

SAGODI, Robert, dr.; ROSZORMENYI, Miklos, dr.; SZABO, Istvan, dr.; KANITZ,  
Eva, dr.

Bacteriological examination of patients with sparse colonies in the  
sputum. Tuberkulozis 15 no.2:44-48 F '62.

1. Az Orszagos Koranyi Tbc Intezet (igazgato-foorvos: Boszormenyi  
Miklos dr. kandidatus, tudomanyos igazgato: Foldes Istvan dr. kandi-  
datus) kozlemenye.

(SPUTUM microbiol) (TUBERCULOSIS PULMONARY diag)

NYEGES, Jeno, dr.; SAGODI, Robert, dr.

Data on the closure of cavities following drug therapy. Tuberkulozis  
17 no.3:77-80 Mr '64.

1. Az Orszagos Koranyi Tbc Intezet (igazgato: Boszormenyi Miklos  
dr. tudomanyos igazgato: Foldes Istvan dr.) I Belosztalyanak (ve-  
zeto: Barat Iren dr.) kozlemenye.

Sagomonyan, A. Ya.

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Sagomonyan, A. Ya. Operational methods in ~~the~~ dy-  
~~namics~~ Vestnik Moskov. Univ. 3, no. 5, 53-58 (1948).

(Russian)  
The operational calculus is incorrectly applied to the  
problem of an oscillating deformable obstacle in a super-  
sonic flow.  
G. F. Carrier (Providence, R. I.)

Source: Mathematical Reviews,

Vol. 10, No. 10

JMS  
LFH

SAGOMONYAN, A. YA.

Sagomonyan, A.Ya. "On the supersonic motion of the cylindrical field of a substance with thin casing," Vestnik Mosk. un-ta, 1948, No. 9, p. 27-39

SO: U-2888, Letopis Zhurnal'nykh Statey, No. 1, 1949

SAGOMONYAN, A. Ya.

Sagomonyan, A. Ya. Investigation of the linearized equation of self-similar unsteady motion of a fluid. Vestnik Moskov. Univ. Ser. Fiz.-Mat. Estest. Nauk 1952, no. 9, 3-8 (1952). (Russian)

L'auteur étudie l'équation des ondes cylindriques:

$$(1) \quad \frac{\partial^2 \varphi}{\partial x^2} + \frac{\partial^2 \varphi}{\partial y^2} = \frac{1}{a^2} \frac{\partial^2 \varphi}{\partial t^2}$$

Il explicite la forme de (1) en variables:  $\xi = x/t$ ,  $\eta = y/t$ , et cherche les solutions de la transformée (E) et (1) du type:  $\varphi = t \varphi_1(\xi, \eta)$ . (E) est hyperbolique (elliptique) dans le domaine  $\mathcal{D}_H$  (ou  $\mathcal{D}_E$ ):  $\xi^2 + \eta^2 > a^2$  (ou  $\xi^2 + \eta^2 < a^2$ ). Les deux familles de caractéristiques de E dans  $\mathcal{D}_E$  se déterminent aisément; le long de chaque courbe caractéristique il existe une relation linéaire entre  $\partial \varphi / \partial x$  et  $\partial \varphi / \partial y$ . Un artifice analogue à celui de Tchapyguine permet d'exprimer les solutions de (E) dans  $\mathcal{D}_E$  au moyen d'une fonction analytique de variable complexe: d'où possibilité de résoudre divers problèmes aux limites pour (E) dans  $\mathcal{D}_E$ . Les solutions particulières, formées par cette méthode, sont, aux dires de l'auteur, dépourvues de discontinuités, qui apparaissent nécessairement dans les écoulements stationnaires à zones sur- et subsoniques. J. Kravtchenko.

Mathematical Reviews  
Vol. 15 No. 4  
Apr. 1954  
Mechanics

*Chin Aeromechanics,*

SAGOMONYAN, A. Ya.

Sagomonyan, A. Ya. The method of characteristics for the steady axisymmetric self-similar motion of a fluid. Vestnik Moskov. Univ. Ser. Fiz.-Mat. Estest. Nauk 8, no. 12, 63-68 (1953). (Russian)

An axisymmetric flow field is self-similar ("auto-model") if the velocity components, pressure, density, and entropy

are functions of  $x/l$  and  $y/l$  only, where  $x, y$  are cylindrical coordinates. The author sketches methods to be used in three typical boundary problems which may occur in constructing numerical solutions of the characteristic equations for either linearized or non-linearized isentropic flow.

J. H. Giese (Ann Arbor, Mich.)

hydrodynamics (Ae)

Chin of aeromechanics

~~5750711047710, 11. 12.~~  
USSR/Physics - Shock Waves

FD-1678

Card 1/1 : Pub. 129-3/25

Author : Sagomonyan, A. Ya.

Title : Reflection of shock waves from hard walls forming an angle

Periodical : Vest. Mosk. un., Ser. fizikomat. i yest. nauk, Vol. 10, 33-40, Feb 1955

Abstract : The author considers the problem of determining the parameters behind a reflected shock wave formed after the encounter of a direct wave of any intensity with the apex angle between two hard walls. He derives an approximate solution in which the formulas obtained possess a simple form. If the angle between the walls is close to  $180^\circ$ , the influence of the apex angle upon the disturbed region of the gas behind the reflected shock wave is insignificant. In this case, in order to determine the motion in the region where the influence of the apex angle (diffraction of the angle) is exerted one can employ the linearized equations describing the non-steady motion of a gas (A. Ya. Sagomonyan, Vest. Mosk. un., Sep 1952. M. I. Lighthill, Proc. Roy. Soc., ser. A. 200, p 454-465, 1950). The author sets up the problem, determines the parameters of the gas, and obtains the solution in the region of rarefaction. Two references.

Institution : Chair of Aeromechanics

Submitted : January 12, 1954

SAGOMONYAN, A. Ya.

V Sagomonyan, A. Ya., and Bagdoyev, A. G. Penetration 1 - P/W  
of a cone into a fluid with a free surface. Vestnik  
Moskov. Univ. 10 (1955), no. 8, 47-52. (Russian)  
The problem of vertical penetration of a cone into an  
incompressible fluid is investigated. Formulas for velocity  
and deceleration during the penetration process are  
derived. The constants entering into the formulas may be  
obtained in the general case by numerical solution of an  
integral equation. Particularly examined is the case of  
penetration of a narrow cone for which the penetration  
law may be expressed by simple formulas.

Authors' summary.

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SOV/124-58-11-12251

Translation from: Referativnyy zhurnal, Mekhanik, a 1958, Nr 11, p 41 (USSR)

AUTHOR: Sagomonyan, A. Ya.

TITLE: The Penetration of a Narrow Wedge Into a Compressible Liquid  
(Pronikaniye uzkoqe klina v szhimayemuyu zhidkost')

PERIODICAL: Vestn. Mosk. un-ta. Ser. matem., mekhan., astron., fiz., khimii,  
1956, Nr 2, pp 13-18

ABSTRACT: In a linear formulation the author examines the problem of a narrow wedge penetrating at a constant velocity into a semispace filled with an ideal compressible liquid. By virtue of its self-similarity the problem reduces by a well-known procedure to the solution of a certain boundary problem of the theory of the functions of a complex variable. A determination is made of the pressure distribution on the wedge, of the force acting upon the wedge, etc. The author shows that the magnitude of the force acting upon the wedge, in the case of an incompressible liquid, turns out to be just half the magnitude ascribed to it by Wagner, the explanation given for this being that Wagner, while determining this force from the momentum theorem, had nevertheless neglected the amount of momentum being dissipated by the particles of the

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SOV/124-58-11-12251

The Penetration of a Narrow Wedge Into a Compressible Liquid

liquid's free surface---which had led him to overrate the magnitude of the force.

S. S. Grigoryan

Card 2/2

SAGOMONYAN, A. Ya

Sagomonyan, A. Ya. Reflection of a shock wave from the vertex of a cone and the problem of its penetration into a compressible fluid. Vestnik Moskov. Univ. 11 (1956), no. 3, 3-17. (Russian)

Consider the unsteady axisymmetric flow produced when a plane shock impinges upon a circular cone. The author assumes that the cone is so blunt that regular reflection occurs at the intersection of the cone and main shock, and also that entropy variations are negligible, so the flow is approximately irrotational. Then the velocity potential is of the form  $\varphi(x_0, y_0, t) = \varphi(x_0/t, y_0/t)$ . In the region of diffracted flow near the vertex of the cone the partial differential equation satisfied by  $\varphi$  is of elliptic type; in the region between the cone and the regularly reflected part of the shock it is hyperbolic. For the non-linearized partial differential equation the author exhibits characteristic equations, boundary conditions, and presents results of a numerical calculation of the shock location at the edge of the hyperbolic region of unsteady flow. For the linearized equation, while retaining the exact boundary conditions at the cone and by keeping the tangential velocity component continuous at the reflected "weak shock" (actually a characteristic) he is able to obtain explicit formulas for velocity

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Chair gazovoy i  
volnovoy dinamiki

*Sagomonyan, A. Ya.*  
components and pressure on the reflected shock. For very blunt cones, for which some boundary conditions are applied on the plane  $\alpha_0 = 0$  rather than on the cone, he finds the velocity potential by means of Kirchoff's formula for the wave equation. He compares computations of velocity and pressure distributions obtained by both linearized methods for a cone with  $75^\circ$  semi-vertex angle. He also sketches a parallel treatment of the entry of a cone into a compressible fluid with a plane free surface.  
*J. H. Giese (Aberdeen, Md.)*

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RIA  
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16(1)

AUTHORS:

TITLE:

PERIODICAL:

ABSTRACT:

Sherzy, I.A., University Lecturer, and 507/55-90-2-31/55  
 Kopylov, V.D., Scientific Assistant  
 Lomonosov - Lectures 1957 at the Mechanical-Mathematical  
 Faculty of Moscow State University (Lomonosovskiy  
 otdelnyy 1957 goda na mekhaniko-matematicheskoy fakul'tete  
 MSU)

Vestnik Leningradskogo Universiteta, Seriya matematika, mekhanika,  
 astronomiya, fizika, khimiya, 1958, no. 2, pp. 241-246 (USSR)  
 The Lomonosov lectures 1957 took place from October 17 -  
 October 21, 1957 and were dedicated to the 40-th anniversary  
 of the general revolution.  
 In the general representation of functions of several  
 variables by superposition of functions with less variables  
 and C-entropy of functions. The lecture generalizes  
 the results of Kolmogorov and Lushchik, V.I. Arnold and  
 V.K. Il'in. The content has been already published  
 (Doklady Akademi nauk SSSR, 14, 5, 1957, pp. 1045-1048).  
 Member of the Academy of Sciences of the USSR, A.K. Ginzburg, in  
 "Investigation of the boundary layer of the motion of a two-  
 component liquid".

- The other lectures were given separately in the sections  
 mechanics and mathematics. The following lectures were given:  
 1. Professor L.N. Stepanov, Corresponding Member, AS USSR, "On  
 the problem of sound waves from a rotating deformed ball."  
 2. Professor G.G. Cherny, "The flow around thin truncated  
 bodies by an incompressible fluid."  
 3. Professor S.M. Zhurav, "Proprietes of the calculation,  
 construction and structure of hydrotechnical dike on the  
 rivers of the Central Strip of the USSR."  
 4. Professor A.M. Sagdeev, "Penetration of a rigid body  
 into the GROUND."  
 5. M.Z. Litvinov-Sedoy, Senior Scientific Assistant, "On the  
 synthesis of controlled circuits with bounded interval of  
 variation of the controlled variable."  
 6. V.A. Izrael, Candidate of Physical-Mathematical Sciences,  
 "General Plastic Limit Properties Under Restrictions of  
 Structure."  
 7. Professor R.A. Slepyin, "On Some Questions of the Flow  
 Around Porous Walls."

Card 2/5

A.YA SAGOMOXAN

10(1), 16(1)

SOV/155-58-3-25/37

AUTHOR:

Sagomonyan, A. Ya.

TITLE:

One-Dimensional Soil Creeps With Spherical, Cylindrical, and Plane Waves (Odnomernyye dvizheniya grunta so sfericheskimi, tsilindricheskimi i ploskimi volnami)

PERIODICAL:

Nauchnyye doklady vysshey shkoly. Fiziko-matematicheskkiye nauki, 1958, Nr 3, pp 131-137 (USSR)

ABSTRACT:

The author investigates the soil creeps for explosions of a spherical charge by comprehending the homogeneous soil as a "plastic gas" according to Kh.A.Rakhmatulin [Ref 3]. The consideration of the tangential tensions not considered by Rakhmatulin ("ideal plastic gas") are new. The author assumes the knowledge of the compression curve of the soil according to Kh.A.Rakhmatulin and N.A.Alekseyev [Ref 2]. The solution is carried out by successive consideration of spherical layers with constant densities variable by steps. A detailed description

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One-Dimensional Soil Creeps With Spherical,  
Cylindrical, and Plane Waves

SOV/155-58-3-25/37

of the solution is given in [Ref 4]. The author enumerates  
the errors in the paper of A. Kompaneyets (Doklady Akademii nauk  
SSSR, 1956, Vol 109, Nr 1) which treats a similar problem.  
There are 2 figures, and 6 Soviet references.

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

SUBMITTED: April 22, 1958

Card 2/2

10(1), 10(1)

AUTHOR: ~~Sagomonyan, A. Ya.~~

SOV/155-58-3-26/37

TITLE: Propagation of Waves With a Small Amplitude in the Soil (Rasprostraneniye voln maloy amplitudy v gruntakh)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Fiziko-matematicheskiye nauki, 1958, Nr 3, pp 138-142 (USSR)

ABSTRACT: The author considers one-dimensional soil creeps for small tensions and only with a consideration of elastic deformations. By usual linearizing action the problem of the propagation of small waves in the homogeneous or inhomogeneous soil is reduced to integrable equations. It is assumed that the soil compression is described by a known function:  $-\epsilon_r = f(\varrho)$ . In the inhomogeneous case the author obtains the motion equation

$$\frac{1}{c^2(r)} \frac{\partial^2 P}{\partial t^2} = \frac{1}{r^2} \frac{\partial}{\partial r} \left( r^2 \frac{\partial P}{\partial r} \right) - \frac{\partial}{\partial r} \ln(\varrho r^\nu) \frac{\partial P}{\partial r},$$

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Propagation of Waves With a Small Amplitude in the Soil SOV/155-58-3-26/37

where  $P = r \sqrt{\epsilon - \frac{2\tau_0}{r \sqrt{1+\mu}}}$  and  $c(r)$  denotes the sound velocity.

The author mentions K.I.Smirnov.

There are 5 Soviet references.

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

SUBMITTED: April 22, 1958

Card 2/2

SAGOMONYAN, A.Ya.

Fall of a flat plate onto the surface of a compressible fluid.  
Vest Mosk. un. Ser. mat., mekh., astron., fiz., khim. 14 no.2:  
49-53 '59 (MIRA 13:3)

1. Kafedra volnovoy i gazovoy dinamiki Moskovskogo gosuniversiteta.  
(Fluid dynamics)

88414

S/055/60/000/006/005/008  
C111/C222

16.7600

AUTHOR: Sagomonyan, A.Ya.

TITLE: On the Velocities of the Hydraulic Shock in Pipes Inserted One Into Another

PERIODICAL: Vestnik Moskovskogo universiteta. Seriya I. Matematika, mekhanika, 1960, No. 6, pp. 66 - 71

TEXT: In a pipe of radius R there is an other pipe with the radius  $r < R$ . Let the pipes be elastic and two different fluids are flowing in them. There is a one-dimensional flow. The index 2 relates to the fluid in the inner pipe, the index 1 relates to the fluid between the pipes. Under neglection of the tenacity of the pipes and of the forces in the walls perpendicular to the axis the author establishes the motion equations. If  $f(x,t) = 0$  is the characteristic surface of the motion system then, as it is well-known,

(1.15) 
$$\lambda = \frac{-\frac{\partial f}{\partial t}}{\frac{\partial f}{\partial x}}$$

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On the Velocities of the Hydraulic Shock in Pipes Inserted One Into Another

is the velocity of this surface. It is stated that  $\lambda$  satisfies a bi-quadratic equation if it is assumed that the velocities  $v_1$  and  $v_2$  of the fluids in comparison with  $\lambda$  are negligible. This equation reads

$$(1.18) \quad \lambda^4 - k \lambda^2 + \omega = 0$$

where  $k, \omega$  are given by

$$(1.19) \quad k = \frac{\frac{2RF\rho_1}{e_1E_1} + \frac{2r\Omega_2\rho_1}{e_2E_2} + \frac{2r\Omega_1\rho_2}{e_2E_2} + \Omega_1 \left( \frac{1}{a_1^2} + \frac{1}{a_2^2} \right)}{\left( \frac{2RF\rho_1}{e_1E_1} + \frac{\Omega_1}{a_1^2} \right) \left( \frac{2r\rho_2}{e_2E_2} + \frac{1}{a_2^2} \right) + \frac{2r\Omega_2\rho_1}{e_2E_2a_2^2}}$$

$$\omega = \frac{\Omega_1}{\left( \frac{2RF\rho_1}{e_1E_1} + \frac{\Omega_1}{a_1^2} \right) \left( \frac{2r\rho_2}{e_2E_2} + \frac{1}{a_2^2} \right) + \frac{2r\Omega_2\rho_1}{e_2E_2a_2^2}} \quad (1.19)$$

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On the Velocities of the Hydraulic Shock in Pipes Inserted One Into Another

Here

$$(1.13) \quad \Delta \begin{vmatrix} 0 & \frac{1}{\rho_1} & A - BB \\ B & 0 & \frac{1}{\rho_2} \frac{\partial t}{\partial x} \\ \frac{\partial f}{\partial x} - \gamma A & \frac{c}{\rho_2} B & \end{vmatrix} + \frac{1}{\rho_1} \frac{\partial f}{\partial x} \begin{vmatrix} \frac{\partial f}{\partial x} & 0 & - BB \\ 0 & B & \frac{1}{\rho_2} \frac{\partial f}{\partial x} \\ 0 & \frac{\partial f}{\partial x} & \frac{c}{\rho_2} B \end{vmatrix} = 0$$

e and E are the thickness and the modulus of elasticity of the pipes, a is the sound velocity,  $\rho$  is the density. From (1.18) it follows that there exist two propagation velocities for disturbances

$$(1.20) \quad \lambda_1 = \left[ \frac{1}{2} (k + \sqrt{k^2 - 4\omega}) \right]^{1/2}$$

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On the Velocities of the Hydraulic Shock in Pipes Inserted One Into Another

$$(1.21) \quad \lambda_2 = \left[ \frac{1}{2} (k - \sqrt{k^2 - 4\omega}) \right]^{1/2}$$

The formulas (1.20) and (1.21) are confirmed by a linearized calculation.

The author mentions N.Ye. Zhukovskiy.  
There are 2 Soviet references.

ASSOCIATION: Kafedra gazovoy i volnovoy dinamiki (Chair of Gas and Wave Dynamics)

SUBMITTED: January 21, 1960

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S/020/60/134/006/008/031  
B019/B067

17.8000

AUTHOR: Sagomonyan, A. Ya.

TITLE: Penetration of Pointed, Axially Symmetric Bodies Into the Ground

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 134, No. 6,  
pp. 1320 - 1323

TEXT: On the basis of experimental results obtained for soils of low moisture at the Moskovskiy gosudarstvennyy universitet (Moscow State University), Kh. A. Rakhmatulin introduced "plastic gas" as a model. Dynamical compression curves of argillaceous soil with air humidity, obtained by N. A. Alekseyev, are shown in Fig. 1. It is noted that no recent experimental data are available on this field, and some shortcomings of the studies mentioned at the beginning are pointed out. The development of this theory is described with the help of experimental data. Hence, it is assumed that the particles of the medium, while the body moves in its plane, remain parallel to the free surface. Shock waves propagate in each of these planes, and density changes only in the shock

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Penetration of Pointed, Axially Symmetric  
Bodies Into the Ground

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wave. The equations of motion and mass conservation are written down. It is shown that for a perfectly smooth body, axial, radial, and normal tensions are equal. For this case and for that in which friction exists between body and soil, formulas are deduced for the penetration rate of the body. Figs. 2 and 3 give the acceleration curves and the rates of penetration for different soil characteristics. The calculations were on the computer "Strela". The curves indicate an essential influence of the soil density on penetration depth and velocity. Finally, simpler approximate formulas for determining the penetration rate at any depth are discussed. There are 3 figures and 3 Soviet references.

PRESENTED: May 31, 1960, by L. I. Sedov, Academician

SUBMITTED: May 30, 1960

Card 2/2



SAGOMONYAN, A.Ya.

One-dimensional motion of ground with spherical, cylindrical,  
and plane waves. Trudy NIIOSP no.44:43-67. '61. (MIRA 14:8)  
(Elastic waves) (Soil mechanics)

SI. GOMONYAN, Artur Yakovlevich; KAPUSTINA, V.S., red.; LAZAREVA,  
L.V., tekhn. red.

[Three-dimensional problems concerning the unsteady motion of  
a compressible fluid] Prostranstvennye zadachi po neustanoviv-  
shemusia dvizheniiu szhimaemoi zhidkosti. Moskva, Izd-vo  
Mosk. univ., 1962. 78 p. (MIRA 16:1)  
(Fluid dynamics)

S/055/62/000/001/005/007  
D299/D303

AUTHOR: Sagomonyan, A. Ya.

TITLE: Motion of slender bodies in a fluid towards its free surface

PERIODICAL: Moskva. Universitet. Vestnik. Seriya I. Matematika, Mekhanika, no. 1, 1962, 53-59

TEXT: The motion is considered of a slender body of revolution in an incompressible fluid. It is required to determine, in the linear formulation, the velocity potential of the disturbed unsteady fluid-flow. Vertical motion of the body towards the free surface is considered. Let a sharp slender body of revolution move vertically through an incompressible fluid. Assuming that the fluid was at rest before the body started its motion, the latter introduces a small perturbation in the state of the fluid. In the linear formulation, the velocity potential at the free surface is zero. Assuming that the velocity of the body is directed along its axis of symmetry, the fluid motion will have axial symmetry, and the con-

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Motion of slender bodies ...

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tinuity equation becomes

$$\frac{\partial^2 \varphi}{\partial x^2} + \frac{\partial^2 \varphi}{\partial y^2} + \frac{1}{y} \frac{\partial \varphi}{\partial y} = 0 \quad (3) \quad \checkmark$$

Denoting by  $f(t)$  the distance between the origin of coordinates and the sharp edge of the body and by  $h$  its height, one obtains (after setting up the boundary conditions), the formula for the velocity potential

$$\varphi(x, y, t) = -\frac{1}{2} \int_{f(t)}^{f(t)+h} \frac{f'(t) \varepsilon'(\xi - f(t)) \varepsilon(\xi - f(t)) d\xi}{\sqrt{(x - \xi)^2 + y^2}} +$$

$$+ \frac{1}{2} \int_{-f(t)-h}^{-f(t)} \frac{f'(t) \varepsilon'(\xi + f(t)) \varepsilon(\xi + f(t)) d\xi}{\sqrt{(x - \xi)^2 + y^2}} \quad (6)$$

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 D299/D303

Motion of slender bodies ...

If the slender body is a cone with semi-angle  $2\beta$ , one obtains

$$\varphi(x, y, t) = \frac{f'(t)B^2}{2} \left\{ \int_{-f(t)-h}^{-f(t)} \frac{\xi + f(t)}{\sqrt{(x-\xi)^2 + y^2}} d\xi - \int_{f(t)}^{f(t)+h} \frac{\xi - f(t)}{\sqrt{(x-\xi)^2 + y^2}} d\xi \right\} \quad (7)$$

The pressure is determined by means of Lagrange's integral. The motion of body at an angle  $\omega$  with the free surface is also examined. In this case the fluid motion is no longer axisymmetrical. The velocity potential is determined by the classical methods of aerodynamics. One obtains

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Motion of slender bodies ...

$$\varphi_1(x, \theta, y, t) = -\frac{\alpha y \cos \theta}{2} \left\{ \int_{f(t)}^{f(t)+h} \frac{f'(t) \epsilon^2 (\xi - f(t)) d\xi}{\sqrt{(x-\xi)^2 + y^2}} - \int_{-f(t)-h}^{-f(t)} \frac{f'(t) \epsilon^2 (\xi + f(t)) d\xi}{\sqrt{(x-\xi)^2 + y^2}} \right\} \quad (14)$$

where  $\alpha$  is the angle of attack. The case of  $\alpha$  being a function of time was solved in the references; there it was found that the second integral in Eq. (14) can be neglected (to within higher-order infinitesimals). Hence a simpler, yet sufficiently accurate formula is derived for the velocity potential. On the motion of body towards surface having waves of small amplitude, it is assumed that the surface waves are plane progressive waves, and that the body moves vertically. The velocity potential of the wave motion is

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Motion of slender bodies ...

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$$\varphi_1(x_1, y_1, t) = \frac{ag}{\sigma} e^{-kx_1} \sin(ky_1 + \sigma t) \quad (16)$$

(a being the amplitude and k and  $\sigma$  are related to the wavelength  $\lambda$ ).  
One further obtains

$$\varphi_1 = \frac{ag}{\sigma} e^{-kx} \sin(ky \cos \theta + \sigma t) \quad (18)$$

The velocity potential of the total motion of the fluid can be expressed by formula

$$\varphi(x, \theta, y, t) = \varphi_0(x, y, t) + \varphi_1(x, \theta, y, t) + \varphi_2(x, \theta, y, t)$$

where  $\varphi_0$  is the potential for the vertical motion in the fluid at  
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Motion of slender bodies ...

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rest (given by Eq. (6)),  $\varphi_1$  - the potential of the wave motion (given by Eq. (18)), and  $\varphi_2$  is found to be

$$\varphi_2(x, \theta, y, t) = \frac{a^2 y \cos \theta \cos at}{2} \left\{ \int_{f(t)}^{f(t)+h} \frac{e^{-k\xi} (\xi - f(t)) d\xi}{\sqrt{(x-\xi)^2 + y^2}} - \int_{-f(t)-h}^{-f(t)} \frac{e^{k\xi} (\xi + f(t)) d\xi}{\sqrt{(x-\xi)^2 + y^2}} \right\}$$

(20)

In determining the parameters of the disturbed motion of the fluid in the vicinity of the surface of the body, the second integral in Eq. (20) can be neglected. There are 4 references: 3 Soviet-bloc and 1 non-Soviet-bloc (in translation).

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Motion of slender bodies ...

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D299/D303

ASSOCIATION: Kafedra volnovoy i gazovoy dinamiki (Department of  
Wave- and Gas Dynamics)

SUBMITTED: March 14, 1961

Card 7/7



ALEKSEYEV, N.A. (Moskva); RAKHMATULIN, Kh.A. (Moskva); SAGOMONYAN, A.Ya.  
(Moskva)

Fundamental equations of soil dynamics. PMTF no.2:147-150 Mr-Ap  
'63. (MIRA 16:6)

(Soil mechanics)

SAGDMCNYAN, A.YA (Moscow)

"Contribution to the problem of interaction of bodies  
at very high velocities"

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

SAGOMONYAN, A.Ya.; KUTLYAROV, V.S.

Approximate method for determining the mean diameter of a hole  
made in a barrier by a striker in a high velocity impact. Vest.  
Mosk. un. Ser. 1: Mat.,mekh. 19 no.2:63-69 Mr-Ap '64.

(MIRA 17:3)

1. Kafedra gazovoy i volnovoy dinamiki Moskovskogo universiteta.

RAKHMATULIN, Khalil Akhmetovich; SAGOMONYAN, Artur Yakovlevich;  
ALEKSEYEV, Nikolay Aleksandrovich; DOZORTSEVA, G.I., red.

[Problems in soil dynamics] Voprosy dinamiki gruntov.  
Moskva, Izd-vo Mosk. univ., 1964. 236 p.  
(MIRA 18:1)

SAGOMONYAN, A.Ya.

Interaction of a body of small mass and a semi-infinite obstacle  
at high collision speeds. Vest. Mosk. un. Ser. 1: Mat., mekh. 19  
no. 5:39-48 S-O '64. (MIRA 17:12)

1. Kafedra gazovoy i volnovoy dinamiki Moskovskogo universiteta.

ACCESSION NR: AP4040946

S/0020/64/156/005/1053/1056

AUTHOR: Sagomonyan, A. Ya.

TITLE: On the problem of interaction of bodies at very high speeds

SOURCE: AN SSSR. Doklady\*, v. 156, no. 5, 1964, 1053-1056

TOPIC TAGS: interaction, supersonic interaction, shock wave, potential flow, vortex flow, body collision, body interaction

ABSTRACT: A procedure based on observations and experimental data on interaction of bodies at speeds of 3—7 km/sec and Roentgen photographs at speeds of 2 km/sec and presented as a first step in the solution of the problem of interaction makes it possible to determine the basic parameters of the phenomenon. It is assumed that the body of large mass is motionless prior to collision. Various phenomena occurring during the encounter, such as deformation of bodies, changing of their state, glowing, etc., are analyzed (see Fig. 1 of the Enclosure). Supersonic interaction of a moving body with a semi-infinite obstacle is considered and reduced to the problem of the motion of an incompressible fluid between two concentric spheres, i.e., the contact

Card 1/3

ACCESSION NR: AP4040946

surface and the shock wave moving with forward velocity  $u$ . Expressions are derived for the pressure, angle of separation and resistance force  $F$  of a contact surface to the motion. A numerical example is given for collision of steel bodies at speeds of 10—88 km/sec in the cases of potential and vortex flows behind the shock wave. / Orig. art. has: 2 figures, 1 table, and 10 formulas.

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

SUBMITTED: 21Nov63

ENCL: 01

SUB CODE: ME

NO REF SOV: 004

OTHER: 001

Card 2/3



ACC NR: AM6012203

Monograph

UR/

Rakhatulin, Khalil Akhmedovich; Sagomonyan, Artur Yakovlevich; Bunimovich, Abram Isaakovich; Zverev, Igor' Nikolayevich

Gas dynamics (Gazovaya dinamika) Moscow, Izd-vo "Vysshaya shkola", 1965, 722 p. illus., biblio., tables. 7500 copies printed.

TOPIC TAGS: gas dynamics, gas flow, supersonic flow, aerodynamic heating, boundary layer

PURPOSE AND COVERAGE: This textbook for university students is based on lectures in gas dynamics given by the authors at the Mechanical and Mathematical Department, Moscow State University. The book presents fundamentals of gas dynamics with special emphasis placed on modern numerical methods of solving gas dynamic problems using electronic computers.

TABLE OF CONTENTS:

1. Thermodynamics -- 9
2. Gas motion equations -- 98
3. One-dimensional steady-state motion of gas -- 179
4. Motion of gas with small perturbations -- 223
5. One-dimensional nonsteady-state motion of gas with finite perturbations -- 266
6. Steady supersonic gas flow with finite perturbations -- 299

Card 1/2

UDC: NONE

ACC NR: AM6012203

7. Steady-state supersonic gas flow about bodies of revolution -- 351
8. Shock waves (self-modeling problems) -- 437
9. Two-dimensional subsonic motion of gas with finite perturbations -- 470
10. The boundary layer and problems of aerodynamic heating -- 490
11. Rarefied gas-flow -- 594
12. Physical principles of the theory of radiating gas -- 642

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SUB CODE: 20/ SUBM DATE: 24May65/ ORIG REF: 092/ OTH REF: 039

Card 2/2

L 47568-66 EWT(1) WW/GW

ACC NR: AP603217

SOURCE CODE: UR/0055/66/000/005/0109/0115

AUTHOR: Sagomonyan, A. Ya.

ORG: Department of Wave and Gas Dynamics, Moscow University (Kafedra volnovoy i gazovoy dinamiki Moskovskogo universiteta)

TITLE: Dissipation of the energy of an explosion in a soil medium

SOURCE: Moscow. Universitet. Vestnik. Seriya I. Matematika, mekhanika, no. 5, 1966, 109-115

TOPIC TAGS: energy dissipation, ground explosion, soil thermodynamics, explosion cavity, shock wave, explosion, UNDERGROUND EXPLOSION, SOIL PHYSICS

ABSTRACT: The mechanical parameters of motion behind a shock wave resulting from a spherical explosion in a soil medium (clay of average moisture content), treated as a plastic gas, are examined in relation to the changes occurring in the internal energy of the soil. Computations are performed in order to determine the degree of influence of internal friction and soil tenacity on the magnitude of internal energy. It is assumed that the internal energy of the soil can be represented as the sum of two functions which depend on density and temperature. A method of determining these functions is developed, although computations are hindered by the lack of adequate information on soil thermodynamics; it is found that at the explosion cavity boundary the amount of internal energy transferred to a particle due to soil tenacity is insignifi-

Card 1/2

UDC: 541.126

L 47563-66

ACC NR: AP6032176

cant in comparison to the amount attributable to internal friction. Further, the influence of the function of the cavity radius variation on the value of internal energy and temperature increase in the medium is also found to be negligible. The only significant temperature increase in the shock front takes place in a narrow soil layer surrounding the explosion cavity. Orig. art. has: 21 formulas and 2 tables. [DM]

SUB CODE: 08/ SUBM DATE: 06Jul65/ ORIG REF: 002/ OTH REF: 001/ ATD PRESS: 5092

Card 2/2 VMD

L 47569-66

ACC NR: AP6032176

cant in comparison to the amount attributable to internal friction. Further, the influence of the function of the cavity radius variation on the value of internal energy and temperature increase in the medium is also found to be negligible. The only significant temperature increase in the shock front takes place in a narrow soil layer surrounding the explosion cavity. Orig. art. has: 21 formulas and 2 tables. [DM]

SUB CODE: 08/ SUBM DATE: 06Jul65/ ORIG REF: 002/ OTH REF: 001/ ATD PRESS:  
5092

Card 2/2 vmt

SOURCE CODE: UR/0055/66/000/006/0098/0103

ACC NR: AP7000040

AUTHOR: Sagomonyan, A. Ya.

ORG: Department of Gas and Wave Dynamics (Kafedra gazovoy i volnovoy dinamiki)

TITLE: Impact of a supersonic jet on a surface

SOURCE: Moscow. Universitet. Vestnik. Seriya I. Matematika, mekhanika, no. 6, 1966, 98-103

TOPIC TAGS: supersonic flow, gas jet, jet flow, detached shock wave, shock wave structure, flow analysis, flow characteristic.

ABSTRACT: The problem of the impact of a supersonic gas jet on a flat rigid surface is considered. The form and position of a shock wave impinging on a surface, also the average values of gasdynamic parameters of a subsonic flow region between a shock wave and the surface of a body are determined (see Fig). Expressions for velocity components behind the shock wave are derived for supersonic gas jets. The detachment distances of the shock wave at  $x = 0$  and  $x = R$  are determined under certain simplifying assumptions for both supersonic and hypersonic jets. The flow between the shock wave and the surface is analyzed, assuming that: 1) the velocity along the  $x$ -axis is independent of  $y$  and is equal to the values of this component on the shock wave; 2) the velocity along the  $y$ -axis depends linearly on  $y$ , thus it is equal to the value of the component on the shock front and vanishes on the

UDC: 533.7

Card 1/5

SAGONYAN, A. N.

The following is among dissertations of the Leningrad Polytechnic Institute imeni Kalinin:

"Influence of parameters of an excitation system on the static stability of a synchronous generator." 2 July 1953. Various refinements are made in the evaluation of new methods of regulating the excitation of synchronous generators for long-distance transmission. Certain conclusions and recommendations are pointed out which could be useful in developing an excitation system for the generator of the Kuybyshev and other powerful electrical transmission systems.

SO: M-1048, 28 Mar 56

SAGORTSCHEV, B.

Bulgaria

Discussion meeting on the New Methods of Analytical Chemistry of the Chemical Society in the German Democratic Republic on the 1st and 2nd of July 1955.

"Eine neue Elektrolysenmethode"

SO: Chemische Technik, Feb 1956, Unclassified.



COUNTRY : Poland E-1  
CATEGORY :  
ABS. JOUR. : RZKhim, No. 1959, No. 86013  
AUTHOR : Sagortschew, B.  
INST. :  
TITLE : New Advances in the Field of Internal  
Electrolysis  
ORIG. PUB. : Chem. analit., 1958, 3, No 3-4, 291-297

ABSTRACT : A presentation of the theoretical foundations of the method of internal electrolysis and of the history of its development; the authors of basic work on internal electrolysis are listed, and contributions of Soviet chemists are considered in detail. A description is given of the diaphragm method of internal electrolysis, developed by the author (the diaphragm is of collodium, anode -- Zn or other metal of suitable electrode potential, cathode -- Winkler's electrode); The instrument used is simple and reliable in operation. A description is given of procedures developed by the author for determining  $\text{Cu}^{2+}$ ,  $\text{Zn}^{2+}$ ,  $\text{Te}^{+}$ , and  $\text{Mn}^{2+}$ , either previously published (RZKhim, 1957, No 2, 4678; 1958, No 6, 17545) or being published elsewhere. -- V. Mirkin.

SAGORTSCHEW, B. [Zagorchev, B.]; BOZADZIEVA, L. [Bozadzhieva, L.];  
MITROPOLITSKA, E.

Chromatographic separation of iron (III) from chromium (III).  
Doklady BAN 15 no.3:273-276 '62.

1. Predstavleno akad. D. Ivanovym [Ivanov, D.], chlen  
Redaktsionnoy kollegii, "Doklady Bolgarskoy Akademii  
Nauk."

BALUSEV, B. [Balushev, B.]; DANOVA, D.; SAGORTSCHEW, B. [Zagorchev, B.]

Separation of ferri- and copper ions through ion exchange with ammonium fluoride. Doklady BAN 17 no.6:565-567 '64.

1. Vorgelegt von Akademienmitglied D. Ivanov.

L 00153-66 ETC/ENG(m)/ENP(b)/ENP(t) IJP(c) RDW/JD  
ACCESSION NR: AP5025544

BU/0011/65/018/003/0247/0250

24  
23  
B

AUTHOR: Sagortschew, B.; Bojkova, D.; Todorova, N.

TITLE: Chromatographic separation of tellurium and bismuth and the photometric determination of tellurium

SOURCE: Bulgarska akademiya na naukite, Doklady, v. 18, no. 3, 1965, 247-250

TOPIC TAGS: chromatographic analysis, photometric analysis, tellurium, bismuth

ABSTRACT: [German article] Bismuth admixtures in the electrolytic slime usually confuse the photometric determination of tellurium since Bi combines with thiocarbamide to form yellow complexes. Consequently, the authors studied the conditions for the chromatographic separation of tellurium and bismuth resulting in a fast and technologically sufficiently accurate photometric determination of tellurium. Experiments showed that by using the cationite KY-2 and by varying the pH-value of the eluting hydrochloric acid solution one can achieve a completely satisfactory chromatographic separation of the tellurate ions (from  $K_2TeO_4$ ) and the bismuth ions (from  $Bi(NO_3)_3$ ). The average relative error is of the order of +1.6%. Orig. art. has 2 tables.

Card 1/2

L 00153-66

ACCESSION NR: AP5025544

ASSOCIATION: Chemical-Technological Institute, Sofia-Darvenitsa

SUBMITTED: 00

ENCL: 00

SUB CODE: IC, GC

NR REF SOV: 000

OTHER: 003

JPRS

Card <sup>KC</sup> 2/2

SAGOV, V.

On duty before the party congress. Stroitel' no.9:27-28 S '61.  
(MIRA 14:12)

(Construction industry)

SOV/112-57-9-18582

Translation from: Referativnyy zhurnal, Elektrotehnika, 1957, Nr 9,  
pp 67-68 (USSR)

AUTHOR: Sagoyan, A. N.

TITLE: Effect of the Torque-Speed Characteristic of a Turbine on the Steady-State Stability of Long-Distance Electric Transmissions (Vliyaniye momentno-skorostnoy kharakteristiki turbiny na staticheskuyu ustoychivost' dal'nikh elektroperedach)

PERIODICAL: Sb. nauch. tr. Yerevansk. politekhn. in-t, 1956, Nr 12, pp 115-128

ABSTRACT: The effect was investigated of the torque-speed characteristic of a turbine on the stable-operation range of excitation regulators of synchronous-generators that supplied infinite-power busbars through a long-distance transmission line. The double-circuit electric transmission line in question was:  $l = 900$  km,  $x = 0.293$  ohm/km,  $b = 3.93 \times 10^{-6}$ . The station rated power at the sending end was 600 Mw. It has been found that with various regulation parameters (angle, stator current, or voltage) the maximum stable-operation

Card 1/2

SOV/112-57-9-18582

• Effect of the Torque-Speed Characteristic of a Turbine on the Steady-State . . . .

angle of the transmission line does not depend on the turbine torque-speed characteristic; it is the same for all cases. Consideration of the torque-speed characteristic brings about an increased maximum value of the regulator's amplification factor for angles smaller than the maximum angle, and thereby expands the stable-operation range of synchronous-generator excitation regulators.

V.I.U.

Card 2/2



SAGONYAN, A.M.

110-3-13/22

AUTHORS: Sagonyan, A.M., Candidate of Technical Sciences, and  
Adrahyan, K.G., Candidate of Technical Sciences.

TITLE: Self-synchronisation of Low-power Diesel Power Stations  
(Gonosinkhronizatsiya dizel'nykh elektrostantsiy malyo  
moshchnosti)

PERIODICAL: Vestnik Elektromyshlennosti, 1958, Vol.29, No.3,  
pp. 60 - 63 (USSR).

ABSTRACT: Accurate methods of synchronisation are difficult to apply to low-power diesel power stations and little data are available on the parallel operation of mobile diesel power stations. The article gives the results of investigations on the process of self-synchronisation of an electric power station, type ДЭС-30. Usually when self-synchronisation is used, at the instant of paralleling, the generator with the system the rotor circuit is connected to an automatic field suppression resistance, but diesel power stations, types ДЭС-30 and ДЭС-60 are made without automatic field suppression; it is, therefore, recommended instead to connect the rotor to the field circuit. It is not advised to check the slip before paralleling by means of remanent magnetism because this requires considerable rearrangement of the control panel. The slip is best checked by a panel-mounted frequency meter. The method

Card 1/2

110-5-13/22

### Self-synchronisation of Low-power Diesel Power Stations

of carrying out self-synchronisation on these power stations is described. Tests results from synchronisation with an infinitely large system are given in Table 1. After being synchronised more than 1 000 times in this way, the generator was in good condition and no mechanical damage was observed. Fig.2 gives typical oscillograms of self-synchronisation of a diesel-electric power station, type D-30-30 with slips of zero and 4%.

Self-synchronisation between diesel power stations was investigated. The principal data for the most difficult case, when the two generators are of the same power, are given in Table 2. Tests made with no-load on the generators gave the typical oscillograms shown in Fig.4. Tests were also made with inductive and resistive loads. It will be seen from the data in Table 2 that with a resistive load, self-synchronisation is preferably made with a slip of - 6 - 0%.

The method of self-synchronisation is advisable for connecting mobile power stations for parallel operation with a system or with one another. The synchronising currents are not dangerous. Whenever diesel power stations are paralleled, it is desirable simultaneously to apply excitation to the synchronised generator

Card2/3

110-3-13/22

Self-Synchronization of 100-kw Diesel Power Stations

... in order to accelerate the process of self-synchronization.  
The report contains 4 figures and 2 tables.

ASSOCIATION: Yerevan Polytechnical Institute (Yerevanskiy  
Politechnicheskiy institut)

AVAILABLE: Library of Congress

Card 3/3

1. Frequency meters 2. Generators-Synchronization

STENDER, Vladimir Vil'gel'movich, prof., doktor tekhn. nauk. Prini-  
mali uchastiye: KSENZHEK, Oktavian Stanislavovich, dots.,  
kand. tekhn. nauk; RAZINA, Ninel' Fedorovna, dots., kand. tekhn.  
nauk; SAGOYAN, Leonid Nikolayevich, dots., kand. tekhn. nauk;  
SLUTSKIY, Iosif Zinov'yevich, dots., kand. tekhn.nauk; GALINKER,  
I.S., prof., otv. red.; TRET'YAKOVA, A.N., red.; TROFIMENKO, A.S.,  
tekhn. red.

[Applied electrochemistry] Prikladnaia elektrokhimia. Khar'kov,  
Izd-vo Khar'kovskogo gos.univ. im. A.M.Gor'kogo, 1961. 538 p.  
(MIRA 15:6)

(Electrochemistry)

SAGOYAN, L.N.

Behavior of silver in the electrolytic refining of copper.  
Report No.1: Study of the equilibrium between silver and  
cuprous ions in solution by means of radioisotopes. Trudy  
DKHTI no.6:216-223 '58. (MIRA 13:11)  
(Copper) (Electrolysis) (Silver--Isotopes)

SAGOYAN, L.N.

Behavior of silver in the electrolytic refining of copper.  
Report No.2: Study of the electrolytic refining of silver  
containing copper by means of radioisotopes. Trudy ~~IKHTI~~  
no.6:224-231 '58. (MIRA 13:11)  
(Copper) (Silver--Isotopes) . (Electrolysis)

SAGOYAN, L.N.

Mechanism of processes taking place on nickel hydroxide electrodes.  
Izv. AN Arm.SSR.Khim.nauki 17 no.1:3-6 '64. (MIRA 17:4)

1. Dnepropetrovskiy khimiko-tehnologicheskii institut imeni  
Dzerzhinskogo.

KHARKEVICH, V.I.; SAGOYAN, L.N.

Exchange in the system nickel oxide hydrate - water. Ukr. khim.  
zhur. 31 no.10:1052-1054 '65. (MIRA 19:1)

1. Dnepropetrovskiy khimiko-tehnologicheskij institut. Submitted  
April 22, 1964.



ALESHKEVICH, S.A.; SAGOYAN, L.N.

Nickel oxide electrode. Report No. 2. Ukr. khim. zhur. 31  
no. 11:1147-1149 '65 (MIRA 19:1)

1. Dnepropetrovskiy khimiko-tehnologicheskii institut.

SAGOVSKAYA, Yekaterina Nikolayevna; KOROLEV, S.N., redaktor; MAKRUSHIN, V.A.,  
~~tekhnicheskiiy redaktor~~

[Methodological development of arithmetic lessons for class 5]  
Metodicheskie razrabotki urokov po arifmetike V klassa. Leningrad,  
Gos. uchebno-pedagog. izd-vo Ministerstva prosveshcheniya RSFSR,  
Leningradskoe otd-nie, 1956. 260 p. (MIRA 10:1)  
(Arithmetic--Study and teaching)

~~SARGOVSKAYA, Yelena, Nikolayevna~~; KOROLEV, S.N., redaktor; LEONT'YEVA,  
L.A., tekhnicheskiy redaktor

[Arithmetic lesson plans for the sixth grade; based on practice]  
Plany urokov po arifmetike dlia VI klassov; iz opyta raboty.  
Leningrad, Gos.uchebno-pedagog. izd-vo M-va prosv. RSFSR, Leningr.  
otd-nie, 1957. 103 p. (MLRA 10:10)  
(Arithmetic--Study and teaching)

SAGUYAN, A.

85-8-18/18

AUTHOR: Saguyan A., Rear-Admiral

TITLE: Aircraft Carriers and their Use (Avianostsy i ikh ispol'zovaniye)

PERIODICAL: Kryl'ya Rodiny, 1957, Nr 8, pp. 30-31 (USSR)

ABSTRACT: The article, which is said to be based on information gathered from foreign publications, outlines how with the course of time the views on their use have varied since the first appearance of aircraft carriers during World War I, and offers some very general information on certain ships of this type now in commission in the United States and British fleets. The article contains no data of scientific value. Of possible interest may be the manner in which the author formulates the present American and British view on the use of the carriers, and describes the latest tendencies in the development of this type of ships. The pertinent paragraphs of the article are rendered below: "On the basis of the World War II and Korean war experience, the American and British experts consider that, aircraft carrying units

Card 1/3

85-8-18/18

Aircraft Carriers and their Use (Cont.)

represent the main striking force in the matter of accomplishing the various operational or tactical missions assigned to the navy. Under the present-day conditions, with the appearance of atomic and hydrogen weapons, as well as of pilotless means of attack, the importance of the aircraft carriers has increased in as much all these modern means of combat may be based on them. Making use of aircraft carriers, permits to achieve a speedier and more massive concentration of air power. Aircraft carriers can also 'pave the way' for intercontinental bombers, and provide fighterplanes for convoying the latter. Or, else, the carriers may combine the blows of their aircraft with those to be dealt by the intercontinental bombers. In the last few years the tendency in the United States and in Britain was not only to improve the technical and tactical characteristics of the carriers, but also to multiply their types, so as to adapt them to various specific tasks. The carriers are so built as to ensure the proper use of modern combat weapons, especially of atomic weapons and of pilotless means of attack. Various new types of aircraft carriers now being developed include carriers of anti-submarine helicopters, carriers of

Card 2/3

85-8-18/18

Aircraft Carriers and their Use (Cont.)

helicopters designed for the transportation and landing of troops, and so forth, bearing proof as to the aggressive nature of the United States' and Britain's naval doctrines." 2 tables and 2 photos.

AVAILABLE: Library of Congress

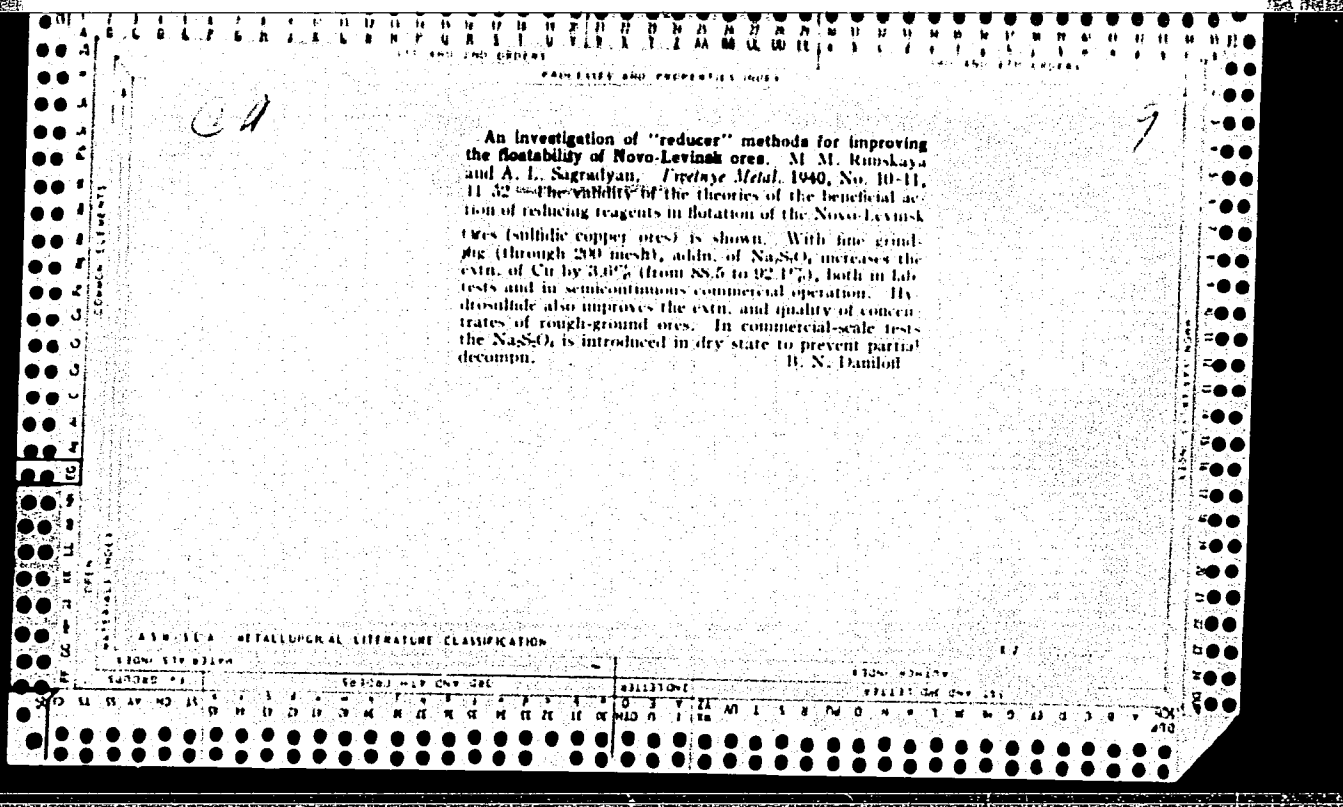
Card 3/3

UTRATIN, I.A.; SAGRAAZHAV, P. (Ulan-Bator)

So-called giant-cell tumors. Vrach. delo no.11:97-99 N '61.  
(MIRA 14:11)

1. Onkologicheskoye otdeleniye tsentral'noy respublikanskoy  
bol'nitsy.

(TUMORS)





SAGRADYAN, A. L.

USSR/Flotation  
Pyridine

Mar/Apr 47

"Use of Heavy Pyridine in the Flotation of Ores of the Degtyarsk Bed," V. M. Arashkevich,  
A. L. Sagradyan, 1 p

"Tsvetnye Metally" No 2 p. 25-26

Discussion of the use of heavy pyridine as a flotation frothing agent in concentration of ores. Short account of experimental and practical results obtained in various concentration plants.

PA 28T54

SAGRADYAN, Aza L'vovna; PIAKSIIN, I.N., redaktor; VERIGO, K.N., redaktor;  
YEZDOKOVA, M.L., redaktor; TRITSKIY, A.V., gornyy inzhener, retsenzent;  
SUVOROVSEKAYA, N.A., kandidat khimicheskikh nauk, retsenzent; VAIN-  
SHTEIN, Ye.B., tekhnicheskyy redaktor.

[Control of technical processes in flotation plants] Kontrol' tekhnologicheskogo protsessa flotatsionnykh fabrik. Pod red. I.N.Plaksina. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po cherno i tsvetnoi metallurgii, 1954. 496 p. (MLRA 8:1)

1. Chlen-korrespondent AN SSSR (for Plaksin)  
(Flotation)

SAGRADYAN, A. L.

137-1958-1-75

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 1, p 13 (USSR)

AUTHORS: Sagradyan, A. L., Nagirnyak, F. I., Nasedkina, Ye. P.

TITLE: Industrial Experience in Perfecting the Use of Selective Flotation of the Copper-Zinc Ores of the Novo-Sibayevsk Deposits (Promyshlennyy opyt ~~osvoeniya~~ selektivnoy flotatsii medno-tsinkovoy rudy Novo-Sibayevskogo mestorozhdeniya)

PERIODICAL: Byul. tsvetn. metallurgii, 1957, Nr 11-12, pp 33-38

ABSTRACT: A procedure has been developed and perfected to assure attainment of the planned level of ore crushing prior to copper flotation. In accordance with the plans for completing the equipment of Nr 3 section, de-sliming has been introduced into the ore-dressing procedure. The most important special feature of the use of reagents in the flotation is that the ore is crushed in a weakly alkaline medium containing not more than 5 to 15 g/m<sup>3</sup> of CaO in the classifier tailings. Depression of ZnS and FeS<sub>2</sub> is accomplished by feeding Na<sub>2</sub>S, ZnSO<sub>4</sub> and NaCN into the crushing process, the bulk of the depressors being delivered at the moment when the grains are initially unlocked. When the process has attained

Card 1/2

137-1958-1-75

Industrial Experience in Perfecting the Use of Selective Flotation (cont.)

stability, lower amounts of NaCN should be charged. The Na<sub>2</sub>S has to be metered throughout the process, as its consumption depends upon the content of water-soluble salts in the ore. The best collector proved to be butyl aeroflot in a mixture with butyl xanthogenate. The production indices were greatly influenced by the sequencing procedure used in turning on the flotation machines, the rate of output of the various sections, and the composition of the ore. When the procedure involving use of hydrocyclones using middlings from bowl-type classifiers was used, the hydrocyclone product sizes for feed to the flotation process corresponded to the design specification - 200 mesh.

A. Sh.

1. Copper ores--Flotation    2. Zinc ores--Flotation    3. Ores  
--Processing

Card 2/2

SAGRADYAN, A.

Outlook for over-all utilization of ores from the Kafan deposit.  
Prom.Arm. 4 no.9:53-57 S '61. (MIRA 14:11)

1. Nauchno-issledovatel'skiy gornometallurgicheskiy institut  
Sovnarkhoza Armyanskoy SSR.  
(Kafan region--Ores)

SAGRADYAN, A.L.

Changes in the mucous membrane of the oral cavity (during the dynamics of disease) in patients with epidemic hepatitis and acute dysentery. Soob. AN Gruz. SSR 32 no. 1:221-228 0 '63.  
(MIRA 17:9)

1. Tbilisskiy gosudarstvennyy meditsinskiy institut. Predstavleno akademikom K.D.Eristavi.

SAGRADYAN, Aza L'vovna, kand. tekhn. nauk; SUVOROVSKAYA, Natal'ya  
Aleksandrovna, doktor khim. nauk; SIMONOV, K.A., otv.red.;  
MAKRUSHINA, Ye.A., otv. red.

[Control of the technological process in flotation plants]  
Kontrol' tekhnologicheskogo protsessa flotatsionnykh fab-  
rik. Izd.2., perer. i dop. Moskva, Nedra, 1964. 426 p.  
(MIRA 18:2)

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dorozhnogo komiteta professional'nogo soyuza rabotnikov zhelez-  
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To you, party, we dedicate our work and creativeness. Sov.  
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17  
Raw-material base for development of porcelain industry  
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G. M. Kosolapoff

PM  
PM

15-57-8-11321  
Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 8,  
p 173 (USSR)

AUTHOR: Sagunov, V. G.

TITLE: Bentonite Clays of the Kara-Kalpakskaia ASSR and the  
Eastern Aral Region (Bentonitovyye gliny Karakalpakii  
i Vostochnogo Priaral'ya)

PERIODICAL: Izv. AN KazSSR, ser. geol. 1956, Nr 25, pp 48-56

ABSTRACT: The Khodzhakul'skoye mestoizhdeniye (deposit) of  
bentonite lies 12 km from the Karatau quay on the Amu  
Darya River. It is correlated with the faunal level  
of the marls of the Eocene epoch. The deposits are  
traced from the Sultan-uiz-dag Ridge along the right  
bank of the Amu Darya River to the eastern Aral  
region. The bentonites compose three seams 5 cm to  
25 cm thick. Their quality is good. They have the  
following chemical composition (in weight-percent):

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15-57-8-11321

Bentonite Clays of the Kara-Kalpakskaya ASSR (Cont.)

H<sub>2</sub>O hygroscopicity coefficient 10.9; SiO<sub>2</sub> 49.14, Fe<sub>2</sub>O<sub>3</sub> 2.00, Al<sub>2</sub>O<sub>3</sub> 17.08, CaO 3.19, MgO 4.08, SO<sub>3</sub> 3.29, Na<sub>2</sub>O + K<sub>2</sub>O 3.18, others 8.26; total 101.12. Apart from the montmorillonite (95 to 98 percent), the clay substance contains gypsum (1 to 3 percent), limonite (1 to 2 percent), very small granules of quartz (0.25 to 0.01  $\frac{\text{mm}}$  and smaller), calcite, and also bands of biotite and muscovite. To serve the needs of the Kara-Kalpakskaya ASSR and the adjacent regions of Turkmenkaya SSR, the author recommends combined mining operations in the Khodzhakul'skoye deposit as follows: mining of clay gypsum for use in gypsum binders, mining of bentonite clay for refining of cottonseed oil, and mining of phosphorites for use in the phosphoric meal fertilizer for local use. The village of Karatau should be made a large industrial center for the production of brick, lime, alabaster, building materials from gypsum binders, and phosphoric fertilizer; mining of bentonite clays, quarry stone and dimension stone, sand, and gravel should also be done here. The locations of raw materials for manufacture of all the enumerated nonmetallic

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15-57-8-11321

Bentonite Clays of the Kara-Kalpakskaya ASSR (Cont.)

building materials have been surveyed and are found at one to three kilometers from the village.

Card 3/3

V. P. Yeremeyev

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