermal	0.58	-	0.63	-	0.76	-

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The Reflection by Paraffin and Water of Neutrons With Different Energies SOV/89-7-4-17/28

The dependence of the albedo on the angle of incidence θ may be described for all energies investigated by the relation $(1 - \alpha)_\theta = (1 - \alpha)_{\theta = 0} \cos \theta$. The authors thank undergraduate degree student of the Leningradskiy politekhnicheskiy institut (Leningrad Polytechnic Institute) G. P. Gordeyev, who took active part in the measurement of the albedo of slow neutrons. There are 2 tables and 2 references.

SUBMITTED: April 2, 1959

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

21(8) SOV/89-7-4-18/28

AUTHORS: Kogan, A. M., Petrov, G. G., Chudov, L. A., Yampol'skiy, P. A.

TITLE: Neutron Absorption Density Distribution in Paraffin

PERIODICAL: Atomnaya energiya, 1959, Vol 7, Nr 4, pp 386-388 (USSR)

ABSTRACT: A tissue dose due to neutrons is determined partly by the energy liberated within the tissue in neutron capture. According to the initial neutron energy, this part of the tissue dose will make a different contribution to the total dose. Thus, for neutrons with an initial energy of some kev, the tissue dose is determined practically entirely by the energy liberated in capture. For the neutrons with an initial energy of 1 Mev the essential part of the dose is determined by that energy which is scattered during the slowing-down process by the neutrons. In order to determine the capture component of the neutron dose, the spatial distribution of neutron absorption in paraffin (which simulates a biological tissue) was investigated. These measurements were carried out during the perpendicular incidence of a broad beam of neutrons upon a plane paraffin surface. The paraffin block had the shape of a rectangular parallelepiped of

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40.40.60 cm. The neutrons impinged upon the surface of 40.40 cm. Neutron density was measured by means of thin manganese foils. In these experiments the depth distribution of the absorption density of the inciding neutrons with the following energies was measured: 1. The thermal neutrons were filtered through cadmium of 1 mm thickness out of a beam emerging from the channel of a nuclear reactor. 2. Neutrons with $\sim$ 5 ev were filtered out of a beam of resonance neutrons at a nuclear reactor by means of a combination of a boron- and a cadmium filter. 3. Photoneutrons of an antimony-beryllium source with an energy of 25 kev. 4. Photoneutrons of a sodium-deuterium source with an energy of 220 kev. 5. Photoneutrons of a sodium-beryllium source with the energy of 0.83 Mev. 6. The neutrons of the reaction $H_1^2(d,n)He_2^3$ with the energy of 2.9 Mev. 7. The neutrons of a polonium-beryllium source with the mean energy of 5 Mev. The maximum statistical error in measuring the activity of the foils was $\sim$ 3%. The results of these measurements are shown by a diagram. The existence of a maximum, which shifts into the interior of the paraffin with increasing energy is characteristic of all curves.

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In the transition of thermal neutrons to thermal deuterons with an energy of several ev, the maximum shifts abruptly from 0.5 to 2.5 cm. This may be due to the fact that maximum absorption probably takes place in a depth of the order of one transport-length of the range of the inciding neutron. Also the comparatively slow shifting of the maximum into the interior of the paraffin with an energy increase to 5 Mev may be explained by the weak dependence of the scattering cross section in this energy interval. The diagram mentioned indicates a tendency towards increasing on the part of the ratio between absorption in the maximum and absorption on the surface. The velocity of absorption density decrease decreased with an increase of the energy of the inciding neutrons. There are 1 figure and 1 reference.

SUBMITTED: April 2, 1959

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

16(1)

AUTHOR: Chudov, L.A. SOV/20-125-3-10/63

TITLE: On the Singularities of the Solutions of Linear Partial Differential Equations With Constant Coefficients (Ob osobennostyakh resheniy lineynykh uravneniy v chastnykh proizvodnykh s postoyannymi koeffitsiyentami)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 3, pp 504-507 (USSR)

ABSTRACT: Let the linear equation with constant coefficients

$$(1) \quad L\left(\frac{\partial}{\partial x}\right)u = L\left(\frac{\partial}{\partial x_1}, \ldots, \frac{\partial}{\partial x_n}\right)u = 0$$

be considered. Let L be a homogeneous irreducible polynomial of m-th degree, where the cone $L(\omega) = 0$ possesses no singular points besides the origin of coordinates 0. Let $\bar{G}$ be a neighborhood of 0 and $G = \bar{G} - 0$. It is assumed: 1. $u(x)$ possesses continuous derivatives of p-th order in G, $p \geqslant m$ 2. $u(x)$ satisfies the equation (1) in G 3. all derivatives of $u(x)$ with the order $m - 1$ satisfy the condition $|D^{(m-1)}u| < A\,|x|^{-q}$, where $q \geqslant 0$ and integer, A = const, $|x| = \sqrt{x_1^2 + \ldots + x_n^2}$ 4. a certain derivative of $u(x)$ of the order μ, $0 \leqslant \mu \leqslant p$ makes a jump in 0.

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On the Singularities of the Solutions of Linear Partial Differential Equations With Constant Coefficients SOV/20-125-3-10/63

Theorem: If (1) is not elliptic and $p \geqslant P(m,n)$, then it is $p - \mu < n - 1$ for $n = 2k + 1$ and $p - \mu < n$ for $n = 2k$. The number $P(m,n)$ is $n - 1$ for $n = 2k + 1$, if $m \leqslant \frac{n}{2}$ and is equal to $m + \frac{n-1}{2}$, if $m > \frac{n}{2}$; if n is even, then $P(m,n)$ depends on the position of the lines of curvature of the cone $L(\omega) = 0$. The author mentions I.P. Petrovskiy. There are 7 Soviet references.

PRESENTED: December 18, 1958, by I.G. Petrovskiy, Academician

SUBMITTED: December 15, 1958

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

PETROVSKIY, Ivan Georgiyevich. Prinimal uchastiye CHUDOV, L.A.; BAYEVA, A.P., red.; KALASHNIKOV, A.S., red.; AKELAMOV, S.N., tekhn. red.

[Lectures on equations with partial derivatives] Lektsii ob uravneniiakh s chastnymi proizvodnymi. Izd.3., dop. Moskva, Gos. izd-vo fiziko-matem.lit-ry. 1961. 400 p. (MIRA 14:12)
(Differential equations, Partial)

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L 13231-63 EPA(b)/EWT(1)/BDS/ES(v) AEDC/ S/044/63/000/003/040/047
AFFTC/ASD Pd-4/Pe-4

AUTHOR: Brailovskaya, I. Yu., Chudov, L. A.

TITLE: Solution of boundary layer equations by a difference method

PERIODICAL: Referativnyy Zhurnal, Matematika, No. 3, 1963, 5, Abstract 3V19 (Sb. Rabot. Vychisl. Tsentra Mosk. Un-ta, v. 1, 1962, 167-182).

TEXT: Boundary layer equations (the case of a compressible gas with heat transfer and diffusion for a binary mixture)

$$\rho u \frac{\partial u}{\partial x} + \rho v \frac{\partial u}{\partial y} = \frac{\partial}{\partial y}\left(\mu \frac{\partial u}{\partial y}\right) - \frac{\partial p}{\partial x},$$

$$\frac{\partial}{\partial x}(\rho u) + \frac{\partial}{\partial y}(\rho v) = 0,$$

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$$\rho u\frac{\partial c}{\partial x}+\rho v\frac{\partial c}{\partial y}=\frac{\partial}{\partial y}\left(\rho D_{12}\frac{\partial c}{\partial y}\right)\frac{1}{Pr_{g\infty}},$$

$$\rho c_p\left(u\frac{\partial\theta}{\partial x}+v\frac{\partial\theta}{\partial y}\right)=\frac{\partial}{\partial y}\left(\lambda\frac{\partial\theta}{\partial y}\right)\frac{1}{P_{r\infty}}+$$

$$+\rho\mathfrak{D}_{12}\left(\frac{c_{p,\infty}}{c_{p,\infty}}c_{p_1}-c_{p_2}\right)\frac{\partial c}{\partial y}\frac{\partial\theta}{\partial y}\frac{1}{Pr_{g\infty}}+\mu\left(\frac{\partial u}{\partial y}\right)^2\frac{1}{km}$$

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Solution of boundary layer equations ....

with corresponding boundary conditions where the sought quantities are u, v, c, and θ (the remaining quantities are known functions in v, c, θ, or constants) are solved approximately by means of implicit difference equations. In this case it is possible to carry out the computations for the entire boundary layer by means of a uniform method which can be run conveniently on computers. Numerical results corresponding to a hydrogen-air mixture are given.

[Abstracter's note: Complete translation.]

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B112/B102

AUTHOR: Chudov, L. A.

TITLE: Difference methods of solving Cauchy's problem for the Laplace equation

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 143, no. 4, 1962, 798-801

TEXT: The author considers solutions $u(x,y) = \sqrt{2/\pi}\sum_{k=1}^{\infty} a_k e^{ky}\sin kx$ of the boundary value problem $u_{xx} + u_{yy} = 0$, $u(0,y) = u(\pi,y) = 0$, $u(x,0) = \varphi(x)$, $u_y(x,0) = \psi(x)$, which satisfy the apriori condition $\int_0^{\pi} u^2(x,y)dx \leqslant M^2$. The approximate solutions $u(mh, n\tau(h)) = s^n(k,h)\sin kmh$, where $\tau(h) \to 0$ for $h \to 0$, are shown to be convergent to the exact solution, if they fulfill the stability condition $|s^n(k,h)| \leqslant Ke^{ky}$ $(0 \leqslant n\tau \leqslant y)$ and the condition $\ln s(k,h)/\tau \to k$ for $h \to 0$. Similar results are

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Difference methods of solving ... S/020/62/143/004/005/027
B112/B102

obtained for a number of different difference schemes.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

PRESENTED: November 21, 1961, by I. G. Petrovskiy, Academician

SUBMITTED: November 17, 1961

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APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

CHUDOV, L.A.; KUSKOVA, T.A.

Use of difference schemes in calculating nonstationary flows of a viscous incompressible liquid. Sbor. rab. VTS MGU 2:190-207 '63. (MIRA 17:7)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

ACCESSION NR: AT4006709 S/3043/63/000/002/0098/0109

AUTHOR: Chudov, L. A.

TITLE: Some disadvantages of the classical boundary layer theory

SOURCE: Moscow. Universitet. Vy*chislitel'ny*y tsentr. Sbornik rabot, no. 2, 1963. Chislenny*ye metody* v gazovoy dinamike, 98-109

TOPIC TAGS: boundary layer theory, boundary layer, Prandtl method, Vishik Lyusternik method, viscous fluid flow, boundary layer flow, Prandtl boundary layer, compressible gas flow, boundary value problem, Prandtl asymptotic boundary condition, viscous incompressible fluid, boundary layer condition

ABSTRACT: As the coefficient of viscosity (ν) of a viscous fluid approaches zero, the flow of the liquid, according to the classical theory, approaches some "maximum" flow of an ideal liquid in every subregion. At small values of ν the whole region of flow can be subdivided into the "basic region", where the flow differs but little from the maximum, and into the boundary layers. These are narrow regions located along various boundary sections, where the flow of the viscous fluid differs substantially from the maximum flow. It is defined by special boundary-layer equations. Such equations describing the boundary-layer flow in the case of an impermeable boundary were derived by Prandtl. However, in

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some practical and important cases, Prandtl's equations are not applicable. In the general case it is impossible to obtain a continuous approximate solution by coupling the "maximum" flow and the solution of the classical boundary-layer equations. The author's aim was to prove that the solution of the above problems requires application of the methods proposed earlier by M. I. Vishik and L. A. Lyusternik. The article deals with a simple case of flow of a viscous liquid near a flat impermeable wall. A zero approximation is established by the method of M. I. Vishik and L. A. Lyusternik, and the connection of the equations obtained with Prandtl's equations is determined. The cause of the "paradoxical" behavior of v when y approaches ∞ in the asymptotic Prandtl solution is ascertained, and a simple method is suggested which permits allowing an approximate solution to be obtained for the whole area of flow. Orig. art. has: 38 formulas.

ASSOCIATION: Vy*chislitel'ny*y tsentr Moskovskogo universiteta (Computer Center, Moscow State University)

SUBMITTED: 00 DATE ACQ: 16Dec63 ENCL: 00

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

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

ACCESSION NR: AT4006705 S/3043/63/000/002/0020/0047

AUTHOR: Chudov, L. A.; Kudryavtsev, V. P.

TITLE: Round-off errors in finite difference solutions of elliptic equations and systems subject to initial conditions

SOURCE: Moscow. Universitet. Vy*chislitel'ny*y tsentr. Sbornik rabot, no. 2, 1963. Chislenny*ye metody* v gazovoy dinamike, 20-47

TOPIC TAGS: round-off error, elliptic differential equation, finite difference method, many-point scheme, net step selection, supersonic flow, blunt body, boundary value problem

ABSTRACT: A study was carried out to estimate the round-off errors and the approximation errors and to select the most rational mesh size of a net for the simplest many-point difference schemes of the form

$$\frac{u_m^{n+1}-u_m^n}{\tau} = -\frac{1}{h}\sum_{q=-p}^{p} a_q^{(p)} v_{m+q}^n, \qquad \frac{v_m^{n+1}-v_m^n}{\tau} = \frac{1}{h}\sum_{q=-p}^{p} a_q^{(p)} u_{m+q}^n. \qquad (1)$$

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ACCESSION NR: AT4006705

where h and τ are the mesh size of the net, ($\tau = \tau(h)$ and $\tau(h) \to$ when $h \to 0$), and the $a_q^{(p)}$ are coefficients determined from a given formula. The stability and convergence of the difference scheme (1) are analyzed in connection with the boundary value problem for the Cauchy-Riemann equations. It is proved that these difference schemes are stable with respect to initial conditions and that the approximate solution converges to the exact solution. Estimates of the relative approximation errors and of the relative round-off errors are derived for difference scheme (1) in cases in which the indices of the scheme are $p = 1$ and $p = 2$. The problem of selecting h (τ is assumed to be sufficiently small) such that the relative round-off error does not exceed a certain given value of ε is analyzed. It is stressed that for a given y, the selection of h will be optimal when approximation errors and round-off errors are of the same order. These difference schemes are applied to the solution of equations describing supersonic flow of a reacting mixture of gases past an axisymmetric blunt body. The method of determining the lower bound for the mesh size h is presented using the known values of shock wave parameters. Orig. art. has: 41 formulas and 2 figures.

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

SARMIN, E.N. (Moskva); CHUDOV, L.A. (Moskva)

Stability of numerical integration of systems of ordinary differential equations derived in using the method of straight lines. Zhur. vych. mat i mat fiz. 3 no.6:1122-1125 N-D 63. (MIRA 17:1)

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L 9938-65 EWT(d) Pg-4 IJP(c) AFM(dp)/ASD(d)/ESD(dp)/AFETR/ASD(a)-5/AFWL/
ACCESSION NR: AT4047140 AFTC(b) MLK S/0000/64/000/000/0101/0109

AUTHOR: Chudov, L. A. (Moscow); Konstantinov, G. A. (Moscow); Lin, Yun-nien (Moscow)

TITLE: The problem of the probable estimates of round-off errors in the numerical solution of differential equations.

SOURCE: Chislenny*ye metody* resheniya differentsial'ny*kh i integral'ny*kh uravneniy i kvadraturny*ye formuly* (Numerical methods of solving differential and integral equations and quadrature formulas); sbornik statey. Moscow, Izd-vo Nauka, 1964, 101-109

TOPIC TAGS: differential equation, ordinary differential equation, Euler method numerical method, algorithm, iteration, normal distribution, round-off error

ABSTRACT: In solving ordinary differential equations by numerical iteration techniques, perhaps the most serious source of error is round-off errors created by approximations made in intermediate steps of an algorithm. The present paper examines the equation

$$y' = y$$

with the initial condition $y_0 = y(0)$. This is essentially a Cauchy problem. The method of

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ACCESSION NR: AT4047140

Euler is applied for the numerical solution of the equation. The initial value y_0 is considered as a random variable with mean a_0 and spread σ_0^2, distributed according to a normal distribution. The mean a, and spread σ^2 are then determined for the value y, obtained in the first repetition of the solution algorithm. The main result is to determine, as a function of a_0, the probable round-off error of the algorithm, where the iterations are related by:

$$y_{n+1} = y_n + hy_n \quad (n = 0, \ldots).$$

Numerical experiments support the validity of the probability distributions derived. Orig. art. has: 15 formulas and 4 tables.

ASSOCIATION: none

SUBMITTED: 14Sep63 ENCL: 00 SUB CODE: MA

NO REF SOV: 006 OTHER: 001

Card 2/2

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

KUDRYAVTSEV, V.P.; FRANK, L.S.; CHUDOV, L.A. (Moscow)

"Finite difference methods of solution of incorrect problems with initial conditions and their application in gasdynamic calculations".

report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 Jan - Feb 64.

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

PASKONOV, V.M.; CHUDOV, L.A. (Moscow)

"The finite difference method of solving boundary layer problems"

Report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow 29 Jan - 5 Feb 64.

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

MARKOV, A.A.; CHUDOV, L.A. (Moscow)

"Higher approximations in asymptotic solutions for a viscous gas flow near the impermed boundary and in the region of a diffused shock wave".

report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 Jan - Feb 64.

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

CHUDOV, L.A. (Moskva); KONSTANTINOV, G.A. (Moskva); LIN' YUN'-NYAN' [Lin Yün-nien] (Moskva)

Probability estimates of rounding-off errors in the numerical solution of differential equations. Zhur. vych. mat. i mat. fiz. 4 no.4(suppl.):101-109 '64. (MIRA 18:2)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

L 49428-65 EWT(d) IJP(c)

ACCESSION NR: AT5013279 UR/3043/65/000/004/0003/0027

AUTHOR: Frank, L. S.; Chudov, L. A.

TITLE: Difference methods for solving the incorrect Cauchy problem

SOURCE: Moscow. Universitet. Vychislitel'nyy tsentr. Sbornik rabot, no. 4, 1965. Chislennyye metody v gazovoy dinamike (Numerical methods in gas dynamics), 3-27

TOPIC TAGS: numerical analysis, incorrect Cauchy problem, difference scheme, initial data smoothing

ABSTRACT: The solution of the Cauchy problem for the model equation

$$\frac{\partial u}{\partial t} = \frac{1}{t}\frac{\partial u}{\partial x}, \qquad (1)$$

is analyzed under *a priori* assumptions that the solution exists and is bounded in the strip

$$T_1 \leqslant t \leqslant T_2 \ (T_1 < 0,\ T_2 > 0).$$

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L 49428-65

ACCESSION NR: AT5013279

The conditional correctness (according to Tikhonov) of this problem is established, and the Cauchy problem for the finite-difference equation, approximating equation [illegible] and studied for the case when the strip of existence of solution [illegible] contains the straight line t = 0, on which the initial conditions of the Cauchy problem are given. A new definition of the stability of a difference scheme is presented, its convergence is proved, and the approximation error is established. An example is presented showing that when the line t = 0 is on the boundary of the domain of existence of solutions, the difference scheme approximating the differ- [illegible] is divergent. To obtain a convergent process, the smoothing of [illegible] carried out, and the proposed stable scheme is applied. The es- [illegible] rate of convergence of the computation process is [illegible]. It is [illegible] obtained results can be extended to the solution of the incorrect Cauchy problem for a system of equations with constant coefficients. Orig. art. has [illegible] formulas. [LK]

Moskovskiy universitet, Vychislitel'nyy tsentr (Moscow University, [illegible]

ENCL: 00 [illegible]

SUB CODE: MA

NO REF SOV: 012 OTHER: 001 ATD PRESS: 4003

Card 2/2

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

PETROVSKIY, Ivan Georgiyevich; CHUDOV, L.A., red.; RYBKIN, G.F., red.

[Lectures on the theory of integral equations] Lektsii po teorii integral'nykh uravnenii. Izd.3., ispr. Moskva, Nauka, Glav. red. fiziko-matem. lit-ry, 1965. 127 p. (MIRA 18:6)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

FRANK, L.S.; CHUDOV, L.A.

Difference methods for solving an incorrect Cauuchy problem.
Sbor. rab. VTS MGU 4:3-27 '65. (MIRA 18:9)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

L 00725-66 EWT(1)/EWP(m)/EWA(d)/FCS(k)/EWA(1)

ACCESSION NR: AT5013292 UR/3043/65/000/004/0232/0241

AUTHOR: Morosova, T. K., Sadkov, Yu. N., Chudov, L. A.

29
28 Bt-1

TITLE: Difference method for the solution of the problem of gas motion through variable cross section tubes

SOURCE: Moscow. Universitet. Vychislitel'nyy tsentr. Sbornik rabot, no. 4, 1965. Chislennyye metody v gazovoy dinamike (Numerical methods in gas dynamics), 232-241

TOPIC TAGS: ideal gas, ideal flow, flow analysis, difference method

ABSTRACT: The papers investigate the flow of an ideal gas within a variable cross section tube whose radius is given by the continuous function $r(x)$ $(0 \leq x \leq x_3)$:

$$r(x) = \begin{cases} a & \text{при } 0 \leqslant x < x_1, \\ r_1(x) & \text{при } x_1 < x < x_2, \\ b & \text{при } x_2 < x < x_3. \end{cases}$$

A piston with mass M and negligible thickness is held fixed at the point $x = x_2$. The pressure of the gas to the left of the piston is larger than on the right.

Card 1/2

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L 00725-66

ACCESSION NR: AT5013292

Using equations for unidimensional gas motion the author calculates the motion of the piston due to the pressure difference after the instant t = 0 when the piston is released. Computations were carried out on the "Strela" computer of the Vychislitel'nyy tsentr (Computer Center) of the MGU. The time needed for the calculation of a layer 290 points thick is 1 min (layers were fixed by specific chosen mass increments). One of the complete solutions required 40 min of computer time. Gas velocity graphs show a comparison between curves calculated by the method of differences and by the method of characteristics (the former exhibits a fine structure as compared with the latter). Orig. art. has: 19 formulas and 2 figures.

ASSOCIATION: Vychislitel'nyy tsentr, Moskovskiy universitet (Computer Center, Moscow University)

SUBMITTED: 00 ENCL: 00 SUB CODE: MA, ME

NO REF SOV: 003 OTHER: 001

Card 2/2

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

L 01847-67 EWT(d) IJP(c)

ACC NR: AR6013773 SOURCE CODE: UR/0044/65/000/010/B087/B087

AUTHOR: Frank, L. S.; Chudov, L. A.

36

B

TITLE: Difference methods for the solution of the incorrect Cauchy problem

16

SOURCE: Ref. zh. Matematika, Abs. 10B415
REF SOURCE: Sb. rabot Vychisl. tsentra Mosk. un-ta, v.4, 1965, 3-27

TOPIC TAGS: numeric solution, approximation convergence, difference method, Cauchy problem, mathematic model

ABSTRACT: The Cauchy problem is investigated under the a priori assumption of the existence and boundedness of the solution in the interval $T_1 < t < T_2$ ($T_1 \leq 0$; $T_2 > 0$) for the model equation: $\partial u/\partial t = (1/i)(\partial u/\partial x)$. Conditional correctness of this problem is established and convergence of the solutions of stable and approximating difference schemes is proved. Errors are estimated. An example is introduced showing that if the line of initial conditions is the boundary of solution existence, than any homogeneous difference scheme approximating the differential equation is divergent. Smoothing of the initial conditions is used to attain convergence. [Translation].

SUB CODE: 12

Card 1/1 fv UDC 518:517.944/.947

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

64-58-3-4/20

AUTHORS: Malets, A. M., Ternovskaya, A. N., Chudov, L. N., Stul', M.I., Rozval, B. S.

TITLE: Reconstruction of Mechanical Furnaces at the Shchelkovo Chemical Plant for the Burning of Pyrites in the Boiling Range (Rekonstruktsiya mekhanicheskikh pechey na Shchelkovskom khimicheskom zavode dlya obzhiga kolchedana v kipyashchem sloye)

PERIODICAL: Khimicheskaya Promyshlennost', 1958, Nr 3, pp 18 - 22 (USSR)

ABSTRACT: The reconstruction described here was worked out in co-operation with A.G. Sokal'skiy and E. I. Shipov. Such a reconstruction can either be made by new constructions or by an alteration of old mechanical furnaces. This latter possibility is more economic and increases the capacity 2 - 2,5 times. A reconstruction project of the Tower of the Bashen mine of the plant mentioned above is given. The principal alterations consist of a division of the furnace chamber, of the installation of air blasts and cooling elements and of a special charging

Card 1/3

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Reconstruction of Mechanical Furnaces at the Shchelkovo Chemical Plant for the Burning of Pyrites in the Boiling Range 64-58-3-4/20

bunker. With that furnace no.7 was also reconstructed on the basis of the experiences made in August 1957. The necessity of utilizing the heat of combustion was stated. In order to increase the effectivity of the air blasts the construction of a special blast lattice was developed (a sketch of which is given), and experience showed a certain optimum height of the lattice arrangement (1m). The construction of the raw material feeder was designed by A. N. Malets under consideration of certain particulars. The cooling system was arranged horizontally as this does not lead to the formation of sulfuric acid and to subsequent corrosion. The purification of the gas from dust was guaranteed by dust catchers with cyclone cleaners and electrical precipitators of the XK-45 type, whereas the combustion dust was removed by screw conveyors. The conditions for the starting of the furnace are given. In the work of furnaces no.5 and no.7 until now a combustion of sulfur of 98% was reached with gas with 13% sulfur dioxide. No.7 is especially productive. The temperature in the boiling range was 750°-800° with the sulfur content

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

Reconstruction of Mechanical Furnaces at the Shchelkovo Chemical Plant for the Burning of Pyrites in the Boiling Range 64-58-3-4/20

in the waste dust not exceeding 1%. Besides many advantages the furnaces show the disadvantage that it is comparatively often necessary to close them down as the mechanization of removing the combustion products is insufficient and the cooling system often burns through, too. In order to make use of the combustion heat the construction of a kettle is proposed which is to be hung in the boiling chamber. There are 2 figures, 1 table.

1. Furnaces--Performance 2. Pyrites--Processing 3. Particles (Airborne)--Control systems 4. Electrostatic precipitators --Performance

Card 3/3

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

MALETS, A.M.; TERNOVSKAYA, A.N.; CHUDOV, L.N.; STUL', M.I.; ROZVAL, B.S.

Remodeling mechanical ovens at the Shchelkovo chemical plant for roasting pyrites in a fluidized bed. Khim. prom. no.3:146-150 Ap-My '58. (MIRA 11:6)

(Pyrites) (Ovens) (Fluidization)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

CHUDOV, V., kapitan dal'nego plavaniya, dotsent

Determining the necessary length of the anchor chain depending on the depth of anchorage. Mor. flot 25 no.4:19-20 Ap '65. (MIRA 18:6)

1. Kafedra sudovozhdeniya Kaliningradskogo tekhnicheskogo instituta rybnoy promyshlennosti i khozyaystva.

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

CHUDOV, V.A.; MARKOV, N.N.

Remarks on S.I.Pokras' suggestions. Stan.i instr. 24 no.11:16-17 N '53. (MLRA 6:12)

(Gauges) (Pokras, S.I.)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

DRAUDIN,A.T.; CHUDOV,V.A.

Kinematic errors in the transmission mechanism of measuring instruments in machine building. Stan. i instr. 26 no4:22-26 Ap '55. (MLRA 8:6)
(Machinery, Kinematics of) (Measuring instruments)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

CHUDOV, V.A.

Methods of controlling form defects. Stan. i instr. 26 no.5:24-27 My '55. (MIRA 8:8)
(Machine-shop practice--Quality control)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

CHudov, V.A.

AID P - 5150

Subject : USSR/Engineering

Card 1/2 Pub. 103 - 9/18

Author : Chudov, V. A.

Title : Electric contact control device

Periodical : Stan. i instr., 5, 32-37, My 1956

Abstract : The author describes a few typical electric devices designed by the Interchangeability Bureau of the Ministry of Machine tool and Instrument Industry (MS i IP BV) for mechanical control measurements. The characteristics of some of these are given (the BV-N2-1-21-2, BV-678, BV-779 and the BV-773). The BV-634K device with a floating lever has been approved for mass production by the "Kaliber" plant. The 773 & 779 BV type as well as the BV-510I(capital i), the TsL-123 and the BV-801 are also described, and the BV-N220 electronic relay is outlined. Ten drawings; 2 Russian references (1953-1955).

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

AID P - 5150

Stan. i instr., 5, 32-37, My 1956

Card 1/2 Pub. 103 - 9/18

Institution : As above.

Submitted : No date

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

Chudov, V.A.

AID P - 5168

Subject : USSR/Engineering

Card 1/1 Pub. 103 - 9/19

Author : Chudov, V. A.

Title : Precision tests of electric contact control devices

Periodical : Stan. i instr., 6, 30-32, Je 1956

Abstract : The author describes the precision tests, proceedings and equipment used in testing of limited-range control devices and amplitude-transmitters. Three drawings; two Russian references (1948-1953).

Institution : None

Submitted : No date

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

CHUDOV, V. H.

VOLODIN, Ye.I., kandidat tekhnicheskikh nauk; GORODETSKIY, I.Ye., professor, doktor tekhnicheskikh nauk [deceased]; DOSCHATOV, V.V., inzhener; KOROTKOV, V.P., kandidat tekhnicheskikh nauk; MANTSEV, B.M., inzhener; NESTEROVSKIY, M.M., inzhener; PALEY, M.A., inzhener; ROSTOVYKH, A.Ya., kandidat tekhnicheskikh nauk; TAYTS, B.A., professor, doktor tekhnicheskikh nauk; EYDINOV, V.Ya., kandidat tekhnicheskikh nauk; ERVAYS, A.V., inzhener; CHUDOV, V.A., inzhener; ACHERKAN, N.S., doktor tekhnicheskikh nauk, professor, glavnyy redaktor; VLADISLAVLEV, V.S., redaktor; MALOV, A.N., redaktor; POZDNYAKOV, S.N., redaktor; STOLBIN, G.B., redaktor; CHERNAVSKIY, S.A., kandidat tekhnicheskikh nauk, redaktor; MARKUS, M.Ye., inzhener, redaktor [deceased]; KARGANOV, V.G., inzhener, redaktor graficheskikh rabot; SOKOLOVA, T.F., tekhnicheskiy redaktor

[Metal worker's manual; in five volumes] Spravochnik metallista; v piati tomakh. Red. sovet N.S.Acherkan i dr. Moskva, Gos.nauchno-tekhn. izd-vo mashinostroit.lit-ry. Vol.1.(Pod red.S.A.Chernavskogo).1957.603 p. (Mechanical engineering)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

CHUMOV [redacted]

Nomenclature of length measurement indicators. Izm. tekh. no.4: 12-16 Jl-Ag '57. (MLRA 10:8)

(Length measurement)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

CHUDOV, V.A.

CHUDOV, V.A.

The new IRT indicator. Stan. i instr. 28 no.12:28-29 D '57. (MIRA 10:12)

(Gauges)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

AUTHOR: Chudov, V.A. SOV-115-58-4-8/45

TITLE: A Device for Checking Indicating Instruments (Pribor dlya poverki indikatorov)

PERIODICAL: Izmeritel'naya tekhnika, 1958, Nr 4, pp 20-21 (USSR)

ABSTRACT: For checking clockwork-type indicating instruments with a measurement interval of 0-10 mm, readings must be taken at 200 points - with normal checking devices a painstaking and laborious process. The present device has solved the problem by using a precision screw to fix the angle of turn and move the wedge a set distance. One complete turn of the operating handle shifts the wedge 1 mm and the needle of the indicating instrument being checked should then cover exactly 10 divisions. There are 2 diagrams.

1. Gages--Calibration

Card 1/1

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

PHASE I BOOK EXPLOITATION SOV/5074

Berklayd, I. M., A. P. Kurochkin, A. V. Lyakhovskiy, A. M. Snetkov, and V. A. Chudov.

Datchiki i izmeritel'nyye golovki (Pickups and Dial-Indicators) Moscow, Mashgiz, 1960. 158 p. Errata slip inserted. 10,000 copies printed. (Series: Progressivnyye sredstva kontrolya razmerov v mashinostroyenii)

Eds. of Series: B. S. Bayburov, M. I. Kochenov, and D. D. Malyy; Scientific Ed.: T. P. Bespakhotnaya; Ed. of Publishing House: M. S. Yeliseyev; Tech. Ed.: A. Ya. Tikhanov; Managing Ed. for Literature on Instrument Construction and Means of Automation N. V. Pokrovskiy, Engineer.

PURPOSE: This book is intended for technical and design personnel It may also be used by students specializing in instrument designing at schools of higher technical education and tekhnikums.

COVERAGE: The authors discuss the designs, schematic diagrams, and characteristics of pickups and dial-indicators used as inspection

Card 1/4

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

devices. Electrocontact, pneumatic, inductive, and capacitive measuring systems and their pickups are described. Particular attention is given to special features of the designs, circuit diagrams, testing methods, and fields of application of these pickups. Specifications are also given. The book is a part of a larger work in the field of modern means of inspection which was recommended by the Commission on the Introduction of Advanced Methods and Means of Dimensional Inspection in Machine Building under the auspices of Gosudarstvennyy nauchno-tekhnicheskiy komitet Soveta Ministrov SSSR (State Scientific Technical Committee of the Council of Ministers of the USSR). No personalities are mentioned. There are 15 references, all Soviet.

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

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I007/I207

21,5,210

AUTHORS: D'yachenko,P.Ye., Oshchepkov,P.K., Tolkacheva,N.N., Andreyev,G.A., Chudov,V.A., Goryunov,A.N., and Dubova,L.N.

TITLE: On the hardening of metal surface layers by irradiation

SOURCE: Akademiya nauk SSSR. Komissiya po tekhnologii mashinostroyeniya. Seminar po kachestvu poverkhnosti. Trudy. no. 5,1961. Kachestvo poverkhnosti detaley mashin; metody i pribory, uprochneniye metallov, tekhnologiya mashinostroyeniya, 27-31

TEXT: The thermal effect of nuclear irradiation in the surface layers of metals was investigated after electronic, ionic and deuteron irradiation. The equipment consisted of a voltage-pulse generator, electron gun and a vacuum unit. Considerable increase in the wear resistance of metals resulted from the levelling of micro-irregularities, fusion of micro-cracks and the sudden quenching of the surface layer. In a second test, ionic irradiation was achieved in a unit for the electromagnetic separation of isotopes by irradiation with titanium ions. The titanium diffused into the surface of the specimens to a depth of 110 microns and wear resistance

Card 1/2

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I001/I207

On the hardening of metal...

increased by as much as 10 times compared to the initial resistance. Microhardness increased by as much as 1.5 times. Deuteron irradiation was performed in a cyclotron and resulted in an increase of microhardness by a factor of 2-3, and of wear resistance by a factor of 2-2.5. There are 4 figures.

B

Card 2/2

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

CHUDOV, V.A.

Increasing the precision of internal grinding. [Trudy] Inst. mash., STMP no.18:69-78 '64. (MIRA 18:4)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

BALAKSHIN, O.B., kand. tekhn. nauk; BYKHOVSKIY, M.L., prof., doktor tekhn. nauk; VOLODIN, Ye.I., kand. tekhn. nauk; GRIGOR'YEV, I.A., kand. tekhn.nauk; DRAUDIN-KRYLENKO, A.T., inzh.; IVANOV, A.G., kand. tekhn.nauk; KOZLOV, M.P., kand. tekhn. nauk; KOROTKOV, V.P., prof.; KOCHENOV, M.I., kand. tekhn.nauk; KUTAY, A.K., kand. tekhn. nauk; MARKOV N.N., kand. tekhn. nauk; PALEY, M.A., inzh.; RAYBMAN, N.S., kand. tekhn.nauk; ROSTOVYKH, A.Ya., kand. tekn. nauk; RUMYANTSEV, A.V., kand. tekhn.nauk; SARKIN, I.G., prof.; SMIRNOV, A.S., inzh.; TAYTS, B.A., prof., doktor tekhn. nauk; YAKUSHEV, A.I., prof., doktor tekhn. nauk; NESTEROV, V.D., inzh., nauchnyy red.; CHUDOV, V.A., inzh., nauchnyy red.; GAVRILOV, A.N., doktor tekhn.nauk, prof., red.; BLAGOSKLONOVA, N.Yu., inzh., red. izd-va; SOKOLOVA, T.F., tekhn. red.

[Manufacture of instruments and means of automatic control: a manual in five volumes] Priborostroenie i sredstva avtomatiki; spravochnik v piati tomakh. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit. lit-ry. Vol.1.[Interchangeability and engineering measurements] Vzaimozameniaemost' i tekhnicheskie izmereniia. 1963. 568 p. (MIRA 16:8)
(Electronic measurements) (Automatic control)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

D'YAKOV, V.V., kand.tekhn.nauk; KORZON, A.I., gornyy inzh.; CHUDOV, Yu.A., gornyy inzh.

Efficient sprinkler system for mines. Gor.zhur. no.2:63-66 F '63. (MIRA 16:2)

1. Sverdlovskiy institut okhrany truda Vsesoyuznogo tsentral'nogo soveta professional'nykh soyuzov.
(Mine dusts) (Sprinklers)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

CHUDOVA, L. A.

Chudova, L. A.

"The signoid flexure of the intestine and primary resection of it." Novosibirsk State Medical Inst. Novosibirsk, 1956. (Dissertation For the Degree of Candidate in Medical Science).

Knizhnaya letopis'
No 34, 1956. Moscow.

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

BREGADZE, I.L.; DEMIN, A.A.; VITSYN, B.A.; IZRAILEV, M.I.; KHURGIN, M.I.; CHUDOVA, L.A.

Ligation of external iliac veins in chronic circulatory insufficiency [with summary in English]. Khirurgiia 33 no.8:87-89 Ag '57. (MIRA 11:4)

1. Iz gospital'noy khirurgicheskoy kliniki (zav.-prof. I.L. Bregadze) i gospital'noy terapevticheskoy kliniki (zav.-prof. A.A. Demin) Novosibirskogo meditsinskogo instituta (dir.-prof. G.D. Zalesskiy)

(VASCULAR DISEASES, PERIPHERAL, surg.
ligation of anterior iliac veins in chronic circ. insuff.)
(VEINS, ILIAC, surg.
same)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

CHUDOVA, V; CHUDOBOVA, H.

Urinary histidine test for pregnancy in clinical practice.
Lek. listy 5 no.19:565-567 1 Oct. 1950 (CIML 20:1)

1. Of the Gynecological-Obstetrical Clinic at Palackeho University, Olomouc (Head--Docent.Vlad. Vasek, M. D.).

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

CHUDOVA, V.

Pyrimidine block in gynecological diseases. Cesk. gyn. 17 no. 2-3:106-110 1952. (CLML 22:3)

1. Of the Obstetric-Gynecological Clinic (Head--Docent Vasek, M. D.) of Palacky University in Olomouc.

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

SUMETSKIY, I.Sh., inzh.; CHUDOVICH, G.M., inzh.

Mobile drilling rigs. Gor. zhur. no.4:54-56 Ap '61. (MIRA 14:4)

1. Zavod "Pnevmatika", Leningrad.
(Rock drills)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

CHUDOVICH, V.

Progress turns on socialist competition. Sov. profsoiuzy 5 no.5: 11-15 My '57. (MLRA 10:6)
(Dnepropetrovsk--Rolling mills)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

CHUDOVICHEVA, N. A. and IVANOVA, A. K.

"Observations of the Latitude Variation of the Engelhardt Astronomical Observatory According to the New 1951 Program", Byul. Astronom. Observ. Im. Engelgardta, No 30, 1953, pp 17-40

Abs

W-31146, 1 Feb 55

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

CHUDOVICHEVA, N.A.; IVANOVA, A.K.

Latitude variation of the Engel'gardt Astronomical Observatory in 1952. Astron.tsir. no.134:7 F '53. (MLRA 6:6)

1. Astronomicheskaya Observatoriya imeni Engel'gardta.
(Latitude variation)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

CHUDOVICHEVA, N.A.; IVANOVA, A.K.

Latitude variations of the Engel'gardt Astronomical Observatory in 1951-1954. Astron.tsir. no.157:5-6 F'55. (MLRA 8:10)

1. Astronomicheskaya observatoriya imeni Engel'gardta
(Latitude variation)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

CHUDOVICHEVA, N.A.

Observing latitude variations of the Engel'gardt Astronomical Observatory in 1952-1954. Uch.zap.Kaz.un. 116 no.6:32-51 '56. (MLRA 10:3)

1. Astronomicheskaya observatoriya im. Engel'gardta.
(Kazan--Latitude variation)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

CHUDOVICHEVA, N.A.

CHUDOVICHEVA, N.A.

Observations of lunar occultations of stars at the Engel'gardt Observatory in 1956. Astron.tsir. no.178:25 Mr '57. (MLRA 10:9)
(Occultations)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

CHUDOVICHEVA, N.A.

V.P. Engel'gardt's astronomical works (comments by S.N. Korytnikov). Ist.-astron.issl. no.4:453-465 '58. Moscow, Fizmatgiz, (MIRA 11:10) (Engel'gardt, Vasilli Pavlovich, 1828-1897) (592 pp.)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

CHUDOVICHEVA, N.A.; RABINSKIY, P.M.; KAPRALOV, V.P.

Measurements of the latitude of the Engel'gardt Astronomical Observatory in 1957-1958. Astron. tsir. no.199:14-15 Ja '59. (MIRA 13:2)

1. Astronomicheskaya observatoriya im. V.P. Engel'gardta.
(Astronomy, Spherical and practical)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3"

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CHUDOVICHEVA, N.A.

26

PHASE I BOOK EXPLOITATION SOV/5742

Akademiya nauk SSSR. Mezhduvedomstvennyy komitet po provedeniyu Mezhdunarodnogo geofizicheskogo goda. VIII razdel programmy MGG: Shiroty i dolgoty.

Predvaritel'nyye rezul'taty issledovaniy kolebaniy shirot i dvizheniya polyusov zemli; sbornik statey (Preliminary Data of Latitude Variations and Migrations of the Earth's Poles; Collected Articles. No. 1) Moscow, Izd-vo AN SSSR, 1960. 97 p. Errata slip inserted. 1,000 copies printed.

PURPOSE: This collection of articles is intended for astronomers, geophysicists, and other scientists concerned with the problem of latitude variations and the migration of the Earth's poles.

COVERAGE: Part I of the collection contains preliminary results of latitude observations from 1957.5 through 1959.0 made at IGY stations in the USSR network, including new stations in Siberia. Part II consists of articles describing new instruments, observational programs and methods, and procedures of processing the latitude observational data. With the larger number of stations and the use of new instruments it is anticipated that the final results will provide a more comprehensive study of anomalies and instrumental

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errors in latitude observations than has been possible previously. No personalities are mentioned. English abstracts and references follow each article.

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Preliminary Data of Latitude Variations (Cont.) SOV/5742

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Kapralov, V. P., P. M. Rabinskiy, and N. A. Chudovicheva. Latitude Observations at the Astronomical Observatory imeni Engel'gardt (ZTL-180 Zenith-Telescope) 25

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Card 3/5

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

CHUDOVICHEVA, N.A.; KAPRALOV, V.P.; RABINSKIY, P.M.; URASINA, I.A.

Latitude variations of the Engel'gardt Astronomical Observatory in 1959. Astron.tsir. no.210:14 Ap '60. (MIRA 13:9)

1. Astronomicheskaya observatoriya im.Engel'gardta.
(Latitude variation)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

3,1850

S/035/061/000/004/021/058
A001/A101

AUTHOR: Chudovicheva, N.A.

TITLE: The ЗТЛ-180 (ZTL-180) zenith telescope of the Astronomical Observatory imeni Engel'gardt and the first series of observations with it

PERIODICAL: Referativnyy zhurnal. Astronomiya i Geodeziya, no. 4, 1961, 17, abstract 4A216 ("Tr. 14-y Astrometr. konferentsii SSSR", Moscow-Leningrad AN SSSR, 1960, 284 - 286, Engl. summary)

TEXT: The new ZTL-180 zenith telescope was mounted in the Astronomical Observatory imeni Engel'gardt in summer 1957. All the quantities necessary for latitude determinations were investigated: the value of one screw revolution (from observations of scale pairs), scale division of Talcott levels (by A.S. Vasil'yev's method), periodic and advance errors of the ocular micrometer screw (by Ridberg's method) and other instrument characteristics. The author presents a curve of latitude variation from August 16, 1957, to April 23, 1958, obtained from observations with visual readings of the micrometer and the levels. N.A.

[Abstracter's note: Complete translation]

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

CHUDOVICHEVA, O.M.

Tempel's periodic comet 2 1956 e. Astron.tsirk.no.170:1-2 '56.
(Comet, Tempel's (II)) (MLRA 9:10)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

POTTER, Kh.I.; CHUDOVICHEVA, O.N.

Investigating the KIM-3 coordinate measuring device. Izv. GAO 20 no.4:121-132 '57. (MIRA 13:4)
(Astronomical instruments)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

BULATOVA, F.F.; CHUDOVICHEVA, O.N.

Accurate positions of minor planets according to photographic observations in Pulkovo. Izv.GAO 20 no.4:133-136 '57. (MIRA 13:4)

(Planets, Minor)

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CHUDOVICHEVA, O.N.

PHASE I BOOK EXPLOITATION SOV/5721

Vsesoyuznaya astrometricheskaya konferentsiya.

Trudy 14-y Astrometricheskoy konferentsii SSSR, Kiyev, 27-30 maya 1958 g. (Transactions of the 14th Astrometrical Conference of the USSR, Held in Kiyev 27-30 May 1958). Moscow, Izd-vo AN SSSR, 1960. 440 p. Errata slip inserted. 1000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Glavnaya astronomicheskaya observatoriya (Pulkovo).

Resp. Ed.: M. S. Zverev, Corresponding Member, Academy of Sciences USSR; Ed. of Publishing House: N. K. Zaychik; Tech. Ed.: R. A. Zamarayeva.

PURPOSE: The book is intended for astronomers and astrophysicists, particularly those interested in astrometrical research.

COVERAGE: This publication presents the Transactions of the 14th Astrometrical Conference of the USSR, held in Kiyev 27-30 May 1958. It includes 27 reports and 55 scientific papers presented at the plenary meeting of the Conference

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60

and at the special sectional meetings. An appendix contains the resolutions adopted by the Conference, the composition of the committees, the agenda, and the list of participants at the Conference. A brief summary in English is given at the end of each article. References follow individual articles. The Presidium of the Astrometrical Committee (Chairman M. S. Zverev), which supervised the preparation of this publication, expresses thanks to the members of the secretariat: V. M. Vasil'yev, I. G. Kol'chinskiy, A. B. Onegina, and Kh. I. Potter.

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

CHUDOVICHEVA, O.N.

Determining the photometric field error of the Pulkovo normal astrograph. Izv. GAO 22 no. 1:161-164 '60. (MIRA 13:12)
(Astronomical photography)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3"

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BRONNIKOVA, N.M.; KISELEVA, T.P.; KOROLEVA, L.S.; CHUDOVICHEVA, O.N.

Precise positions of minor planets from photographic observations at Pulkovo. Trudy GAO Ser.2 73:135-146 '61. (MIRA 15:1)
(Planets, Minor)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

35242
S/035/62/000/002/009/052
A001/A101

3,5150

AUTHORS: Deych, A. N., Chudovicheva, O. N.

TITLE: A comparison of proper motions and magnitudes of stars in two special Kapteyn's areas according to measurements at Pulkovo and Groningen. Determination of light absorption by dark nebulosities in these areas

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 2, 1962, 36, abstract 2A324 ("Izv. Gl. astron. observ. v Pulkove", 1961, v. 22, no. 1, 65-78, English summary)

TEXT: The proper motions and photographic magnitudes of 549 and 479 stars respectively in Kapteyn's areas 9 and 24 are compared on the basis of the papers: Deych, A. N., Lavdovskiy, V. V. "Izv. Gl. astron. observ. v Pulkove", 1948, no. 141; Deych, A. N. "Izv. Gl. astron. observ. v Pulkove", 1948, no. 141; Hiemstra, B. "Publ. Kapteyn Astron. Labor.", 1938, v. 48). The summary catalogue is presented. The probable error of one proper motion is equal to ± 0".0033. To determine light absorption, all the stars in the light and dark fields of both areas were divided into groups, with 20 stars in each, in the order of increasing their

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visible magnitudes. Mean group proper motions μ and magnitudes m were obtained with taking into account systematic and random errors. A method of estimating light absorption by a dark nebula is proposed, which is based on the known relation between tangential velocity, proper motion and distance of the star. Space velocities of stars of various spectral classes are given, as well as percentage of these classes. The ratios of distances of stars of the same visible magnitudes in the light and dark fields indicates the existence of light absorption by clouds of the order of $0^m.5$. To this, $0^m.2$ more should be added on account of a change of luminosity function while passing to actually brighter stars weakened by absorption. The total light absorption by dark clouds in both areas turns out to be equal to $0^m.7$. This agrees well with estimates determined by Wolf's graphical method. There are 10 references.

Authors' summary

[Abstracter's note: Complete translation]

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

S/035/62/000/002/004/052
A001/A101

AUTHORS: Bronnikova, N. M., Kiseleva, T. P., Koroleva, L. S., Chudovicheva, O. N.

TITLE: Precise positions of asteroids according to Pulkovo photographic observations

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 2, 1962, 18, abstract 2A172 ("Tr. Gl. astron. observ. v Pulkove", 1961, v. 73, 133-146, English summary)

TEXT: The authors give 223 positions [α, δ (1950.0), O-C] of 8 selected asteroids: Ceres-1, Pallas-2, Juno-3, Vesta-4, Hebe-6, Iris-7, Melpomene-18, Harmonia-40. Observations were carried out during 1957 - 1959 by means of a normal astrograph; plates were measured on devices of Repsold and КИМ-3 (KIM-3). The authors present the list of fundamental stars and "relationships".

L. N.

[Abstracter's note: Complete translation]

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

CHUDOVICHEVA, O.N.

Precise positions of minor planets Hebe and Parthenope from photographic observations at Pulkovo. Izv.GAO 23 no.1:184-186 '62.
(MIRA 16:12)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

CHUDOVICHEVA, O.N.

Expansion of planetary nebulae NGC 6853 (Dumbell nebula) and NGC 7662. Izv. GAO 23 no.4:154-159 '64. (MIRA 17:9)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

BRONNIKOVA, N.M.; KORSUNOVA, L.S.; STRUGATSKAYA, A.A.; CHUDOVICHEVA, O.N.

Precise positions of minor planets from photographic observations in Pulkovo. Izv. GAO 23 no.4:174-179 '64. (MIRA 17:9)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

CHUDOVICHEVA, O.N.

Precise positions of the minor planet Iris from photographic observations in Nikolayev. Izv. GAO 23 no.4:194-195 '64.
(MIRA 17:9)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

BRONNIKOVA, N.M.; KISELEVA, T.P.; STRUGATSKAYA, A.A.; CHUDOVICHEVA, O.N.

Exact positions of minor planets computed from photographic observations at Pulkovo. Biul. Inst. teor. astron. 10 no.1: 81-87 '65. (MIRA 18:12)

1. Submitted May 9, 1964.

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000509030001-3

CHUDOVSKIY, A. F.

Subject : USSR/Engineering AID P - 2577

Card 1/1 Pub. 110-a - 16/16

Authors : Gukhman, A. A., Doct., Phys. Math. Sci., Prof.
Shumayev, A. I. and A. I. Veynik, Docs. Tech. Sci., Profs.
Temkin, A. G., Kand. Tech. Sci.
Blokh, A. G., Kand. Tech. Sci.

Title : A. F. Chudovskiy, Teplo obmen v dispersnykh sredakh (Heat Exchange in Dispersion media) Gosenergoizdat, 1954. (Book Review)

Periodical : Teploenergetika, 8, 60-64, Ag 1955

Abstract : The book is an analysis of large-grain dispersion material. The reviewers consider the book as a timely contribution to Soviet science, although it is not devoid of some small errors.

Institution : None

Submitted : No date

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CHUDOWSKI, Ryszard

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