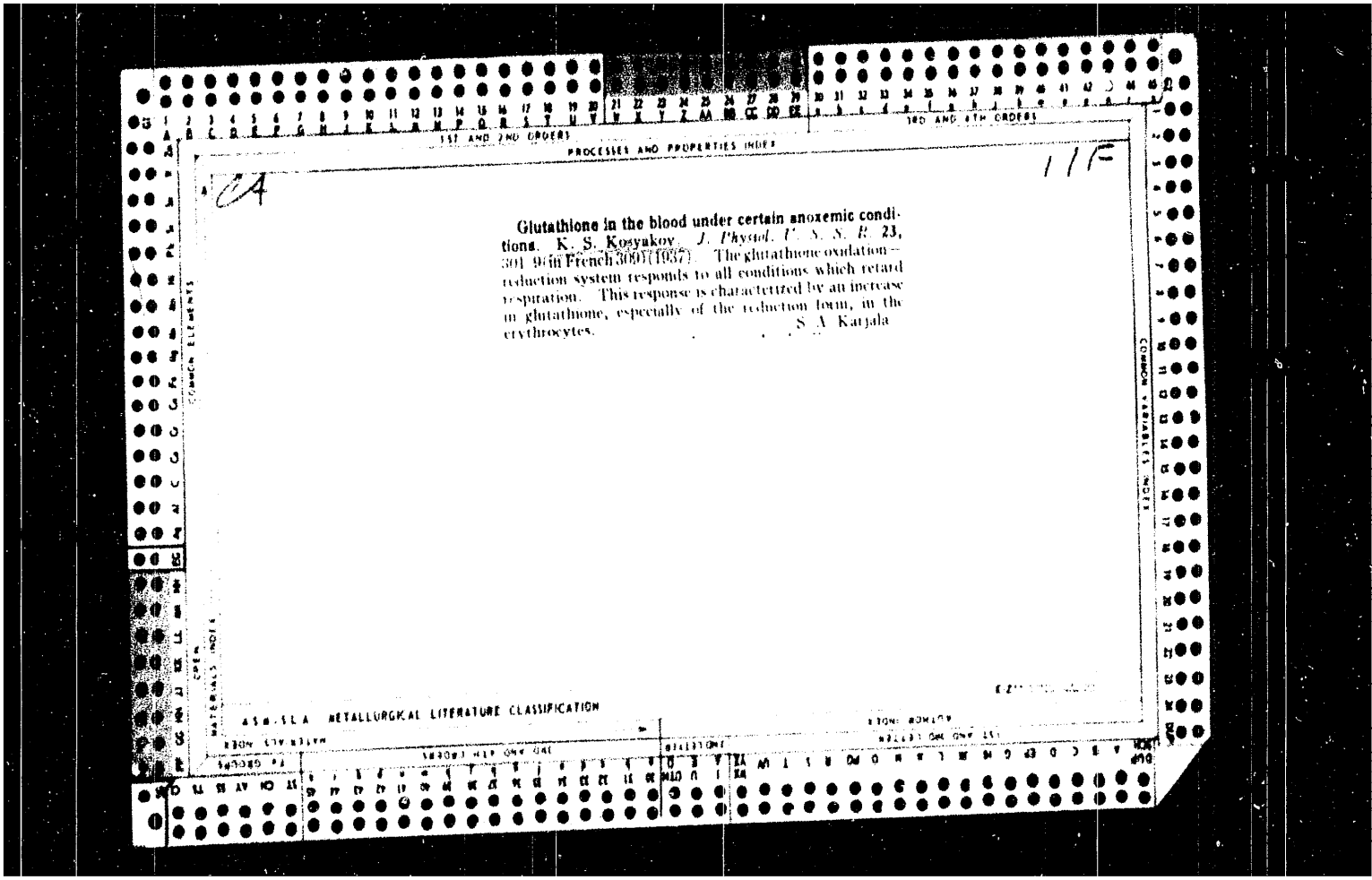


PROCESSES AND PROPERTIES INDEX

1 1 F

CA

Glutathione in the blood under certain anoxemic conditions. K. S. Kosyakov. *J. Physiol. U. S. S. R.* 23, 301–9 (in French) 3001 (1937). The glutathione oxidation–reduction system responds to all conditions which retard respiration. This response is characterized by an increase in glutathione, especially of the reduction form, in the erythrocytes. S. A. Karjala

45a-SLA METALLURGICAL LITERATURE CLASSIFICATION

KOSYAKOV, K. S.

Mbr., Chair Pathology, Clinic & Therapy of Chem. Warfare Poisons, Faculty for Sanitary Defense, Central Inst. Advanced Training for Physicians Moscow, -1939-42-;
Mbr., Mil. Med. Acad. S. M. Kirov, -c1948-.
Mbr., Biochemical Lab., Chair Facultative Therapy,
Mil. Med. Acad. im. S. M. Kirov, -c1949-.
"The Glutathione Content of Blood in Methemoglobinemia," Farmokol. i Toksikol., 2, No. 3, 1939; "On Exogenous and Endogenous Methemoglobin Formation," Biokhim., 4, No. 5, 1939;
"On the Rapidity of the Adsorption of the Substances Intracutaneously Injected," ibid., 5, Nos. 1-2, 1942;
"The Toxicity of Hydrocyanic Acid on the Ground of the Altered State of the Nervous System," ibid., No. 5, 1942;
"Oxygen and Catalysis," Dok. AN, 63, No. 6, 1948; "The Content of Ascorbic Acid in the Gonads of a Triton in Connection with Their Functional Activity," Fiziol. Zhur. SSSR, 35, No. 1, 1949.

DUBININ, N.P., prof.; KOSYAKOV, K.P., inzh.

Automatic gating mechanisms for chill-casting machines. Izv.vys. ucheb.zav.; mashinostr. no.9:149-158 '62. (MIRA 16:2)

1. Moskovskoye vysshaye tekhnicheskoye uchilishche imeni Baumana.

(Foundries—Equipment and supplies)

KOSYAKOV, K. P.

ALEKIN, L.Ye.; BALABIN, V.V.; GLADILIN, A.N.; DUBININ, N.P.; KOSYAKOV, K.P. POPOV, L.A.; KHRENOV, A.D.

[The organization of standard workshops for students of the "metal technology" departments of technical colleges] Metodika organizatsii tipovykh uchebnykh masterskikh kafedry "Tekhnologiia metallov" vtuzov. Moskva, Sovetskaia nauka, 1953. 243 p. (MLRA 7:7)

1. Moscow. Moskovskoye vysshoye tekhnicheskoye uchilishche. Kafedra "Tekhnologiya metallov".
(Metalwork---Study and teaching)

DUBININ, N.P., doktor tekhn. nauk; KOSYAKOV, K.I., inzh.

Design diagrams and calculation of gravity die casting machine guides. Lit. proizv. no.11:21-25 N '65.
(MIRA 18:12)

KOSYAKOV, K.K.

Simple device for determining the speed of blood coagulation.
Lab. delo 3 no.2:51-52 Mr-Ap '57 (MLRA 10:5)

1. Iz kafedry biokhimii Voyenno-meditsinskoy ordena Lenina Akademii imeni Kirova.
(PHYSIOLOGICAL APPARATUS) (BLOOD--COAGULATION)

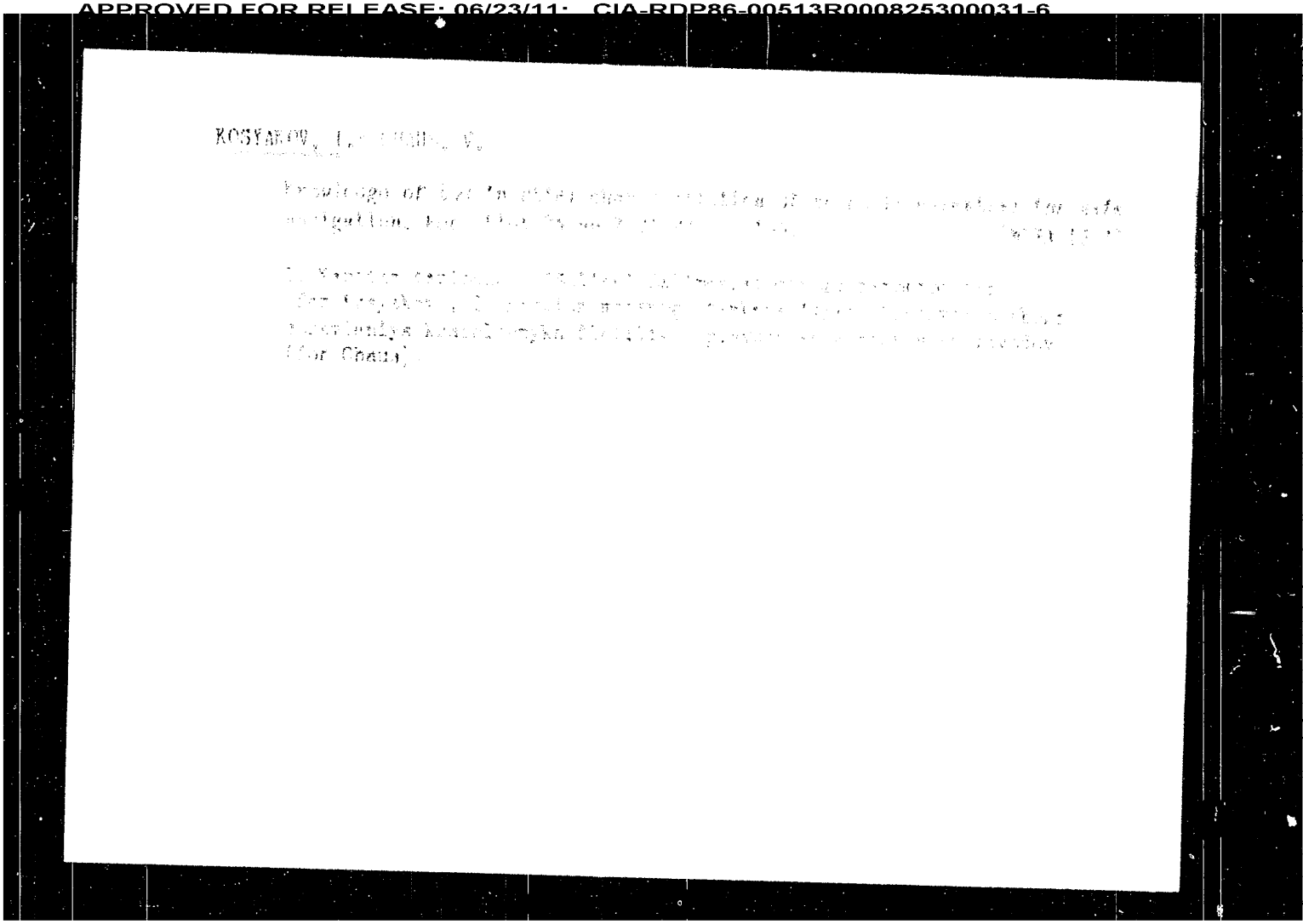
OZHGA, S.; KOSYAKOV, K., prof.; GREKOV, V.

Exciting and useful. Sov.foto 22 no.11:46 N '62. (MIRA 16:1)
(Nature photography)

SAPOZHNIKOV, D.I.; GRAUERMAN, L.A.; KOSYAKOV, I.Ye.

Pilot plant testing of method for obtaining carotene from the leaves of green plants. Trudy Bot.inst., Ser.4 no.9:282-291 '53. (MLRA 6:6)

1. Botanicheskiy institut imeni V.L. Komarova akademii nauk SSSR.
(Carotene)



USSR/Chemistry - Ceramics

Card : 1/1 Pub. 104 - 2/12

Authors : Kosyakov, G. A. and Fayn, I. A.

Title : Ceramic articles for the people's consumption

Periodical : Stek. i ker. 11/7, 3 - 4, June 1954

Abstract : The action taken by various ceramic factories to comply with Government requirements for more consumption goods is recounted. Such action sometimes involves making additions to equipment and personnel including corps of artists. The various types of artistic and practical articles are described and quantitities produced are stated. The factories which specialize in each kind are indicated. Illustrations.

Institution : ...

Submitted : ...

KOSYAKOV, B.V.; SHAKHTUROV, P.I.; YAGODKINA, N.Ya.

Determining the optimum pattern of holes in testing operations in the Zyryanovsk deposit. Izv.AN Kazakh.SSR. Ser.geol. no.5:83-90 '62.
(MIRA 15:12)

(Zyryanovsk District—Ore deposits)

KOSYAKOV, A.V.; PETRICH, I.M.

At a new crushed stone plant. Put' i put. khoz. no.9:26-28 S '58. (MIRA 11:9)

1. Nachal'nik Znamenskogo shchebenochnogo zavoda (for Kosyakov).
2. Glavnyy inzhener Znamenskogo shchebenochnogo zavoda (for Petrich).
(Znamenka--Stone, Crushed)

LUKINOV, Mikhail Ivanovich, inzh.; KOSYAKINA, Z.K., red.; MIKHEYEVA, A.A., tekhn. red.

[Ceramic drain pipes] Keram cheskie drenazhnye truby. Moskva, Gosstroiizdat, 1963. 158 p. (MIRA 17:2)

MOSHCHANSKIY, N.A., doktor tekhn.nauk, prof.; ZOLOTNITSKIY, I.M., kand.tekhn.nauk; SOLOMATOV, V.I.; SHNEYDEROVA, V.V.; KOSYAKINA, Z.K., red.; KASIMOV, D.Ya., tekhn.red.

[Plastics and synthetic resins in anticorrosion technology] Plastmassy i sinteticheskie smoly v protivokorrozionnoi tekhnike. [By] N.A.Moshchanskii i dr. Moskva, Izd-vo lit-ry po stroit., 1964. 136 p. (MIRA 17:3)

GINZBURG, David Borisovich, doktor tekhn. nauk; DELIKISHKIN, Sergey Nikolayevich, kand. tekhn.nauk; KHODOROV, Yevgeniy Iosifovich, kand. tekhn. nauk; CHIZHSKIY, Anatoliy Fedorovich, kand. tekhn. nauk; BUDNIKOV, P.P., akademik, red.; DOBROKHOTOV, N.N., akademik, nauchn. red.[deceased]; KOSYAKINA, Z.K., red.; BOROVNEV, N.K., tekhn. red.

[Kilns and drying apparatus for the silicate industry] Pechi i sushilki silikatnoi promyshlennosti. [By] D.B.Ginzburg i dr. Izd.3., perer. Moskva, Gosstroiizdat, 1963. 342 p. (MIRA 17:2)

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

DIKERMAN, Natan Iosifovich; KOSYAKINA, Z.K., red.; NAUMOVA, G.D., tekhn. red.

[New output of brickyards; setting up a building materials production base for completely prefabricated construction in Moscow Province] Novaia produktsiia kirpichnykh zavodov; iz opyta sozdaniia proizvodstvennoi bazy polnosbornogo stroitel'stva v Moskovskoi oblasti. Moskva, Gosstroiizdat, 1963. 123 p. (MIRA 16:6)
(Moscow Province--Buildings, Prefabricated)

DUDEROV, Grigoriy Nikolayevich; ZALKIND, I.Ya, nauchnyy redaktor; KOSYAKINA, Z.K., redaktor; GLADKIKH, N.N., tekhnicheskiy redaktor.

[The firing of sintered ceramic materials] Obzhig spekaiushchikhsia keramicheskikh mass. Moskva, Gos.izd-vo lit-ry po stroit. materialam, 1957. 122 p. (MLRA 10:4)

(Ceramic industries)

REMPEL', A.M.; SUKHOV, P.V.; KOPEYKIN, A.A., glavnyy red.; ROKHVARGER, Ye.L., zamestitel' glavnogo red.; VASYUTINSKAYA, A.A., red.; GARTSMAN, B.M., red.; ZAYONTS, R.M., red.; LUNDINA, M.G., red.; NOSOVA, Z.A., red.; PETROV, N.A., red.; RIVKIN, A.M., red.; ROMANOV, P.R., red.; SOKOLOV, P.V., red.; FEYN, Yu.E., red.; KOSYAKINA, Z.K., red.; KASIMOV, D.Ya., tekhn.red.

[Research on clay materials] Issledovanie glinistogo syr'ia. Moskva, Gosstroiizdat, 1963. 119 p. (Kuchino. Gosudarstvennyi nauchno-issledovatel'skii institut stroitel'noi keramiki. Trudy, no.22). (MIRA 17:3)

L 46552-66

ACC NR: AT6012387

of x-ray surface analysis at room temperature give some indication of the "slip" of surface pyramids and prisms. A discussion of the changes occurring in the material fabric in plastic deformation is presented. It is thought that this material is perhaps more sensitive to minute imperfections in chemical content and microstructure than are many others. Electron microscope tests were made on titanium alloy AT-4 [4.5% Al, 1.5% (Cr+Fe+Si), 0.01% B, 0.1% C, 0.15% O, 0.05% N, 0.015% H, and the remainder titanium]. The results show that under cyclical loading deformation develops through several mechanisms. These results are diagrammed and described, and compared with the findings of other research. Orig. art. has: 4 figures and 1 table.

SUB CODE: 11/ SUBM DATE: 02Dec65/ ORIG REF: 007/ OTH REF: 004

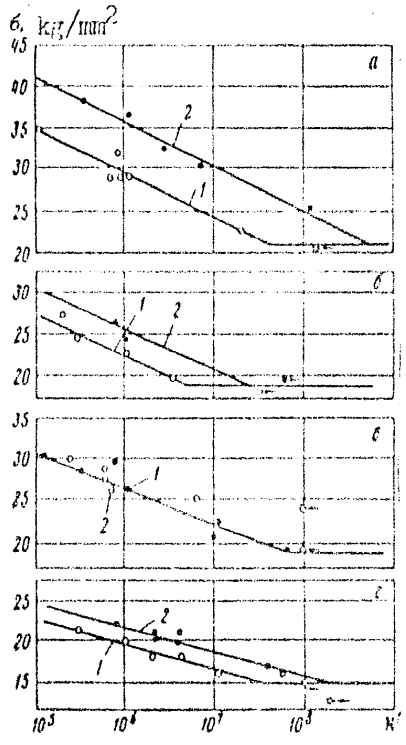
Card 3/3

L 46559-66

ACC NR: AT6012387

3

Fig. 1. Fatigue curves in air (1) and in vacuum (2). a - alloy AT4, b - titanium IMP-1A, c - transformer iron, d - steel 10.



Card 2/3

L 46599-66 EWT(m)/EWP(w)/T/EWP(t)/ETI/EWP(k) IJP(c) JD/JG/GS

ACC NR: AT6012387 SOURCE CODE: UR/0000/65/000/000/0167/0172

AUTHORS: Oding, I. A. (deceased); Ivanova, V. S.; Kosyakina, Ye. S.

ORG: none

TITLE: Peculiarities of plastic deformation and failure of titanium at room temperature

SOURCE: Soveshchaniye po metallokhimii, metallovedeniyu i primeneniyu titana i yego splavov, 6th. Novyye issledovaniya titanovykh splavov (New research on titanium alloys); trudy soveshchaniya. Moscow, Izd-vo Nauka, 1965, 167-172

TOPIC TAGS: material testing, fatigue strength, titanium, titanium alloy, plastic deformation, electron microscopy / AT4 alloy, 10 steel, IMP-1A titanium, T-40 titanium

ABSTRACT: Some properties of titanium in construction uses are discussed. Particular attention is given to the effects of surface conditions and stress concentrations. Comparative data on the fatigue resistance both in air and in vacuum are given. An unexpected outcome of these data (see Fig. 1) is that the effect of the air ambient on fatigue strength of titanium is about twice as great as that for iron. It is suggested that the level of chemical activity between titanium and oxygen in the air increases in conditions of cyclical loading. The plastic deformation behavior of titanium under both cyclical and static loads is also noted. The results

Card 1/3

GORDIYENKO, L.K., kand. tekhn. nauk; VEKSLER, Ye.Ya., inzh.; KOSYAKINA, Ye.S., inzh.

Appearance of dislocation structure in high temperature 12Kh1MF and 12MKh boiler steel. Elek. sta. 36 no.9:13-15 S '65. (MIRA 18:9)

ODING, I.A. [deceased]; IVANOVA, V.S.; KOSYAKINA, Ye.S.

Mechanism underlying the plastic deformation of an α-titanium alloy due to fatigue. Dokl. AN SSSR 158 no.2:328-330 S '64.

(MIRA 17:10)

1. Institut metallurgii im. A.A.Baykova. 2. Chlen-korrespondent AN SSSR (for Oding).

L 41566-65
ACCESSION NR: AP5001614

"he method for determining the damage line in metals during fatigue" (Ivanova, V. S.; Ob opredelenii linii povrezhdayemosti metallov pri ustalosti. Zavodsk. laboratoriya, 1960, 26, no. 10, 1136) No cracks were detected below the damage line. The size and number of the cracks increased with increased number of cycles. In samples tested under vacuum the crystal lattice was broken and the cracks merged. The silicon-containing iron behaved similarly, only the cracks were narrower, and when tested under vacuum, cross slip occurred in earlier stages of damage than in the armco iron. Thus the number of cycles at which submicroscopic cracks form due to the action of given stress amplitude can be determined from the fatigue curve for a given material. Orig. art. has: 3 figures.

ASSOCIATION: None

SUBMITTED: 21Nov63 ENCL: 00 SUB CODE: MM

NR REF SOV: 004 OTHER: 003

Card 2/2

L 41566-65 EWT(m)/EWP(w)/EWA(d)/T/EWP(t)/EWP(b)/EWA(c) JD
ACCESSION NR: AP5001614 S/0279/64/000/006/0125/0128

AUTHOR: Ivanova, V. S. (Moscow); Koeyakina, Ye.S. (Moscow); Korochkina, L. S. (Moscow)

TITLE: Investigation of the initial stages of fatigue failure with the help of an electron microscope

SOURCE: AN SSSR, Izvestiya. Metallurgiya i gornoye delo, no. 6, 1964, 125-128

TOPIC TAGS: fatigue failure, electron microscope examination, armco iron, silicon containing iron, stress cracking

ABSTRACT: Armco iron and siliceous iron were subjected to cycled stressing, and polished unetched samples were examined with an electron microscope. In armco iron annealed at 950C for 3 hours a plot of the stress vs. the log of cycles showed the damage line was shifted by about 8.5 kg/mm^2 in comparison to the failure line. Submicroscopic cracks were detected in samples stressed between the number of cycles resulting in initial sample damage and the number of cycles resulting in fatigue failure. This is in accord with earlier work on

Card 1/2

L 16680-65
ACCESSION NR: AP4045621

meters of the equations. Orig. art. has: 9 equations

ASSOCIATION: Moskovskiy gosudarstvenny*y universitet im. M. V. Lomonosova (Moscow State University)

SUBMITTED: 03Apr64 ENCL: 00

SUB CODE: MA, ME NO REF SOV: 001 OTHER: 000

Card 2/2

L 16681-65 EWT(m)/EWA(d)/EWP(t)/EWP(b) IJP(c) MJW/JD

ACCESSION NR: AP4043630 S/0020/64/158/002/0328/0330

AUTHOR: Oding, I. A. (Corresponding member AN SSSR); Ivanova, V. S.; Kosyakina, Ye. S.

TITLE: Investigation of the mechanism of plastic deformation of α-titanium alloy under cyclic loading

SOURCE: AN SSSR. Doklady*, v. 158, no. 2, 1964, 328-330, and insert facing p. 328

TOPIC TAGS: titanium aluminum alloy, AT4 alloy, AT4 alloy fatigue, AT4 alloy plastic deformation, plastic deformation mechanism, crack formation mechanism

ABSTRACT: The mechanism of the plastic deformation of the AT-4 alloy under cyclic loading was studied on flat specimens subjected to alternate bending. Electron microscope examination revealed the complex nature of the deformation mechanism; twinning in some grains and slip in others. Because of the presence of numerous obstacles to the movement of dislocations, secondary phases, interstitial

Card 1/2

ODING, I.A.; KOSYAKINA, Ye.S.

Methods of detecting dislocations in crystals (survey).
Zav.lab. 28 no.4:450-458 '62. (MIRA 15:5)
(Dislocations in crystals)

IVANOVA, V.S., doktor tekhn.nauk; KOSYAKINA, Ye.S., inzh.

Electron microscopy on the fatigue of St. 10 and EIAIT steels.
Metalloved.i term.obr.met. no.2:32-34 F '62. (MIRA 15:3)

1. Institut metallurgii imeni A.A.Baykova.
(Steel--Fatigue) (Electron microscopy)

KOSYAKINA, O.A.

Solubility in the ternary system CuCl - NaCl - H_2O at 25°. Dokl. na nauch. konf. l no.4:21-25 '62. (MIRA 16:8)
(Solubility) (Chlorides)

DRUZHININ, I.G.; KOSYAKINA, O.A.

Solubility of solid phases in the aqueous reciprocal system $CuCl_2+Na_2SO_4 \leftrightarrows CuSO_4+Na_2Cl_2$ at 25°. Zhur. neorg. khim. 6 no.7:1702-1712 Jl '61. (MIRA 14:7)
(Systems (Chemistry))

KOSYAKOVA, O. A.

KOSYAKOVA, O. A. : "A study of solubility in the mutual aqueous system $CuCl_2 + Na_2SO_4 \rightleftarrows CuSO_4 + NaCl$ at 25 degrees Centigrade." Inst of General and Inorganic Chemistry imeni N. S. Kurnakov. Acad Sci USSR. Yaroslavl', 1956 (Dissertation for the Degree of Candidate in Chemical Science)

Source: Knizhnaya Letopis' No. 28 1956 Moscow

S/129/62/000/002/004/014
E073/E335

Electron-microscopic ...

Metals, v.85, no. 7, 1957; Ref. 5: A.H. Cottrell, D. Hull
Proc. Roy.Soc., A 242, no. 1229, 1957; Ref. 6: D. Hull
Philos. Mag., v.3, no. 29, 1958.

ASSOCIATION: Institut metallurgii imeni A.A. Baykova
(Institute of Metallurgy imeni A.A. Baykov)

Card 4/4

characteristic for metals in which the process of fatigue is activated by intersecting sliding systems. However, this condition is necessary but insufficient since the process of extrusion will develop only if alternating stresses are applied. In the steel [13Г] (G13L) (1% C, 12% Mn, 0.1-0.3% Cr, 0.08% P 0.01% S), tested for fatigue with a repeated loading (120 000 cycles) of a single polarity, intersecting slip systems were observed but not extrusion. The formation of fatigue cracks under such conditions is caused by the coagulation of vacancies and interaction of dislocations which move in the intersecting slip systems. Thus, fatigue cracks occur during the process of extrusion and intrusion only if alternating cyclic stresses are used and only in metals in which intersecting slip systems are activated under such conditions.
There are 3 figures and 7 references: 1 Soviet-bloc and 6 non-Soviet-bloc. The four latest English-language references mentioned are: Ref. 2: P.J.E. Forsyth - Proc.Roy.Soc., A 242 no. 1229, 1957; Ref. 4: P.J.E. Forsyth - Journal Institute of

S/129/62/000/002/004/014
E073/E335

the boundaries of the grain, there is only one slip system. Prior to the fatigue tests the austenitic steel was water-quenched from 1 200 °C and then stabilized at 650 °C, whilst the carbon steel was subjected to annealing at 900 °C. Symmetrical bending was applied electromechanically to specimens of 1 x 10 mm cross-section during the fatigue tests. The structure of the slip bands was studied by means of metallographic and electron microscopes (using chromium shaded replicas). Extrusion phenomena were observed in the austenitic steel but not in the carbon steel. Spherical sub-micropores were observed at the boundaries of the deformed layer in a number of cases and the high-resolution electron microscopes revealed that the submicroscopic cracks in the deformed metal volumes frequently consisted of pores which were stretched into chains. The formation of these pores was attributed to the coagulation of vacancies. Such loosening of the metal volume by the deformation was not observed in the austenitic steel. The obtained information leads to the conclusion that extrusion is

S/129/62/000/002/004/014
E073/E335

AUTHORS: Ivanova, V.S., Doctor of Technical Sciences and Kosyakina, B.S., Engineer

TITLE: Electron-microscopic investigation of the fatigue phenomena in the steels Ст.10 (St.10) and ЭЯ1Т (EYaIT)

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov no. 2, 1962, 32 - 34 + 2 plates

TEXT: There are various hypotheses on the mechanism of formation of fatigue cracks. A.H. Cottrell and D. Hull (Ref. 5 - Proc. Roy. Soc., A 242, no. 1229, 1957) consider that the mechanism of extrusion and intrusion is due to alternate effects of intersecting systems of slip; extrusion and intrusion should be observed only during cyclic alternating stresses in specific metals in which cyclic loading activates mutually intersecting slip planes in the grains. The authors chose two different metals to verify this hypothesis: an austenitic steel which had a tendency to develop mutually intersecting slip planes, and a carbon steel in which within

Card 1/4

KOSYAKIN, Yu.K., inzh.; LIZAREVA, I.F.; MALOMOT, I.K.

Ultraviolet exposure room equipped with erithema-producing lamps.
Svetotekhnika 4 no.12:21-23 D '58. (MIRA 11:12)

1. TSentrogiproshakhtostroy.
(Ultraviolet rays--Therapeutic use)

KOSYAKIN, P.V., inzh.

Unsolved problems connected with spare parts and with supplies of technical materials. Elek.i tepl.tiaga 3 no.11:45-46 N '59. (MIRA 13:3)
(Electric railroads--Equipment and supplies)

L 07198-67

ACC NR: AT6031768

ed in selecting the necessary cutting tools. The best cutters consist of hard alloy plates, but even these undergo substantial wear. Experiments were conducted which show the feasibility of using diamond cutters in the future. After machining and inspection, the cups are polished electrochemically to produce a cleaner surface and an anticorrosion film. The final soldering stage is the most critical production step. Soldering is conducted in a vacuum by means of high frequency currents. Industrial samples of accelerator sections produced by this method have been in operation for several years and have confirmed the fact that the geometric dimensions, the surface finish, the hermetic properties of the joints and the radiometric parameters remain unchanged. Orig. art. has: 4 figures.

SUB CODE: 09,20,14/ SUBM DATE: none

Card 2/2 egp

L 07198-67 EWT(m) IJP(c)

ACC NR: AT6031768 SOURCE CODE: UR/3092/66/000/004/0174/0181

AUTHOR: Arkhangel'skiy, F. K.; Ginzburg, Ye. L.; Gustov, G. K.; Kosyakin, M. N.; Urodkov, V. M.

ORG: none

48
B+1

TITLE: Certain technological features in the mass production of diaphragm-type waveguides for traveling wave electron linear accelerators 19

SOURCE: Moscow. Nauchno-issledovatel'skiy institut elektrofizicheskoy apparatury. Elektrofizicheskaya apparatura, no. 4, 1966, 174-181

TOPIC TAGS: traveling wave, waveguide, linear accelerator

ABSTRACT: A mass production technique is described for diaphragm-type waveguides used in traveling wave linear accelerators. The process involves the following operations: the stamping of cup billets, annealing, machining, and electrochemical polishing of cups, soldering of subsections made up of individual cups, and the soldering of sections from subsections. The waveguide consisting of the cups and the terminal matching section are made of deoxidized copper with a specific electric conductivity of not less than $5.80 \cdot 10^7$ mho/m. The cup billets are obtained by hot stamping from round rolled metal. The machining of stamped billets consists of four stages: coarse cutting, annealing, preliminary fine cutting and final machining. Difficulties were encounter-

Card 1/2

KOSYAKIN, M.K.

Effectiveness of trace element fertilizers in Chernozem soils.
Zemledelie 27 no.4:41-42 Ap '65. (MIRA 18:4)

1. Bogoroditskoye opytnoye pole Belgorodskoy oblasti.

KOSYAKIN, M.K.

Corn as a fallow crop preceding winter rye. Zemledelie 25 no.4: 73-74 Ap '63. (MIRA 16:5)

1. Bogoroditskoye opytnoye pole Belgorodskoy oblasti. (Rye) (Corn (Maize))

KOSYAKIN, M.K.

Planting buffer strips on fallows. Zemledelie 7 no.6:82-83 Je '59. (MIRA 12:8)

1. Bogoroditskoye opytnoye pole.
(Fallowing)

KOSYAKIN, A.R.; FLOROV, I.F.; SHEPOTKOV, I.V.

Increasing the energy content of hydrocarbon fuels. Khim. i tekh. topl. i masel 7 no.10:66-68 O '62 (MIRA 15:?)

KOSYAKIN, A.R.

Effect of fine filtration of the MC-20 aviation oil on its performance characteristics. Khim. i tekh. topl. i masel. 8 no.3:65-67 Mr '63. (MIRA 16:4)

(Airplanes--Lubrication)
(Filters and filtration)

L 44019-66

ACC NR: AT6015202

stability of greases since factors such as chemical oxidation, thermal decomposition and polymerization affect their drying rate. Orig. art. has: 1 table and 3 figures.

SUB CODE: 11/ SUBM DATE: 10Dec65

Card 2/2 gd

L 44019-66 EWT(m)/T DJ/GD

ACC NR: AT6015202 (A,N) SOURCE CODE: UR/0000/66/000/000/0104/0109

AUTHOR: Kosyakin, A. R.; Uspenskaya, Ye. A.

57
B+1

ORG: none

TITLE: Determining the thermal stability of lubricating greases

SOURCE: Metody otsenki ekspluatatsionnykh svoystv reaktivnykh topliv i smazochnykh materialov (Methods for the performance evaluation of jet propellants and lubricants). Moscow, Izd-vo Mashinostroyeniye, 1966, 104-109

TOPIC TAGS: grease, lubricant property, heat resistance, THERMAL STABILITY, LUBRICATING OIL

ABSTRACT: The new method worked out for determining the thermal stability of lubricating greases is based on determining the length of time the grease is heated at a given temperature to complete dryness, and the effect of atmospheric oxygen on it. The proposed method was found sufficiently accurate for temperatures of 120-350°C. The method clearly shows the effect of temperature on thermal stability of different greases and helps to differentiate between greases of different compositions according to their thermal stability. It was established that volatility alone cannot be used as a characteristic of thermal

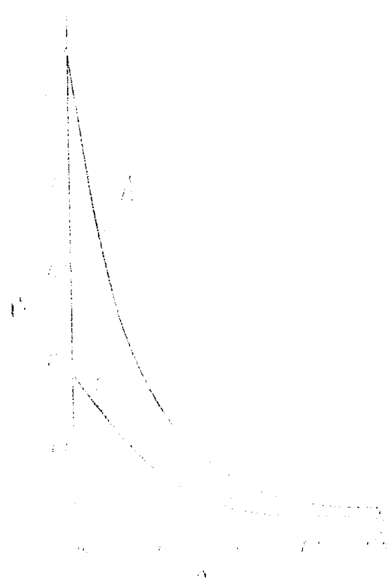
Card 1/2

UDC: 662.753.32:629.13.001.4

77789 SOV/[illegible]

ASSOCIATION: Central Scientific Research Institute of Aircraft Engines (Tsentral'nyy nauchno-issledovatel'skiy institut aviamotostroyeniya)

Fig. 1. The relation between formation of the varnish deposit by aviation oil MS-20 and the duration of its continuous operation in the engine: (A) 1-ring groove Nr [illegible], 2-ring groove Nr [illegible] (from bottom, up); (B) the thickness of the varnish deposit in ring grooves of the piston engine, mm; (C) the duration of oil's stay in engine, hr.



Card [illegible]

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300031-6

15.4110.

AUTHOR: Kosyakin, A. R.

TITLE: The Change of the Oil's Temperature in Piston's Varnish Deposit During Engine Operation

PERIODICAL: Khimiya i tekhnologiya topliv i masel, 1960, No 3, pp 47-50 (USSR)

ABSTRACT: The average temperature of the piston head during the experiments was 85° and that of the oil coming into the engine, 90°. The results of experiments are shown in Fig. 1. The oil with high amounts of tars, asphaltenes, carbenes, and kerotenes forms less varnish deposits. Adhesion of these products does not affect formation of the deposit, resulting from condensation of the oxidation products, which as usual is inhibited by antioxidant oil additives. There are 4 figures; and 7 references, 1 Soviet, 1 U.S. The U.S. reference is: Denison, G. H., Clinton, J. O., Chemistry and Prevention of Piston-Ring Sticking, SAE J., May, 13, No 5 (1945).

Card 1/2

KOSYAKIN, A. R.; KAN, A. V.

Chemistry

"Reclaiming of Oils in Enterprises", Gostoptekhizdat, 1948

Summary No. 60, 26 May 52; [redacted]

L 02398-67

ACC NR: AT6015204

3 g of lubricant were used throughout the tests for eqch bearing. The bearings were tested at 5000 and 10,000 rpm and 200 and 350°C with a radial load from 50 to 450 kg. The tests were arranged in five-hour sequences. A diagram is given showing the test equipment and bearing specimen. The proposed method may be used for accurately determining the nominal work capacity of greases by testing them on 3-5 bearings. The results show that the nominal work capacity of TsIATIM-221 grease is 13 hours, while that for VNII NP-222-2 lubricant is 1 hour at 500 rpm, 250°C bearing temperature and a radial load of 250 kg. The nominal work capacity of VNII NP-235 grease is 32.1-46.4 hours, while that for standard TsIATIM-221 lubricant is 31.1-58 hours at 10,000 rpm and a radial load of 150 kg at 250°C and 200°C respectively for the two lubricants. VNII NP-222-2 and VNII NP-206 lubricants showed a similar work capacity under identical conditions. This method for determining the nominal work capacity of greases should find application in further research work. Orig. art. has: 3 figures, 2 tables, 1 formula.

SUB CODE: 11, 13/ SUBM DATE: 10Dec65/ ORIG REF: 002

Card 2/2

L 02398-67 EWP(c)/EWP(k)/EWT(d)/EWT(m)/EWP(h)/T/EWP(l)/EWP(v) IJP(c) WW/DJ/JXT/GS

ACC NR: AT6015204 (A,N) SOURCE CODE: UR/0000/66/000/000/0118/0125

53

AUTHOR: Kosyakin, A. R.; Uspenskaya, Ye. A.; Iskusnykh, Yu. V.

51

ORG: None

B+1

TITLE: Evaluating the work capacity of greases used in ball bearings

SOURCE: Metody otsenki ekspluatatsionnykh svoystv reaktivnykh topliv i smazochnykh materialov (Methods for the performance evaluation of jet propellants and lubricants). Moscow, Izd-vo Mashinostroyeniye, 1966, 118-125

TOPIC TAGS: lubricant, ball bearing, grease

ABSTRACT: Experimental data are given on a new method for comparative evaluation of the work capacity of greases used in high-speed closed roller bearings operating at temperatures below 350°C. Duration of normal bearing operation is used as the criterion for evaluating the work capacity of the lubricants. The point of binding is assumed as the breakdown point of normal bearing operation. Binding is characterized by disruption of smooth bearing operation and by a significant temperature increase in the external ring. 7VP180506BT3 ball bearings were tested on the IS-9 unit. Several bearings belonging to a single precision class were used for each testing stage. These bearings were washed in benzene and acetone before testing, and the clearances between the rings and separators were filled with the lubricant to be tested. 1.5 and

Card 1/2 UDC: 662.753.32:629.13.001.4

KOSYAKIN, A.R.

PROCESSES AND PROPERTIES INDEX

The first series of continuous laboratory cracking units in Russia M. B. Volf and A. R. Kosyakin. *Neftepererabotka* 3, No. 12, 1 (1930). The unit's consist of a pump which feeds the stock into a coil heated by mea... of an oil bath, a second coil immersed in a babbitt bath, and a reaction chamber also heated with babbitt where the highest temp. is available at a pressure of 40–50 atm. The cracked product then passes through a pressure reducing valve, a condenser-cooler and a receiver-gas separator. The sepd. gas is passed through a charcoal adsorber, gas meter and gas holder, or it may be passed into the air, while the cracked product is fractionated in a Glinskii app. The pressure distillate is taken off under atm. conditions and the cracked condensate is distd. at a residual pressure of 7 mm. A layout of the equipment is given.

A. A. Bochtlingk

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

L 45505-66

ACC NR: AR6013697

random-process generators using operational amplifiers, using a Pollack trigger, and using n-blade step-by-step commutators are presented. V. M. [Translation of abstract]

SUB CODE: 09

hs

Card 2/2

L 45505-66 EWT(d)/EWP(k)/EWP(h)/EWP(v)/EWP(l) BC

ACC NR: AR6013697 SOURCE CODE: UR/0058/65/000/010/H051/H051

AUTHOR: Yegorov, S. V.; Kosyakin, A. A.; Madzharov, N. Ye. 14 72 B

TITLE: Random-signal generators for the investigation of automatic systems

SOURCE: Ref. zh. Fizika, Abs. 10Zh345

REF SOURCE: Tr. Mosk. energ. in-ta, vyp. 59, 1965, 229-243

TOPIC TAGS: random process, spectral distribution, automatic control, design, random noise signal, correlation function, very low frequency

ABSTRACT: The problem considered is that of obtaining random processes having stipulated statistical characteristics (spectral density and distribution density), occurring during the investigation of automatic devices subjected to various types of random signals. Methods are described for obtaining processes with time quantization and with characteristics close to those of "white noise" in a certain finite range of infralow frequencies (0 - 10 Hz). The correlation function of such a process is investigated. A method is proposed for selecting the parameters of the shaping filter for specified values of dispersion and approximation error. Certain methods are developed for obtaining the considered random processes, viz., a random-process generation method based on the choice and fixation of the values of a high frequency periodic process at the instants of time separated by random intervals, a method for obtaining a binary noise (generalized telegraph signal), and a method for obtaining a pseudorandom process with arbitrary discrete distribution. Diagrams of

Card 1/2

L 33443-66 EWT(1)
ACC NR: AR6014180 SOURCE CODE: UR/0271/65/000/011/A012/A012

AUTHOR: Yegorov, S. V.; Kosyakin, A. A.; Madzharov, N. Ye.

TITLE: Random signal generators intended for studying automatic systems

SOURCE: Ref. zh. Avtomatika, telemekhanika i vychislitel'naya tekhnika, Abs. 11A88

REF SOURCE: Tr. Mosk. energ. in-ta, vyp. 59, 1965, 229-243

TOPIC TAGS: random signal generator, automatic control, automatic control system, automatic control theory

ABSTRACT: The problem of generating random processes with required characteristics (spectral density and distribution density) is considered; it arises in simulator studies of automatic control systems subject to various random influences. Methods are described for generating time-quantized processes with characteristics close to those of white noise, in a finite infralow-frequency band. The correlation function of such a process is investigated. A method is given for selecting parameters of a forming filter, when the dispersion and approximation error values are specified. Certain methods for generating the random processes are set forth: a method based on selecting and recording a h-f periodic process at time moments separated by random intervals; a method for generating binary noise (generalized telegraph signal); a method for generating a pseudo-random process with arbitrary discrete distribution. Circuits of random-process generators designed with operational amplifiers, Polak trigger, and step switches are presented. Seven figures. Bibliography of 12 titles. V. M. [Translation of abstract]

Card 1/1 SUB CODE: 13, 09 UDC: 62-5:519.25

YEGOROV, S.V.; KOSYAKIN, A.A.; MADZHAROV, N.Ye.

Generators of random numbers for the study of automatic control systems.
Trudy MEI no.59:229-244 '65. (MIRA 18:9)

On the study of linear ...

From the formula for the time-averaged spectral density it is evident that the effect of the sampled-data element is equivalent to the addition of some uncorrelated noise to the input signal f (this noise being called time-quantization noise), and to the multiplication of the transfer function of the continuous element by a quantity which is the inverse of the period of repetition of the sampled-data element. Thus, the original system has been reduced to a linear continuous system. The overall error of the system has 4 components: 1) The dynamic error of the reduced continuous element; 2) The errors due to the noise; 3) The errors due to time quantization of the useful signal, and 4) The errors due to time quantization of the noise signal. The formulas for the mean-squares of the component errors are particularly useful when the spectral densities and the frequency characteristics of the reduced continuous element are given graphically. The synthesis of the system amounts to determining the transfer function of the reduced continuous element, so that the mean-square error is a minimum. The solution of this problem is equivalent to the solution of Wiener's problem (Extrapolation, Interpolation and Smoothing of Stationary Time Series. N.Y., 1949). An illustrative example is given.

SUBMITTED: April 26, 1962

S/103/63/024/003/004/015
D405/D301

AUTHOR: Kosyakin, A.A.

TITLE: On the study of linear sampled-data systems in the case of stationary random signals

PERIODICAL: Avtomatika i telemekhanika, v. 24, no. 3, 1963, 331-340

TEXT: The analysis and synthesis of linear sampled-data systems for stationary random signals is considered. The performance criterion used is the minimum of the mean-square error, obtained by continuous-time averaging. The analysis is based on the method proposed by J.R. Ragazzini and L.A. Zadeh (The Analysis of Sampled-Data Control Systems. Trans. AIEE, v. 71, pt. II, 1952) whereby the sampled-data system is treated as a system with periodically varying parameters; this leads to a simple solution by replacing the original system by a purely continuous system. The autocorrelation function, the momentary spectral density, and the mean square of the output signal of the sampled-data system are periodic functions of time.

Card 1/2

BALTRUSHEVICH, A.V.; KOSYAKIN, A.A.; KRUG, G.K.

Dynamics of digital automatic control systems. Trudy MEI no.44: 157-294 '62. (MIRA 16:5)

(Automatic control)

Statistical theory of ...

pulse system in the presence of the same disturbance. There are 6 figures and 5 references: 3 Soviet-bloc and 2 non-Soviet-bloc. The references to the English-language publications read as follows: W.R. Bennett, Spectra of Quantized Signals. Bell System Technical Journal, vol. 27, July 1948; B.A. Widrow, Study of Rough Amplitude Quantization by means of Niquist Sampling Theory. Trans IRE., vol. PGCT-3, no. 4, December 1958.

SUBMITTED: July 13, 1960

Statistical theory of ...

comparison with the mean square value of the input signal, the quantization noise can be considered as non-correlated with the input signal. The exact conditions of validity of such an assumption are given by

$$u_{1m} < \frac{2\pi}{\sigma}, \qquad u_{2m} < \frac{2\pi}{\sigma}. \tag{12}$$

4) With the same condition (σ small) the spectral probability density can be considered as constant in a wide interval of frequencies; a formula for it is given in the text. The discrete spectral density of quantization noise depends only on σ and is equal to $\sigma^2/12$. 5) If σ is sufficiently small the digital system is reduced to a limiting pulse system (defined as one that differs from a digital system by the absence of amplitude quantization), having at its input, beside useful signals, a quantization noise with spectral densities equal to $\sigma^2/12$. 6) If there is some disturbance at the input of the digital system, besides the useful signal, the error caused by it is equal to the error occurring in the limiting

Card 3/4

26770
S/103/61/022/006/005/014
D229/D304

2) [illegible] correlation function of quantization noise and the re- [illegible] [illegible]rrelation function of quantization noise and input sig-na[illegible] [illegible] determined from

$$R_{nn}(\tau) = \frac{s^2}{4\pi^2} \sum_{i=-\infty}^{\infty} \sum_{k=-\infty}^{\infty} \frac{(-1)^{i+k+1}}{ik} F_{2x}\left(\frac{2\pi i}{s}, \frac{2\pi k}{s}, \tau\right), \quad (10)$$

(with $i \neq 0$, $k \neq 0$)

[illegible] (11)

[illegible]

[illegible]

26770
S/103/61/022/006/00[illegible]
D229/D304

16.8000 (1031, 1121)

AUTHOR: Kosyakin, A.A. (Moscow)

TITLE: Statistical theory of amplitude quantization

PERIODICAL: Avtomatika i telemekhanika, v. 22, no. 6, 1961, 722 - 729

TEXT: Systems of automatic control containing digital computers (TsVM) are being widely applied at present. The investigation of such systems entails considerable difficulties, as the operation of representing a continuous signal in the form of digital code is essentially non-linear owing to amplitude quantization of the signal. The authors states that previous investigations give no rigorous theoretical proof of the result and contain several errors. The conclusions of the author's investigation are: 1) The process of amplitude quantization of a stationary random input signal can be considered as a process of addition of an equivalent noise (called the noise of quantization) to the signal.

Card 1/4

Design of digital ...

ror in reproduction of the useful signal. There are 6 figures and 5 references: 3 Soviet-bloc and 2 non-Soviet-bloc. The references to the English-language publications read as follows: W. R. Bennet, Bell System Technical Journal, v. 27, July 1948; N. Wiener, Extrapolation, interpolation and smoothing of stationary time series, 1949.

ASSOCIATION: Moskovskiy energeticheskiy institut (Moscow Institute of Power Engineering)

Card 3/3

Design of digital ...

ous function at discrete equidistant time instants. The error of quantization can be regarded as a noise; its characteristics are found by considering some equivalent noise which is assumed to be independent of the input signal and called the noise of time quantization. The authors obtain an expression for the spectral density of the latter. If the noise of level quantization is itself time quantized the resulting spectral density is found to be $(9^2/3\omega^2 T) \sin^2(\omega T/2)$, where T is the step of time quantization. For systems operating with increments of a discrete quantity (called systems of the first group), the authors deduce a formula for their mean square error and quote Wiener's formula for their synthesis. The total error of a system of the second group (operating with total values of a discrete quantity), consisting of the dynamic error of the continuous part and the errors due to level and time quantization, are also deduced. Analysis of systems of the second group is stated to be very complicated and to become simpler only if the error due to quantization noises is much less than the dynamic er-

Card 2/3

S/145/61/000/012/006/007
D221/D302

AUTHORS: Krug, G. K., Candidate of Technical Sciences, Docent, Kosyakin, A. A. and Zaydenberg, L. M., Engineers

TITLE: Design of digital systems according to the criterion of the mean square error

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Mashinostroyeniye, no. 12, 1961, 140-150

TEXT: The paper is an attempt to devise a method of designing systems of digital program control of metal cutting machines, taking into account the digital character of transmission and conversion of the signal. The error in level quantization depends on the quantization step. When the quantization step 9 is small, the error curve can be approximated by a series of rectilinear segments having variable inclinations, except for the case of the input signal passing an extremum. The mean error is then zero, and the mean square error becomes equal to $9^2/12$. The spectral density of the quantization noise is practically uniform in most practical cases. Time quantization is understood as fixing the values of a continu-

Card 1/3

KOSYAKIN, A.A. (Moskva)

Problem concerning the determination of the parameters of self-oscillations in the digital section of automatic control systems. Izv. AN SSSR. Otd. tekh. nauk. Energ. i avtom. no.3:91-96 Jl '61. (MIRA 14:7)

(Automatic control)

cular interactions in the source material and can also yield the lifetimes of the high-lying excited states. Various models for the interaction of the recoil nuclei with the surrounding atoms of the source material are discussed. The results obtained for Sn-116 and Cu-65 are found to agree with data from other work. Orig. art. has 3 figures, 5 formulas, and 1 table.

ASSOCIATION: Institut yadernoy fiziki Akademii nauk Kazakhskoy SSR (Nuc. Phys. Inst. Acad. Sci. Kazakh SSR); Institut yadernoy fiziki Akademii nauk Uzbekskoy SSR (Nuc. Phys. Inst. Acad. Sci. Uzbek SSR)

SUBMITTED: 15Mar63 DATE ACQ: 08Oct63 ENCL: 02

SUB CODE: PH NO REF SOV: 002 OTHER: 006

L 19648-63 EWT(m)/EDS AFFTC/ASD

ACCESSION NR: AP3007059 S/0056/63/045/003/0443/0447

AUTHORS: Kaipov, D. K.; Shubny*y, Yu. K.; Kosyak, Yu. G.; Begzhanov, R. B.

TITLE: Resonance scattering of gamma rays from liquid and solid sources on Sn-116 and Cu-65 nuclei

SOURCE: Zh. eksper. i teoret. fiziki, v. 45, no. 3, 1963, 443-447

TOPIC TAGS: gamma ray, resonance scattering, liquid source, solid source, Ir-116, Ni-65, Sn-116, Cu-65

ABSTRACT: The reduction in the resonance scattering of 1.29 and 1.14 MeV gamma quanta by Sn^{116} and Cu^{65} nuclei was found to be 0.055 and 0.040 when liquid sources of In^{116m} and Ni^{65} are used and 0.050 and 0.024 when solid sources are used. The study of the attenuation effect in liquid and solid sources, as distinguished from the gaseous sources hitherto used, can lead to conclusions about the mole-

Card 1/4

KAIPOV, D.K.; SHUBNYY, Yu.K.; AMERBAYEV, V.M.; KAZANGAPOV, A.; KOSYAK, Yu.G.

Resonance scattering of gamma quanta by Mg^{24} nuclei. Zhur. eksp. i teor. fiz. 48 no.5:1221-1223 My '65. (MIRA 18:7)

1. Institut yadernoy fiziki AN Kazakhskoy SSR.

The Production of π-Mesons in Condensed Media by Particles of Cosmic Rays in the Stratosphere

especially if the dimensions of the target and of the detector are about equal. The total number of mesons with an energy of less than E_0 is $N(<E_0) = aE_0^{1,6}$. The relative production cross sections of mesons for different thicknesses of the target and the values of the coefficient a are compiled in a table. The relative cross section σ_{Pb}/σ_{Al} increases with decreasing E_0. For low-energy mesons this cross section is probably greater than the geometric relative cross section $\sigma_{Pb}/\sigma_{Al} = 3,9$. The authors thank R. Suzhikova for her assistance in checking the photoemulsion. There are 2 tables and 4 references, 1 of which is Soviet.

ASSOCIATION: Institut yadernoy fiziki Akademii nauk Kazakhskoy SSR (Institute of Nuclear Physics of the Academy of Sciences, Kazakh SSR)

SUBMITTED: May 18, 1958

21(7)

SOV/56-35-3-59/61

AUTHORS: Kaipov, D. K., Shakhvorostov, V. N., Kosyak, Yu. G.

TITLE: The Production of π-Mesons in Condensed Media by Particles of Cosmic Rays in the Stratosphere (Generatsiya π-mezonov v kondensirovannykh sredakh chastitsami kosmicheskikh luchey v stratosfere)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol 35, Nr 3, pp 825-826 (USSR)

ABSTRACT: The present paper deals with the production of very slow pions in condensed media by cosmic rays in the stratosphere. As detector of the slow mesons photoemulsions of 400 μ thickness without a base were used, and aluminum and lead of different thicknesses served as a target. The photoemulsions, which were placed between two aluminum- or lead plates, were conveyed into the stratosphere in spherical probes, and were irradiated by particles of cosmic rays for the duration of 12 hours in altitudes of 28 to 30 km. On these photoplates the $\pi \rightarrow \mu$ decays and the σ-captures were then fixed. The results obtained by checking are compiled in a table. Geometrical conditions exercise an essential influence upon the result,

Card 1/3

L 58444-65
ACCESSION NR: AP5013878

2

1.38 MeV. The lifetime of the 1.38-MeV level in Mg^{24} was found to be (1.1 ± 0.2) x x 10^{-12} sec. This result is in satisfactory agreement with data by others. "The authors thank R. B. Begzhanov for making it possible to do the experiment in his laboratory." Orig. art. has: 1 figure and 2 formulas.

ASSOCIATION: Institut yadernoy fiziki Akademii nauk Kazakhskoy SSR (Institute of Nuclear Physics, Academy of Sciences, Kazakh SSR)

SUBMITTED: 08May64 ENCL: 00 SUB CODE: NP

NR REF SOV: 003 OTHER: 004

L 82

Card 2/2

L 58444-65 EWT(m) Pab DIAAP
ACCESSION NR: AP5013878 UR/0056/65/048/005/1221/1223

AUTHOR: Kaipov, D. K.; Shubnyy, Yu. K.; Amerbayev, V. M.; Kazangapov, A.; Kosyak, Yu. G.

TITLE: Resonance scattering of Gamma quanta by Mg-24 nuclei

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 48, no. 5, 1965, 1221-1223

TOPIC TAGS: Gamma scattering, resonance scattering, scattering cross section, level lifetime, energy distribution, magnesium nucleus

ABSTRACT: The authors studied the resonance scattering of 1.38-MeV γ quanta by Mg^{24} nuclei, using the radioactive isotope Na^{24}, with a half-life of 14 hours, in the form of an aqueous solution of NaOH. The average cross section for resonant scattering was found to be $3.7 \pm 0.6 \times 10^{-28}$ cm^2). The energy distribution of the emitted γ quanta was calculated by means of a model with continuous slowing down of the recoil nuclei as a result of elastic collisions with the surrounding atoms. The distribution was calculated for the cascade in which a β particle with end-point energy 1.39 MeV was emitted together with two γ quanta with energies 2.76 and

Card 1/2

BAYVEL', L.P., inzh.; ZIL'BER, G.M., inzh.; KOLTAK, Yu.V., inzh.; LAGUNOV, L.S., inzh.; NAKHMAN, Yu.V., inzh.

Some results of the measurement of the degree of steam moisture using an experimental low-pressure steam turbine. Energomashinostroenie 10 no.8:37-39 Ag '64. (MIRA 17:11)

S/114/60/000/007/009/009
E073/E435

Combating Erosion in the Last Stages of Powerful Steam Turbines

were carried out by Engineer M.N.Mandel'blit. These measures proved successful on a turbine under investigation, which after the here described type of treatment was in operation for over 6500 working hours without any appreciable erosion damage. There are 6 figures and 6 references: 5 Soviet and 1 non-Soviet.

Card 3/3

Combating Erosion in the Last Stages of Powerful Steam Turbines

operation, the blades of the last stage were inspected and it was found that the leading edges were strongly eroded. The erosion reached a maximum extent in the strip above the widening provided for holding the bandage wire. To reduce erosion, various measures are being recommended by manufacturers, for instance, French firms recommend diffusion nickel or boron plating, other manufacturers apply electrolytic chromating or brazing-on sintered carbide plates. The Works experimented with various protective layers and on the basis of the results they decided to introduce as a standard measure an electro-spark deposition of a protective layer of the T15K6 (T15K6) alloy. This measure proved more effective than using protective layers of ferrochromium, stellite etc; it is also much cheaper. Satisfactory performance is obtained only up to circumferential speeds of 350 m/sec, at higher speeds, i.e. 450 m/s, it is necessary to combine the use of protective coatings with measures that reduce effectively the humidity of the steam. The experiments with electro-erosion deposited protective coatings

S/114/60/000/007/009/009
E073/E435

AUTHORS: Kosyak, Yu.F., Engineer and Savukov, V.P., Engineer

TITLE: Combating Erosion in the Last Stages of Powerful Steam Turbines

PERIODICAL: Energomashinostroyeniye, 1960, No.7, pp.35-38

TEXT: The Khar'kovskiy turbinyy zavod (Khar'kov Turbine Works) have investigated the possibilities of reducing erosion of the blades in the last stages of large turbines. This was done in view of unfavourable experiences with new ВКТ-100 (VKT-100) 100 MW turbines designed to operate with steam at 90 atm, 535°C. The pressure in the condenser is 0.035 at.abs. The blade of the latter, i.e. of the 21st stage, is 417 mm long and has a circumferential speed of 447 m/sec. The blades are made of 1Х13 (1Kh13) steel. The calculated steam humidity at the outflow from the guide vanes of this stage is 10.7%. The blade is very thin, 4 mm. For a certain time the first turbine of this new series operated at parameters differing from the design ones, i.e. with steam at 80 atm, at a temperature of 485 to 490°C, which resulted in an increased moisture content of the steam. Loading was only partial, amounting to 75 to 85 MW. After 1500 hours

Card 1/3

KOSYAK, Yu.F., inzh.; GALATSAN, V.N., inzh.; SHILIN, Yu.P., inzh.;
POLYAKOV, V.S., inzh.; ABRAMENKO, O.B., inzh.; NOSUL'KO, D.R., inzh.

Trial run and experience in the operation of the K-300-240-
KhTGZ turbine unit. Teploenergetika 12 no.11:2-12 N '65.
(MIRA 18:10)

1. Khar'kovskiy turginnyy zavod im. S.M. Kirova; Gosudarstvennyy trest po organizatsii i ratsionalizatsii rayonnykh elektrostantsiy i setey i Pridneprovskaya gosudarstvennaya rayonnaya elektrostantsiya.

KOSYAK, Yu. F., inzh.

Removing moisture from turbine stages operating on wet steam. Energomashinostroenie 4 no.9:45-46 S '58. (MIRA 11:11)
(Steam turbines)

KOSYAK, Yu.F., inzh.; NAKHMAN, Yu.V., inzh.; ZIL'BER, T.M., inzh.; YUDIN, A.N., inzh.

Study of the moisture collectors of low-pressure turbine stages. Energomashinostroenie 11 no.9:10-12 S '65. (MIRA 18:10)

L 22148-66
ACC NR: AP6012950

state is presented in graphic form. The authors conclude that the graph represents a startup regime which is satisfactory for cold starting of the unit, but make several concrete recommendations for areas of caution or improvement. It was found that the cooling of the unit does not result in over-standard temperature or dimensional differences at any time, so that startup from partially-cooled states is always possible. Orig. art. has: 9 figures. [JPRS]

SUB CODE: 10, 13 / SUBM DATE: none / ORIG REF: 002

Card 2/2 dda

L 22148-66 EWP(f)/T-2/ETC(m)-6 WW

ACC NR: AP6012950 SOURCE CODE: UR/0096/65/000/011/0002/0012

53

B

AUTHOR: Kosyak, Yu. F. (Engineer); Galatsan, V. N. (Engineer); Shilin, Yu. P. (Engineer); Polyakov, V. S. (Engineer); Abramenko, O. B. (Engineer); Nosyl'ko, D. R. (Engineer)

ORG: KhTGZ, ORGRES, Pridneprovskaya GRES

TITLE: First experience in starting and operation of a pilot model of the K-300-240-KhTG3 turbine

SOURCE: Teploenergetika, no. 11, 1965, 2-12

TOPIC TAGS: thermoelectric power plant, electric rotating equipment

ABSTRACT: Since the end of 1963, a combined team from ORGRES (Moscow), the Khar'kov Turbine Plant and the Pridneprovskaya GRES have been working to develop and test starting, load and stopping regimes for a 300 Mw power unit consisting of the TPP-110 boiler and the K-300-240-KhTGZ turbine. During the initial and most subsequent startups, the temperature states of the steam conduits and the turbine were monitored with both standard control-measurement devices and special thermocouples placed for the investigations. Starts were performed from the cold, hot and intermediate states. The article presents a cross section of the turbine, steam-flow chart during startup, a diagram of the locations of thermocouples in the turbine during testing, and startup graphs for the various states. A recommended startup schedule from the cold

Card 1/2 UDC: 621.165.001.42.001.5

KOSYAK, Ye.L.; KRYZHANOVSKAYA, A.S.; MILYATITSKAYA, F.R.; SVESHNIKOV, O.A.

Standardization of the basic dimensions for furniture. Der. prom. 10 no.7:1-4 Jl '61. (MIRA 14:7)

1. Nauchno-issledovatel'skiy institut arkhitektury sooruzheniy Akademii stroitel'stva i arkhitektury USSR.
(Furniture--Standards)

KOSYAK, Ye.I.

X-ray spectroscopic microanalysis of the rhenium mineral from Dzhezkazgan ores. Vest. AN Kazakh SSR 22 no.8:72-87 Ag '58.
(MIRA 11:8)

KOSYAK, V., michman, kursant

The sea is calling. Voen. znan. 41 no.7:8 Jl '65. (MIRA 18:7)

1. Vysshaye voyenno-morskoye uchilishche im. S.O.Makarova.

KOSYAK,S.

Television set for long distance reception. Radio no.11:22-24 N'55.
(Television--Receivers and reception) (MLRA 9:1)

VELICHKIN, P.A., prof.; KOSYAK, A.I.

Evaluation of silage from the sanitary and helminthological point of view. Veterinariia 39 no.7:77-78 Jl '62. (MIRA 18:1)

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