$$\eta = 2V^* \frac{1-f_2 - \frac{1+f_2}{1+\gamma_\infty^* + 2V^*} \cdot [1 + 2V^* - \gamma_\infty^* (\gamma_\infty^* + 2V^*)]}{(1+2V^*)\left(\frac{1}{\eta_1} - \mu_o \eta_2\right) + \gamma_\infty^* (\gamma_\infty^* + 2V^*)} \quad (11.5)$$

The quality coefficient is expressed by:

$$C = \frac{[(1+f_2)\gamma_\infty^* - (f_1 + f_2)]^{\frac{3}{2}}}{\mu_o \eta_1 \eta_2 \gamma_\infty^{*2} + 1 - \mu_o \eta_1 \eta_2} \cdot \quad (12.1)$$

and considering that $f_1 = f_2 = f$, the formula (12.1) is changed:

$$C = \frac{(1+f)^{\frac{3}{2}}}{m} \cdot \eta_1 \cdot \frac{\left(\gamma_\infty^* - \frac{2f}{1+f}\right)^{\frac{3}{2}}}{\gamma_\infty^{*2} + \frac{1}{m} - 1} \quad (12.2)$$

Table 1 shows the results of some calculations. It can be observed that the quality coefficient is greatly influenced by the friction represented by the coefficient m. The wind tunnel coefficient is expressed by:

$$C_s = \frac{1}{\frac{1}{\eta_1} - \mu_o \eta_2 + \gamma_\infty^* \frac{\gamma_\infty^* + 2V^*}{1+2V^*} \cdot \mu_o \eta_2} \cdot \frac{1+\eta_o}{2} \quad (13.1)$$

In case that V* = 0, the following expression is obtained for a fix point:

$$c_{s0} = \frac{1 + \eta_o}{2\,m} \cdot \frac{\eta_1}{\gamma_\infty^* + \frac{1}{m} - 1} \qquad (13.2).$$

The impuls coefficient is computed by introducing J_o, the value of the total impulses between the two propellers. Thus the impuls coefficient is given by:

$$c_i = \eta_1 \frac{(1-f_1)^{\frac{3}{2}} (1+2V^*)^{-\frac{1}{2}} + V^*}{\gamma_\infty^* \frac{(\gamma_\infty^* + 2V^*)}{1 + 2V^*}} \cdot m + 1 - m \qquad (14.2)$$

At a fixed point the expression becomes:

$$c_{10} = \frac{(1-f)^{\frac{3}{2}} \cdot \eta_1}{\left(\gamma_\infty^{*2} + \frac{1}{m} - 1\right) \cdot m} \qquad (14.3)$$

Card 9/12 Table 2 shows the values of the ratio

$$\frac{C_i\ (\gamma_\infty^*\ ,\ m)}{C_i\ (1,\ m)}$$

for different values of the parameters. The impulse coefficient can be increased by reducing γ_∞^*. The coefficient of the aeolian power is expressed by:

$$C_e = (1 + \frac{\bar{\gamma}_o + \bar{\gamma}_\infty}{2}\ [-\bar{\gamma}_\infty(\bar{\gamma}_\infty + 2)\mu_o\eta_1\eta_2 - \bar{\gamma}_o(\bar{\gamma}_o + 2)(1 - \mu_o\eta_1\eta_2)]\frac{1}{\eta_1}, \quad (15.4)$$

with the condition that:

$$-\bar{\gamma}_\infty(\bar{\gamma}_\infty + 2) < \bar{\gamma}_o(\bar{\gamma}_o + 2)\left(\frac{\eta_o}{\mu_o} - 1\right) + \frac{\eta_o}{\mu_o}. \quad (15.5)$$

If in the presence of a speed at infinite, V, the introduced total power is zero, the counteracting propeller system is in a self-rotation region. This selfrotation coefficient χ is expressed by:

$$\chi = \left(\frac{\bar{\gamma}_o}{2} + 1\right) \cdot (1 + \gamma_o(1 - f_1)). \quad (16.5),$$

Card 10/12 and the traction coefficient C_T by:

Counteracting Tandem Propellers RUM/8-59-1-2/24

$$C_T = \bar{T}_o (\bar{T}_o + 2) \left[1 - f_1 - \frac{(\bar{T}_o + 2)(1 + f_2)}{\eta_1 \mu_o \eta_2 (\bar{T}_o + \bar{T}_\infty + 2)} \right] \quad (16.8)$$

On the base of the classical theory it is possible to compute the values which interfere in the mixture phenomenon between a parallel flow with the speed v_o and a resting fluid at a great distance from the separation surface. Figure 8 shows the variation of the u/v_o ratio between the speed in a point at the y distance from the separation surface and the nondisturbed speed v_o. The loss of output has a value of 0.1325. The author then establishes the equations for μ_o (the coefficient of the output reduction due to the friction of the flow vein with the external fluid) and η_o (the coefficient of the reduction of the total output of the vein, due to the mixture with the outer fluid):

$$\mu_o = \frac{\Psi_{rot} - \Delta\Psi}{\Psi_{rot}} \cong 1 - 0.0228 \frac{L}{R} + 0.00095 \frac{L^2}{R^2} \quad (18.1)$$

$$\eta_o = 1 - 0.0571 \frac{L}{R} + 0.00236 \frac{L^2}{R^2} \quad (18.2)$$

These evaluations are only estimated, the friction influence depends from the Reynolds Figure. Counteracting propellers can be used for the production of a highspeed zone between the 2 propellers. Behind this zone

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Counteracting Tandem Propellers

the kinetic energy of the flow is imposed on the rear propeller and the stream is being enlarged. The quality coefficient can be improved but the friction greatly influences this phenomenon, producing a limit for the quality coefficient, and decreases the more the propellers become counteracting. An interesting increase has been obtained for the wind tunnel and impulse coefficients, especially with carefully designed propeller blades. The improvement of the other coefficients is not so important. Counteracting propellers could be used for a total or partial replacement of the wind tunnel diffusers, or for the deflection of a flow produced by the front propeller, or for the production of a power which is transversal to the flow. A flow deflection could also be obtained by a non-parallel installation of the propellers.

There are: 9 diagrams, 2 tables, 1 graph and 6 references, 5 of which are Rumanian and 1 English.

SUBMITTED: October 4, 1958

Card 12/12

PATRAULEA, N.

Antagonist tandem propellers. In French. [illegible]

REVUE DE MECANIQUE APPLIQUEE. (Academia Republicii Populare Romine. Institutul de Mecanica Aplicata)
Bucuresti, Rumania
Vol. 4, no. 3, 1959.

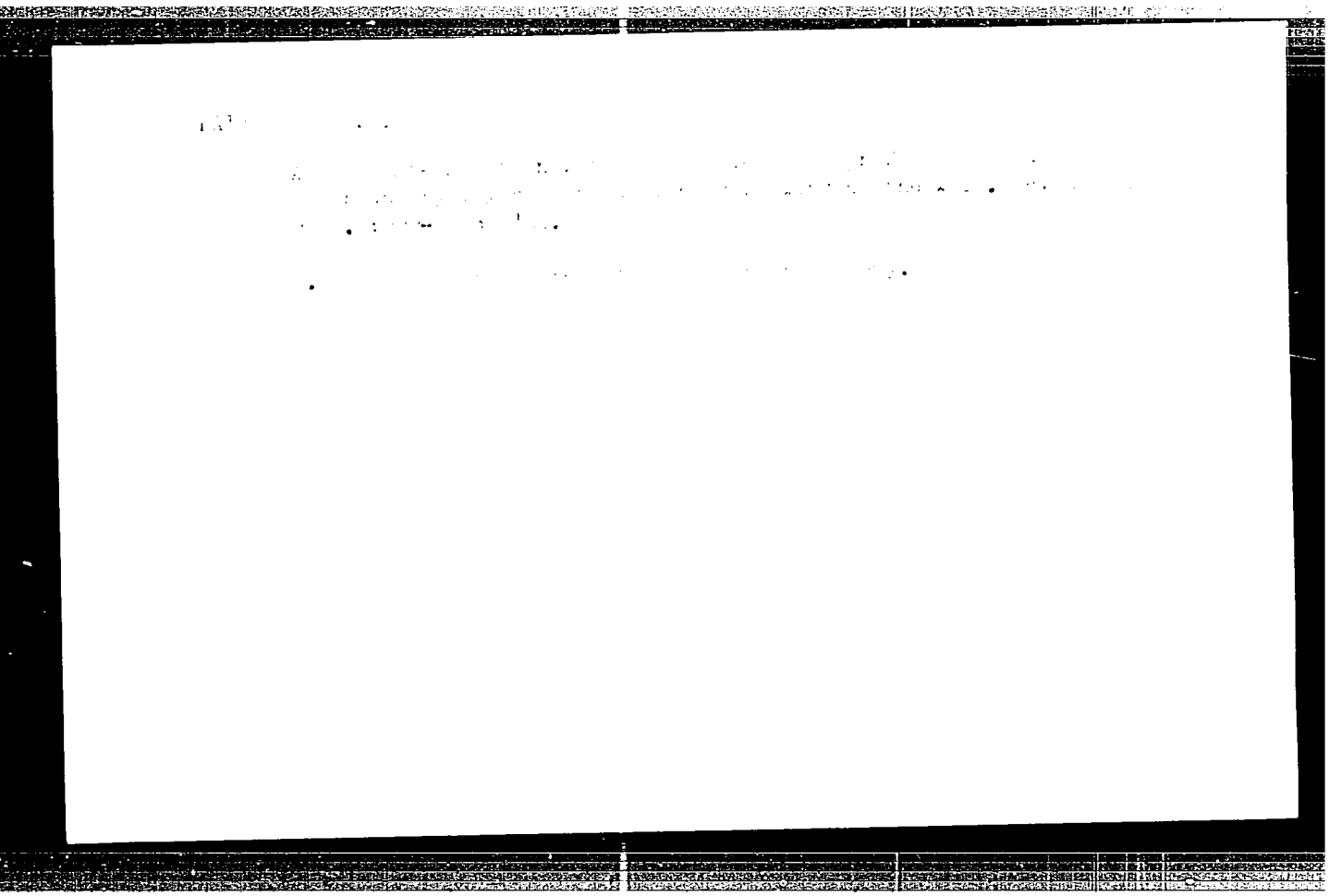
Monthly list of Eastern European Accession Index (EAI) LC vol. , no. 11
November 1959
Uncl.

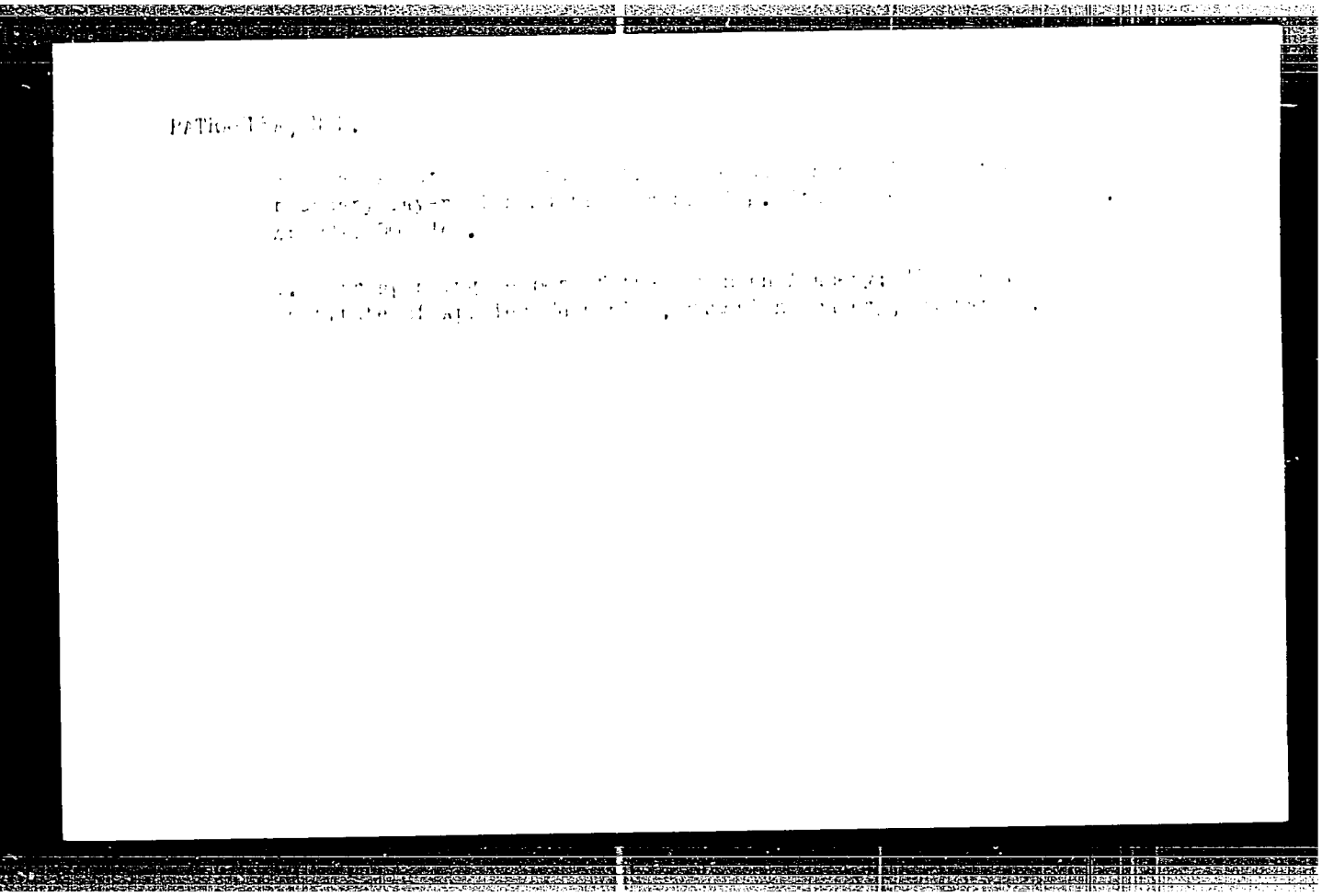
PATR[illegible], [illegible].

The heating of dwellings by radiation with the help of heating panels made of metallic plates. p.49.

REVISTA CONSTRUCTIILOR si a MATERIALELOR DE CONSTRUCTII. (Asociatia Stiintifica a Inginerilor si Tehnicienilor din Romania si Ministerul Constructiilor si al Materialelor de Constructii)
Bucuresti, Rumania
Vol. 11, no. [illegible], Sept. 1959.

Monthly list of Eastern European Accessions Index (EEAI) LC vol. [illegible], no. 11
November 1959
Uncl.





R/008/60/000/006/005/008
A231/A126

100000 2807

AUTHORS: Patraulea, N.N.; Andrei, Şt.; Rado, Ch.

TITLE: On the aerodynamic calculation of vehicles using the ground effect

PERIODICAL: Studii şi cercetări de mecanică aplicată, no. 6, 1960, 1,565 - 1,579

TEXT: The article presents some general considerations on the operation principle of vehicles based on the ground effect, as well as the aerodynamic calculation of different views of the problem, taking into consideration the two fundamental types, i.e., platforms with circular jets and with annular jets. a) Vehicles in which a potential motion is accomplished in the whole space between the platform and the ground (circular jet): Considered is the hypothetical case of a vehicle in which an overpressure is achieved under the platform, due to an irrotational flow of the fluid in the whole space between the platform and the ground (Fig. 1). Notating with v' the asymptotic velocity and with s the asymptotic section after the fluid has been evacuated along the ground supposed to be perfectly horizontal, the necessary power is that one which corresponds to the kinetic energy far downstream: $N_{id} = \frac{\rho}{2} s v'^3$, (2.1). Considering then that the jet is not infinitely thin, the stream lines are almost circle arcs, thus the

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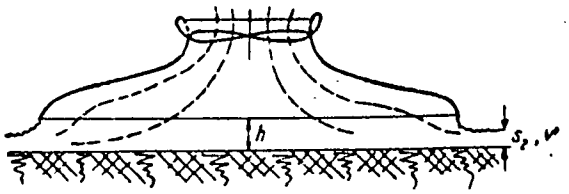
hypothesis that the stream lines are circular can be maintained. The authors then continue with examining variations of parameters and draw certain conclusions on how the operating characteristics may be improved. There are 8 figures and 1 non-Soviet-bloc reference. The reference to the English-language publication reads: E.K. Liberatore: A parameter for comparing ground effect vehicles. Aero-Space-Engineering, October 1959.

SUBMITTED: May 12, 1960

Figure 1



Card 2/2

30588
R/008/61/000/005/004/005
D289/D305

10 1200 1327 2607

AUTHOR: Patraulea, N. N.

TITLE: Annular wings with jet flaps

PERIODICAL: Studii si cercetări de mecanică aplicată, no. 5, 1961, 1075-1080

TEXT: The article deals with the general case of the axisymmetrical flow around a jet-flapped annular wing and presents the boundary conditions on the jet-sheet as well as some basic relations for determining the asymptotic downstream cross-section of the wake. The tubular jet sheet is characterized by the discharge of the impulse I, per unity of span and by its initial deflection θ. Supposing that the speed module in the jet is constant, the impulse discharge per unity of transversal length may be expressed by:

$$I(r) = \rho_j v_j Q_j / 2\pi r \qquad (1)$$

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in which Q_j is the total jet discharge and $\rho_j v_j Q_j$ the total discharge of the impulse module. The total thrust on the wing is equal to the initial discharge of the impulse module:

$$T = \rho_j Q_j v_j \qquad (3)$$

and thus, the propulsion power of the pressures on the external side of the wing will be:

$$T_A = \rho_j Q_j v_j (1 - \cos \Theta) \qquad (4)$$

To determine the asymptotic cross section of the wake, the author considers the general case of an annular wing with jet flaps, in the presence of a permeable surface acting in its interior, such as a propeller disk within the wing. The total thrust is given by:

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D289/D305

Annular wings with jet flaps

$$T = I_j + \rho S_0 v_0^2$$

in which S_0 is the asymptotic cross-section of the wake and v_0 the velocity within the wake at infinite downstream. However, T might also be expressed by adding T_A to the power acting on the propeller element T_E and to the reacting power of the jet:

$$T = T_A + T_E + I_j \cos \theta$$

The following relations can be deduced from (5) and (6):

$$\rho S_0 v_0^2 = T_A + T_E - I_j(1 - \cos \theta)$$

Card 3/6

Annular wings with jet flaps

Considering v_o and the pressure jump δp to be known, then:

$$T_E = S\delta p \qquad (8)$$

Thus, S_o and T_A are the only unknown values in (7). Supposing now, that T_A is expressed by

$$T_A = \frac{\rho}{2} V_\infty^2 Sf(\vartheta) \qquad (9)$$

in which the dimensionless number ϑ is defined by

$$\vartheta = S_o v_o / SV_\infty \qquad (10)$$

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Annular wings with jet flaps

If the pressure jump is positive, i.e. a tractive propeller [illegible] is used, then

$$v < v_0$$

i.e. the jet tube expands due to the action of a passive permeable surface. The author finally examines the variation of the [illegible] tion around the annular wing in case of a finite and an infinite S_0 cross section. There are 3 figures and 2 Soviet-bloc [illegible] references.

SUBMITTED: June 10, 1961

Card 6/6

PATRA'LEA, M.N.

Three-dimensional rheoelectric analogy without the influence of the boundaries. Studii cerc mec apl 12 no.6:1187-1191 '61.

34912
[illegible]/62/000/00[illegible]/[illegible]
[illegible]

AUTHOR: [illegible]

TITLE: Fluid [illegible] [illegible] rotating jet sheets

PERIODICAL: Mecanica aplicata, [illegible] 1, 1962, [illegible]-30

TEXT: Continuing the study of the flow [illegible] with a jet sheet ([illegible] publication, [illegible], no. 5, [illegible]) [illegible] presented on axial-symmetric jet sheets, with a rotational movement around the symmetry axis of the movement; the rotating jet sheets are applicable to slender bodies as well as to [illegible] dies. After first establishing the relations for the rotating jet sheets, whose particles describe spiral paths, two cases are analyzed in detail: 1) a slender body with a rotating jet sheet placed in a limited vein of the flow - a problem of possible application in the deflection of the vein of a reaction engine; [illegible] ring-shaped wing, where the centrifugal forces in the rotating [illegible] sheet cause the existence of lower pressures inside the fluid [illegible]

Card 1/2

X

Fluid obstacles with ...

than outside. There are 3 figures and 1 Soviet-bloc reference.

SUBMITTED: October 16, 1961

X

Card 2/2

L 04880-67 EWP(m)/EWP(k)/EWP(w)/EWP(v) EM

ACC NR: AP6025065 SOURCE CODE: RU/0019/66/011/002/0341/0351

AUTHOR: Patraulea, N.N.

ORG: Institute of Fluid Mechanics, Academy of the Socialist Republic of Rumania, Bucharest (Institut de Mecanique de Fluides de l'Academie de la Republique de Roumanie)

TITLE: Calculation of the jet flap controlled lifting propeller

SOURCE: Revue Roumaine des sciences techniques. Serie de mecanique appliquee, v. 11, no. 2, 1966, 341-351

TOPIC TAGS: helicopter rotor, jet vane, lift coefficient, thrust control

ABSTRACT: A theory is developed of jet flap controlled helicopter rotors which are powered not only by the jet flaps but also by some other (mechanical or pneumatic) means. It is assumed that the jet flaps are fixed to the outer half of the rotor blades. Graphs are plotted which show the ratio $\mu = \frac{M_j}{M} = \frac{2\varkappa}{\zeta^2 \sin^2 0} \cdot \frac{0{,}201(c_z - 2\pi\alpha_0)^2/\overline{w} + 4{,}7(c_z - 2\pi\alpha_0) + 19{,}8\overline{w}}{c_z + \frac{2c_x}{3\overline{w}}}$ between the moment produced by the jet flaps and the total moment, as a function of the angle of attack of

Card 1/2 UDC: 532

L 04880-67

ACC NR: AP6025065

the blades α°, the lift coefficient c_z, and $\overline{\omega}$, a parameter associated with the induced axial velocity in the plane of the rotor disc. In terms of power, the graphs indicate that it is efficient to have a large mechanical factor of the rotor driving force, which corresponds to small values of μ. The transverse curve in each graph represents the lower applicability bound of the graphs. Below this curve, jet flap control is no longer feasible, and a more precise analysis of controllability is required. Orig. art. has: 6 figures and 26 formulas.

SUB CODE: 01/ SUBM DATE: 05Nov65

Card 2/2

L 54056-65 EWT(1)/EWP(m)/EPR/FCS(k)/EWA(1) Pd-1/Pi-4 WW

ACCESSION NR: AP4049972 R/0119/64/009/005/0999/1003

AUTHOR: Patraulea, N. N. (Corresponding member ARPR)

TITLE: An approximate solution with apparent velocity profiles for the equations of the boundary layer with suction or blowing applied at the wall

SOURCE: Revue Roumaine des sciences techniques. Serie de mecanique appliquee, v. 9, no. 5, 1964, 999-1003

TOPIC TAGS: boundary layer, velocity profile, laminar flow, hydromechanics

ABSTRACT: As reported in previous publications, the equations of the laminar boundary layer with suction or blowing applied at the wall, and in the absence of a pressure gradient, permit the following simple solution:

$$\frac{u}{V} = 1 - e^{\frac{v_0}{\nu} y}, \qquad (1),$$

where V_0 is the velocity normal to the wall ($V_0 < 0$ in the case of suction and $V_0 > 0$ in the case of blowing), y is the ordinate, u = velocity in the boundary layer, V = velocity of the external current, and ν is the coefficient of kinematic viscosity. Starting from the above considerations, the author has previously shown that in the case of linear diffusion, applied to the study of the boundary

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ACCESSION NR: AP4049972

layer, solutions with velocity profiles similar to those encountered in the case of a non-uniform external current may be found. The purpose of the present investigation was to determine whether the rigorous equations of the incompressible laminar boundary layer would also permit such a solution. In the final analysis, it was found that a rigorous solution of the proposed problem does not exist. Subsequently, the author explains the technique of finding an apparent solution, if certain approximations are introduced and accepted. The author states that the approximate solutions obtained in the present investigation are "closer to reality" than those reported in previous articles. Orig. art. has: 31 formulas.

ASSOCIATION: None

SUBMITTED: 13May64 ENCL: 00 SUB CODE: ME

NO REF SOV: 000 OTHER: 003

Card 2/2

PATRAULEA, N.N.

Approximate solution with profiles of similar speed of the equations of boundary layer with suction or distributed continuous blowing. Studii cerc mec apl 17 no.5:1271-1275 '64.

1. "Traian Vuia" Institute of Applied Mechanics of the Rumanian Academy, Bucharest; Corresponding Member of the Rumanian Academy. Submitted May 13, 1964.

PATRAULEA, N.N., ROSTEINICU, N., MALAI, E., GAVRILA, M.

On bidimensional [illegible] shaft lines. Studii cerc mec apl 16 [i.e. 15] no.3:561-583 '64.

1. Corresponding Member of the Rumanian Academy (for Patraulea).
Submitted January 28, 1964.

PATRAULEA, N.N.

Extension of the Mestcherski relativistic equation. Rev mec appl 9 no. 3:569-580 '64.

PATRAULEA, N.N.

Similar solutions of the diffusion equation applied to the laminar boundary layer with suction and blowing. Rev mec appl 9 no.4:819-826 '64.

1. Corresponding Member of the Rumanian Academy.

PATRAULEA, N.N.

On the relativistic extension of Mescerski's equation.
Studii cerc mec apl 15 no.1:5-16 '64.

1. Corresponding member of the Rumanian Academy.

R/0008/64/015/001/0005/0016

ACCESSION NR: AP4040446

AUTHOR: Patraulea, N. N. (Corresponding member)

TITLE: The relativistic extension of Mexcerski's equation

SOURCE: Studii si cercetari de mecanica aplicata, v. 15, no. 1, 1964, 5-16

TOPIC TAGS: Mescerski's equation, variable mass, relativity, light velocity, rocket, propellant ejection, velocity quadrivector, inertial reference system, acceleration, random cosmic particle, photomic rocket, cosmic resistance, collision, propellant consumption, trajectory, matrix, direction change

ABSTRACT: The present work is concerned with the extension of Mescerski's equation about the motion of a material point having a variable mass to the velocity of a rocket close to the speed of light and to some relativistic ejection speeds of propellant. The motion with respect to an inertial system coinciding with the moving material point (the rocket) is first determined followed by the generalization to any inertial reference system. The following topics are theoretically covered: velocity and acceleration of the rocket propellant ejection, cosmic resistance due to collision with random cosmic particles, propellant consumption needed

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FA/SPA(b)/EWT(d)/FAS/EWT(m)/T-2/ES(v)/BDS—AEDC/AFFTC/ASD/AFMDC/APGC—Pd-4/Pe-4
L 12114-63 PHASE I BOOK EXPLOITATION RUM/6236

Patraulea, N. N.

Studii de aerodinamica hipersustentatiei; zborul cu decolare si aterizare scurtă sau la verticală (Study on Aerodynamics of Hypersustentation; Short and Vertical Takeoff and Landing) [Bucharest] Ed. Academiei RPR, 1962. 625 p. 750 copies printed.

Resp. Ed.: Diicu Boicescu; Tech. Ed.: Petru Brumă.

PURPOSE: This book is intended for researchers and engineers in aeronautics and related fields.

COVERAGE: The problem areas and theory of V/STOL are explored. Discussed are hypersustentation (i.e., optimum lift systems) and pertinent designs and devices, such as boundary-layer and aerodynamic-circulation control devices; permeable, nonpermeable, and jet flaps; toroidal, annular, and annular jet wings; flying platforms (ground-effect and air-cushion); and deflected-jet, blown-wing

Card 1/13

Study of Aerodynamics (Cont.)

L 12114-63 RUM/6236

and autogiro-type aircraft. An examination of a rheoelectric analogy is included. The author, a contributor on aeronautics to scientific publications, claims some ideas in this book as his own or as those of Rumanian scientists. No personalities are mentioned. References accompany each chapter.

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Card 2/13

PHASE I BOOK EXPLOITATION RUM/6236

Patraulea, N. N.

Studii de aerodinamica hipersustentatiei; zborul cu decolare şi aterizare scurtă sau la verticală (Study on Aerodynamics of Hypersustentation; Short and Vertical Takeoff and Landing) [Bucharest] Ed. Academiei RPR, 1962. 625 p. 750 copies printed.

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Card 1/14

and autogiro-type aircraft. An examination of a rheoelectric analogy is included. The author, a contributor on aeronautics to scientific publications, claims some ideas in this book as his own or as those of Rumanian scientists. No personalities are mentioned. References accompany each chapter.

TABLE OF CONTENTS:

PATRE, A.

Bending of thin-walled rods. In Russian. p. 421.

REVUE DE MECANIQUE APPLIQUEE. (Academia Republicii Populare Romine, Institutul de Mecanica Aplicata)
Bucuresti, Rumania
Vol. 4, no. 3, 19 9.

Monthly list of Eastern European Access or Index (EEAI) LC vol. 8, no. 11
November 1959
Uncl.

PATREYEVA, V.A.

Functional disorders of external respiration and their significance in the evaluating the work capacity of patients with manifestations of coronary insufficiency. Terap.arkh. 32 no.1:23-27 Ja '60. (MIRA 13:10)
(CORONARY HEART DISEASE) (RESPIRATION)
(DISABILITY EVALUATION)

PATREYEVA, V. A. Cand Med Sci -- (diss) "Disturbance of external respiration in cases of coronary deficiency and its importance for the establishment of work fitness." Gor'kiy, 1959. 12 pp (Gor'kiy State Med Inst im S. M. Kirov), 200 copies (KL, 47-59, 117)

PATRICHI, Fl.
SURNAME, Given Names

Country: Rumania

Academic Degrees: -Researcher; Cercetor-

Affiliation: Meteorological Institute (Institutul Meteorologic).

Source: Bucharest, Stiinta si Tehnica, No 9, Sep 1961, pp 16-17.

Data: "The Automatic Rumanian Meteorological Station."

GPO 991643

PATRICHA, G.K., inzh.

Stationary lighting of man-engines. Bezop. truda v prom. 3 no.11:37 N '59. (MIRA 13:3)

1.Shakhta No.32 tresta Snezhnyanantratsit.
(Man-engines)

PATRICHI, C., ing.

Graphic method for processing the central seismosoundings. Rev min 14 no.1:39-41 Ja '63.

PATRICIU, M.

The Resita Metallurgical Plant contributes to the intense industrialization of Rumania. p. 683

METALURGIA SI CONSTRUCTIA DE MASINI. (Ministerul Industriei Metalurgice si Constructiilor de Masins si Asociatia Stiintifica a Inginerilor si Technicienilor din Rominia) Bucuresti, Rumania
Vol. 11, no. 8, Aug. 1959

Monthly List of East European Accessions (EEAI) LC Vol. 9, no 2 Feb. 1950.

Uncl.

PATRICHIU, V. [Patriciu, V.] (Rumyniya)

How to establish heliotherms. Vop. kur., fizioter. i lech. fiz. kul't. 26 no. 2:160-164 Mr-Ap '61. (MIRA 14:4)
(HYDROTHERAPY)

PATRICIU, V., prof.

"Geology of coal deposits particularly in Rumania" by Gr.Ralleanu, N.Grigoras, N.Oncescu. Reviewed by V.Patriciu. Rev min 15 no.3:152 Mr '64.

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Geologic studies in the region of Surducul Mare. p. 153.

AN ALELE SERIA STIINTELOR NATURII. Bucuresti, Rumania. Vol. 7, no. 20, 1958.

Monthly List of East European Accessions (EEAI), LC. Vol. 8, no. 9, Sept. 1959.
Uncl.

PATRICIU, V.

"Hydrogeological drilling" by Gh.Costache. Reviewed by V.Patriciu. Rev min 14 no.12:568 D'63.

PATRICIU, Valeriu, prof. dr. ing.

How to construct artificial heliothermal lakes. Meteorologia hidrol gosp 7 no.2:83-90 '62.

PATRIK, I., kand.sel'skokhozyaystvennykh nauk; PREVO, A., kand. biologicheskikh nauk

Increased efficiency in poultry procurement and fattening. Mias. ind. SSSR 31 no.4:36-38 '60. (MIRA 14:7)

1. TSentral'nyy nauchno-issledovatel'skiy institut ptitseperera-batyvayushchey promyshlennosti.
(Poultry industry)

PATRIKEYEVA, N.A., zasluzhennyy uchitel' shkoly RSFSR

Model of a remote control system. Fiz. v shkole 20 no.6:66-67 N-D '60. (MIRA 14:2)

1. 97-ya shkola, Moskva.
(Remote control)

PATRIK, A. M.

Surgeons

Role of V. A. Ratimov in the development of Russian Surgery. Vest, Khir. 72, No. 2, 1952.

9. Monthly List of Russian Accessions, Library of Congress, August 1953. Unclassified.

USSR/Farm Animals - Poultry

Abs Jour : Ref Zhur - Biol., N 15, 1958, 69414

Author : Patrik I.A.
Inst : -
Title : Effect of Manganese upon the Organism of Hens

Orig Pub : Ptitsevodstvo, 1957, N 4, 33-35

Abstract : The addition of 40 mg of $KMnO_4$ daily, per head to a variety composed ration has slightly increased the egg production of hens (by 3-6.2%), egg weight (54 gs against 53 g in the controls), and chick hatching (by 4.8-3.6%). In the experimental groups, the Hb content in the blood was higher and molting was delayed. It is recommended to control rations of hens with regard to Mn content on the basis of 10 mg per 100 g of dry feeds. -- F.M. Kazantsev

Card 1/1

- 59 -

PATRIK, I.A., kand. sel'skokhoz. nauk; VINOGRADOVA, A.P., kand. sel'skokhoz. nauk; YERMOLAYEVA, A.L., mladshiy nauchnyy sotrudnik

Raising meat chicken in cages. Trudy TSNIIPPa 9:46-53 '62. (MIRA 16:6)

(Poultry industry)

BOGOLYUBSKIY, S.I.; VASIL'YEV, V.G.; IOTSYUS, G.P., kand. sel'-khoz. nauk; KONDRATYUK, N.D., kand. ekon. nauk; PATRIK, L.A., kand. sel'khoz. nauk; PEL'TSER, S.O., kand. sel'-khoz. nauk; SMETNEV, S.I., akademik; TIKHOMIROV, A.Ye., kand. tekhn. nauk; FEDOROVSKIY, N.P., kand. biol. nauk; GROMOVA, A.V., red.

[Manual for the poultry farmer] Spravochnik ptitsevoda. Izd.2., perer. i dop. Moskva, Kolos, 1965. 413 p. (MIRA 18:7)

1. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk iemni V.I.Lenina (for Smetnev).

PATRIK, I.A., kand. sel'skokhoz. nauk; PREVO, A.A., kand. biol. nauk

Applying more efficient methods for duckling fattening. Trudy TSNIIPPa 9:53-60 '62. (MIRA 16:6)

(Ducks—Feeding and feeds)

PATRIK, I.A., kand. sel'skokhoz. nauk; LAZAREV, Ye.F., starshiy nauchnyy sotrudnik

Animal fats and their use in poultry fattening. Trudy TSNIIPPa 9:60-70 '62. (MIRA 16:6)

(Poultry—Feeding and feeds)

PATRIK, I.A., kand. sel'skokhoz. nauk

Use of phosphatides in the growing of meat chicken (broilers).
Trudy TSNIIPPa 9:70-74 '62. (MIRA 16:6)

(Poultry—Feeding and feeds)
(Phosphatides)

ARSENSHVILI, A.Yu.; BOGDANOV, M.N.; GORIZONTOVA, Ye.A.; YERSHOVA, Ye.I.; YELENBAUM, N.I.; IOFE, N.Sh.; KARAVAYEV, A.M.; KOLOBOV, G.M.; LOBIN, N.V., kand. sel'khoz. nauk; KUSHNER, Kh.F., doktor biolog. nauk; MISHIN, P.N.; PATRIK, I.A., kand. sel'khoz. nauk; REDIKH, V.K., kand. sel'khoz. nauk; SEMTNEV, S.I., akademik; SAMOLETOV, A.I.; FILASOV, V.V.; SHKUDOVA, R.I.; SOKOLOVA, G.S., red.; ROMANOVICH, Ye.F., red.; LEVINA, L.G., tekhn. red.

[Chickens for meat] TSypliata na miaso. Moskva, Izd-vo M-va sel'.khoz. RSFSR, 1960. 197 p. (MIRA 15:1)
(Poultry)

PATRIK, I. A.

"The Effect of Phosphatides on Chick Growth and on the Chemical Content of their Meat"

Report submitted for the Twelfth World's Poultry Congress, Sydney, Australia 10-18 Aug 1962

PATRIK, I.A., kand. sel'skokhoz. nauk

Raising ducklings for meat production. Ptitsevodstvo 9 no.4:16-20 Ap '59. (MIRA 12:6)
(Ducks)

VOLKOV, V.A.; FEDOROVSKIY, N.P., kand.biolog.nauk; PENIONZHKEVICH, E.E., prof., doktor biolog.nauk; MASLIYEV, I.T., kand.sel'skokhoz.nauk; KRIKUN, A.A., kand.sel'skokhoz.nauk; PATRIK, I.A., kand.sel'skokhoz. nauk; MALINOVSKAYA, A.S., kand.biolog.nauk; DAKHNOVSKIY, N.V., kand.biolog.nauk; ORLOV, M.V., kand.sel'skokhoz.nauk; REDIKH, V.K., kand.sel'skokhoz.nauk; GOFMAN, M.B., zootekhnik; GRIGOR'YEV, G.K., starshiy nauchnyy sotrudnik; GORIZONTOVA, Ye.A., starshiy nauchnyy sotrudnik; FEOKTISTOV, P.I., kand.veter.nauk; KOTEL'NIKOV, G.A., kand.veterin.nauk; SHKUDOVA, R.I., red.; BALAKIN, V.M., red.; GRADUSOV, Yu.N., red.; SOKOLOVA, G.S., red.; SAYTANIDI, L.D., tekhn.red.

[Duck raising] Utkovodstvo. Izd-vo M-va sel'khoz. R.S.F.S.R., 1959. 284 p. (MIRA 13:12)

1. Nachal'nik Glavnogo upravleniya ptitsevodstva Ministerstva sel'skogo khozyaystva RSFSR (for Volkov). 2. Vsesoyuznyy nauchno-issledovatel'skiy institut ptitsepromyshlennosti (for Grigor'yev). 3. TSentral'nyy nauchno-issledovatel'skiy institut ptitseperera-batyvayushchey promyshlennosti (for Gorizontova).
(Ducks)

SCHENSNOVICH, V.B.

"Intestinal protozoal diseases in man". N.A. Patrik. Reviewed by V.B. Schensnovich. Med. paraz. 25 no.1:88 Ja-M '56 (MLRA 9:6)

(INTESTINES--DISEASES) (PROTOZOA, PATHOGENIC)
(PATRIK, N.A.)

PATRIK, N. P.

"Intestinal Hemorrhage in Cases of Exanthematous Typhus," Klin. med., 26, No.6, 1948

Clinic Infectious Diseases, Kazakh State Med. Inst,. im. Molotov

PAVLIK, N. F.

2430. PAVLIK, N. F. Klinicheskiye nablyudeniya nad sypnym tif[illegible]. Zdravookhraneniye Kazakhstana, 1[illegible], No. 3, S. 17-20.

SO: Letopis, No. 43, 1[illegible].

PATRIK, N.P.

Intestinal balantidiasis and its treatment with osarsol. Trudy Inst. kraev. pat. AN Kazakh.SSR 1:5-9 '52. (MLRA 10:2)
(ACETARSONES) (BALANTIDIUM COLI)

PATRICK, N. P.

Balantidium Coli

Intestinal balantidiasis and its treatment. Klin. med. 30, no. 2, Feb. 1952

9. Monthly List of Russian Accessions, Library of Congress, August 1952, Uncl.

MARGOLINA, L.

"Protozoal intestinal diseases in man" by N.P.Patrik. Reviewed by L.Margolina. Lab.delo 3 no.4:59-60 Jl-Ag '57. (MLRA 10:8)
(INTESTINES--DISEASES) (PROTOZOA, PATHOGENIC)
(PATRIK, N.P.)

PATRIK, N.P., prof.; ZEYTLENOK, M.A., dotsent

"Course on infectious diseases" by A.F.Bilibin, K.V.Bunin. Reviewed by N.P.Patrik, M.A.Zeitlenok. Sov.med. 21 no.8:150-152 Ag '57. (MIRA 10:12)
(COMMUNICABLE DISEASES) (BILIBIN, A.F.) (BUNIN, K.V.)

PATRIK, N.P., prof.

Review of V.P. Pod"iapol'skaia and V.F. Kapustin's book "Helminth diseases of man." Sov.med. 23 no.9:149-150 S '59. (MIRA 13:1)
(WORMS, INTESTINAL AND PARASITIC)
(POD"IAPOL'SKAIA, V.P.) (KAPUSTIN, V.F.)

PATRIK, S., inzh.

Tiling roofs. Sel'. stroi. 9 no.5:20-22 Ag '54. (MIRA 13:2)
(Tiles, Roofing)

PATRIK, S. [Patryk, S.], inzh.

Covering roof slopes with ribbed slag-cement sheets. Sil'.bud. 7 no.7:8-10 Jl '57. (MIRA 12:11)
(Roofing, Concrete)

PATRIK, S., inzhener.

Rolling and storing clay as a method of improving the quality of bricks. Stroi.mat. 3 no.8:19-21 Ag '57. (MLRA 10:10)
(Brickmaking)

PATRIK, S.A.; ISHKHANOV, G.S., nauchnyy red.; KOVSHOVA, O.N., red.; LOKHMANOVA, M.F., tekhn.red.

[Tiled roofs] Cherepichnaia krovlia. Moskva. 1958. 127 p. (Tiles, Roofing)

GAK, B.N., kand.tekhn. nauk; GERVIDS, I.A., kand. tekhn. nauk; GONCHAR, P.D., inzh.; VASIL'KOV, S.G., kand. tekhn. nauk; YEVNEVICH, A.V., kand. tekhn.nauk; KIPTENKO, A.K., inzh.; LUNDINA, M.G., kand. tekhn.nauk; NAUMOV, M.M., kand. tekhn. nauk; PATRIK, S.A., inzh.; POPOV, L.N., kand. tekhn. nauk; ROGOVOY, M.I., inzh.; SEDOV, V.G., inzh.; SOKOLOV, Yu.B., inzh.; FRANCHUK, K.O., inzh.; KHAYKIN, V.Ya., inzh., nauchnyy red.; CHIBUNOVSKIY, N.G., inzh., nauchnyy red.; NOKHRATYAN, K.A., red. [deceased]; GUZMAN, M.A., red.; GURVICH, E.A., red.; BOGOVNEV, N.K., tekhn. red.

[Handbook on the production of structural ceramics]Spravochnik po proizvodstvu stroitel'noi keramiki. Moskva, Gosstroiizdat. Vol.3.[Wall and roofing ceramics]Stenovaia i krovel'naia keramika. Pod red. M.M.Naumova i K.A.Nokhratiana. 1962. 699 p. (MIRA 16:1)

(Ceramics) (Building materials industry)

PATRIK, S.A., inzh.

Expansion of roof-tile production. Stroi. mat. 5 no.5:4-6 My '59. (MIRA 12:8)

(Tiles, Roofing)

PATRIK, S.A.

[Mining and storing clay under winter conditions] Dobycha i khranenie gliny v zimnikh usloviiakh. Moskva, Promstroiizdat, 1954. 144 p. (MLRA 7:11D)

PA 14/49T63

PATRIK, N. P., Prof.

USSR/Medicine - Typhus
Medicine - Hemorrhage

Jun 48

"Intestinal Hemorrhage in Cases of Exanthematous Typhus," Prof N. P. Patrik and B. Kadyrova, Clinic of Infectious Diseases, Kazakhsk State Med Inst imeni V. M. Molotov, 3½ pp

"Klin Med" Vol XXVI, No 6

Contrary to accepted ideas, intestinal hemorrhage is not rare typhus complication. Prognosis is, as a rule, favorable. Pathogenesis is complicated. Hemorrhagic forms of typhoid easily mistaken for those of typhus.

14/49T63

PATRIK, N.P.

Intestinal balantidiasis and its therapy. Klin. med., Moskva 30 no.2: 44-47 Feb 1952. (CLML 22:1)

1. Of the Institute of Endemic Pathology of the Academy of Sciences Kazakh SSR (Head of Laboratory of Medical Parasitology -- Honored Worker in Science Prof. N. P. Patrik), Alma-Ata.

PATRIK, S.A., inzhener.

Mechanized clay supplying of the brick industry in cold weather conditions. Mekh.stroi. 10 no.7:20-27 Jl '53. (MLRA 6:7)
(Brick industry--Cold weather operations)

LEVIN, Roman Yefimovich; professor, doktor tekhnicheskikh nauk; KRUGLYY, S.M., redaktor; PATRIK, Ye.M., redaktor izdatel'stva; BERLOV, AP., tekhnicheskiy redaktor.

[New evaporators] Novyi vyparnoi apparat. Moskva, Gos.nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1957. 199 p. (MLRA 10:5)

(Evaporating appliances)

DAMKAS, Kh.M.; PATRIKEVICH, S.B.; YESHNIYAZOVA, N.

Determining the toxigenicity of diphtheria bacteria by the diffusion method in mixed and pure cultures. Med. zhur. Uzb. no.3:69-71 Mr '60. (MIRA 15:2)

1. Iz kafedry mikrobiologii (zav. - prof. P.F.Samsonov) Tashkentskogo gosudarstvennogo meditsinskogo instituta.
(CORYNEBACTERIUM DIPHTHERIAE)

1. VEKSHEGONOV, V.YA.; PATRIKEY, N.M.

2. USSR (600)

4. Windbreaks, Shelterbelts, Etc.

7. Renew and extend shelterbelts according to plan. Les.i step' 4 no.10, 1952.

9. **Monthly List of Russian Accessions**, Library of Congress, January 1953. Unclassified.

[illegible], [illegible].

Ukraine - Afforestation

Successes of Anton Dolinnyi's section. Les i step' [illegible], No. [illegible], [illegible]

9. Monthly List of Russian Accessions, Library of Congress, September 1953, Uncl.

2

PATRIKEYEV, A.

ShV 11-150 swivel. Nov.neft.tekh.:Bur.no.7:3 '48. (MLRA 9:4)
(Oil well drilling--Equipment and supplies)

PATRIKEYEV, A.

Organizing competition among drivers in Omsk. Avt.transp.33 no.10:37 O '55. (MLRA 9:1)
(Omsk--Motorbus drivers)

PATRIKEYEV, A.B., inzh.; SHCHUKIN, Ya.A., inzh.

Horizontal force interaction of running wheels of rail bridge cranes. Vest. mashinostr. 45 no.1:31-34 Ja '65.

PATRIKEYEV, A.B., inzh

Side forces of running wheels of ground-type charging machines.
Vest. mashinostr. 45 no. 12:39-41 D '65 (MIRA 19:1)

124-57-2-2532

Translation from: Referativnyy zhurnal, Mekhanika, 1957, Nr 2, p 143 (USSR)

AUTHORS: Patrikeyev, A. V., Chibrikin, M. V.

TITLE: On Fatigue Testing of Wood (K voprosu ob issledovanii drevesiny na ustalost')

PERIODICAL: V sb.: Vopr. drevesinovedeniya. Moscow-Leningrad, Goslesbumizdat, 1953, pp 64-71

ABSTRACT: A testing technique is propounded for fatigue testing of wood (the shape of a specimen and a fastening method therefor, the number of stress cycles per minute, the maximal number of cycles, a schematic design for a testing machine, etc.) The fatigue limits found in the investigation of pine and beech amounted to 22-25% of the ultimate static strength for static tangential flexure.

1. Wood--Fatigue 2. Wood--Test methods A. F. Rozhnyatovskiy

Card 1/1

PATRIKEYEV, B.; IMSHENETSKIY, V.

Improving the assembly of large-panel buildings. Na stroi. Ros. 3 no.3: 7-10 Mr '62. (MIRA 16:2)

1. Glavnyy inzh. upravleniya Sverdlovskgorstroy (for Patrikeyev).
2. Nachal'nik tekhnicheskogo otdela upravleniya Sverdlovskgorstroya (for Imshenetskiy).

(Sverdkovsk--Apartment houses)(Precast concrete construction)

PATRIKEYEV, G. A.

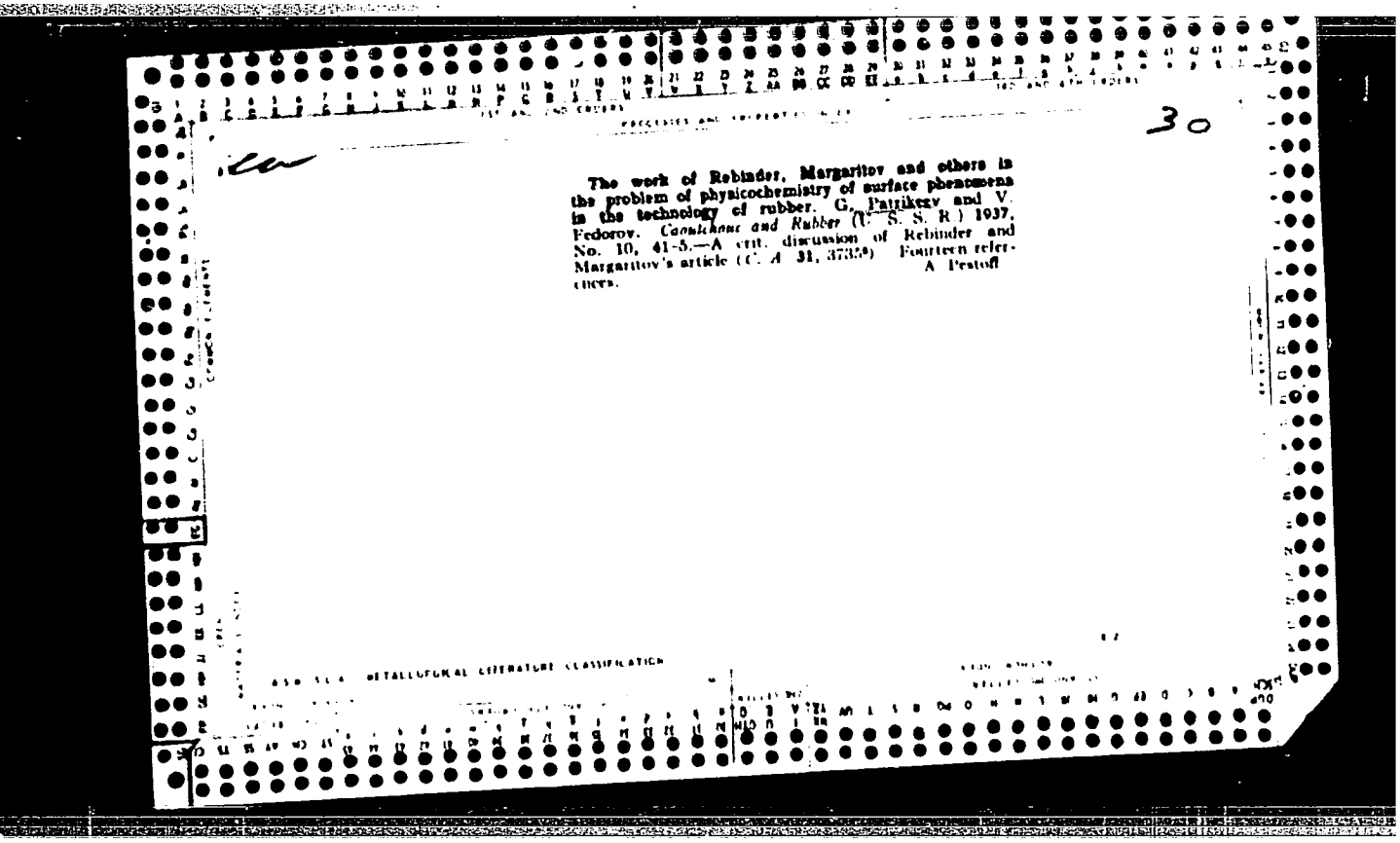
Distr: 4E2c(j)

1233. Basic problems in the theory of bond strength between layers in rubber articles. G. A. Patrikeyev. 'Prochnost' Svyazi . . . .', 1954, pp. 78-80. (Vses. Khim. Obshch. im. D. I. Mendeleeva, Dec., 1954). This contribution consists of a critical discussion of other papers presented to the conference in particular those of G. I. Slonimskii (*Rubb Abs.*, 1957, abs. 2090), I. A. Tarutin *et al*, and M. M. Poznakovskii (see abstracts above). 64422

BURCHE, Ye.F., voyeninzhener 3 ranga; VLADIMIROV, M.A.; TEPLINSKIY, B.L., general-mayor aviatsii, redaktor; PATRIKEYEV, F.A., mayor, redaktor; DOZHDEV, I.M., tekhnicheskiy redaktor.

[Military aircraft of the U.S.S.R.] Voennye samolety SSSR. Moskva, Voennoe izd-vo Narodnogo komissariata oborony SSSR, 1940. 59 p. [Microfilm] (MLRA 7:11)

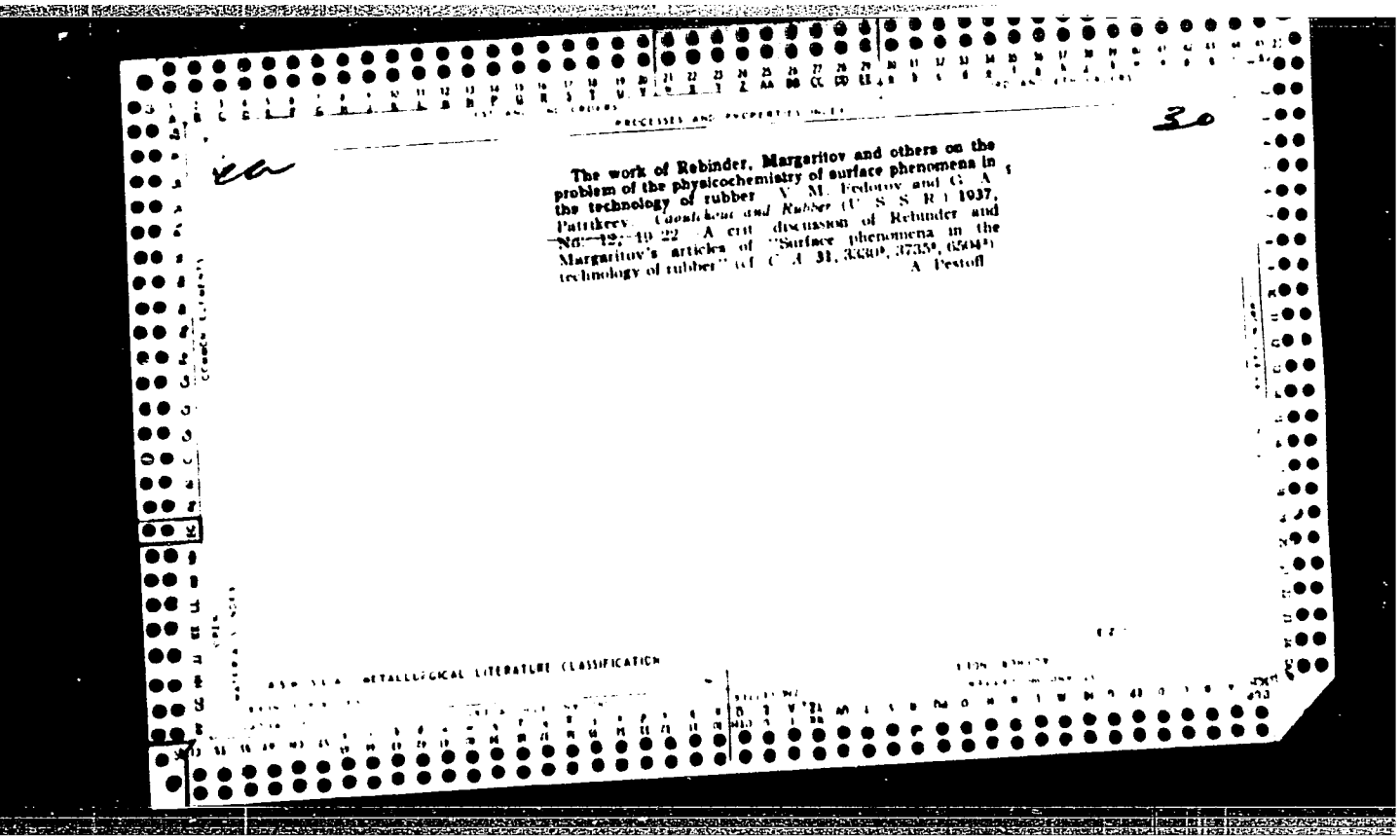
1. Russia (1923- U.S.S.R.) Armiya. Upravleniye voyenno-vozdushnykh sil.
(Airplanes--Recognition)



30

The work of Rebinder, Margaritov and others in the problem of physicochemistry of surface phenomena in the technology of rubber. G. Patrikeev and V. Fedorov. *Caoutchouc and Rubber* (U. S. S. R.) 1937, No. 10, 41–5.—A crit. discussion of Rebinder and Margaritov's article (C. A. 31, 3735⁹). Fourteen references. A. Pestoff

METALLURGICAL LITERATURE CLASSIFICATION



The work of Rebinder, Margaritov and others on the problem of the physicochemistry of surface phenomena in the technology of rubber. V. M. Fedotov and G. A. Pattikeev. *Caoutchouc and Rubber* (U. S. S. R.) 1937, No. 12, 19-22. A crit. discussion of Rebinder and Margaritov's articles of "Surface phenomena in the technology of rubber" (cf. C. A. 31, 3380, 3735, 6504).
A. Pestoff

PATRIKEYEV, G. A.

"Structure theory of mechanical properties of rubbers," a paper presented at the 9th Congress on the Chemistry and Physics of High Polymers, 2[illegible] June-2 July 57, Moscow.

B-3,004, 3[illegible]

AUTHOR: Patrikeyev, G. A.

TITLE: The Mechanics of Polymer Molecules (Mekhanika polimernykh molekul)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 120, Nr 2, pp. 339-342 (USSR)

ABSTRACT: The authors first mention and discuss several previous papers. It is possible to consider an expanded polymer chain as a quasi-elastic rod that contracts itself when the external influence is diminished. This phenomenon is caused by the potential energy which was accumulated during the expansion. This process is reversible when there are no activations of the valence bonds and when there are no chemical conversions. The observation of the elementary act of the rupture of the elastically stressed polymer is fundamentally important for the mechanical properties of the polymer molecules. The thermodynamic equilibrium of an elastically expanded molecular chain depends on the ratio between the elastically stressed state of the molecule and the influence of the external forces. For an estimation of this ratio and of the influence of the external forces on the production of macromolecules during the

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The Mechanics of Polymer Molecules

mechanical rupture it is sufficient to take into account the number of the valence bonds (n) of the expanded molecule. The energy, which is accumulated during the elastic expansion of the molecular chain, is very important and it is the higher the more similar the expansion energy of the unit valence bond to the dissociation energy of the C-C-bond. There are reasons to suppose that the dissipative processes during the elastic rupture of a polymer molecule are the fundamental ones. For an investigation of this problem it is not sufficient to confine oneself to the mechanic properties of the polymer molecules, but it is necessary to take into account also the problems of the deformation of polymeric systems. At present the immediate experimental investigation of the elementary act of the elastic expansion and of the mechanical rupture of the polymer molecule is impossible. In the investigation of the mechanical deformations of the polymer body it has to be taken into account the possibility of elastic expansions and of the mechanical rupture of polymer molecules. These phenomena may be accompanied by the production of radicals and by an activation of the valence bonds and, moreover, by dissipative processes. An important part of the program recommended by the author is the investigation

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of the mecanical expansion of polymer systems. There are 13 references, 1o of which are Soviet.

PRESENTED: January 2, 1958, by V. A. Kargin, Member, Academy of Sciences, USSR

SUBMITTED: December 26, 1957

1. Polymers—Molecular structure 2. Molecular association —Analysis

Card 3/3

PATRIKEYEV, G.A.

Mechanics of the stretched polymer systems. Dokl. AN SSSR 120 no. 3:562-565 My '58. (MIRA 11:7)

1. Predstavleno akademikom V.A. Kargin.
(Polymers)

SOV/76-33-9-31/37

5(4), 15(9)

AUTHOR: Patrikeyev, G. A.

TITLE: The Correlation Between the Mechanical Properties and the Structure of Stretched Rubber

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 9, pp 2081 - 2089 (USSR)

ABSTRACT: This article presents data contained in a report held at the IX Conference on General Problems of the Chemistry and Physics of Compounds of High Molecular Weight. Supposing that an elastic elongation (E) is determined by several polymer molecules forming an elastic network, a "mechanical" theory of the molecular structure may be employed for the investigation of stretched polymer systems if the equilibrium conditions of the elastic elements of this network are investigated (Ref 2). Accordingly, there must be a correlation (C) between the characteristics of the mechanical properties of stretched rubber (R) and the external stress f (equation (1)), as well as between the mechanical and the structural characteristics (equations (1) - (3)) (Ref 2). For the examination of (C) in equations (1) - (3), which determine the equilibrium conditions

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The Correlation Between the Mechanical Properties and the Parameters of Structure of Stretched Rubber SOV/76-33-9-31/37

between the mechanical and structural characteristics, a number of (G)-samples were investigated here with the use of Shopper's tensile testing machine. The value E_a (elasticity modulus outside the equilibrium in the test elongation) varies but little with the degree of vulcanization of natural rubber, but increases by 2.5 - 3 times when the vulcanization of (R) is prolonged on the basis of sodium butadiene rubber (SBR), divinyl styrene rubber (DSR), divinyl nitrile rubber (DNR), and polychlorprene rubber, i.e. in the case of (R) on the basis of synthetic rubber kinds of the structural type. The author investigated the dependence of various characteristics or f; the results are given in a graph (Figs 4-12). The (C) which is defined by equations (1) - (3) permits an investigation of the elastic elongation of polymer molecules in addition to elongations of the (R). It is recommended to develop a new scientific subject, the mechanics of stretched polymer systems (Ref 2) on the basis of the results obtained by the mechanics of polymer molecules (Ref 1). However, the instruments used for mechanical tests of (R)(by elongation) are to be considerably improved to obtain precise measurements for the evaluation of

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The Correlation Between the Parameters of Mechanical Properties and the Structure of Stretched Rubber SOV/76-33-9-31/37

the mechanical and structural characteristics. The author thanks Ye. A. Abramova and T. S. Dvorkina for their assistance in the present investigation. There are 12 figures and 5 Soviet references.

SUBMITTED: March 18, 1958

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S/190/60/002/009/019/019
B004/B060

AUTHORS: Patrikeyev, G. A., Gusarov, B. G., Konoplev, V. I.

TITLE: Brittle Rupture of Polymers in High-elastic State

PERIODICAL: Vysokomolekulyarnyye soyedineniya, 1960, Vol. 2, No. 9, pp. 1438-1439

TEXT: Polymeric material weakened by incisions is bound to undergo a brittle rupture at the incised spot at low temperatures and a certain critical elongation rate. The authors checked this assumption by a dynamometer and an МПО-2 (MPO-2) loop oscilloscope which allowed for elongation rates to be measured up to 2 $m \cdot sec^{-1}$. In natural rubber, the tearing strength was found to be considerably reduced at an elongation rate of over 0.7 $m \cdot sec^{-1}$ and temperatures of $-20 \pm 5^{\circ}C$. At this rate, a brittle rupture occurred at $-60^{\circ}C$. Figs. 1 and 2 show the experimental data. The authors recommend the application of tearing strength tests at high elongation rates. The need is felt of an improvement in inertialess dynamometers. There are 2 figures and 2 Soviet references.

SUBMITTED: June 11, 1960
Card 1/1

Patrikeyev, G A

81868

S/020/60/133/02/44/068
B004/B064

15.9200

AUTHOR: Patrikeyev, G. A.

TITLE: The Molecular Mechanism Underlying the Deformations of Polymeric Substances

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 133, No. 2, pp. 405 - 408

TEXT: In the introduction the author states that the concepts hitherto developed on the stressed state of an ideally elastic network and the relaxation processes in the deformation of polymers have been derived without considering a molecular mechanism. He discusses the possibility of establishing the molecular mechanism by way of interpreting the results of mechanical tests of rubber under the application of the methods of macromolecular mechanics (Refs. 11-13). From analyzing the change of the cross section and the surface of an elastic body in the case of extension, the author arrives at the conclusion that the geometrical considerations alone indicate that a one-dimensional extension is accompanied by complex three-dimensional translations of the

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