MURAVKIN, O. N.

"Investigation of the Corrosive-Abrasive Deterioration of Water Economizers and the Search for Means of Controlling It." Cand Tech Sci, Central Sci Res Inst of Technology and Machine Building (TsNIITMash), Min Heavy Machine Building USSR, Moscow, 1955. (KL, No 11, Mar 55)

So: Sum. No 670, 29 Sept 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (15)

MURAVKIN, O. N.

4E2c

The effect of gas corrosion upon the abrasion of steel. A. V. [illegible] and [illegible] Muravkin. [illegible] Korroz. [illegible] Moscow, Mashgiz Sbornik 19[illegible] Referat. Zhur., Met. 1956 No. 6827. —Abrasion of steel [illegible] current of gas was studied; the gases were [illegible] + 20% [illegible], N_2 + 0.7% SO_2, and [illegible] at 250°. Water vapor [illegible] 0.7% of [illegible] times. This is attributed to action of the abrasive on a thin scale layer produced by the corrosive agent rather than to action on the metal itself. There is a max. of concn. of corrosive substances in the abrasive medium, beyond which abrasion is not increased.

Alexis N. Pestoff

RYABCHENKOV, A.V., doktor khimicheskikh nauk, professor; MURAVKIN, O.N., kandidat tekhnicheskikh nauk.

Corrosion-abrasion wear of waste-gas heater water-pipes. [Trudy] TSNIITMASH no.77:165-182 '55. (MLRA 9:7)
(Pipe, Steel--Corrosion)

MURAVKIN, O.N.

✓ 9142* Corrosion-Abrasion Wear in Water Economizers and a Method of Protecting Them. Korrozionno-abrazivnoe iznashivanie vodianykh ekonomaizerov i sposob ikh zashchity. (Russian.) A. V. Riabchenkov and O. N. Muravkin. *Energomashinostroenie*, 1956, no. 3, Mar. 1956, p. 19-23.

Relation between wear of boiler pipes and the angle of attack and speed of flow of hot gases. Longitudinal rods welded on outside of pipe considerably lessen wear and increase service life. Diagrams, graphs, micrographs, photographs.

Metal 2

MURAVKIN, O.N.; RYABCHENKO, A.V.

Investigating corrosion-abrasive wear of the steel used for water economizer boiler tubes. Trans. i. isn. mash. no. 11:81-107 '56.
(Pipe, Steel--Corrosion) (Mechanical wear) (MIRA 9:9)

MURAVKIN, U. N.

18(7) PHASE I BOOK EXPLOITATION SOV/2296

Tsentral'nyy nauchno-issledovatel'skiy institut tekhnologii i mashinostroyeniya

Korroziya i zashchita metallov v mashinostroyenii (Corrosion and Protection of Metals in the Machine-building Industry) Moscow, Mashgiz, 1959. 347 p. (Series: Its: [Sbornik] kn. 92) 3,500 copies printed.

Ed.: A. V. Ryabchenkov, Doctor of Chemical Sciences, Professor; Ed. of Publishing House: A. I. Sirotin, Engineer; Tech. Ed.: B. I. Model'; Managing Ed. for Literature on Heavy Machine Building (Mashgiz): S. Ya. Golovin, Engineer.

PURPOSE: This collection of articles is intended for designers, technologists, and industrial and research workers concerned with corrosion and corrosion protection of metals.

COVERAGE: This collection of articles deals with problems of corrosion and metal protection under investigation at TsNIITMASh during the past two years. The articles discuss stress corrosion, intergranular corrosion, scale and heat resistance of austenitic steels in gaseous media, protective coating, fretting corrosion, and resistance of metals to cavitation. No personalities are mentioned. References follow each article.

TABLE OF CONTENTS:

AVAILABLE: Library of Congress

Card 7/7

GO/fal
10-19-59

(8)

RYABCHENKOV, A.V., doktor khim. nauk, prof.; MURAVKIN, O.N., kand. tekhn. nauk

Characteristics and prevention of fretting corrosion of metals. Trudy TSNIITMASH 92:273-331 '59. (MIRA 12:8)
(Fretting corrosion)

MURAVKINA, F.O., ekonomist; ZHUKHOVITSKIY, A.F., inzh.

Role of the [redacted] economic adviser in a machinery plant. Vest.mashinostr. 43 no.11:86-87 N '63. (MIRA 17:2)

CZECHOSLOVAKIA

MURAVJOV, I., Prof.

Bratislava, Farmaceuticky obzor, No 4, 1963, pp 145-152

"On the Coordination of Scientific Research in the Field of Pharmacy in the USSR."

MURAVLENKO, V.I.

Petroleum and gas industries in Kuybushev Province in 1960. Neft. khoz. 38 no.1:17-21 Ja '60. (MIRA 13:7)

1. Kuybyshevskiy sovnarkhoz.
(Kuybyshev Province--Petroleum industry)
(Kuybyshev Province--Gas, Natural)

GALONSKIY, P.P.; KOVALENKO, K.I.; KUVYKIN, S.I.; MINGAREYEV, R.Sh.; MURAVLENKO, V.I.; OBNOSOV, A.D.; SHASHIN, V.D.; SHMAREV, A.T.

Volga-Ural region is one of the largest petroleum bases of the country. Neft. khoz. 42 no.9/10:56-64 S-O '64.
(MIRA 17:12)

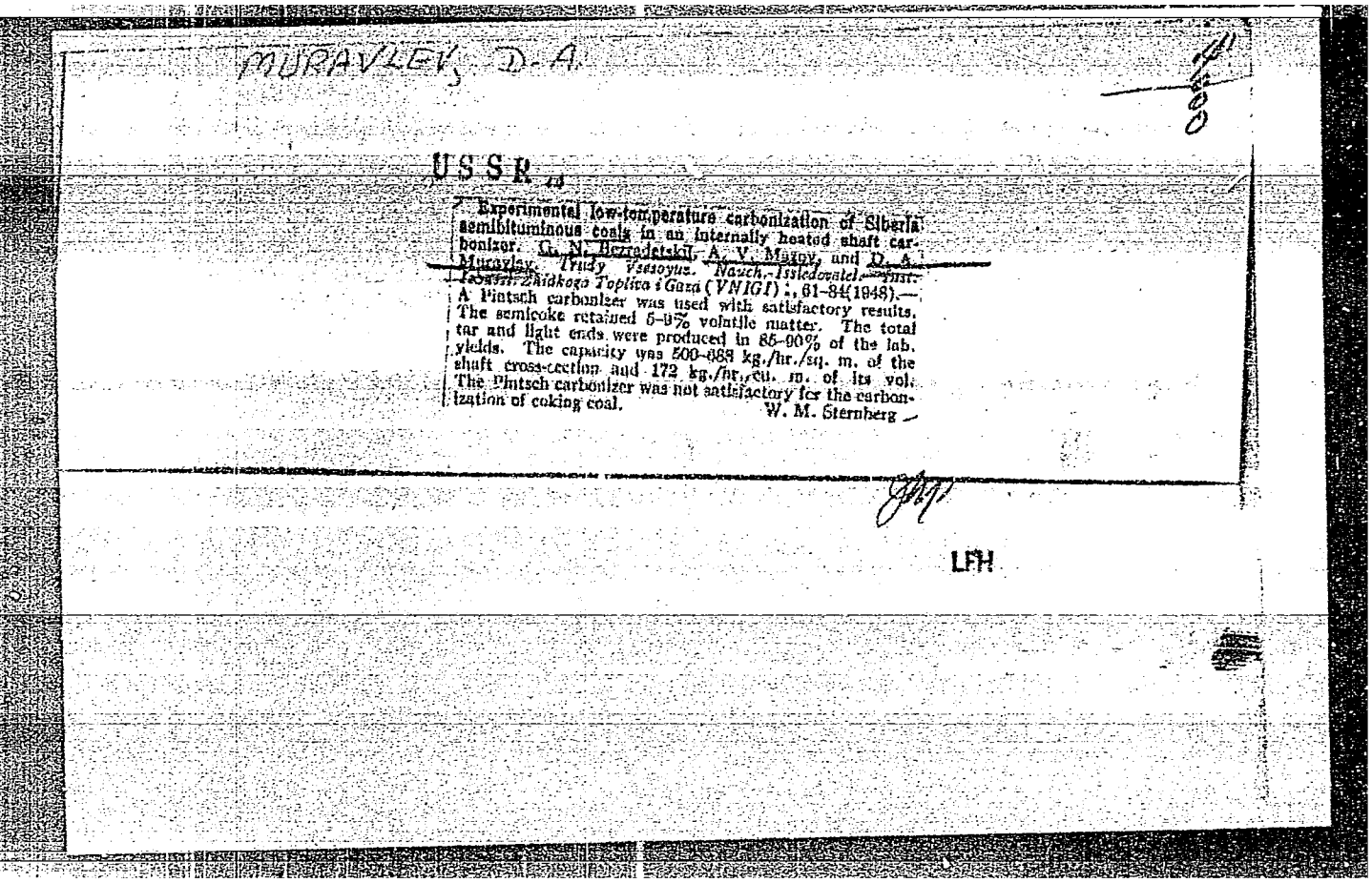
1. MURAVLENKO, V.M.

2. USSR (600)

4. Geology, Structural - Novo-Spasskiy District

7. Geological structure of the Aleksandrovsk Uplift in the Novo-Spasskiy and Radishchevo Districts of the Ul'yanovsk Province of the R.S.F.S.R. (abstract) Izv. Glav. upr. geol. fon. no2, 1947

9. Monthly List of Russian Accessions, Library of Congress, March 1953, Unclassified



MURAVLEV, D. A.

USSR

Experimental low-temperature carbonization of Siberian semibituminous coals in an internally heated shaft carbonizer. G. N. Bezpadetskii, A. V. Mayov, and D. A. Muravlev. *Trudy Vsesoyuz. Nauch.-Issledovatel. Inst. Iskusst. Zhidkogo Topliva i Gaza (VNIGI)* 1, 61-84(1948).—A Pintsch carbonizer was used with satisfactory results. The semicoke retained 5-9% volatile matter. The total tar and light ends were produced in 85-90% of the lab. yields. The capacity was 500-688 kg./hr./sq. m. of the shaft cross-section and 172 kg./hr./cu. m. of its vol. The Pintsch carbonizer was not satisfactory for the carbonization of coking coal.

W. M. Sternberg

LFH

NARINYAN, M.A.; RASSKAZOV, I.D.; MESHCHERYAKOV, L.I.; RAYEVSKIY, N.A.; MURAVLEV, G.A.

Erection of the 44,8 metal span structures by the GEPK-130 crane. Transp. stroi. 15 no.9:13-16 S '65. (MIRA 18:11)

1. Upravlyayushchiy Mostostroyem No. 3(for Narinyan). 2. Glavnyy inzh. Mostostroya No. 3 (for Rasskazov). 3. Glavnyy tekhnolog Mostostroya No. 3(for Meshcheryakov). 4. Nachal'nik tekhnicheskogo otdela Mostostroya No.3 (for Rayevskiy). 5. Starshiy inzh. Mostostroya No.3 (for Muravlev).

MURAVLEV G.G.

USSR/ Agriculture - Soil reclamation

Card 1/1 Pub. 123 - 5/16

Authors : Muravlev, G. G.

Title : Natural conditions of northern Kazakhstan

Periodical : Vest. AN Kaz. SSR 12, 42-54, Dec 1954

Abstract : The reclamation of approximately 400,000 km^2 of waste land in northern Kazakhstan for agriculture is reported. The geographical location of the reclaimed agricultural area is described. Nineteen USSR references (1933-1954).

Institution : .....

Submitted : .....

MURAVLEV, G.G.

Effective utilization of natural sources of water in the central part of Kustanay Province. Vest. AN Kazakh. SSR 11 no.10:56-65 O'55. (Kustanay Province--Water supply) (MLRA 9:1)

KURAVLEV, G.G.

Lakes of Karasu District, Kustanay Province; Kayhagar, Shalkar, Zhanshura, Biye-Soygan, Alabota. Vop.geog.Kaz.no.2:133-165 '57. (MIRA 10:7)

(Karasu District--Lakes)

MURAVLEV, G.G.

KAVETSKIY, S.P.; MURAVLEV, G.G.

Regularities in hydrological conditions of mountain rivers. Trudy Kar. NIGMI no.9:94-101 '57. (MIRA 11:1)
(Rivers)

MURAVLEV, G.G.

General characteristics of the lakes in Kustanay Province-Sary-Kopa and Zhaman-Akkol'. Trudy Sekt.geog.AN Kazakh.SSR no.3:42-99 '59. (MIRA 12:7)

(Sary Kopa, Lake) (Zhaman-Akkol, Lake)

MURAVLEV, G.G.

Salt lakes. Trudy Otd. geog. AN Kazakh. SSR no.8:174-181 '61.
(MIRA 14:8)

(Pavlodar Province--Lakes)

MURAVLEV, G.G.

Brief characteristics of the Shaganak and Shaglytengiz lakes in northern Kazakhstan. Trudy Otd. geog. AN Kazakh. SSR no.8:182-187 '61. (MIRA 14:8)

(Shaganak Lake) (Shaglytengiz Lake)

MURAVLEV, G.G., kand.geograf. nauk

Some patterns of the distribution of lakes in Kazakhstan.
Vest. AN Kazakh.SSR 20 no.11:18-24 N '64.
(MIRA 18:2)

KHUSAINOVA, N.Z.; MURAVLEV, G.G.; NITROFANOV, V.P.

Conference on the matter and energy cycles in lakes. Izv. AN Kazakh. SSR. Ser. biol. nauk 3 no.1:111-112 Ja-F '65.
(MIRA 18:5)

MURAVLEV, M., starshina 2 stat'i; GORDEYENKO, S., starshina 2 stat'i; KUZ'MINOV, V., starshina 2 stat'i; MAKHONIN, A., matros; KUDRYAVTSEV, N., matros.

We are guarding our beloved sea. Sov.mor. 17 no.18:12 S '57. (MIRA 10:11)

1. Uchastnik Vsearmeyskogo soveshchaniya otlichnikov (for Muravlev) (Russia--Navy)

MURAVLEV, O.P., inzh.; SANNIKOV, D.I., inzh.; STREL'BITSKIY, E.K., kand. tekhn. nauk

Concerning the use of a theoretical probability method for studying the reliability of electric machinery. Vest. elektroprom. 34 no.3:52-53 Mr '63. (MIRA 16:8)

(Electric machinery)

MURAVLEV, V.S.; GIL'DENGORN, A.I.; DESYATKOV, M.I., inzh., retsenzent.
SHAPIRO, I.I., inzh., red.

[Establishment of consolidated norms for machining under piece and small series production conditions] Ukrupnennoe normirovanie stanochnykh rabot v usloviiakh edinichnogo i melkoseriinogo proizvodstva. Moskva, Mashinostroenie, 1965. 81 p. (MIRA 18:11)

L 46145-66 EWT(m)/EWP(j)/T IJP(c) WW/RM

ACC NR: AP6026738 (A) SOURCE CODE: UR/0183/66/000/003/0042/0043

AUTHOR: Serkov, A. T.; Budnitskiy, G. A.; Chivilikhina, M. P.; Veretennikova, T. P.; Shishkina, N. P.; Kondrashova, I. A.; Muravleva, L. V.; Ordina, V. I.

ORG: VNIIV

34
B

TITLE: Improving the quality of viscose cord

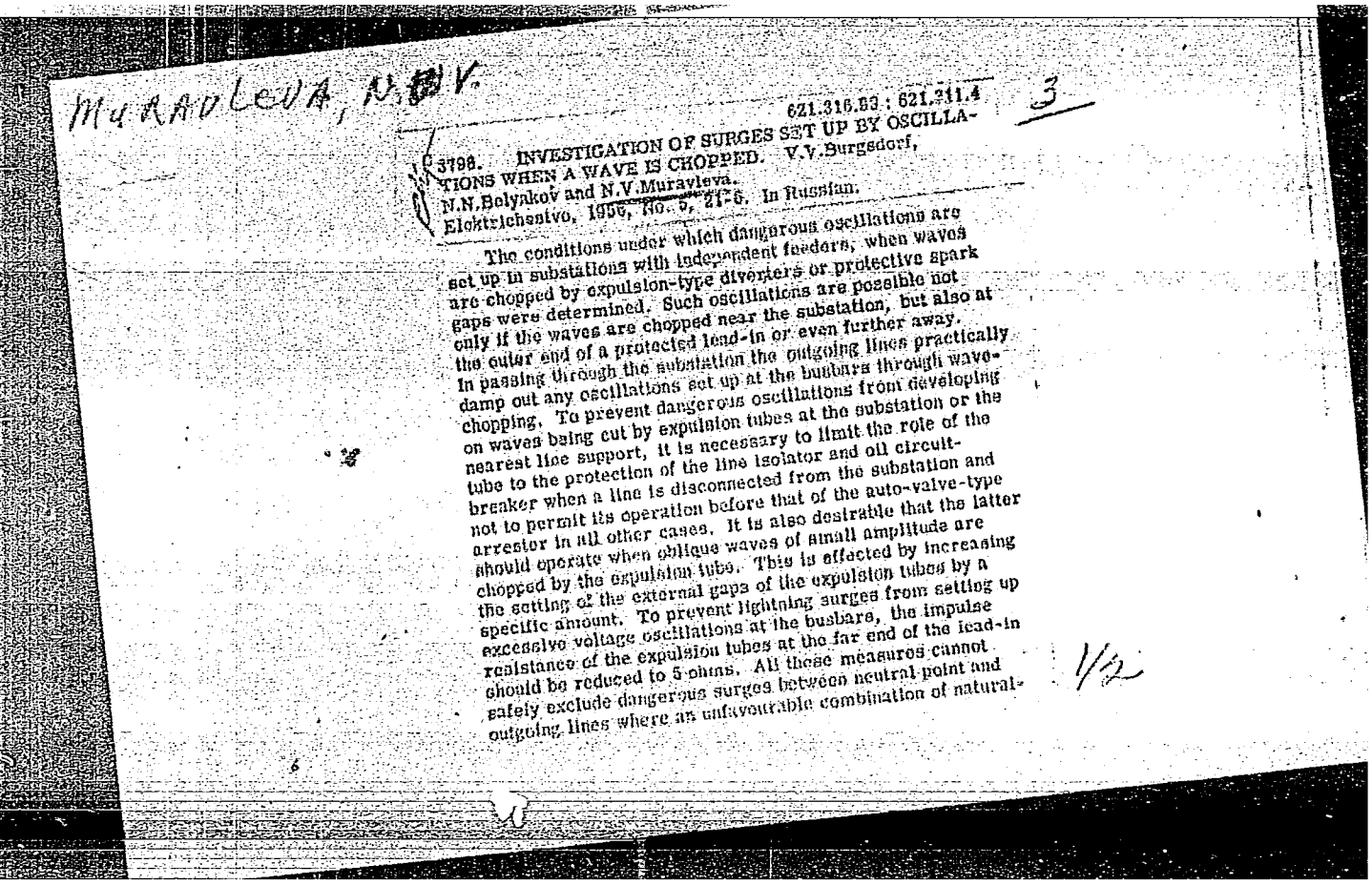
SOURCE: Khimicheskiye volokna, no. 3, 1966, 42-43

TOPIC TAGS: cellulose, synthetic material, cellulose plastic, synthetic fiber

ABSTRACT: The details of a modified procedure for manufacturing high tensile strength viscose cords are described. In essence, the procedure consists of accelerated processes of coagulation, filtration, and cord forming. It also requires the use of high purity reagents: sulfuric acid (GOST 2184-59), and ethylene oxide- and aliphatic amine derivatives as modifiers. The modified procedure does not require any new machines, only a minor adjustment of the cord spinning procedure. It is claimed that the modified procedure is capable of yielding viscose cords with tensile strength by 50-60% greater than that manufactured elsewhere in the world. Orig. art. has: 2 figures.

SUB CODE: 11/ SUBM DATE: 28Feb66/ ORIG REF: 004

Card 1/1 lab UDC: 677.463



MURAVLEVA, N.V.

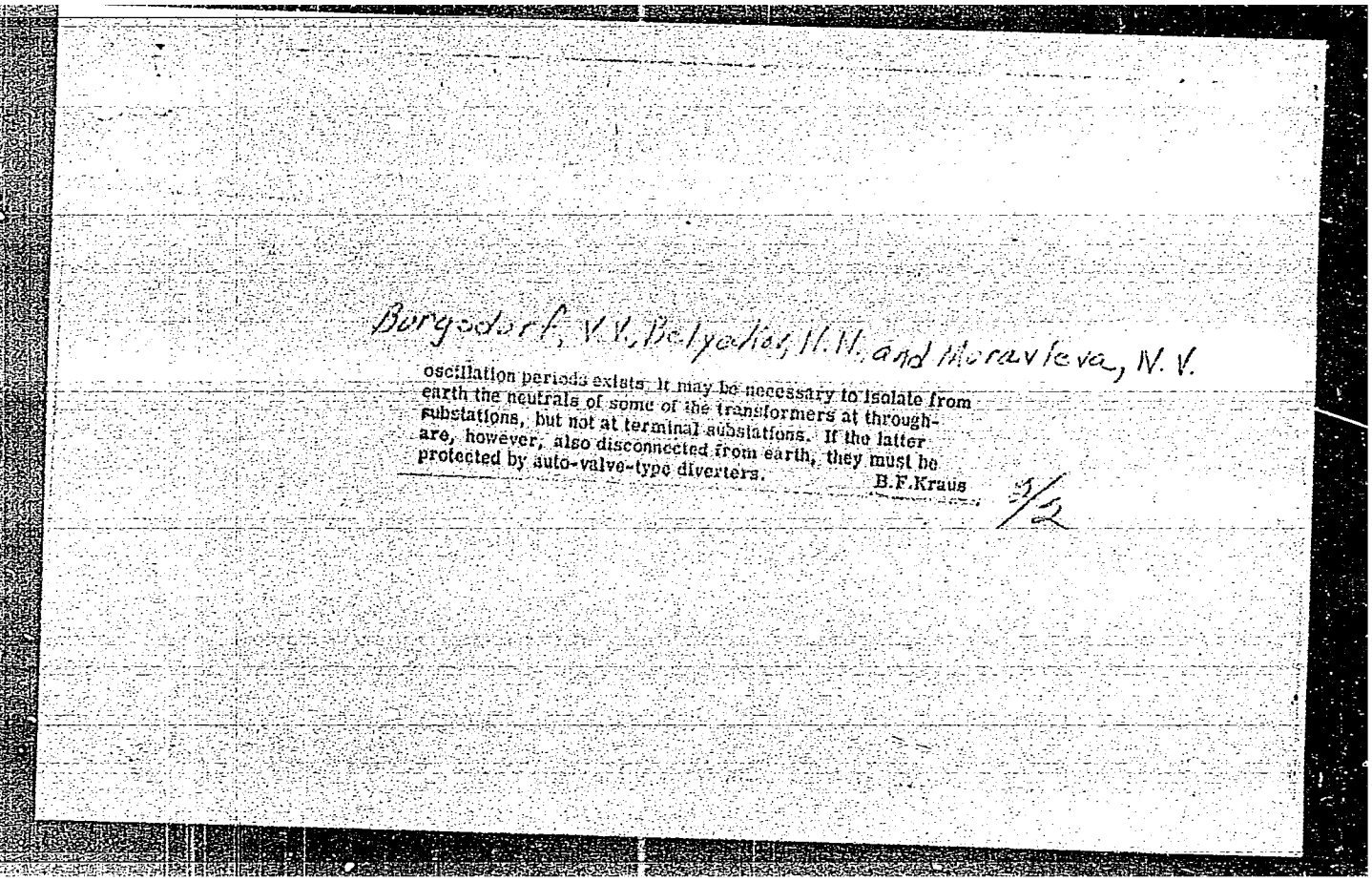
3

621.316.93 : 621.311.4

3798. INVESTIGATION OF SURGES SET UP BY OSCILLATIONS WHEN A WAVE IS CHOPPED. V.V.Burgsdorf, N.N.Belyakov and N.V.Muravleva. Elektrichestvo, 1956, No. 9, 21-6. In Russian.

The conditions under which dangerous oscillations are set up in substations with independent feeders, when waves are chopped by expulsion-type diverters or protective spark gaps were determined. Such oscillations are possible not only if the waves are chopped near the substation, but also at the outer end of a protected lead-in or even further away. In passing through the substation the outgoing lines practically damp out any oscillations set up at the busbars through wave-chopping. To prevent dangerous oscillations from developing on waves being cut by expulsion tubes at the substation or the nearest line support, it is necessary to limit the role of the tube to the protection of the line isolator and oil circuit-breaker when a line is disconnected from the substation and not to permit its operation before that of the auto-valve-type arrester in all other cases. It is also desirable that the latter should operate when oblique waves of small amplitude are chopped by the expulsion tube. This is effected by increasing the setting of the external gaps of the expulsion tubes by a specific amount. To prevent lightning surges from setting up excessive voltage oscillations at the busbars, the impulse resistance of the expulsion tubes at the far end of the lead-in should be reduced to 5 ohms. All these measures cannot safely exclude dangerous surges between neutral point and outgoing lines where an unfavourable combination of natural-

1/2



Burgsdorf, V.V., Belyakin, N.N. and Moravieva, N.V.

oscillation periods exists. It may be necessary to isolate from earth the neutrals of some of the transformers at through-substations, but not at terminal substations. If the latter are, however, also disconnected from earth, they must be protected by auto-valve-type diverters.

B.F.Kraus

1/2

MURAVLEVA, N. V., Cand Tech Sci -- (diss) "Study of storm protection systems for rotary machines operating on overhead lines." Mos, 1958. 17 pp (Min of Higher Education USSR. Mos Order of Lenin Power Engineering Inst), 150 copies (KL, 41-58, 121)

S/196/61/000/011/019/042
E194/E155

AUTHOR: Muravleva, N.V.

TITLE: Protection of distribution equipment against atmospheric overvoltages. (For discussion)

PERIODICAL: Referativnyy zhurnal, Elektrotekhnika i energetika. no.11, 1961, 34-35, abstract 11E 239. (Elektr. stantsii, no.4, 1961, 68-73)

TEXT: Analysis of 6494 cases of operation of valve-type lightning arresters in sub-stations and tubular lightning arresters at approaches to sub-stations showed that in 67% of the cases only the tubular arresters on the approaches operated and in 8% of the cases both types of arrester operated. Calculations of surge protection of sub-stations on an analyser showed that in the cases when the tubular arrester did not operate and the distance between the valve arrester and the protected equipment was in accordance with recommended practice, the voltage amplitude on the protected equipment did not reach the impulse-test voltage. It is possible for a voltage equal or near to the [illegible] value to appear on equipment when the tubular and valve

wave whose amplitude is determined at the point of intersection of the curve of the dangerous wave with the volt-second characteristics of the line insulator, then the necessary length of approach is 1500 m. If the initial wave has an amplitude equal to the minimum impulse voltage of the tubular arrester at the start of the approach, the necessary length is 1200 m. For distances from arrester to transformer of 100 and 140 m the lengths should be respectively 1800-1400 and 2000-1600 m. Selection of approach length according to an amplitude corresponding to minimum line insulation voltage at the start of the approach permits the approach length to be cut down or permits of a greater distance between the arrester and protected insulation. It is considered that the new recommendations should employ a protective circuit without tubular arresters for sub-stations. At a 110 kV sub-station with lines on wooden poles, with the approaches protected by earth wires, the wave amplitudes may reach 1000-1100 kV and at 35 kV sub-stations 500-550 kV, arrester currents not exceeding 5 kA. The new recommendations should include protection of sub-stations other than terminal- and through-types. Whatever the

number of permanently-connected lines at a sub-station, valve-type dischargers are necessary because at individual points in the sub-station the voltage may exceed

$$U_{line} \frac{2}{n}$$

(where n is the number of lines connected). The new recommendations should ease the requirements in respect of protection of approaches to rotating machines. For machines of medium output, earth-wire protection of the approach should be permitted; for generators of low output and motors there is no need to protect the approach against direct lightning strokes. At stations with cables having a total length of about 20 km there is no need to instal valve-type arresters. It is recommended to protect machines by protective capacitances of about 0.5 micro farads per phase.
5 literature references.

[Abstractor's note: Complete translation.]

Card 4/4

BURGSDORF, V.V.; MURAVLEVA, N.V.

More about the protection of power generators from over-voltages caused by lightning. Prom.energ. 16 no.10:51-53 O '61.
(MIRA 14:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut elektroenergetiki.
(Electric protection) (Electric power distribution)

BURGSDORF, V.V., doktor tekhn. nauk; MURAVLEVA, N.V., kand tekhn. nauk; RAZEVIG, D.V., kand. tekhn. nauk

Concerning F.A. Likhachev's article "Protection of electric substations connected to electric power transmission lines with an elevated lightning grounding line from overvoltages caused by lightning strikes." Elek. sta. 32 no.1:89-90 Ja '61. (MIRA 16:7)

(Likhachev, F.A.) (Lightning protection) (Electric substations) (Electric lines—Overhead)

LINDORF, L.S.; FUFURIN, P.N.; ULITSKIY, M.S.; USTINOV, P.I.; ZEYLIDZON, Ye.D.; MININ, G.P.; KOTS, A.Ya.; KHAVIN, N.Z.; MURAVLEVA, N.V.; LIBERMAN, A.Ya.; BARANOV, B.M.; ZVENIGORODSKIY, I.S.; IVANOV, V.S.; IOFFE, F.Ye.; BURLAKOV, B.M.; MIRENBURG, L.A.; FAYERMAN, A.L., red.; BORUNOV, N.I., tekhn. red.

[Study manual on the technical operation of electric networks and power plants; electrical section of electric power plants and electric power distribution networks]Posobie dlia izucheniia pravil tekhnicheskoi ekspluatatsii elektricheskikh stantsii i setei; elektricheskaia chast' elektrostantsii i elektricheskie seti. Moskva, Gosenergoizdat, 1962. 558 p. (MIRA 15:8)
(Electric power plants—Handbooks, manuals, etc.)
(Electric power distribution—Handbooks, manuals, etc.)

MURAVLEVA, N.V., kand.tekhn.nauk; POPOV, S.M., inzh.

Measurement of the grounding resistance of power line poles without disconnecting the guard wire. Elek.sta. 33 no.11:68-72 N '62. (MIRA 15:12)

(Electric lines--Overhead)

LINDORF, L.A.; FUFURIN, N.P.; ULITSKIY, M.S.; USTINOV, P.I.; ZEYLIDZON, Ye.D.; MININ, G.P.; KOTS, A.Ya.; KHAVIN, N.Z.; MURAVLEVA, N.V.; LIBERMAN, A.Ya.; BARANOV, B.M.; ZVENIGORODSKIY, I.S.; IVANOV, V.S.; IOFFE, F.Ye. [deceased]; BURLAKOV, B.M.; MIRENBURG, L.A. [deceased]; FAYERMAN, A.L., red.

[Aid for studying engineering regulations governing the operation of electric power plants and networks] Posobie dlia izucheniia pravil tekhnicheskoi ekspluatatsii elektricheskikh stantsii i setei. Izd.2., peresmotrennoe. Moskva, Energiia, 1965. 551 p. (MIRA 18:6)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy proizvodstvennyy komitet po energetike i elektrifikatsii.

BOROVSKIY, Vladimir Mikhaylovich; ABLAKOV, Enver Bekovich; KOZHEVNIKOV, Konstantin Yakovlevich; MURAVLYANSKIY, Konstantin Dmitriyevich; BEZSONOV, A.I., otv.red.; ALEKSANDRIYSKIY, V.V., red.; SHEVCHUK, T.I., red.; ROROKINA, Z.P., tekhn.red.

[Ancient Syr-Darya Delta and the northern Kyzyl-Kum; possibilities of soil improvement and problems of land reclamation] Drevniaia del'ta Syr-Dar'i i Severnye Kyzyl-Kumy; pochvenno-meliorativnye usloviia i problema sel'skokhoziaistvennogo osvoeniia. Alma-Ata, Izd-vo Akad.nauk Kazakhskoi SSR. Vol.2. 1959. 418 p. (MIRA 12:8)

1. Chlen-korrespondent Akademii nauk Kazakhskoy SSR (for Bezsonov). (Syr-Darya Delta--Soils) (Kyzyl-Kum--Soils)

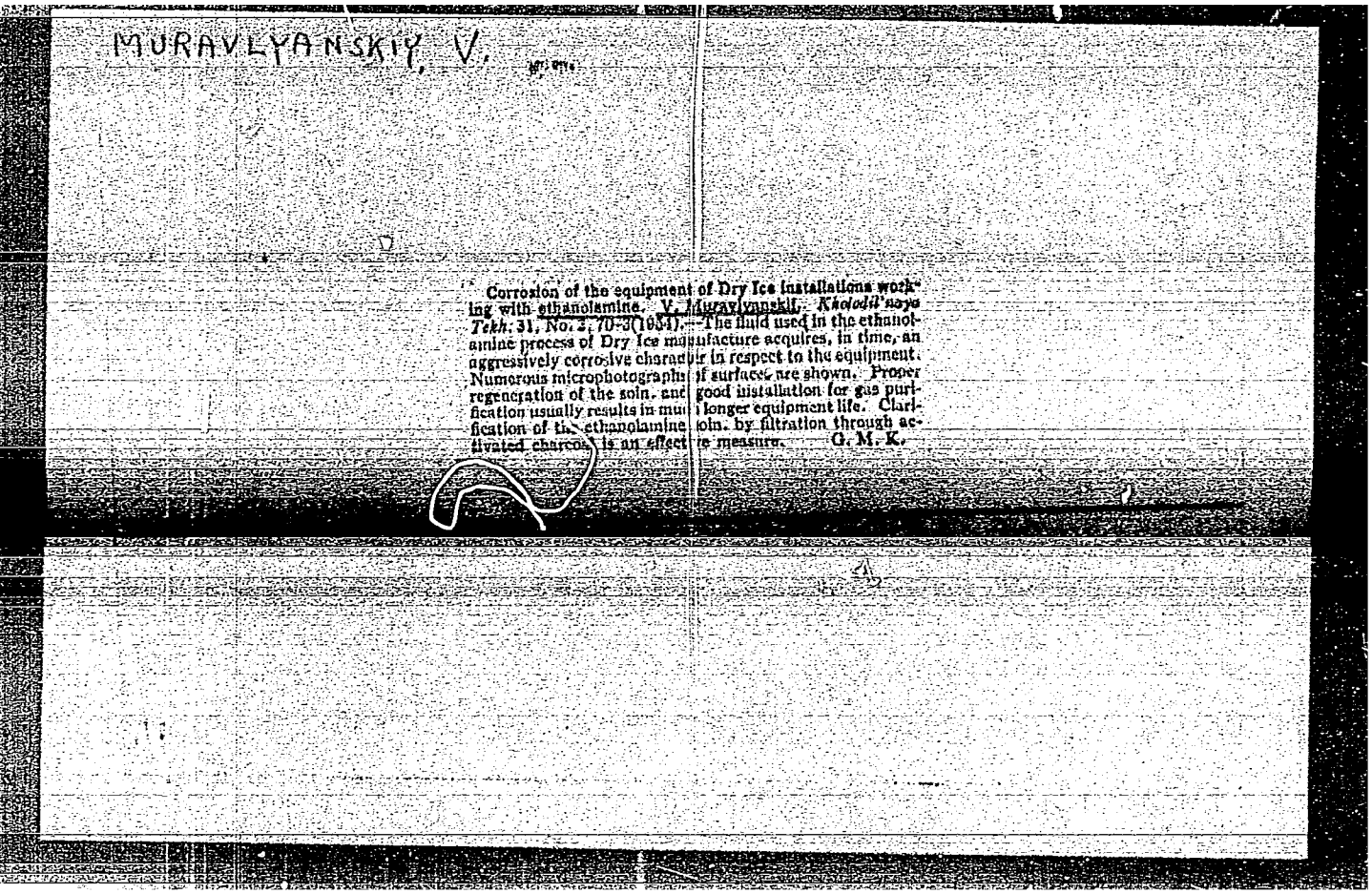
VINBERG, G.G.; MURAVLEVA, Ye.P.; FINENKO, Z.Z.

Some data on the chlorophyll content in plankton and the primary production of the Black Sea. Trudy SBS 17:212-220 '64.
(MIRA 18:6)

MURAVLYANSKIY, V.

Operating experience of the dry ice plant of the Leningrad cold storage combine. Khol.tekh. 30 no.4:66 O-D '53. (MLRA 7:3)

1. Nachal'nik zavoda sukhogo l'da Lenkhladokombinata.
(Refrigeration and refrigerating machinery) (Valves)

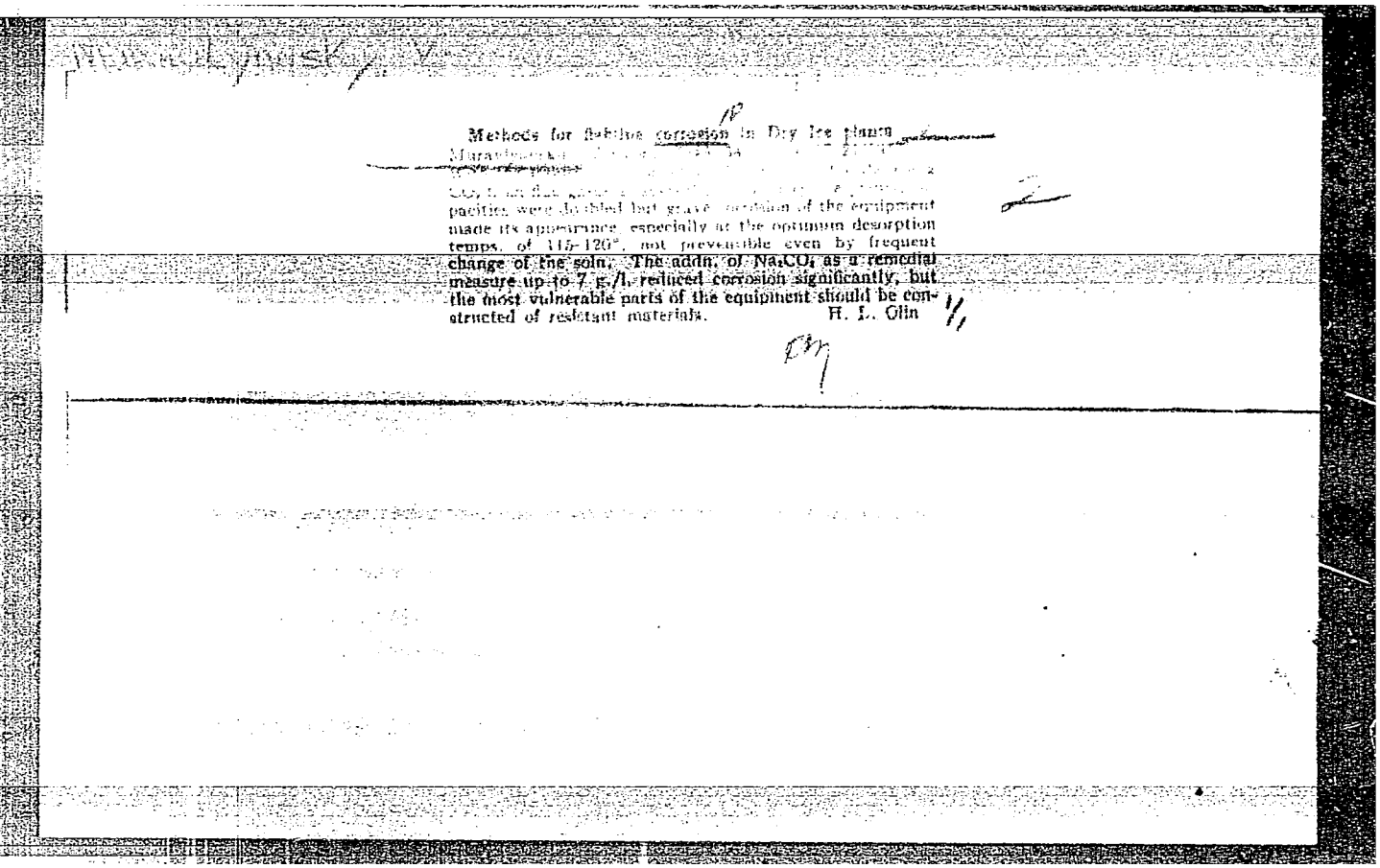


MURAVLYANSKIY, V.

Corrosion of the equipment of Dry Ice installations working with ethanolamine. V. Muravlyanskii. *Kholodil'naya Tekh.* 31, No. 2, 70-3(1954).—The fluid used in the ethanolamine process of Dry Ice manufacture acquires, in time, an aggressively corrosive character in respect to the equipment. Numerous microphotographs of surfaces are shown. Proper regeneration of the soln. and good installation for gas purification usually results in much longer equipment life. Clarification of the ethanolamine soln. by filtration through activated charcoal is an effective measure. G. M. K.

MURAVLYANSKIY, V., inzhener.

Box for the manufacture of dry ice briquets. Khol.tekh. 33 no.2: 64-65 Ap-Je '56. (MLRA 9:9)
(Leningrad--Dry ice)



Methods for fighting corrosion in Dry Ice plants.

[illegible] pacities were doubled but grave corrosion of the equipment made its appearance, especially at the optimum desorption temps. of 115–120°, not preventible even by frequent change of the soln. The addn. of Na_2CO_3 as a remedial measure up to 7 g./l. reduced corrosion significantly, but the most vulnerable parts of the equipment should be constructed of resistant materials. H. L. Olin

14(1) SOV/66-59-2-16/31

AUTHOR: Muravlyanskiy, V., Engineer

TITLE: The Utilization of a Dry Ice Unit with Two Reserve Intermediate Recipients (Ekspluatatsiya sukholednogo agregata s dvumya rezervnymi promezhutochnymi sosudami)

PERIODICAL: Kholodil'naya tekhnika, 1959, Nr 2, pp 56-57 (USSR)

ABSTRACT: A dry ice installation should be designed in such a way as to lose the minimum of time on the preventive cleaning of apparatus. The schematic diagram shows the lay-out of a system with 2 reserve recipients doubling intermediate recipients Nr 1 and Nr 2. An installation of this kind in the dry ice shop of the Leningrad Refrigeration Plant has reduced the previous loss of 6 hours to half-an-hour. There is 1 schematic diagram.

Card 1/1

BELOSTOTSKIY, Isaak Abramovich; MURAVNIK, Faina Savel'yevna; SILINA, Alevtina Vasil'yevna; MAKAROV, V.I., red.

[Multiple-unit TS-1 trolleybus] Sochlennyi trolleibus TS-1. Moskva, Stroiizdat, 1965. 171 p. (MIRA 18:8)

MURAVOV, I.V.

Relation between the functional state of nerve centers and the restorative action of active relaxation. Fiziol.zhur. (Ukr.) 1 no.1: 83-90 Ja-F '55. (MLRA 9:9)

1. Kiivs'kiy medichniy institut imeni akademika O.O.Bogomol'tsya, Kafedra gigiyeni pratsi.
(REST) (NERVOUS SYSTEM) (INHIBITION)

MURAVOV, I.V.

Restorative effects of active rest in various stages of exhaustion. Fiziol.zhur. [Ukr.] 2 no.6:51-55 N-D '56. (MLRA 10:2)

1. Kiivs'kiy medichniy institut imeni akademika O.O.Bogomol'tsya, kafedra normal'noi fiziologii.
(REST) (FATIGUE)

MURAVOV, I. V. Doc and Med Sci -- (diss) " Processes of fatigue and recovery in the physiological mechanism of active rest." Kiev, 1957. 20 pp 20 cm. (Kiev Order of Labor Red Banner Medical Inst im A.A. Bogomolets), 200 copies

(KL, 21-57, 106)

MURAVOV, I.V.; SUKACHEV, M.S.; ROMANENKO, D.I.

Ergographic technique. Fiziol.zhur. 43 no.12:1202-1204 D '57.
(MIRA 11:3)

1. Kafedra normal'noy fiziologii Meditsinskogo instituta, Kiyev.
(MUSCLES, physiology,
ergography, technic & appar. (Rus))

KRASNOSEL'SKIY, G.I., prof.; MURAVOV, I.V., kand.med.nauk

Critical evalnation of idealistic views on the "normal" physical development of man. Nek.filos.vop.med.i est. no.2:395-406 '60. (MIRA 15:7)

1. Kafedra fizicheskogo vospitaniya i lechebnoy fizicheskoy kul'tury Kiyevskogo meditsinskogo instituta.
(MAN—CONSTITUTION) (GROWTH)

MURAVOV, I.V., kand.meditsinskikh nauk

Problems of exercise therapy at the Ukrainian Republic Conference on Medical Control and Exercise Therapy. Vop. kur., fizioter. i lech. fiz. kul't. 25 no.2:191 Mr-Ap '60. (MIRA 13:9)
(EXERCISE THERAPY)

FROL'KIS, V.V.; GOLOVCHENKO, S.F.; DUKHOVICHNYY, S.M.; MURAVOV, I.V.; TANIN, S.A.

Change in working capacity, energy expenditure, blood circulation and respiration during the aging of the organism. Vrach. delo no.3:54-59 Mr '63. (MIRA 16:4)

1. Laboratoriya fiziologii (zav. - V.V.Frol'kis) Instituta gerontologii i eksperimental'noy patologii AMN SSSR.
(AGING)

KACHOROVSKAYA, Ol'ga Vladimirovna, kand. med. nauk; PETRENKO, Marina Feofilovna; MURAVOV, I.V., red.

[Physical education as a means of preventing premature age-connected changes] Fizicheskaia kul'tura kak sredstvo preduprezhdeniia prezhdevremennykh vozrastnykh izmenenii. Kiev, Zdorov'ia, 1964. 47 p. (MIRA 18:1)

MURAVOV, I.V.

Muscular activity, active rest and regulation of blood circulation, respiration and energy metabolism in young and elderly persons. Vop. geron. i geriat. 4:40-53 '65. (MIRA 18:5)

1. Institut gerontologii AMN SSSR, Kiyev.

MURAVOV, I.V.; SHCHEGOLEVA, I.V.; DERKACH, N.V.

Blood pressure in persons 80 years of age and older; based on materials of a mass medical screening. Vop. geron. i geriat. 4:72-80 '65. (MIRA 18:5)

1. Institut gerontologii AMN SSSR, Kiyev.

MURAVOV, I.V., TKACHEV, F.T. [Tkachov, F.T.]

Physiologic analysis of the effect of previous muscular efforts on the working capacity of nonfatigued muscles. Fiziol. zhur. [Ukr.] 10 no.2:163-169 Mr-Ap '64. (MIRA 18:7)

1. Laboratoriya fiziologii dvigatel'nogo rezhima Instituta gerontologii i eksperimental'noy patologii AMN SSSR, Kiyev.

DUDNIK, M.I.; MURAVOVA, L.P.

Determination of the antigens Rh_0 (D), M, N, A, B, O in the process of storing preserved blood. Trudy Kiev. nauch.-issl. inst. perel. krovi i neotlozh. khir. 3:155-158 '61. (MIRA 17:10)

1. Kiyevskiy institut perelivaniya krovi.

L 53759-65 EWT(m)/EPF(c)/EPR/EWP(j)/T/EWP(t)/EWP(b) Pc-4/Pr-4/Pa-4
IJP(c) JD/RM

ACCESSION NR: AP5011685 UR/0195/65/006/002/0338/0342
541.183.26:546.72-44

AUTHOR: Chesnokova, R. V.; Gorbunov, A. I.; Lachinov, S. S.; Muravskaya, S. K.; Erdedi, G. A.

TITLE: Nitrogen and hydrogen chemisorption on ammonia synthesis iron catalyst. Part I.

SOURCE: Kinetika i kataliz, v. 6, no. 2, 1965, 338-342

TOPIC TAGS: nitrogen chemisorption, hydrogen chemisorption, nitrogen, hydrogen, ammonia synthesis, ammonia, iron catalyst

ABSTRACT: Nitrogen and hydrogen chemisorption was studied at 200° and 475°C over unpromoted and promoted ammonia synthesis iron catalysts. Al_2O_3, K_2O, CaO, and SiO_2 were used as promoters. The BET specific surface areas of reduced iron catalysts (in m^2/gram) were: iron catalyst with 0.05 wt. % of Al_2O_3 and 1.9 wt. % of K_2O--0.7; iron catalyst with 8.6 wt. % Al_2O_3--17.5; unpromoted catalyst--5.1; iron catalyst with 4.75 wt. % Al_2O_3 and 2.3 wt. % K_2O--8.3; iron catalyst with 3.87 wt. % Al_2O_3, 1.14 wt. % K_2O, 3.36 wt. % CaO, and 0.97 wt. % Si--18.9. The amounts of ab-

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L 53759-65
ACCESSION NR: AP5011685

sorbed nitrogen and hydrogen are proportional to the catalyst specific surface area. The parallelism in behavior of nitrogen and hydrogen indicates a similarity in the nature of surface bonded compounds of these two gases. For all catalysts but the unpromoted one the rate of nitrogen adsorption is proportional to the surface coverage. On promoted iron catalysts the equilibrium chemisorption of nitrogen agrees well with the Freundlich isotherm. Orig. art. has: 1 table, 3 figures, and 1 formula.

ASSOCIATION: Nauchno-issledovatel'skiy institut azotnoy promyshlennosti (Scientific Research Institute of the Nitrogen Industry)

SUBMITTED: 26Nov63 ENCL: 00 SUB CODE: GC

NO REF SOV: 013 OTHER: 008

Card 2/2

MURAVSKAYA, N. (Dr), E. Milling (Dr) and Bortfeld, S. (Dr)

"Treatment of the Aftereffects of Poliomyelitis"

Meditsinskiy Rabotnik, 28 Oct 1955
Current Digest of the Soviet Press, Vol 7, No 45, p24, Uncl

TSYGANKOV, P.S.; MURAVSKAYA, O.G.

Heating the columns of beer rectification apparatuses. Spirt. prom. 24 no.3:10-11 '58. (MIRA 11:6)
(Distillation apparatus)

STABNIKOV, V.N.; MURAVSKAYA, O.G.

Hydrodynamic conditions of bubbling in tray contacting apparatus. Izv.vys.ucheb.zav.; pishch.tekh. no.5:108-116 '59. (MIRA 13:4)

1. Kiyevskiy tekhnologicheskiy institut pishchevoy promyshlennosti, kafedra protsessov i apparatov.
(Plate towers)

MURAVSKAYA, O.G., inzh.

Work of overflow systems in rectification columns. Pishch. prom. no.2:165-176 '65. (MIRA 18:11)

1. Kiyevskiy tekhnologicheskiy institut pishchevoy promyshlennosti.

MURAVSKAYA, Ye.

Trade relations of Riga with Polotsk, Vitebsk, and Smolensk in the 13th-14th centuries. Vestis Latv ak no.2:31-42 '61. (MIRA 10:9)

(Latvia—History)

SUPRUNOV, A.T.; MURAVSKAYA, Z.A.

Method of assaying vitamin B_{12} in seawater. Trudy SBS 16: 463-466 '63. (MIRA 17:6)

SUPRUNOV, A.T.; MURAVSKAYA, Z.A.

Vitamin B_{12} content in water of the Bay of Sevastopol and its possible ecologic significance. Trudy SBS 17:342-345 '64.
(MIRA 18:6)

L 18869-66 EWT(m)/EWP(t)/ IJP(c) JD
ACC NR: AP6008067 SOURCE CODE: UR/0032/66/032/002/0214/0215

AUTHOR: Givel'berg, G. Ye.; Edel'man, F. L.; Muravskiy, B. M.

ORG: Institute of semiconductor physics of the Siberian Branch of the Academy of Sciences SSSR (Institut fiziki poluprovodnikov Sibirskogo otdeleniya Akademii nauk SSSR)

TITLE: A simple method of preparing silicon samples

SOURCE: Zavodskaya laboratoriya, v. 32, no. 2, 1966, 214-215

TOPIC TAGS: semiconductor crystal, silicon diode

ABSTRACT: The authors describe a method for preparing simultaneously a great number of samples from crystals used in mass production of high-frequency silicon diodes. A crystal plate of a 2-mm diameter and 0.3 to 0.2 mm thick was held in a special clamp made of teflon. The arrangement of the clamping device was schematically illustrated. One or both sides could be etched by immersion into a mixture (1:3:3) of hydrofluoric, nitric and acetic acids. The duration of treatment was about 1 hr and 30 min. A surface conductance for 75-kev electrons was obtained.

SUB CODE: 20 / SUBM DATE: None / ORIG REF: 001 / OTH REF: 000

Card 1/1

KOSMAN, M.S.; MURAVSKIY, B.S.

Current oscillations arising in silicon at high pulse voltages. Fiz. tver. tela 3 no.8:2504-2506 Ag '61. (MIRA 14:8)

1. Leningradskiy gosudarstvennyy pedagogicheskiy institut im. A.I. Gertsena.
(Silicon)

L 24795-65 EWT(m)/EWP(b)/EWP(t) IJP(c) JD
ACCESSION NR: AP5003476 S/0181/65/007/001/0334/0336

17
17
B

AUTHOR: Muravskiy, B. S.

TITLE: Electric excitation of "fast" states as a method for investigating their parameters

SOURCE: Fizika tverdogo tela, v. 7, no. 1, 1965, 334-336

TOPIC TAGS: surface property, germanium, semiconductor instability, fast state, state density, capture time, capture cross section

ABSTRACT: It is shown that the model previously described by the author (FTT v. 4, 2485, 1962; Radiotekhn. i elektron. v. 8, 162, 1963) for the purpose of explaining the occurrence of spontaneous periodic oscillations of the current in a semiconductor and resulting from the relaxation of the surface potential barrier by charge exchange between the strong electric field and the surface impurity centers ("fast" states), can be used to explain similar effects ob-

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served by other investigators. Furthermore, inasmuch as periodic filling and depletion of the fast levels occurs during the relaxation of the surface potential barrier, an experimental investigation of the charge-exchange process makes it possible to determine the density of the fast states, as well as the effective cross section and the capture time of electrons by these states. The experimental set-up and the method of processing the samples was described in the earlier papers. The methods of calculating the measured parameters is described briefly. The application of the method to the study of a surface of n-germanium etched in CP-4 has shown that the existence of the surface potential barrier is due to centers with Coulomb attraction ($f = 10^{-12}$ cm^2) with parameters $N_1 = 10^{10}$ cm^{-2}, $\tau_1 = 5 \times 10^{-8}$--$10^{-7}$ sec, and $N_2 = 8 \times 10^{11}$ cm^{-2}, $\tau_2 = 5 \times 10^{-6}$ sec (N, τ -- density of fast states and capture time by the fast states, respectively). At critical voltages that excite the levels with the parameters τ_2 and N_2, large-amplitude oscillations are observed (150--30 mA) and an increase in the critical voltage increases the

oscillation frequency. For the fast levels with parameters N_1 and r_1, low-oscillation amplitudes (5--10 mA) were observed. In this case slight deviation from the critical voltage stops the oscillations. This indicates that at large values of N the levels corresponding to fast states spread out to form a band, and the level with the maximum energy corresponds to the lower time of transition to the level. "The author thanks M. S. Kosman and A. R. Regel' for continuous interest and advice." Orig. art. has: 2 figures.

ASSOCIATION: Krasnodarskiy gosudarstvennyy pedagogicheskiy institut im. 15-letiya VLKSM (Krasnodarsk State Pedagogical Institute)

SUBMITTED: 27Jul64 ENCL: 00 SUB CODE: SS

NR REF SOV: 006 OTHER: 006

S/120/62/000/001/025/061
E140/E463

AUTHOR: Muravskiy, B.S.

TITLE: High-voltage pulse amplifier final stage

PERIODICAL: Pribory i tekhnika eksperimenta, no.1, 1962, 109-110

TEXT: This note describes a cascaded power tetrode stage for generation of high-voltage pulses for studying strong fields in semiconductors. Depending on the polarity of the input pulse, the circuit operates as a grounded cathode or as a cathode follower stage, with one tube acting as the amplifier, the other as its load. The circuit has high distortion for pulses shorter than 50 μs. There is 1 figure.

ASSOCIATION: Leningradskiy gosudarstvennyy pedagogicheskiy institut (Leningrad State Pedagogical Institute)

SUBMITTED: June 28, 1961

Card 1/1

24 7750

S/181/62/004/009/022/045
B104/B186

AUTHOR: Muravskiy, B. S.

TITLE: Investigation of the anomalous characteristics of point contacts on the surface of germanium and silicon

PERIODICAL: Fizika tverdogo tela, v. 4, no. 9, 1962, 2485-2489

/6

TEXT: When a metal point contacts a Ge or Si surface, its volt-ampere characteristics can show anomalies: At certain positions of the point intense current oscillations will arise. The aim of this investigation was to find a correlation between these positions and such surface defects that are produced when the surface is crossed by edge dislocations. n- and p-type Ge and Si single crystals of 2-25 ohm·cm were ground, polished and etched on their (100) faces. After rinsing with distilled water, a tungsten electrode was applied onto the etched surface and a brass electrode to the opposite surface. The inverse volt-ampere characteristics with pulsed voltage were measured. The characteristics showed great differences as the point contact was shifted across the surface. The probability of

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S/181/62/004/009/022/045
B104/B186

Investigation of the anomalous ...

finding a contact position at which current oscillations arise ("oscillating" contact) can be raised when the point electrode is moved along a surface defect that is produced when the surface is crossed by edge dislocations. This abnormal behavior which is attributed to peculiarities of the surface potential occurs at and below room temperature. It vanishes irreversibly on heating. The most important English-language reference is: M. A. Lampert. Phys. Rev., 125, 126, 1962. There are 2 figures. /B

ASSOCIATION: Leningradskiy gosudarstvennyy pedagogicheskiy institut im. A. I. Gertsena (Leningrad State Pedagogical Institute imeni A. I. Gertsen)

SUBMITTED: March 23, 1962 (initially)
April 28, 1962 (after revision)

Card 2/2

MURAVSKIY, B.S.

High-voltage output pulse cascade. Prib.i tekh.eksp. 7 no.1:109-110 Ja-F '62. (MIRA 15:3)

1. Leningradskiy gosudarstvennyy pedagogicheskiy institut.
(Pulse techniques(Electronics))

9.4340

45037

S/109/63/008/001/022/025
D295/D308

AUTHOR: Muravskiy, B. S.

TITLE: Surface breakdown of p-n junctions in silicon

PERIODICAL: Radiotekhnika i elektronika, v.8, no.1, 1963, 162-170

TEXT: Surface breakdown has been studied in Д-209 (D-209) alloyed silicon diodes and in point-contact nonformed diodes consisting of a p-type silicon slab (of 20 - 25Ω.cm resistivity) and a plane and a point electrode on either side. The rectification factor was measured up to and beyond breakdown, and reverse current-voltage characteristics were obtained under constant and pulsed voltage. Surface breakdown is observed in about one-third of the units investigated, accompanied by intense stable relaxation oscillations of diode current, having a period of microseconds. Neither the surface breakdown voltage nor the parameters of the oscillations are affected by surface treatment or by the dielectric constant of the surrounding medium. The phenomenon is interpreted as connected with a depleted layer which arises on account of 'fast'

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Surface breakdown of...

S/109/63/008/001/022/025
D295/D308

surface states in good electrical contact with the body but not with adsorbed chemical substances. The concentration of such states in silicon is one order of magnitude larger than in germanium. The corresponding current-voltage characteristics in semi-logarithmic coordinates exhibit three successive sections, the slope being constant over each section and increasing from one section to another. The first section is interpreted as due to filling of the surface 'fast' states for an increasing inverse voltage. Then the field in the depleted layer reaches a value sufficient to start an avalanche process with carrier multiplication and more rapid current increase (the second section). The further increase of inverse voltage enhances multiplication and gives rise to breakdown (the third section). (With shorter voltage pulses (up to 5 μ) the corresponding characteristics have only two sections.) The avalanche processes involved 'shunt' the p-n junction and do not lead to irreversible changes in its properties. (The rectification factor before and after breakdown is practically the same.) The relaxation oscillations observed are of a different nature from those predicted by Burgess (J. Electronics, v. 1, no. 3, 1955,297)

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and are interpreted as due to the difference of the time constants of bulk conductivity and p-n junction conductivity, which leads to periodical variations of the differential conductivity. A diode with such variable conductivity can transform, at a suitable low temperature, a d.c. voltage into sustained relaxation oscillations. The conversion efficiency can be very high. There are 6 figures.

SUBMITTED: January 29, 1962

Card 3/3

MURAVSKIY, B.S.

Electrical excitation of "fast" states as a method of studying their parameters. Fiz. tver. tela 7 no.1:334-336 Ja '65.
(MIRA 18:3)

1. Krasnodarskiy gosudarstvennyy pedagogicheskiy institut imeni 15-letiya Vsesoyuznogo Len nskogo kommunisticheskogo soyuza molodezhi.

L 8977-66 EWT(l)/EWT(m)/T/EWP(t)/EWP(b)/EWA(b) LIP(c) JD/GG/AT

ACC NR: AP5027427 SOURCE CODE: UR/0181/65/007/011/3412/3413

AUTHOR: Murevskiy, B. S.; Guskov, V. S.; Kruzhilina, N. G.; Shved, A. G. 50 B

ORG: Krasnodar State Pedagogical Institute im. 15th Anniversary of the VLKSM (Krasnodarskiy gosudarstvennyy institut)

TITLE: Current oscillations in compensated germanium and silicon

SOURCE: Fizika tverdogo tela, v. 7, no. 11, 1965, 3412-3413

TOPIC TAGS: silicon semiconductor, germanium semiconductor, electric current

ABSTRACT: The authors study current oscillations in metal contacts on a semiconductor with an artificially added impurity in the surface layer. Ohmic contacts were electrically formed on the surfaces of *n*-germanium, *n*-silicon and *p*-silicon plates. Preparation of the specimens is briefly described. It was found that the electrical properties of the surface layer are considerably dependent on the type of impurity which is added. Current generation was observed when *n*-germanium was compensated with elements which form shallow acceptor levels (aluminum, zinc, copper), and when *p*-silicon was compensated with antimony, which introduces a shallow donor level. No current oscillations were observed when elements which form shallow acceptor levels were added to *p*-silicon. Compensation by elements which form deep levels of either the donor or acceptor type did not result in current generation. It is assumed that the cur-

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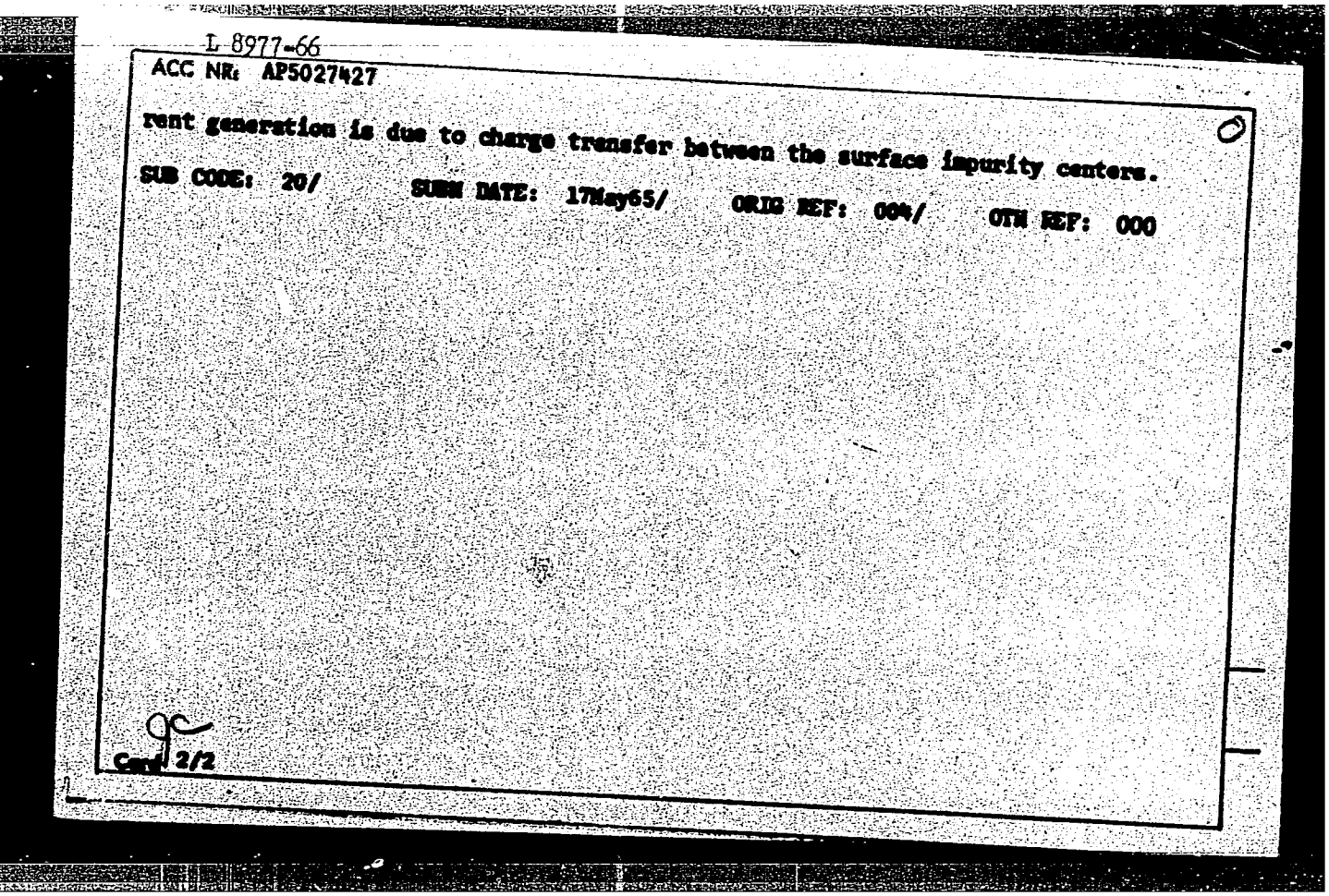

L 8977-66
ACC NR: AP5027427

rent generation is due to charge transfer between the surface impurity centers.

SUB CODE: 20/ SUBM DATE: 17May65/ ORIG REF: 004/ OTH REF: 000

Card 2/2

MURAVSKIY, G.B., aspirant

The effect of a movable load on an infinite beam lying on an elastic foundation. Trudy MIIT no.134:54-84 '61. (MIRA 15:5)
(Beams and girders)

37142
S/179/62/000/001/012/027
E114/E181

10.6100

AUTHOR: Muravskiy, G.B. (Moscow)

TITLE: Non-steady state oscillations of an elastically supported beam subjected to a live load

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye tekhnicheskikh nauk. Mekhanika i mashinostroyeniye, no.1, 1962, 91-97

TEXT: A solution for a force impulse acting on a beam at a point is utilised to consider the case of an infinite beam supported elastically and subjected to a live load varying in accordance with any given function. Since the fourth order differential equation with constant coefficients expressing the bending of the beam is linear, its solution can be expressed in terms of the function of distance and time due to a single concentrated impulse acting on the beam at the initial instant in the origin of the coordinate frame. A force is assumed to travel along the beam with constant speed, the force changing as a function of time, and this is assumed to be equivalent to a series of impulses acting in sequence at points along the beam.

Laplace transformation is applied, being easier to compute. Since it can be proved that the even terms vanish, only odd coefficients are needed, and these are calculated by the author and given in the table up to n = 65. Since the even coefficients are zero, the function is equally valid for positive and negative values of the non-dimensional coefficients derived from the original equation for bending of the beam. The Laplace transformation is utilised to find the solution for a force travelling along the beam with a certain velocity and changing as a known function. Graphs are plotted for the deflection of the beam and the bending moment when the force travels along the beam with various velocities and, for comparison, a curve for a static force is included. A simplified case of a constant applied force is considered and simplified equations for the deflection and the bending moment are solved by integration and utilising previously given coefficients. Graphs are drawn for the two functions corresponding to various values of the non-dimensional constant derived, and it is shown that if this value is equal to the square root of 2, the velocity with which

the force travels along the beam becomes critical, leading to sustained oscillations and limitless growth of the deflection at the point of application of the force. If a mass travelling along the beam with constant velocity is subjected to a variable force, it is not possible to apply the Laplace transformation, while the introduction of moving coordinate systems leads to an equation which is too complicated for practical purposes. Therefore, the author first considers the deflection of the beam under a steady load, then sets up the equation for moving the load along the beam and, combining the two, obtains a formula for an equivalent force which allows calculation of the deflection and the bending moments, as previously, for a travelling force. This solution only holds good provided the load and the beam always remain in contact. Otherwise the equation is applicable only for the fraction of time while the load is actually in contact with the beam. For the rest of the time it is necessary to consider separately free oscillations of the beam and free movement of the load under the action of a force, followed by the load suddenly hitting the beam. But, unlike the usual case, the

point of application of this impact will travel along the beam. Solutions for a point load moving along the beam with a force acting on the load in accordance with a certain known function can be reduced to a dynamic pressure exerted by the load on the beam. Several other cases are capable of solution by reduction to a force travelling along the beam, thus enabling numerical values to be obtained taking into consideration the non-uniformity of the beam, the effect of suspension and springs, etc. An example is given of two masses joined elastically and travelling along the beam. This method is applicable to the solution of problems involving several loads travelling along one beam, but this considerably increases practical difficulties of calculation, as it is then required to solve a set of particularly complicated Voltaire's equations of the first kind. There are 2 figures and 1 table.

SUBMITTED: October 1, 1960

Card 4/4

MURAVSKIY, G.B. (Moskva)

Calculation of an infinite-length beam laying on a flexible support for the action of a momentary concentrated impulse. Izv.AN SSSR.Otd. tekh.nauk.Mekh.i mashinostr. no.6:168-169 N-D '62. (MIRA 15:12)
(Beams and girders)

MURAVSKIY, G.B. (Moskva)

Unsteady vibrations of an infinite plate lying on an elastic foundation. Izv. AN SSSR Otd. tekh. nauk. Mekh. i mashinostr. no.2:87-92 Mr-Ap '63. (MIRA 16:6)

(Elastic plates and shells—Vibration)

MURAVSKIY, G.B., kand. tekhn. nauk

Action of a moving evenly distributed mass load on a hinged single-span beam. Trudy MIIT no.164:125-132 '63. (MIRA 18:3)

MURAVSKIY, G.B. (Moskva)

Nonsteady vibrations of a load lying on an infinite plate supported by an elastic basis. Izv. AN SSSR. Mekh. no.1:124-127 Ja-F '65. (MIRA 18:5)

MURAVSKIY, G.B.

Calculation of forced vertical vibrations of a circular stamp resting on an elastic foundation. Osn., fund. i mekh. grun. 8 no.1:7-8 '66.

(MIRA 19:1)

ROSHCHIN, V.P.; GALYAMIN, L.N., starshiy nauchnyy sotrudnik; MURAVSKIY, S.Ye.

Corn ensilage with the dry biological "SKM" preparation. Zhivotnovodstvo 24 no.9:50-52 S '62. (MIRA 15:12)

1. Moldavskiy nauchno-issledovatel'skiy institut zhivotnovodstva i veterinarii (for Roshchin, Galyamin). 2. Glavnyy inspektor po tekhnologii i ispol'zovaniyu kormov Ministerstva proizvodstva i zagotovok sel'skokhozyzystvennykh produktov Moldavskoy SSR (for Muravskiy).

(Corn (Maize)) (Biological products) (Ensilage)

MURAVSKIY, V.A.

[Chromatographic analysis of hydrocarbons; bibliographic index of Soviet and foreign book and periodical literature for 1955-1960 (1-XI)] Khromatograficheskii analiz uglevodorodov; bibliograficheskii ukazatel' otechestvennoi i inostrannoi knizhnoy i zhurnal'noi literatury za 1955-1960 g. (1-XI). Kolichestvo nazv. - 711. Sost. V.A.Muravskii. Moskva, 1961. 145 p. (MIRA 15:6)

1. Moscow. TSentral'naya nauchno-tekhnicheskaya biblioteka neftyanoy promyshlennosti.
(Bibliography--Chromatographic analysis)
(Hydrocarbons)

L 05731-67 EWT(1) GD

ACC NR: AT6022276 SOURCE CODE: UR/0000/66/000/000/0057/0062

AUTHOR: Vol'man, V. I.; Muravtsov, A. D.

ORG: none

TITLE: Calculation of the ferrite-and-dielectric-loaded waveguide Y-circulator

SOURCE: Vsesoyuznaya nauchnaya sessiya, posvyashchennaya Dnyu radio. 22d, 1966. Sektsiya kvantovoy elektroniki. Doklady. Moscow, 1966, 57-62

TOPIC TAGS: waguide circulator, waveguide element

ABSTRACT: Circulation equations for a Y-circulator with a ferrite cylinder inside a dielectric bushing are set up; assumptions: (a) the amplitude of the first azimuth harmonic of the electric field on the bushing surface substantially exceeds the amplitudes of all other harmonics; (b) one of the nodes of the standing wave formed on the bushing surface is located along the axis of the arm being isolated. The equations contain 7 independent parameters; 5 of them must be specified, and 2 can be found from the solution. The parameter selection is limited by the requirement that the isolation between the circulator arms should be 20 db or more. A calculation procedure and auxiliary curves are supplied. An experimental verification is claimed which revealed errors of 8—20% between theoretical and experimental values. Orig. art. has: 4 figures and 5 formulas. [03]

SUB CODE: 09 / SUBM DATE: 11Apr66 / ORIG REF: 001 / ATD PRESS: 5046

Card 1/1

L 09970-67 EWT(1) GS

ACC NR: AT6022279 SOURCE CODE: UR/0000/66/000/000/0079/0082

AUTHOR: Vol'man, V. I.; Muravtsov, A. D.

ORG: none

TITLE: Methods of parameter control in ferrite cylinders used in waveguide Y-circulators

SOURCE: Vsesoyuznaya nauchnaya sessiya, posvyashchennaya Dnyu radio. 22d. 1966. Sektsiya kvantovoy elektroniki. Doklady. Moscow, 1966, 79-82

TOPIC TAGS: waveguide, waveguide propagation, waveguide design, ferrite

ABSTRACT: A method for testing ferrite cylinders prior to their installation in circulators is reported. The method consists of placing ferrite cylinders into a specially designed resonant cavity and measuring the resonant frequency of this system. This approach helps to increase ferrite component yield in mass production. Rather than measure the absolute values of resonance, the deviation from a standard reference value is determined. For a cylindrical resonant cavity with a coaxial internal magnetized ferrite cylinder, electromagnetic waves can be sustained if the following relation is satisfied:

$$\frac{I_n(x_0 R)}{Y_n(x_0 R)} = -\frac{I_n(x_0 r_1)}{Y_n(x_0 r_1)} - \frac{2}{\pi x_0 r_1 Y_n^2(x_0 r_1)} \times \frac{1}{\frac{\eta_0}{\eta_1}\left[\frac{I_n'(x_\perp r_1)}{I_n(x_\perp r_1)} - \frac{k}{\mu}\frac{n}{x_\perp r_1}\right] - \frac{Y_n'(x_0 r_1)}{Y_n(x_0 r_1)}}, \quad (1)$$

Card 1/2

where R is the radius of the cavity, r_1 is the radius of the ferrite cylinder. If the resonator dimensions are selected such that

$$Y_1(x_0 R) = 0, \quad (2)$$

then, according to (1) for $n = \pm 1$ at resonant frequency the expression (3) must be true.

$$\frac{\eta_0}{\eta_1}\left[\frac{J_1'(x_1 r_1)}{J_1(x_1 r_1)} \pm \frac{k}{\mu}\frac{1}{x_1 r_1}\right] = \frac{Y_1'(x_0 r_1)}{Y_1(x_0 r_1)}, \quad (3)$$

The numerical computation shows that for $|k/\mu|$ = 0.5 to 0.6 the half sum of the resonant frequencies approximately coincides with the roots of the equation

$$\frac{\eta_0}{\eta_\perp}\frac{J_1'(x_\perp r_1)}{J_1(x_\perp r_1)} = \frac{Y_1'(x_0 r_1)}{Y_1(x_0 r_1)}. \quad (4)$$

It is known that this expression is nearly the same as the one for the operation of a Y-circulator equipped with a ferrite cylinder having optimum properties. Consequently, the ferrite cylinders can be selected for optimum performance on the basis of the indirect measurement of their electrical parameters, using the resonance method. The experimental evaluation of 40 ferrites has shown this test to be highly accurate and useful. Orig. art. has: 5 figures.

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AUTHORS: Muravtsov, L. P. and Smirnov, B. I.

TITLE: X-Ray diffraction study of packing faults in deformed tantalum

PERIODICAL: Fizika tverdogo tela, v. 3, no. 4, 1961, 1272-1276

TEXT: It has earlier been shown that packing faults in the {211} planes of cubic body-centered metallic crystals must exert an influence upon X-ray diffraction. Such investigations have been made for special cases, e. g., for β-brass, molybdenum, iron, tungsten, and tantalum; however, only two lines of the latter have been examined. The present study was made with tantalum specimens which had been briquetted from powder (containing 0.63% of niobium) by means of cellulose-nitrate varnish. A tablet pressed from powder and heated in vacuo for three hours at 1050°C served as a standard. The annealed specimen had an interplanar spacing of d = 2.3 A and exhibited only very weak reflection. The X-ray diffraction studies were made with a УРС-50 И (URS-50I) apparatus with a scintillation counter. The reflection lines 110, 200, 211, 220, 400, and 422 were examined. Filtered Cu radiation

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was used for all lines except for 422 where filtered Mo K_α radiation was used. It has earlier been shown that packing faults in body-centered cubic lattices lead to a blurring of the lines. The effective block dimensions D have been determined from the dependence of the dispersion coefficient A_L^p on the distance L. The following was obtained: D_{110} = 210 A, D_{200} = 120 A, D_{211} = 130 A, i. e., $D_{110} : D_{200} : D_{211}$ = 1.8 : 1.0 : 1.1. The "true" block dimensions D_p (regions of coherent scattering) and the probability of packing faulty may be calculated from the effective block dimensions. The relation $1/D = 1/D_p + 1/D_F$ holds, where D_F is termed the "fictitious" block dimensions; $D_F = k/(1.5\alpha + \beta)$. Results:

Line	$(1.5\alpha + \beta)\cdot 10^3$	D_p, A
110-200	13.7	350
200-211	4.1	150
110-211	28	1260

A comparison of the relative D values taken from other publications shows that only W and Mo blocks are isotropic, i. e., that an effect of packing

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faults has not been detected. The block dimensions were anisotropic in these cases. In order to check their own values, the authors calculated the fault probability and D_p also for β-brass and iron according to data of other authors. The results agree qualitatively. The D_p values of β-brass had a negative sign for the 110-211 pairs, i. e., these blocks must lead to a contraction and not to a broadening of the lines. This result is very surprising, and the authors attempt to explain it by mathematical and physical considerations. However, it has been found that further studies of the packing faults are required for a final explanation. B. M. Rovinskiy is mentioned. There are 1 figure, 3 tables, and 13 references: 3 Soviet-bloc and 11 non-Soviet-bloc. The two most recent references to English-language publications read as follows: O. J. Guentert, B. E. Warren, J. Appl. Phys. 29, 40, 1958; B. E. Warren, Progr. in Met. Phys. 8, 147, 1959.

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