L 3656-66 EWP(e)/EWT(m)/EWP(w)/EPF(c)/EWP(i)/ETC/EPF(n)-2/EWG(m)/T/EWP(t)/EWP(b) 22

ACCESSION NR: AT5024878 EWA(c) IJP(c) JD/WW/JG/DJ/GS/AT/WH UR/0000/65/000/000/0127/0142 87 84

AUTHOR: Epik, A. P.; Bovkun, G. A.; Golubchik, I. V.; Sinitsina, L. P. 44,55 44,55 44,55 44,55

TITLE: Certain properties of carbide and boride diffusion coatings on refractory metals

SOURCE: AN UkrSSR. Institut problem materialovedeniya. Diffuzionnyye pokrytiya na metallakh (Diffusion coatings on metals). Kiev, Naukova dumka, 1965, 127-142

TOPIC TAGS: metal diffusion plating, refractory metal, boride, carbide, corrosion resistance, wear resistance, metal scaling

ABSTRACT: Since the physicochemical properties of the diffusion coatings of refractory metals still remain relatively uninvestigated, the authors investigated the scale resistance, wear resistance, and chemical resistance of the carbide and boride diffusion coatings on Ti, Zr, Mo, and W as well as of the boride coatings of Nb. The boride coatings on Ti, Zr, Nb, Mo, and W represented the phases TiB_2, ZrB_2, NbB_2, $Mo_2B + Mo_2B_5$, and $W_2B + W_2B_5$, and the carbide coatings, correspondingly, the phases TiC, ZrC, Mo_2C, and $W_2C + WC$. Tests of the scale resistance of

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the carbides of these refractory metals at oxidation temperatures of 600-1000°C showed that their scale resistance increases in the following order

$$Mo_2C < WC < W_2C < VC < TiC < TaC(NbC) < ZrC$$

For the borides, this sequence is as follows

$$TiB_2 > ZrB_2 > NbB_2 > TaB_2 > W_2B_5$$

with the borides being generally more scale-resistant than the carbides. Wear-resistance tests, in their turn, based on friction against a rigidly affixed rotating piece of sandpaper, showed that the boridized specimens are more wear-resistant than the carbidized specimens, and that both types of specimens are many times more wear-resistant than the refractory base metal. Measurements of the microhardness of the diffusion coatings showed that it approximates the microhardness of the corresponding phases of the stoichiometric composition. Finally, chemical-resistance tests of the specimens, as based on the authors' tests of corrosion resistance in hydrochloric, sulfuric, nitric, and phosphoric acids, as

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ACCESSION NR: AT5024878

well as in alkalis, showed that carbidized W is the most wear-resistant, as it virtually does not interact with nitric, sulfuric, and phosphoric acids, while it only weakly interacts with alkali solutions. Of the boronized specimens, boronized W and Mo are the most corrosion-resistant. These investigations are only in their initial stage, and they will be continued. Orig. art. has: 2 figures, 5 tables.

ASSOCIATION: Institute of Problems in Materials Science , AN UkrSSR (Institut problem materialovedeniya, AN UkrSSR)

SUBMITTED: 06Aug65 ENCL: 00 SUB CODE: MM, IC, GC

NO REF SOV: 025 OTHER: 007

PC

Card 3/3

SIVKINA, N., aspirantka

Protection of nontransplanted beets from peronosporosis. Zashch. rast. ot vred. i bol 10 no.9:22-23 '65. (MIRA 18:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zashchity rasteniy.

L 2991-66 FSS-2/EWT(1)/FCC/EWA(d)/EWA(h) TT/GS/GW
ACCESSION NR: AT5023633 UR/0000/65/000/000/0514/0528

AUTHOR: Blokh, Ya. L.; Dorman, L. I.; Kurnosova, L. V.; Logachev, V. I.; Platonov, G. F.; Razorenkov, L. A.; Sinitsina, V. G.; Suslov, A. A.; Fradkin, M. I. 76 B+1

TITLE: Some results of the study of cosmic ray nucleons by the Elektron-2 satellite

SOURCE: Vsesoyuznaya konferentsiya po fizike kosmicheskogo prostranstva. Moscow, 1965. Issledovaniya kosmicheskogo prostranstva (Space research); trudy konferentsii. Moscow, Izd-vo Nauka, 1965, 514-528

TOPIC TAGS: satellite, radiation, cosmic ray, cosmic radiation, nuclear particle, nucleon/Elektron 2 satellite

ABSTRACT: Included in the instrumentation of the Elektron-2 satellite (launched, Jan 1964; apogee, 68,000 km) was a combination of internal and external counters designed to register nuclear components of primary cosmic radiation. The design and calibration of this apparatus is described, and some results of partially-reduced data are discussed. One counter mounted on the external surface of the satellite was a combination of the Cerenkov and scintillation types which responded to nucleons in the atomic number range of $2 \geq Z \geq 30$. The internal counter was a Cerenkov

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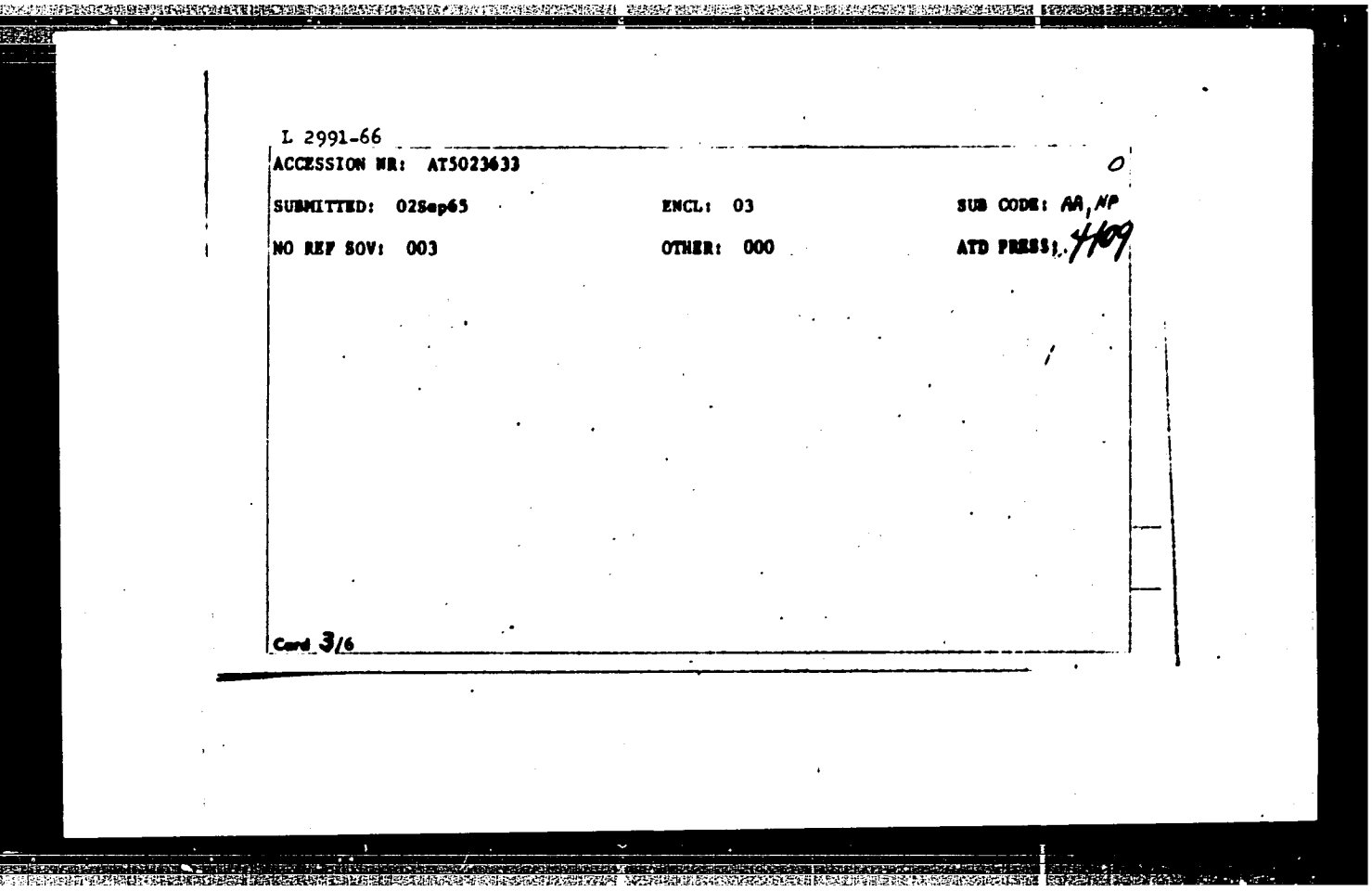
L 2991-66
ACCESSION NR: AT5023633

type, registering at the discrete levels of Z ≥ 2, Z ≥ 5, and Z ≥ 15. All counters were shielded and were designed to register only particles with energies ≥ 600 Mev/nucl. Fig. 1 of the Enclosure gives the basic schematic of the external counter combination. The authors detail the method used to calibrate the photomultiplier outputs in terms of the Z-range of input excitation; for example, for the type FEU-35 external counter, the anode output characteristic corresponded to the range from Z = 4 to Z = 21, and the output of the 7th dynode, to the range Z = 6 to Z = 28. The calibration technique was to excite a SiC electroluminescent diode with a high-voltage, short-duration (4—30 nsec) thyratron pulse, providing the phototube with a light input similar to a counter input. Early results from these primary particle counters, obtained during the IQSY, have been a useful supplement to analogous satellite data from the 1959-1962 period, during which solar activity was undergoing the transition from maximum to minimum. Comparative results are seen in Fig. 2, which shows an almost twofold increase in nuclear particles recorded near the solar activity minimum. Table 1 compares data from one orbit of Elektron-2 to that of the 1959 and 1960 satellites and the 1962 Mars-1 probe. To date only data for the Z ≥ 15 particles have been reduced enough for statistical analysis. A large increase in incidence of this size particle was noted during solar eruptions observed in the course of the Elektron-2 flight. Orig. art. has: 18 figures, 1 table, and 1 formula. [SH]

ASSOCIATION: none
Card 2/2



L 2991-66

ACCESSION NR: AT5023633 0

SUBMITTED: 02Sep65 ENCL: 03 SUB CODE: AA, NP

NO REF SOV: 003 OTHER: 000 ATD PRESS: 4109

Card 3/6

L 4089-66 EWT(1)/FCC/EWA(h) GW

ACCESSION NR: AP5026227 UR/0048/65/029/010/1853/1858

AUTHOR: Kurnosova, L.V.; Logachev, V.I.; Platonov, G.F.; Razorenov, L.A.; Sinitsina, V.G.; Susloy, A.A.; Fradkin, M.I.

TITLE: Investigation of low-energy charged particles with the Cosmos 12, Cosmos 15, and Electron 2 satellites /Report, All-Union Conference on Cosmic Ray Physics held at Apatity 24-31 August 1964/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 29, no. 10, 1965, 1853-1858

TOPIC TAGS: primary cosmic ray, heavy particle, artificial earth satellite, Cerenkov counter, scintillation counter, solar activity

ABSTRACT: Equipment carried by Electron 2 to measure the nuclear component of cosmic rays during the International Year of the Quiet Sun is described briefly and a few preliminary results are reported. The equipment consisted of a Cerenkov counter mounted within the satellite behind 1.5 g/cm^2 of matter and a telescope composed of a Cerenkov counter and a scintillation counter, mounted outside the satellite behind 0.6 g/cm^2 of aluminum. All the counters could record cosmic ray particles with energies exceeding 600 Mev/nucleon. The external telescope recorded nu-

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ACCESSION NR: AP5026227

clei with charge numbers of 2 or greater, and the external Cerenkov counter, which was part of the telescope, also recorded very heavy nuclei with charge numbers near 30. Nuclei with charge numbers not less than 2, 5, or 15 were recorded in separate channels by the internal Cerenkov counter. The counters were tested and calibrated in the laboratory with the aid of cosmic ray particles; the associated photomultipliers were calibrated with flashes from a SiC diode. Preliminary results are compared with analogous data recorded with the Second Soviet Cosmic Rocket, the Third Soviet Satellite Vehicle, and the Mars 1. A strong negative correlation is indicated between solar activity and the intensity of the nuclear component of the cosmic radiation. The intensity of the nuclear component nearly doubled between the flights of the Second Cosmic Rocket in 1959 and the Electron 2 in 1964. It is anticipated that when the data recorded with the Electron 2 are processed they will provide information concerning the dependence of the nuclear component on solar activity. A number of solar flares occurred in February and March during the flight of the Electron 2. Analysis of the data recorded during these flares is awaited with great interest. Orig. art. has: 1 formula, 6 figures, and 1 table. [15]

ASSOCIATION: Laboratoriya kosmicheskikh luchey Fizicheskogo instituta im. P.N. Lebedeva Akademii nauk SSSR (Cosmic Ray Laboratory, Physics Institute, Academy of Sciences, SSR)

L 4089-66

ACCESSION NR: AP5026227 O

SUBMITTED: 00 ENCL: 00 SUB CODE: NP,ES

NO REF SOV: 001 OTHER: 000 ATD PRESS: 4127

BVK

Card 3/3

SHLIPPE, Sergey Aleksandrovich; SINITSINA, Yekaterina Fedorovna; SOLOLEVSKIY, V.I., kand. geol.-miner. nauk, red.; MURONETS, I.I., red. izd-va; KOLCHANOV, V.P., spets. red.; PLAKSHE, L.Yu., tekhn. red.

[German-Russian geological and mineralogical dictionary] Nemetsko-russkii geologo-mineralogicheskii slovar'. Pod red. V.I.Sobolevskogo. Moskva, Fizmatgiz, 1962. 472 p. (MIRA 15:11)

(German language—Dictionaries—Russian)
(Geology—Dictionaries) (Mineralogy—Dictionaries)

1. SI.ITSKAYA, D. A.

2. USSR (600)

4. Dahlias

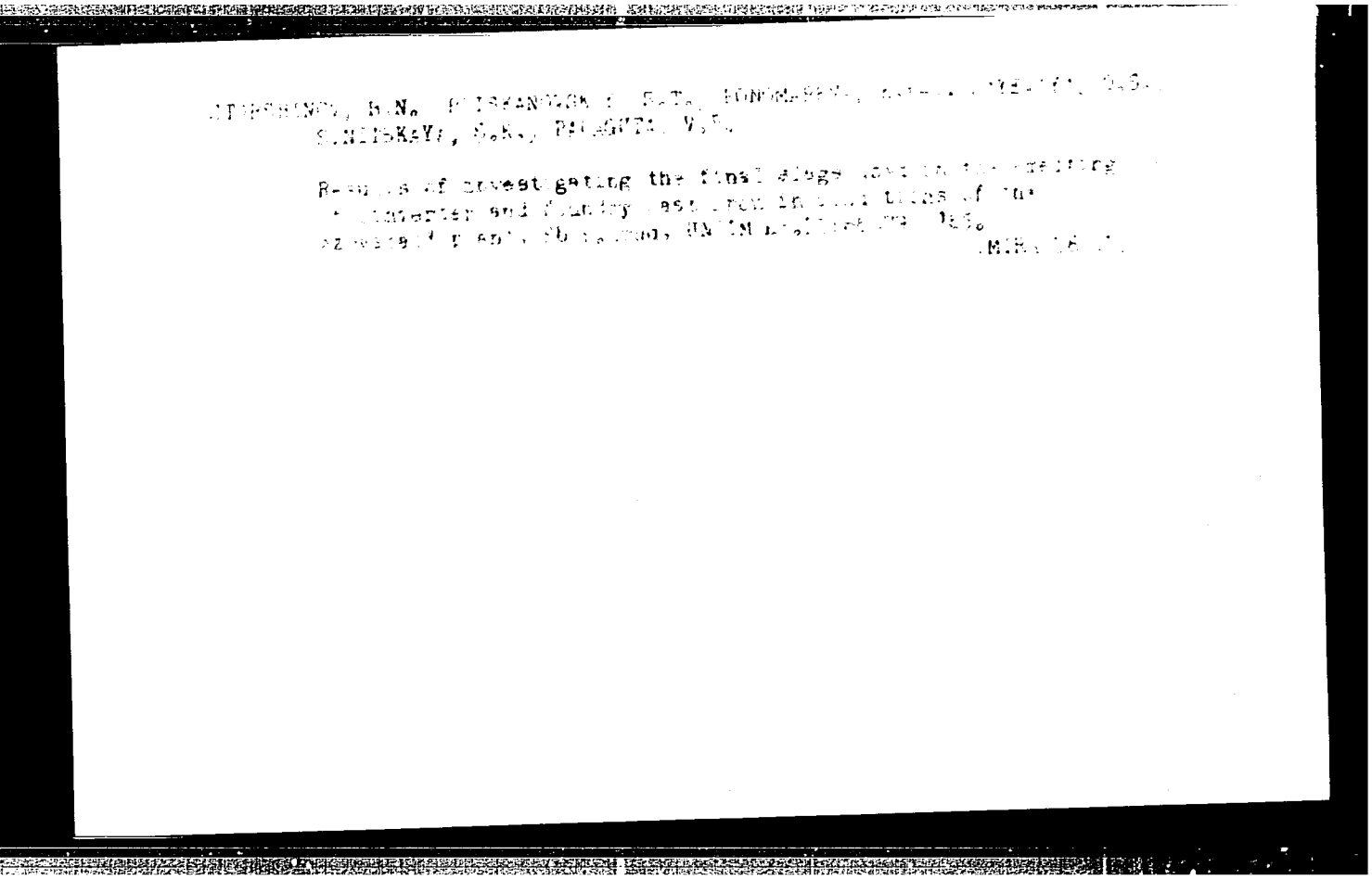
7. Vegetative hybridization of dahlias. Trudy Bot. inst. A. SSSR, Ser. 6, no. 2, 1952.

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

POSTOVOYTOVA, L.; SINITSKAYA, N., metodist

Toward active participation of students. Prof.-tekh. obr. 20 no.9:19-20 S '63. (MIRA 16:11)

1. Zaveduyushchaya laboratoriyey professiy legkoy promyshlennosti TSentral'nogo uchebno-metodicheskogo kabineta, Moskva (for Postovoytova).



STARSHINOV, B.N.; SINITSKIY, V.D.; SEN'KO, G.Ye.; GLUYGA, D.V.; BABIY, A.A.; KHORUZHIY, A.G.; Prinimali uchastiye: OSTROUKHOV, M.Ya.; SAVELOV, N.I.; PLISKANOVSKIY, S.T.; MOISEYEV, Yu.G.; LAVRENT'YEV, M.L.; TARASOV, F.P.; ZAGREBA, A.V.; KAMENEV, E.D.; TKACHENKO, A.A.; FREYDIN, L.M.; LUKIN, P.G.; POPOV, Yu.A.; MISHIN, P.P.; KARACHENTSEV, M.D.; DOLMATOV, V.A.; AYUKOV, A.S.; PALAGUTA, V.P.; VYAZOVSKIY, Yu.V.; SOLODKIY, Yu.A.; KONAREVA, N.V.; SAPRONOV, Yu.V.; SINITSKAYA, S.K.; SAPRONOV, B.V.; LEKAREV, V.L.; STOLYAR, V.V.; PROKHORENKO, Z.A.; BANDINA, Ye.Ye.

Results of the first year of operation of large capacity blast furnaces. Sbor. trud. UNIIM no.11:34-46 '65.

(MIRA 18:11)

112-3-6164

Translation from: Referativnyy Zhurnal, Elektrotekhnika, 1957, Nr 3, p. 161 (USSR)

AUTHOR: Sinitskin, B. S.

TITLE: Automatic Compensators and Bridges with Extended Scale Scanning (Avtomaticheskiye kompensatory i mosty s mnogokratnym obkhodom shkaly)

PERIODICAL: Dokl. L'vovsk. politekhn. in-ta, 1955, Vol. 1, Nr 2, pp. 147-149

ABSTRACT: The author explains the principle for doubling the scanning length of scales of automatic potentiometers or bridges, by the introduction of fixed resistors which are short-circuited in a definite sequence by the contacts of an auxiliary relay when the carriage reaches either end of the scale. It is possible to design instruments with triple or higher scanning of the scale. The accuracy of the instruments is improved by the use of fixed resistors which are more accurate than a slide wire, and by the greater useful length of the scale.

M.Kh.Sh.

Card 1/1

SINITSKIY, A., inzh.; PANOV, S., aspirant

Method for the solution of problems in routing mass freight haulage. Avt. transp. 42 no. 5:33-35 My '64. (MIRA 17:5)

1. Laboratoriya programmirovaniya Glavnogo upravleniya avtomobil'nogo transporta Moskovskogo gorodskogo Soveta deputatov trudyashchikhsya (for Sinitskiy). 2. Moskovskiy avtomobil'no-dorozhnyy institut (for Panov).

SINITSKIY, A. A.

Sinitskiy, A. A. "Serologic methods of hemolytic streptococcous differertiation," in symposium: Skarlatina i streptokokkovyye infektsii, Leningrad, 1948, p. 54-66 - Bibliog: p. 65-66

SO: U-2888, Letopis Zhurnal'nykh Statey, No. 1, 1949

SINITSKIY, A. A.

Sinitskiy, A. A., Chebotarevich, M. F., and Matorina, S. N. "Immunological properties of globulin fractions of antiscarlet fever sera," in symposium: Skarlatina i streptokokkovyye infektsii, Leningrad, 1948, p. 149-62 - Bibliog: 8 items

SO: U-2888, Letopis Zhurnal'nykh Statey, No. 1, 1949

SINITSKIY, A. A.

USSR/Medicine — Streptococci
Medicine — Puerperal Infection

Nov/Dec 48

"Biological Properties and Factors Controlling the Propagation of Pyogenic Microbes in Puerperal Diseases," A. M. Dolgopl'skaya, A. A. Sinitskiy, Bacteriol Lab, and Clinic for Puerperal Diseases, Cen Inst of Obstet and Gynecol, 2½ pp

"Akusher i Ginekol" No 6

Reviews existing data on subject. Presents results of bacteriological investigation of 48 cases. Concludes that existing laboratory tests for determining biological properties of pathogenic microbes do not permit detailed evaluation of their virulence and pathogenicity Virulence of hemolytic streptococci of puerperal origin is manifested most clearly by determinination of activity of the propagation factor. Test on coagulase in conjunction with determination of activity of propagation factor is most complete in the determination of pathogenic and virulent properties of staphylococci of puerperal origin.

PA 22/49T46

[illegible], . I., [illegible], L. A.

Tarasevich, Lev Alekseyevich. [illegible]

Bibliography of L. A. Tarasevich. Sov. zdrav. 11 no. [illegible], [illegible].

[illegible]ly List of Russian Accessions, Library of Congress, [illegible] L. C. Unclassified.

SINITSKIY, A.A.

SMORODINTSEV, A.A., professor, redaktor; SINITSKIY, A.A., redaktor; RULEVA, M.S., tekhnicheskiy redaktor.

[Neurovirus infections; etiology, immunology, clinical recurrent aspects of epidemic meningo-encephalitis and Japanese encephalitis] Neirovirusnye infektsii; etiologiia, immunologiia, klinika dvukhvolnovogo virusnogo meningo-entsefalita i iaponskogo entsefalita. [Leningrad] Gos. izd-vo med. lit-ry, 1954. 339 p. (MLRA 7:10)

1. Chlen-korrespondent Akademii meditsinskikh nauk SSSR (for Smorodintsev).
(Brain--Inflammation)

SINITSKIY, A.; POPOVA, Ye., uchenyy sekretar'. (Reviewer)

"Epidemiological analysis." M.D.Metal'nikov. Reviewed by A.Sinitskii, E.Popova. Zhur.mikrobiol.epid.i immun. no.4:86-90 Ap '54. (MLRA 7:5)

1. Zamestitel' direktora po nauchnoy chasti Instituta im. Pastera. (Epidemiology) (Metal'nikov, M.D.)

[redacted], A.A.

"Comparative Evaluation of Methods of Detecting Pathogenic Bacteria," Military Medicine, [redacted]

Lecture delivered at a conference of Soviet military physicians at the Military Medical Academy im. S.M. Kirov, Leningrad, 29 October - 2 Nov 56.

SINITSKIY, A.A.

Nature of acute intestinal diseases in infants. Vop.okh.mat. i det. 1 no.2:94-95 Mr-Ap '56. (MLRA 9:9)
(INTESTINES--DISEASES) (INFANTS)

MAGAZANIK, G.L.; SINITSKIY, A.A.

Effect of ultraviolet irradiation on experimental peritonitis. (MIRA 11:4)
Khirurgiia Supplement:67-68 '57.

1. Iz gospital'noy khirurgicheskoy kliniki I Leningradskogo meditsinskogo instituta imeni akademika I.P.Pavlova.
(ULTRAVIOLET RAYS--PHYSIOLOGICAL EFFECT)
(PERITONITIS)

SINITSKIY, A.A.; FRIDMAN, E.A.; KLUTCHAREVA, I.S.

On the problem of influenza epidemiology in Leningrad. J. Hyg. Epidem., Praha 1 no.1:49-55 1957.

1. Pasteur Institute of Epidemiology and Microbiology Leningrad, USSR.
(INFLUENZA, epidemiology,
in Russia)

7

SHAFIR, A.I., prof.; PANSHINSKAYA, M.M.; [illegible], A.A., prof.; AVER'YANOVA, A.V.; KOUZOV, P.A., kand.tekhn.nauk

Using paper filters for eliminating viruses from the air of ventilated rooms [with summary in English]. Gig. i san. 22 no.9:3-9 S '57. (MIRA 10:12)

1. Iz Leningradskogo nauchno-issledovatel'skogo sanitarno-gigiyenicheskogo instituta Leningradskogo nauchno-issledovatel'skogo instituta mikrobiologii, epidemiologii i gigiyeny imeni Pastera i Vsesoyuznogo instituta okhrany truda Vsesoyuznogo tsentral'nogo soveta profsoyuzov v Leningrade.

(AIR POLLUTION
viruses, exper. use of filter paper for purification)
(VIRUSES
in air, exper. filtration purification with filter paper.

SINITSKIY, A.A.; FRIDMAN, E.A.; KLYUCHAREVA, I.S.

Epidemiology of influenza in Leningrad in the last years (1954-1955). Zhur. mikrobiol. epid. i immun 28 no.2:3-8 F '57 (MLRA 10:4)

1. Iz Leningradskogo instituta epidemiologii, mikrobiologii i gigiyeny imeni Pastera.
(INFLUENZA, epidemiol.
in Leningrad)

SHITSKIY, A.A., SIROKO, I.A.

Interinstitute conference on strains, standards, and diagnostic preparations. Zhur.mikrobiol. epid. i immun. 29 no.6:150-154 Je '58 (MIRA 11:7)

(BACTERIOLOGY, MEDICAL)

SINITSKIY, A. A.; A[illegible], M. M.; G[illegible]; KACHENSKAYA, YE. S.; KAUSHANSKAYA, E. YE.; ROSENTAL', K. [illegible]; SAPOZHNIKOVA, [illegible]. A.

"Experience of active immunization against measles."

Report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists and Infectionists. 1959

ROGOZIN, I.I.; SINITSKIY, A.A.

Role of vaccinations in the elimination and reduction of infectious diseases in the U.S.S.R. Zhur.mikrobiol.epid.i immun. 31 no.2:3-7 F '60. (MIRA 13:6)
(COMMUNICABLE DISEASES)

SINITSKIY, A.A.; D'YAKOV, S.I.; MIKHAYLOV, I.F.; NIKITIN, V.M.; OSIPOVA, I.V.

Use of an indirect method for staining P. pestis with fluorescent antibodies. Report No.1:Specificity of staining and morphological characteristics of plague vaccine cells. Zhur.mikrobiol.epid.i immun. 31 no.11:35-39 N '60. (MIRA 14:6)

1. Iz Voyenno-meditsinskoy ordena Lenina akademii imeni Kirova.
(PLAGUE) (VACCINES) (ANTIGENS AND ANTIBODIES)

SINITSKII, A.A., prof.; YAKOVLEV, A.M., mayor meditsinskoy sluzhby, kand.med. nauk

One of the factors in natural body resistance. Voen.-med. zhur. no.6: 43-47 Je '61. (MIRA 14:8)
(PROPERDIN) (IMMUNITY)

SINITSKIY, A.A.

"Experimental reproduction of human diseases" by D.S.Sarkisov, P.I.Remezov. Reviewed by A.A.Sinitskii. Vop.virus. 6 no.2:242-243 Mr-Ap '61. (MIRA 14:6)
(PATHOLOGY, EXPERIMENTAL) (SARKISOV, D.S.) (REMEZOV, P.I.)

SINITSKIY, A.A.; YAKOVLEV, A.M.

Characteristics of the bacterial factor in burns. Vest.khir. 89 no.7:79-83 Jl '62. (MIRA 15:8)

1. Iz kafedry mikrobiologii (nach. - prof. A.A. Sinitskiy) i kliniki termicheskikh porazheniy (nach. - prof. T.Ya. Ar'yev) Voyenno-meditsinskoy ordena Lenina akademii im. S.M. Kirova. Adres avtorov: Leningrad, Botkinskaya ul., d.23, kafedra mikrobiologii.

(BURNS AND SCALDS--MICROBIOLOGY)

KUDLAY, D.G.; BELYAKOV, V.D.; DYGIN, V.P.; SINITSKIY, A.A.;
ZEMSKOV, M.V.; ZOLOTNITSKIY, M.Yu.

Book reviews and bibliography. Zhur. mikrobiol., epid. i immun. 40 no.2:122-133 F '63. (MIRA 17:2)

L 17976-65 EWT(1)/EWA(b) AMD JK S/0016/64/000/010/0155/0156
ACCESSION NR: AP5002645

AUTHOR: Sinitskiy, A. A.(Professor); Osipyan, V. T. (Candidate of medical sciences) B

TITLE: A review of Prakticheskaya dezinfektsiya (Leningradskaya sistema obsluzhivaniya epidochagov iz yedinogo tsentra)(Practical disinfection(the Leningrad system of treating epidemic foci from a single center), edited by G. Ya. Zmeyev, The Practicing Physician's Library, 1964

SOURCE: Zhurnal mikrobiologii, epidemiologii i immunobiologii, no. 10, 1964, 155-156

TOPIC TAGS: disease control, health service

Abstract: The book describes the Leningrad centralized system of disinfection and describes changes introduced in the system in recent years. The method consists of centralizing all primary disinfection measures in the city disinfection station. The reviewers commend the book's style and format, enumerate several minor inconsistencies and lapses in its text, and suggest that the Leningrad experiment will be a useful model in organizing disinfection operations in other cities.

Card 1/2

L 17976-65
ACCESSION NR: AP5002645

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: GO, LS

NO REF SOV: 000 OTHER: 00 JPRS

Card 2/2

L 39697-65 EWA(j)/EWA(b)-2/EWT(1) JK

ACCESSION NR: AP5007792 S/0177/64/010/007/0048/0052

AUTHOR: Sinitskiy, A. A. (Professor); Remezov, P. I. (Lieutenant colonel of medical service, Doctor of medical sciences) 20 B

TITLE: Role of immunity in the control of infectious diseases

SOURCE: Voyenno-meditsinskiy zhurnal, no. 7, 1964, 48-52

TOPIC TAGS: immunization, infection, vaccine, disease control organizations

ABSTRACT: This is a literature survey of the experience of Soviet public health and the Armed Forces' medical service in the use of specific vaccination on a mass basis. Moderate to highly effective results have been obtained in controlling the following diseases: typhoid, paratyphoid, poliomyelitis, brucellosis, botulism, smallpox, diphtheria, influenza, typhus, tularemia, plague, tick-borne encephalitis, yellow fever, tetanus, gas gangrene, and rabies. Vaccination has thus far been ineffective or only of secondary significance in dysentery, parotitis, and tuberculosis. In recognition of the practical difficulties in carrying out timely mass vaccination programs, the authors recommend the use of combined vaccines to provide protection against several diseases at the same time. The aerogenic (inhalation) method of immunization proposed by N. I. Aleksandrov and N. Ye. Gafen is said to be

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L 39697-65

ACCESSION NR: AP5007792

highly promising for a number of infections (not named).

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: LS, CB

NO REF SOV: 000 OTHER: 001

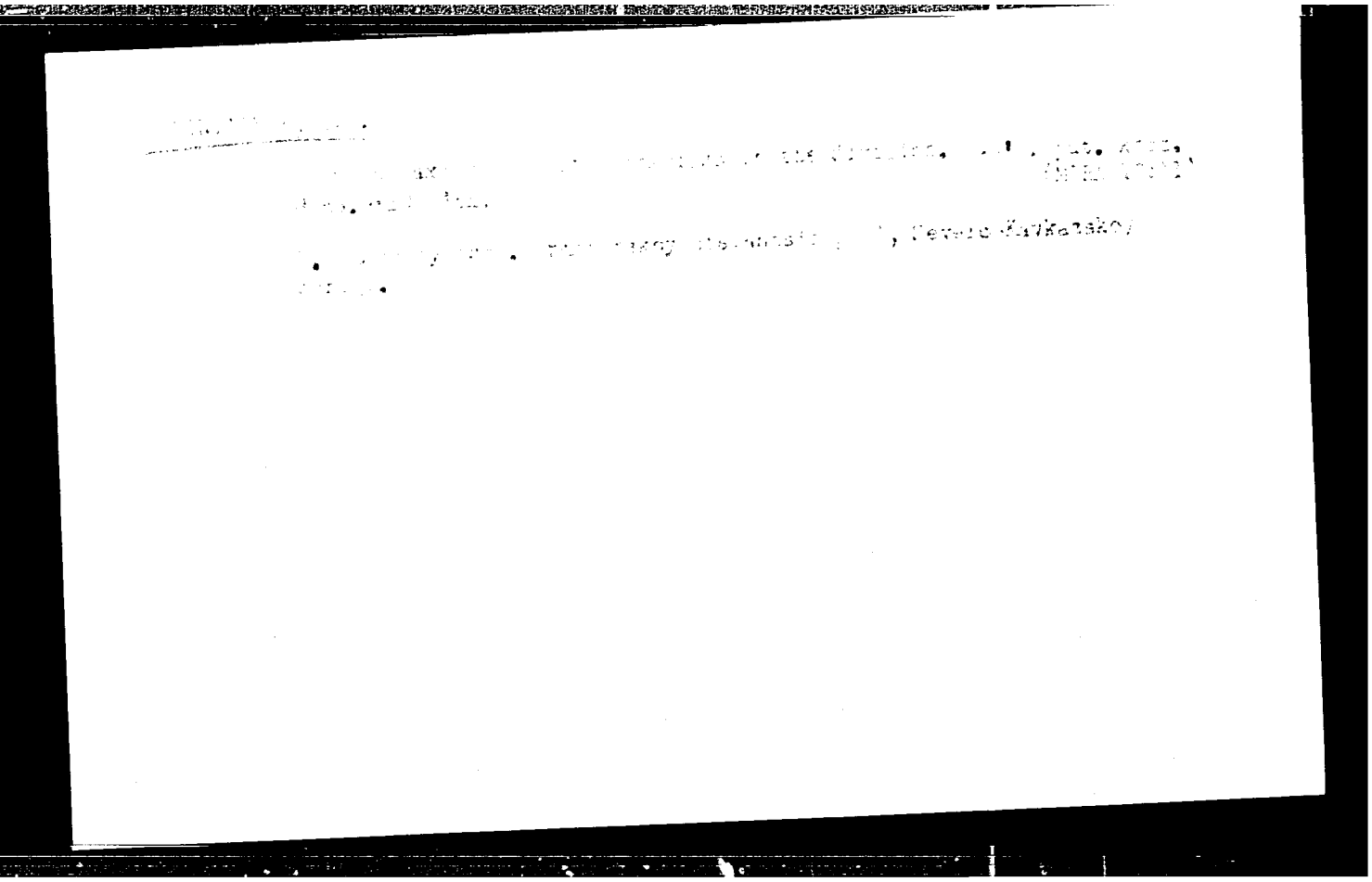
Card 2/2

[illegible], [illegible], [illegible], [illegible], podpolkovnik [illegible],
doktor med. [illegible]

Stimulation of the natural resistance of the organism. [illegible] (MIRA [illegible])
[illegible]. no.8:18-23 '64.

SINITSKIY, A. [illegible], prof.; TARASOV, V.N.; GOREV, N.Ia.; [illegible], G.A., mayor meditsinskoy sluzhby

Ways of improving the methods of virological studies; a review of the literature. Voen. med. zhur. no.10:39-[illegible] [illegible] '63. (MIRA [illegible])



SINITSKIY, A.D.

Unique condition of the elastic-plastic stage. Trudy LPI no.196:108-128 '58. (MIRA 12:3)

(Elasticity)

SINITSKIĬ, A. K.

Priblizhennyi metod issledovaniia voprosov ustoichivosti. (Leningrad. Institut inzhenerov grazhdanskogo vozdushnogo flota. Trudy, 1935, no. 1, p. 131-187, tables, diagrs.)

Title tr.: Approximation method of investigating the problems of stability.

TL725.A1L4 1935

SO: Aeronatuical Sciences And Aviation in the Soviet Union, Library of Congress, 1955

SINITSKIY, A. K.

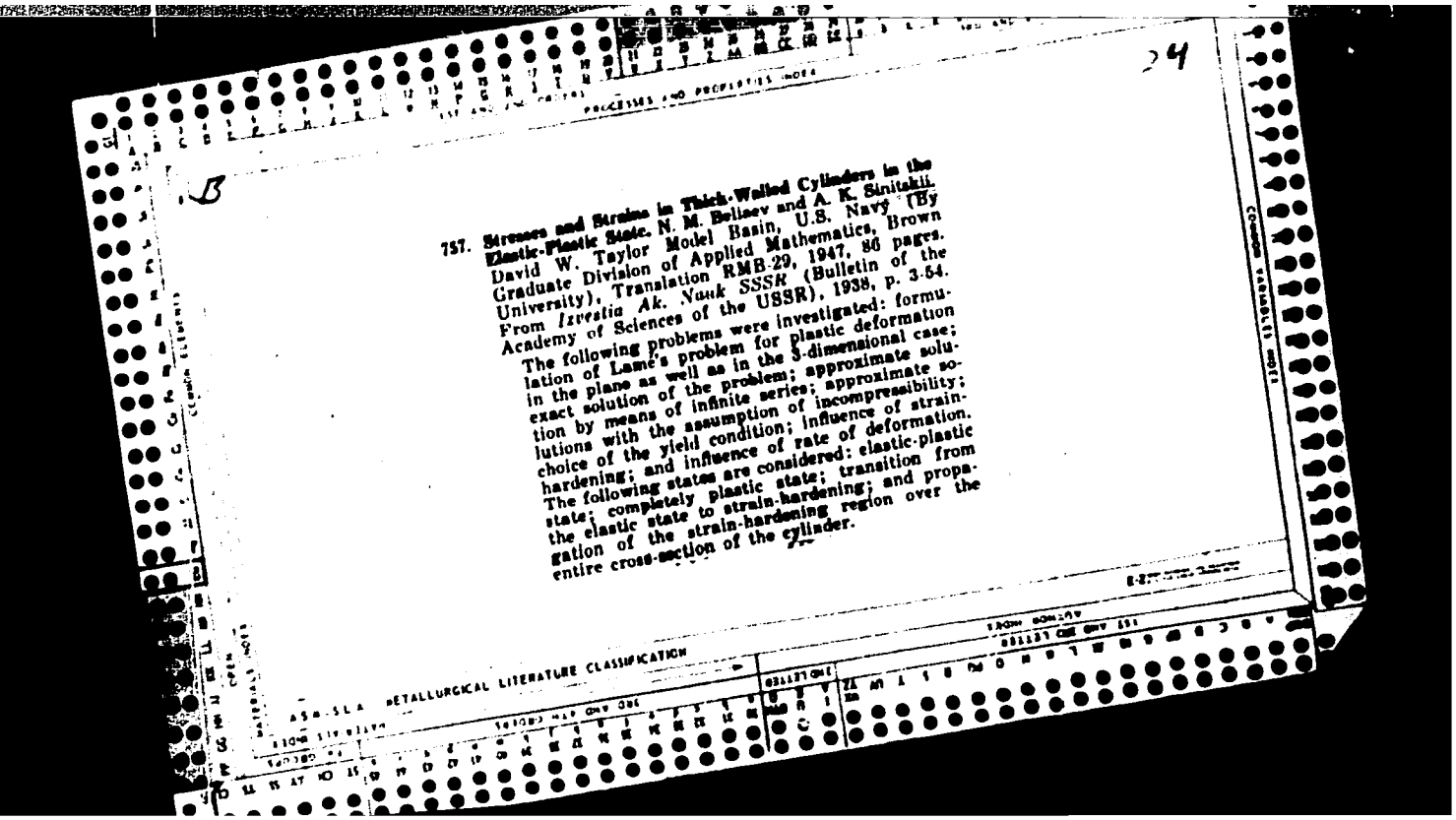
[illegible], SIROLI [illegible], and A. K. SINITSKIY.

Napriazheniia i deformatsii v tolstostennykh tsilindrakh pri uprugo-plasticheskom sostoianii materiala s uchetom uprochneniia. (Akademiia Nauk SSSR. Izvestiia. Otdelenie tekhnicheskikh nauk, 193[illegible], no. 4, p. 21-49, tables, diagrs.)

Title tr.: Stresses and strains in thick-walled cylinders in the elastic-plastic state with allowance for strain-hardening.

AS262.A62A4 1936

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



757. **Stresses and Strains in Thick-Walled Cylinders in the Elastic-Plastic State.** N. M. Beliaev and A. K. Sinitskii. David W. Taylor Model Basin, U.S. Navy (By Graduate Division of Applied Mathematics, Brown University), Translation RMB-29, 1947, 86 pages. From *Izvestia Ak. Nauk SSSR* (Bulletin of the Academy of Sciences of the USSR), 1938, p. 3-54.

The following problems were investigated: formulation of Lamé's problem for plastic deformation in the plane as well as in the 3-dimensional case; exact solution of the problem; approximate solution by means of infinite series; approximate solutions with the assumption of incompressibility; choice of the yield condition; influence of strain-hardening; and influence of rate of deformation. The following states are considered: elastic-plastic state; completely plastic state; transition from the elastic state to strain-hardening; and propagation of the strain-hardening region over the entire cross-section of the cylinder.

[illegible], [illegible]

Elasticity

[illegible] method [illegible] solving problems [illegible] theory of plastic deformations. Trudy [illegible] Politekh. Inst. No. 3, 1947.

[illegible], Library of Congress. November 1952, Uncl.

SINITSKIY, A.K.

Approximation method in the theory of plastic deformations. Trudy Len.politekh.inst. no.4:39-51 '47. (MLRA 6:8)
(Deformations)

BELYAYEV, Nikolay Mikhaylovich; BELYAVSKIY,L.A.; KACHURIN,V.K.; KIPNIS, Ya.I.; KOZHEVNIK,I.A.; KUSHELEV,N.Yu.; SINITSKIY,A.K.; KACHURIN, V.K., redaktor; SNITKO,I.K., redaktor; TUMARKINA,N.A., tekhnicheskiy redaktor

[Collection of problems on strength of materials] Sbornik zadach po soprotivleniiu materialov. Izd.3-e, perer. i dop. Moskva, Gos.izd-vo tekhniko-teoret. lit-ry, 1955. 346 p. (MLRA 9:3)

(Strength of materials--Problems, exercises, etc.)

BELYAYEV, Nikolay Mikhaylovich [deceased]. Prinimali uchastiye: BELYAVSKIY, L.A.; KACHURIN, V.K.; KIPNIS, Ya.I.; KOZHEVNIKOV, I.A.; KUSHELEV, N.Yu.; SINITSKIY, A.K., SMITKO, I.K., red.; TUMARKINA, N.A., tekhn.red.

[Collection of problems on the strength of materials] Sbornik zadach po soprotivleniiu materialov. Pod obshchei red. V.K. Kachurina. Izd.6., stereotipnoe. Moskva, Gos.izd-vo fiziko-matem.lit-ry, 1958. 346 p. (MIRA 12:9)
(Strength of materials)

SINITSKIY, A.K.

Relationship between stresses and deformations in nonlinear elastic solid mediums. Trudy LPI no.196:129-143 '58. (MIRA 12:3)
(Strains and stresses) (Elasticity)

SINITSKIY, A.K.

Plotting the solution of an axially symmetric plane problem of the plasticity theory with the consideration of the effect of mean normal stress and the type of the stress deviator. Trudy LPI no.208: 182-194 '60. (MIRA 13:9)

(Deformation (Mechanics))

ZAKHAROV, Kirill Vasil'yevich; KUSHELEV, Nikita Yur'yevich; SINITSKIY, Anatoliy Konstantinovich; SEMENOV, V.P., otv. red.; YAGN, Yu.I., prof., red.

[Laboratory manual on the strength of materials] Rukovodstvo k laboratornym rabotam po soprotivleniiu materialov. Izd. 2., Leningrad, Leningr. politekhn. in-t, 1963. 126 p. (MIRA 17:11)

BELYAYEV, Nikolay Mikhaylovich. Prinimali uchastiye: BELYAYEVSKIY, L.A.; KACHURIN, V.K.; KIPNIS, Ya.I.; KOZHEVNIKOV, I.A.; KUSHELEV, N.Yu.; SINITSKIY, A.K.; SMITKO, I.K., red.

[Collection of problems on the strength of materials] Sbornik zadach soprotivleniiu materialov. Izd.9., ispr. Moskva, Izd-vo "Nauka," 1965. 348 p. (MIRA 18:3)

SINITSYN, A.P.

Analysis of the seismic resistance of dams. Trudy Inst. Fiz. Zem. no.33. Vop. inzh. seism. no.9:77-86 '[illegible]. (MIRA 17:12)

OVES, I.S., kand.tekhn.nauk; MITTEL'SHTEYN, M.G., inzh.; SINITSKIY, A.Z.; KHODOSH, M.S.; KOZHIN, A.P., kand.ekon.nauk, nauchnyy red.; GERASIMOVA, G.S., red. izd-va; RODIONOVA, V.M., tekhn. red.

[Practice and effectiveness of centralized transportation of construction materials in Moscow] Opyt i effektivnost' tsentralizovannykh perevozok stroitel'nykh gruzov v Moskve. Moskva, Gosstroiizdat, 1962. 166 p. (MIRA 15:7)
(Moscow—Building materials—Transportation)

L 14462-66
ACC NR: AP6002972 (N) SOURCE CODE: UR/0286/65/000/024/0147/0148

INVENTOR: Sinitskiy, B. A.; Kuznetsov, V. M.; Vaksman, A. Z.; Ratner, A. G.; Vikhman, B. A.; Rimmer, A. I.; Dmitriyev, V. P.; Rikhter, A. A.; Zagaytov, A. P.

ORG: none

TITLE: A universal form for hulls in shipbuilding. Class 65, No. 177291

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 24, 1965, 147-148

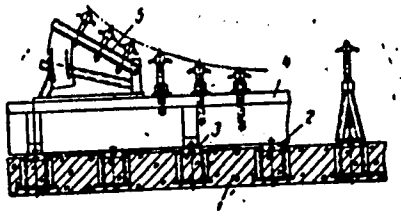
TOPIC TAGS: shipbuilding engineering, marine equipment, ship

ABSTRACT: This Author's Certificate introduces a universal form for hulls in shipbuilding. The installation includes a foundation with standard elements, e.g. beams, stands and frames in a form depending on the members which make up the hull structure. The installation is designed for convenience in assembly, efficiency in the use of production area and economy of metal. The foundation is made up of anchored longitudinal or transverse channel or angle tracks. The projecting horizontal shelves of the tracks form T-slots above the level of the foundation by the thickness of a shelf. The standard elements are made with mating sockets for fastening

UDC: 629.12.002.011 : 621.757 : : 621.791 : 621-783.624

Card 1/3

L 14462-66
ACC NR: AP6002972



1 - foundation; 2 - tracks; 3 - horizontal shelves;
4 - standard element; 5 - metal units.

Card 2/3

L 14462-66

ACC NR: AP6002972

to the angle or channel tracks. Detachable metal units are mounted on the standard elements.

SUB CODE: 13/ SUBM DATE: 12Nov64

Card 3/3

SINITSKIY, D.P., inzh.; PAVLYUK, N.A., inzh.

Rails treated for greater strength. Put' i put.khoz. 5 no.4:10 Ap '61. (MIRA 14:7)

1. Nachal'nik Berdyaushskoy distantsii Yuzhno-Ural'skoy dorogi (for Sinitskiy). 2. Master po opytnym rabotam, st. Berdyaush, Yuzhno-Ural'skoy dorogi (for Pavlyuk).
(Railroads—Rails)

SINITSKIY, I.L., rentgenolog

Organization of flurorographic examination in Namangan Province. Med.zhur.Uzb. no.6:19-20 Je '58. (MIRA 13:6)

1. Oblastnoy tuberkuleznyy dispanser Namanganskoy oblasti.
(NAMANGAN PROVINCE--DIAGNOSIS, FLUOROSCOPIC)

SINITSKIY, Kh.; MEHETSKAYA, T.

Forest industries in the White Russian Polesye. Izv. AN BSSR no.2:25-35 Mr-Ap '55. (MLRA 8:9)
(Polesye--Wood-using industries)

SINITSKIY, Kh.; DEMICHEV, A.I., redaktor; ALEKSANDROVICH, Kh., tekhnicheskiy redaktor

[Increasing labor productivity in the industries of White Russia] Povyshenie proizvoditel'nosti truda v promyshlennosti Belorusskoi SSR. Minsk, Izd-vo Akademii nauk BSSR, 1956. 62 p. (MIRA 10:1)
(White Russia--Labor productivity)

KABEL'SKIY, I.M., kand.tekhn.nauk; SINITSKIY, Kh.I., kand.ekon.nauk

Specialization of metalworking enterprises. Mash.Bel. no.5: 220-226 '58. (MIRA 12:11)
(Metalworking) (Industrial management)

112-3-6161

Translation from: Referativnyy Zhurnal, Elektrotekhnika, 1957, Nr 3, p. 161 (USSR)

AUTHOR: Sinitskiy, L. A.

TITLE: The Problem of Computation of Stabilization Time of Electrical Measuring Instruments (K voprosu o raschete vremeni uspokoyeniya elektroizmeritel'nykh priborov)

PERIODICAL: Dokl. L'vovsk. politekhn. in-ta, 1955, Vol. 1, Nr 2, pp. 153-157

ABSTRACT: The degree of stabilization of an instrument is plotted as a function of the ratio of stabilization time to the period of natural oscillations, on the basis of an exact solution of the equation of motion of the movable part of an instrument. It is pointed out that the formulae given in the literature for determination of stabilization time give an error of 20%.

M.Kh.Sh.

Card 1/1

USSR/Automatics and telemechanics-nonlinear elements FD-1763

Card 1/2 Pub. 10 - 3/11

Author : Karandeyev, K. B.; Sinitskiy, L. A. (L'vov)

Title : A method for calculating the transient processes in circuits containing conditionally nonlinear elements

Periodical : Avtom. i telem., 16, Sep-Oct 1955, 483-487

Abstract : The authors propose a method of calculation of transient processes in circuits with conditionally nonlinear elements, which is based on the replacement of nonlinear element by equivalent linear circuit. As an example he considers the transient process in a nonlinear bridge stabilizer. He points to the possibility of improving the character of transient processes because of the change of the stabilizer circuit scheme. Eight references: e.g. Prof. K. M. Polivanov, editor, Fizicheskiye osnovy elektrotekhniki [Physical principles of electrical engineering], State Power Press, 1950; B. S. Sotskov, "Thermistors and their application in circuits," Avtom. i telem., 9, No 1, 1948; F. Ye. Temnikov, R. R. Kharchenko, Elektricheskiye izvereniya neelektricheskikh velichin [Electrical measurement of nonelectrical quantities], State Power Press, 1948; S. A. Ginzburg, "Calculation of the nonlinear bridge," Trudy MEI, No 8, 1952; M. I. Kontorovich, Operatsionnoye ischisleniye i nestatsionarnyye yavleniya v elektricheskikh tsepyakh [Operator

Card 2/2

calculus and nonsteady phenomena in electrical circuits], GITTL, 1949; M. A. Topchibashev, "Results of study of volt-ampere characteristics of certain nonlinear resistors," Avtom i telem., 10, No 1, 1949.

Institution : -

Submitted : Jan 21, 1954

SIGORSKIY, Vitaliy Petrovich; SINITSKIY, Lev Aronovich; KARANDEYEV, K.B., professor, redaktor; ZIL'BAN, M.S., redaktor izdatel'stva; SIVACHENKO, Ye.K., tekhnicheskiy redaktor

[Magnitoelectric ratiometers] Magnitoelektricheskie logometry. Pod red. K.B. Karandeeva. Kiev, Izd-vo Akad. nauk USSR, 1956. 196 p. (MLRA 10:5)
(Electric measurements)

SIGORSKIY, V.P.; SINITSKIY, L.A.

Inaccuracy of non-zymmetrically circuited logometers due to temperature variations. Izm.tekh. no.2:39-43 Mr-Ap '56. (MIRA 9:7)
(Electric instruments)

AUTHOR: Kalashnikov, N.I. and Sinitskiy, L.A. 120-4-29/35

TITLE: A Compensation Method for Measuring Small Phase Displacements Using an RC-Phase-shifter (Primeneniye RC-fazovrashchateley dlya izmereniya malykh fazovykh sdvigov metodom kompensatsii)

PERIODICAL: Pribory i Tekhnika Eksperimenta, 1957, No.4, pp. 97-98 (USSR)

ABSTRACT: Circuits previously suggested for this purpose have either been too complicated or have not permitted both positive and negative increments in phase about zero. It is proposed here to use L-sections containing two equal capacitors and two resistors as described by E.O. Saakov (Ref.3). Two formulae are derived, applicable to particular arrangements of the elements, relating phase-shift and change in element value. In one arrangement, it is immaterial which element is varied; in two others, a particular resistor should be chosen. These conditions give best linearity, but for angles less than about 3° the quadratic error may be neglected. If the source- or output-loading is appreciable, it is advisable to choose a circuit in which the effect of this loading is constant. This may be achieved by keeping the sum of two resistors constant and the result is single-knob control of phase-shift, using a potential divider

Card1/2

120-4-29/35

A Compensation Method for Measuring Small Phase Displacements Using an RC-Phase-shifter.

connected between the two condensers. An oscillograph is used to monitor the effect of the phase-shifter. With an image 3 or 4 times greater than the diameter of the screen, the error in measurement need not exceed 5 or 10 minutes of arc. There are 4 references, 3 of which are Slavic.

ASSOCIATION: Institute of Mechanical Engineering and Automation Ac.Sc. Ukrainian SSR (Institut mashinovedeniya i avtomatiki AN USSR)

SUBMITTED: December 14, 1956

AVAILABLE: Library of Congress

Card 2/2

SINITSKIY L.A.

105-58-4-5/37

AUTHORS: Sigorskiy, V. P., Candidate of Technical Sciences
Sinitskiy, L. A., Candidate of Technical Sciences

TITLE: Calculating Electric Circuits Containing Rectifiers (Raschet elektricheskikh tsepey s vypryamitelyami)

PERIODICAL: Elektrichestvo, 1958, Nr 4, pp. 26 - 29 (USSR)

ABSTRACT: Until lately the formation and solution of equations for non-linear circuits was carried out separately for every individual case. The results obtained are of special character. Here the authors try to generalize the problems and to obtain formulae characterizing a sufficiently wide class of diagrams with rectifiers. First a circuit with a reactive element is investigated, namely a circuit with a rectifier in form of a fourpole, at the inlet of which an harmonic electromotive force $u_1 = U_m \sin(\omega t + \varphi)$ applies and the only element (in this case the capacity) is connected with the output. It is assumed that the rectifier has a linearly discontinuous characteristic. It is assumed that the current in the rectifiers at the moment $t = 0$ and $t = t_o$ is equal to zero. The

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Calculating Electric Circuits Containing Rectifiers

problem consists in the determination of the phase angles φ and ψ, corresponding to these moments. The system is derived from two transcendent equations for φ and ψ (6). Then a circuit with two reactive elements is investigated. The second element is a capacity or an inductivity. It is shown that also in this case the equation (6) holds if the mentioned denotations are understood by the quantities contained in the equation. An analogous formula is obtained when two inductivities are contained in the diagram. It is maintained that equation (6) comprises a wide class of diagrams. The solution of (6) is numerically very difficult. Therefore a graphic solution is given and an example is calculated through. There are 5 figures, 1 table, and 6 references, 6 Soviet references.

ASSOCIATION: Institut mashinovedeniya i avtomatiki Akademii nauk Ukrainskoy SSR (L'vov) (L'vov Institute for Machinery and Automation of the AS Ukrainian SSR)

SUBMITTED: July 6, 1957

AVAILABLE: Library of Congress

Card 2/2 1. Electric circuits (Rectifiers) - Analysis

SOV/21-58-11-6/28

AUTHORS: Sigorskiy, V.P., Sinitskiy, L.A., and Shumkov, Yu.M.

TITLE: Determining the Switching Moment of a Rectifier in an Electrical Circuit of the n-th Order (Opredeleniye momentov pereklyucheniya vypryamitelya v elektricheskoy skheme n-go poryadka)

PERIODICAL: Dopovidi Akademii nauk Ukrains'koi RSR, 1958, Nr 11, pp 1177-1180 (USSR)

ABSTRACT: A rectifier with linear lumped-parameter characteristics can be substituted by an equivalent circuit with a switch. Then the circuit of the n-th order with one rectifier can be represented by a four-terminal network. The authors derive equations for determining the moments of switching the rectifier under the following conditions: at the input of the four-terminal network the voltage $u(t)=U_m \sin(\omega t+\varphi)$ is applied, and a simple periodic process operates in the circuit. Theorems on the closing and opening of the switch [Ref. 2] are used in the derivation of these equations. There are: 1 set of block diagrams and 3 Soviet references.

Card 1/2

SOV/21-58-11-6/28

Determining the Switching Moment of a Rectifier in an Electrical Circuit of the n-th Order

ASSOCIATION: Institut mashinovedeniya i avtomatiki AN UkrSSR (Institute of Machine Study and Automation of the AS UkrSSR)

PRESENTED: By Member of the AS UkrSSR, K.K. Khrenov

SUBMITTED: June 24, 1958

NOTE: Russian title and Russian names of individuals and institutions appearing in this article have been used in the transliteration.

Card 2/2

SOV/105-19-9-8/11

AUTHORS: Karandeyev, K. B., Sinitskiy, L. A. (L'vov)

TITLE: On Selectivity of Rectification Measuring Devices (K voprosu ob izbiratel'nosti vypryamitel'nykh izmeritel'nykh ustroystv)

PERIODICAL: Avtomatika i telemekhanika, 1958, Vol 19, Nr 9, pp 892-895 (USSR)

ABSTRACT: This is an investigation of the selectivity of rectifying measuring devices. It is assumed that the measured voltage and the noise voltage are sinusoidal functions of time with non-multiple frequencies. Formulae for the determination of errors in the usual rectifying apparatus and in the phase-shift sensitive rectifying apparatus with different forms of the control signal are obtained. Some known principles form the theory of selectivity of rectifying devices are given as these are not mentioned in publications on electric measurements. The influence of the noise voltage level on the measuring device is not investigated. As a summary the following facts were ascertained: 1) The elements of the rectifying system have the characteristic feature of suppressing noises by a signal, as long as the noise signal is smaller than that of the intelligence signal. 2) The suppression of the noise level by the signal becomes noticeable

Car Card 1/2

8(3)

AUTHORS: Sigorskiy, V. P., Candidate of Technical Sciences, Sinitskiy, L. A., Candidate of Technical Sciences

SOV/105-59-1-8/29

TITLE: Determining the Direct Current Components of Currents and Voltages in Rectifier Circuits (Opredeleniye postoyannykh sostavlyayushchikh tokov i napryazheniy v tsepyakh s vypryamitelem)

PERIODICAL: Elektrichestvo, 1959, Nr 1, pp 34-35 (USSR)

ABSTRACT: In the former paper (Ref 1) by the authors it was shown that for all circuits with rectifier and reactive element (capacity or inductance) a general system of equations can be set up which determines the moments of transition of the rectifier from one state to another. Here a method is given for determining the D. C. components of currents and voltages in all elements of this class of scheme. The nonlinear circuit is represented in the form of a four-pole. At its input, a sine-shaped e.m.f. is applied; at the output, a reactive element is connected. One determines the D. C. components of the voltage on capacity C or those of the current in inductance L, then the D. C. components of voltages and currents for the individual scheme elements can be obtained. It is shown that

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for this it is sufficient to find the D. C. component of the voltage on the capacity or that of the current by the inductance, to set up then formulas (3) and (5) (transformed equations by Kirchhoff (Kirkhgof)) for the circuit in question, and to solve them with regard to the quantities required. The method given here permits to determine the D. C. components of currents and voltages on all elements of a rectifier circuit without being forced to determine and integrate the corresponding instant values on the elements of the circuit. There are 2 figures and 1 Soviet reference.

SUBMITTED: March 24, 1958

SOV/105-59-3-23/27

8(0)

AUTHORS: Kompaneyts, L. G., Sinitskiy, L. A., Candidate of Technical Sciences

TITLE: Determination of the Mean Values of Nonsinusoidal Currents Containing Second or Third Harmonics (Opredeleniye srednikh znacheniy nesinusoidal'nykh tokov pri nalichii vtoroy ili tret'yey garmoniki)

PERIODICAL: Elektrichestvo, 1959, Nr 3, pp 93 - 94 (USSR)

ABSTRACT: The mean value of a.c. quantities (current or voltage) is determined by an equation of the following form:

$$x_{cp} = \frac{1}{T}\int_0^T |x(t)|\,dt,$$ where T denotes the period of the function x(t). A number of electrical measuring instruments responds only to this mean value which is also of interest in the calculation of rectifier circuits. If the alternating currents are non-sinusoidal, the determination of x is connected with difficult calculations as it is therefore

Card 1/2

Determination of the Mean Values of Nonsinusoidal Currents SOV/105-59-3-23/27
Containing Second or Third Harmonics

necessary to find the roots of the transcendent equation $x(t) = 0$. For this reason it would be desirable to have diagrams giving the mean value of the harmonics contained in $x(t)$ as a function of amplitude and phase angle. The respective diagrams for the case where $x(t)$ contains the second and third harmonic are presented in this paper. Its application is described and elucidated by an example. There are 2 figures.

ASSOCIATION: Institut mashinovedeniya i avtomatiki AN USSR (L'vov)
(Institute of Machine Building and Automation AS UkrSSR (L'vov))

Card 2/2

SOV/105-60-1-14/25

AUTHOR: Sinitskiy, L.A., Candidate of Technical Sciences (L'vov)

TITLE: Designing Full-wave Rectifier Circuits

PERIODICAL: Elektrichestvo, 1960, Nr 1, pp 68-72 (USSR)

ABSTRACT: For circuits containing a valve, the method for drawing up equations which determine the opening and closing time of the valve during one period of the exterior sinus shaped electromotive force was explained in the papers (Refs 1,2). The computation of circuits with several valves can be traced back in some cases to the computation of an equivalent circuit with one valve. This is illustrated here with the example of a full-wave rectifier circuit for a single-phase current (bridge-circuit and circuit with a neutral conductor). The bridge-circuit, the two fundamentally different working methods possible here and the conditions governing the time for the transition of the valve from one state into the other are investigated first. An equivalent circuit (Fig 2a) with one valve is obtained. The computation of the equivalent circuit according to the method (Ref 1) developed for circuits with a sinus shaped

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electromotive force is given next.- The same task is then solved for a full-wave rectifier circuit with a neutral conductor (Fig 7). It is shown that the bridge circuit and the circuit with a neutral conductor are entirely equivalent between each other, if the direct resistances of the valves in the bridge circuit are half as great as those in the circuit with a neutral conductor. There are 12 figures and 4 Soviet references.

SUBMITTED: September 18, 1957

SINITSKIY, L.A.

Periodic operating conditions in an electric circuit containing a nonlinear resistance. Avtom.kont.i izm.tekh. no.4:54-57 '60. (MIRA 13:8)

(Electric circuits)

KURILOV, Ye.N.; SINITSKIY, L.A.

Frequency error of a rectifying device with a separation capacitance. Izm.tekh. no.9:41-42 S '60. (MIRA 13:9)
(Electric current)

SINITSKIY, L.A.; SHUMKOV, Yu.M.

Satisfactory approximation of the characteristics of transistor diodes. Radiotekhnika 15 no.12:35-42 D '60. (MIRA 14:9)

1. Deystvitel'nyye chleny Nauchno-tekhnicheskogo obshchestva radiotekhniki i elektrosvyazi imeni Popova.
(Transistors)

31459
S/651/61/000/005/002/009
D209/D305

9,2530

AUTHORS: M.A. Rakov, and L.A. Sinitskiy

TITLE: Magnetic frequency dividers

SOURCE: Akademiya nauk Ukrayins'koyi RSR. Instytut mashynoznavstva i avtomatyky, L'viv. Avtomaticheskiy kontrol' i izmeritel'naya tekhnika. No. 5, Kiev, 1961, 71 - 77

TEXT: This article describes the performance and the applications of magnetic frequency dividers. An important version of frequency dividers is an instrument dividing the frequency by two (Fig. 1). The secondary is an oscillating circuit with variable natural frequency. The windings w, connected to an alternating voltage source via a resistance R, and a diode act as both exciting and magnetizing windings. Six differential equations defining the frequency divider are given. These equations are difficult to solve. Therefore this frequency divider was very thoroughly examined experimentally. The regions of stable and reproducible conditions of frequency division and the relationships bet-

4

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31459
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D209/D305

Magnetic frequency dividers

ween power transfer coefficient and circuit parameters were examined. The operation of magnetic frequency divider depends on primary voltage, frequency, load and other parameters. The increase of C results in widening the limits of stable operation but this causes an increase of threshold voltages of the initiation of frequency division. The optimum power transfer coefficient in the circuit under test reaches 20 %. The shape of the output voltage curve is practically independent of the shape of supply voltage waveform, provided the magnets operate in the saturated condition. The divider output voltage does not contain any even harmonics, even if the supply voltage is distorted. This property is important when the divider is used as a source of supply for the second harmonic magnetic modulator. The frequency divider can be used in those cases where a 90° phase shift at halved frequency between two voltages is required. Tests of an arrangement utilizing two frequency dividers for the purpose of quadrature shift proved that the operation did not depend on either frequency, load or paramenter variations with time. There are 6 figures and 3 Soviet-bloc references.

4

SUBMITTED: October 25, 1960

Card 2/3

31461
S/651/61/000/005/004/009
D209/D303

9,2530

AUTHOR: Sinitskiy, L.A.

TITLE: Phase sensitive second harmonic rectifier with silicon voltage stabilizers

SOURCE: Akademiya nauk Ukrayins'koyi RSR. Instytut mashynoznavstva i avtomatyky, L'viv. Avtomaticheskiy kontrol' i izmeritel'naya tekhnika. No. 5, Kiev, 1961, 97 - 99

TEXT: This paper describes the application of silicon voltage stabilizers to phase-sensitive detectors. In order to rectify the second harmonic output voltage of high-sensitivity magnetic amplifiers with frequency doubling, phase sensitive detectors utilizing symmetrical non-linear resistors are normally used. The author suggests the application of silicon voltage stabilizers connected in series opposition. The tests carried out showed that it was comparatively easy to select silicon stabilizers with the same voltage to within 1%. The circuits shown in Fig. 3 were investigated. The circuit 3b is superior to circuit 3a in that the presence of the second harmonic in the controlling voltage does not cau-

Card 1/3

Phase sensitive ...

se zero shift. The highest voltage sensitivity at 2f is obtained with the controlling voltage equal to the breakdown voltage (here 8.5 - 9 volts). The detector zero adjustment is achieved by shunting one of the stabilizers with a linear resistance (a few hundred kiloohms). The zero drift with ± 10 % mains voltage fluctuation and ambient temperature change from room to + 80°C is equivalent to 3 - 4 mV at the input. The instability of the zero corresponds to 0.1 - 015 %. The linearity range can be increased by using either higher voltage silicon stabilizers or several lower voltage ones connected in series. There are 3 figures and 2 Soviet-bloc references

SUBMITTED: October 1, 1960

Card 2/3

BLAZHKEVICH, B.I.; VERKHOVTSEV, V.S.; VOROBKEVICH, V.Yu.; RAKO, M.A.; SINITSKIY, L.A.; SMIRNOV, N.I.; SHKOL'NYY, V.A.

Magnetic semiconductor millivoltmeter for measuring the electromotive force of thermocouples. Avtom.kont. i izm. tekh. no.5:142-148 '61. (MIRA 14:11)
(Millivoltmeter)

SINITSKIY, L.A. [Synyts'kyi, L.A.] (L'vov); SHUMKOV, Yu.M. (L'vov)

Certain qualitative properties of nonlinear circuits with piecewise characteristics of the nonlinear element. Avtomatyka no.5:51-59 '61. (MIRA 14:12)

(Automatic control)

SINITSKIY, L.A.

Designing differential rectifier circuits. Izm.tekh. no.7:43-46 Jl '61. (MIRA 14:6)

(Electric circuits)

S/103/61/022/002/010/015
B019/B060

9.2530 (also 1031)

AUTHORS: Rakov, M. A., Sinitskiy, L. A. (L'vov)

TITLE: Magnetic modulator of the second harmonic with a feed from a quadratic shift diagram

PERIODICAL: Avtomatika i telemekhanika, v. 22, no. 2, 1961, 238-242

TEXT: The construction of magnetic modulators of the second harmonic in which no filters are used in control and exciting circuits, is regarded as a problem of major importance. The second harmonic in the signal circuit can be eliminated by feeding the excitation coils of the magnetic modulator by two current sources, whose voltages are shifted mutually by 90°. The odd harmonics in the control and output coil are, however, not eliminated by this circuit, and it is, therefore necessary to make use of a circuit with four cores (Fig. 1). The two voltages whose frequencies are mutually shifted by 90° are obtained by using a frequency division. A phase shift of 180° is no problem today. If these two voltages are each divided by a frequency divider into two voltages with half the frequency, these two voltages will then have a relative phase relation of 90°. The diagram

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shown in Fig. 2 is indicated as the frequency divider, and it is said to offer the advantage of doing without separate d-c sources. Fig. 3 is a graph illustrating the stability ranges of the frequency division of this circuit in the dimensionless coordinates $\mathcal{E} = U_{1m}/w_1 S\omega B_s$ and $k = R_1 w_2^2/R_H w_1^2$, where $m = R_H C$. The stable ranges presented in this figure have been obtained by generalizing experimental results. The chief advantage of the frequency divider considered here is the fact that the output voltage practically contains no even harmonic. It is especially important that this property does not depend on the form of the feed voltage. Thus, the use of such a frequency divider makes it possible to appreciably reduce requirements as to the form of the feed voltage, and, furthermore, excludes filters in this circuit. Fig. 4 shows the diagram of a modulator with a current feed from a quadratic shift circuit. The circuit was set up on the basis of foregoing findings. The voltage amplification factor amounts to 600 and the power fluctuation in the case of the feed voltage fluctuating by about $\pm$ 10% amounts to 10^{13} watts. There are 4 figures and 6 references: 5 Soviet-bloc.

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9,2530

AUTHORS: Rakov, M. A., and Sinitskiy, L. A. (L'vov)

TITLE: Some properties of second harmonic magnetic modulators with single-phase and two-phase supply

PERIODICAL: Avtomatika i telemekhanika, v. 22, no. 11, 1961, 1513-1520

TEXT: Single-phase and two-phase modulators are analyzed in order to compare their amplification and time constants and to show the advantages of two-phase supply system. Because of the 4 n order of harmonics present in the control circuit, a two-phase modulator must not be identified with a single-phase modulator operating with even harmonic suppression. A two-phase type supplied by quadrature voltages does not need a filter in the control circuit. It is to be compared with a single-phase type provided with a simple choke in the control circuit as both types may be regarded as reasonably frequency independent. The circuit of the single-phase modulator is shown in Fig. 1. Assuming sine wave current and an approximated

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expression for the dynamic permeability, the equation of the control circuit is

$$\frac{dh_2}{d\theta} + \gamma h_2 + \lambda \frac{d}{d\theta}\left[\frac{h_2}{1 + h_m^2 \sin^2\theta}\right] = \gamma h_o \qquad (5)$$

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where $h_2 = \frac{w_2 i_2}{H_s l}$; H_s - field strength at which $\mu_\partial = \frac{1}{2}\mu_o$; l - mean length of the magnetic path; $\theta = \omega t$, $\gamma = \frac{r}{\omega L}$; $\lambda = \frac{L_o}{L}$; L_o - initial inductance of the control winding; $h_m = \frac{w_1 I_m}{H_s l}$; $h_o = \frac{w_2 U_2}{r H_s l}$. Voltage drop on r is assumed 0 for all harmonics $i_2(h_2)$ with the exception of $h_2^{(o)}$. Eq. (5) splits then into

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$$\frac{d}{d\vartheta}\left(h_2 + \lambda \frac{h_2}{1 + h_m^2 \sin^2\vartheta}\right) = 0 \qquad (6)$$

and

$$h_2^{(o)} = h_o \qquad (7)$$

4

By integrating (6) and solving it for h_2, the expression is found for the second harmonic

$$h_2^{(2)} = -2\frac{\alpha}{\beta}\,\frac{1-\sqrt{1-\alpha^2}}{\beta-\sqrt{1-\alpha^2}}\,h_o \qquad (10)$$

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where α and β are functions of λ and h_m. The amplification of the modulator, i.e. the ratio of the EMF of the second harmonic in the output winding to the control voltage is

$$K_U = 8v \frac{1 - \sqrt{1 - \alpha^2}}{h_m^2(\beta - \sqrt{1 - \alpha^2})} \qquad (1.$$

4

where

$$v = \frac{\omega L_0 w_B}{w_2 r}$$

Amplification increases with the choke inductance and reaches maximum when $L \to \infty$; this corresponds to the complete absence of even harmonics in the control circuit. In order to find the time constant Eq. (5) is rewritten in the form of a linear differential equation

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