KOZLOV, K., kand.tekhn.nauk

New requirements of lifeboats. Mor.flot 22 no.12:30-32 D '62.
(MIRA 15:12)

1. Glavnyy spetsialist po teorii korablya TSentral'nogo proyektno-konstruktorskogo byuro No.1.
(Lifeboats)

Kozlov, K.A.

USSR/Microbiology - Soil Microbiology. F-3

Abs Jour : Ref Zhur - Biol., No 3, 1958, 9862

Author : Kozlov, K.A.
Inst :
Title : Observations on Microflora of Acid Peat-Marshy Soils of Upper Type when Treated by Lime.

Orig Pub : Uch. zap. GPU, 1956, No 216, 125-139

Abstract : It was shown that liming, as well as addition of organic fertilizers (with simultaneous liming) of newly assimilated acidy (pH 3.02) upper peat-bogs considerably activates microbiological processes, which cause an increase in yield of agricultural products: the number of ammonifying, nitrdfying, aerobic and cellulose-decomposing microorganisms increase, as well as anaerobic nitrogen fixers; the titer of bacillary forms of ammonificators increases (the dominant form is Bacillus mesentericus). Lining of upper peat-bogs also changes the correlation

CArd 1/2

USSR/Microbiology - Soil Microbiology. F-3

Abs Jour : Ref Zhur - Biol., No 3, 1958, 9862

of individual microorganism groups; the relative number of fungi is decreased and content of actinomycetes is markedly increased (tenfold).

Card 2/2

Kozlov, K.A.

USSR/Microbiology - Soil Microbiology. F-3

Abs Jour : Ref Zhur - Biol., No 3, 1958, 9863

Author : Kozlov, K.A.
Inst :
Title : Observations on Microflora of Peat-Marshy Soils of Transitional Type when Treated by Lime.

Orig Pub : Uch. zap. GPU, 1956, No 216, 140-148

Abstract : It was shown that addition to newly assimilated peat soils of transitional type (pH 3.9) of lime (2tons/hectare) as well as mineral (PK) and organic (10 tons/hectare) fertilizers increases energy of cellular decomposition as well as increasing the number of microorganisms which actively mineralize soil organic substances-- sporous ammonifiers and actinomycetes. Nitrification energy is insignificant. The largest crop of perennial grasses was obtained on a variant with liming and a background of PK (254.9%).

Card 1/1

J

USSR / Soil Science. Biology of Soils.

Abs Jour: Ref Zhur-Biol., No 21, 1958, 95739.

Author : ~~Kozlov, K. A.~~
Inst : Leningrad State University.
Title : Change of Microflora of Peat-Marsh Lowland Soil Type During Liming.

Orig Pub: Uch. zap. LGU, 1956, No 216, 149-159.

Abstract: The influence was studied of liming, mineral (RK) and (organic mixture of soil with manure - 40t/ha) fertilizers on the microflora of light acid lowland peat-marsh soil. Liming increased the quantity of ammonifactors in the soil. B. mycoides forced out B. mesentericus. Liming and mineral fertilizers increased (by 10-100 times) the content of cellulose-destroying bacteria (Sporocytophaga type), as well as created favorable condi-

Card 1/2

TSYGANOV, V.A.; GOLYAKOV, P.N.; GOLENISHCHEV, N.N.; KOZLOV, K.A.

Antagonistic characteristics of actinomycetic soils in Leningrad. Eksp. i klin. issl. po antibiot. 1:15-23 '58. (MIRA 15:5)
(ACTINOMYCES) (LENINGRAD--SOILS--MICROBIOLOGY)

KOZLOV, K.A.

Biology of Actinomyces in the peat bog soils of Leningrad Province. Eksp. i klin. issl. po antibiot. 1:24-31 '58. (MIRA 15:5)
(ACTINOMYCES)
(LENINGRAD PROVINCE--SOILS--MICROBIOLOGY)

TSYGANOV, V.A.; GOLYAKOV, P.N.; GOLENISHCHEV, N.N.; KOZLOV, K.A.

Comparative antimicrobial and antiblastic activity of some actinomycetes. Eksp. i klin. issl. po antibiot. 1:304-310 '58. (MIRA 15:5)

(TUMORS) (ACTINOMYCES)

KOZLOV, Konstantin Aleksandrovich; PEN'TYUKHOV I.P., red.; PECHERSKAYA, T.I., tekhn. red.

[Agriculture and its invisible friends, the microbes] Sel'skoe khoziaistvo i nevidimye druz'ia - mikroby. Irkutsk, Irkutskoe knizhnoe izd-vo, 1960. 91 p. (MIRA 14:10)
(Microbiology) (Soil micro-organisms)

KOZLOV, K.A., kand.biologicheskikh nauk

Effect of electric sterilization on the microflora of hotbed soils.
Agrobiologiia no.5:703-706 S-O '60. (MIRA 13:10)

1. Irkutskiy sel'skokhozyaystvennyy institut.
(Soil micro-organisms) (Hotbeds)

KOZLOV, K.A.

Effect of cultivation practices on upland peat bog soils. Trudy Inst. mikrobiol. no.7:292-297 '60. (MIRA 14:3)

1. Leningradskiy gosudarstvennyy universitet imeni A.A. Zhdanova.
(PEAT SOILS) (SOIL MICRO-ORGANISMS)

KOZLOV, K.A.

"Breeding of microbes" by D.F.Petrov. Reviewed by K.A.Kozlov. Zhur.mikrobiol.epid.i immun. 31 no.8:148-150 Ag '60. (MIRA 14:6)

(MICROBIOLOGY) (PETROV, D.F.)

KOZLOV, K.A., kand.biol.nauk

Predation among the micro-organisms. Priroda 49 no.9:94-96 S '60.
(MIRA 13:10)

1. Irkutskiy sel'skokhozyaystvennyy institut.
(Micro-organisms)

KOZLOV, K.A., starshiy nauchnyy sotrudnik, dotsent, kand.biologicheskikh nauk

"Medical microbiology" by F.I.Shevchenko. Reviewed by K.A.Kozlov. Med. zhur. Uzb. no.7:66-77 Jl '61. (MIRA 15:1)

1. Institut geografii Sibiri i Dal'nego Vostoka Sibirskogo otdeleniya AN SSSR, i Irkutskiy sel'skokhozyaystvennyy institut.
(MEDICAL MICROBIOLOGY)
(SHEVCHENKO, F.I.)

KOZLOV, K.

"Microbe selection" by D.F.Petrov. Reviewed by K.Kozlov. Mikrobiologiia 30 no.1:186-188 Ja-F '61. (MIRA 14:5)
(MICROBIOLOGY) (PETROV, D.F.)

KOZLOV, K., dotsent

Review of F.I.Shevchenko's book "Medical microbiology." Med. zhur. Uzb. no.2:84-86 F '62. (MIRA 15:2)
(SHEVCHENKO, F.I.) (MEDICAL MICROBIOLOGY)

KOZLOV, K.A.

Study of the biological activity of Eastern Siberian soils. Pochvovedenie no.4:40-47 Ap '62. (MIRA 15:4)

1. Irkutskiy sel'skokhozyaystvennyy institut.
(Siberia, Eastern--Soil biology)

KOZLOV, K.A.; LUGAUSKENE, A.Yu.; ILYALETDINOV, A.N.; SAMOSOVA, S.M.

Work of the sections of the All-Union Microbiological Society.
Mikrobiologiia 31 no.1:185-188 Ja-F '62. (MIRA 15:3)
(MICROBIOLOGY)

KOZLOV, K.A.

Landform microbiology. Dokl. Inst. geog. Sib. i Dal'. Vost. no.2:47-55 '62. (MIRA 18:10)

KOZLOV, K.A.

Characteristics of the microbiology of some regions of Eastern Siberia. Rost vyroba 9 no.7/8:868-872 Jl-Ag '63.

1. Zemepisny ustav pro Sibir a Dalny vychod Sibirske odbocky Akademie ved SSSR, Irkutsk.

KOZLOV, K.A.; MIKHAYLOVA, E.N.

Dehydrogenase activity of some soils in Eastern Siberia. Pochvovedenie no. 2:58-63 F '65 (MIRA 19:1)

1. Institut geografii Sibiri i Dal'nego Vostoka. Submitted June 4, 1963.

ACC NR: AP6031664 SOURCE CODE: UR/0216/66/000/005/0719/0733

AUTHOR: Kozlov, K. A.

ORG: Institute of Geography of Siberia and the Far East, SO AN SSSR, Irkutsk (Institut geografii Sibiri i Dal'nego Vostoka SO AN SSSR)

TITLE: Biological activity of soil

SOURCE: AN SSSR. Izvestiya. Seriya biologicheskaya, no. 5, 1966, 719-733

TOPIC TAGS: soil biology, soil enzymology, soil science, microbiology, microbe density, population study, microflora, soil enzyme, SOIL BACTERIOLOGY, SOIL CHEMISTRY

ABSTRACT: Contemporary soil microbiologists mainly investigate species composition of soil microbes, their relationships, their ecology and distribution, and soil biochemistry. The enzymatic activities of soil bacteria reveal much about the state of a given soil as a whole. Thus, the soil enzymology field has become a separate and specialized branch of soil science. Soil enzyme activity is complex, depending on biotic and biochemical processes and their interaction with the environment, and special standards and processes must be applied to the study of soil microbiology. A statistical and correlative approach is necessary. Soil enzymic activity is an indicator

Card 1/2 UDC: 631.46

ACC NR: AP6031664

of total soil biochemical activity, and therefore, accounting for the limitations of this method, model experiments can be performed in which the effects of adding certain soil microbes to sterile soil can be observed. Possibly, when existing techniques can be refined and new ones developed, it will be possible to make exact determinations of soil types by analysis of the biochemical activities of its microflora. Biochemical activities of various soil layers, and microbiological and chemical techniques associated with theoretical and applied soil science are discussed. [WA-50; CBE No. 12]

SUB CODE: 08/ SUBM DATE: 12Nov63/ ORIG REF: 064/ OTH REF: 047/

Card 2/2

ACC NR: AP6031664 SOURCE CODE: UR/0216/66/000/005/0719/0733

AUTHOR: Kozlov, K. A.

ORG: Institute of Geography of Siberia and the Far East, SO AN SSSR, Irkutsk (Institut geografii Sibiri i Dal'nego Vostoka SO AN SSSR)

TITLE: Biological activity of soil

SOURCE: AN SSSR. Izvestiya. Seriya biologicheskaya, no. 5, 1966, 719-733

TOPIC TAGS: soil biology, soil enzymology, soil science, microbiology, microbe density, population study, microflora, soil enzyme, SOIL BACTERIOLOGY, SOIL CHEMISTRY

ABSTRACT: Contemporary soil microbiologists mainly investigate species composition of soil microbes, their relationships, their ecology and distribution, and soil biochemistry. The enzymatic activities of soil bacteria reveal much about the state of a given soil as a whole. Thus, the soil enzymology field has become a separate and specialized branch of soil science. Soil enzyme activity is complex, depending on biotic and biochemical processes and their interaction with the environment, and special standards and processes must be applied to the study of soil microbiology. A statistical and correlative approach is necessary. Soil enzymic activity is an indicator

Card 1/2 UDC: 631.46

ACC NR: AP6031664

of total soil biochemical activity, and therefore, accounting for the limitations of this method, model experiments can be performed in which the effects of adding certain soil microbes to sterile soil can be observed. Possibly, when existing techniques can be refined and new ones developed, it will be possible to make exact determinations of soil types by analysis of the biochemical activities of its microflora. Biochemical activities of various soil layers, and microbiological and chemical techniques associated with theoretical and applied soil science are discussed. [WA-50; CBE No. 12]

SUB CODE: 08/ SUBM DATE: 12Nov63/ ORIG REF: 064/ OTH REF: 047/

Card 2/2

KOZLOV, K.D.; prinimali uchastiye: ZAGORUYKO, K.Ye; ROZOVA, Z.I.; BULATETS-KAYA, T.P.; TREYSTER, F.Z.; SHCHUKINA, T.M.; ZAYTSEVA, N.Ye.; KRYLO-VA, L.S.; AMEL'YAN, G.Ye.; BAYDAKOV, N.N.; RYZHKOV, A.N., red.; ME-MESHKINA, L.I., tekhn. red.

[Economy of Sakhalin Province; statistical collection] Narodnoe khoziaistvo Sakhalinskoi oblasti; statisticheskii sbornik. IUzhno-Sakhalinsk, Sakhalinskoe knizhnoe izd-vo, 1960. 103 p. (MIRA 14:6)

1. Sakhalin (Province) Statisticheskoye upravleniye. 2. Kollektiv rabotnikov Statisticheskogo upravleniya Sakhalinskoy oblasti (for all except Ryzhkov, Memeshkina). 3. Nachal'nik Statisticheskogo upravleniya Sakhalinskoy oblasti (for Kozlov)
(Sakhalin--Statistics)

Kozlov, K. G.

ZIMIN, A.P.; IGNATOV, A.V.; KOZLOV, K.G., insh.; retsenzent; BUBYAKIN, N.S., insh., retsenzent; DUGINA, N.A., tekhn.red.

[Technical manual for supervisors in the machinery industry] Tekhminimum kontrolera mashinostroitelia; posobie dlia kontrolerov mekhanicheskikh tsekhov. Moskva, Bos.nzuchno-tekhn.izd-vo mashinostroit. lit-ry, 1951. 262 p. (MIRA 10:12)
(Machinery industry)

KOZLOV, K.G.

Unit for bending folded branch pipes using a gasoline-kerosene torch. [Suggested by: K.G. Kozlev]. Rats. i izobr. predl. v stroi. no.142: 31-34 '56. (MLRA 10:4)

(Pipe bending) (Blowtorches)

KOZLOV, K. G., Eng.

"External Finishing of Machines and Quality Control" p. 132-148 in book Increasing the Quality and Efficiency of Machinery, Moscow, Mashgiz, 1957, 626pp.

SAMOYLOV, Sergey Ivanovich, prof.; GORELOV, Valentin Mikhaylovich, inzh.; BRASLAVSKIY, Veniamin Markovich, kand. tekhn. nauk; KONDRATOV, Yuriy Nikolayevich, inzh.; KALININ, Ignat Andreyevich, inzh.; KUROCHKIN, Vasiliy Mikhaylovich, inzh.; POPOV, Vladimir Artem'yevich, inzh.; KOZLOV, Kirill Georgiyevich, inzh.; FEDOROV, Boris Fedorovich, kand. tekhn.nauk; STEPANOV, Valentin Vladimirovich, kand. tekhn. nauk; DUGINA, N.A., tekhn. red.

[Technological processes in the manufacture of heavy machinery] Tekhnologiia tiazhelogo mashinostroeniia. Pod red. S.I.Samoilova Moskva, Mashgiz, 1962. 589 p. (MIRA 16:4)
(Machinery industry)

KOZLOV, K.I.; CHERNYAVSKIY, D.V.

Modernization of the tenter dryer drive. Izv.vys.ucheb.zav.;tekh. tekst.prom. no.4:147-151 '60. (MIRA 13:9)

1. Kostromskoy tekstil'nyy institut.
(Textile machinery--Electric driving)

KOZLOV, K.I.

BOCHAROV, M.D., otvetstvennyy red.; GRININ, A.G., red.; KOZLOV, K.I., red.; KOSTENKO, N.G., red.; KOCHEYEV, I.P., red.; STAKHOVA, A.P., red.; TADYYEV, P.Ye., red.; SHEVTSOV, M.I., red.; TEKHTIYEKOV, M.I., tekhn.red.

[In the mountains of the Altai] V gorakh Altaia. [Gorno-Altaisk] Gorno-Altaiskoe knizhnoe izd-vo. Vol.1. 1957. 72 p. (MIRA 11:6)
(Altai Territory--Description and travel)

BURCHINSKIY, G.I., dotsent, kandidat meditsinskikh nauk; ROZMAINSKIY, I.V.; KOZLOV, K.K. (Kiyev)

Cure of severe general blastomycosis. Klin.med. 33 no.12:74-75 D '55. (MLRA 9:5)
(BLASTOMYCOSIS)

KOZLOV, K. K.

USSR/Solid State Physics - Phase Transformations in Solids, E-5

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 34699

Author: Gedberg, M. G., Kozlov, K. K.

Institution: None

Title: Carbide Inhomogeneity of High-Speed Tool Steel

Original Periodical: Nauch. tr. Stalingrad. mekhan. in-ta, 1955, 2, 214-230

Abstract: None

1 of 1

KOZLOV, K.K.

Application of the differ ntial magnetic method to the study of steel within a subcritical range of temperatures. Zav.lab. 29 no.12:1461-1463 '63. (MIRA 17:1)

1. Volgogradskiy metallurgicheskiy zavod "Krasnyy Oktyabr'".

KOZLOV, K.K.; KONDRAT'YEV, Ye.T.; MELIKHOV, I.S.

Intermediate transformation of austenite. Metalloved. i term. obr. met. no.4:8-10 Ap '65. (MIRA 18:6)

1. Volgogradskiy zavod "Krasnyy Oktyabr'" i Volgogradskiy sel'skokhozyaystvennyy institut.

USSR/Cultivated Plants - Fodders. -6

Abs Jour : Ref Zhur - Biol., No 9, 1956, 39387

Author : Kravchinskiy, V.P., Kovalev, K.I.

Inst : Stalingrad State Agricultural Experiment Station.

Title : Results of Experiments with Fodder Watermelons and Sugar Squash.

Orig Pub : Byul. Nauchn. inform. Stalingr. s.-kh. o-va, 1956, No 1, 28-29.

Abstract : No abstract.

Card 1/1

KOZ[illegible], K.M.; KULAGINA, G.B.

Small-size stabilized high-voltage rectifying source. Elektrofiz. app. no.23139-I/2 '64. (MIRA 18:3)

L 07190-67 EWT(1) TT/AT

ACC NR: AT6031767 SOURCE CODE: UR/3092/66/000/004/0169/0173

AUTHOR: Kozlov, K. M.

32
B+1

ORG: none

TITLE: Certain problems in designing voltage stabilization systems for synchronous generators

SOURCE: Moscow. Nauchno-issledovatel'skiy institut elektrofizicheskoy apparatury. Elektrofizicheskaya apparatura, no. 4, 1966, 169-173

TOPIC TAGS: synchronous generator, voltage stabilization, electric inductance

ABSTRACT: An evaluation is made of possible additional error introduced into the mean and peak values of generator voltage due to variation in the amplitudes and phases of its harmonics assuming that the effective value of generator voltage is stabilized to a high degree and remains constant. Based on the Fourier representation of the complex voltage, expressions are derived for various error components. Computations show that errors produced by the variation in the form of the voltage curve during load fluctuations exceed the assigned accuracy of stability by many times. Therefore the sensing element must be selected on the basis of the AC voltage curve value to be stabilized. A parametric bridge provides for the stabilization of the effective value of the voltage curve regardless of its form but does not provide for the stabilization of the mean

Card 1/2

L 07190-67

ACC NR: AT6031767 O

or peak value but does not provide for the stabilization of the effective value under these same conditions. For specific synchronous generators when the variation in the amplitude and phase of voltage harmonics as a function of loading is known, it is possible to use the derived equations to compute the corresponding errors a priori. The circuits associated with the sensing element must not introduce additional distortion of the curve shape. In particular the leakage inductance of the transformer and of the measurement circuit must be as small as possible and the transformer must not contain resonance peaks at the harmonic frequencies. Orig. art. has: 4 figures, 8 formulas.

SUB CODE: 09/ SUBM DATE: 00/ ORIG REF: 003/ OTH REF: 000

Card 2/2 egh

KOZLOV, Kh. S.

KOZLOV, Kh. S.: "The effect of the location of the tow-line hook on the ease of control of towed barges". Leningrad, 1955. Leningrad Shipbuilding Inst. (Dissertations for the Degree of Candidate of Technical Scieces)

SO: Knizhnaya letopis', No. 52, 24 December, 1955. Moscow.

KOZLOV, K.S., kand.tekhn.nauk; ORLOV, D.A., inzh.

Simplifying calculations in compiling information on stability.
Sudostroenie 24 no.8:11-15 Ag '58. (MIRA 11:10)
(Stability of ships)

DORMIDONTOV, N.K., doktor tekhn.nauk, prof.; LYSENKO, L.G., kand.tekhn. nauk; KOZLOV, K.S., kand.tekhn.nauk

Calculating stability curves by prototype with changes of the main dimensions and the coefficient of total displacement of the vessel. Trudy LIVT no.5:3-11 '60. (MIRA 15:2)
(Stability of ships) (Displacement (Ships))

KOZLOV, K. S., kand.tekhn.nauk; LYSENKO, L. G., kand.tekhn.nauk

Experimental determination of the properties of stability and maneuverability for tugboats. Trudy LIVT no.14:41-48 '61.
(MIRA 14:11)

(Tugboats) (Shiptrials)

KOZLOV, Konstantin Sergeyevich; GORYANSKIY, Yu.V., red.;
STUL'CHIKOVA, N., tekhn. red.

[Modern methods of evaluating the draft and the stability of a ship] Sovremennye metody otsenki posadki i ostoichivosti sudna. Leningrad, Izd-vo "Morskoi transport," 1963. 106 p. (MIRA 16:7)
(Stability of ships) (Trim (Of ships))

DRANNIKOV, A.B.; KOZLOV, K.V.

Present state and objectives of the mechanization of conveying and storing operations. Avt.prom. 28 no.2:1-5 F '62. (MIRA 15:2)

1. Nauchno-issledovatel'skiy institut avtomobil'noy promyshlennosti. (Transportation, Automotive) (Materials handling)

KOZLOV, Konstantin Yakovlevich; KALININ, O.V., red.; FREGER, D.P., red. izd-va; BELOGUROVA, I.A., tekhn. red.

[Efficient equipment for assembling the frames of industrial buildings of precast reinforced concrete] Ratsional'naia osnastka i prisposobleniia dlia montazha karkasa promyshlennykh zdanii iz sbornogo zhelezobetona; iz opyta stroek Lensovnarkhoza. Leningrad, 1961. 24 p. (Leningradskii Dom nauchno-tekhnicheskoi propagandy. Obmen peredovym opytom. Seriia: Stroitel'naia promyshlennost', no.13) (MIRA 14:9)

1. Instruktor peredovykh metodov truda tresta Orgtekhstroy Upravleniya stroitel'stva Lensovnarkhoza (for Kozlov).
(Industrial buildings) (Precast concrete construction)

KOZLOV, Konstantin Yakovlevich; VLASOVSKIY, V.A., red.; FREGER, D.P., red.izd-va; GVIRTS, V.L., tekhn. red.

[Ways to improve labor productivity in the assembly of reinforced-concrete elements of multistory industrial buildings] Puti povysheniia proizvoditel'nosti truda na montazhe zhelezobetonnykh konstruktsii mnogoetazhnykh proizvodstvennykh zdanii; iz opyta strock Lensovnarkhoza. Leningrad, 1962. 21 p. (Leningradskii dom nauchno-tekhnicheskoi propagandy. Obmen peredovym opytom. Seriia: Stroitel'naia promyshlennost', no.25)
(MIRA 16:3)

(Industrial buildings--Design and construction)
(Precast concrete construction)

S/006/60/000/06/13/025
B007/B005

AUTHOR: Kozlov, L. A.

TITLE: Production of the Alidade KA -2 (KA-2)

PERIODICAL: Geodeziya i kartografiya, 1960, No. 6, pp. 47 - 48

TEXT: The alidade KA -2 (KA-2) (Ref., Footnote on p. 47) is now produced in series. While the reading system of the instrument meets the demands made on the accuracy of large-scale surveys, the design, and particularly the production, of the instrument show evident shortcomings. These shortcomings are pointed out by the author. Nevertheless, the instrument is regarded as a good alidade. The editorial board of the periodical states that the manufacturers consider L. A. Kozlov's remarks to be justified, and is already eliminating the shortcomings pointed out. There is 1 Soviet reference.

Card 1/1

L 22973-66 EWT(m)/EWP(w)/EWA(d)/T/EWP(t) IJP(c) JD/GS

ACC NR: AT6008657 (N) SOURCE CODE: UR/0000/65/000/000/0137/0146

AUTHORS: Serensen, S. V. (Moscow); Kozlov, L. A. (Moscow)

ORG: none

TITLE: The fatigue of alloys at high temperatures in statistical aspect

SOURCE: Vsesoyuznoye soveshchaniye po voprosam staticheskoy i dinamicheskoy prochnosti materialov i konstruktsionnykh elementov pri vysokikh i nizkikh temperaturakh, 3d. Termoprochnost' materialov i konstruktsionnykh elementov (Thermal strength of materials and construction elements); materialy soveshchaniya. Kiev, Naukova dumka, 1965, 137-146

TOPIC TAGS: material testing, fatigue testing, temperature effect, fatigue strength, probability, statistics, statistical model / EI4376 alloy, EI617 alloy

ABSTRACT: The statistical interpretation of fatigue testing results at high temperatures and normal temperatures is essentially the problem of determining the relationship between stress σ, durability N, and probability of destruction --P, or probability of "survival"-- $\ell = 1 - P$. In developing this concept the authors outline in detail the characteristics of the statistical distribution of

Card 1/3

L 22973-66
ACC NR: AT6008657

fatigue properties and their parameters. Fatigue curves in ℓ, N coordinates are shown for the alloy EI617 at 1070 and 1170 K temperatures. These curves give the distribution of the logarithm of durability (time until failure). Obtaining statistical characteristics by this approach is compared with the technique of plotting the distribution of the logarithm of stress amplitude in ℓ, σ coordinates. The authors develop relationships for the variation of the distribution of fatigue characteristic parameters with the level of stress, temperature, and cycle assymetry. Figure 1 shows the dependence of the coefficient of variation S of the logarithm of duration for selected alloys EI4376 and EI617. Relationships for the change of the vibration coefficient with prolongation of fatigue are plotted, and a method for evaluating the statistics of fatigue strength for nonstationary loading conditions is traced. The interactions of technological and mathematical factors in the statistical evaluation of mechanical properties are discussed.

Card 2/3

L 22973-66

ACC NR: AT6008657

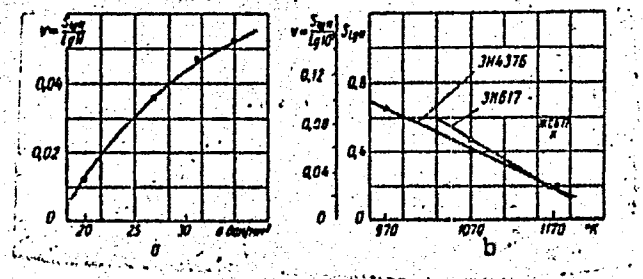

Fig. 1. Dependence of the coefficient of variation of the logarithm of duration.

Orig. art. has: 9 figures and 4 equations.

SUB CODE: 20, 11/ SUBM DATE: 19Aug65/ ORIG REF: 003

Card 3/3

SERENSEN, S. V. ; KOZLOV, L. A. ; KAGAYEV, V. P.

The carrying capacity and the estimate of the durability of parts under variable pressure.

Vest Mash p. 15, Sept. 1951

SERENSEN, S. V.; KOZLOV, L. A.; KAGAYEV, V. P.

Strength of Materials

Carrying capacity and estimate of durability of parts under static and variable stresses. Vest. mash. 31, No. 11, 1951.

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

SERENSEN, S. V.; KAGAYEV, V. P.; KOZLOV, L. A.

Machinery - Design

Problem of calculating reserve strength durability, Vest. mash., 32, no. 1, 1952

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

1. KOZLOV, L. A.

2. USSR (600)

4. Strength of Materials

7. Conference on the methods of calculation for strength under conditions of variable stresses, Vest. mash., 33, No. 1, 1953.

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

SERENSEN, S.V., Deystvitel'nyy chlen Akademii nauk SSSR; KOZLOV, L.A., inzhener

High frequency bending machine for planned load. Vest.mash. 33 no.4:16-18 Ap '53. (MLRA 6:5)

1. Akademiya nauk SSSR. (Testing machines)

SERENSEN, S.V.; KOZLOV, L.A.

Supporting power and strength calculation of parts under static and varying stresses. Vest. mash. 33 no.12:3-11 D '53. (MLRA 6:12)
(Strength of materials) (Machinery--Tables, calculations, etc.)

SERENSEN, S.V.; KOGAYEV, V.P.; KOZLOV, L.A.; SHNEYDEROVICH, R.M.; RESHETOV, D.N., doktor tekhnicheskikh nauk, professor, retsenzent; TRAPEZIN, I.I., kandidat tekhnicheskikh nauk, redaktor; MARGANOV, V.G., inzhener, redaktor graficheskikh rabot; POPOVA, S.M., tekhnicheskiy redaktor

[Bearing capacity and strength calculations of machine parts] Nesushchaia sposobnost' i raschety detalei mashin na prochnost'. Pod red. S.V.Serensena. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroitel'noi lit-ry, 1954. 208 p. (MLRA 8:4)
(Strength of materials) (Machinery) (Strains and stresses)

SERENSEN, S.V.; KOZLOV, L.A.

Stress determination in the shafting of a tugboat steam engine.
Nauch.trudy Inst.mash. i sel'khoz.mekh. AN URSR no.5:70-88 '55.
(Shafts and shafting--Testing) (MLRA 9:2)

Kozlov, Leonid Aleksandrovich

PHASE I BOOK EXPLOITATION 371

Serensen, Sergey Vladimirovich; Garf, Mikhail Ernestovich; and Kozlov, Leonid Aleksandrovich

Mashiny dlya ispytaniy na ustalost'; raschet i konstruirovaniye (Fatigue Testing Machines; Design and Calculation) Moscow, Mashgiz, 1957. 404 p. 5,500 copies printed.

Ed.: Serensen, S.V., Academician, Ukrainian Academy of Sciences; Reviewer: Morozov, Yu. N., Docent; Ed. of Publishing House: Akimova, A.G.; Tech. Ed.: Model', B.I.; Managing Ed. for Literature on Machine Building and Instrument Construction (Mashgiz): Pokrovskiy, N.V.

PURPOSE: This book on design and calculation of fatigue testing machines is intended for engineering and technical personnel, computing staffs, designers and laboratory workers, and students in technical vuzes.

Card 1/ 17

Fatigue Testing Machines; Design and Calculation 371

COVERAGE: The book presents a dynamic analysis and design calculations for strength of fatigue testing machines. Along with dynamic analysis methods and design calculations for strength and durability of principal assemblies, the study reviews various designs of fatigue testing machines, including machines employing high cyclic rates, machines for testing at high temperatures, etc. In addition to already published materials, the book includes engineering data obtained from the following groups: Komitet prochnosti Nauchno-tekhnicheskogo obshchestva mashinostroitel'noy promyshlennosti (Committee on Endurance, Scientific and Technical Society of the Machine-building Industry), Spetsial'noye konstruktorskoye byuro ispytatel'nykh mashin Nauchno-issledovatel'skogo instituta vyesovoy promyshlennosti (Special Design Bureau for Testing Machines, Scientific Research Institute of the Weights and Measures Industry), Institut Mashinovedeniya AN SSSR (Machine Studies Institute, USSR Academy of Sciences), Vsesoyuznyy nauchno-issledovatel'skiy teplovoznyy institut (All-Union Scientific

Card 2/17

Research Institute for Locomotives), etc. There are 125 references, 89 of which are Soviet, 21 German, 2 French, 1 Italian, and 13 English.

TABLE OF CONTENTS:

KOZLOV, L.A., kandidat tekhnicheskikh nauk.

Scientific and technical conference on durability tests of actual and model machine parts. Zav.lab.23 no.2:253-254 '57. (MLRA 10:3)

(Metals--Testing)

14(11), 18(3)

AUTHORS: Serensen, S. V., Kozlov, L. A. SOV/32-24-11-21/37

TITLE: Linear Interpretation of Accumulation of Defects and Characteristic Curves of Resistance Against Fatigue and Static Endurance Failure (Lineynaya interpretatsiya nakopleniya povrezhdeniya i kharakteristiki soprotivleniya ustalostnomu i dlitel'nomu staticheskomu razrusheniyu)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol 24, Nr 11, pp 1378-1392 (USSR)

ABSTRACT: This study deals with questions of processing the results of tests obtained by repeated overloading and overheating of the samples. Apart from the results of tests obtained by Miller (Ref 13), fatigue diagrams of the deformed alloy EI617 , at temperatures of 700-900°, of the cast alloy ZhS6 at 800-1000° and of the steel 18KhNVA at 300-550° (Ref 19) are given and explained. It is noted that the diagrams of the fatigue and static endurance limit can be represented in the logarithmic coordinates "tension-endurance" (at a constant temperature) and "temperature-endurance" (at a constant tension) as sections of straight lines the inclination of which characterizes fa-

Card 1/3

Linear Interpretation of Accumulation of Defects and Characteristic Curves of Resistance Against Fatigue and Static Endurance Failure

tigue resistance or endurance resistance. In case of repeated overloading and overheating the function between endurance Z and the variable parameter x is more complicated, the above diagrams, however, can still be represented in the logarithmic coordinates

$$\lg \frac{z_2}{Z_1 - z_1} \quad \text{and} \quad \lg \frac{x_2}{x_1}$$

as sections of straight lines the inclination of which (coefficient q in the equation of the curve) characterizes the resistance against cyclic and repeated overloading and overheating. The value q characterizes the fatigue resistance in the interval between the tension amplitudes of 1 and $\left(\frac{\sigma_2}{\sigma_1}\right)_o$ and is specific for every material. In the case of $\frac{\sigma_2}{\sigma_1} > \left(\frac{\sigma_2}{\sigma_1}\right)_o$ the sum of defects approaches the linear expression

Linear Interpretation of Accumulation of Defects and Characteristic Curves of Resistance Against Fatigue and Static Endurance Failure

$\sum \frac{n}{N} = 1$. Therefore first the diagrams of the static and then those of the repeated loads should be determined. The values p and q are determined and then compared to each other. Observations were made that agree with the data given by Corten and Dolan (Korten) (Ref 7). The q-values for the steels 12KhN2A = 7.1 and 40KhNMA = 10 and for the alloys EI437A, EI598 and EI617, are given. Also the test results obtained by Robinson (Robinzon) (Ref 14) and Miller (Ref 13) are explained and data concerning the steels M-252, S-816 and 16-25-6 (q=60 and approximately 45 for 16-25-6) are given.
There are 21 figures and 21 references, 10 of which are Soviet.

KOZLOV, L.A.

3

PHASE I BOOK EXPLOITATION SOV/5940

Serensen, Sergey Vladimirovich, Academician, Academy of Sciences UkrSSR, Yevgeniy Georgiyevich Buglov, Mikhail Ernestovich Garf, Leonid Aleksandrovich Kozlov, Nikolay Ivanovich Korsakevich, Oksana Yur'yevna Kramarenko, and Ol'ga Borisovna Slutskaya

Prochnost'pri nestatsionarnykh rezhimakh nagruzki (Strength Under Nonstationary Loading Conditions) Kiyev, Izd-vo AN UkrSSR, 1961. 294 p. 2000 copies printed.

Sponsoring Agency: Akademiya nauk Ukrainskoy SSR. Otdeleniye tekhnicheskikh nauk.

Ed. of Publishing House: O. M. Pechkovskaya; Tech. Ed.: V. Ye. Sklyarova..

PURPOSE: This book is intended for engineers of design bureaus, industrial laboratories, and testing stations, and for

Card 1/7

Strength Under Nonstationary (Cont.) SOV/5940

members of scientific research institutes.

COVERAGE: The book deals with problems connected with the study of the stress state and the strength of machine and construction parts under nonstationary loads. Discussed are statistical methods of systematizing random alternating stress states, characteristics of experimental devices used for registering such stresses, and the recording of the results of fatigue tests. Attention is given to the analysis of stresses induced by short-duration forces in elastic machine systems. The book is the result of work carried out by the Institut mashinovedeniya (Institute of Machine Science) AN UkrSSR [now the Institut liteynogo proizvodstva] and of the processing of published data. V. A. Grobov, Doctor of Technical Sciences, is mentioned as having assisted in the editing of this book. Each chapter is accompanied by references, mostly Soviet.

Card 2/7

KARLINSKIY, S.S., inzh.; KOZLOV, L.A., inzh.

Optimum conditions for boring with the BA-100 rig. Gor. zhur. no.9:27-29 S '61. (MIRA 16:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut tsvetnykh metallov, Ust'-Kamenogorsk.

(Boring)

SERENSEN, S.V., akademik; KOZLOV, L.A., kand.tekhn.nauk

Strength analysis under nonstationary variable stresses.
Vest.mash. 42 no.1:11-17 Ja '62. (MIRA 15:1)

1. Akademiya nauk USSR (for Serensen).
(Strength of materials)

S/122/63/000/001/004/012
D263/D308

AUTHORS: Sorensen, S.V., Academican of the AS UkrSSR and Kozlov, L.A., Candidate of Technical Sciences

TITLE: Cumulative fatigue damage and calculations towards greater strength of metals under alternating stresses of variable amplitude

PERIODICAL: Vestnik mashinostroyeniya, 43 no. 1, 1963, 32-34

TEXT: The present study, which is a continuation of previous works by the same authors, takes into account results and conclusions reached in this field by other workers. Additional data are given relating to characteristics of cumulative fatigue damage and their application in calculations are explained.

$$\sum \frac{n_i}{N_i} = \sum \frac{\omega_i n_i}{N_i} = 1 \qquad (1)$$

(ω_i - coefficient of stress interaction, N_i - durability), and var-

Card 1/2

Cumulative fatigue damage ...

ious conditions for the fatigue curve and intensity spectrum are analyzed and experimental results from various sources included. There are 2 figures and 10 references.

SERENSEN, S.V., akademik; KOZLOV, L.A., kand. tekhn. nauk

Characteristics of nonstationary strength and the determination of the potential of durability. Vest. mashinostr. 44 no.6:10-18 Je '64. (MIRA 17:8)

1. AN UkrSSR (for Serensen).

KOZLOV, L.A.; SADYKOV, B.G.

Extraction of the placenta by the M.M.Mitlin method. Sov.med. 23 no.6:122-124 Je '59. (MIRA 12:9)

1. Iz 1-y kafedry akusherstva i ginekologii (zav. - prof. P.V.Manenkov) Kazanskogo gosudarstvennogo meditsinskogo institute i rodil'nogo otdeleniya Respublikanskoy klinicheskoy bol'nitsy Ministerstva zdravookhraneniya Tatarskoy SSR (glavnyy vrach Sh.V.Bikchurin).
(PLACENTA)

KOZLOV, L.A., aspirant

Manual or instrumental investigation of the cavum uteri in the early postnatal period? Kaz.med.zhur. no.5:46-49 S-O '60. (MIRA 13:11)

1. Iz 1-y kafedry akusherstva i ginekologii (zav. - prof. P.V. Manenkov) Kazanskogo meditsinskogo instituta.
(UTERUS)
(OBSTETRICS)

KOZLOV, L.A.

Instrumental examination of the uterus after labor. Akush. i gin. 36 no.2:20-21 Mr-Ap '60. (MIRA 13:12)
(UTERUS—EXAMINATION) (PUERPERIUM)

KOZLOV, L.A., aspirant

Histological diagnosis of cancer of the cervix uteri. Kaz.med. zhur. 41 no.1:57-59 Ja-F '60. (MIRA 13:6)

1. Iz 1-y kafedry akusherstva i ginekologii (zav. - prof. P.V. Manenkov) Kazanskogo meditsinskogo instituta.
(UTERUS--CANCER)

KOZLOV, L.A., aspirant; POLYAKOV, I.F., ordinator

Spontaneous childbirth in kyphosis. Kaz. med. zhur. no.4:78-79 Jl-Ag '61. (MIRA 15:2)

1. 1-ya kafedra akusherstva i ginekologii (zav. - prof. P.V.Nanenkov) Kazanskogo meditsinskogo instituta i akusherstva otdeleniye Respublikanskoy klinicheskoy bol'nitsy (glavnyy vrach - Sh.V.Bikchurin [deceased]).
(LABOR (OBSTETRICS)) (SPINE--ABNORMITIES AND DEFORMITIES)

KOZLOV, L.A., aspirant

Clinical value of the iodine reaction for the diagnosis of early pregnancy. Kaz. med. zhur. no.6:36 N-D '61. (MIRA 15:2)

1. Pervaya kafedra akusherstva i ginekologii (zav. - prof. P.V.Manenkov) Kazanskogo meditsinskogo instituta i Respublikanskaya klinicheskaya bol'nitsa (glavnyy vrach - Sh.V.Bikchurin [deceased].
(PREGNANCY--SIGNS AND DIAGNOSIS)
(IODINE--THERAPEUTIC USE)

KOZLOV, L.A. (Kazan')

"Polyps of the cervix uteri" by I.A. Zorin. Reviewed by L.A. Kozlov. Kaz. med. zhur. no.2:89 Mr-Ap '62. (MIRA 15:6)
(UTERUS--TUMORS)
(ZORIN, I.A.)

KOZLOV, L. A.

Working conditions and measures for their improvement in production and use of vinyl chloride plastics. S. L. Tribukh, N. P. Tikhomirova, S. V. Levina, and L. A. Kozlov. Gigiena i Sanit. 1949, No. 10, 38-44.--In the production departments the concn. of org. Cl in a typical plant is usually within 0.005-0.27 mg./l., with a large proportion caused by chlorinated biphenyls (Sovol). The use of effective ventilation sites is stressed. In plants which utilize the products for consumer industry similar or somewhat higher atm. Cl can be found and ventilation needs are again stressed. Workers show tendency for respiratory and circulatory disorders, with some cases of hepatitis. Chlorinated biphenyl plasticizers may cause acne-type skin eruptions, largely on the face. Pressure rolling at above 120-30° is not recommended.

G. M. K.

KOZLOV, L.A.

Clinical report on acute poisoning by vapors of metallic mercury. Vestnik Oto-Rino-Laringol. 12, No.6, 33-7 '50. (MLRA 3:11)
(CA 47 no.19:10124 '53)

KOZLOV, L.A. (Moskva)

Advisability of allowing persons with pathological conditions of the tympanic membrane and the middle ear to work in noisy factories. Gig. truda i prof. zab. 4 no.5:52-54 My '60. (MIRA 13:9)

1. Institut gigiyeny truda i profzabolevaniy AMN SSSR.
(EAR--DISEASES) (NOISE--PHYSIOLOGICAL EFFECT)

DROGICHINA, E.A.; RASHEVSKAYA, A.M.; YEVGENOVA, M.V.; ZORINA, L.A.; KOZLOV, L.A.; KUZNETSOVA, R.A.; RYZHKOVA, M.N.; SENKEVICH, N.A.; SOLOV'YEVA, L.V.[deceased]; SHATALOV, N.N.; LETAVET, A.A., prof., red.; YEGOROV, Yu.L., red.; BUL'DYAYEV, N.A., tekhn. red.

[Manual on periodic medical examinations for industrial workers] Posobie po periodicheskim meditsinskim osmotram rabochikh promyshlennykh predpriiatii. By E.A.Drogichina i dr. Moskva, Medgiz, 1961. 287 p. (MIRA 14:12)

(INDUSTRIAL HYGIENE)

SHATALOV, N. N.; RYZHKOVA, M. N.; KOZLOV, L. A.; GLOTOVA, K. V.; GRIGOR'YEVA, V. M. (Moskva)

Some information on occupational pathology in persons servicing ultrasonic power installations. Gig. truda i prof. zab. 5 no.7: 28-33 Jl '61. (MIRA 15:7)

1. Institut gigiyeny truda i professional'nykh zabolevaniy AMN SSSR.

(ULTRASONIC WAVES—PHYSIOLOGICAL EFFECT)

SERENSEN, S.V.; KOZLOV, L.A.

Methods of fatigue testing at high temperatures. Zav.lab. 29 no.11: 1359-1365 '63. (MIRA 16:12)

KOZLOV, L.A.

Fatigue testing machines for reverse-bend test at elevated temperatures. Zav.lab. 29 no.11:1366-1372 '63. (MIRA 16:12)

ANDREYEVA-GALANINA, Ye.TS., prof.; GENKIN, S.M., prof. [deceased]; GUS'KOVA, A.K., doktor med. nauk; DVIZHKOV, P.P., prof.; DOLGOV, A.P., prof.; DROGICHINA, E.A., prof.; YEVGENOVA, M.V., doktor med. nauk; KAPLAN, Yu.D., kand. med. nauk; KOZLOV, L.A., st. nauchn. sotr.; LETAVET, A.A., prof.; MARTSINKOVSKIY, B.I., prof. [deceased]; MOLOKANOV, K.P., prof.; RASHEVSKAYA, A.M., prof.; SOSNOVIK, I.Ya., prof. [deceased]; SENKEVICH, N.A., dots.; EL'KIN, M.A., kand. med. nauk; RABEN, A.S., red.; SHATALOV, N.N., red.

[Occupational diseases; a manual for physicians] Professional'nye bolezni; rukovodstvo dlia vrachei. 2., dop. izd. Moskva, Meditsina, 1964. 757 p. (MIRA 17:11)

1. Deystvitel'nyy chlen AMN SSSR (for Letavet).

KOZLOV, L.F., inzh.

Determining ship resistance using results of towing tests conducted in model basins. Sudostroenie 24 no.3:4-7 Mr '58. (MIRA 11:4)
(Ship resistance)

KOZLOV, L.F., inzh.

Supercavitating propellers [from foreign journals]. Sudostroenie 26 no.2:66-68 (208) Feb '60. (MIRA 14:11)
(Propellers)

KOZLOV, L.F., inzh.

Modern studies in the field of the resistance of water to the movement of ships. Sudostroenie 26 no.3(209):61-65 Mr '60.
(MIRA 14:11)

(Ship resistance)

KOZLOV, L.F., inzh.

British investigation of an increase for rough surfaces.
Sudostroenie 27 no.5:57-60 My '60. (MIRA 14:6)
(Great Britain--Ship models--Testing)
(Friction)

S/207/62/000/005/005/012
B125/B102

AUTHOR: Kozlov, L. F. (Leningrad)

TITLE: Approximate integration of the equations of the laminar boundary layer on a porous surface in an incompressible liquid

PERIODICAL: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 5, 1962, 121-127

TEXT: An approximate method is developed here because the known exact solutions to a system of equations for laminar boundary flow cannot be integrated if the velocity distributions are arbitrary. A porous surface is taken to mean one over which the velocity has a non-vanishing normal component. A plane laminar boundary layer between such a surface and a steadily flowing incompressible liquid without volume forces is considered. The system of differential equations for this,

$$u\frac{\partial u}{\partial x}+v\frac{\partial u}{\partial y}=UU'+\nu\frac{\partial^2 u}{\partial y^2},\qquad \frac{\partial u}{\partial x}+\frac{\partial v}{\partial y}=0\qquad \left(U'=\frac{dU}{dx}\right) \tag{1.1}$$

Card 1/5

Approximate integration of the ...

is approximately integrated by the system

$$\frac{df}{dx} = \frac{U''}{U'} f + \frac{U'}{U} \{2\zeta - 2[2 + H] f - 2t^{**}\} \left(U'' = \frac{d^2U}{dx^2}\right) \tag{1.10}$$

$$\frac{df}{dx} = \frac{1}{(H_1 - 1/2 H_2)} \frac{U'}{U} [1 - Ht^{**} - (2H_1 + H_3 + H_4) f] + \frac{U''}{U'} f \tag{1.20}$$ and

$$\frac{df}{dx} = \frac{U'}{U} \frac{4}{(3H_3 - 2H_6)} \left[H - H_4 t^{**} - \left(H_5 + H_7 + \frac{1}{2} H_8\right) f\right] + \frac{U''}{U'} f \tag{1.23}$$

$$H_8 = \int_0^\infty \eta^2 (1 - \varphi)\, d\eta$$

comprising the three generalized equations of the zeroth, first, and second moment, respectively. x is the coordinate along the surface of the body, y the coordinate normal to the surface, u and v are the projections of the velocity vector onto the coordinate axes, U the given longitudinal velocity on the external boundary of the layer and ν is the kinematic viscosity coefficient of the liquid. The following boundary condition

Card 2/5

Approximate integration of the ...

holds for bodies with porous surfaces: $u = 0$, $v = -v_0$, $u \to U$ for $y \to \infty$.

The dimensionless parameter

$$f = \frac{\delta^{**2}}{\nu}\frac{dU}{dx}, \qquad \zeta = \frac{\tau_w \delta^{**}}{\mu U}, \qquad t^{**} = \frac{v_0 \delta^{**}}{\nu} \tag{1.9}$$

are introduced and $\delta^* = \int_0^\infty (1 - (u/U)Ddy)$, $\delta^{**} = \int_0^\infty (u/U)(1-(u/U)dy)$, and $H = \delta^*/\delta^{**}$. After the constants

$$a = \frac{1}{H_1 - {}^1/_2 H_2}, \qquad b = \frac{2H_1 + H_3 + H_4}{H_1 - {}^1/_2 H_2} \tag{2.1}$$
$$c = \frac{H_6 + H_7 + {}^1/_2 H_5}{H_0}, \qquad H_0 = \frac{3H_3 - 2H_5}{4(H_1 - {}^1/_2 H_2)}$$

have been introduced, the equations of the first and second moments take on the form

Card 3/5

Approximate integration of the ...

$$\frac{df}{dx} = a\frac{U'}{U}\left(1 - Ht^{**} - \frac{b}{a}f\right) + \frac{U^*}{U'}f \qquad (2.2) \text{ and}$$

$$\frac{df}{dx} = \frac{a}{H_0}\frac{U'}{U}\left(H - H_4 t^{**} - H_0 cf\right) + \frac{U^*}{U'}f \qquad (2.3).$$

The formula $H = 2.59 - 1.18t^{**} - 7.55f$ resulting if $H_0 = 2.59$ and $H_0(b/a-c) = 7.55$, and the interpolation formula $\int = 0.22 + 0.56t^{**} - 1.18ft^{**} + 1.85f - 7.55f^2$ are in good agreement with the exact values of H and $\int$. The maximum error is 5%. The form parameter

$$l_* = \frac{(1.85 - 1.18t^{**}) - \sqrt{(1.85 - 1.18t^{**})^2 + 4 \cdot 7.55\,(0.22 + 0.56t^{**})}}{2 \cdot 7.55} \qquad (3.3)$$

[= - 0.0875] for an impenetrable surface. It can be calculated from each of the three equations of moments. The coordinate system is so placed that U = 0 if x = 0. The integration constant then is C = 0 and f(0) = A/B.

Card 4/5

Approximate integration of the ...

After f(x) the other parameter

$$\delta^{**} = \sqrt{\frac{\nu f(x)}{U'(x)}}, \quad \delta^{*} = \delta^{**} H(f, t^{**}) \qquad (5.1)$$

$$\frac{\tau_w}{\frac{1}{2}\rho U^2} = \frac{2\nu}{U\delta^{**}} \zeta(f, t^{**}), \quad v_0 = \frac{vt^{**}}{\delta^{**}}$$

can be calculated. As a first approximation of the change to be expected in the parameter t^{**} for a solid with porous surface, it is recommended to use the corresponding values for a porous plate with given v_0 distribution. There are 4 figures.

SUBMITTED: June 5, 1962

Card 5/5

S/170/62/005/003/009/012
B108/B104

10.1300

AUTHOR: Kozlov, L. F.

TITLE: Transition of laminar boundary layer to turbulence under the action of the turbulence of an inflowing stream

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, v. 5, no. 3, 1962, 103 - 106

TEXT: The conditions under which the vortices of an inflowing stream cause an early separation of the laminar boundary layer are calculated within the statistical theory of turbulence, presupposing isotropic turbulence in the flow. The critical Reynolds number $Re_t^{**} = u_\delta \delta_t^{**}/\nu$ for the boundary layer determines the transition to turbulent flow:

$$Re_t^{**} = Re_H^{**} + \frac{A(f_s + f)^{\frac{1}{2}}}{\left[\varepsilon (L/L_0)^{-\frac{1}{5}}\right]^{\frac{5}{4}} Re^{-\frac{1}{4}} \Omega (u_\delta/u_0)},$$

$$\Omega (u_\delta/u_0) = \frac{(u_\delta/u_0)^3}{[1 + (u_\delta/u_0)^4]^{3/4}}, \quad Re = u_0 L/\nu.$$

Card 1/3

Transition of laminar boundary...

This expression gives a good description of what actually happens. The constant $A \approx 0.22$ was determined from experiments. The minimum Reynolds number Re_t^{**} accounts for the attenuation of the vortices in the boundary layer. δ_t^{*H} is the thickness of that part in the transition region where the boundary layer loses momentum, u_δ - velocity along the outer surface of the boundary layer, u_o - velocity of the outer flow, f_s - form factor at the point of separation of the boundary layer, ε - degree of turbulence in the flow, L - characteristic length of the body, ν - kinematic viscosity. The above semi-empirical formula is simplified to $Re_t^{**} = Re_H^{**} + C(f_s + f)^{1/2}/\varepsilon^{5/4}$ where the constant C = 1.88. This formula agrees very well with the experiment if the degree of turbulence of the outer flow is greater than 0.1%. Ye. I. Stepanov (PMM, v. 11, 1947) is mentioned. There are 2 figures and 13 references: 3 Soviet and 10 non-Soviet. The four most recent references to English-language publications read as follows: Schubauer G. B., Skramstad H. K. J. Aeron. Sci., 14, 1947; Wright E. A., Bailey. G. W. J. Aeron. Sci., 6, 1939; Crabtry L. F.J. Roy. Aeron. Soc., N 7, 1958; Preston I. H. J. Roy. Aeron. Soc., N 12, 19

Card 2/3

Transition of laminar boundary...

S/170/62/005/003/009/012
B108/B104

SUBMITTED: November 29, 1961

Card 3/3

X