

S/179/60/000/04/018/027
E191/E181

Formulation and Method of Solution of the Contact Pressure Problem
between Elastic Bodies Bounded by Developpable Surfaces

are transformed into non-dimensional form. To obtain a unique solution for the equations, it is necessary to add equations which express the minimum properties of contact pressure stress distributions. The equations are further transformed for use by computer techniques. The integral equations are replaced by algebraic equations with a weak non-linearity and the minimum value equations are also replaced by a system of non-linear algebraic equations. It follows that several real branches of the solution exist. A procedure for solving by an iteration process is suggested, in which the desired branch is selected by scanning. There are 5 Soviet references. ✓

SUBMITTED: April 13, 1960

Card 2/2

KIL'CHEVSKIY, N.A. [Kil'chevs'kyi, M.O.]

"Direct" methods for solving Hertz' contact problem. Dop. AN URSR
no.8:1031-1034 '60. (MIRA 13:9)

1. Kiyevskiy politekhnicheskii institut. Predstavleno akademikom
AN USSR G.N. Savinym.

(Elasticity)

KIL'CHEVSKIY, N.A. [Kil'chevs'kiy, N.O.]

Dynamic contact compression and collision of elastic bodies. Dop.
AN URSR no.11:1476-1479 '60. (MIRA 13:11)

1. Kiyevskiy politekhnicheskii institut. Predstavleno akademikom AN
USSR G.N.Savinym.
(Elasticity)

MUSHTARI, Kh.M., red.; ALUMYAE, N.A., red.; BOLOTIN, V.V., red.;
VOL'MIR, A.S., red.; GANIYEV, N.S., red.; GOL'DENVEYZER,
A.L., red.; ISANBAYEVA, F.S., red.; KIL'CHEVSKIY, N.A.,
red.; KORNISHIN, M.S., red.; LUR'YE, A.I., red.; SAVIN,
G.N., red.; SACHENKOV, A.V., red.; SVIRSKIY, I.V., red.;
SURKIN, R.G., red.; FILIPPOV, A.P., red.; ALEKSAGIN, V.I.,
red.; SEMENOV, Yu.P., tekhn. red.

[Proceedings of the Conference on the Theory of Plates and
Shells] Trudy Konferentsii po teorii plastin i obolochek, Ka-
zan', 1960. Kazan', Akad. nauk SSSR, Kazanskiy filial, 1960.
(MIRA 15:7)
426 p.

1. Konferentsiya po teorii plastin i obolochek, Kazan', 1960.
2. Moskovskiy energeticheskiy institut (for Bolotin).
3. Kazanskiy khimiko-tehnologicheskiy institut (for Ganiyev).
4. Institut mekhaniki Akademii nauk USSR (for Kil'chevskiy).
5. Kazanskiy gosudarstvennyy universitot (for Sachenkov).
6. Kazanskiy filial Akademii nauk SSSR (for Svirskiy).
(Elastic plates and shells)

MIL'CHEVSKIY, N.A. [Mil'chevskiy, N.A.] (Kiev)

Vibration processes during collisions of elastic solids.
Prikl. Mekh. 7 no. 1:10-14, 1971. (NIA 140)

1. Invariant of collision.
(Elastic solids--Vibration)

KIL'CHEVSKIY, N.A. [Kil'chevs'kyi, M.O.] (Kiyev); KONSTANTINOV, A. Kh.
[Konstantynov, A. Kh.] (Kiyev); PROTSENKO, O.P. (Kiyev)

Theory of longitudinal vibrations of a system of material points
connected with springs. Prykl.mekh. 7 no.3:233-238 '61.
(MIRA 14:6)

1. Institut mekhaniki AN USSR.
(Vibration)

KIL'CHEVSKIY, N.A. [Kil'chevs'kyi, M.O.] (Kiyev); KOMISSAROVA, G.L.
[Komisarova, H.L.] (Kiyev); TKACHUK, G.I. [Tkachuk, H.I.]

Longitudinal vibrations of systems consisting of similar elements.
Prykl.mekh. 7 no.6:609-615 '61. (MIRA 14:11)

1. Institut mekhaniki AN USSR.
(Elastic solids--Vibration)

KIL'CHEVSKIY, N.A. [Kil'chevskiy, M.O.]; PUTYATA, T.V.; FRADLIN, B.N.

Illia Iakovlevych Shtaerman (on the occasion of his 70th birthday).
Prykl.mekh. 7 no.6:681-682 '61. (MIRA 14:11)
(Shtaerman, Illia Iakovlevich, 1891-)

Kil'chevskiy, N.A.
BOHOVSKIY, P.V.

PHASE I BOOK EXPLOITATION

SOV/6206 25

Konferentsiya po teorii plastin i obolochek. Kazan', 1960.

Trudy Konferentsii po teorii plastin i obolochek, 24-29 oktyabrya 1960. (Transactions of the Conference on the Theory of Plates and Shells Held in Kazan', 24 to 29 October 1960). Kazan', [Izd-vo Kazanskogo gosudarstvennogo universiteta] 1961. 426 p. 1000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Kazanskiy filial. Kazanskiy gosudarstvennyy universitet im. V. I. Ul'yanova-Lenina.

Editorial Board: Kh. M. Mushtari, Editor; F. S. Isanbayeva, Secretary; N. A. Alamyae, V. V. Bolotin, A. S. Vol'mik, N. S. Ganiyev, A. L. Gol'denveyzer, N. A. Kil'chevskiy, M. S. Kornishin, A. I. Lur'ye, G. N. Savin, A. V. Sachenkov, I. V. Svirskiy, R. G. Surkin, and A. P. Filippov. Ed.: V. I. Aleksagin; Tech. Ed.: Yu. P. Semenov.

PURPOSE: The collection of articles is intended for scientists and engineers who are interested in the analysis of strength and stability of shells.

Card 1/14

Transactions of the Conference (Cont.)

SOV/6206 ⁷⁵

COVERAGE: The book is a collection of articles delivered at the Conference on Plates and Shells held in Kazan' from 24 to 29 October 1960. The articles deal with the mathematical theory of plates and shells and its application to the solution, in both linear and nonlinear formulations, of problems of bending, static and dynamic stability, and vibration of regular and sandwich plates and shells of various shapes under various loadings in the elastic and plastic regions. Analysis is made of the behavior of plates and shells in fluids, and the effect of creep of the material is considered. A number of papers discuss problems associated with the development of effective mathematical methods for solving problems in the theory of shells. Some of the reports propose algorithms for the solution of problems with the aid of electronic computers. A total of one hundred reports and notes were presented and discussed during the conference. The reports are arranged alphabetically (Russian) by the author's name.

Card 2/14

Transactions of the Conference (Cont.)

SOV/6206

2

Grigoronko, Ya. M. On the Nonsymmetrical State of Stress of a Conical Shell of Linearly Variable Thickness

142

Dlugach, M. I. Uniqueness Conditions of Displacements in Multiply Connected Regions and Shells With Openings

149

Il'gambov, M. A., and Kh. M. Mushtari. Some Problems of Static and Dynamic Stability of Sandwich Plates

155

Kan, S. N. Thermal Stresses in a Circular Conical Shell

164

Kil'chevskiy, N. A. Approximate Methods for Investigating Equilibrium and Vibration of Shells as "Discrete Continual" Systems

170

Kovalenko, A. D. Solution in Special Functions of Unsymmetrical-Deformation Problems of Shallow Spherical and Conical Shells

177

Card 7/14

SAVIN, G.N., otv.red.; ADADUROV, R.A., red.; ALUMYAE, N.A., red.;
AMBARTSUMYAN, S.A., red.; AMIRO, I.Ya., red.; BOLOTIN, V.V., red.;
VOL'MIR, A.S., red.; GOL'DENVEYZER, A.L., red.; GRIGOLYUK, E.I.,
red.; KAN, S.N., red.; KARMISHIN, A.V., red.; KIL'CHEVSKIY, N.A.,
red.; KISELEV, V.A., red.; KOVALENKO, A.D., red.; MUSHTARI, Kh.M.,
red.; NOVOZHILOV, V.V., red.; UMANSKIY, A.A., red.; FILIPPOV, A.P.,
red.; LISOVETS, A.M., tekhn. red.

[Proceedings of the Second All-Union Conference on the Theory of
Plates and Shells] Trudy Vsesoiuznoi konferentsii po teorii plastin i
obolochek. 2d, Lvov, 1961. Kiev, Izd-vo Akad.nauk USSR, 1962. 581 p.

1. Vsesoyuznaya konferentsiya po teorii plastin i obolochek. 2,
Lvov, 1961. (MIRA 15:12)

(Elastic plates and shells)

S/879/62/000/000/004/088
D234/D308

AUTHOR: Kil'chevskiy, N. A. (Kiev)

TITLE: Analysis of various methods of reduction of three-dimensional problems of the theory of elasticity to two-dimensional ones, and an investigation of the formulation of boundary problems of the theory of shells

SOURCE: Teoriya plastin i obolochek; trudy II Vsesoyuznoy konferentsii, L'vov, 15-21 sentyabrya 1961 g. Kiev, Izd-vo AN USSR, 1962, 58-69

TEXT: The author reviews four methods of reduction: 1) Reduction by means of power series expansion; 2) reduction by means of expansion in terms of special functions; 3) reduction by means of a general dynamical equation; 4) semi-inverse method. The purpose of the article is the classification of the methods of reduction. There are 20 references.

Card 1/1

KIL'CHEVSKIY, N.A. [Kil'chevs'kyi, M.O.]; SELEZOV, I.T.; NIKULINSKAYA, S.N.
[Nikulins'ka, S.M.]; PAL'KO, L.S.

Water hammer in an elastic pipeline. Dop. AN URSR no.2:165-168 '62.
(MIRA 15:2)

1. Institut mekhaniki AN USSR. 2. Chlen-korrespondent AN USSR
(for Kil'chevskiy, N.A.).

(Water hammer)

PHASE I BOOK EXPLOTTATION

SOV/6571

Kil'chevskiy, Nikolay Aleksandrovich

Osnovy analiticheskoy mekhaniki obolochek (Fundamentals of Analytical Mechanics of Shells) Part 1. Kiev, Izd-vo AN USSR, 1963 p. Errata slip inserted. 10,000 copies printed.

Sponsoring Agency: Akademiya nauk Ukrainskoy SSR. Institut mekhaniki.

Resp. Ed.: A. D. Kovalenko, Academician, Academy of Sciences of the USSR; Ed.: Yu. A. Lupan; Tech. Ed.: O. A. Kodashovich.

PURPOSE: This book is intended for scientific workers, aspirants, and students in schools of higher education working in elastic shell theory. A university-level knowledge is presumed in mathematical analysis, theoretical mechanics, theory of elasticity, and classical theory of shells.

Card 1/13

APPROVED FOR RELEASE: 06/13/2000 (CIA-RDP86-00513R000722520012-0)
Fundamentals of Analytical Mechanics (Cont.)

COVERAGE: Analytical methods of setting up elastostatic and elastodynamic systems of differential and integral equations of the theory of shells are discussed without utilizing any auxiliary assumptions concerning shell strains, including the Kirchhoff-Love hypothesis. Methods of solving systems of integral equations by reduction to systems of ordinary differential and algebraic equations are also presented. The familiar hypotheses of the classical theory of shells are not applied since the author proceeds from general principles in the theory of elasticity and receives more exact differential equations which are of higher order than the equations of the classical theory of shells. The tensor analysis methods are widely used because of their utmost suitability for building up the analytical mechanics of shells. These methods are used to prepare a base for programming the numerical solution of shell-theory problems on computers. The book is the first part of an investigation of shell theory; in the second part, application of the theory to particular problems will be

Card 2/13

SAVIN, Guriy Nikolayevich, doktor fiz.-matem. nauk, akademik;
KIL'CHEVSKIY, Nikolay Aleksandrovich, doktor fiz.-
matem.nauk; PUTYATA, Tat'yana Vasil'yevna, kand. fiz.
matem.nauk; LAVRINENKO, P.P., kand. fiz.-mat. nauk,
retsenzent; BONDARENKO, O.P., inzh., red.izd-va;
STARODUB, P.A., tekhn. red.

[Theoretical mechanics] Teoreticheskaya mekhanika. Pod
obshchei red. G.N.Savina. Izd.2., dop. i perer. Kiev,
Gostekhizdat USSR, 1963. 610 p. (MIRA 17:2)

1. Akademiya nauk Ukr.SSR (for Savin).

~~KILICHENSKIY, N. A.~~ [Kil'chevs'kyi, M. O.] (Kiyev); KIL'CHINSKAYA,
G. A. [Kil'chyns'ka, H. O.] (Kiyev); REMIZOVA, M. I. (Kiyev)

Analytical theory of shells. Prykl. mekh. 9 no.1:3-10 '63.
(MIRA 16:4)

1. Institut mekhaniki AN UkrSSR i Kiyevskiy politekhnicheskij
institut.

(Elastic plates and shells)

KIL'CHEVSKIY, N. A. [Kil'chevs'kyi, N. A.] (Kiyev)

Geometry of the dynamics of nonholonomic systems and its applications. Prykl. mekh. 9 no.3:233-237 '63.
(MIRA 16:4)

1. Institut mekhaniki AN UkrSSR.

(Relativity(Physics))
(Field theory)

KIL'CHEVSKIY, N.A. [Kil'chevs'kyi, M.O.] (Kiyev); PETRENKO, M.P. (Kiyev);
BABIČH, D.V. [Babych, D.V.] (Kiyev)

Longitudinally radial vibrations of a system of cylindrical shells with concentrated masses in joints. Prykl. mekh. 9 no.6:677-683 '63. (MIRA 16:12)

1. Institut mekhaniki AN UkrSSR.

KIL'CHEVSKY, N.A. (Kiev)

"Continuum problems of analytic mechanics"

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

KIL'CHEVSKY, N.A.; KONSTANTINOV, A.KH.; REMIZOVA, N.I. (Kiev)

"Solutions of dynamic boundary value problems of the theory of shells ensuing from the integrodifferential equations of motion".

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

KIL'CHEVSKIY, N.A. [Kil'chevs'kyi, M.O.]; KONSTANTINOV, A.Kh. [Konstantinov, A.Kh.]

Forced vibrations of a thick conic panel in the nonclassical formulation . Dop. AN URSR no.2:194-197 '64. (MIRA 17:5)

1. Institut mekhaniki AN UkrSSR. 2. Chlen-korrespondent AN UkrSSR (for Kil'chevskiy).

IZDEBSKAYA, G.A. [Izdebs'ka, H.A.]; KIL'CHEVSKIY, N.A. [Kil'chevs'kyi, M.O.]

Convergence of the collocation method and optimal selection of the collocation points as applied to the integrodifferential equations of equilibrium in the theory of plates. Dop. AN URSSR no.4:469-472 '64.
(MIRA 17:5)

1. Institut mekhaniki AN UkrSSR i Kiyevskiy politekhnicheskii institut. 2. Chlen-korrespondent AN UkrSSR (for Kil'chevskiy).

L 52209-65 ENT(l)/ENP(m)/EYK(n)-2/SAR(d) Pt-1/Pt-1 WW

ACCESSION NR: AP5017072

UR/0198/64/010/005/0477/0483

37
36

AUTHOR: Kilichovs'kyi, M. O. (Kilichovskiy, M. A.) (Kiev); Sherslyva'ka, N. N. (Shepelovskaya, N. N.) (Kiev)

TITLE: Approximate solutions of certain hydroelastic problems

SOURCE: *Prykladna mekhanika*, 7, 10, no. 5, 1964, 477-483

TOPIC TAGS: fluid mechanics, hydrodynamics, surface geometry, differential equation, integral equation

Abstract: A method in which a shell-liquid system is approximately replaced by a system having a finite number of degrees of freedom and allowing the use of the Euler-Lagrange principle has been studied. After analyzing the constraints imposed on the system, the authors show that from the conditions at the free surface there follows an equation of non-holonomic constraint which does not allow the application of the classical Ostrogradskiy-Hamilton and Euler-Lagrange principles. However, by averaging over the volume enclosing the possible locations of the free surface, the above-mentioned constraint is replaced by a geometric constraint. This simplification makes possible the elimination (using the energy integral) of the relative velocity components (within the nonviscous fluid) from the

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I. 52203-55

ACCESSION NR: AP5017072

expression for the kinetic energy of the system. This, in turn, makes possible the use of the Euler-Lagrange principle in place of the Ostrogradskiy-Hamilton principle. The resulting system of integral-differential equations is a generalization of the well-known Jacobi equations.

Orig. art. has 4 formulas.

ASSOCIATION: Instytut mekhaniki AN URSS (Mechanics Institute, AN URSS)

SUBMITTED: 18oct63

ENCL: 00

SUB CODE: ME, MA

NO REF SQ: 005

OTHER: 000

JPRS

llc
Card 2/2

L 24198-65 INT(d)/INT(h)/INT(w)/INT(d)/INT(v)/INT(k)/INT(h) PF-ll/Pab EM
ACCESSION NR: AF5000112 B/0198/64/010/066/0660/0665

AUTHOR: Kilicheva'ky, M. O. (Kilicherskiy, M. A.) (Kiev); Petrenko, M. P. (Kiev); Barsuk, P. P. (Kiev); Babych, D. V. (Babich, D. V.) (Kiev)

TITLE: Approximate longitudinal and radial vibration analysis of a system of 3 cylindrical shells partly liquid filled 26 B

SOURCE: Fizicheska mekhanika, v. 10, no. 6, 1964, 660-665

TOPIC TAGS: cylindrical shell, cylindrical shell vibration, liquid filled shell, oscillatory system, elasticity theory

ABSTRACT: The longitudinal and radial vibrations of a system of cylindrical shells partly filled with an inviscid incompressible liquid are investigated. The case of potential motion of the liquid is analyzed. For setting up the equations of motion the authors used the energy methods of elasticity theory and the variational principles of analytical mechanics. In the examined numerical example, consideration of the effect of the liquid and of the elasticity of the bottoms leads to a diminution of basic natural frequency by 6%, but neglect of radial displacements of shells leads to an increase in natural frequency of 18%. Orig. art. has: 18 formulas.

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7. 24198-65
ACCESSION NR: AP5000112
ASSOCIATION: Institut matematiky AN UZSSR / Institute of Mechanics, AN UZSSR
SUBMITTED: 03Dec65 ENCL: 00 SUB CODE: MR
NO REF SOV: 006 OTHER: 000

Card 2/2

L 29132-65 EWT(d)/EWT(m)/EWP(n)/EWA(d)/EWP(y)/EWP(x)/EWA(h) P1-4/Pab EM/RM
ACCESSION NR: AP5000610 B/0021/64/000/011/1460/1463

AUTHOR: KIL'CHEVA'KIVY, M. O. (KIL'CHEVA'KIVY, M. A.) (Corresponding member AN UkrSSR)

TITLE: The Green-Volterra formula in nonlinear elasticity theory

SOURCE: AN UkrSSR, Dopovidi, no. 11, 1964, 1460-1463

TOPIC TAGS: shell structure stability, elasticity theory, Green formula, Volterra equation, integral equation

31
30
B

ABSTRACT: The author extends earlier results (DAN USSR, 1964, 1963; Osnovy analiticheskoy mekhaniki obolochek /Principles of Analytic Mechanics of Shells/, Izd-vo AN UkrSSR, 1963) to include the space-time manifold, and obtains a generalization of the Green-Volterra formula of linear elasticity theory to include an anisotropic elastic medium with geometrical and physical nonlinearities. The result is obtained in the form of an integral equation that is derivable from the properties of a four-dimensional invariant analogous to the known invariant of elasticity theory from which the reciprocity of work is derived. To construct this invariant it is necessary to supplement the finite-strain tensor of rigid-

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L 29132-65

ACCESSION NR: AP5000610

body mechanics with additional four-dimensional linear components. Orig. art.
has: 21 formulas.

ASSOCIATION: Instytut mekhaniki AN UkrSSR (Institute of Mechanics AN UkrSSR)

SUBMITTED: 06Dec63

ERIC: 00

SUB CODE: AS, MA

NR REF SOV: 00

OTHER: 000

Card 2/2

I 15174-66 EWT(d)/EWT(m)/EWP(w)/EWP(v)/EWP(k)/EWA(h)/ETC(m)-6 LJP(c) NW/EM
ACC NR: AP6001240 (N) SOURCE CODE: UR/0198/65/001/011/0001/0006

AUTHOR: Kil'chevkiy, N. A. (Kiev); Nikulinskaya, S. N. (Kiev) 33

ORG: Institute of Mechanics, AN SSSR (Institut mekhaniki AN SSSR) B

TITLE: On the axisymmetric mode of buckling of a circular cylindrical shell 26

SOURCE: Prikladnaya mekhanika, v. 1, no. 11, 1965, 1-6

TOPIC TAGS: cylindrical shell, shell buckling, axisymmetric buckling, axially compressed cylindrical shell

ABSTRACT: A critical analysis of the existing methods used in solving the problem of axisymmetric buckling of circular cylindrical shells is presented. The classical solution (by R. Lorenz, S. P. Timoshenko, and R. Southwell about 50 years ago) of the problem of static buckling of a circular cylindrical shell under longitudinal compression forces uniformly distributed along its face edges was analyzed by N. A. Kil'chevskiy (PMM, vol, 6, 1942) who introduced essential corrections to it. The results of this analysis are now repeated and an additional discussion on this subject is given. It is proven that the set of quasi-linear boundary conditions developed in this analysis stipulates the lowest possible critical (buckling) value of the system of longitudinal compressive forces acting upon the shell. The strong dependence of the buckling forces on the boundary conditions is discussed in detail and the effect of nonlinearities associated with boundary conditions is pointed out. The weak

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L. 15174-66
ACC NR: AP6001240

effect of boundary conditions on the buckling process which were observed during experimental investigations is mentioned, and hopes are expressed that the development of the dynamic theory of stability will lead to removal of such contradictions. Orig. art. has: 1 figure, 22 formulas, and 1 table. [VK]

SUB CODE: 20/ SUBM DATE: 19May65/ ORIG REF: 003/ OTH REF: 001/ ATD PRESS: 4/90

Card

2/2

L 14433-66 EWT(d)/EWT(m)/EWP(w)/EWP(v)/EWP(k)/EWA(h)/ETC(m)-6 IJP(c) WW/EM
ACC NR: AP6002644 SOURCE CODE: UR/0021/65/000/011/1438/1443

19
13

AUTHOR: Kil'chevs'kyv, M. O. -- Kil'chevskiy, N. A. (Corresponding member AN UkrSSR);
Komisarova, H. L. -- Komissarova, G. L.; Martynenko, V. S.

ORG: Institute of Mechanics, AN UkrSSR (Instytut mekhaniky AN URSR)

TITLE: Nonstationary motion of a viscous liquid in a thin elastic cylindrical tube

SOURCE: AN UkrRSR. Dopovidi, no. 11, 1965, 1438-1443

TOPIC TAGS: hydrodynamics, viscous flow, unsteady flow

ABSTRACT: The authors investigated theoretically the nonstationary motion of viscous incompressible liquids through deformable cylindrical tubes with the law of motion prescribed at the end cross sections of the tube. Tubes under consideration have large critical Reynolds numbers and the wall thickness-to-diameter ratio of the tube is small. It is assumed that at each point under consideration the velocity of the liquid is parallel to the axis of the tube. The solution is in the form of an approximate expression through special kinds of polynomials the coefficients of which are found by means of the least square method. Orig. art. has: 35 formulas.

SUB CODE: 20 / SUBM DATE: 12Feb65 / ORIG REF: 001

Card 1/1 BVK

2

ACC NR: AR6019264

(N)

UR/0124/00/002/V022/V022

AUTHOR: Killechevskiy, N. A.; Konstantinov, I. I.; Remizova, N. I.

TITLE: Solutions of dynamic boundary value problems of shell theory developed from integro-differential equations of motion

SOURCE: Ref. zh. Mekhan, Abs. 2V152

REF SOURCE: Sb. Dinamika sistem tverdykh i zhidkikh tel. Kiyev, 1965, 3-20

TOPIC TAGS: shell theory, boundary value problem, integral equation, partial differential equation

TRANSLATION: An analysis is made of works dealing with various methods for deriving and using integral and integro-differential equations of shell dynamics. Three ways of deriving the equations are distinguished: the method of directly applying three-dimensional boundary value problems of the theory of elasticity to two-dimensional problems of shell theory without introducing auxiliary Kirchhoff-Liav hypotheses; a method based on the application of the theorem on mutuality of work in the two-dimensional variant in combination with the Kirchhoff-Liav hypotheses; and the method of equivalent inversion of the systems of equations of classical shell theory. Attention is concentrated mainly on solutions of concrete boundary value problems. An example is given of the dynamics of a thick plate, rectangular in plan, supported at the corners on smooth

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ACC NR: AR6019264

"APPROVED FOR RELEASE: 06/13/2000" CIA-RDP86-00513R000722520012-0"

absolutely rigid supports, under the action of a concentrated load applied at an arbitrary point and directed along the normal to the mean surface of the plate. Also considered is the analogous problem for a thick conic panel. Numerical methods are discussed for the solution of systems of integro-differential equations, in particular, methods based on the introduction of focused nuclei and on the method of collocation, allowing the application of high-speed calculating machines. 34 references.

SUB CODE: 12

Card 2/2

L 14010-67

ACC NR: AP6036453

magnitude is given. From this formula, the time of the impact duration is derived with effects of the sphere size and of its elastic characteristics taken into account. It is shown that for anisotropic plates, these effects and thus the impact duration also depend on the side ratio of the plate (the duration increases with increasing side ratio), and this dependence is plotted in a diagram. Orig. art. has: 1 figure and 18 formulas.

SUB CODE: 20/ SUBM DATE: 22Feb66/ ORIG REF: 007/ ATD PRESS: 5105

Card 1/1

KIL'CHEVSKIY, V.K.
KIL'CHEVSKIY, V.K.

Give more consideration to specific conditions on collective farms
in introducing and putting crop rotations into practice. Zemledelia
5 no.5:28-31 Ny '57. (MLRA 10:7)
(White Russia--Rotation of crops)

S/879/62/000/000/034/088
D234/D308AUTHOR: Kil'chinskaya, G. A. (Kiev)

TITLE: Mathematical formulation of the generalized dynamical problem of thermoelasticity for flexible shells

SOURCE: Teoriya plastin i obolochek; trudy II Vsesoyuznoy konferentsii, L'vov, 15-21 sentyabrya 1961 g. Kiev, Izd-vo AN USSR, 1962, 227-231

TEXT: Taking into account the effect of volume expansion on temperature field, the author derives a system of 4 differential equations: 1) equation of motion, 2) equation of simultaneous deformations, 3) two equations for determining the force due to temperature. For the case of thermal shock a characteristic equation

$$(m_1^2 - n_1^2 - i_1) \left\{ (m_1^2 - n_1^2 - i\omega_1) \left[(m_1^2 - n_1^2)^4 + \frac{32}{3} m_1^4 - \right. \right.$$

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Mathematical formulation of ...

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$$\begin{aligned}
 & - \frac{32}{3h^2} \left(\frac{\mu}{c_B} \right)^2 \omega_1^2 (m_1^2 - n_1^2)^2 \left[+ \epsilon_1 \omega_1 \left[m_1^2 (m_1^2 - n_1^2) - \frac{4}{3} (m_1^2 - n_1^2)^4 \right] \right] - \\
 & - \frac{4}{3} \epsilon_1 \omega_1 (m_1^2 - n_1^2)^3 = 0 \qquad (10)
 \end{aligned}$$

is obtained, which is of a higher order than that obtained by Chadwick and Sneddon (J. Mech. and Phys. Solids, 6, no. 3, 1958).

Card 2/2

ACCESSION NR: AT 4010242

S/3052/63/000/003/0132/0141

AUTHOR: Kil'chinskaya, G. A. (Kiev)

TITLE: The thermal resonance of plastic shells in a variable temperature field

SOURCE: AN UkrSSR. Institut mekhaniki. Teplovy*ye napryazheniya v elementakh konstruktsiy; nauchnoye soveshchaniye. Doklady*, no. 3, 1963, 132-141

TOPIC TAGS: thermal resonance, plastic shell, plastic shell thermal resonance, supersonic flow

ABSTRACT: The aim of the investigation was to determine the influence of a variable temperature field on the stability of flexible shells, showing how it changes the modulus of elasticity and the temperature coefficient of expansion and defines the conditions for thermal resonance under dynamic loads. The following limitations were included in the investigation: 1. The reverse thermoelastic effect was not considered. 2. Temperature variation was linear with depth and periodic with time. 3. Poisson's ratio was assumed constant for all temperatures. 4. The linear coefficient of expansion and the modulus of elasticity were linearly dependent on the temperature. The differential equations for flexible shells evolved

Card 1/2

ACCESSION NR: AT4010242

by means of the Kirchoff theory served as a basis for the calculations. Solution of these equations showed the influence of inertia. Orig. art. has: 30 formulas and 1 table.

ASSOCIATION: Institut mekhaniki AN UkrSSR (Mechanics Institute)

SUBMITTED: 00

DATE ACQ: 17Jan64

ENCL: 00

SUB CODE: AP

NO REF SOV: 008

OTHER: 002

Card 2/2

KIL'CHEVSKIY, N. A. [Kil'chevs'kyi, N. O.] (Kiyev); ~~KIL'CHINSKAYA,~~
G. A. [Kil'chyns'ka, H. O.] (Kiyev); REMIZOVA, N. I. (Kiyev)

Analytical theory of shells. Prykl. mekh. 9 no.1:3-10 '63.
(MIRA 16:4)

1. Institut mekhaniki AN UkrSSR i Kiyevskiy politskhnicheskiy
institut.

(Elastic plates and shells)

ACCESSION NR: AT4039434

S/2879/64/000/000/0521/0528

AUTHOR: Kil'chinskaya, G. A. (Kiev)

TITLE: The dynamic instability of circular cylindrical shells under the influence of longitudinal forces of compression with thermoparametric resonance

SOURCE: Vsesoyuznaya konferentsiya po teorii obolochek i plastin. 4th, Yerevan, 1962, Teoriya obolochek i plastin (Theory of plates and films); trudy* konferentsii, 1964, 521-528

TOPIC TAGS: shell, cylindrical shell, shell stability, thermal expansion, dynamic instability, compression, longitudinal compression, resonance, thermoparametric resonance, linear expansion, elasticity

ABSTRACT: The purpose of the present article was to study the stability of cylindrical shells subjected to the joint action of periodic (in time) longitudinal compressive forces and temperature fields with the coefficient of linear thermal expansion and the elasticity

Card 1/5.

ACCESSION NR: AT4039434

modulus dependent on the temperature. The following simplifying assumptions were made:
 1) the reverse thermo-elastic effect was not considered; 2) the elasticity modulus E and
 the linear thermal expansion coefficient α are assumed to be linear functions of the
 temperature

$$E = E_0 - E'T; \quad \alpha = \alpha_0 + \alpha'T; \quad (1)$$

where T is the current temperature coordinate, α_0 and E_0 are the isothermal values of the
 corresponding magnitudes; 3) the dependence of the Poisson coefficient ν on temperature
 has been disregarded; 4) it has been assumed that the temperature varies linearly
 throughout the thickness of the shell and periodically in time; 5) the investigation is based
 on the differential equations for the movement of flexible shells using the Kirchhoff - Lyan
 hypothesis (A. S. Vol'mir. Doklady* AN SSSR, 123, no. 5, 1958); 6) the problem has
 been considered in a linear formulation only. If a circular cylindrical shell of radius R
 and length l is compressed by longitudinal forces P , periodically changing in time

$$P = P_0 + P_1(t), \quad (2)$$

Card 2/5

ACCESSION NR: AT4039434

then, on the basis of assumptions 1 through 6 above, the equations for the perturbed movement of the shell are reduced to the following differential equation (with the coordinate system chosen as follows: the z axis is directed along the normal to the midsurface of the shell, with the x and y axes directed along the lines of its major curvatures; t is the time coordinate):

$$E_1(1-\nu^2) \nabla^2 \nabla^2 \nabla^2 w + \frac{E_1}{R^2} \frac{\partial^4 w}{\partial x^4} + \rho \nabla^2 \nabla^2 \frac{\partial^2 w}{\partial x^2} + \rho h \frac{\partial^4 w}{\partial t^4} = 0, \quad (3)$$

where $w(x, y, t)$ is the buckling function; ρ is the density of the material; h is the thickness of the shell; and E_1 , E_2 , and E_3 are the elasticity moduli of, respectively, the first, second and third order, as determined by the following formulas

$$E_1 = \int_{-\frac{h}{2}}^{\frac{h}{2}} E dz; \quad E_2 = \int_{-\frac{h}{2}}^{\frac{h}{2}} E z dz; \quad E_3 = \int_{-\frac{h}{2}}^{\frac{h}{2}} E z^2 dz. \quad (4)$$

The solution to the problem is sought in accordance with the Galerkin method in the form of a series

$$w(x, y, t) = \sum_{m,n} f_{mn}(t) w_{mn}(x, y). \quad (5)$$

ACCESSION NR: AT4039434

where w_{mn} are assigned functions which satisfy the homogeneous boundary conditions which flow from the method of fastening the shell, while f_{mn} are the functions to be determined. From the results obtained in the article it follows that a temperature field, periodically changing in time, exerts the same effect on a shell as a parametric load - it may cause the appearance of regions of dynamic instability under given (specific) ratios of the temperature field parameters and of the shell with constant initial forces in the midsurface. If the shell is acted upon by a longitudinal parametric compressive load, the effect of the periodically changing temperature field is to expand the regions of dynamic instability. Several particular cases illustrating this position are analyzed. The examples considered indicate the presence of qualitatively new dynamic processes, dependent on the inertia terms in the shell thermoelasticity equations and on the temperature variation of the elasticity modulus and linear thermal expansion coefficient. Taking into consideration the dependence of the elasticity modulus and the linear thermal expansion coefficient on temperature, it becomes possible not only to make allowance in the dynamic equations for the parametric effect of the temperature field, but also to extend the results obtained to cases of high heating temperatures (albeit not outside the limits of a definite interval where linear differential equations can describe the processes taking place). Orig. art.

4/6

L 50534-65 EWT(d)/ENP(w)/EW(d) Pg. 4 LJP(e) EN/EN
ACCESSION NR: AP501178h UR/0198/65/001/001/0073/0078

33
B

AUTHOR: Kli'chinskaya, G. A. (Ukr)

TITLE: Nonlinear effects in oscillation of elastic rods under conditions of high temperature fields

SOURCE: Prikladnaya mekhanika, v. 1, no. 4, 1965, 73-78

TOPIC TAGS: vibration, elastic stress, thermal stress, nonlinear differential equation, temperature field

ABSTRACT: The effect of unsteady state temperature fields on the longitudinal oscillations of an elastic rod was investigated analytically by taking into account the temperature dependence of the modulus of elasticity E , the thermal expansion α , and the thermal conductivity λ or

$$E = E_0(1 - \eta_0\theta); \quad \eta_0 = \frac{E'}{E_0};$$

$$\alpha = \alpha_0(1 + \eta_1\theta); \quad \eta_1 = \frac{\alpha'}{\alpha_0};$$

$$\lambda = \lambda_0(1 + \eta_2\theta); \quad \eta_2 = \frac{\lambda'}{\lambda_0};$$

Card 1/3

L 50534-65

ACCESSION NR: AP5011784

0

The temperature field is described by the equation

$$\frac{1}{\lambda} \frac{\partial \theta}{\partial t} = \frac{\partial}{\partial x} \left[\frac{\lambda(\theta)}{\lambda_0} \frac{\partial \theta}{\partial x} \right] - \frac{q_1}{\lambda_0} \theta$$

the initial condition $\theta|_{t=0} = 0$, and the boundary conditions

$$\frac{\partial \theta}{\partial x} \Big|_{x=0} = 0,$$

$$\theta|_{x=L} = \theta(t)$$

$$\theta|_{x=0} = 0.$$

The solution is obtained by a series expansion in the small parameter ϵ for two cases: 1)

$$\theta(t) = T_1 = \text{const.}$$

and 2)

$$\theta(t) = T_1 \sin \omega t.$$

The results show that the effect of the temperature field on the rod oscillations is very strong initially but slowly decreases later. As an overall conclusion it is stated that the action of the temperature field appears to be the source of

Cont 2/3

L 50594-65

ACCESSION NR: AP5011784

parametric oscillations and to act as a nonlinear perturbing force. It also leads to nonlinear terms in the thermoelastic equations. Orig. art. has: 30 equations.

ASSOCIATION: Institut mehaniki, AN UkrSSR (Institute of Mechanics, AN UkrSSR)

SUBMITTED: 228ap64

ENCL: 00

SUB CODE: ME, AS

NO REF SOV: 605

OTHER: 000

ml
Card 3/3

ACC NR: AR6019266

SOURCE CODE: UR/0124/66/000/002/V029/V029

AUTHOR: Kil'chinskaya, G. A.

TITLE: Dynamic stability of a nonuniformly heated rod

SOURCE: Ref. zh. Mekhan, Abs. 2V209

REF SOURCE: Sb. Dinamika sistem tverdykh i zhidkikh tel. Kiyev, 1965, 49-55

TOPIC TAGS: dynamic stability, heat equation, elasticity

TRANSLATION: The influence of the interconnection of temperature and force effects, periodic in time, on the stability of an elastic rod is studied. The modulus of elasticity in its relation to temperature is used to calculate the parametric effect of temperature on oscillations of the heated rod. The law of temperature field change is obtained on the basis of an exact solution of the Fourier heat equation under the following conditions: convection heat exchange between the lateral surface of the rod and the surrounding medium, and temperature change periodic in time at one end of the rod and thermal isolation at the other. A "quasi-stationary" heat process which does not depend on the initial thermal state of the system and is defined by a periodic function of time is studied. The variation method of Bubnov-Galerkin is used to solve the problem of heated rod oscillations. On the basis of the research, the following conclusions are drawn: the temperature field periodic in time increases the total co-

Card 1/2

ACC NR: AR6019266

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000722520012-0"

efficient of excitation in the presence of a parametric force load, and it also may be an energizer of parametric oscillations in its absence, but it cannot extinguish parametric oscillations even under maximum phase displacement of the force load and temperature field. 5 references.

SUB CODE: 12,20

Card 2/2

ACCESSION NR: AP4041047

S/0120/64/000/003/0177/0180

AUTHOR: Strikha, V. I.; Kil'chitskaya, S. S.

TITLE: Measuring thin oxide films on germanium and silicon

SOURCE: Pribory* i tekhnika eksperimenta, no. 3, 1964, 177-180

TOPIC TAGS: semiconductor, germanium, silicon, oxide film on Ge, oxide film on Si

ABSTRACT: Two parameters Δ and α that enter into R. G. Archer's formulas (J. Electrochem. Soc., 1957, 104, 10, 619) were experimentally determined and are reported on in the present article. Determining these parameters opened the way for finding absolute values of the thickness of oxide films on semiconductors by a well-known optical method (ellipticity of polarization of the reflected ray). The method is found to be applicable for measuring films up to 200Å thick. The preliminary results of measuring oxide films on Ge and Si after their surfaces

Card 1/2

ACCESSION NR: AP4041047

were etched with CP-8, HF, or H_2O_2 , or mechanically polished, or obtained by spallation of the crystal in air, are reported. Orig. art. has: 3 figures, 7 formulas, and 2 tables.

ASSOCIATION: Kiyevskiy gosudarstvennyy universitet (Kiev State University)

SUBMITTED: 28Jun63

ENCL: 00

SUB CODE: EC

NO REF SOV: 002

OTHER: 002

Card

2/2

L 01284-66 EWT(1)/T/EWA(h) IJP(c) A^T/GS

ACCESSION NR: AT5020447

UR/0000/64/000/000/0034/0038

AUTHOR: ^{44, 55} Strikha, V. I.; ^{44, 55} Kil'chitskaya, S. S. 51
B+1

TITLE: Surface recombination velocity in silicon as a function of the concentration of majority charge carriers 27

SOURCE: ^{44, 55} Mezhevuzovskaya nauchno-tekhnicheskaya konferentsiya po fizike poluprovodnikov (poverkhnostnyye i kontaktnyye yavleniya). Tomsk, 1962. Poverkhnostnyye i kontaktnyye yavleniya v poluprovodnikakh (Surface and contact phenomena in semiconductors). Tomsk, Izd-vo Tomskogo univ., 1964, 34-38

TOPIC TAGS: silicon semiconductor, carrier lifetime, electron recombination, surface property, crystal surface, semiconductor research, etched crystal 21, 44, 55

ABSTRACT: Since the silicon used for semiconductor devices often varies in resistivity, the authors studied the effect of majority carrier concentration on surface recombination velocity for various methods of treating the surface of silicon. The conductivity modulation method (K. D. Glinchuk, Ye. G. Miselyuk, E. I. Rashba, ZhTF, 26, 12, 1956) was used for measuring the surface recombination velocity. The effective lifetime of the carriers during illumination of the sample is determined by

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L 01284-66

ACCESSION NR: AT5020447

volumetric and surface recombination. The diffusion length L_g and the surface recombination velocity may be determined by measuring τ_{eff} in two specimens of different thicknesses d from the formula $\tau_{\text{eff}} = \frac{L_g}{S}$ at $d \geq 3L_g$ or $\tau_{\text{eff}} = \frac{d}{2S}$ at $d < L_g$,

where S is the surface recombination velocity. The experimental apparatus is described. Samples of B-doped p-silicon were studied with resistivities in the 270-0.1 $\Omega \cdot \text{cm}$ range. Two surface treatments were used: polishing with M-7 powder and etching in SR-8. Satisfactory ohmic contacts were made by electrolytic deposition of nickel on the ends of the specimens. Since the velocity of surface recombination depends on the intensity of illumination, the authors made a preliminary study of surface recombination velocity as a function of injection level $\left(\frac{\Delta p}{p_0}\right)$. It was found

that the surface recombination velocity decreases with a reduction in the injection level, and is independent of the intensity of illumination at low levels of injection. All measurements of surface recombination velocity were made at illumination levels low enough for the recombination velocity to be constant. Surface recombination velocity is shown as a function of majority carrier concentration in fig. 1 of the Enclosure for the two surface treatments. This relationship between recombination velocity and carrier concentration should be taken into account in the

Card 2/4

L 01284-66

ACCESSION NR: AT5020447

manufacture of semiconductor devices. Orig. art. has: 3 figures, 3 tables. 0

ASSOCIATION: none

SUBMITTED: 06Oct64

ENCL: 01

SUB CODE: SS, NP

NO REF SOV: 006

OTHER: 005

Card 3/4

L 01284-66

ACCESSION NR: AT5020447

ENCLOSURE: 01

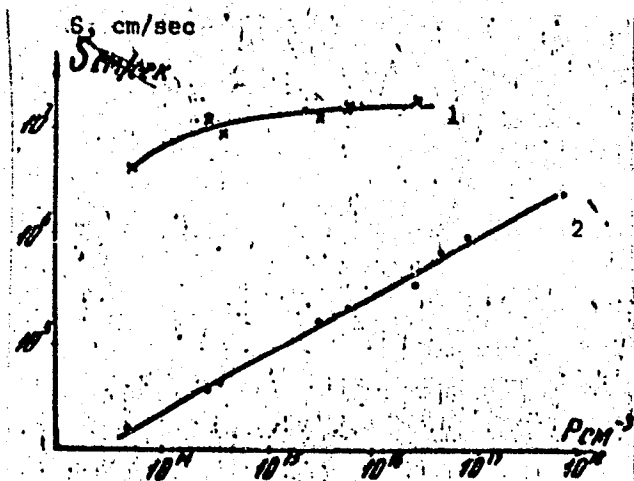


Fig. 1. Surface recombination velocity as a function of concentration: 1--polished specimens; 2--etched in SR-8.

Card 4/4 90

L 08337-67 EWT(1)/EWT(m)/EWP(t)/ETI IJP(o) JD/AT

ACC NR: AR6017146

SOURCE CODE: UR/0275/66/000/001/B005/B006

AUTHOR: Strikha, V. I.; Kil'chitskaya, S. S. 45

TITLE: The dependence of "surface recombination speed" of silicon on the concentration of the basic charge carriers 27

SOURCE: Ref. zh. Elektronika i yeye primeneniye, Abs. 1B38

REF SOURCE: Sb. Poverkhnosti. i kontaktn. yavleniya v poluprovodnikakh. Tomsk. Tomskiy un-t, 1984, 34-38

TOPIC TAGS: silicon, silicon semiconductor, semiconductor carrier, carrier density, recombination

TRANSLATION: The speed (S) of surface recombinations in silicon in relation to concentration of basic charge carriers p_0 was investigated. The subject of the study was p -type silicon with boron impurity and specific resistivity in the range of 270 to 0.1 ohm/cm. The surface was finished either by polishing with M7 powder or etched with CP-8. Recombination speed was determined by the method of conductivity modulation; the measurements were carried out at low injection levels and without capture of the generated carriers by the electrodes. For the polished surface, the speed changed insignificantly up to a concentration of the basic carriers of $5 \cdot 10^{16} \text{ cm}^{-3}$, then remained constant and approximately equal to the thermal (recombination) speed of the carriers.

UDC: 539.293:546.28

Card 1/2

L 08337-67

ACC NR: AR6017146

For the CP-8 etched surface, the recombination speed is lower and for the change of p_0 from $4.6 \cdot 10^3 \text{ cm}^{-3}$ to $6.6 \cdot 10^{17} \text{ cm}^{-3}$ the recombination speed increased from $2 \cdot 10^4 \text{ cm/sec}$ to $2.5 \cdot 10^6 \text{ cm/sec}$. For the experimental line $S \propto p^{0.5}$.

SUB CODE: 11,07,20

Card 2/2 nst

KIL'CHINSKIY, A.A. (Kiyev)

A model for determining the thermoelastic characteristics of
fiber reinforced materials. Prikl. mekh. 1 no.12:65-74 '65.
(MIRA 19:1)

1. Institut mekhaniki AN UkrSSR. Submitted Aug. 30, 1965.

ZHELTONOZHKO, Yu.V., gornyy inzh.; KIL'CHINSKIY, M.V., gornyy inzh.;
LESNYKH, V.A., gornyy inzh.; OPYTOV, V.P., gornyy inzh.;
TARARYKO, P.M., gornyy inzh.; YURILIN, G.M., gornyy inzh.

Mine filling ZU-1 units in mines of the "Kirovugol'" Trust.
Ugol' Ukr. 9 no.12:35-36 D '65. (MIRA 19:1)

1. Kadiyevskiy obshchestvennyy nauchno-issledovatel'skiy gornyy
institut.

KIL'CHITSKIY, G.G., inzh.

Automatic system for the cooling of soils. Put' i put.khoz. 9
no.8:25 '65. (MIRA 18:8)

1. Stantsiya Yeletskaya, Severnoy dorogi.

KILCZER, Gyula

Compensation of transformed observation data. Geofiz kozl 4 no.2:
65-70 '55.

KILCZER, Gyula

Possibility for detecting shot and inverse strata by seismic refraction measurements. Geofiz kozl 4 no.2:57-64 '55.

KILCZER, Gyula

Error in determining the thickness and depth of the earth's crust which occurs when low-velocity layer is neglected at the seismic refraction measurement. Geofiz kozl 8 no.4:197-200 '60.

1. "Geofizikai Közlemények" szerkeszto bizottsagi tagja.

KILCZER, Gyula; ELEK, Ilona

Correction of seismic refraction measurements performed on hilly terrains. Geofiz kozl 8 no.4:201-207 '60.

1. "Geofizikai Kozlemenyek" szerkeszto bizottsagi tagja (for Kiloczer).

HOFFMANN, Bogdan; MALYSZKO, Edward; KILCZEWSKI, Waldemar

Aminitrozol sensitivity of *Trichomonas vaginalis*. Przegł.
derm. 50 no.4:210-300 '63.

1. Z Kliniki Dermatologicznej AM w Białymstoku Kierownik:
prof. dr J. Lesinski Z Zakładu Higieny AM w Białymstoku
Kierownik: doc. dr B. Hoffmann.

(THIAZOLES) (TRICHOMONAS) (DRUG RESISTANCE, MICROBIAL)
(PHARMACOLOGY)

HOFFMANN, Bogdan; KILCZEWSKI, Waldemar

Some epidemiological problems of trichomoniasis in males. Wied.
parazyt. 8 no.2:235-242 '62.

1. Klinika Dermatologiczna Akademii Medycznej, Białystok.
(TRICHOMONAS INFECTIONS epidemiol)

HOFFMAN, Bogdan; KILCZEWSKI, Waldemar; MALYSZKO, Edward

Studies on trichomoniasis in males. Polski tygod. lek. 16 no.50:
1936-1939 11 D '61.

1. Z Kliniki Dermatologicznej A.M. w Białymstoku; kierownik: prof.
dr Janusz Lesinski.

(TRICHOMONAS INFECTIONS statist) (GENITALIA MALE dis)

HOFFMANN, Bogdan; KAZANOWSKA, Wanda; KILCZEWSKI, Waldemar; KRACH, Jadwiga

Serological diagnosis of Trichomonas infection. Med. dosw. mikrobiol.
15 no.1:91-99 '63.

1. Z Kliniki Dermatologicznej, z Kliniki Położnictwa i Chorob
Kobięcych i z Zakładu Higieny AM w Białymstoku.
(TRICHOMONAS INFECTIONS) (SERODIAGNOSIS)
(TRICHOMONAS VAGINITIS) (STATISTICS)

MANIKOWSKA-LESINSKA, Wanda; KILCZEWSKI, Waldemar

Modern criteria for the evaluation of the treatment of syphilis.
Przegl. dermat. 49:261-267 '62.

1. Z Kliniki Dermatologicznej AM w Białymstoku Kierownik: prof. dr
J. Lesinski.

(SYPHILIS)

POLAND

HOFFMANN, Bogdan, KACZOROWSKI, Wanda, KILCZYŃSKI, Waldemar,
and KPAK, Hansiga, Clinic of Parasitology (Klinika Parazy-
tologii), Clinic of Obstetrics and Gynecology (Klinika
Polemiczna i Chorob Kobiecych), and the Department of Hy-
giene (Instytut Higieny) of the AM [Akademia Medycy i Medyci-
nal Nauk] in Wladystok.

"Serological Diagnosis of Trichomonas Infection"

Wersja, Zeszytu Diagnostyka i Mikrobiologia, Vol. 11,
No. 1, 1972, pp. 91-99.

Abstract: [Authors' English summary modified] Using the
OF test of a Trichomonas antigen on human sera, the authors
found the test specific and sensitive, and encouraging for
further development of serological methods for diagnosis of
this disease. They give materials and procedure, and a
statistical analysis of their findings. Of the 13 refer-
ences, 2 are Polish, 4 are German, and 7 are English.

1/1

KILCZEWSKIJ, N.A. (Kiev)

Some generalizations concerning the formulation and methods
of solving problems of static and dynamic contacts. Mechanika
Gliwice no.13:3-22 '62.

HOMMIK, K., kand. tekhn. nauk; KALJUMAE, H., inzh. gidrotekhn.;
KASK, R., kand. sel'khoz. nauk; KATUS, A., inzh. lesnogo khoz.;
KILDEMAA, K., kand. geogr. nauk; KURKUS, J., agronom; LIPPMAA, A.,
inzh. gidrotekhn.; PANT, R., prepodavatel', agronom; RAIG, V.,
inzh. gidrotekhn.; REMEL, A., inzh. melior.; TALPSEPP, E., kand.
sel'khoz. nauk; SOOSAAR, V., inzh., lesnogo khoz.; STERNFELD, R.,
inzh. stroit.; TOMINGAS, E., inzh. melior.; KARUS, G., red.;
RAUD, M., red.; VAHTRE, I., tekhn. red.

[Handbook for soil improvement] Maaparanduse kasiraamat. Tal-
linn, Eesti riiklik kirjastus. Vol.1. [Fundamentals of soil
improvement] Maaparanduse alused. 1962. 473 p. (MIRA 15:5)
(Soils)

FRIDAY, I.T., and Geo Sci. (1977) "A study of the
of the ^{various of the} ~~rock~~ ¹⁰⁰ ~~trails~~ ¹⁰⁰ of potassium SR." ~~1977, 100, 100-100~~
100; 100-100 (100-100), (100, 100-100)

KIL'DEMA, Kallio Tynisovich; GOLOMYSOV, F.S., red.; BARANOVA, L.G.,
tekh. red.

[Improving the utilization of stony lands] Ob uluchshenii is-
pol'zovaniia kamenistykh zemel'. Leningrad, Sel'khozizdat,
1962. 116 p. (MIRA 15:10)
(Clearing of land) (Stone)

KIL'DEMA, K.T.

Survey of studies of small geographical complexes in the Estonian
S.S.R. Izv. Vses. geog. ob-va 94 no.3:202-208 My-Je '62.

(MIRA 15:7)

(Estonia--Geographical research) (Estonia--Landforms)

EL'IN, V.A.; RILDENBA, I.A. [Rildeman, I.]

Effect of cortisone and insulin on the activity of hexokinase
in leucocytes. Vop. med. khim. 8 no.4:374-376 71-09 '68.

(HJ 17:11)

1. Otdel biokhimi Instituta eksperimental'noy meditsiny AN
SSSR, Leningrad i sektor biokhimi Instituta eksperimental'noy
i klinicheskoy meditsiny 78 Akademiya Med. Nauk, Leningrad.

1 25023-65

ACCESSION NR: AP5005990

8/0301/64/010/004/0107/0108

13

AUTHOR: Killip, L. A.

6

TITLE: Variations in hexokinase activity of human erythrocytes at different ages

SOURCE: Voprasy meditsinskoy khimii, v. 10, no. 4, 407-409

TOPIC TAGS: biochemistry, hematology

Abstract: The literature contains conflicting statements regarding the influence of age on glycolytic activity and hexokinase activity in erythrocytes in healthy humans. The author investigated this problem in 168 people (102 men and 66 women) of different ages. Hexokinase activity was determined in erythrocyte hemolysates by the decrease of glucose. The author concludes that activity of hexokinase in human erythrocytes varies with age. In children during the first year of their life the activity of the enzyme exceeds that of adults 2.5-3 times. Within the first 4 years the activity of hexokinase in erythrocytes of children decreases by about 50 percent, but during the next 5-7 years its alterations are comparatively small. A certain increase in hexokinase activity was noted in erythrocytes of children 13-15 years old. No significant alterations in hexokinase

Card 1/2

L 25023-65

ACCESSION NR: AP5005990

activity of erythrocytes could be observed between 20 and 50 years while in older people some tendency towards a decrease in the enzymatic activity was found. Orig. art. has 1 graph.

ASSOCIATION: Sektor biokhimi Estonskogo instituta eksperimental'noy i klinicheskoy meditsiny ANU SSSR, Tallin (Department of Biochemistry, Estonian Institute of Experimental and Clinical Medicine, ANU SSSR)

SUBMITTED: 20Jul63

ENGL: 00

SUB CODE: LS

NO REF SOV: 003

OTHER: 008

JPRS

Card 2/2

L 8467-55 EMT(D)/EWA(R) ESD(01)/RAEM(0)

ACCESSION NR: AP4044180

8/01/64/060/008/0009/0011

AUTHOR: Kil'dayev, O. T. (Engineer); Ponomarev, V. A. (Engineer); Pospelov, V. V. (Engineer)

TITLE: Multiplier unit for EAUS system

SOURCE: Priborostroyeniya, no. 8, 1964, 9-11

TOPIC TAGS: multiplier, logarithmic multiplier, silicon diode multiplier / EAUS system

ABSTRACT: A logarithmic multiplier developed for the Soviet electronic standardized-unit control system (EAUS) is briefly described. The equation $U_0 = N^{10000} \cdot 10000$ is implemented with the aid of two function generators, which convert input currents into voltages, three transistorized d-c chopper amplifiers, and a feedback function generator. The function generators are designed with four D806 silicon voltage-regulating diodes operating without any external bias

Card 1/2

L 8465-65

ACCESSION NR: AP4044180

source. The amplifiers are designed with P15 develops a signal within the standard 0-5 ma range. perform multiplication of one of the inputs by a constant factor within 0.3-3. It is claimed that the basic error is under 2% (of 1 ma) and that the additional error is under 0.8% per 10C; a supply-voltage (220 v) variation within -15+5% results in an error not exceeding the basic error. and 17 formulae.

transistor); the final amplifier range. The instrument can also constant factor within 0.3-3. (1 ma) and that the additional (220 v) variation within -15+5% Orig. art. has: 3 figures

ASSOCIATION: NIITeplopribor (Scientific Research Institute of Thermal Instruments)

SUBMITTED: 00

ENGL: 00

SUB CODE: DP, JE

NO REF SOV: 000

OTHER: 000

Card 2/2

DANILOV, B.P., inzh.; BORODITSKAYA, R.M., inzh.; ZHUDOV, V.F., inzh.;
BORISOVA, N.S., inzh.; MYASNYANKINA, T.V., inzh.; KIL'DEYEVA, V.Ye.,
inzh.

Shrinkage of air-entrained concrete without autoclave treatment.
Stroi.mat. 8 no.1:38-40 Ja '62. (MIRA 15:5)
(Air-entrained concrete)

8(6).

SOV/91-59-10-12/29

AUTHOR: Kil'dibekov A., Engineer

TITLE: Direct Regulation of Generator Excitation by its Tension

PERIODICAL: Energetik, 1959, Nr. 10, pp 21-22, (USSR)

ABSTRACT: The article describes one of the possible layouts for the regulation of excitation in small efficiency generators (Fig. 1). The tension of the generator stator, reduced by the transformer (TN) and rectified by the basic rectifier (B_1) is led through the dividing rectifier (B_2) to the rheostat (r_m). A regulating resistance (r_p) is connected at the output (B_1). The device can be laid out not only by single-phase, but also by a three-phase scheme. Changing of tension applied to resistance (r_p) causes corresponding alteration in conductivity of the parallel with rheostat (r_m) branch consisting of (r_p) and (B_2), through which a part of excitation current passes. This leads, in its turn, to an increase in electromotive force in the exciter armature and of current intensity in generator rotor. When tension at the resistance r_p is increased, that is, when the generator is unloaded, the

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SOV/91-59-10-12/29

Direct Regulation of Generator Excitation by its Tension

process of regulation passes with the sign inverted to that which takes place in the first case. In adjustment of the layout, the regulating resistance r_p plays the basic role. The regulation device was assembled and tested at the electric laboratory of the Power Institute of the Academy of Sciences of the Kazakh SSR, with a synchronized generator of 25 kw capacity, Type SG-25/6. It was also tested at the Inter-kolkhoz Second Kamenskaya GES (near Alma-Ata), with a generator, Type S-134/8, of 150 kw capacity. The device can be used for excitors which under normal conditions are not excessively saturated. There are 1 graph and 1 diagram.

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KIL-DIBEKOV, A.A.

Some results of a semi-industrial testing of an excitation
controller with direct action. Izv. Ak. Kazakh. SSh. Ser. energ.
no. 1:59-61 '60. (MIRA 15:5)
(Electric machinery--Testing)

ACCESSION NR: AP4037099

S/0258/64/004/002/0263/0265

AUTHORS: Vol'mir, A. S. (Moscow); Kil'dibekov, I. G. (Moscow)

TITLE: Linear theory of stability of cylindrical shells

SOURCE: Inzhenernyy zhurnal, v. 4, no. 2, 1964, 263-265

TOPIC TAGS: cylindrical shell, shell stability, critical stress, combined stresses, radius of curvature

ABSTRACT: The authors show that computational formulas for the basic cases of stressed shells of average and great length can be obtained with the help of the so-called momentless theory of shells. This approach differs from that of V. M. Darevskiy, who proposed a variant of the original system of equations, introducing terms which characterize tension of the averaged surface. The authors also derive some simple approximations for the parameter of upper critical stresses. They mention that in the case of combined stresses these methods may also be applicable. Orig. art. has: 9 formulas.

Card

1/2

L 32290-65 RT(a)/RT(b)/RT(c)/RT(d)/RT(e)/RT(f)/RT(g)/RT(h) PR-1/PeB
UR/0198/55/001/003/0001/0009

ND/ND/EM
MOESSIGER NR: AP501158h

AUTHORS: YOLINER, A. S. (Moscow); KADITSKY, I. G. (Moscow)

TITLE: Stochastic characteristics of cylindrical shell behavior under acoustic loads, 1/

SOURCE: Prikladnaya mekhanika, v. 1, no. 3, 1965, 1-9

TOPIC TAGS: stochastic process, acoustic wave, shell theory, random oscillation, Galerkin method, density distribution, surface load

ABSTRACT: The nonlinear oscillations and stability of cylindrical shells under the action of acoustic loads were studied analytically. The acoustic load is represented as white noise. The shell is in the form of a circular cylindrical panel of length a and width b, hinged at one end. A uniform compressive force p is assumed to act on the cylindrical surface. Using the Galerkin or the Ritz method, the following equation of motion is obtained

$$\frac{d^2 \eta}{dt^2} + 2 \frac{d \eta}{dt} + \eta \left(1 - \frac{p}{p_c} \right) (a^2 - \eta^2 + \eta^3) - \eta^3 = f(t)$$

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1 52290-6

ACCESSION No: AP501158

If it is assumed that $\phi^*(z)$ can be represented by a "white noise" of zero mean value and spectral density S_ϕ , the following Fokker-Planck-Kolmogorov equation is obtained for the ψ coordinate probability and the velocity $\dot{\psi} = d\psi/dt$

$$\frac{\partial(\psi \dot{\psi})}{\partial t} = -\frac{\partial}{\partial \psi} \left[\left(\frac{d\psi}{dt} \right) (\psi - \psi_0 + \eta) \right] - \frac{\partial^2}{\partial \psi^2} \left[\frac{d^2 \psi}{dt^2} \right]$$

This leads to the two expressions for the probability densities

$$\psi = \frac{1}{\sigma} \exp \left[-\frac{1}{2} \left(\frac{\psi - \psi_0}{\sigma} \right)^2 \right] + \frac{1}{\sigma} \frac{d\psi}{dt} \left(\frac{\psi - \psi_0}{\sigma} \right)$$

$$\dot{\psi} = \frac{1}{\sigma} \exp \left(-\frac{1}{2} \left(\frac{\dot{\psi}}{\sigma} \right)^2 \right)$$

For the special case of constant $\eta = \eta_0$, the critical level $\psi_0 = \eta_0$, and a

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ACCESSION NR: AP5011584

numerical solution of the probability density equations gives a bi-modal distribution for $Z(t)$. To obtain the probability characteristics of the dynamic deflection magnitudes, the concept of mean relative cross section is utilized, and the following equation is obtained for the probability density of extremes

$$f(C_{max}) = \frac{2(S_0) \left(1 - \frac{P_0}{P_2}\right)}{\Gamma(\alpha) - \Gamma(\alpha) + \Gamma(\alpha)} \left[R - R^2 + \gamma(\gamma) \right] \times$$

$$\times \exp \left[-\frac{1}{S_0} \left(1 - \frac{P_0}{P_2}\right) \left(R^2 - \frac{2}{3} P_0^2 + \frac{1}{3} P_2^2 \right) \right]$$

Numerical examples are given for various special cases. Finally, an expression is obtained for the mean number of direct and inverse modulating motions

$$\frac{N}{S_0} = \sqrt{\frac{S_0}{\pi} / \omega}$$

Orig. art. has: 24 equations, 6 figures, and 1 table.

Card 3/4

L 52290-55

ACCESSION NR: AF501150

ASSOCIATION: Moskovskiy Aviat͡sionnyy Institut (Moscow Aviation Institute)

SUBMITTED: 23 Nov 64

ENCL: 00

SUB CODE: AS

NO REF SOV: 010

OTHER: 003

72/1
GWS A/A

ACCESSION NR: AP4042536

S/0022/64/017/003/0065/0070

AUTHOR: Vol'mir, A. S.; Kil'dibekov, I. G.

TITLE: Nonlinear acoustic vibration of a cylindrical shell

SOURCE: AN ArmSSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, v. 17, no. 3, 1964, 65-70

TOPIC TAGS: acoustic vibration, nonlinear acoustic vibration, forced nonlinear vibration, shallow panel, cylindrical panel, shallow cylindrical panel, panel vibration, free acoustic vibration, forced acoustic vibration

ABSTRACT: Natural and forced nonlinear vibrations of circular cylindrical panels induced by pulsation of the acoustic pressure are investigated. The dynamic behavior of panels having a "perfect" shape of and those with initial imperfections in the form of the middle surface is analyzed by applying E. I. Griglyuk's method of determining amplitude-frequency characteristics. The agreement between the results of this investigation and data obtained by the "harmonic-balance" method by G. V. Mishenkov is mentioned. The panel is subjected to

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ACCESSION NR: AP4042536

compression along the generatrix and to acoustic uniform time-dependent pressure varying in accordance with the cosine law. Using regular initial differential equations of elastic-shallow-shell theory describing the stress-strain relationships in a simply supported shell with middle-surface irregularities, an ordinary differential equation which describes (in the first approximation) the non-linear acoustic vibrations of the panel is obtained by applying the Bubnov-Galerkin method. Expressions for a "perfect" panel and for free vibrations can be deduced from this equation by equating to zero corresponding nondimensional parameters. The static equilibrium and the amplitude-frequency relationships of the panel are analyzed for various curvature and surface-irregularity parameters, and are illustrated by diagrams. Orig. art. has: 4 figures and 16 formulas.

ASSOCIATION: Moskovskiy Aviatsionnyy Institut (Moscow Aviation Institute)

SUBMITTED: 22Feb64 ATD PRESS: 3076 ENCL: 00

SUB CODE: AS NO REF SOV: 005 OTHER: 004

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1 11312505 EMT(d)/EMT(l)/EMT(m)/EMP(w)/EMA(g)/EMP(v)/EMP(t)/EMP(k)/EMP(b)/

WA(h) PT-h/feb EM/JD
ACCESSION NR: APA045014

S/0145/64/000/007/0026/0030

AUTHOR: Vol'mir, A. S. (Doctor of technical sciences, Professor);
Kil'dibakov, I. G. (Engineer)

TITLE: Investigation of behavior of shells and plates under impact

SOURCE: IVUZ. Mashinostroyeniya, no. 7, 1964, 26-30

TOPIC TAGS: shell impact, plate impact, shell impact buckling, plate impact buckling

ABSTRACT: The buckling of a double-curvature shell of arbitrary shape caused by a "longitudinal" impact, which produces displacements in the middle surface of the shell, is discussed. A system of three differential equations of the theory of elastic thin shells and plates describing the dynamic behavior of a shell under impact with consideration of inertia forces produced by these displacements is derived. From initial expressions for strains in the middle surface, the strain-compatibility equation, equilibrium equations, and stress-strain relationships. These equations contain the dynamic-stress, deflection, and curvature functions related to the middle surface of the shell.

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I-11312-65

ACCESSION NR: AP404501A

By equating one curvature of the shell to zero and the other to $1/R$ (where R is the curvature radius of the middle surface) or by setting both curvatures equal to zero, a set of equations for a circular cylindrical shell or for a plate will be obtained, respectively. In a particular case, when the problem is static, the system of final equations turns into a regular system of equations of the nonlinear theory of plates and shells. By rejecting the nonlinear terms and disregarding the initial imperfections, the basic equations of the dynamic linear theory can be obtained. The integration of the final equations can be carried out on an electronic digital computer by using some numerical method, e.g., the method of finite differences. Orig. art. has: 13 formulas.

ASSOCIATION: Ufaskiy aviatsionnyy institut (UFA Aviation Institute)

SUBMITTED: OSMAR64

AND PRESS: 3100

ENCL: 00

SUB CODE: AS

NO REV SOV: 002

OTHER: 001

Card 2/2

SMIRNOV, Vasilii Ivanovich; KHUDYAKOV, Ivan Fedorovich; TIKHONOV, Anatolii Ivanovich; KIL'DIBEKOV, R.G., retsenzent; MISHIN, V.D., red.; KRYZHOVA, M.L., red. izd-va; MATLYUK, R.M., tekhn. red.

[Obtaining cobalt from converter slags] Izvlecheniye kobal'ta iz konverternykh shlakov. Sverdlovsk, Metallurgizdat, 1963.
150 p. (MIRA 16:5)

(Cobalt) (Slag)

KIL'DIBEKOV, V. (g.Slobodskoy, Kirovskoy oblasti)

Women workers of a small shop. Most.prom.i khud.promys.
3 no.5:11 My '62. (MIRA 15:6)
(Kirov Province--Shoe industry--Labor productivity)

GORSHKOV, G., tekhnik (Sverdlovsk); GRISHCHENKO, E. (Aktyubinsk);
GRANOVSKIY, L., instruktor; IVANNIKOV, A.; BERDYUGIN, V., gornyy
inzh.; KIL'DIBEKOV, V.; GORELIK, M., inzh.; ATKOCHAYTIS, Ye.
[Atkocaitis, E.] (Vil'nyus); CHERTILIN, V. (Bavly, Tatarskaya ASSR);
DZHURAYEV, U. (Fergana)

Exchange of news and practice. Izobr.i rats. no.2:18-19 F '62.
(MIRA 15:3)

1. Ural'skiy zavod tyazhelogo mashinostroyeniya (for Gorshkov).
 2. Predsedatel' sojeta Vsesoyuznogo obshchestva izobretateley i ratsionalizatorov remontno-mekhanicheskogo zavoda "Bol'shevik", g. Aktyubinsk (for Grishchenko).
 3. Tsentral'nyy Sovet Vsesoyuznogo obshchestva izobretateley i ratsionalizatorov (for Granovskiy).
 4. Predsedatel' oblastnogo sojeta Vsesoyuznogo obshchestva izobretateley i ratsionalizatorov (for Ivannikov).
 5. Vneshtatnyy konsul'tant oblastnogo konsul'tatsionnogo punkta Vsesoyuznogo obshchestva izobretateley i ratsionalizatorov, g. Kemerovo (for Berdyugin).
 6. Zaveduyushchiy otdelom promyshlennosti gazety "Leninskiy put", g. Slobodskoy Kirovskoy obl. (for Kil'dibekov).
 7. Otdel kapital'nogo stroitel'stva predpriyatiya teplovykh setey upravleniya energetiki Soveta narodnogo khozyaystva BSSR, g. Minsk (for Gorelik).
- (Technological innovations)

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VENETSKIY, Il'ya Grigor'yevich; KIL'DISEV, Grigoriy Semenovich; BOYARSKIY,
A.Ya., professor, nauchnyy redaktor; SHEPITSIS, Ye.M., redaktor;
VINOGRADOVA, V.A., tekhnicheskoy redaktor

[Manual of mathematical statistics] Posobie po matematicheskoi stati-
stike. Moskva, Gos. statisticheskoe izd-vo, 1956. 201 p. (MLRA 10:3)
(Mathematical statistics)

VENETSKIY, Il'ya Grigor'yevich; KIL'DISHEV, Grigoriy Semenovich;
BOYARSKIY, A. Ya., nauchnyy red.; PREVEZENTSEVA, A.G., red.;
IL'YUSHENKOVA, T.P., tekhn. red.

[Basic principles of mathematical statistics] Osnovy matema-
ticheskoi statistiki. Moskva, Gosstatizdat, 1963. 307 p.
(MIRA 16:6)

(Mathematical statistics)

AUTHORS: ^{S.} Kil'dishev, G., and Venetskiy, I. 2-58-5-13/17
TITLE: The Selective Method in Statistics (Vyborochnyy metod v statistike)
PERIODICAL: Vestnik Statistiki, 1958, Nr 5, pp 79-80 (USSR)
ABSTRACT: The authors review a book by V.N. Krylov, named "The Selective Method in Statistics" and published by Gosstatizdat, in 1957.
AVAILABLE: Library of Congress
Card 1/1

KIL'DISHEV, I. YA.

AUTHOR: Kil'dishev, I. Ya. 6-56-4-13/15
TITLE: On the Economizing on Polygraphic Material (Ob ekonomii poligraficheskikh materialov)
PERIODICAL: Geodeziya i Kartografiya, 1956, Nr 4, pp. 64-66 (USSR)
ABSTRACT: This is a short report concerning the saving of material at the Tashkent Cartographical Institute. From 1953 on, consumption was systematically reduced. The best results were obtained between 1955 and 1957. The consumption of printing ink was reduced from 4.8 kg in 1953 to 2.7 kg in 1957. The consumption of alcohol is reduced by changing the composition of the mixture. Saving of offset rubber canvas is brought about by protecting it from being damaged by punctures or by pressure. A table containing a survey of the total saving of material is given. The best work was performed by the brigades of the printers S.I. Khranov, V.P. Baranov, Ye.A. Mazurin, by the colorist G.N. Neklyudov, and the controller R.G. Rozenblyum. There is 1 table.
AVAILABLE: Library of Congress
Card 1/1
1. Cartography 2. Materials---Consumption

KIL'DISHEVA, A.V.; BELOSEL'SKAYA, V.S.

Microbiological characteristics of bacteria causing bacillary
dysentery in 1949-1950. Zhur. mikrobiol. epid. i immun. no.10:
99 0 '54. (MLBA 8:1)

1. Iz Kyubyshevskogo instituta epidemiologii i mikrobiologii.
(SHIGELLA DYSENTERIAE)