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B019/B060

AUTHORS: Barmin, A. A. and Gogosov, V. V.

TITLE: The Piston Problem in Magnetohydrodynamics

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 134, No. 5, pp. 1041 - 1043

TEXT: The authors studied the motion of a piston in a conducting medium without presupposing restrictions in velocity or in the magnetic field. Piston and medium are assumed as being ideally conductive, and it is further presupposed that the internal energy of the medium be related to pressure and density by the relation $e = \gamma p(\gamma - 1)\varrho$. A diagram constructed in the velocity space served for determining the combinations of propagation rates of shock waves, of rarefaction waves, and of rotational discontinuities. The construction of this diagram presupposes the knowledge of relations between the absolute gas velocities u, v, w behind the shock waves, the velocities of rarefaction waves, and the discontinuities with respect to the Alfvèn velocity in the undisturbed medium. These relationships are discussed, and the diagram is then set up in the

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The Piston Problem in Magnetohydrodynamics S/020/60/134/005/006/023
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velocity space. The mode of combination of waves in the plasma is inferred from the position of the piston velocity in the diagram. If Y^+ and Y^- correspond to fast and slow shock waves, P^+ and P^- to fast and slow rarefaction waves, and A to a discontinuity, the following combinations will be possible: P^+AY^-, Y^+AY^-, P^+AP^-, and Y^+AP^-. Moreover, the diagram includes planes and lines, where P^- and Y^-, P^+ and Y^+, and A, respectively, are vanishing. A. G. Kulikovskiy, G. S. Golitsin, I. A. Akhiyezer, R. V. Polovin, and G. Ya. Lyubarskiy are mentioned. The authors thank A. G. Kulikovskiy and G. A. Lyubimov for their discussions and remarks. There are 1 figure and 13 references: 11 Soviet and 2 US.

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

PRESENTED: May 19, 1960, by L. I. Sedov, Academician

SUBMITTED: May 8, 1960

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D201/D302

24.2120

AUTHOR: Gogosov, V.V. (Moscow)

TITLE: The interaction of magneto-hydrodynamic waves with contact and vortex discontinuities

PERIODICAL: Prikladnaya matematika i mekhanika, v. 25, no. 2, 1961, 187 - 195

TEXT: The author considers the interaction of magneto-hydrodynamic waves: rapid S^+ and slow S^-, shock-waves: rapid R^+, slow R^-, with vortex-, A, and contact-, K, discontinuities. Assuming an ideal medium, then there is a discontinuity at the moment of impact. The notation used is that of the author's previous article (Ref. 3: Raspad proizvol'nogo razryva v magnitnoy gidrodinamike, PMM, 1960, v. XXV, vyp. 1). The following assumptions are made: 1) The x-axis is perpendicular to the plane of the wave and the y-axis lies in the direction of motion. 2) In the case of the interaction of magneto-hydrodynamic waves with K-discontinuities, the K-discontinui-

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ties die away, the shock waves strike from the left and the rarified waves from the right. 3) The vortex discontinuities having overtaken the fast waves and the slow waves having overtaken the vortex discontinuities, move from left to right. 4) An A-discontinuity, on encountering the magneto-hydrodynamic waves moves to the left and the waves to the right. Interaction of S^+ waves with A- and K-discontinuities. Either

$$H_{yo}' > H_+(p_o, H_{yo}, p = p_o')$$

or

$$H_{yo}' < H_+(p_o, H_{yo}, p = p_o').$$

In the first case, (Fig. 1), and in the second case (Fig. 2). For the rarefaction wave and the K-discontinuity, the following combinations are possible: R^+R^-K, R^+KS^-, S^+KS^+, S^-KS^- in case 1, and R^+KR^-, R^+S^-K, S^+KS^+, S^-KS^- in case 2. The case S^+KS^+ is possible if the S^+ lines originating from the points (p_o', H_{yo}') and (p_o, H_{yo}) intersect. The combination KS^+ is possible (i.e. the intensi-

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ty of the K-discontinuity is zero) if $_o$ and $_o'$ are correspondingly combined on the S^+ wave. All possible combinations are shown which apply whether the Eqs. in cases 1 or 2 holds. In the cases $R^-KR^-S^+$ and $S^-KS^-S^+$ then the intensities of R^- and S^- are equal. If instead of combinations with no or with two vortex discontinuities, a combination with one vortex discontinuity is considered, the corresponding diagrams may be easily obtained. If an S^+ wave overtakes an A-discontinuity, then there is an induced discontinuity

$$H_{yo} < 0,\ H'_{yo} > 0,\ \Delta u = u_o > 0,\ \Delta v = v_o = \varphi_+ + 2h'_o V'_o.$$

If an S^+ wave collides with an A-discontinuity, then there is an induced discontinuity

$$\Delta u = u_o > 0,\ \Delta v = -\varphi_+ + 2h'_o/V_o,\ H_{yo} > 0,\ H'_{yo} < 0.$$

Interaction of S^- waves with K- and A-discontinuities. The 2 possible cases are given by

$$H'_{yo} > H_-(p_o,\ H_{yo},\ p = p'_o),$$

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and

$$H'_{yo} < H_-(p_o, H_{yo}, p = p'_o).$$

In the first case, the possible combinations are S^+R^-K, R^-KR^+, S^+KS^+, S^-KS^-. In the second case the possible combinations are: R^-KS^+, R^+R^-K, S^+KS^-, S^-KS^-. S^+KS^+ is possible if the S^+ lines from the points (p_o, H_{yo}) and (p'_o, H'_{yo}) intersect. (There are either 2 points of intersection or none). S^-KS^- is possible if the S^- lines arising from these points intersect. The combination KS^- is also possible. In the case of an S^- wave and an A-discontinuity (assumed plane), if the wave overtakes the A-discontinuity, there is an induced discontinuity

$$\Delta u = u_o > 0, \ \Delta v = \varphi_- + 2/h_o/V_o > 0, \ H_{yo} < 0, \ H'_{yo} > 0,$$

and if the wave and A-discontinuity collide, then

$$H_{yo} > 0, \ H'_{yo} < 0, \ \Delta u > 0, \ \Delta v = \varphi_- + /2h'_o/V'_o > 0.$$

The case of R^+ waves: There are 2 cases

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$$p_0 < p_+(p_0', H_{y0}', H_y = H_{y0})$$

and

$$p_0 > p_+(p_0', H_{y0}', H_y = H_{y0}).$$

The possible combinations are S^-KS^+, KR^-S^+, R^+KR^+, S^+KS^+, and S^-KS^- in case 1, and R^-KS^+, KS^-S^+, R^+KR^+, S^+KS^+, S^+KS^- in case 2. S^+KS^+ occurs necessarily in case 1; in case 2 it occurs if the S^+ lines arising from the points (p_0', H_{y0}') and (p_0, H_{y0}) intersect. S^-KS^- occurs if the S^- lines intersect. If an R^+ wave overtakes an A-discontinuity, then there is an induced discontinuity

$$\Delta u = u_0 < 0, \quad \Delta v = -\chi_+ + 2h_0V_0, \quad H_{y0} < 0, \quad H_{y0}' > 0$$

in the case of collision between an R^+ wave and an A discontinuity, then there is an induced discontinuity

$$\Delta u = u_0 < 0, \quad \Delta v = \chi_+ + 2/h_0'/V_0', \quad H_{y0} > 0, \quad H_{y0}' < 0.$$

The case of R^- waves: There are 2 cases, given by

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$$p_0 > p_-(p_0', H_{y0}', H_y = H_{y0}),$$

and

$$p_0 < p_-(p_0', H_{y0}', H_y = H_{y0}).$$

In the first case, the possible combinations are KS^-S^+, R^-KS^-, R^-KR^-, S^-KS^-, S^+KS^+. In the second case, the possible combinations are KS^-R^+, S^+KS^-, R^-KR^-, S^-KS^-, S^+KS^+. The combination S^+KS^+ is possible if the S^+ lines from the points (p_0, H_{y0}) and (p_0', H_{y0}') intersect. The combination S^-KS^- is possible, if the S^- lines from these points intersect. There are 16 figures and 3 Soviet-bloc references.

SUBMITTED: December 12, 1960

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AUTHOR: Gogosov, V. V. (Moscow)

TITLE: The decay of any explosion in magnetohydrodynamics

PERIODICAL: Prikladnaya matematika i mekhanika, v. 25, no. 1, 1961, 108-124

TEXT: The methods suggested in the present paper for solving the problem mentioned in the title is based upon the construction of diagrams within the region $\Delta u = u_0 - u_0'$, $\Delta v = v_0 - v_0'$, $\Delta w = w_0 - w_0'$, by means of which, if Δu, Δv, Δw is known, the combination of detonations solving the problem may be determined. The numerical determination of the final solution also, in principle, presents no difficulties. The problem of the independent decay in gasdynamics was solved for the first time by N. Ye. Kochin (Refs. 2,3). The parameters characterizing the medium in the initial instant of time are denoted by the index 0. The parameters of the medium, located in the initial instant to the right of the explosion

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plane and in the following points of time to the right of the plane of the contact explosion, are denoted by a prime. The parameters of the medium located to the left of the corresponding surfaces have no prime. The parameters of the medium located behind the first (second, third) wave propagated to the left or to the right are characterized by the figures 1 (2,3). According to A. G. Kulikovskiy the conditions prevailing on the shock wave may be expressed by the parameters of the state in front of the wave and by the tangential components of the magnetic field.

$$\frac{\rho_1}{\rho_0} = \frac{h_0 Z_\pm + 1}{h_1 Z_\pm + 1} \tag{1.1}$$

$$p_1 = p_\pm(p_0, H_{\tau 0}, H_{\tau 1}) \equiv \gamma (h_1 - h_0)\left[Z_\pm - \frac{1}{2}(h_1 + h_0)\right] \tag{1.2}$$

$$(U - u_0)^2 = 1 + h_1 Z_\pm \tag{1.3}$$

$$u_1 - u_0 = \pm f_+, \qquad v_1 - v_0 = \mp \varphi_+ \operatorname{sign} H_{\tau_0} \tag{1.4}$$

and

$$u_1 - u_0 = \pm f_-, \qquad v_1 - v_0 = \pm \varphi_- \operatorname{sign} H_{\tau_0} \tag{1.5}$$

Card 2/10 $f_\pm = \frac{h_1 - h_0}{\sqrt{1 + h_1 Z_\pm}} Z_\pm V_0, \qquad \varphi_+ = \left|\frac{h_1 - h_0}{\sqrt{1 + h_1 Z_\pm}} V_0\right|$

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show the corresponding expressions in the form as given to the author by A. A. Barmin. The upper (lower) sign in these expressions corresponds to the wave running to the right (left). In these and also in other formulas u, v, w denote the absolute velocities of the gas, U - the velocity of the shock wave, V - the Alfvèn velocity. The conditions prevailing on the shock waves were determined by Fridrikhs

$$|H_\tau| = H_\pm(p_0, H_{\tau_0}, p_1) \equiv \sqrt{(q_\pm - 1)(P - q_\pm^{-1}) H_n^2} \qquad (2.1)$$

$$u_1 - u_0 = \mp \psi_+, \qquad v_1 - v_0 = \pm \chi_+ \operatorname{sign} H_{\tau_0} \qquad (2.2)$$

$$u_1 - u_0 = \mp \psi_-, \qquad v_1 - v_0 = \mp \chi_- \operatorname{sign} H_{\tau_0} \qquad (2.3)$$

$$\psi_\pm = \frac{V_0}{\gamma P_0^{1/2}} \int_{P_1}^{P_0} \left(\frac{P}{P_0}\right)^{-\frac{\gamma+1}{2\gamma}} q(P_0, q_0, P)\, dP$$

and

$$\chi_\pm = \frac{V_0}{\gamma P_0^{1/2}} \int_{P_1}^{P_0} \left(\frac{P}{P_0}\right)^{-\frac{\gamma+1}{2\gamma}} \left(\frac{1 - q_\pm}{1 - P q_\pm}\right)^{\frac{1}{2}} dP \qquad \left(q_\pm = \frac{c_\pm^2}{c^2}\right) \qquad (2.4).$$

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Here, $c_{\pm}$ denotes the propagation rate of the weak, fast and slow magnetohydrodynamic waves, and $q_{\pm} = q(P_o, q_o, P)$ is the solution of the equation $\frac{dP}{dq} + \frac{\theta P}{1-q} = \frac{\theta}{q^2(1-q)}$, $\theta = \frac{\gamma}{2-\gamma}$. In these formulas the upper (lower) sign corresponds to the expansion wave running to the right (left). Part 4 deals with the possibility of the decay of an arbitrary explosion into two shock waves or similarity-type waves, which are separated from each other by a contact discontinuity. The R^-KR^- and R^+KR^+ - combinations are possible only if point p'_o, H'_{y_o} is located on a curve expressing the connection between p and H_y in R^- and R^+ waves, respectively. From two shock waves and similarity-type waves, the following combinations may be formed:

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1) R^-KS^+, R^+KS^-, S^+KS^+, R^+R^-K, KS^-S^+ (4.1)

если $p_0 > p_+(p_0', H_{v_0}', H_v = H_{v_0})$, $H_{v_0}' > H_+(p_0, H_{v_0}, p = p_0')$.

2) R^+KS^+, S^-KS^+, R^+KS^-, R^+R^-K, KR^-S^+ (4.2)

если $p_0 < p_+(p_0', H_{v_0}', H_v = H_{v_0})$, $H_{v_0}' > H_+(p_0, H_{v_0}, p = p_0')$

3) R^+KR^-, S^-KS^+, KR^-S^+, R^+S^-K (4.3)

если $p_0 < p_+(p_0', H_{v_0}', H_v = H_{v_0})$, $H_{v_0}' < H_+(p_0, H_{v_0}, p = p_0')$

4) R^-KS^+, S^+KS^+, R^+KR^-, R^+KS^+, KS^-S^+, R^+S^-K

если $p_0 > p_+(p_0', H_{v_0}', H_v = H_{v_0})$, $H_{v_0}' < H_+(p_0, H_{v_0}, p_0 = p_0')$ (4.4)

S^-KS^--комбинация возможна, если $p_-(p_0', H_{v_0}', H_v = 0) > p_-(p_0, H_{v_0}, H_v = 0)$.

The Figs. (7,8,9,10), which are added, illustrate the domains of applicability of the various combinations. To a combination consisting

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The decay of any explosion in... S/040/61/025/001/012/022
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of three shock waves or similarity-type waves and of one contact discontinuity, there corresponds one line in the plane Δu Δv. To the points of intersection of these lines there correspond the combinations consisting of two shock waves or similarity-type waves and one contact discontinuity. For each line (point) below the line of separation there is one line (point) above the separation line, to which a combination of the same waves as also for the lower point plus two rotative discontinuities exist. To the combination of four waves and one contact discontinuity there corresponds one domain in Δu Δv. Part 8 reports on the lines of separation. To the points on and behind the vacuum line there correspond combinations containing two R^--waves of maximal intensity. Finally the spatial cases of the problem are discussed. The author thanks L. I. Sedov, A. G. Kulikovskiy, and G. A. Lyubimov for discussion. There are 18 figures and 13 references: 9 Soviet-bloc and 4 non-Soviet-bloc.

SUBMITTED: October 9, 1960

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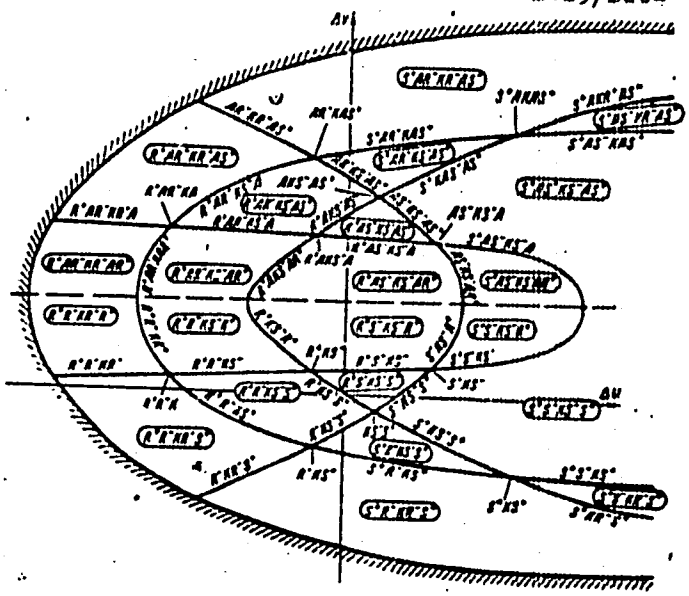

Fig. 7

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Fig. 8

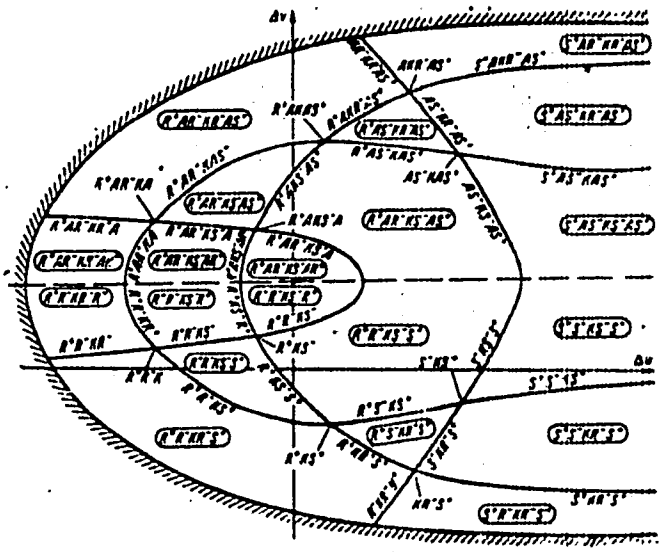

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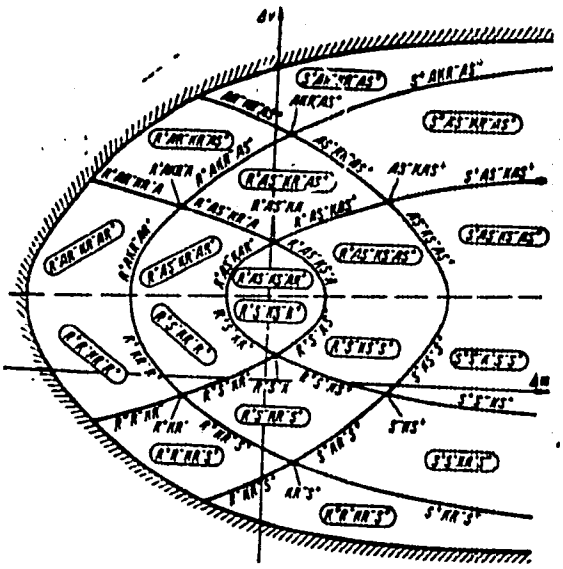
Fig. 9



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Фиг. 9

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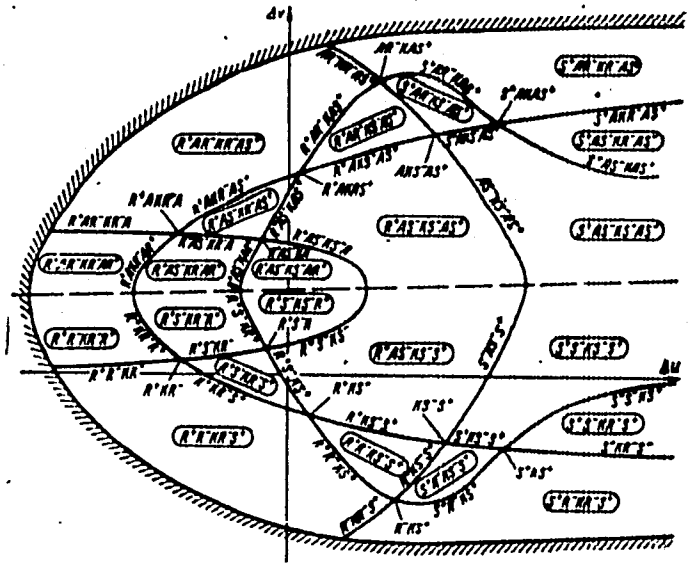
Fig. 10



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Фиг. 10

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GOGOSOV, V. V.

Cand Phys-Math Sci - (diss) "Decomposition of spontaneous /proizvol'nyy/ explosion and problem of the piston in magnetic hydrodynamics." Moscow, 1961. 6 pp; (Moscow State Univ imeni M. V. Lomonosov, Scientific Research Inst of Mechanics); 150 copies; price not given; (KL, 6-61 sup, 192)

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D208/D304

AUTHOR: Gogosov, V.V. (Moscow)

TITLE: Interaction of magnetohydrodynamic waves

PERIODICAL: Akademiya nauk SSR. Otdeleniye tekhnicheskikh nauk. Prikladnaya matematika i mekhanika, v. 25, no. 3, 1961, 456 - 467

TEXT: Interaction of the following types of waves is considered: fast (S^+) and slow (S^-) shock waves, fast (R^+) and slow (R^-) rarefaction waves and the interaction of the magnetohydrodynamic waves with a flat conducting wall. The medium is assumed to be ideally conductive and its parameters are not restricted. At the moment of interaction a disturbance occurs composed of some combination of waves and the purpose of this work is to determine possible combinations. The following symbols are used: if two waves move one behind the other to the right (left), the state of the undisturbed medium is denoted by $0^0(0)$. The state behind the first wave by the

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index 1, behind the second wave by $O(O')$. When two waves meet head on, the state of the undisturbed medium is denoted by 1, state of the medium behind the wave moving to the right by O, and that behind the wave moving to the left, by O'. Also a line in the plane pHy representing the relation between p and Hy in the $S^+(S^-, R^+R^-)$ wave when the magnetic field and pressure in front of the wave are H_o and p respectively, is in whort called S^+ line (S^-, R^+, R^-), emerging from the point (p_o, H_{yo}). Other symbols are adopted from the authors earlier work (Ref. 1: Raspad proizvol'nogo razryva v magnitnoy gidrodynamike (Breakdown of a shock wave in magnetohydrodynamics) PMM, 1961, vol. 25, ed. 1). The case of the collision between the waves of the same type and intensity and reflection of the wave from the wall can be reduced to a case of the breakdown of a shock wave when $p = p_o'$, $H_{\tau o} = H_{\tau o}'$, Δu, Δv, Δw arbitrary. Other cases considered are: $H_{yo} \lesseqgtr 0$, $H_{yo}' \lesseqgtr 0$, where $p_o = p_o'$, $H_{yo} = H_{yo}'$ is taken as an example for $H_y > 0$. The interaction of S^+

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waves is shown to produce a shock wave on which $\Delta u = 2u_0 > 0$, $\Delta v = 2v_0 < 0$ and which results in S^+R^-, R^-S^+, S^+, $S^-S^-S^+$, and S^+ S^+ combinations. Collision of S^- waves of the same intensity gives

$$R^+S^-S^-R^+, \quad S^+S^-S^-S^+, \quad S^-S^-, \quad R^+AS^-S^-AR^+$$

$$S^+AS^-S^-AS^+, \quad AS^-S^-A, \quad S^+AR^-R^-AS^+, \quad S^+AAS^+$$

while collison of S^- with the ideally conducting wall gives on reflection

$$R^+S^-, \ S^+S^-, \ S^-, \ R^+AS^-, \ S^+AS^-, \ AS^-, \ S^+AR^-, \ S^+A$$

The collisions of R^+ and R^- waves are discussed in a similar manner For the interaction of rarefaction waves of any intensity, the R^+ R^- interaction is considered, for $\Delta u < 0$, $\Delta v \lessgtr 0$ and frequent references are made to (Ref. 1: Op.cit.). For the R^+ wave colliding with R^- moving to the right, where $H_{yo} > H_{yo}'$ three cases are dis-

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Interaction of magnetohydrodynamic ... S/040/61/025/003/010/026
D208/D304

cussed: 1) $p_o > p_o'$ ($H_{yo}' < H + (p_o, H_{yo}, p = p_o')$); 2) $p_o < p_o'$; 3) $p_o = p_o'$. For R^+ overcoming R^- which is moving to the left, the cases discussed are: $H_{yo}' < H_{yo}$, $H_{yo}' > H_{yo}$, $H_{yo}' = H_{yo}$. Interaction of shock waves of any intensity is discussed next. For two S^+ moving to the right there are two possibilities: 1) $p_o = p_+ (p_1, H_{y1}, H_y = H_{yo}) < p_+(p_o', H_{yo}', H_y = H_{yo})$; 2) $p_o = p_+(p_1, H_{y1}, H_y = H_{y1}) > p_+(p_o', H_{yo}', H_y = H_{yo})$. for two S^-, $\Delta u > 0$, $\Delta v > 0$, 1) $p_o > p_-(p_o', H_{yo}', H_y = H_{yo})$; 2) $p_o < p_-(p_o', H_{yo}', H_y = H_{yo})$. Interaction between S^+ and S^- is discussed for: $p_o > p_o'$, $p_o < p_o'$, $p_o = p_o'$. For S^+ overcoming S^- moving to the right, again 3 cases, namely $H_{yo} < H_{yo}'$, $H_{yo} > H_{yo}'$ and $H_{yo} = H_{yo}'$ are discussed. If in the plane pH_y the bahavior of S^+, S^-, R^+, R^- lines differs from the

Card 4/5

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"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

26733

Interaction of magnetohydrodynamic ... S/040/61/025/003/010/026
D208/D304

cases considered above, then the investigation of their interaction should be performed in a similar manner. The cases when R^+, R^- overcome S^+, S^- respectively are investigated in an analogous manner to that employed for the case of S^+, S^- overcoming R^+, R^- respectively. There are 3 figures and 10 references: 9 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: J. Kato, Interaction of hydromagnetic waves. Progr. Theor. Phys. 1959, t. 24, no. 3.

SUBMITTED: February 23, 1961

X

Card 5/5

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

S/020/61/141/001/005/021
B104/B138

AUTHOR: Gogosov, V. V.

TITLE: Interaction of gyratory discontinuities

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 141, no. 1, 1961, 55 - 58

TEXT: During collision of gyratory discontinuities a discontinuity develops, in which the conservation laws are not satisfied. The discontinuity therefore breaks up into several combinations of waves. These combinations of waves are studied in this article. As shown in previous papers (V. V. Gogosov, Prikl. matem. i mekh., 25, no. 3 (1961), L. D. Landau, Ye. M. Lifshits, Elektrodinamika sploshnykh sred (Continuum Electrodynamics), 1957; V. V. Gogosov, Prikl. matem. i mekh., 25, no. 1 (1961)), the disintegration of a discontinuity can be studied with the aid of a diagram plotted in the $\Delta u \Delta v \Delta w$ space. First, the author assumes that a three-dimensional discontinuity disintegrates into two gyratary discontinuities. It is shown that the equation for the line in the $\Delta u \Delta v \Delta w$ space which corresponds to this decomposition is the equation of a circle. The position of this circle in the $\Delta u \Delta v \Delta w$ space is

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discussed for different cases. In addition, the collision of gyratory discontinuities of arbitrary intensities is studied. It is shown that a discontinuity arises, which may disintegrate 1) into the combination $S^+AR^-R^-AS^+$, 2) into the combinations $S^+AR^-R^-AS^+$, $R^+AS^-S^-AR^+$, AA and 3) AA. A symbolizes the gyratory discontinuities. In a collision of discontinuities of equal intensities a discontinuity arises, which may disintegrate into the combination $S^+AR^-R^-AS^+$. This collision is equivalent to that of a gyratory discontinuity with an ideally conducting wall. In this case, the combination S^+AR^- is reflected from the wall. If the collision process is considered in a system of coordinates, in which the medium rests behind the gyratory discontinuity, the problem considered above is equivalent to a piston problem. This piston moves in a resting medium with a velocity equal to the absolute velocity of the medium behind the gyratory discontinuity, but in opposite direction. In front of the piston there are different combinations of waves. The author thanks L. I. Sedov, A. G. Kulikovskiy, and G. A. Lyubimov for discussions. There are 2 figures and 7 Soviet references.

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

Interaction of gyratory...

S/020/61/141/001/005/021
B104/B138

ASSOCIATION: Nauchno-issledovatel'skiy institut mekhaniki Moskovskogo gosudarstvennogo universiteta im. M. V. Lomonosova (Scientific Research Institute of Mechanics of Moscow State University imeni M. V. Lomonosov)

PRESENTED: June 6, 1961, by L. I. Sedov, Academician

SUBMITTED: June 1, 1961

Card 3/3

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

32593
S/040/62/026/001/010/023
D237/D304

26.1410

AUTHOR: Gogosov, V.V. (Moscow)

TITLE: Disruption of an arbitrary flow discontinuity in magnetohydrodynamics

PERIODICAL: Akademiya nauk SSSR. Otdeleniye tekhnicheskikh nauk. Prikladnaya matematika i mekhanika, v. 26, no. 1, 1962, 88-95

TEXT: A problem is considered of the disruption of a discontinuity in magnetohydrodynamics in the presence of a magnetic field perpendicular to the plane of discontinuity. The problem is stated as follows: Let thermodynamic parameters of the medium and velocity undergo a continuity break at t=0, on the plane x=0. Continuity conditions shall not apply, hence the discontinuity will decompose into some combination of waves. The author states that in the present case, 120 different combinations are possible, depending on the parameters of the medium on both sides of the discontinuity, and the purpose of the solution is to find a way of showing which, out of all possible types of disruption, occurs in each particular

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32693

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D237/D304

Disruption of an arbitrary ...

case. In this work the method is proposed, based on construction of diagrams in the planes $\Delta u = u_0 - u_0'$, $\Delta v = v_0 - v_0'$ by means of which the resulting combination of waves can be found, if Δu and Δv are known. The medium is assumed to be ideally conducting, and the solution of the problem unique. The results obtained have applications in astrophysics in investigating collisions of cosmic masses, in magnetohydrodynamics, in investigating interactions of hydromagnetic waves, etc. There are 9 figures and 19 references: 16 Soviet-bloc and 3 non-Soviet-bloc. The references to the English-language publications read as follows: I. Bazer, Astrophys. J., 1958, 128, no. 3; G. Kato, Progr. Theor. phys., 1949, 21, no. 3.

SUBMITTED: September 25, 1961

Card 2/2

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

32828

24.4300 3617 1327 1502 2807

S/020/62/142/002/006/029
B112/B104

AUTHOR: Gogosov, V. V.

TITLE: Splitting of non-evolutional magnetohydrodynamic shock waves

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 142, no. 2, 1962, 292-295

TEXT: It is demonstrated that in general a non-evolutional magnetohydrodynamic shock wave splits into six subwaves. The problem of splitting of non-evolutional shock waves is assumed to be unambiguously solvable in the class of evolutional waves, which indicates that evolutional shock waves do not split. An evolutional discontinuity is a discontinuous solution of non-linear differential equations, which depends continuously on the initial and boundary conditions. Only plane discontinuities are considered here: $w_o = w'_o = 0$, $H_{zo} = H'_{zo} = 0$. The cases $H^*_{yo} = |H_{yo}| > H'_{yo}$ (Fig. 1), $H^*_{yo} = |H_{yo}| < H'_{yo}$ (Fig. 1 and 2), and $H^*_{yo} = |H_{yo}| = H'_{yo}$ (Fig. 1) are investigated. Fig. 3 shows the connection between $\Delta u = u_o - u'_o$ and $\Delta v = v_o - v'_o$ (u, v, and w are the components of the velocity). A. A. Barmin

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32828

Splitting of non-evolutional...

S/020/62/142/002/006/029
B112/B104

is mentioned. L. I. Sedov is thanked for assistance. There are 3 figures and 14 references: 11 Soviet and 3 non-Soviet. The two references to English-language publications read as follows: Lax, Comm. Pure and Appl. Math., 10, 537 (1957); J. Bazer, W. B. Ericson, Astrophys. J., 129, 758 (1958).

ASSOCIATION: Nauchno-issledovatel'skiy institut mekhaniki Moskovskogo gosudarstvennogo universiteta im. M. V. Lomonosova (Scientific Research Institute of Mechanics of Moscow State University imeni M. V. Lomonosov)

PRESENTED: August 28, 1961, by L. I. Sedov, Academician

SUBMITTED: July 4, 1961

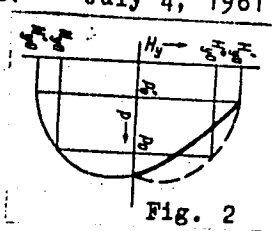

Fig. 2

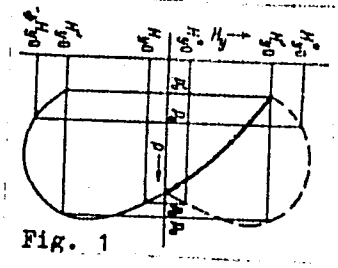

Fig. 1

Fig. 3

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"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

GOGOSOV, V.V. (Moscow):

"Motion and heat transfer of multi-component non-isothermal plasma in a canal with a magnetic field."

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

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

L 43707-65 EWT(1)/EPF(n)-2/EWG(m)/EPA(w)-2 Pz-6/Po-4/Pab-10/Pi-4 IJP(c) WW/GS/AT

ACCESSION NR: AT5009755 UR/0000/64/004/000/0073/0081

AUTHOR: Gogosov, V. V.

TITLE: Influence of dissipative processes in the damping of weak plasma waves

SOURCE: Soveshchaniye po teoreticheskoy i prikladnoy magnitnoy gidrodinamike, 3d, Riga, 1962. Voprosy magnitnoy gidrodinamiki (Problems in magnetic hydrodynamics); doklady soveshchaniya, v. 4. Riga, Izd-vo AN LatSSR, 1964, 73-81

TOPIC TAGS: dissipative plasma oscillation, plasma wave damping, nonequilibrated plasma, weak plasma wave

ABSTRACT: The damping of weak waves within three-component plasmas was studied earlier by D. A. Frank-Kamenetskiy, (ZhTF, 1960, 30, 8, 893). He assumed the plasma to be quite cold - the gas pressure was not taken into account. The system of equations describing the plasma was closed without an energy equation. The dispersion relation was written down assuming that the frictional force between the components is proportional to the difference between the velocities of the components. The present paper studies the damping of weak plasma magnetohydrodynamic waves taking into account the differences in temperature, velocity, and thermodynamic properties of the components (viscosity, temperature gradients, creation of ionized particles, dissociation, charge exchange processes, etc.). The damping is assumed to be not too strong (small over a wavelength). The system is thermally

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ACCESSION NR: AT5009755

insulated and is initially not in equilibrium. During the establishment of equilibrium the system does work on the external medium, and the author follows the damping 1) of an acoustic wave of a given (real) frequency propagating within the fluid, and 2) of magnetohydrodynamic waves resulting from an arbitrary initial perturbation. Orig. art. has: 28 formulas.

ASSOCIATION: None

SUBMITTED: 11Aug64 ENCL: 00 SUB CODE: MM

NO REF SOV: 009 OTHER: 002

Card 2/2

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

L 16071-65 EWT(1)/EWG(k)/EPA(sp)-2/EWA(m)-2/EPA(w)-2/EEC(t)/T/EEC(b)-2
Po-4/Pi-4/Pz-6/Pab-10 IJP(c)/SSD(b) AT
ACCESSION NR: AP4046268 S/0040/64/028/005/0852/0861

B

AUTHOR: Gogosov, V. V. (Moscow)

TITLE: On possible simplification of the equations of completely ionized two-temperature plasma

SOURCE: Prikladnaya matematika i mekhanika, v. 28, no. 5, 1964, 852-861

TOPIC TAGS: ionized plasma, electronic temperature, ionic temperature, plasma motion equation, generalized Ohm's law, electronic velocity, ionic viscosity

ABSTRACT: The system of equations which describe the behavior of a plasma in which the temperature of the ions is not equal to the temperature of the electrons, is very complex. The present paper gives a simplification of these equations by evaluating the importance of its various terms. The critical parameters are determined for which certain simplification can be made such as neglecting the anisotropic transfer coefficients, electronic viscosity in Ohm's law, etc. It turns out that for the corresponding parameters, the viscous terms in the Ohm's law must be taken into consideration, and therefore the latter is expressed by a

Card 1/2

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ACCESSION NR: AP4046268

differential, rather than by an algebraic relationship. There are cases when the electronic, but not the ionic, viscosity must be considered. Most of these phenomena occur when the electronic and ionic temperatures are not identical. Orig. art. has: 1 figure, 31 equations

ASSOCIATION: None

SUBMITTED: 03Jun64 ENCL: 00

SUB CODE: ME, NP NO REF SOV: 003 OTHER: 001

Card 2/2

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

L 43714-65 EWT(1)/EWP(m)/EPA(sp)-2/EWG(v)/EPR/EPA(w)-2/T-2/EWA(m)-2 Pd-1/Peb-10/
Pe-5/Ps-4/Pi-4 IJP(c) GS
ACCESSION NR: AT5009748 UR/0000/64/004/000/0005/0013

60
57

AUTHOR: Gogosov, V.V.; Shikin, I.S.

TITLE: Some problems of relativistic magnetohydrodynamics

SOURCE: Soveshchaniye po teoreticheskoy i prikladnoy magnitnoy gidrodinamike. 3d, Riga, 1962. Voprosy magnitnoy gidrodinamiki (Problems in magnetic hydrodynamics); doklady soveshchaniya. v. 4. Riga, Izd-vo AN LatSSR, 1964, 5-13

TOPIC TAGS: shock wave, relativistic magnetohydrodynamics, magnetohydrodynamic shock wave

ABSTRACT: F. Hoffman and E. Teller were the first to formulate the relationships existing within shock waves of relativistic magnetohydrodynamics (Phys. Rev., 1950, 80, 692). A. I. Akhiyezer and R. V. Polovin utilized evolutionary considerations to prove that there exist fast and slow magnetohydrodynamic shock waves (ZhETF, 1959, 36, 6, 1845) without solving, however, the relativistic equations. The present paper shows how one can solve these equations by choosing an appropriate coordinate system (the magnetic field and the velocity are within the same plane perpendicular to the plane wave front of the shock wave) and then

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ACCESSION NR: AT5009748

applying the known nonrelativistic method for the solution of shock equations, developed earlier by I. Bazer and W. B. Ericson (Astrophys. J., 1959, 129, 3, 758). Orig. art. has: 22 formulas and 1 figure.

ASSOCIATION: None

SUBMITTED: 11Aug64 ENCL: 00 SUB CODE: ME

NO REF SOV: 010 OTHER: 002

Card 2/2

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

ACCESSION NR: AP4034271 S/0207/64/000/002/0050/0059

AUTHOR: Gogosov, V. V. (Moscow)

TITLE: Heat exchange in completely ionized nonisothermal plasma moving in a channel with a magnetic field

SOURCE: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 2, 1964, 50-59

TOPIC TAGS: heat exchange, ionized plasma, plasma, magnetic field, Hartman number, anisotropy

ABSTRACT: The author derives formulas for the distribution of current density, velocity, and temperature components for a section of the channel in the problem given by the title. He explains the effects of the various parameters, i.e., resistance of exterior load, Hartman number, parameters characterizing the anisotropy of the transfer coefficient; and others, on the distributions of temperature components in a section of the channel. Orig. art. has: 2 figures, 1 table, and 56 formulas.

ASSOCIATION: none

SUBMITTED: 09Jan64 DATE ACQ: 15May64 ENCL: 00

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

Card 1/1

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

GOGOSOV, V.V. (Moskva)

Heat transfer in a completely ionized nonisothermal plasma moving in a channel with a magnetic field. PMTF no.2:50-59 Mr-Ap '64. (MIRA 17:8)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

ACC NR: AP6022521 SOURCE CODE: UR/0040/66/030/003/0424/0440

AUTHOR: Gogosov, V. V. (Moscow)

ORG: none

TITLE: Boundary layers in a completely ionized two-temperature plasma

SOURCE: Prikladnaya matematika i mekhanika, v. 30, no. 3, 1966, 424-440

TOPIC TAGS: boundary layer flow, boundary layer temperature, boundary layer thickness, ionized plasma, plasma flow

ABSTRACT: Equations are derived for boundary layers in a completely ionized two-temperature plasma. Study of the temperature behavior near the wall in a two-temperature plasma involves investigation of two thermal boundary layers: the electronic, in which the electron temperature changes sharply, and the ionic, in which the ion temperature changes sharply. The thickness of the electronic thermal boundary layer is much greater than that of the ionic thermal boundary layer. In some cases, no electronic thermal boundary layer exists. In addition to these boundary layers, in which the electronic and ionic temperatures in a two-temperature heat conducting plasma change sharply, a specific boundary layer close to the wall, the so-called "screening" layer, can occur. In this layer, any temperature difference between the electrons and ions created by outside sources close to the wall acquires a value

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ACC NR: AP6022521

determined jointly by viscosity, Joule heating, and heat conductivity in conformity with the equations. The thickness of this layer in a wide range of parametric changes is much smaller than the thicknesses of the dynamic and ionic thermal boundary layers. In an external flow, where the viscosity and heat conductivity of the medium can be neglected, a narrow "screening" layer can also exist. In this layer, the difference between the electronic and ionic temperatures created by sources in some cross section of the flow (e.g., at the entrance into the channel) changes sharply up to a value determined by the Joule heating in conformity with the equations for an external flow. These "screening" layers apparently are characteristic features of a two-temperature plasma and do not exist in a single-temperature plasma. Orig. art. has: 41 formulas and 3 figures. [JA]

SUB CODE: 20/ SUBM DATE: 02Nov65/ ORIG REF: 005/ OTH REF: 001/ ATD PRESS: 5034

Card 2/2

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

ZAIMOVER, I.Yu.; GOGOTOV, L.T. (Vladivostok)

Problem of levomycetin therapy in influenza. Klin.med. 39 no.3:151 Mr '61. (MIRA 14:3)
(CHLOROMYCETIN) (INFLUENZA)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

S/262/62/000/005/003/013
1007/1207

Authors: Semenov, A. S.,
Gogotsi, G. A.

Title: METHODS FOR COMPUTATION OF DISKS OF ARBITRARY PROFILE, TAKING INTO ACCOUNT THE THERMAL STRESSES

Periodical: *Referativnyy zhurnal, otdel'nyy vypusk.* 42. *Silovye ustanovki*, no. 5, 1962, 24, abstract 42.5.122 (*Izv. Kievsk. politekhn. in-ta*, no. 30, 1960, 101-113)

Text: The computation method suggested is illustrated by a calculation example for a cone-shaped disk, provided with a hub. There are 2 figures, 1 computation table and 7 references.

[Abstractor's note: Complete translation.]

Card 1/1

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

GOGOTSI, G. [Hohotsi, H], inzh.

Within the atom, on earth and in space. Znan. ta pratsia no.11:10-12 N '61. (MIRA 14:11)

(Electromagnetism)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

KORITNIKOV, V.P., inzh.; GOGOTSI, G.A. [Hohotsi, H.A.], inzh.

Energetics of the future. Nauka i zhyttia 11 no.1:14-18 Ja '61.
(MIRA 14:3)

(Electric power production)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

GOGOTSI, G.A. [Hohotsi, H.A.], inzh.

Gas turbines. Nauka i zhittia 11 no.10:14-17 O '61. (MIRA 15:1)

(Gas turbines)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

GOGOTSI, G.A.

Experimental models and schematics of magnetohydrodynamic systems. Energ. i elektrotekh. prom. no.1:74-78 '62. (MIRA 15:6)
(Magnetohydrodynamics--Models)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

[illegible], S.N., kand. tekhn. [illegible]

System for testing materials in [illegible] heat [illegible]. Energ. i elektrotekh. prom. no. [illegible]-26 [illegible].

(MLRA [illegible]:10)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

PISARENKO, G.S.; VDOVENKO, V.V.; GOGOTSI, G.A.; GRYAZNOV, B.A.; KRAVCHUK, L.V.; KURIAT, R.I.; TRET'YACHENKO, G.N.

System for testing materials in a high-temperature flow. Energ. i elektrotekh. prom. no.4:22-23 O-D '64.

(MIRA 18:3)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

L 31115-66 EWT(1)/EWP(m)/EWT(m)/EWP(w)/EWA(h)/EWP(v)/T/EWP(t)/EWP(k)/EWA(1)/
ETC(m)-6 IJP(c) JD/EM/WB/GS

ACC NR: AT6008671 (N) SOURCE CODE: UR/0000/65/000/000/0261/0268

AUTHORS: Pisarenko, G. S. (Academician AN UkrSSR) (Kiev); Tret'yachenko, G. N. (Kiev); Gorgotsi, G. A. (Kiev); Kravchuk, L. V. (Kiev); Kuriat, R. I. (Kiev); Vdovenko, V. V. (Kiev); Gryaznov, B. A. (Kiev)

ORG: none

TITLE: Apparatus for investigating characteristic strength of materials and structural elements in high-temperature gas streams

SOURCE: Vsesoyuznoye soveshchaniye po voprosam staticheskoy dinamicheskoy prochnosti materialov i konstruktsionnykh elementov pri vysokikh i nizkikh temperaturakh, 3d. Termoprochnost' materialov i konstruktsionnykh elementov (Thermal strength of materials and construction elements); materialy soveshchaniya. Kiev, Naukova dumka, 1965, 261-268

TOPIC TAGS: high temperature strength, gas flow, temperature test, test chamber, aerodynamic environment test

ABSTRACT: The details of a test apparatus for investigating the high-temperature strength of materials and parts are described. This apparatus is used to evaluate the fatigue strength of brittle and plastic structural elements (such as gas turbine blades), the thermal shock characteristics of various materials, their thermal

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APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

L 31115-66

ACC NR: AT6008671

stability, oxidation resistance at high temperatures, etc. The apparatus consists of a gas dynamic test bed, a high-temperature flow generator (from 600 to 3000K), and an instrumentation complex for measuring and recording the flow temperature and other parameters. The gas flow can attain velocities up to Mach 1.5 at a flow rate of 1.7 kg/sec, and pressures of 80 newtons/cm^2. The air stream is heated successively in three combustion chambers and pumped through a blow-through chamber. Three types of blow-through chambers are used as test sections: one for a continuous test run, another for a controlled duration test run, and a third type for instantaneous exposure and removal of the model. The instrumentation consists of thermocouples, automatic recording potentiometers, calorimeters, pyrometers, oscillograms, and flow meters. The apparatus also contains a device for controlling the mixture of the test gas. Orig. art. has: 4 figures.

SUB CODE: 20,13/ SUBM DATE: 19Aug65

Card 2/2

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

L 44197-66 EWT(m)/EWT(w)/EWP(j)/T/EWP(t)/ETI JD/AW/RM

ACC NR: AP6015700 (A) SOURCE CODE: UR/0413/66/000/009/0098/0098

INVENTOR: Pisarenko, G. S.; Tret'yachenko, G. N.; Gogotsi, G. A. 18 B

ORG: none

TITLE: Device for recording failures of test pieces prepared from brittle heat-insulating materials. Class 42, No. 181362 [announced by the Institute for Problems in Science of Materials AN UkrSSR (Institut problem materialovedeniya AN UkrSSR)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 9, 1966, 98

TOPIC TAGS: recording device, failure pickup unit, heat insulating material

ABSTRACT: This Author Certificate introduces a device for recording failures of test pieces prepared from brittle heat-insulating materials during tests for heat resistance featuring failure pickup units, a temperature transmitter, and an automatic temperature recorder. For higher accuracy, there is a relay-type slave mechanism with open

Card 1/2 UDC: 620.172.224.4

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

L 44197-66

ACC NR: AP6015700

contacts between the temperature transmitter and the recorder. The mechanism is connected with both the single signal unit and storage unit which, in turn, are connected by current leads with the failure pickup units of the test pieces (see Fig. 1). Orig. art. has: 1 figure. [Translation] [LD]

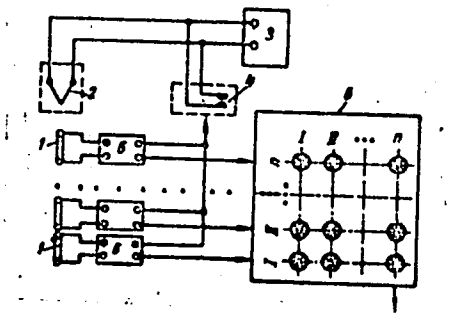

Fig. 1. Automatic device for recording failures of test pieces prepared from heat-insulating materials.
1—Failure pickup unit; 2—temperature transmitter; 3—automatic recorder; 4—slave mechanism; 5—storage unit; 6—single signal unit

SUB CODE: 13/4/ SUBM DATE: 18Jan65/

Card 2/2

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

L 09336-67 EWT(m)/EWP(w)/EWP(t)/ETI IJP(c) JD/JH

ACC NR: AP6029520 SOURCE CODE: UR/0432/66/000/004/0042/0043

AUTHOR: Gogotsi, G. A.; Gol'dberg, M. Sh.; Yaremenko, A. A.

ORG: None

TITLE: Device for recording moment of failure

SOURCE: Mekhanizatsiya i avtomatizatsiya upravleniya, no. 4, 1966, 42-43

TOPIC TAGS: ~~measuring apparatus~~, electromeasuring device, heat resistance, thermal fatigue, physics laboratory instrument, high temperature metal

ABSTRACT: A special measuring instrument for determination of thermal endurance of materials is described. The instrument, devised by the Material Research Institute of the AN UkrSSR, is used for recording the time and temperature at which the tested samples of materials are fractured. The device is designed for a simultaneous testing of four samples. Thin metal films deposited on the sample surfaces serve as sensors of occurred fractures. The measuring arrangement consists of a potentiometer, thermometers (thermocouple, pyrometer or electric resistance type), time-relay, recording tape, signal light panel and other circuit elements shown in a diagram and a photo. The procedure of measurements is described and the consecutive fractures of four samples are reflected in a time-temperature curve. It is mentioned that the device was used for testing the oxides of magnesium and aluminum and other high-temperature materials. Orig. art. has: 3 figures.

SUB CODE: 20/ SUBM DATE: None/ ORIG REF: 003/ OTH REF: 001

Card 1/1

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

L 27753-66

ACC NR: AP6028242

SOURCE CODE: UR/0220/66/035/002/0193/0199

AUTHOR: Nesterov, A. I.; Gogotov, I. N.; Kondrat'yeva, Ye. N.

ORG: Soil Biology Faculty, Moscow State University im. M. V. Lomonosov (Biologo-pochvennyy fakul'tet Moskovskogo gosudarstvennogo universitet)

36

B

TITLE: Effect of light intensity on utilization of carbon compounds by photosynthesizing bacteria

SOURCE: Mikrobiologiya, v. 35, no. 2, 1966, 193-199

TOPIC TAGS: light biologic effect, photosynthesis, bacteria, carbon

ABSTRACT: The shape of light curves showing the uptake by purple and green bacteria of C^{14} from various compounds (bicarbonate, acetate, ethane) depends on the species of organism, source of carbon, and composition of the medium. The saturating intensity of light ranges from 7 to $60 \cdot 10^3$ erg/cm^2/sec. Purple and green bacteria capable of autotrophic growth (Rhodopseudomonas sp., Chloropseudomonas ethylicum, and Chlorobium thiosulfataphilum) take up more carbon from acetate than from CO_2 in the 7 to $150 \cdot 10^3$ erg/cm^2/sec interval. Regardless of the light intensity, Rhodopseudomonas sp., unlike C. ethylicum, takes up considerable quantities of CO_2 on a medium with acetate only if sulfide is present. Changes in light intensity seem to affect the way some carbon compounds are utilized by photosynthesizing bacteria. Orig. art. has: 3 figures. [JPRS: 36,932]

SUB CODE: 06 / SUBM DATE: 15Jul65 / ORIG REF: 011 / OTH REF: 014

LS

Card 1/1

UDC: 576.8.095.14:576.851.12

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

GOGOTOVA, V. P.

GOGOTOVA, V. P. - Kand. tekhn. nauk

Nauchno-issledovatel'skiy institut po stroitel'stvy Ministerstva stroitel'stva predpriyatiy mashinostroyeniya

Molotsys Izvest'-kipelka

Page 105

SO: Collection of Annotations of Scientific Research Work on Construction, completed in 1950, Moscow, 1951

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

GEORGIEV, Dimitur [illegible], [illegible]

Some new and rare species of butterflies (Lepidoptera) in the fauna of Bulgaria. Izv Zool Inst BAN [illegible] 14 Ja'64

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

GOGOV, Georgi

Labor productivity and intensity in retail trade. Trud tseni 6 no. 3:38-47 '64.

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

GOGOVA, V.P., inzh.

Coordinating conference on problems concerning the development of fluorescent lighting fixtures for outdoor use. Svetotekhnika 8 no.6:27 Je '62. (MIRA 15:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy svetotekhnicheskiy institut.

(Fluorescent lighting)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 11, p 160 (USSR)

SOV/124-58-11-12984

AUTHOR: Gogsadze, R. Sh.

TITLE: Some Boundary Problems of the Theory of Elasticity for a Plane Composite Region (Nekotoryye granichnyye zadachi teorii uprugosti dlya ploskoy sostavnoy oblasti) in Georgian

PERIODICAL: Tr. Gruz. politekhn. in-t, 1957, Nr 4 (52), pp 107-134

ABSTRACT: An examination of the boundary problems of the flexure of a thin plate, the first and second problems of the plane theory of elasticity for regions composed of different elastic materials, and other auxiliary problems [ref. Muskhelishvili, N. I. Nekotoryye osnovnyye zadachi matematicheskoy teorii uprugosti (Some Basic Problems of the Mathematical Theory of Elasticity). Moscow, Izd-vo AN SSSR, 1949]. The author applies the Kolosov-Muskhelishvili method and directs the solution of these problems to the solution of one boundary problem of the theory of the function of a complex variable. The case when the region consists of two subregions, namely, an ellipse and a confocal elliptical annulus, are examined separately.

A. Ya. Gorgidze

Card 1/1

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

L 18829-63 BDS

ACCESSION NR: AR3005043

S/0196/63/000/005/0015/0015

SOURCE: RZh. Elektrotekhnika i energetika, Abs. 5 A90

47

AUTHOR: Gogsadze, R. Sh.

TITLE: Stability of electrical systems containing linear elements

CITED SOURCE: Tr. Tbilissk. n.-i. in-ta priborostr. i sredstv avtomatiz., v. 2, 1960, 99-111

TOPIC TAGS: linear electrical system, transient process, Lagrange function, impedance, inductance, emf

TRANSLATION: A Lagrange function is constructed for a linear electrical system and stability is studied on the basis of the virtual work principle. The resulting evaluations are applicable to systems consisting of an arbitrary combination of different linear elements (impedances, inductances, capacitances, triggers, and emf sources) and any linkages among them. One table. Bibliography with one title. B. Yakhinson.

DATE ACQ: 10Jul63 SUB CODE: GE ENCL: 00

Card 1/1

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

L 35438-65 EWP(m)/EWT(1)/EEC(t)/T; Pg-4/Pl-4/Po-4/Pq-4 IJP(c)

ACCESSION NR: AP5005621 S/0251/65/037/002/0289/0296

AUTHOR: Gogsadze, R. Sh.

TITLE: An Einstein-Infeld material body and Newton's laws of motion

SOURCE: AN GruzSSR. Soobshcheniya, v. 37, no. 2, 1965, 289-296

TOPIC TAGS: gravitation theory, tensor analysis, Newtonian mechanics

ABSTRACT: The author develops a justification of Newtonian laws of motion for a material body as defined by Einstein and Infeld. The laws of gravitational field energy-impulse conservation according to Einstein are reviewed. Einstein's equation is written as $\frac{\partial G^p_{ij}}{\partial x^p} + H_{ij} = 0$, where $G^p_{ij} = \delta^i_j \Gamma^p_{ip} - \Gamma^p_{ij}$, $H_{ij} = \Gamma^p_{iq}\Gamma^q_{pj} - \Gamma^p_{ij}\Gamma^q_{pq}$, Γ^p_{ij} - Christophel's symbol and δ^i_j - Kroneker's symbol. A^k satisfies the set of linear differential equations $G^p_{iq}\frac{\partial A^q}{\partial x^p} - H_{iq}A^q = 0$. Applying the Christofel transformation and other transformations, the author derives the system

$$G^p_{iq}\frac{\partial}{\partial x^p}\left(\frac{\partial x^q}{\partial x^{*s}}A^{*s}I\right) - H_{iq}\left(\frac{\partial x^q}{\partial x^{*s}}A^{*s}I\right) - G^p_{iq}\frac{\partial}{\partial x^p}\left(\frac{\partial x^q}{\partial x^{*s}}\right)A^{*s}I -$$

Card 1/2

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"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

L 35438-65

ACCESSION NR: AP5005621

$$\left[-G^{\rho}_{\epsilon\eta}\frac{\partial x^{\eta}}{\partial x^{\epsilon s}}\frac{\partial I}{\partial x^{\rho}}A^{\epsilon s}-I\left\{\frac{\partial}{\partial x^{\rho}}\left(\frac{\partial x^{\eta}}{\partial x^{\epsilon s}}\right)-\frac{\partial x^{\eta}}{\partial x^{\epsilon r}}\frac{\partial x^{\epsilon l}}{\partial x^{\rho}}\frac{\partial}{\partial x^{m}}\left(\frac{\partial x^{m}}{\partial x^{\epsilon l}}\right)\right\}\Gamma^{\rho}_{\epsilon\eta}A^{\epsilon\eta}=0,$$ where

$I=\frac{\sqrt{-g}}{\sqrt{-g^{*}}}$, and $\frac{\partial I}{\partial x^{l}}=I\left(\Gamma^{m}_{lm}-\frac{\partial x^{\epsilon m}}{\partial x^{l}}\Gamma^{\epsilon m}_{m}\right)$. The author then shows that an Einstein-Infeld body (a body defined as a region in a strong field) is justified by the laws of classical mechanics. Gravitational fields are defined in terms of metric tensors. Christophel symbols and the Ricci tensor are used in deriving four equations, three of which agree with the classical equations of motion of a material body in an internal gravitational field. The fourth equation must be linked with the law of conservation of energy. It is noted that a comprehensive study must be made to determine means of solving the equations without making an unwarranted number of simplifying assumptions. Orig. art. has: 38 equations.

ASSOCIATION: Institut metrologii Tbilisskiy filial (Institute of Metrology, Tbilisi Branch)

SUBMITTED: 03Jun64 ENCL: 00 SUB CODE: MA, ES

NO REF SOV: 002 OTHER: 003

Card 2/2

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

SIGUA, O.A.; GOGSADZE, V.G.

Subdural hematomas of nontraumatic etiology. Vop. neirokhir. no.5:12-14 '64. (MIRA 18:10)

1. Institut klinicheskoy i eksperimental'noy nevrologii (direktor - prof. P.M.Saradzhishvili) AN Gruzinskoy SSSR, Tbilisi.

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

RAZMADZE, T.S.; GOGOSHVILI, N.Z.

Development of chromospheric flares. Biul. Abast. astrofiz. obser. 32:123-139 '65. (MIRA 18:10)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

DRAGOI, I.; GOGU, O.

Using alluviums as the raw material for the manufacture of light silicocalcareous products. Studii chim Timisoara 9 no.1/2:115-119 Ja-Je '62.

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

DRAGU [illegible], [illegible], acad.; TRIBUNESCU, [illegible], GOGU, Olga

Study of the serpentines in Tisovita (Banat) in view of the chemical evaluation of the components. Bul St si Tehn Tim 9 no.1:29-34 Ja-Je '64.

1. Submitted June 29, 1964.

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

GOGUA, G., mladshiy nauchnyy sotrudnik

The soft scale Eupulvinaria peregrina. Zashch. rast. ot vred. i bol. 10 no.1:47 '65. (MIRA 18:3)

1. Institut chaya i subtropicheskikh kul'tur.

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

GOGUA, L.K., inzhener (Moskva)

Principles for the planning of standard substations of 110 and 35 kv. Elektrichestvo no.2:91-92 F '56. (MLRA 9:5)
(Electric substations)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

GOGUA, L. K.

"New Standard 35 and 110-kv Stepdown Substations."

in book - New Developments in the Design of Electric Equipment for Hydro-electric Power Plants, 1957. 222 p. Moscow-Leningrad, Gosenergoizdat.
(Data on the Conference on Design and Operation, Moscow, 16-24 May 1956.)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

GOGUA, L.K., insh., red.; PEVZNER, A.S., red. izd-va; SOLNTSEVA, L.M., tekhn. red.

[Manual of consolidated indices of the cost of planning and research] Spravochnik ukrupnennykh pokazatelei stoimosti proektnykh i izyskatel'skikh rabot. Vvoditsia v deistvie s 1 ianvaria 1958 g. Pt.10. [Electric power, air-blower, and boiler plants] Elektricheskie i vozdukhoduvnye stantsii, kotel'nye. Moskva, Gos. izd-vo lit-ry po stroit. i arkhit. 1958. 56 p. (MIRA 11:8)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po delam stroitel'stva.
(Turboblowers) (Electric power plants) (Steam power plants)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

GOGUA, L.K.; DVOSKIN, L.I.

[High-voltage distribution systems; training charts] Raspredelitel'nye ustroistva vysokogo napriazheniia; uchebnye tablitsy. Moskva, Gos.energ.izd-vo, 1960. fold.l (in portfolio).

(MIRA 13:9)

(Electric power distribution)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

ALEKSEYEVA, G.Ye., kand. tekhn. nauk, dots.; BELESHKINA, L.P., dots., kand. tekhn. nauk; BALUYEV, V.K., inzh.; BAMDAS, A.M., prof., doktor tekhn. nauk; VENIKOV, V.A., prof., doktor tekhn. nauk; YEZHKOV, V.V., kand. tekhn. nauk; ANISIMOVA, N.D., dots., kand. tekhn. nauk; GANTMAN, S.A., kand. khim. nauk; GLAZUNOV, A.A., dots., kand. tekhn. nauk; GOGUA, L.K., inzh.; GREBENNICHENKO, V.T., inzh.; GRUDINSKIY, P.G., prof.; GORFINKEL', Ya.M., inzh.; ZVEZDIN, A.L., inzh.; KAZANOVICH, G.Ya., inzh.; KNYAZEVSKIY, B.A., dots., kand. tekhn. nauk; KOSAREV, G.V., dots., kand. tekhn. nauk; MESSERMAN, S.M., kand. tekhn. nauk, dots.; KOKHAN, N.D., inzh.; KUVAYEVA, A.P., dots., kand. tekhn. nauk; SOKOLOV, M.M., dots., kand. tekhn. nauk; LASHKOV, F.P., dots., kand. tekhn. nauk; LAZIN, A.I., inzh.; YUDIN, F.I., inzh.; LIVSHITS, A.L., kand. tekhn. nauk; METEL'TSIN, P.G., inzh.; NEKRASOVA, N.M., dots., kand. tekhn. nauk; OL'SHANSKIY, N.A., dots., kand. tekhn. nauk; POLEVAYA, I.V., dots., kand. tekhn. nauk; POLEVOY, V.A., dots., kand. tekhn. nauk [deceased]; RAZEVIG, D.V., prof., doktor tekhn. nauk; RAKOVICH, I.I., inzh.; SOLDATKINA, L.A., dots., kand. tekhn. nauk; TREMBACH, V.V., dots., kand. tekhn. nauk; FEDOROV, A.A., prof., kand. tekhn. nauk; FINGER, L.M., inzh.; CHILIKIN, M.G., prof., doktor tekhn. nauk, glav. red.; ANTIK, I.V., inzh., red. GOLOVAN, A.T., prof., red.; PETROV, G.N., prof., red.; FEDOSEYEV, A.M., prof., red.

(Continued on next card)

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"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

ALEKSEYEVA, G.Ye.--- (continued). Card 2.

[Electrical engineering manual] Elektrotekhnicheskii spravochnik. Pod obshchei red. A.T. Golovana i dr. Moskva, Energiia. Vol.2. 1964. 758 p. (MIRA 17:12)

1. Moscow. Energeticheskiy institut. 2. Moskovskiy energeticheskiy institut (for Golovan, Grudinskiy, Petrov, Fedoseyev, Chilikin, Venikov). 3. Chlen-korrespondent AN SSR (for Petrov).

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

PETRIASHVILI, B.V.; GOGUA, N.A.

Casting automobile engine camshafts in sand chills. Trudy Inst. met. AN Gruz. SSR 12:145-151 '62. (MIRA 15:12)
(Founding) (Automobiles—Transmission devices)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

L 19204-63 EWT(1)/BDS AFFTC/ASD MLK(a)

ACCESSION NR: AP3007621 S/0286/63/000/011/0020/0020

AUTHOR: Matskov, A. A.; Danielyan, S. A.; Goguadze, G. Ya.

TITLE: Frequency multiplier. Class 21, No. 154888

SOURCE: Byul. izobret. i tovarn. znakov, no. 11, 1963, 20

TOPIC TAGS: transistorized frequency multiplier, frequency multiplier, bilateral limiter, limiter

ABSTRACT: This Author Certificate introduces a frequency multiplier using transistors and two oscillatory circuits. In order to make it possible to use oscillatory circuits with low Q-factors, a bilateral limiter is connected between them. Orig. art. has: 1 figure.

ASSOCIATION: none

SUBMITTED: 22Jul61 DATE ACQ: 16Oct63 ENCL: 00

SUB CODE: SD NO REF SOV: 000 OTHER: 000

Card 1/1

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

S/137/62/000/002/031/144
A006/A101

AUTHORS: Tevonyan, M. S., Goguadze, L. D.

TITLE: Studying the concentration ability of molybdenum-copper ores of the Gekgyundur deposit (AzerbaydzhanSSR)

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 2, 1962, 8, abstract 2G58 ("Yezhegodnik Kavkazsk. in-ta mineral'n. syr'ya za 1957 g.", Moscow, Gosgeoltekhizdat, 1959, 22)

TEXT: The concentration ability of 2 Mo-ore samples was investigated. Sample no. 1 was Mo-ore and contained 2.10% Mo, 0.10% Cu. From this sample conditional Mo-concentrate was obtained, containing 47.3% Mo at 82% extraction. It is possible to obtain also high-percentage Mo-concentrate with 50 and 52% Mo at a somewhat lower extraction percentage (75%). Sample no. 2 was Cu-Mo ore with 0.14% Mo, 0.21% Cu and a high pyrite content. As a result of 6 purification operations with addition of cyanogen fuse and lime, a conditional Mo-concentrate was obtained with 47.8% Mo at 53% extraction, and conditional Cu-concentrate with 11.7% Cu at about 60% extraction.

[Abstracter's note: Complete translation] A. Shmeleva

Card 1/1

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

GORNAYEV, I.D.

Dressing of the Dzirula pegmatites. Trudy KIMS no.5:[illegible],

Flotability of nonsulfide minerals by domestic cation collectors. Ibid.:117-124 (MIRA [illegible])

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

Goguadze, M.N.

USSR/General and Special Zoology. Insects. Injurious Insects and Ticks. Pests of Fruit and Berry Crops P

Abs Jour : Ref Zhur - Biol., No 11, 1958, No 49684

Author : Goguadze M.N.
Inst : -
Title : The Natural Enemies of the Leaf-Roller Polychrosis Batrana Schiff in Kakhetia.

Orig Pub : Zashchita rast. ot vredit. i bolezney, 1957, No 3, 30-31

Abstract : The natural enemies of the leaf-roller P. batrana Schiff, are parasitic and predatory insects, arachnoid, insectivorous birds, fungi and bacteria. Insects are of the greatest importance. In Georgia, from 1949 to 1954, the author discovered 16 species of entomophagi insects which feed on leaf-rollers. Elasmus flabellatus and Eulophus sp. were found most often. Both species are widely distributed in Europe, but are not found

Card : 1/2

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

RUSIASHVILI, I.L. (Telavi); GOGUADZE, M.N. (Telavi); MAMALADZE, L.T. (Telavi); DERYABIN, V.I., nauchnyy sotrudnik; BALAYAN, L.N., nauchnyy sotrudnik

Testing preparations against the spider mite. Zashch.rast.ot vred.i bol. 7 no.5:36 My '62. (MIRA 15:11)

1. Samarkandskaya sel'skokhozyaystvennaya opytnaya stantsiya (for Deryabin, Balayan).
(Red spider--Extermination)

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2"

"APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R000615530009-2

ZHARIKOV, Ya.P., nauchnyy sotrudnik; NOVOSELOV, V.S., nauchnyy sotrudnik; RUSIASHVILI, I.L., kand. sel'skokhoz. nauk; GOGUADZE, M.N.; EMERIKH, F.D.; FEDOROVA, L.I.; TITOV, K.G., kand. sel'skokhoz. nauk

Brief information. Zashch. rast. ot vred. i bol. 9 no.2: 56-57 '64. (MIRA 17:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut l'na (for Novoselov). 2. Telavskaya opytnaya stantsiya (for Rusiashvili, Goguadze). 3. Moskovskoye otdeleniye Vsesoyuznogo nauchno-issledovatel'skogo instituta rasteniyevodstva (for Emerikh, Fedorova). 4. Severo-Zapadnyy nauchno-issledovatel'skiy institut sel'skogo khozyaystva, Leningradskaya obl. (for Titov).

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GOGUADZE, Sh.

On the "Urekskii" State Farm. Zashch. rast. ot vred. i bol. 8 no.9:5-6 S '63. (MIRA 16:10)

1. Direktor sovkhoza "Urekskiy".

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[illegible], [illegible]; [illegible], N.Ye.; GOGUADZE, [illegible]; FOMIN, A.V.

Stabilization of water-logged soils by means of spatial copolymers of the acrylic series. Plast.massy no.10:40-44 '64.

(MIRA 17:30)

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MAN'KOVSKIY, G.I.; DAVYDOV, V.V.; ODINOKOVA, L.V.; KAMENSKIY, I.V.; OGNEVA, N.Ye.; KOGAN, N.N.; GOGUADZE, TS.A.

Solution for binding rocks. Gor. zhur. no.9:75 S '63. (MIRA 16:10)

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L 05541-67 EWT(1) RM

ACC NR: AP6031055 (N) SOURCE CODE: UR/0304/66/004/009/0041/0045

AUTHOR: Goguadze, V. D.

ORG: All-Union Scientific Research Institute of Tea and Subtropical Cultures. (Vsesoyuznyy nauchno-issledovatel'skiy institut chaya and subtropical cultures)

15
B

TITLE: Effect of herbicides on soil microflora

SOURCE: Khimiya v sel'skom khozyaystve, v. 4, no. 9, 1966, 41-45

TOPIC TAGS: microflora, red soil, alluvial soil, herbicide, antibiotic, chemical compound, fungus antibiotic

ABSTRACT: Spraying with 1000 l/ha of simazine and diuron was found to favorably affect the development of all basic groups of microorganisms in red and alluvial soils. The resistance of various types of microorganisma to herbicides must be considered in selecting the best dosage. Four to 15 kg/ha doses of simazine and diuron are not toxic for most types, but, nevertheless, cause a temporary regrouping in their composition, which evidently affects soil biodynamics. It was also found that microorganisms can use simazine and diuron during their life cycle, but to a varying

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ACC NR: AP6031055

degree. Simazine is more accessible to these microorganisms than diuron. Orig. art. has: 7 tables. [W.A.60] [GC]

SUB CODE: 02, 06, 07/ SUBM DATE: 09Nov65/ ORIG REF: 007/

Card 2/2 egb

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GOGUADZE, V.D.

Microflora of the Red soil of Georgia. Izv. AN SSSR, Ser. biol. 28 no.1:40-48 Ja-F'63. (MIRA 16:8)

1. Vsevoyuznyy nauchno-issledovatel'skiy institut chaya i subtropicheskikh kul'tur.
(GEORGIA—SOIL MICROORGANISMS)

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GOGUADZE, V.G.

Dacryocystorhinostomy by means of a trephine constructed by the author. Oft. zhur. 15 no.3:179 '60. (MIRA 14:5)

1. Iz Makharadzevskoy rayonnoy bol'nitsy Gruzinskoy SSR.
(DACRYOCYSTORHINOSTOMY)
(SURGICAL INSTRUMENTS AND APPARATUS)

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EXCERPTA MEDICA Sec 12 Vol 13/8 Ophthalmology Aug 59

1245. TREATMENT OF CASES OF BLEPHARITIS (Russian text) - Goguadze V.I. - SAB. MED. 1957, 3 (26-28)

In 110 cases of blepharitis the treatment used was the implantation of preserved skin, injections of aloe and local application of a 10% sulphidine (N^1-(2-pyridyl) sulphanilamide) ointment. A complete cure was obtained in 81 of the cases, improvement in 19 cases, and no result in 10 cases. The observation period ranged from 2 to 4 yr.

(S)

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GOGUADZE, V.I.

Preventing obstruction of dacrocystorhinostomic openings by means of probes. Oft.zhur. 13 no.2:123-124 '58. (MIRA 11:4)

1. Iz Makharadzevskoy raycnnoy bol'nitsy Gruzinskoy SSR.
(LACRIMAL ORGANS--DISEASES)

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GOGUADZE, V.I.

Treatment of blepharitis with biogenic stimulators. Oft. zhur 14 no.1: 52-53 '59 (MIRA 12:6)

1. Rayonnaya bol'nitsa g. Makharadze.
(EYELIDS--DISEASES) (TISSUE EXTRACTS)

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GOGUADZE, V., doktor khim.nauk, zasluzhennyy izobretatel' Gruzinskoy SSR;
TARENKO, M., nauchnyy sotrudnik

Lighting without burning. Izobr. i rats. no.10:12-13 '63.
(MIRA 17:2)

1. Institut prikladnoy khimii i elektrokhimii AN Gruzinskoy SSR (for Tarenko).

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SHVANGIRADZE, M.D.; TSKHADADZE, K.A.; TARENKO, M.I.; GOGUADZE, V.P.

Increase of the sensitiveness of nitrogen detection by the Lassaigne method. Zhur. anal. khim. 18 no.11:1399-1400 N '63. (MIRA 17:1)

1. Institut prikladnoy khimii i elektrokhimii AN GruzSSR, Tbilisi.

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PROCESSES AND PROPERTIES INDEX

Ca

21

Burning cement in inclined rotary kilns. V. P. Gogundze. Russ. 58,803, Jan. 31, 1941. The output of the furnace is increased by feeding from the lower end in countercurrent to the mud a jet of disintegrated marl together with the flame. The marl passes through the zone of calcination and fusion and finally reaches the drying zone.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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12

Effect of β-phenylethyl alcohol and its derivatives on the aroma of tea. V. P. Geguadze (Tbilisi Chem. Inst.) *Bull. Acad. Sci. Georgian S.S.S.R.* 4, 689-72(1943) (in Georgian and Russian); cf. *C.A.* 37, 4710[illegible]. The substance is found to confer an addtl. aroma which although it harmonizes with the natural aroma of tea is not identical with it. The deriv., having no aroma of its own, acts like Ruzicka's "exalton," intensifying without altering the proper aroma of tea. N. Thon

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PROCESSES AND PROPERTIES INDEX

30

Plasticizers from naphthenic acid esters. Yu. S. Zal'kind, V. P. Goguadze, and N. K. Iremadze (Tbilisi Chem. Inst.). *Bull. Acad. Sci. Georgian S.S.S.R.* 4, 987-92 (1943)(in Georgian and Russian).—The acids were extd. from two kerosene (90-160° and 150-180°) and two oil (85-160° and 150-210°) fractions of Baku petroleum distd. under 3-6 mm. and esterified for 24 hrs. on a water bath with 1% *p*-toluenesulfonic acid as catalyst with EtOH (4-fold excess) and with glycerol (2-fold excess), in the latter case dild. with gasoline which is subsequently distd. off. From the kerosene acids one obtains Et esters m. −75, −73; glycerol esters m. −75, −21; from the oil acids, Et esters m. −60, −68; glycerol esters m. −50, −52°. By volatility tests (loss of wt. in air after 15 days), Et esters of the lower fractions are too volatile for use as plasticizers and not volatile enough for use as solvents. Esters of the higher fractions, particularly glycerides, have the right low volatility. No turbidity or pptn. occurs on mixing with cellulose ester solns. A cellulosic lacquer prepd. with naphthenic acid glyceride as plasticizer proved satisfactory. N. Thon

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

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CA

12

Improving the quality of tea. V. P. Gonzalez. U.S.S.R. 64,020, July 31, 1945. To improve its aroma, tea is treated with tetraphenethyl orthocarbonate (cf. C.A. 37, 4710[9]). M. Hesch

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PROCESSES AND PROPERTIES INDEX

2

Hydration of acetylene in the presence of liquid aerosol catalysts. V. I. Gorgadze and I. S. Rukhadze (Chem. Inst. Acad. Sci. Georgian S.S.R., Tbilisi). Bull. Trad. Sci. Georgian S.S.R. 7, 345-51(1940)(in Russian). Acetylene was hydrated with H_2O vapor in the presence of mists of liquid catalysts: (I) 20% H_2SO_4 + 0.5% $HgSO_4$; (II) H_2SO_4 90%; (III) 20% H_2SO_4 + 0.5% ($FeSO_4$ + $MnSO_4$), Fe:Mn = 1:4; (IV) H_2SO_4 90% + 0.5% ($FeSO_4$ + $MnSO_4$), Fe:Mn = 1:3; (V) as IV, with traces of $HgSO_4$. At the temp. (I) 75-78°, (II) 100-110°, (III) 88°, (IV) 100°, (V) 80-90°, the yields of hydration products (lower limits, disregarding the losses) were (I) 6.25%, (II) traces, (III) 1.17%, (IV) 3.48%, (V) 13.35%. In case II there was considerable tar formation. It is noteworthy that addn. of small amts. of Fe and Mn salts to either 20% or 90% H_2SO_4 aerosol gives acceptable yields, and that Hg^{++} salt in aerosol form promotes the reaction about twice as vigorously as the usual Hg catalyst.

N. Thon

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CA

Tannic substances in the seeds of Georgian tea. V. P. Gogoadze and I. R. Loladze (Acad. Sci. Georg. S.S.R., Tiflis). *Soobshcheniya Akad. Nauk Gruzinskoi S.S.R.* 10, No. 4, 197-201(1949).—The tannins of a variety of Chinese tea that had been acclimatized in Georgia were examd. The tannins were found to belong to the catechol group according to the Procter-Paessler scheme, or to class B_2 in the Freudenberg scheme. The tannins of the seed covering and of the seed shell were identical, and appear to be of the same type as found in Chinese tea proper. It is suggested that the seed tannins may be the results of chem. changes of tea saponin. The isolation was done in absence of atm. O_2 by refluxing with H_2O, ppm. by cooling, and concn.

G. M. Kosolapoff

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