"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKES, Jaroslav

Content and variability of nitrogen substances in the world market spring barley in relation to the starch and the absolute weight of grain. Prir ces slezsky 22 no.4:549-570 '61.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKES, Jaroslav, inz. CSc.

Conditions of environment as the determining factor in the development of the principal economic and biologic properties of world varieties of spring barley. Vest ust zemedel 11 no. 4:146-148 '64.

1. Research Institute of Grain, Kromeriz.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKGER, Ya.V.

Short-term forecasting of diseases and pests in Bashkiria. Zashch. rast.ot vred. i bol. 3 no.2:44-45 Mr-Ap '58. (MIRA 11:4)

1. Zaveduyushchaya sektorom sluzhby ucheta i prognozov Ministerstva sel'skogo khozyaystva Bashkirskoy ASSR.
(Bashkiria--Plants, Protection of)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHAN, Yu., starshiy prepodavatel'

Operational efficiency and ways of improving the means of regulating air humidity in tank vessel cargo spaces. Mor. flot 23 no.9:32-33 S '63. (MIRA 16:11)

1. Kafedra "Morskoye delo" Odesskogo vysshego inzhenernogo morskogo uchilishcha.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHAN, Yu. K., inzh.-sudovoditel'

Ensuring the preservation of light petroleum products transported by tankers. Mor. flot 18 no.11:15-17 N '58. (MIRA 11:12)

1.Odesskoye vysshaye inzhenernoye morskogye uchilishche.
(Tank vessels) (Petroleum products--Transportation)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHAN, Yu. K. shturman dal'nego plavaniya

Temperature regime in tanker cargo areas. Mor. flot 19 no.5:8 My '59. (MIRA 12:7)

1. Assistent kafedry Odesskogo vysshego inzhenrno-morskogo uchilishcha.

(Tank vessels) (Temperature)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHAN, Yu. K., assistent

Reducing petroleum cargo losses and tanker corrosion. Mor.flot 20 no.1:18-20 Ja '60. (MIRA 13:5)

1. Odesskoye vyssheye inzhenernoye morskoye uchilishche.
(Tank vessels--Corrosion)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

MAGNER, Leonid Mironovich, kand.tekhn.nauk; KIRIN, Yuriy Pavlovich; LEKHAN, Yuriy Kondrat'yevich; STEPANENKOV, Rosl'd Vasil'yevich; GRISHIN, Yu.A., red.; SERKO, G.S., red.izd-va; TIKHONOVA, Ye.A., tekhn.red.

[Problems on seamanship; manual for higher schools of marine engineering] Zadachnik po morskoi praktike; uchebnoe posobie dlia vysshikh inzhenernykh morskikh uchilishch. Moskva, Izd-vo "Morskoi transport," 1960. 218 p. (MIRA 13:9)
(Seamanship)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHAN, Yu.K., starshiy prepodavatel'

Loading process of a seagoing tanker. Ekon. i [illegible] no.1:96-101 '63.

Moisture conditions of cargo spaces in a tank vessel and effect of air drying operations on them. Ibid.:101-107 (MIRA 17:8)

1. Odesskoye vyssheye inzhenernoye morskoye uchilishche.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

VYSOTA, Ivan Iosifovich; KORASEL'SHCHIKOV, N.I., and. tekhn. nauk, retsenzent; LEKHANIN, V.V., prof., doktor tekhn. nauk, retsenzent; PERVOV, V.M., retsenzent; KOMOGORTSEV, P.Ya., red.; SHLENNIKOVA, Z.V., red. izd-va; BODROVA, V.A., tekhn. red.

[Marine steam machinery] Sudovye parovye mashiny. Moskva, Izd-vo "Rechnoi transport." Pt.2. [Fundamentals of theory and maintenance] Osnovy teorii i ekspluatatsii. 1961. 280 p. (MIRA 14:11)
(Marine engines)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

ZAKHARIKOV, N.A., kandidat tekhnicheskikh nauk; LEVIN, A.M., kandidat tekhnicheskikh nauk; LEKHEL', S.N.

Combustion processes in flameless burner ducts. Trudy Inst.isp.gaza AN URSR 1:5-15 '53. (MLRA 9:6)
(Gas burners)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHIKOYNEN, M. M., Cand Tech Sci -- (diss) "Reinforcement of electrolytic iron coatings used in machine repair by means of introducing ~~into electrolytes~~ of ~~different~~ various types of additives," Len, 1957. 15 pp (Min of Agriculture USSR, Len Agr Inst), 100 copies (KL, 2-58, 113)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHIKOYNEN, M.M.

Giving added strength to iron coatings; as applied to the repair of worn machine parts. Dokl. AN Tadzh. SSR no. 20:87-94 '57. (MIRA 11:7)

1. Kafedra remonta mashin Tadzhikskogo sel'skokhozyaystvennogo instituta.

(Iron--Heat treatment)
(Electroplating)
(Mechanical wear)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

137-58-6-13788

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 6, p 369 (USSR)

AUTHOR: Lekhikoynen, M.M.

TITLE: The Effect of Organic Additives on the Wear Resistance of Iron Coatings (Vliyaniye organicheskikh dobavok na iznosostoykost' zheleznykh pokrytiy)

PERIODICAL: Dokl. AN TadzhSSR, 1957, Nr 20, pp 95-101

ABSTRACT: Wear resistance (W) and the effect thereon of annealing of coatings produced in electrolytes based on $FeCl_2 \cdot 4H_2O$ with additions of NH_4Cl, $MnCl_2$, glycerol, gelatin, dextrin, and citric acid (the compositions of the electrolytes used are given) were investigated. A normalized steel 45G2 underwent the coating process. Pickling was conducted during 30-45 sec at a current density 15-20 amp/dm^2 after a special preparation of the surface of the specimens. Wear tests were conducted with an MI machine for dry sliding friction against a cast iron block under a specific pressure of 15-55 kg/cm^2. Results of the tests were compared with the W of standard specimens of 45G2 steel tempered in a high-frequency furnace and of steel St 20 tempered and annealed at 300°C after cementation. The coatings

Card 1/2

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

137-58-6-13788

The Effect of Organic Additives on the Wear Resistance of Iron Coatings

withstood loads up to 55 kg/cm^2, whereas the standard specimens were disastrously worn at 25 kg/cm^2. The increase in W is explained by the elevated hardness of the coating, which contains up to 2 % Mn and up to 0.5% C, by the presence of internal stretching stresses, by the dispersed structure, and by the presence of pores in the coating. The best results were obtained in electrolytes of the composition (in g/ℓ): $FeCl_2 \cdot H_2O$ 500, HCl 1.8-2, NH_4Cl 100, $MnCl_2 \cdot 6H_2O$ 100, glycerol 80, and dextrin 30-50 at a current density of 25-35 amp/dm^2 and a 75-90° temperature. The coatings produced should be annealed at 250-300° in order to eliminate H_2.

A.F.

1. Iron coatings--Mechanical properties 2. Iron coatings--Effectiveness
3. Electrolytes--Effectiveness 4. Organic materials--Metallurgical effects

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

D'YAKOV, A.M., inzh.-mekhanik; LEKHIKOYNEN, M.M.; MRAIL'CHUK, F.L., kand.tekhn. nauk, red.; ZASENTSEV, I.I., inzh., red.

[Technological process of the overhauling of the GAZ-51, GAZ-63-63A, GAZ-93, PAZ-651-652 motor vehicles] Tekhnologicheskii protsess kapital'nogo remonta avtomobilei GAZ-51, GAZ-63-63A, GAZ-93, PAZ-651-652; metodicheskoe posobie. Dushanbe, Tadzhikskii sel'khoz. in-t, 1963. 120 p. (MIRA 17:9)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

CHERVONYASHCHIY, A.F.; LEKHNE, I.B., inzh.

R75 rails are being laid into the track. Put' i put.khoz. no.10:16-18 O '58. (MIRA 11:12)

1. Nachal'nik putevoy mashinnoy stantsii No.1, st. Bezymyanka Kuybyshevskoy dorogi (for Chervonyashchiy).
(Railroads--Rails) (Railroads--Track)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

COUNTRY : USSR
CATEGORY : Farm Animals. Horses.

ABS. JOUR. : RZBiol., No. 4, 1959, No. 16647

AUTHOR : Bilek, Yan; Dushek, Ya.; Lekhnar, F.
INST. : -
TITLE : New Data on the Method of Obtaining Mare Milk and on Influencing Its Secretion.

ORIG. PUB. : Za sotr. s.-kh. nauku, 1957, A6, No 3, 259-288

ABSTRACT : The activity of the mare's milk gland was studied as well as the possibility of influencing this gland with the goal in view of prolonging the lactation period; the techniques of milking mares were also studied. The experiments were conducted at the work bases of the Milicheskoye and Asavercyskoye farms. It was determined that when machine milking was employed (with manual auxiliary milking at the end of it), the mares were

CARD: 1/4

32

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

ABS. JOUR. : RZBiol., No. 4, 1959, No. 16647

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : better milked, and the lactation period was extended as compared to manual milking. When the mares were [illegible] milked [illegible] amount of milk obtained in [illegible] manual milking [illegible] milkings [illegible] between [illegible] There exists a relationship between the activity of the milk gland and the surface temperature of the udder; this relationship is manifested by an increase of the surface temperature during milking as compared to

CARD: 2/4

COUNTRY : USSR

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHNER, YE.A.

3-58-4-8/34

AUTHOR: Lekhner, Ye.A., Candidate of Philosophical Sciences

TITLE: Studies Are Going On (Idut zanyatiya) Remarks of a Philosophy Instructor (Zametki prepodavatelya filosofii)

PERIODICAL: Vestnik Vysshey Shkoly, 1958, # 4, pp 27 - 32 (USSR)

ABSTRACT: The author describes the conducting of a lecture and 3 seminars in philosophy, and the attitude of the instructors and the audience.

He shows how the students' interest in a subject was aroused through argumentation and debate, and how necessary it is to connect logically philosophical theses to concrete science.

ASSOCIATION: Moskovskiy energeticheskiy institut (Moscow Power Engineering Institute)

AVAILABLE: Library of Congress

Card 1/1

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHNER, Ye.A.; MELKUMYAN, M.I., red.

[Philosophy and contemporary natural science] Filosofiia i sovremennoe estestvoznanie. Petrozavodsk, Vysshaia shkola, 1964. 248 p. (MIRA 17:5)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHNITSKIY, S. G.

LEKHNITSKIY, S. G.

Ust ichivost' anizotropnykh plastinok; posobie dlia aviakonstruktorov. Moskva, Gostekhizdat, 1943. 79 p., diagrs.

Bibliography: p. 79-80.

Title tr.; Stability of anisotropic plates; a manual for aircraft designers.

TL671. 6. L4

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHNITSKIY, S.G.

7

Lehnickii, S. G. Distribution of strain in rotation of an elliptic anisotropic plate. Leningrad State Univ. Annals [Uchenye Zapiski] 87 [Math. Ser. 13. Mechanics], 161-166 (1944). (Russian) [MF 16483]

A homogeneous anisotropic elliptical plate of constant thickness is revolved with constant angular velocity about an axis through the center, normal to the plane of the plate. The author obtains a simple solution for the mean stresses developed in the plate by rotation. The material of the plate is assumed to have one plane of elastic symmetry, parallel to the middle plane of the plate, and the displacements are taken sufficiently small to make the linear theory applicable.

I. S. Sokolnikoff (Los Angeles, Calif.).

Source: Mathematical Reviews, Vol 8, No. 2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHNITSKIY, S. G.

(Lekhnitskiĭ, S. G.) On complex parameters occurring in general formulas of certain problems of the theory of elasticity of anisotropic solids. Leningrad State Univ. Annals [Uchenye Zapiski] 87 [Math. Ser. 13. Mechanics], 167–171 (1944). (Russian) [MF 16184]

The author has shown earlier [Appl. Math. Mech. [Akad. Nauk SSSR. Prikl. Mat. Mech.] 1, 78–90 (1937); 2, 181–210 (1938)] that the solution of plane problems in anisotropic elasticity and of the deflection of anisotropic elastic plates depends on the roots μ_i of the characteristic equation associated with the differential equation for Airy's function or for the deflection of the plate. The parameters μ_i depend on the elastic constants in the generalized Hooke's law and thus characterize the elastic properties of the medium. The paper contains a derivation of the laws of transformation of the parameters μ_i when the coordinate system is rotated through an angle φ about an axis normal to the plane of elastic symmetry of the medium. *I. S. Sokolnikoff.*

Source: Mathematical Reviews, Vol 8, No. 2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHNITSKIY, S. G.

X *Lehnickij, S. G. Anizotropnye Plastinki. [Anisotropic Plates.] OGIZ, Moscow-Leningrad, 1947. 355 pp.

This is a new impression of a book [first published in 1944] concerned with a systematic treatment of the theory of thin anisotropic elastic plates subjected to small deformations. Its object is to acquaint individuals working with anisotropic media with the present state of development of a branch of elasticity that is assuming great technical importance. The book develops three basic themes: (1) the state of generalized plane stress in anisotropic media [chapters 1–7, 138 pp.], (2) small deflections of thin anisotropic plates [chapters 8–11, 138 pp.], (3) stability of thin anisotropic plates [chapters 12–15, 102 pp.]. The presentation is condensed and the stress is placed on the practical side of the theory in order to make the book serve as a guide to designers of structures built of anisotropic materials. Many conclusions are summarized in the form of graphs and tables. The theoretical results are often stated without proofs with the indication of sources where proofs may be found. Bibliographical references include 80 items, with the latest entry dated 1943. This is the first comprehensive exposition of anisotropic theory of elasticity in book form known to the reviewer. *I. S. Sokolnikoff* (Los Angeles, Calif.).

Source: Mathematical Reviews, Vol 10 No 6

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHNITSKIY, S. G.

LEKHNITSKIY, S. G.

Izgib priamougol'noi ortotropnoi plastinki, lezhashchei na parallel'nykh rebrakh zhestkosti. (Prikladnaia matematika i mekhanika, 1948, v. 12, no. 3, p. 339-344)

Title tr.: The bending of a rectangular orthotropic plate resting on parallel rigid ribs. Reviewed by I. S. Sokolnikoff in Mathematical Reviews, 1949, v. 10, no. 3, p. 21[illegible].

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHNITSKIY, S.G.

LEKHNITSKIY, S. G.

Raspredelenie napriazhenii v uprugom sterzhne s krivolineinoi anizotropiei pod deistviem rastiagivaiushchei sily i izgibaiushchikh momentov. (Prikladnaia matematika i mekhanika, 1949, v. 13, no. 3, p. 307-316)

Title tr.: Stress distribution in an elastic bar with curvilinear anisotropy under the action of a stretching force and bending moments.

Reviewed by I. S. Sokolnikoff in Mathematical Reviews, 1950, v. 11, no. 4, p.249.

QA 801. P7 1949

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHNITSKIY, S. G.

Lekhnitskiy, S. G. - "Problems of the equilibrium of elastic anisotropic sheets", Vestnik vyssh. shkoly, 1949, No. 5, p. 52-55.

SO: U-4630, 16 Sept. 53, (Letopis 'Zhurnal 'nykh Statey, No. 23, 1949).

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

Elasticity Theory

Applied Mechanics Review

450. S. G. Lekhnitskii, Stress distribution in an elastic rod with curvilinear anisotropy under the influence of a tension force and bending moments (in Russian), Akad. Nauk SSSR Prikl. Mat. Mekh. 13, 307–316 (1949).

A cylindrical rod of arbitrary cross section is made of elastic material possessing cylindrical anisotropy. The axis of anisotropy, in general, does not coincide with the axis of the cylinder, but the planes of elastic symmetry are normal to the generators of the cylinder. The lateral surface of the rod is free of external forces and the distribution of forces on the ends of the rod is statically equivalent to a single force directed along the axis of the rod, and a bending couple. A long isotropic rod subjected to such a distribution of forces experiences compression and pure bending, but in a long anisotropic rod in addition to bending and compressive stresses new stresses arise. These are typical of those that appear in the study of a plane deformation.

The author's formulation of the problem of compression and bending of rods with cylindrical anisotropy, leads him to the determination of the stress function satisfying a fourth-order partial differential equation similar to that appearing in the analysis of plane deformation in anisotropic elasticity. The problem of compression of thick circular pipes by longitudinal forces is solved explicitly. One peculiarity of the solution is that for certain values of the elastic coefficients the concentration of stress appears in the neighborhood of the axis of anisotropy. The problem of bending of thick circular pipes by terminal couples is also completely solved for one case of cylindrically orthotropic medium.

I. S. Sokolnikoff, USA

1950

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHNITSKIY, S. G.

+Lekhnitskiy, S. G. Teoriya uprugosti anizotropnogo tela. [Theory of Elasticity of an Anisotropic Body]. Gosudarstv. Izdat. Tekh.-Teor. Lit., Moscow-Leningrad, 1950. 299 pp.

This monograph is principally concerned with a systematic presentation of recent contributions in the domain of linear anisotropic theory of elasticity made in the USSR.

Chapter 1 (66 pp.) contains a discussion of the basic concepts of anisotropic theory of elasticity and culminates in the formulation of general equations governing the behavior of anisotropic media. Chapter 2 (20 pp.) reviews the simplest cases of plane distribution in anisotropic rods and plates such as considered by W. Voigt, Lehrbuch der Kristallphysik [Teubner, Leipzig and Berlin, 1910]. The remaining four chapters (206 pp.) contain a condensed summary of recent contributions. The state of stress in a homogeneous anisotropic cylinder subjected to the action of forces in the plane normal to the axis of the cylinder, and not varying along the axis, is analyzed in chapters 3 and 4. The special case of cylindrically anisotropic media is presented in some detail. In chapter 5, the equilibrium of a cantilever beam of uniform cross section under a load on its free end is discussed; several problems involving symmetric deformation and torsion of bodies of revolution are treated in chapter 6.

The monograph contains no discussion of deflection and stability of anisotropic plates, but these problems have been treated in the author's earlier book, Anisotropic Plates [Gosudarstv. Izdat. Tekh.-Teor. Lit., Moscow-Leningrad, 1947; these Rev. 10, 415]. A stress analyst working with anisotropic media will find this book highly useful because of many explicit design formulas included in it. The bibliography contains 56 items, 45 of which are in the Russian language.

I. S. Sokolnikoff (Los Angeles, Calif.).

Source: Mathematical Reviews, Vol 13 No 2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHNITSKIY, S. G.

Strains and Stresses

"Concentration of stresses near openings." Reviewed by S.G. Lekhnitskiy, V.M. Panferov. Prikl. mat. i mekh. 16 no. 1, 1952

Monthly List of Russian Accessions, Library of Congress, June 1952. UNCLASSIFIED.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHNITSKIY, S. G.

USSR.

1941. Lekhnitskii, S. G., Approximate determination of stresses in elastic aniso-ropic plates near apertures slightly deviating from the circular (in Russian), *Inzhener. Sbornik, Akad. Nauk SSSR* 17, 3-28, 1953.

Stress distribution in elastic anisotropic infinite plates (slices) weakened by openings is studied in this paper. An opening is defined by $x = a(\cos\theta + \epsilon\cos 3\theta)$ and $y = a(\sin\theta - \epsilon\sin 3\theta)$, where a is constant, and ϵ is a small parameter. By a proper choice of ϵ, nearly square openings with rounded corners are obtained. Depending on the sign of ϵ, these "squares" may be differently oriented. Author utilizes an approximate procedure based on a complex variable technique previously developed by Muskhelishvili and extended to anisotropic plates by the author. This technique is applied to an arbitrary load distribution on the contour of an opening and to two special cases: plate subjected to uniform tension at infinity, and to an analogous plate subjected to in-plane bending moment.

E. P. Popov, UBA

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHNITSKIY, S.G.

~~LEKHNITSKIY, S.G.~~

~~LEHNICKII, S.G.~~

USSR / MS

Lehnickii, S. G. The stress distribution in an anisotropic plate with an elliptic elastic core (plane problem). Inžen. Sb. 19, 83–106 (1954). (Russian) 1-F/17

The author solves the problem for infinite plates using a perturbation method, based on the solution for the homogeneous infinite plate loaded uniformly at infinity. The special cases considered comprise a circular core in orthotropic plates under uniaxial and biaxial tension and shear, an elliptic core in a plate subject to stresses varying linearly with the rectilinear coordinates, a circular core in a plate in uniform bending. *J. R. M. Radok* (Providence, R. I.).

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHNITSKIY, S. G.

Lekhnitskiĭ, S. G. Some cases of elastic equilibrium of an anisotropic plate with a noncircular opening (plane case). Inžen. Sb. 22 (1955), 160–187. (Russian)

The author has in a previous paper [Inžen. Sb. 17 (1953), 3–28; MR 16, 540] developed a method for an approximative solution of plane elastic case relative to an anisotropic plate, weakened through an opening slightly different from the circular form. He has analyzed the distribution of stresses in the neighbourhood of an opening with four axes of symmetry in the cases of the extension and of bending generated through moments.

In the present paper he applies this method to solution of the plane case for an anisotropic plate with an opening slightly different from the elliptic form. He gives the approximative solutions for the case of an opening in an orthotropic plate which is near to an equilateral triangle with rounded off corners, and to an oval opening (more exactly, to an opening of the rectangular form with curved shorter sides). The general case of distribution of external forces is considered as well as two particular cases: of extension and of bending through moments.

T. P. Anđelić (Belgrade).

LFH

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHNITSKIY, S. G.

Lehnicki, S. G. Torsion of a many-layer rod of rectangular cross-section. Inžen. Sb. 23 (1956), 63–76. (Russian)

A composite rectangular beam with n layers of orthotropic material, the kth of thickness $h_k - h_{k-1}$, is considered. The boundary conditions for each layer are taken in the form

$$\tau_{xz}=0 \quad (z=0,\ x=a),$$

$$\tau_{yz}=\tau_{k-1}=\sum_{1,3,5,\cdots}\tau_{k-1,m}\cos\frac{m\pi x}{a}\quad (y=h_{k-1}),$$

$$\tau_{yz}=\tau_k=\sum_{1,3,5,\cdots}\tau_{k,m}\cos\frac{m\pi x}{a}\quad (y=h_k),$$

where $\tau_{0,m}=\tau_{n,m}=0$ $(m=1, 3, 5, \cdots)$. The stress and displacement functions are determined by a routine calculation in terms of the $\tau_{k,m}$. Finally making the displacements on each side of the surface $y=h_{k-1}$ agree leads to recurrence relations in $\tau_{k,m}$, $\tau_{k-1,m}$, $\tau_{k-2,m}$.

The case of a symmetrical beam with three layers of equal thickness is treated in detail. *R. C. T. Smith.*

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LEKHNITSKIY, Sergey Georgiyevich; FEL'DMAN, G.I., redaktor; NEGRIMOVSKAYA, R.A., tekhnicheskiy redaktor

[Anisotropic plates] Anizotropnye plastinki. Izd. 2-oe, perer. i dop.. Moskva, Gos.izd-vo tekhniko-teoret.lit-ry, 1957. 463 p. (Elastic plates and shells) (MIRA 10:7)

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

SOV/179-59-2-19/40

AUTHOR: Lekhnitskiy, S. G. (Saratov)

TITLE: The Theory of Anisotropic Thick Plates (K teorii anizotropnykh tolstykh plit)

PERIODICAL: Izvestiya Akademii nauk SSSR OTN, Mekhanika i mashinostroyeniye, 1959, Nr 2, pp 142-145 (USSR)

ABSTRACT: The material of the plate is assumed to be transversely isotropic, with the planes of isotropy parallel to the middle surface, and the material therefore possesses five independent elastic constants. Equations are given without detailed derivation for the displacements and stresses corresponding to a state of plane stress, and for the displacements, stresses and moments in a bent plate, both for the general case, and for the particular case of a plate bent by a uniformly distributed pressure in addition to its own weight. For a simply supported circular plate of radius a, thickness h subjected to a uniformly distributed pressure q, the equations for displacements, stresses and moments are given, neglecting the weight of the plate. In this case, the central

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The Theory of Anisotropic Thick Plates

deflection f and maximum stress σ can be written

$$f = c_1 f_0 \quad , \quad \sigma = c_2 \sigma_0 \quad ,$$

where f_0 and σ_0 are respectively the central deflection and maximum stress calculated from standard thin-plate theory. For an isotropic plate having a Poisson's ratio of 0.3 and $h/a = 0.2$, the values obtained are $c_1 = 1.038$, $c_2 = 1.004$. For a transversely isotropic plate having $G_1 = 0.1\ E$, $C_1 = 1.17$, $C_2 = 1.021$; and for $G_1 = 0.01\ E$, $C_1 = 2.79$, $C_2 = 1.237$, where E is the Young's modulus in the isotropic planes and G_1 is the shear modulus in planes normal to the isotropic planes. Thus for the particular cases considered, the errors of the thin plate approximation are negligible if the material is isotropic,

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The Theory of Anisotropic Thick Plates

but are appreciable if the material is anisotropic, the errors becoming larger the smaller the ratio G_1/E .

There are 4 Soviet references.

ASSOCIATION: Saratovskiy gosudarstvennyy universitet, Kafedra teorii uprugosti (Saratov State University, Chair of Elastic Theory)

SUBMITTED: December 22, 1958.

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LEKHNITSKIY, S.G.

report presented at the 1st All-Union Congress of Theoretical and Applied Mechanics, Moscow, 27 Jan - 3 Feb '60.

168. S. D. Leites (Dnepropetrovsk): On space buckling of columns in the elastic-plastic range.

169. V. S. Lenskii (Moscow): Vibro-creep at room temperature.

170. V. S. Lenskii (Moscow): Plasticity of metals under combined loading.

171. A. I. Leonov (Moscow): Some problems of non-stationary flow of an incompressible visco-elastic (Maxwellian) liquid.

172. A. I. Leonov, M. D. Rusinov (Moscow): Some problems of quasi-steady flow of an incompressible visco-elastic (Maxwellian) liquid.

173. M. Ia. Leonov (Lvov): The generalization of the torsion theory of thin-walled bars.

174. M. Ia. Leonov, V. V. Panasyuk (Lvov): The development of microcracks.

175. Ts. R. Lenik (Tartu): Plastic flow of circular plates under tension and bending of compression and bending.

176. S. G. Lekhnitskii (Leningrad): Torsion of an anisotropic curved bar.

177. A. D. Lizarev (Sverdlovsk): Free vibrations and stability of ordinary and prestressed elastic restrained beams.

178. A Lisowski (Krakow): Displacement of rocks due to excavation of sloping layers.

179. E. V. Litvinov (Kiev): On the application of matrix transformations to the solution of large sets of linear equations of elasticity theory.

180. O. I. Lotkin (Tomsk): The selection of rational parameters for structures of equal stability consisting of plates and stringers.

181. F. A. Lukash (Moscow): Large deflections of shallow shells of non-linear elastic materials.

182. Ia. B. Lbin (Voronesh): Methods for the solution of the problems of axisymmetric states of stress in shells of revolution.

183. R. A. Malakhovskii (Gomel): Analysis of an orthotropic circular conical shell under an arbitrary load applied as a ring.

184. S. V. Malashenko (Kiev): On the experimental study of strains in plates and shells.

185. N. I. Malinin (Novosibirsk): Creep strains and ruptures of high polymers.

186. R. L. Malkina (Sverdlovs): Vibrations of non circular cylindrical shells.

187. A. K. Malmeister (Riga): Some problems of combined loading of quasi-isotropic bodies.

188. K. A. Maltsov (Leningrad): The influence of structural discontinuity in concrete on its strength.

189. S. O. Mamedova (Baku): Investigation of the state of stress in a square prism with coaxial cylindrical hole under internal pressure.

190. G. F. Mandzhavidze (Tbilisi): Solving the plane elastic problem for anisotropic bodies by reduction to the problem of linear coupling with "displacements".

191. L. I. Manevich, Yu. A. Shevliakov (Dnepropetrovsk): The stability of a cylindrical shell in bending.

192. V. M. Marchenko (Moscow): Stress and strain in naturally twisted bars.

193. V. I. Makhovikov (Taranobka): The problems of conformal transformation and plane elasticity for the exterior of an infinite number of holes.

194. Ia. A. Macheret (Moscow): The design of finite and infinite beams on elastic foundation including time effects and without adopting the hypothesis of Zimmerman and Winkler.

195. A. S. Meliakovetskii (Stalino): Vibrations of a curved bar in an elastic medium and on elastic supports.

196. S. R. Mestsian (Erevan): An experimental study of basic creep laws for soils.

197. G. S. Migirenko (Novosibirsk): On statically equivalent loadings.

198. M. Sh. Nikoladze (Tbilisi): Contribution to the theory of plastic shells of uniform strength.

199. R. S. Minasian (Erevan): On the bending of a simply supported parallelogram plate.

200. N. V. Mikhailov (Moscow): Evaluation of the rheological properties of elastic, visco-plastic materials in homogeneous strain-rate under constant shearing stress.

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHNITSKIY, S.G. (Leningrad)

Torsion of anistropic curved beams. Prikl.mat.i mekh. 24 no.3:433-437 My-Je'60. (MIRA 13:10)
(Elastic solids) (Torsion)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

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LEKHNITSKIY, S.G. (Lekhnitskiy); SOLDATOV, V.V. (Ural'sk)

Effect of the position of an elliptic hole on stress concentration in an orthotropic plate subjected to stretching. Izv. AN SSSR. Otd. tekh.nauk.Mekh. i mashinostr. no. 1:3-8 Ja-F '61. (MIRA 14:2)

(Elastic plates and shells)

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B125/B204

10.9200
16.7200

AUTHOR: Lekhnitskiy, S. G. (Leningrad)

TITLE: The torsion of an anisotropic rod by stresses distributed over the lateral surface

PERIODICAL: Prikladnaya matematika i mekhanika, v. 25, no. 1, 1961, 56-67

TEXT: The present paper deals with the torsion of a rod with linear or cylindrical anisotropy by tangential stresses whose dependence on length is characterized by an integer polynomial of degree n with respect to z. Besides, the general theory is developed, and also some special cases are discussed. The first part of the paper deals with the general case of the torsion of the rod with linear anisotropy. This rod is assumed to be a cylinder or a prism made from elastic homogeneous linearly isotropic material. It is assumed to be fixed at one end and subjected to the effect of the tangential stresses t. The only surface of elastic symmetry is perpendicular to the generatrix. The material obeys the generalized Hooke law, and undergoes no

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The torsion of an anisotropic rod ...

deformations. No volume forces exist. In the usual coordinate denotation, the stresses, deformations, and displacements on the lateral surface have the form (1.2) and (1.3).

$$\frac{\partial \sigma_x}{\partial x} + \frac{\partial \tau_{xy}}{\partial y} + \frac{\partial \tau_{xz}}{\partial z} = 0 \quad (xyz) \qquad (1.2)$$

$$\varepsilon_x = a_{11}\sigma_x + a_{12}\sigma_y + a_{13}\sigma_z + a_{16}\tau_{xy}$$

$$\varepsilon_y = a_{12}\sigma_x + a_{22}\sigma_y + a_{23}\sigma_z + a_{26}\tau_{xy}$$

$$\varepsilon_z = a_{13}\sigma_x + a_{23}\sigma_y + a_{33}\sigma_z + a_{36}\tau_{xy}$$

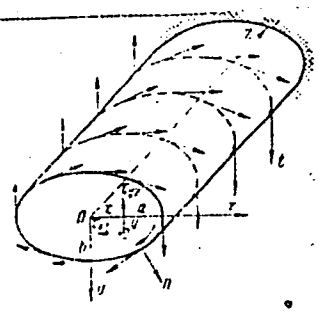
$$\gamma_{xy} = a_{16}\sigma_x + a_{26}\sigma_y + a_{36}\sigma_z + a_{66}\tau_{xy}$$

$$\gamma_{xz} = a_{55}\tau_{xz} + a_{45}\tau_{yz}, \quad \gamma_{yz} = a_{45}\tau_{xz} + a_{44}\tau_{yz}$$

$$\sigma_x \cos(n, x) + \tau_{xy}\cos(n, y) = -t\cos(n, y)$$

$$\tau_{xy}\cos(n, x) + \sigma_y \cos(n, y) = t\cos(n, x)$$

$$\tau_{xz}\cos(n, x) + \tau_{yz}\cos(n, y) = 0 \qquad (1.3)$$



Фиг. 1

Here a_{ij} denotes the elastic constants and n the normal to the edge of

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The torsion of an anisotropic rod ...

the plane-section. For the tangential stresses one puts $t = t_n(s)\left(\frac{z}{l}\right)^n$ (1.7), and in the more general case $t = \sum_{n=0}^{N} t_n(s)\left(\frac{z}{l}\right)^n$ (1.1). t_n here is a function of the curve length s of the section edge. The displacements and strains corresponding to the stresses (1.7) are set up as sums with descending powers of z:

$$u = z^{n+2}u_{n+2} + z^n u_n + z^{n-2}u_{n-2} + \dots$$
$$\dots\dots\dots\dots\dots\dots \qquad (1.8)$$
$$w = z^{n+1}w_{n+1} + z^{n-1}w_{n-1} + \dots$$

$$\sigma_x = z^n\sigma_x^n + z^{n-2}\sigma_x^{n-2} + \dots$$
$$\dots\dots\dots\dots\dots\dots \qquad (1.9)$$
$$\tau_{xy} = z^n\tau_{xy}^n + z^{n-2}\tau_{xy}^{n-2} + \dots$$
$$\dots\dots\dots\dots\dots\dots$$
$$\tau_{xz} = z^{n+1}\tau_{xz}^{n+1} + z^{n-1}\tau_{xz}^{n-1} + \dots$$
$$\dots\dots\dots\dots\dots\dots$$

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By substituting (1.8) and (1.9) into (1.2) one finds, by comparing coefficients $v_{n+2} = \vartheta_{n+2}x + B_{n+2}$ (1.10.n + 2) $u_{n+2} = -\vartheta_{n+2}y + A_{n+2}$ (where ϑ, A, B are arbitrarily chosen constants); there then follow systems of equations:

$$\frac{\partial \tau_{xz}^{n+1}}{\partial x} + \frac{\partial \tau_{yz}^{n+1}}{\partial y} = 0 \qquad (1.10.n+1)$$

$$(n+2)(\vartheta_{n+2}x + A_{n+2}) + \frac{\partial w_{n+1}}{\partial y} = a_{44}\tau_{yz}^{n+1} + a_{45}\tau_{xz}^{n+1}$$

$$(n+2)(-\vartheta_{n+2}y + B_{n+2}) + \frac{\partial w_{n+1}}{\partial x} = a_{45}\tau_{yz}^{n+1} + a_{55}\tau_{xz}^{n+1}$$

$$\frac{\partial \sigma_x^k}{\partial x} + \frac{\partial \tau_{xy}^k}{\partial y} + (k+1)\tau_{xz}^{k+1} = 0, \quad \frac{\partial \tau_{xy}^k}{\partial x} + \frac{\partial \sigma_y^k}{\partial y} + (k+1)\tau_{yz}^{k+1} = 0 \qquad (1.10.k)$$

$$\sigma_z^k = \frac{k+1}{a_{33}} w_{k+1} - \frac{1}{a_{33}}(a_{13}\sigma_x^k + a_{23}\sigma_y^k + a_{36}\tau_{xy}^k)$$

$$\frac{\partial u_k}{\partial x} = \beta_{11}\sigma_x^k + \beta_{12}\sigma_y^k + \beta_{16}\tau_{xy}^k + \frac{a_{13}}{a_{33}}(k+1)w_{k+1}$$

$$\frac{\partial v_k}{\partial y} = \beta_{12}\sigma_x^k + \beta_{22}\sigma_y^k + \beta_{26}\tau_{xy}^k + \frac{a_{23}}{a_{33}}(k+1)w_{k+1}$$

$$\frac{\partial v_k}{\partial x} + \frac{\partial u_k}{\partial y} = \beta_{16}\sigma_x^k + \beta_{26}\sigma_y^k + \beta_{66}\tau_{xy}^k + \frac{a_{36}}{a_{33}}(k+1)w_{k+1}$$

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$$\left(\beta_{ij} = a_{ij} - \frac{a_{i3}a_{j3}}{a_{33}}, \quad i, j = 1, 2, 6; \quad \begin{matrix} k = n, n-2, \ldots, 0 \text{ для } n \text{ четных} \\ k = n, n-2, \ldots, 1 \text{ для } n \text{ нечетных} \end{matrix}\right)$$

$$\frac{\partial \tau_{xz}^{k-1}}{\partial x} + \frac{\partial \tau_{yz}^{k-1}}{\partial y} + k\sigma_z^k = 0 \qquad (1.10k-1)$$

$$kv_k + \frac{\partial w_{k-1}}{\partial y} = a_{44}\tau_{yz}^{k-1} + a_{45}\tau_{xz}^{k-1}, \qquad ku_k + \frac{\partial w_{k-1}}{\partial x} = a_{45}\tau_{yz}^{k-1} + \beta_{55}\tau_{xz}^{k-1}$$

(k = n, n - 2, ..., 2 for n even and k = n, n - 2, ..., 1 for odd n). The second part of this paper then deals with the general course taken by the solution of the problem. Solution of this problem is reduced to the successive solution of two other problems, which are similar to the simple torsion and plane deformation. Among other things, the following equations are obtained for the stress function:

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The torsion of an anisotropic rod ...

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$$L_2\psi_{n+1} = -2(n+2)\vartheta_{n+2} \qquad (2.3.\,n+1)$$

$$L_4F_k = \frac{\partial^2}{\partial x^2}\left[\frac{a_{23}}{a_{33}}(k+1)w_{k+1} - \beta_{12}\sigma_1{}^k - \beta_{22}\sigma_2{}^k - \beta_{26}\tau^k\right] + \qquad (2.3.\,k)$$

$$+ \frac{\partial^2}{\partial y^2}\left[\frac{a_{13}}{a_{33}}(k+1)w_{k+1} - \beta_{11}\sigma_1{}^k - \beta_{12}\sigma_2{}^k - \beta_{16}\tau^k\right] -$$

$$- \frac{\partial^2}{\partial x\partial y}\left[\frac{a_{36}}{a_{33}}(k+1)w_{k+1} - \beta_{16}\sigma_1{}^k - \beta_{26}\sigma_2{}^k - \beta_{66}\tau^k\right]$$

$(k = n,\ n-2, \ldots, 0$ или $1)$

$$L_2\psi_{k-1} = k\left(\frac{\partial u_k}{\partial y} - \frac{\partial v_k}{\partial x}\right) + \frac{\partial}{\partial x}(a_{45}\tau_1{}^{k-1} + a_{44}\tau_2{}^{k-1}) - \frac{\partial}{\partial y}(a_{55}\tau_1{}^{k-1} + a_{45}\tau_2{}^{k-1})$$

$(k = n,\ n-2, \ldots, 2$ или $1)$ (2.3.k−1)

The third part of this paper deals with the torsion of a rod with elliptic cross section. In the solution of concrete problems, the complex representation of the stress functions and displacement functions may be of use. This problem is reduced to determining the functions

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$\Phi_{jk}(z_j)$ within range of the cross section. If the rod is an elliptic cylinder and if stress is uniformly distributed over the edge of each cross section, the problem is solved in an elementary manner for each arbitrary power n in the integer polynomial. Especially, for a uniformly stressed rod, the known result (3.6), (3.7) is obtained.

$$\tau_{xz} = \frac{4t_0}{b^2} yz, \quad \tau_{yz} = -\frac{4t_0}{a^2} xz \qquad (3.6)$$

$$\sigma_x = -\frac{2t_0}{b^2} xy, \qquad \sigma_y = \frac{2t_0}{a^2} xy, \qquad \tau_{xy} = t_0\left(\frac{x^2}{a^2} - \frac{y^2}{b^2}\right)$$

$$\sigma_z = \frac{2t_0}{a^2 a_{33}} [(a_{13} + a_{55}) a^2 - a_{23} - a_{44}] xy \qquad (3.7)$$

The fourth part then deals with the twisting torsion of a hollow cylinder by symmetrically distributed forces. Its one end is assumed to be fixed, while its other end is assumed not to be under stress, and tangential torsional forces are assumed to act upon the cylinder surface. Here $t_a = t_{na}\left(\frac{z}{l}\right)^n$, $t_b = t_{nb}\left(\frac{z}{l}\right)^n$ holds, t_{na} and t_{nb} are constant coefficients.

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The torsion of an anisotropic rod ...

In the present case, $\sigma_r = \sigma_\theta = \sigma_z = \tau_{rz} = 0$, $u = w = 0$ may be put. The principal system then assumes the form

$$\frac{\partial}{\partial r}(r^2\tau_{r\theta}) + \frac{\partial}{\partial z}(r^2\tau_{\theta z}) = 0, \quad G_{\theta z}\frac{\partial v}{\partial z} = \tau_{\theta z}, \quad G_{r\theta}\left(\frac{\partial v}{\partial z} - \frac{v}{r}\right) = \tau_{r\theta},$$

where u, v, w are projections of the displacement onto the directions r, θ, z. The expressions for the displacements and stresses are set up as sums. One then finds (4.6.n+2)-(4.6.k-2).

$$v_{n+2} = \vartheta_{n+2} r \qquad (4.6.\ n+2)$$

$$\tau_{\theta z}^{n+1} = (n+2)\vartheta_{n+2} G_{\theta z} r \qquad (4.6.\ n+1)$$

$$\tau_{r\theta}^{k} = \frac{G_{\theta z} B_k}{r^2} - \frac{k+1}{r^2}\int r^2 \tau_{\theta z}^{k+1} dr, \quad v_k = \vartheta_k r + \frac{r}{G_{r\theta}}\int \frac{\tau_{r\theta}^{k}}{r} dr \qquad (4.6.\ k)$$

$(k = n,\ n-2, \ldots, 0$ или $1)$

$$\tau_{\theta z}^{k-1} = k G_{\theta z} v_k \quad (k = n,\ n-2, \ldots, 2 \text{ или } 1) \qquad (4.6.\ k-2)$$

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The conditions on the outer and inner cylinder surface are (4.7), and one obtains (4.8).

$$\tau_{r\theta}^{n} = t_{nb}/l^{n}, \quad \tau_{r\theta}^{k} = 0 \quad \text{at } r = b$$
$$\tau_{r\theta}^{n} = t_{na}/l^{n}, \quad \tau_{r\theta}^{k} = 0 \quad \text{at } r = a \qquad (4.7)$$

$$\int_a^b \tau_{\theta z}^{n+1} r^2 dr = \frac{t_{na}a^2 - t_{rb}b^2}{l^{n(n+1)}}, \qquad \int_a^b \tau_{\theta z}^{k-1} r^2 dr = 0 \qquad (4.8)$$

Finally, special cases of distribution of torsional stress are dealt with: one end is fixed, and the other is free; the rod is fixed at one end, and is subjected to uniform stress over its entire length, or to linearly growing stress; the rod is fixed at both ends and stressed according to a parabolic law. G. V. Kolosov, N. V. Zvolinskiy, P. M. Riz, G. Yu. Dzhanelidze, A. S. Kosmodamianskiy, and A. I. Vzdalev are mentioned. There are 5 figures and 11 references: 7 Soviet-bloc and 4 non-Soviet-bloc.

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S/040/61/025/006/013/021
D299/D304

AUTHOR: Lekhnitskiy, S.G. (Leningrad)

TITLE: Axisymmetric deformation and torsion of transversely isotropic cylinder under a load having polynomial distribution

PERIODICAL: Prikladnaya matematika i mekhanika, v. 25, no. 6, 1961, 1102 - 1109

TEXT: Elastic equilibrium is considered of a cylinder under stresses, whose distribution over the lateral surface is expressed by a polynomial in z (the distance to the end); the stresses do not depend on the polar angle Θ. A general method is set forth, based on the theory of axisymmetric deformation and torsion, similar to the method proposed by A.I. Lur'ye for the equilibrium of an elastic layer. The method permits satisfying exactly the conditions on the cylindrical surface, whereas the end conditions are satisfied approximately, "in the mean". A hollow circular cylinder of finite length is considered (see Fig.). The general expressions for the

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stresses and displacements are derived, viz.

$$u_r = -\frac{\partial^2 F}{\partial r\,\partial z}, \quad u_\theta = \frac{\partial \varphi}{\partial r}, \quad w = \gamma D^2 F + \delta \frac{\partial^2 F}{\partial z^2} \tag{1.4}$$

$$\sigma_r = \frac{\partial}{\partial z}\left(2G\frac{1}{r}\frac{\partial F}{\partial r} - \alpha D^2 F + \beta\frac{\partial^2 F}{\partial z^2}\right), \quad \tau_{rz} = \frac{\partial}{\partial r}\left(\alpha D^2 F - \beta\frac{\partial^2 F}{\partial z^2}\right)$$

$$\sigma_\theta = \frac{\partial}{\partial z}\left(2G\frac{\partial^2 F}{\partial r^2} - \alpha D^2 F + \beta\frac{\partial^2 F}{\partial z^2}\right), \quad \tau_{\theta z} = G_1\frac{\partial^2 \varphi}{\partial r\,\partial z} \tag{1.5}$$

$$\sigma_z = \frac{\partial}{\partial z}\left(\alpha_1 D^2 F + \beta_1\frac{\partial^2 F}{\partial z^2}\right), \quad \tau_{r\theta} = G D_1^2 \varphi$$

where D^2 is the Laplace operator for functions which depend only on r; the function F determines the axisymmetric deformation and φ - the torsion, $G = E/2(1+\nu)$. By means of the operators

$$\frac{1}{D}\sin szD = sz - \frac{s^3z^3}{3!}D^2 + \frac{s^5z^5}{5!}D^4 - \ldots \tag{1.9}$$

$$\cos szD = 1 - \frac{s^2z^2}{2!}D^2 + \frac{s^4z^4}{4!}D^4 - \ldots$$

(used by Lur'ye), one obtains more compact expressions for the stresses and displacements. Axisymmetric deformation: Assume the

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stresses p and q have rotational symmetry and vary as a function of integral polynomials in z, whereas t = 0. The boundary conditions are set up

$$\sigma_r = p_{2m}\left(\frac{z}{l}\right)^{2m}, \quad \tau_{rz} = q_{2m-1}\left(\frac{z}{l}\right)^{2m-1}, \quad \tau_{r\theta} = 0 \quad \text{for } r = b \qquad (2.1)$$

$$\sigma_r = p'_{2m}\left(\frac{z}{l}\right)^{2m}, \quad \tau_{rz} = q'_{2m-1}\left(\frac{z}{l}\right)^{2m-1}, \quad \tau_{r\theta} = 0 \quad \text{for } r = a$$

the expressions for σ and τ are then given in expanded form. These equations apply to the case of normal stresses proportional to even powers of z, and the tangential stresses to odd powers. The coefficients of the expanded equations are determined successively, until one arrives at the expression

$$(G - \alpha - \beta s_1^2)s_1A_2 + (G - \alpha - \beta s_2^2)s_2C_2, \; s_1B_0 + s_2D_0 \qquad (2.7)$$

whence they can be uniquely determined. If the normal stresses are proportional to odd powers of z, and the tangential to even powers, the boundary conditions are slightly different; the solution is analogous. For a solid cylinder (a = 0), the formulas are conside-

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rably simplified. An example is considered. Torsion: Let the surfaces r = b, r = a of a hollow cylinder be subjected to the stress t only, independent of θ and having a polynomial distribution. The expressions for the displacements and stresses are

$$u_\theta = \frac{d}{dr}\left[\varphi_0 - \frac{s_0^2 z^2}{2!} D^2\varphi_0 + \ldots + (-1)^k \frac{s_0^{2k} z^{2k}}{(2k)!} D^{2k}\varphi_0 + \ldots\right] \quad (3.2)$$

$$\tau_{r\theta} = GD_1^2\left[\varphi_0 - \frac{s_0^2 z^2}{2!} D^2\varphi_0 + \ldots + (-1)^k \frac{s_0^{2k} z^{2k}}{(2k)!} D^{2k}\varphi_0 + \ldots\right]. \quad (3.3)$$

The equations

$$(D_1^2 D^{2m}\varphi_0)_{r=b} = \frac{t_{2m}}{l^{2m}} \quad (D_1^2 D^{2m}\varphi_0)_{r=a} = \frac{t_{2m}'}{l^{2m}} \quad (3.7)$$

$$D_1^2 D^{2m-2}\varphi_0 = 0, \quad D_1^2 D^{2m-4}\varphi_0 = 0, \quad \ldots, \quad D_1^4\varphi_0 = 0 \quad \text{for } r = b \text{ and } r = a$$

for the coefficients, are derived. An example is considered. There are 1 figure and 5 Soviet-bloc references. The reference to the English-language publication reads as follows: Hu Hai-chang. On the three-dimensional problems of the theory of elasticity of a transversely isotropic body. Acta sci. sinica, 1953, 2, no.2.

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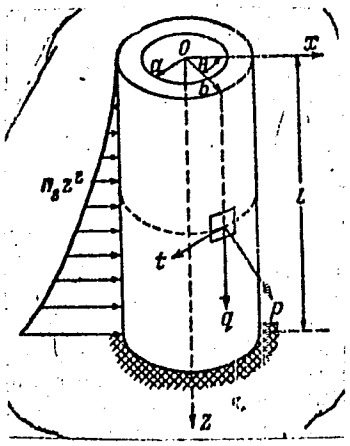
"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

Axisymmetric deformation and ...

S/040/61/025/006/013/021
D299/D304

SUBMITTED: July 8, 1961

Fig.



Card 5/5

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHNITSKIY, S.G., prof., doktor fiziko-matematicheskikh nauk

Theoretical study of stresses in an elastic aniostropic massif near an elliptical underground working. [Trudy] VNIMI no.45:155-179 '62. (MIRA 16:4)

(Rock pressure) (Mining engineering) (Strains and stresses)

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

S/040/62/026/001/016/023
D237/D304

AUTHOR: Lekhnitskiy, S.G.

TITLE: Radial distribution of stresses in a wedge and in a half-plane with a variable elasticity modulus

PERIODICAL: Akademiya nauk SSSR. Otdeleniye tekhnicheskikh nauk. Prikladnaya matematika i mekhanika, v. 26, no. 1, 1962, 148-151

TEXT: A plane problem is considered of the theory of elasticity for an infinite isotropic wedge, the elasticity modulus E of which is a continuous function of the coordinates r, θ, under a load applied to the apex, and for a half-plane. The equation for the modulus of elasticity is derived, and in the case of the constant Poisson coefficient it is shown that there exist a class of solutions in the form $E = E(r, \theta)$, with a corresponding radial distribution of stresses ($\sigma_\theta = \tau_0 = 0$) in the wedge. If the solution is of the type $E = \sum^{N} E(r, \theta)$, then generally, stress distribution shall not be radial, but two cases are given in

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

which the radial distribution occurs, although $E = \sum^{N} E(r, \theta)$. The case when elasticity modulus varies according to the law Eq. (3.1) $E = E_m x^m = E_m r^m \cos^m \theta$ is shown to be a particular example of the case already considered, and the author concludes by remarking that for a half-plane, in which the elasticity modulus E is inversely proportional to the distance from the boundary and Poisson's coefficient is constant, the force acting along the boundary does not result in stress. Stress from the normal force obeys the same law as E, and isobars σr = const. will be represented by straight lines parallel to the boundary. There 4 figures and 5 references: 3 Soviet-bloc and 2 non-Soviet-bloc. The reference to the English-language publication reads as follows: Z. Kaczkowski, Statics of non-homogeneous rectangular plates and discs. Non-Homogeneity in Elasticity and Plasticity. Pergamon Press, London-New York - Paris - Los Angeles, 1959.

SUBMITTED: July 8, 1961

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

S/179/63/000/001/007/031
E032/E314

AUTHOR: Lekhnitskiy, S.G. (Leningrad)

TITLE: Plane stressed state and bending of a nonhomogeneous transversely isotropic plate

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye tekhnicheskikh nauk. Mekhanika i mashinostroyeniye, no. 1, 1963, 61 - 67

TEXT: A multilayer plate consisting of an odd number of transversely isotropic layers arranged symmetrically with respect to the median plane is considered under the following assumptions: 1) the pairs of layers which are symmetrical with respect to the median plane have equal thicknesses and the same elastic properties and the planes of isotropy in each layer are parallel to the median plane of the entire plate; 2) the layers are attached to each other along the contacting surfaces in such a way that slip or complete separation is impossible; 3) the generalized Hook's law holds; 4) the Poisson coefficients for the planes of isotropy of all the layers are the same. The last assumption is particularly importan because without it the theory cannot be derived in the

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simple form given here. The second problem considered is that of a single-layer transversely isotropic plate with the planes of isotropy parallel to the median plane in which the Poisson coefficient remains constant, while the remaining elastic moduli and Poisson coefficients are continuous and even functions of depth in the plate. Again, it is assumed that the generalized Hook's law holds. Two cases of equilibrium are then considered for both the multi-layer and single-layer plates, namely, the plane stressed state and bending under the action of stresses distributed arbitrarily over the lateral surface and bending under the action of a normal load over one of the plane faces. The analysis is a generalization of published solutions for the elastic equilibrium of a thick plate to the restricted non-homogeneous case defined above. Expressions are derived for the stresses and strains which rigorously satisfy all the equations of the theory of elasticity and the conditions on the plane and contacting surfaces of the layers. There are 2 figures.

SUBMITTED: July 20, 1962

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHNITSKIY, S.G.

Distribution of stresses in an elastic half-plane having a variable modulus of elasticity. Issl. po uprug. i plast. no.2:59-65 '63. (MIRA 16:8)

(Strains and stresses) (Elasticity)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHNITSKIY, S.G. (Leningrad)

Problem concerning elastic equilibrium of an anisotropic strip. Prikl. mat. i mekh. 27 no.1:142-149 Ja-F '63. (MIRA 16:11)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHNITSKY, S.G. (Leningrad)

"An improved theory of heterogeneous transversally isotropic plates of asymmetrical construction".

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

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

ACCESSION NR: AP4018422 S/0179/64/000/001/0027/0032

AUTHOR: Lekhnitskiy, S. G. (Leningrad)

TITLE: Uniaxial stressed state of an orthotropic rod with variable moduli of elasticity

SOURCE: AN SSSR. Izv. Otd. tekh. nauk. Mekhanika i mashinostroyeniye, no. 1, 1964, 27-32

TOPIC TAGS: elasticity, stress, stress analysis, stressed state, uniaxial stressed state, orthotropic rod, elastic equilibrium

ABSTRACT: A discussion of the plane problem of elastic equilibrium of an orthotropic rod whose moduli of elasticity are functions of coordinates under the action of axial forces and bending moments applied at the ends. With constant moduli of elasticity and Poisson's ratios, the problem has an elementary solution (stressed state uniaxial), but with variable moduli, it may become quite complex. The conditions are examined which should be satisfied by variable moduli of elasticity in order for the stressed state to be uniaxial; formulas are given for the corresponding stresses and displacements. Orig. art. has: 1 figure, 32 formulas.

Card 1/2

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

ACCESSION NR: AP4018422

ASSOCIATION: none

SUBMITTED: 11Jul63

DATE ACQ: 23Mar64

ENCL: 00

SUB CODE: AP

NO REF SOV: 002

OTHER: 001

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

[illegible] S.S. (Leningrad)

Torsion of an anisotropic solid of [illegible] with variable modulus of elasticity. Prikl. mat. i mekh. 23 no.6:1112-1116 N-D '64 (MIRA 18:2)

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHNITSKIY, S.G. (Leningrad)

More precise theory of inhomogeneous transversely isotropic plates of nonsymmetric structure. Izv. AN SSSR. Mekh. no.1: 81-88 Ja-F '65. (MIRA 18:5)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHNITSKIY, YU.D., glavnyy inzhener.

Work schedule for tree tapping operations. Der.i lesokhim. prom. 3 no.2:27-28 F '54. (MLRA 7:1)

1. Trest Chelyabkhimlesa.

(Tree tapping)

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHNO, I.B., inzhener.

Device for dismantling rail units. Zhel.dor.transp. 37 no.2: 82 F '56. (MLRA 9:5)

(Railroads--Rails)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHNO, Il'ya Borisovich, inzh.; LIDERS, G.V., kand.tekhn.nauk, red.; BOBROVA, Ye.N., tekhn.red.

[New rail and joints design] Novye konstruktsii rel'sov i skreplenii. Moskva, Gos.transp.zhel-dor.izd-vo, 1959. 60 p. (MIRA 13:1)

(Railroads--Rails)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHNO, Il'ya Borisovich; LIDERS, Georgiy Vladimirovich; POTOTSKIY, G.I., red.; KHITROV, P.A., tekhn.red.

["Dragavtsev" ballast cleaner] Mashina Dragavtseva. Moskva, Vses. izdatel'sko-poligr.ob"edinenie M-va putei soobshcheniia, 1960. 33 p. (MIRA 13:9)
(Railroads--Equipment and supplies) (Ballast (Railroads))

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHNO, I.B., inzh.

How to make the best use of "intervals" during over-all track repair operations. Zhel.dor.transp. 42 no.4:53-55 Ap '60. (MIRA 13:7)

(Railroads--Traffic)
(Railroads--Maintenance and repair)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHNO, I.B., inzh.

Determining the center of the turn and pole of rotation of vehicles entering a switch. Trudy MIIT No.111:137-141 '60. (MIRA 13:11)

(Railroad engineering)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHNO, I.B., inzh.

Alignment of heavy rail tracks. Put' i put.khoz. 6 no.12: 30-32 '62. (MIRA 16:1)

(Railroads--Track)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHNO, I.B., inzh.

What kind of stresses have to be taken into account in the design of tightening devices. Put' i put. khoz. 7 no.6:35-36 '63. (MIRA 16:7)

(Railroads—Equipment and supplies)
(Strains and stresses)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

BOLOTIN, V.I.; LEKHNO, I.B.; LIDERS, G.V.

Book on track overhauling. Put' i put. khoz. 8 no.1:39 '64. (MIRA 17:2)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHNO, I.B., kand. tekhn. nauk

Resistance to displacement of ties. Vest. TSNII MPS 23 no.6:42-44 '64. (MIRA 17:10)

1. Moskovskiy institut inzhenerov zheleznodorozhnogo transporta.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

MEKHNO, I.B., inzh.

Studying some norms and parameters of the current maintenance of tracks with heavy type rails. Trudy MIIT no.177:103-117 '63. (MIRA 17:10)

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHNO, I.B., kand. tekhn. nauk

Efficient length of rail lengths without fastenings for the regulation of the track gauge in respiking. Trudy MIIT no.210:37-41 '65. (MIRA 18:12)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

TSVETKOV, G.G.; LEKHNO, I.G., kand.tekhn.nauk

Some problems in constructing roadbeds for new lines. Transp. stroi. 14 no.8:9-10 Ag '64. (MIRA 18:1)

1. Zamestitel' nachal'nika Glavnogo upravleniya zheleznodorozhnogo stroitel'stva Urala i Sibiri (for TSvetkov).

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHNO, R.

Modernized seed corn disinfecting machine. Muk.-elev. prom. 29 no.8:25-26 Ag '63. (MIRA 17:1)

1. Odesskoye spetsial'noye konstruktorskoye byuro prodovol'stvennogo mashinostroyeniya.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

KOCHETKOVA, Z.V.; LEKHNO, S.M.; POLISHCHUK, F.M.

Experimental unit for the manufacture of vitaminized granulated sugar. Sakh.prom. 38 no.3:28-30 Mr '64. (MIRA 17:4)

1. Institut pitaniya AMN SSSR (for Kochetkova). 2. Krasnoprekopenskiy sakharo-rafinadnyy zavod im. Mantulina (for Lekhno, Polishchuk).

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

PA 36T35

LEKHNOVICH, V. S.

USSR/Medicine - Penicillin
Medicine - Diphtheria

Jul 1946

"A New Penicillin Preparation," V. S. Lekhnovich, ½ p

"Priroda" No 7

In 1929, Welch and Megreyl of the US discovered that magnesium hydroxide in the presence of albumin very readily adsorbs diphtheria toxin. Other metal hydroxides also had this same characteristic. A mixture of magnesium and aluminum hydroxide adsorbed 42% penicillin, and after washing this mixture still retained some 28% of the adsorbed penicillin. This was the new preparation. One of the advantages of this new preparation is that it is very easily absorbed into the blood.

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHNOVICH, V. S.

"New Antibiotic - Lycopersicin," Priroda, No.2, 1948

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHNOVICH, V. S.

Wart-resistant varieties of potatoes Moskva, Gos. izd-vo sel'khoz. lit-ry. 1954. 241 p.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

M-5

COUNTRY : USSR
CATEGORY : Cultivated Plants - Potato. Vegetables.

ABS. JOUR. : RZBiol., No.19, 1958 No. 87047

AUTHOR : Lekhnovich, V. S.
INST. : Academy of Sciences USSR
TITLE : Contribution to the History of Potato Culture in Russia.

ORIG. PUB. : Materialy po istorii zemledeliya SSSR. Sb. 2. Moscow-Leningrad, AN SSSR, 1956, 258-400

ABSTRACT : Description of potato propagation in Russia. 1765 is stated to be the date of introduction of potato from Western Europe. The assumption of V. N. Cherkasov, that potatoes were found in Alaska and Kamchatka, and spread westward therefrom, is rejected.

CARD: 1/1

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHNOVICH, V.S.

History of potatoes ("On the history of potatoes" and "Potatoes." V.N.Cherkasov. Reviewed by V.S.Lekhnovich). Bot.zhur. 41 no.9: 1367-1375 S '56. (MLRA 9:11)

1. Vsesoyuznyy institut rasteniyevodstva Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk imeni Lenina, Leningrad.
(Potatoes) (Cherkasov, V.N.)

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHOTSKI, D'yula, inzh.

New method for determining the level of mechanization and automation of industrial equipment. Vest.mashinostr. 44 no.3: 81-84 Mr '64. (MIRA 17:4)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

BLANK, Gennadiy Yakovlevich; LEKHOVA, Z.N., red.; BILENKO, L.S., tod. izd-va; FOMICHEV, P.M., tekhn. red.

[The economics and planning of the state deliveries of agricultural products and raw materials in consumers' cooperatives] Ekonomika i planirovanie zagotovok sel'skokhoziaistvennykh produktov i syr'ia v potrebitel'skoi kooperatsii. Moskva, Izd-vo TSentrosoiuza, 1961. 173 p. (MIRA 14:11)

(Cooperative societies) (Produce trade)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHOVA, Z.

Contract system as the form of economic relations between city and country. Sov.potreb.koop. 5 no.8:33-35 Ag '61. (MIRA 14:7)
(Produce trade)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

LEKHOVA, Z.

Consumers' cooperature societies should organiza the sale of agricultural surpluses. Sov. torg. 34 no.5:5-8 My '61. (MIRA 14:5)
(Cooperative societies) (Produce trade)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929210002-6

SOV/122-58-11-13/18

AUTHORS: Mogilevskiy, I.S., Engineer
Lekhovitser, M.A., Engineer

TITLE: Automatic Diesel Generating Set DGA-48
(Avtomatizirovannaya dizel'generatornaya ustanovka DGA-48)

PERIODICAL: Vestnik Mashinostroyeniya, 1958, Nr 11, pp 70-74 (USSR)

ABSTRACT: The 48-kvt, 400-volt generating set is designed to supply electric power to apparatus and to provide auxiliary power for the diesel-engine power station. The automatic functions of the set include starting and stopping of the engine, load control, protection of the set from abnormal operating conditions, servicing the engine and generator during operation, and the supply of auxiliary power. The generating set may operate for 200 hours without the attendance of servicing personnel. [Please disregard first two words on card 2/3]

Card 1/3

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Automatic Diesel Generating Set DGA-48

unit itself. Starting is initiated by a voltage or temperature signal or the failure of another unit in the same station to start. The starting signal causes the incandescent plugs and the oil pump drive to be switched on. 5 seconds after connecting the plugs the electrical starter is started and runs for 9 seconds. If starting is unsuccessful, another 9 seconds are given after 5 seconds of rest. After 4 attempts, failure to start is signalled. After reaching 500 rpm, a centrifugal relay disconnects the starter, the plugs and the oil pump. On reaching 1350 rpm, readiness to accept load is signalled. The automatic synchroniser acts on a remotely controlled servo-motor actuating the fuel pump. Interlocks ensure an oil temperature exceeding 35°C and a cooling water temperature exceeding 65°C before load is accepted. The automatic control system is responsive to the following faults:- (1) The cooling water temperature exceeds 100°C. (2) The oil temperature exceeds 90°C. (3) The oil

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pressure drops below 1.8 kg/cm^2. (4) The radiator water level drops below a given limit. (5) The engine rpm rises above 1700. (6) The automatic control circuit voltage collapses and (7) The generator is overloaded. The centrifugal relay guarding against overspeeding is shown in cross section in Fig.3. Modified schemes for limited automation are under development. There are 3 illustrations including 1 photograph.

Card 3/3

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LEKHOVITSKII, I. N.

I.N. Lekhovitskii. Determination of aluminum in the presence of a large amount of zinc. P. 1251

Khar'kov Electrotech.
Factory.

SO: Factory Laboratory, No. 10, 1950

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LEKHOVITSKIY, I.N.

5000

Determination of iron and zinc in acid zinc electrolytes. I. N. Lekhovitskii (Electrotech. Plant, Kharkov). Zavodskaya Lab. 21, 1172-3(1955).—In an acid Zn electrolyte Fe is in the bivalent state and can be detd. directly. But to det. the Zn by the Aruina's method (cf. C.A. 34, 5373[1]) Fe[illegible] should be oxidized with $KMnO_4$. I. Bentowitz

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MARCHENKO, N.A.; LEKHOVITSKIY, I.N.; BUYANOVA, A.N.

Electrolytic deposition of silver with periodically reversing direct current. Zhur. prikl. khim. 31 no.10:1511-1520 O '58. (MIRA 12:1)

1.Khar'kovskiy politekhnicheskiy institut imeni V.I. Lenina.
(Silver plating)

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POLYAK, E.A.; STREL'NIKOVA, N.P.; PAVLOVA, V.N.; RIVNYY, V.S.; ONUFRIYENOK, I.P.; SOKOLOVICH, V.B.; LEKHOVITSKIY, I.N.; ALEKSANDROVA, Ye.N.; CHERNUKHA, G.N.

Brief reports. Zav.lab. 25 no.2:162-163 '59. (MIRA 12:3)

1. Sverdlovskiy zavod khimicheskikh reaktivov (for Polyak). 2. Noril'skiy gorno-metallurgicheskiy kombinat (for Strel'nikova, Pavlova). 3. Slavyanskiy sodovyy kombinat (for Rivnyy). 4. Tomskiy politekhnicheskiy institut (for Onufriyenok, Sokolovich). 5. Khar'kovskiy ekektrotekhnicheskiy zavod (for Lekhovitskiy, Aleksandrova). 6. Moskovskiy mashinostroitel'nyy zavod (for Chernukha).
(Chemistry, Analytical)

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LEKHOVITSKIY, I.N., inzh.; MONAKHOVA, N.N., inzh.; SHOKAL'SKIY, Yu.K., inzh.

Using the PFL8V type water emulsion varnish for impregnating the stator windings of electric motors. Vest.elektroprom. 33 no.1:27-30 Ja '62. (MIRA 14:12)

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VLASOV, Mikhail Fedorovich; PIGIN, Sergey Mikhaylovich; CHERVYAKOVA, Vera Ivanovna; LAVRUKHIN, M.A., retsenzent; TKALIN, I.M., retsenzent; LEKHSHTEYN, L.I., red.; ZHISHNIKOVA, O.S., tekhn. red.

[Assembly and adjustment of electric measuring devices]Sborka i regulirovka elektroizmeritel'nykh priborov. Izd.2., perer. Moskva, Gosenergoizdat, 1963. 260 p. (MIRA 16:3)
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