"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

CATEGORY : CULTIVATED PLANTS. Potatoes. Vegetables. Cucurbits.

ABS. JOUR. : REF ZHUR - BIOLOGIYA, NO. 4, 1959, No. 15666

AUTHOR : Prutescu, Eug.

INST.

TITLE : Achievements in Field of Cabbage Selection in Banat.

ORIG. PUB. : Anuarul lucrar. stiint. Inst. agron. Timisoara, Bucuresti, 1957, 169-188

ABSTRACT : Lines evolved from the local Banat sort were obtained by the selection method. Elite cabbage material was grown in hot houses to shorten the periods of selection. The most valuable forms were subjected to chemical analysis for percentage of dry substance, sugar content, raw protein. The analyses established the high economic value of the sorts of white-head cabbage derived. High level agriculture and proper cultivation of seedlings of cabbage made it possible to obtain crops reaching 700 to 880 centers/hectare.

CARD: -- V.D. Latkin-Turkov

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

PRUUDEN, E.; PRUUDEN, Yu. [Pruuden, J.]; TAMM, B.

Approximate determination of the optimal sequence of a given combination of machining positions. Izv. AN Est. SSR. Ser. fiz.-mat. i tekh. nauk 14 no.3:455-463 '65. (MIRA 18:11)

1. Institut kibernetiki AN Estonskoy SSR.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

OSTROVSKIY, N.N.; PRUZHANSKAYA, I.M.; SKOLUBOVICH, G.V.

Improvement in teaching subjects on communicable diseases and epidemiology in medical institutes; concerning E.P. Uzhinova and V.M.Sukharev's article in Zhurnal mikrobiologii, epidemiologii and immunobiologii no.2, 1962, p.p. 128-129. Zhur. mikrobiol. epid. i immun. 33 no.10:126-127 O'62 (MIRA 17:4)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

PRUZHANSKAYA, I.M.; OSTROVSKIY, N.N.

Atypical forms of acute dysentery. Sov. med. 25 no.8:141-143 Ag '61. (MIRA 15:1)

1. Iz kafedry infektsionnykh bolezney (zav. - dotsent I.M.Pruzhanskaya) Blagoveshchenskogo meditsinskogo instituta (dir. M.K.Nadgeriyev).
(DYSENTERY)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

BUYKO, G.N.; PRUZHANSKAYA, N.A.

Effect of the initial properties of rubber and carbon black on the strength of 100 per cent synthetic rubber tires under operating conditions. Kauch. i rez. 23 no.1:15-16 Ja '64. (MIRA 17:2)

1. Nauchno-issledovatel'skiy institut shinnoy promyshlennosti.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

S/0138/64/000/004/0010/0015

ACCESSION NR: AP4034469

AUTHORS: Buyko, G. N.; Prushanskaya, N. A.

TITLE: The effect of the type of carbon black on vulcanization kinetics and structure of vulcanizates

SOURCE: Kauchuk i rezina, no. 4, 1964, 10-15

TOPIC TAGS: vulcanization. vulcanization kinetics, vulcanizate structure, vulcanizate cross link, vulcanization sulfur binding, butadiene styrene rubber, BSK rubber, natural rubber, carbon black filler, carbon black, rubber fatigue resistance, vulcanizate thermal resistance

ABSTRACT: The authors discuss the effect of various types of carbon black on the formation of cross-links, on the development of sulfur binding in butadiene-styrene and in natural rubber mixtures, and on the thermomechanical and thermo-oxidative resistance of the vulcanizates. The carbon blacks tested included the channel type, the furnace gas type PG-40, and the furnace types KhAF and FIF (from liquid hydrocarbons). The rubber-to-carbon black ratio was 100:50. The concentration of effective cross-links in the vulcanizates was calculated from their maximum swelling in metaxylene. It was found that at 153C the density of

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

ACCESSION NR: AP4034469

the vulcanization network was higher in filled rubbers and that it depended on the nature of the carbon black (the KhAF and FIF induced cross-linking at a much higher rate than other types within the experimental period of up to 280 minutes). The amount of bound sulfur also increased with the progress of vulcanization. It was much higher in filled rubbers, except in those filled with channel carbon black. The carbon blacks from liquid hydrocarbons led in the process of sulfur binding. The filled vulcanizates showed a higher thermomechanical resistance than the nonfilled ones. It was found that carbon black had a deleterious effect on the thermooxidation of natural rubber while enhancing the stability of butadiene-styrene rubber in air at 130C. These experimental findings were confirmed by factory tests on tire rubbers. It was also determined that natural rubber with KhAF carbon black had a higher fatigue resistance than natural rubber containing channel black as filler. The authors discuss the reasons for the specific behavior of the various carbon blacks. Orig. art. has: 5 charts and 2 tables.

ASSOCIATION: Nauchno-issledovatel'skiy institut shinnoy promy*shlennosti (Scientific Research Institute of the Tire Industry)

Card 2/3

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

GOL'DENBERG, L.G., inzh.; PRUZHANSKIY, A.M., inzh.; SHISHKIN, V.I., inzh.

Design of gas and electrically heated glass furnaces. Stek. i ker. 21 no.7:6-11 Jl '64. (MIRA 17:10)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

[illegible], A. M., Eng.

Storage batteries

Storage batteries in use at small and medium capacity electric power stations, Elek. sta. 24, No. 1, 1953.

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

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

[illegible]SKIY, G.P., [illegible].

[illegible] the technology of slate in Dushanbe is slow. Stroi. [illegible] 11 no.8:8 Ag '65. (MIRA 18:9)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

ZARETSKIY, B.I., inzh.; NEYFEL'D, M.S., inzh.; MESHKOV, G.V., inzh.; PRUZHANSKIY, G.D., inzh.

Corrugating and assembling unit designed by N.I.Ershov for making slate without using packing material. Stroi. mat. 6 no.11:25-27 N '60. (MIRA 13:11)

(Roofing, Slate)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

PRUSZCZYNSKI, Maciej

2 cases of leiomyoma of the esophagus. Polski tygod.lek. 15 no.42: 1617-1619 17 O'60.

1. Z Zakladu Anatomii Patologicznej Akademii Medycznej w Lodzi; kierownik: prof.dr med. A.Pruszczynski.
(ESOPHAGUS neopl)
(LEIOMYOMA case reports)

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

PRUZHANSKIY, A.M.

Standard project of a heating industrial boiler system. Prom. energ. 18 no.7:42-43 Jl '63. (MIRA 16:9)

1. Promenergo.

(Boilers)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

PRUZHANSKIY, A. M.

USSR/Electricity - Storage Batteries
Power Stations

Jan 53

"Storage Batteries at Low- and Medium-Power Electric Power Stations,"

Engr A. M. Pruzhanskiy

Elektr Stantsii, No 1, pp 44-46

Article published to stimulate ~~in interests of~~ discussion. Author advocates replacing expensive 220-v batteries used at power stas up to 6-kv for emergency supply of protective circuits, etc., with 24-v storage batteries (2 12-v 6-CTE-144 auto batteries), and so amending "Basic Conditions for Planning Low- and Medium-Power Industrial Thermal Electric Power Stations and Heating Networks" (Osnovnyye polozheniy po proyektirovaniyu promyshlennykh teplovykh elektrostantsiy sredney i maloy moshchnosti i teplovykh setey"), developed by Promenergoproyekt, published in 1946.

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

TRUSHANOVIY, A. T.

"Selection of Chamfering Radius and Groove Size for Crushing Chips in Steel Cutting" (from Machinery, 1944) Stanki I Instrument, 1946, 17, Nos. 2-3

BR-52059019

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

KUTNER, M.B., inzh.; PRUZHANSKIY, D.I., inzh.

Analysis of systems of automatizing scale cars (with summary in English). Stal' 19 no.1:5-9 Ja '59. (MIRA 12:1)

1. Dnepropetrovskiy Gipromez.
(Blast furnaces--Equipment and supplies) (Material handling)
(Automatic control)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

SOV/133-59-1-2/23

AUTHORS: Kutner, M.B. and Pruzhanskiy, D.I., Engineers

TITLE: An Analysis of Systems of Automation of Scale Cars (Analiz sistem avtomatizatsii vagon-vesov)

PERIODICAL: Stal', 1959, Nr 1, pp 5 - 9 (USSR)

ABSTRACT: In the Krivorozhskiy zavod (Krivoy Rog Works) efforts for the purpose of automating scale cars were in progress even before the war. In the NTMK (Nizhniy Tagil Met. Combine) such efforts have been in progress jointly with the UPI (Urals Polytechnical Institute) from 1948 onwards, in the Dnepropetrovsk Gipromez jointly with the imeni Dzerzhinskogo Works from 1949 onwards, in the Kuznetskiy metallurgicheskiy kombinat (Kuznetsk Metallurgical Combine) (KMK) from 1950 onwards. "Elektroprivod" jointly with "Azovstal'", the DO TPEP (Dnepropetrovsk Division of Tyazhpromelektro-proyekt), the OF SKBIM (Odessa Branch of the Special Design Office for Experimental Machinery) jointly with the zavod im. Starostina (imeni Starostin Works) have worked on this problem since 1954-1955. The automation systems of KMK and UPI-NTMK have been in operation for some time. The authors deal with the subject matter under the following chapter headings: the programme of loading the charge materials; features of loading charge materials;

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

An Analysis of Systems of Automation of Scale Cars SOV/133-59-1-2/23

arrangement of the programming apparatus; command equipment and equipment for fixing the weight of the materials; automation of the transportation; comparative analysis of 5 automation systems, one of which is available in 2 variants (table, p 7). The TsKB "Elektro-privod" system is considered to be the most complicated in respect of the quantity of equipment required but best as regards its technological potentialities. The most simple system in respect of equipment is the KMK system; the technological potentialities of this system are somewhat lower than those mentioned above. The most serious disadvantage of this system is the low accuracy of weighing and a complicated programming of collecting the burden. The other systems discussed are considered to be inferior. There is 1 table. P.D. Pesin, N.N.Podkantor and N.S. Fil' also participated in the work.

ASSOCIATION: Dnepropetrovskiy Gipromez (Dnepropetrovsk Gipromez)

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

PRUZHANSKIY, Konstantin Grigor'yevich; BABOSHKO, Grigoriy Romanovich; SVET, Ye.B., red.; KUZNETSOVA, O.Ya., tekhn.red.

[Protecting the area of earthwork from freezing] Predokhranenie zemlianykh zaboev ot promerzaniia. Cheliabinsk, Cheliabinskoe knizhnoe izd-vo, 1963. 35 p. (MIRA 17:3)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

SKIY L.YU.

SOV/ 30-58-6-33/45

AUTHORS: Artobolevskiy, I. I., Member, Academy of Sciences, USSR,
Bessonov, A. P., Candidate of Technical Sciences,
Khrushchov, M. M., Doctor of Technical Sciences,
Pruzhanskiy, L. Yu.

TITLE: The Development of Machine Science (Razvitiye nauki o mashinakh)

PERIODICAL: Vestnik Akademii nauk SSSR, 1958, 28, Nr. 6, pp. 118-122 (USSR)

ABSTRACT: At the Institute of Machine Science of the AS USSR, the second All Union Conference on essential problems of the theory of machines and mechanisms took place from March 24 - 28. The task of this conference was the discussion of concrete results obtained by Soviet and foreign scientists in this field in the course of recent years, as well as to determine the main directions of the further development of this science. Besides Soviet scientists from various towns of the USSR, also scientists of the other peoples' republics took part. More than 80 reports and communications were heard. The first plenary meeting was opened by I. P. Bardin, Member, Academy

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

of Sciences. In his report A. A. Blagonravov dealt with the importance of machine science for solving the problems in the automatization of production processes. I. I. Artobolevskiy, Member, Academy of Sciences, gave a survey of the present stage of the machine and mechanism theory. N. G. Bruyevich, Member, Academy of Sciences, reported on the main trends in the development of the science of the accuracy in machine- and apparatus-building. V. Likhtenkhel'dt characterized in short the stage of development of the theory of mechanisms in the German Democratic Republic, D. Manzheron reported on the works of Romanian scientists in this field. I. Shreyter (Czechoslovakia), Ya. Oderfel'd (Poland) and G. Kalitsin (Bulgaria) delivered short welcoming addresses. The work of the conference was carried out in 5 sections: analysis and synthesis of mechanisms; machine dynamics; theory of accuracy in machine and apparatus building; theory of automatic machines; theory of machine drives. Reports dealing with the preset control of metalworking machines met with great interest. At the end of the conference it was found that the research carried out is closely connected with the problem of automatization. It was

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noticed, too, that not all trends in machine theory show a uniform development. The most important problems for the future were outlined. Urgent problems concerning the method of teaching mashine theory as a subject were discussed with the representatives of the Chairs of Universities.

The third All Union Conference on friction and wear in machines was organized by the Institute for Machine Science of the AS USSR in Moscow, and was held from April 9 - 15. It was attended by representatives of the ministries, the councils of national economy, the scientific research institutes, the universities and industrial enterprises of various cities of the USSR, as well as by the foreign scientists F. Dukati and E. Lekhner (Hungary), V. N. Konstantinesku and N. Tipey (Romania) and I. Sgon (Czechoslovakia). The conference was opened by A. A. Blagonravov, Member, Academy of Sciences. Further reports were delivered by:

1) Ye. M. Gut'yar on the present trends in the development of the theory on hydrodynamic lubrication.

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2) G. V. Vinogradov on some new problems in the field of lubrication and lubricating materials.

3) B. V. Deryagin on modern lubrication problems.

4) I. V. Kragel'skiy on the development of the sciences of dry friction.

5) M. M. Khrushchov on modern trends in the development of the science of wear and resistance to wear.

The work of the conference took place in 5 sections: hydrodynamic theory on lubrication and sliding surfaces; lubrication and lubricating materials; dry friction and limit friction; wear and resistance to wear; friction and antifriction materials. The conference expressed the wish that a national committee on friction and wear in machines be formed. The necessity of working out a terminology in the field of friction and wear was stressed. At the Universities for Machine Building a course of lectures on friction, wear and lubrication of machines is to be introduced. It was also suggested to establish branches of the seminary, of the Institute of Machine Science dealing with this field

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The Development of Machine Science SOV/30-58-6-33/45

at other centers.

ASSOCIATION: Institut mashinovedeniya
(Institute of Machine Engineering)

1. Machines--Theory 2. Machines--Design

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

[illegible], I. Ya. Cand. Tech. Sci.

Dissertation: "Investigation of the Effect of Wear and Relaxation on the Elastic Properties of Piston Rings." Inst of Machine Science, Acad Sci USSR, 24 Dec 47.

SO: Vechernyaya Moskva, Dec, 1947 (Project #17836)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

PRUZHANSKIY, L. Yu.

"Relaxation in Cast Piston Rings." Symposium No IV, "Friction and Wear in Machines," Academy of Sciences USSR, 1949.

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

PRUZHANSKIY, L. YU.

K itogam Vtoroi Vsesoiuznoi Konferentsii po treniiu i iznosu v mashinakh. (Vestn. Mash., 1950, no. 3, p. 70-74)

Results of the Second All-Union Conference on Friction and Wear of Machines.

DLC: TN4.V4

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

PRUZHANSKIY, L. Yu.

Cylinders

"Consultation on the wear of cylinders and piston rings of a tractor-type engine." Vest. mash. 32 no. 3, 1952.

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

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

PRUZHANSKIY, L.Yu., kandidat tekhnicheskikh nauk.

Sulfidization used in machinery industry. Vest.mash. 37 no.6:87-88 Je '57. (MIRA 10:7)

(Sulfur) (Cementation (Metallurgy))

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

AUTHOR: Pruzhanskiy, L. Yu. 129-58-5-4/17

TITLE: On Calculating the Deformation of Bimetallic Bushings During Stamping (K raschetu deformatsii bimetallicheskikh vkladyshey pri shtampovke)

PERIODICAL: Metallovedeniye i Obrabotka Metallov, 1958, Nr 5, pp 13-16 (USSR)

ABSTRACT: After stamping of blanks of thin walled bimetallic bushings for automobile engines, the diameter in the division plane will be larger or smaller than the diameter of the die in which the stamping is carried out. Thus, in mass produced blanks made of steel strip clad with babbit the diameter increases; however, during experimental production of bushings made of bimetallic rolled strip consisting of a steel base and a plastic aluminium alloy, it decreases. From the technological point of view only a certain increase in the diameter is permissible but not a decrease. Literature does not contain formulae for determining the elastic deformation of a bimetallic bushing after stamping and, therefore, in this paper an attempt is made to calculate approximately the deformations of bushings after stamping and also the residual stresses occurring in such bushings. The process of stamping of

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129-58-5-4/17

On Calculating the Deformation of Bimetallic Bushings During Stamping

bushings is considered as one taking place under conditions of a uniaxial stress state without taking into consideration the widening during upsetting, external friction and the influence of the speed of impact on the changes in the stresses. To simplify calculation it was assumed that the change in the shape of the blank consists purely of plastic bending without hardening until the blank assumes the same radius as the die and this is followed by plastic upsetting at the face which is uniform along the width of the blank. The calculations are based on the diagrams of the virtual stresses during static tension which was assumed as being the same during compression and tension. If the geometrical dimensions of the blank and the mechanical characteristics of the materials of the bimetal are known, it is possible to calculate by means of the derived equations, Eqs.(3-6), approximately the change in the radius of curvature of the bushing and the residual stresses occurring in it after stamping. If the change in the radius of curvature of the blank after stamping is known, the residual stresses can be calculated by means of Eqs.(2), (4), (5) and (6)

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

129-58-5-4/17

On Calculating the Deformation of Bimetallic Bushings During Stamping

which are given in the paper. Verification has shown that for steel-aluminium blanks the radius should decrease, whilst for the steel-BT babbit combination the radius should remain unchanged or increase. These results are confirmed by practical experience.
There are two figures.

AVAILABLE: Library of Congress.

Card 3/3

1. Bushings-Manufacture 2. Clad steel-Applications
3. Bushings-Stamping deformation-Mathematical analysis

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

PRUZHANSKIY, L.Yu., kand. tekhn. nauk.

Thin-walled bushings made bimetallic steel-aluminum alloy bands.
Vest. mash. 38 no.3:36-37 Mr '58. (MIRA 11:2)
(Sheet-metal work)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

PRUZHANSKIY, L.Yu., kand.tekhn.nauk

Third all-Union conference on the friction and wear of machinery. Vest. mash. 38 no.9:80-83 S '58. (MIRA 11:10)
(Machinery) (Mechanical wear)

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

PRUZHANSKIY, L.Yu. [translator]

[New works on friction and wear; a collection of reports at the London Conference on Lubrication and Wear, 1957] Novye raboty po treniiu i iznosu; sbornik dokladov Londonskoi konferentsii po smazke i iznosu 1957 g. Moskva, Izd-vo inostr.lit-ry, 1959. 258 p. (MIRA 13:6)

1. Conference on Lubrication and Wear, London, 1957. (Lubrication and lubricants--Congresses)

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PHASE I BOOK EXPLOITATION SOV/3948

Akademiya nauk SSSR. Institut mashinovedeniya

Treniye i iznos v mashinakh; sbornik XIV (Friction and Wear in Machinery; Collection of Articles, no. 14) Moscow, Izd-vo AN SSSR, 1960. 333 p. Errata slip inserted. 3,000 copies printed.

Resp. Ed.: M. M. Khrushchov, Doctor of Technical Sciences, Professor; Ed. of Publishing House: V. A. Giryayeva; Tech. Ed.: G. A. Astaf'yeva; Editorial Board: Ye. M. Gut'yar, Doctor of Technical Sciences, Professor; A. K. D'yachkov, Doctor of Technical Sciences, Professor; I. V. Kragel'skiy, Doctor of Technical Sciences, Professor; A. D. Kuritsyna, Candidate of Technical Sciences; L. Yu. Pruzhanskiy, Candidate of Technical Sciences; and M. M. Khrushchov, Doctor of Technical Sciences, Professor.

PURPOSE: The book is intended for scientific research workers and designers in the machine industry.

COVERAGE: The recent works of Soviet scientists on the subject of friction and wear in machinery are presented. Problems discussed include abrasive wear, the real area of contact surface, wear resistance and antifriction properties of some bronze and brass materials, the effect of hot jets of gases on surface layers of steel, and seizure and movements of journals in bearings. Brief biographical sketches and bibliographies of the works of Ye. M. Shvetsova, V. F. Lorents, and L. V. Yelin are presented. Bibliographies on friction, wear, and lubrication for 1956 and 1957 compiled by Ye. O. Vil'dt are also presented. References accompany several of the articles.

Lomakin, V.S., and V.I. Savchenko (Deceased). Investigation of Wear Resistance of Enamel Coatings as Applied to the Life [Extension] of Machine Parts 63

Garkunov, D.N. Investigation of the Wear of Conjugated Parts caused by Reciprocal Rotary Motion 93

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APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

PRUZHANSKIY, L. Yu.

Determining internal stresses in thin-walled bimetallic specimens. Tren.i izn. mash. no.14:240-246 '60. (MIRA 13:8)
(Laminated metals--Testing)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

PRUZHANSKIY, L.Yu.

Investigating pore closing of a porous bronze subjected to friction. Tren. i izn. v mash. no.17:96-102 '63. (MIRA 17:10)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

PRUCHANSKIY, I.Yu. (Moskva)

Determining the impact toughness of hard welding materials. Mashinovedenie no.2:100-104 '65. (MIRA 18:8)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

SHRUSHCHOV, M.M., zasluzhennyy deyatel' nauki i tekhniki, doktor tekhn.nauk, prof.; BABICHEV, M.A., kand.tekhn.nauk; BERKOVICH, Ye.S., kand.tekhn. nauk; PRUZHANSKIY, L.Yu., kand.tekhn.nauk

Determining the wear resistance of hard facings. Vest.mashinostr. 45 no.2:34-39 F '65. (MIRA 18:4)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

KHRUSHCHOV, M.M., doktor tekhn. nauk, prof., otv. red.; VINOGRADOV, Yu.M., red.; KUGEL', R.V., red.; MATVEYEVSKIY, R.M., red.; PRUZHANSKIY, L.Yu., red.; ORPIK, S.L., red.; POLYAKOVA, T.V., tekhn. red.

[Methods for wear testing]Metody ispytaniia na iznashivanie; trudy. Moskva, Izd-vo Akad.nauk SSSR, 1962. 237 p. (MIRA 15:12)

1. Soveshchaniye po metodam ispytaniya na iznashivaniye, Moscow, 1960.
(Testing machines) (Radioisotopes--Technological innovations)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

35980

S/711/60/014/000/010/013
D262/D301

10.8100

AUTHOR: Pruzhanskiy, L.Yu.

TITLE: Calculating internal stresses in thin-walled bimetallic specimens

SOURCE: Akademiya nauk SSSR. Institut mashinovedeniya. Treniye i iznos v mashinakh, v. 14, 1960, 240 - 246

TEXT: A method is demonstrated of determining the internal stresses in thin bimetallic plates (steel and plastic bearing material) by elimination of small layers of the material of the same plate, first from the outer part and then from the inner part. The method of calculation is based on the procedure developed by N.N. Davidenkov, but to determine the internal stresses in the bearing material, the stresses in this material, caused by the previous removal of the layers of the steel base, are taken into account. It is stated that this method eliminates the deficiences of the original method, as the determination of the internal stresses in both materials is carried out successively on the same specimen. There are 2 figures.

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PRUZHANSKIY, L.Ya.

Relieving of tightness and the wedging of a bimetallic bearing bushing caused by heating and cooling. Tren.i izn.mash. no.151: 392-419 '62. (MIRA 15:4)

(Bearings (Machinery))

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

PRUZHANSKIY, L.Yu.

Measurement of deflections in determining internal stresses in thin-walled specimens. Zav.lab. 27 no.9:1138-1139 '61. (MIRA 14:9)

1. Institut mashinovedeniya AN SSSR.
(Materials--Testing) (Strains and stresses)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

33008
S/663/61/000/000/007/009
D040/D112

158360

AUTHOR: Pruzhanskiy, L. Yu.

TITLE: Friction tests of teflon

SOURCE: Plastmassy kak antifriktsionnyye materialy. Inst. Mashinoved. AN SSSR. Moscow, Izd-vo AN SSSR, 1961, 74-79

TEXT: The article presents data obtained in friction and wear tests of teflon on steel at a constant load and at a gradually increasing load, and under conditions of dry friction and copious lubrication with B -2 (V-2) spindle oil. For this purpose, an Amsler test machine, modified for testing plastics, was used. The tests for friction and wear were conducted with segment-shaped teflon specimens and a short steel shaft; a 0.13-mm-thick film of teflon was also used for the friction tests. The plastic segments were held in a self-adjusting ball holder. Wear tests without lubrication showed that the wear of teflon varies in direct proportion to the duration of the test at a given load. The wear products had the form of flakes. Reduction of the thickness of the specimen as a result of the wear was accompanied.

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D040/D112

Friction tests of teflon

as in the case of the tests with lubrication, by thickening, so that the specimen assumed the shape of a trapezium. Under these conditions, but without lubrication, the mean friction factor was 0.20-0.25. Conclusions: (1) The friction factor in dry tests at specific loads from 4.2 to 34.1 kg/cm^2 and a sliding velocity of 0.37 m/sec was 0.20-0.25; (2) The observed regularity of wear in dry friction in the load range 4.2-34.1 kg/cm^2 is analogous with the wear process of metallic bearing materials, i.e. the wear is directly proportional to the specific load and the length of the friction path; (3) The thickness of teflon specimens has a great effect on the permissible load, which is due to the low heat conductivity and low mechanical strength of this plastic. A thin film of teflon applied to metal bears the highest load; (4) In laboratory experiments with a 0.13 mm film of teflon on a steel base, the maximum possible specific load was over 200 kg/cm^2 at a sliding velocity of 0.37 m/sec when V-2 spindle oil was used as a lubricant. There are 6 figures and 2 tables.

Card 2/2

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

S/124/61/000/009/053/058
D234/D303

AUTHOR: Pruzhanskiy, L.Yu.

TITLE: A method of determining internal stresses in thin-walled bimetallic specimens

PERIODICAL: Referativnyy zhurnal. Mekhanika, no. 9, 1961, 46, abstract 9 V427 (V sb. Treniye i iznos v mashinakh. 14, M., AN SSSR, 1960, 240-246)

TEXT: In determining residual stresses in a bimetallic plate by the usual method of successive etching of layers there appears a great inaccuracy if the elastic modulus of the layer is much smaller than that of the basic material. This takes place e.g. in the coating of steel with a soft bearing alloy, when the deflections in etching the coating are small and do not allow accurate measurement. The author offers a more rational method, when initially for greater thickness the plate is etched on the side of the steel base and then when etching the soft layer, the deflections due

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A method of determining...

to previous thinning of the steel base are sufficiently large for accurate measurement. [Abstracter's note: Complete translation]

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

S/032/61/027/009/008/019
B117/B101

AUTHOR: Pruzhanskiy, L. Yu.

TITLE: Flexure measurements during determination of internal stresses in thin-walled specimens

PERIODICAL: Zavodskaya laboratoriya, v. 27, no. 9, 1961, 1138-1139

TEXT: A contactless method for flexure measurements of plates is proposed. The flexure is determined on the basis of changes in form of an originally straight-lined scratch, occurring during the removal of metal layers. The front of the specimen is scratched in the place of the future bend. A ПМТ-3 (PMT-3) device is used for scratching the specimen and for determining the maximum flexure. First, an accurate surface plate is mounted on the frame of the device, parallel to the axis of longitudinal displacement of the frame. Next, the indenting tool is lowered onto the front of the specimen, an indentation developing thereby. This is the start of the scratch. The frame is now moved steadily in one direction, the distance having to be smaller than the length of the specimen (10-12 mm). The straightness of the resulting scratch as well as its change in form due to

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the removal of layers are determined along the specimen in intervals of 0.5 mm on the eyepiece micrometer. For this purpose, the frame with the specimen is displaced longitudinally. The intersection of the eyepiece-micrometer crosshairs coincides with the center of the scratch, or with one of their sides. The position of the scratch perpendicular to the surface plate edge is determined. Measurement results are the more accurate, the narrower the scratch and the more pointed its edges when emerging to the surface. The method proposed was used for determining the flexure of a bimetallic plate. It consisted of a steel base with a thin aluminum alloy coating. The total thickness of the specimen was ~2 mm in the flexure plane. The specimen was 10 mm wide and 20 mm long. The scratch must be protected from damages during removal of the layers. Measurements should be made at constant temperature of the medium. There is 1 figure.

ASSOCIATION: Institut mashinovedeniya Akademii nauk SSSR (Institute of the Science of Machines of the Academy of Sciences USSR)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

PRUZHANSKIY, M.M.

Equivalent electric parameters of piezo-quartz plates excited on harmonics. Radiotekhnika 12 no.8:42-53 Ag '57. (MIRA 10:10)
(Oscillators, Crystal)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

PRUZHANSKIY, M.M.

Bridge circuits of quartz harmonic oscillators. Radiotekhnika 13 no.6:29-46 Je '58. (MIRA 11:6)

1. Deystvitel'nyy chlen Vsesoyuznogo nauchno-tekhnicheskogo obshchestva radiotekhniki i elektrosvyazi im. A.S. Popova.
(Oscillators, Crystal)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

GAVRA, T.D.; PRUZHANSKIY, M.M.

Study of convexo-convex and plano-convex piezoelectric quartz resonators excited by the fundamental frequency and odd harmonics. Radiotekhnika 17 no.12:60-68 D '62. (MIRA 15:12)

1. Deystvitel'nyye chlen Nauchno-tekhnicheskogo obshchestva radiotekhniki i elektrosvyazi imeni Popova.
(Electric resonators)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

ACC NR: AP6035851 SOURCE CODE: UR/0413/66/000/020/0058/0059

INVENTOR: Pruzhanskiy, M. M.

ORG: none

TITLE: A multistage quartz oscillator in the superhigh frequency band Class 21, No. 187093

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 20, 1966, 58-59

TOPIC TAGS: crystal oscillator, transistorized oscillator, shf oscillator

ABSTRACT: An Author Certificate has been issued for a transistorized multistage quartz crystal oscillator. A balanced reactive bridge is connected between the individual oscillator stages (see Fig. 1) to

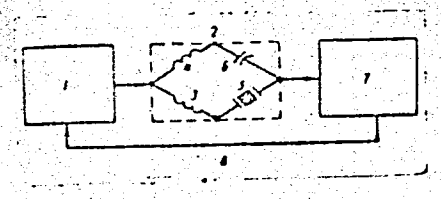

Fig. 1. Multistage crystal oscillator 1 - First oscillator stage; 2 - reactive bridge; 3,4 - circuit reactances; 5 - quartz crystal; 6 - neutrodyne capacitor; 7 - second oscillator stage; 8 - feedback loop.

Card 1/2 UDC: 621.373.521.13

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

ACC NR: AP6035851

ensure stable oscillator operation for random parameter changes in the oscillating circuit at higher mechanical harmonic excitation of the quartz resonator. Two of the bridge arms contain the quartz crystal and a neutrodyne capacitor; the other two arms contain the inductive or capacitive components of the oscillating circuit.

SUB CODE: 09/ SUBM DATE: 19May65

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

Pruzhanskiy, M.M.

USSR retain

621.316.726 : 621.373.421.13

3418. FREQUENCY STABILIZATION OF V.H.F. OSCILLATORS BY THE METHOD OF HARMONIC EXCITATION IN QUARTZ. M.M.Pruzhanskii.

Radiotekhnika, Vol. 11, No. 12, 15-27 (1956). In Russian.

The development of methods relating to the problem of direct stabilization of v.h.f. oscillators using quartz crystals is reviewed. Several systems are suggested where the static capacitance of the quartz is compensated by an inductance; bridge methods which permit high-order harmonic excitation are also considered and their circuits given. The methods of harmonically excited oscillators, including those in which the static capacity is not compensated, are classified and compared.

V.V.Zakharov

4

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

[illegible]

M. N. Pruzhanskiy, in a paper "Stabilization of Short and Ultrashort-Wave Emitters by a Method of Quartz Excitation on Harmonics", discussed in detail the peculiarities of using quartz crystals as frequency stabilizer, gave a theoretical analysis and a comparative evaluation of compensating and of bridge circuits of harmonic quartz emitters, and derived calculation formulas.

Presented at the Eleventh Scientific and Technical Session of the Leningrad Section VTORiE (Scientific and Technical Society for Radio and Electricity) imeni A. S. Popov, dedicated to the celebration of Radio Day, Leningrad, 16-24 Apr 56.

Radiotekhnika, No. 7, 1956.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

108-13-6-3/

AUTHOR: Pruzhanskiy, M.M.

TITLE: Bridge Circuits of Quartz Harmonic Vibration Generators (Mostovyye skhemy garmonikovykh kvartsevykh generatorov)

PERIODICAL: Radiotekhnika, 1958, Vol 13, Nr 6, pp 29-46 (USSR)

ABSTRACT: The analysis of the operation of bridge circuits of quartz harmonic vibration generators is dealt with. The analysis of the operation of compensation circuits of quartz harmonic vibration generators will be dealt with by a separate article. The analysis was based upon the quasilinear method. This made it possible to describe the results obtained by the investigation in a simple and comprehensive manner. As shown (Ref 4) this method can be applied not only for the determination of the amplitude (with an accuracy that is considered satisfactory in practice), but also for the determination of the frequency of the oscillations produced in the quartz generator. The theory developed here serves as a basis for the calculation of conditions for the determination of the amplitude and frequency of the oscillations produced. It explains the influence exercised by the modification of circuit parameters upon the amplitude and the aforementioned

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frequency in the case of quartz harmonic vibration generators with inductive-capacitive and purely capacitive bridge in the feedback circuit. On the strength of the results obtained by the analysis and the data given in tables the following was established: 1.) In bridge circuits of quartz harmonic vibration generators the frequency of the oscillations produced is equal to or nearly equal to the frequency of the continuous quartz resonance, which entails a high degree of firing ability and therefore also frequency stability. 2.) In the circuits Nr 1 and 4 the oscillatory circuit is equivalent to the capacitive resistance ($\operatorname{ctg} \varphi_{equivalent} < 0$) and in Nr 2 and 3 to the inductive resistance ($\operatorname{ctg} \varphi_{equivalent} > 0$). 3.) Circuits Nr 1 and 4 make it possible for the generator to operate with the frequency of continuous resonance. 4.) In the circuits investigated transition from the excitation of a mechanical harmonic vibration of the quartz plate to others by means of a modification of the tuning of the circuit condenser is brought about without changing the tuning of the bridge elements, which determines the properties of the circuit domain. 5.) A purely oscillatory mode of operation of generators Nr 1 and 2 is warranted at values $\Delta \geqslant 0$ and of Nr 3 and 4 at values $\Delta \leqslant 0$. Δ is a dimensionless quantity and

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characterizes the extent of deviation from bridge equilibrium. 6.) The amplitude of the oscillations produced, which is characterized by a_i, is inversely proportional to the quartz resistance r_q, with conditions otherwise remaining the same. The lower r_q in the excited harmonic vibration, the greater the amplitude of oscillation. 7.) The ratios obtained here hold both in the case of a quartz excitation with basic frequency and also in the case of one with harmonic vibrations. There are 7 figures, 7 tables, and 4 references, 4 of which are Soviet.

SUBMITTED: September 17, 1957

1. Electric bridges--Circuits 2. Electric bridges--Performance
3. Harmonic oscillators--Equipment 4. Harmonic oscillators--Theory

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

MEASUREMENT & TEST GEAR

"Equivalent Electric Paremeters of Quartz Plates Excited at Higher Harmonics", by M.M. Pruzhanskiy, Radiotekhnika, No 8, August 1957, pp 42-53.

The authors gives a description and the theoretical analysis of two independent methods of measuring the equivalent parameters of quartz operating at higher harmonics. The first method involves the substitution of the quartz crystal in an oscillating circuit, and the second involves a resonant method with the aid of a Q meter. The results of the measurement of the quartz parameters are given. It is shown that the quality of the quartz first improves with increasing number of harmonics, reaches a maximum, and upon further increase in the number of harmonics it begins to give poor performance. Refers to standard works by Vigoureux, Cady, and Mason.

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

PRUZHANSKIY, M.M.

108-8-5/10

AUTHOR: Pruzhanskiy, M.M.

TITLE: Equivalent Electric Parameters of Piezoquartz Plates which are Excited by Harmonic Oscillation (Ekvivalentnyye elektricheskiye parametry p'yezokvartsevykh plastin, vozbuzhdayemykh na garmonikakh)

PERIODICAL: Radiotekhnika, 1957, Vol 12, Nr 8, pp 42-53 (USSR)

ABSTRACT: A description and a theory of two independent measuring methods for the measuring of equivalent quartz parameters are given. According to the first method, quartz is replaced by its equivalent, and in the case of the second method the resonance process for measuring the parameters of quartz by means of a Q-meter is applied. The measuring results admit of the following conclusions: 1.) The values of the blind parameters agree with the data of the theory of the odd-harmonic crystal. 2.) The values of effective parameters, on the other hand, do not agree with those of the aforementioned theory, because the latter does not divide up the frictional component F among individual components (interior friction, friction in the surface layer, losses to acoustic radiation, friction on places where parts are fastened, etc.). The measuring results show that at first the quality of quartz rises with the ordinal number of the harmonic oscillations, attains its maximum, after which,

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

S/108/62/017/012/009/010
D413/D308

9.2121

AUTHORS: Gavra, T.D. and Pruzhanskiy, M.M., Members of the Society (see Association)

TITLE: Investigation of double- and plano- convex quartz piezoelectric resonators excited at the fundamental and odd harmonics

PERIODICAL: Radiotekhnika, v.17, no.12, 1962, 60-68

TEXT: Although AT-cut double- and plano-convex quartz resonators are now being widely used for high-stability reference oscillators, since they can be made with higher Q than plane-parallel ones, no systematic study of their properties has yet been published and the value of harmonic excitation remains an open question. The authors have made up and tested five basic types of resonator cut to a 1 Mc/s fundamental, and give in table form the equivalent parameters of several samples (oscillation frequency, resistance, characteristic impedance, inductance and Q) at the fundamental and

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3rd, 5th and 7th harmonics. They also give spectrograms for three of the types. Detailed conclusions are drawn about the behavior of the various resonators, their suitability for use in various applications (in particular, the possiblity of using plano-convex resonators excited at the third harmonic in oscillators without tuned circuits), and the directions in which development is needed. The treatment is empirical, and the authors regret the lack of any suitable theory for the oscillation of these resonators. They thank V.A. Romanov and M.D. Katsenel'son for co-operation. There are 1 figure and 3 tables.

ASSOCIATION: Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi im. A.S. Popova (Scientific and Technical Society of Radio Engineering and Electrical Communications imeni A.S. Popov) [Abstractor's note: Name of association was taken from first page of journal.]

SUBMITTED: March 12, 1962

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

PRUZHANSKIY, M.M.

621.316.726 : 621.373.421.13

3416. FREQUENCY STABILIZATION OF V.H.F. OSCILLATORS BY THE METHOD OF HARMONIC EXCITATION IN QUARTZ. M.M.Pruzhanskii. Radiotekhnika, Vol. 11, No. 12, 15-27 (1956). In Russian.

The development of methods relating to the problem of direct stabilization of v.h.f. oscillators using quartz crystals is reviewed. Several systems are suggested where the static capacitance of the quartz is compensated by an inductance; bridge methods which permit high-order harmonic excitation are also considered and their circuits given. The methods of harmonically excited oscillators, including those in which the static capacity is not compensated, are classified and compared.

V.V.Zakharov

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

PRUZHANSKIY, S.V., starshiy nauchnyy sotrudnik

New advances in the organizational forms of fluorography. Zdrav. Ros. Feder. 4 no. 10:34-36 O '60. (MIRA 13:10)

1. Iz Gosudarstvennogo nauchno-issledovatel'skogo rentgeno-radiologicheskogo instituta Ministerstva zdravookhraneniya RSFSR (direktor - doktor med. nauk I.G. Lagunova).
(DIAGNOSIS, FLUOROSCOPIC)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

PROTOPOPOV, S.V.; KRONGAUZ, A.N.; URANOV, Ye.I.

X-ray doses sustained during preventive fluoroscopic examinations. Vest. rent. i rad. 39 no.1:54-59 Ja-F '64. (MIRA 18:1)

1. Orgmetodotdel (zav. - prof. I.M. Yakhnich) i otdel klinicheskoy dozimetrii (zav. - dotsent A.N. Krongauz) Gosudarstvennogo nauchno-issledovatel'skogo rentgeno-radiologicheskogo instituta Ministerstva zdravookhraneniya RSFSR, Moskva.

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

[illegible], S. V., [illegible], V. V. and [illegible], A. A.

"Fluorograph FKF-1." Trudy Tsentral'nogo Nauchno-Issled Inst Rentgenol i Radiol im V. M. Molotova, Vol. 8, pp 32-35, 1951.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

S/716/61/015/000/011/019
D207/D301

AUTHORS: [illegible], V. P. and Druzhin, A. V.

TITLE: Investigating the existing methods of measuring permeability of toroidal samples

SOURCE: Akademiya nauk Ukrayins'koyi RSR. Instytut elektrotekhniky. Sbornik trudov, v. 18, 1961. Voprosy magnitnoy izmeroniy, 90 - 95

TEXT: The authors measured inductance of toroidal ferromagnetic samples [Abstracter's note: Material not specified, probably ferrite] using a Q-meter at frequencies of 1 - 5 Mc/s. The found that the usual formula for calculation of permeability,

$$\mu = \frac{L l_{\text{[illegible]}} \cdot 10^4}{4\pi w^2 S} \qquad (2)$$

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where L is the inductance, l_m is the mean length of the toroid, w is the number of turns and S is the cross-section of the toroid, was inaccurate because the value of μ depended strongly on the number of turns and whether these turns were distributed uniformly over the toroid or concentrated in one place. A better value of μ was obtained from $\mu_1 = L_1 L_0$, where L_1 is the inductance of a coil with a ferromagnet in it and L_0 is the inductance of the same coil without a core. Improved accuracy was obtained by using a large number of turns and avoiding tapping connections. There are 4 figures and 3 references: 2 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: P. Lombardini and R. Schwart, Electr. Manufact., 63, no. 4 (1959).

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

KARPENKO, V.P.; PRUZHIN, A.V.

Study of the existing methods for measuring the magnetic permeability of circular objects. Sbor.trud.Inst.elektrotekh. AN URSR no.18:90-95 '61. (MIRA 15:2)

(Magnetic materials--Measurement)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

PRUZHINER, V.L., inzh.

Timbering horizontal workings with steel mesh. Shakht. stroi. 4 no.12:24-26 D '60. (MIRA 13:12)

(Mine timbering)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

PRUZHINER, V.L., inzh.

Means of improving sewer tunneling. Gor. khoz. Mosk. 37 no.11:7-9 N '63. (MIRA 17:1)

1. TSentral'nyy nauchno-issledovatel'skiy i proyektno-konstruktorskiy institut podzemnogo i shaktnogo stroitel'stva.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

LEVENETS, N.P.; SAMARIN, A.M.; SEMIKIN, I.D.; KAZAKOV, V.E.; BEMBINEK, Ye.I.; PANYUKHNO, L.G.; SVINOLOBOV, N.P.; AVERIN, S.I.; SMIRNOV, V.M.; ZELENSKIY, V.D.; LAYKO, B.G.; TISHCHENKO, O.I.; OKHRIMOVICH, B.P.; DANILOV, A.M.; TISHKOV, Yu.Ya.; PANOV, M.A.; MARKELOV, A.I.; PETROV, A.K.; VASILEVSKIY, P.A.; PASYUK, K.I.; NESTEROV, V.I.; KHRUSTAL'KOV, L.A.; GLAZKOV, V.S.; MAKAGON, V.G.; FOMIN, G.G.; TRISHCHENKO, V.D.; KORZH, V.P.; SUYAROV, D.I.; ARSEYEV, A.V.; PAVLYUCHENKO, A.A.; ZHADAYEV, V.G.; KONDORSKIY, R.I.; MOROZOVA, I.A.; KOCHETOV, V.V.; PRUZHINER, V.L.; MALEVICH, I.A.; MALIOVANOV, D.I.; ZAKOVRYASHIN, I.I.; NOVSKIY, I.S.; NOVIKOVA, V.P.; GRISHIN, K.N.; MOSKOVSKAYA, M.L.; KORNEYEV, B.M.

Inventions. Met. i gornorud. prom. no.3:75-76 My-Je '64. (MIRA 17:10)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

RYBALKIN, G.I., inzh.; SHARAPOV, V.A., inzh.; VELIKIY, I.G., inzh.; MALIOVANOV, D.I., doktor tekh. nauk; PRUZHNIER, V.L., inzh.; KONDORSKIY, R.L., inzh.; TUMANOV, V.Ya., inzh.; POGORELOV, A.K., kand. tekhn. nauk

The BUKS-I equipment is an important step in the accomplishment of overall mechanization of shaft sinking. Shakht. stroi. 9 no.2: 1-3 F '65. (MIRA 18:4)

1. Kombinat Luganskshakhtostroy (for Rybalkin, Sharapov, Velikiy).
2. TSentral'nyy nauchno-issledovatel'skiy i proyektno-konstruktorskiy institut podzemnogo i shakhtnogo stroitel'stva (for Maliovanov, Pruzhnier, Kondorskiy, Tumanov, Pogorelov).

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

MALIOVANOV, D.I., kand.tekhn.nauk, otv.red.; LIDSKIY, B.N., red.; PRUZHINER, V.L., red.; CHEREMNYKH, M.I., red.; CHECHKOV, L.V., red.izd-va; SHKLYAR, S.Ya., tekhn.red.

[Mechanization of drifting in mine construction] Mekhanizatsiia gornoprokhodcheskikh rabot pri stroitel'stve shakht. Moskva, Ugletekhizdat, 1959. 293 p. (MIRA 12:6)
(Coal mining machinery)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

PRUZHININ, Yu. M. (g. Kuybyshev).

Utilization of compensatory possibilities in various forms of schizophrenia defects. Zhur. nevr. i psikh 58 no.12:1489-1490 '58. (MIRA 12:1)

1. Nauchnyy rukovoditel' prof. L.L. Rokhlin.
(SCHIZOPHRENIA,
compensatory possibilities in various forms of schizophrenic defect (Rus))

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

PRUZHININ, Yu. M.

Cand Med Sci - (diss) "Attainment of compensation and restoration of work capacity in various forms of schizophrenic defect." Kuybyshev, 1961. 19 pp; (Ministry of Public Health RSFSR, Gor'kiy Medical Inst imeni S. M. Kirov); 250 copies; price not given; (KL, 5-61 sup, 205)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

PRUZHININ, Yu. M.

K Voprosy o Kompensatsii Shizofrenicheskogo Defekta po Nablyudeniyam Rayonnogo Psikhitra. p. 372

V. sb Aktual'nyy Problemy Nevropatologii i Psikhiatrii. Kuybyshev, 1957.

Nauchnyy Rukovoditel' L. L. Rokhlin.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

Law of increase of electric conductivity in dielectrics in strong electric fields. V. I. Pruzhinina-Granovskaya. *J. Exptl. Theoret. Phys.* (U. S. S. R.) 10, 625-9(1940). The increase of the elec. cond. of dielectrics with increasing fields according to Poole (C. A. 10, 375) is given by $\sigma = Ae^{bE}$, in which log σ, plotted against E (elec.-field strength) is a straight line (A and b are empirical consts.), and according to Frenkel (C. A. 33, 4840) from the idea that the elec. field facilitates thermal ionization, by $\sigma = \sigma_0 e^{\alpha\sqrt{E}}$, where σ_0 is the cond. in weak fields, and $\alpha = \sqrt{e^3\epsilon/kT}$ (where e = electronic charge, ϵ = dielec. const., k = Boltzman's const. and T the abs. temp.). From this formula, log σ gives a straight line when plotted against $\sqrt{E}$. Data from the literature show that the 2nd formula is correct in a larger interval of E, and the deviations from linearity are smaller than with the 1st formula. The variation of α with temp. is correctly represented by Frenkel's formula, but the abs. value of α calcd. from it is false. This is probably due to the effect of small amounts of impurities in the dielectrics that favor ionization. The exptl. values of α for mica at 60° and 293° are, resp., 7.15×10^{-4} and 5.10×10^{-4}, compared with the theoretical figures of 5.10×10^{-4} and 3.75×10^{-4}.

M. Magat

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

>A

B 64
d

Novel type of linear solid resistors "Defar." PRUZHENINA-GRANDAGRAVA, V. I. *Elektrichestvo* (*No.* 11) 45-9 (1946) *In Russian.*—Ceramic solid core resistors are described having linear VA characteristics, and capable of withstanding large short-term overloads. A full description of the manufacturing processes is given, including pre-firing and final high temp. baking of the ceramic rod, and the destrine "soaking" which mainly determines the conductivity of the material. Electrical characteristics are tabulated. A. L.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

30827. FRUKHTINA, V. I., SAVEL'IEV, V. P. AND IVANOV, L. I.

Ventil'nye razyadniki na 3-220 kv. Vestnik elektropromsti, 1949, No. 9, s. 7-15.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

PRUZHININA-GRANOVSKAYA, V. I.

Cause of the nonlinear current-voltage characteristic of silicon carbide. V. I. Pruzhinina-Granovskaya. *Zhur. Tekh. Fiz.* 19, 100-10(1949).—A decision whether the nonlinear increase of the elec. cond. σ of SiC with increasing voltage V, observed from a certain crit. field strength E_c up, is due to the field in the blocking layer reaching E_c (Pul' effect in the blocking layer) or to penetration of carriers from the bulk of the semiconductor into the blocking layer, through diffusion facilitated by the applied field, was sought by measurements of the Hall effect and of the relative change of the elec. resistance, $\Delta R/R$, produced by a magnetic field. Samples of black and of green SiC were used; the former had a steeper current-voltage curve. The dimensions of the samples were 10-20 mm. in length, 5-10 mm. in width, and 2-5 mm. in thickness. The Hall voltage V^H is a linear function of the magnetic field up to 22,000 oersteds. The carrier concn. n was detd. from the Hall const. $R = \pm(3\pi/8)/en$, for a low-resistance green SiC, with hardly any blocking layer; from n, the velocity of the electron $v = I/en$, and the mobility $u = vl/V$, where l = length of the crystal. The mobility u is of the order of 1 (cm./sec.)/(v/cm.), and n of the order of 10^{17}/cc. In nonlinear black SiC samples, n was independent of V in the transmitting direction, but decreased somewhat with V in the blocking direction; the order of magnitude of n is $(1.5-2) \times 10^{19}$. The velocity v increases strongly with increasing V, in the range 0.3-1.5 v.; in this range the fields in the bulk of the SiC are insignificant, and, consequently, the increase of v can be due only to an increase of the elec. field in the blocking layer. In both the low-resistance (linear) green and in the nonlinear black SiC, the sign of R is normal, i.e. the cond. is electronic; pos. (p-type) cond. was found only in samples of nonlinear green SiC. The $\Delta R/R$ effect increases with V. In the same V range, the increase of $\Delta R/R$ is steeper with the more definitely nonlinear black SiC. The $\Delta R/R$ effect decreases slightly with increasing temp. Between room temp. and 100-20°, R decreases linearly with $1/T$; green SiC has the greater temp. coeff. The $\Delta R/R$ permit detn. of the mobility u^* in the blocking layer, and give the values of $n^* E^*$, where E^* is the unknown field in the blocking layers; under the legitimate assumption that practically all the field is concd. in the blocking layer, $V = E^* d$ (where d is the sum of the thicknesses of the 2 blocking layers), and n^*/d as a function of V characterizes the dependence of n^* on V. In black SiC, u^* increases by a factor of approx. 2.5 between V = 0.2 and 1.8 v. In the weakly nonlinear green SiC, u^* increases with V much more slowly, more markedly in the transmitting than in the blocking direction. Inasmuch as u^* can increase with V only in strong fields, it is evident that a Pul' effect must take place in the thin blocking layers, and that this effect is accompanied by an increase of u^* with the field. The order of magnitude of u^* is $10-10^3$, i.e. the same as in other semiconductors, Cu_2O or UO_2. In the V range in which u^* increases by a factor of 2.5, σ increases by a factor of 5.7. Consequently, there must be, along with an increase of u^*, also an increase of n^*/d. It can be that the total increase of σ is due to an increase of u^* in one of the 2 blocking layers, and an increase of n^* in the other. The apparent slight decrease of u^* with increasing temp. is a secondary effect, due to a redistribution of the potential drop between the bulk and the blocking layers. Actually, u^* seems to be independent of the temp.

N. Thon

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

PRUZHININA-GRANOVSKAYA, V. I.

USSR/Physics - Carborundum, Black Conductivity Dec 49

"Temporal Effects of Black Carborundum," R. D. Dudnik, V. I. Pruzhinina-Granovskaya, 8 pp

"Zhur Tekh Fiz" Vol XIX, No 12 p. 1434

Investigates laws of variation of current with time in nonconducting and conducting directions of black carborundum. Shows duration of observable time processes is not linked with any notion of electronic character of these processes. Duration predicted by Pecard's theory of rectification is much less than observed value. Submitted 18 Dec 47.

FDD PA 152T84

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

PRUZHININA-GRANOVSKAIA, V. I.

537.311.33

8737. The reason for non-linearity of the volt-ampere characteristic of carborundum. V. I. PRUZHININA-GRANOVSKAYA. *J. Tech. Phys., USSR*, 19, 109-10 (*Jan.*, 1950) *In Russian.*

It was determined that the electrical conductivity of the blocking layer of carborundum increases with the potential, due to the increase in mobility of electrons in the blocking layer, which is one of the reasons for the Pool effect. It was shown that the electron mobility of the blocking layer increases at the expense of the electron concentration.

BROOKHAVEN GUIDE TO RUSSIAN LITERATURE

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CA

4

Electric properties of silicon carbide. L. I. Ivanov, V. I. Pruzhinina-Granovskaya, and I. V. Chernina. *Zhur. Tekh. Fiz.* 21, 1050-60(1951).—The elec. resistance ρ of the blocking layers of different prepns. of SiC, in the form of powder of narrowly homogeneous grain size of 0.40 mm., under the uniform pressure of 54 kg./sq. cm., was measured in the elec. field strength range $E = 0.8$-60 v./cm. Except in low E (< 2 v./cm.), log ρ decreases nearly linearly but slowly with increasing E. The order of magnitude of ρ for different samples, under identical conditions of pressure and grain size, varied between 1.8×10^4 and 8.3×10^9 ohm. cm. At the same time, the capacity C of a layer of powder of 1 sq. cm. cross section, 1 mm. high, was nearly the same for all prepns., about 11 microfaradays. As $1/C$ is proportional to the thickness of the blocking layer, and on the assumption that the dielec. consts. of the different samples cannot be very much different, it follows that the observed very large differences of ρ from one sample to another are not due to differences of thickness of the blocking layers. The elec. cond. σ of the bulk of the SiC was detd. by the temp. rise due to Foucault currents induced by a high-frequency magnetic field; σ falls linearly with increasing temp. (25-85°), i.e. the cond. of the bulk is metallic. The elec. resistance $1/\sigma$ of the bulk is of the order of 1 ohm cm., as against 10^4-10^9 for the resistance of the blocking layers, and there is no parallelism and no relation between the two. The nonlinearity coeff. α of the current-voltage characteristic, defined by $U = cI^\alpha$ (where U = voltage, I = current intensity, and c and α are consts.), varies with the resistance (α with c U at given I) in a different manner in different samples. The distribution curves of the breakdown potentials, i.e. the curves of the no. n of grains breaking down plotted as a function of the voltage U, pass through a max. at a certain U_m which varies from one sample to another, and increases with ρ of the blocking layer. N. Thon

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

PRUZHININA-GRANOVSKAYA, V. I.

USSR/Physics-Carborundum, Electric Resistance FD-2821

Card 1/1 Pub. 153-4/30

Author : Pruzhinina-Granovskaya, V. I.

Title : Pulse Breakdown of Carborundum Grains and the Behavior of the Grain Complex at Pulse Current Reaction

Periodical : Zhur. Tekh. Fiz, 25, 581-589, 1955

Abstract : The breakdown voltage of stopping layers of carborundum grains was tested at pulse periods of 3 to 2600 microsec. The breakdown voltage was found to depend on the pulse period. It also has thermal character. The plotted curves facilitated explanation of rules governing the breakdown of nonlinear resistance. Three USSR and 3 foreign references.

Institution :

Submitted : April 28, 1955

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

PRUZHININA, GRANOVSKAYA, V. I.

4

Effect of impurities on the electrical conductivity and the nonlinearity of silicon carbide. L. I. Ivanov and V. I. Pruzhinina-Granovskaya. *Zhur. Tekh. Fiz.* 26, 2[illegible] (1956). SiC powder was compressed in an insulated press die and subjected to elec. pulses of given duration. The volt-ampere characteristic $U = CJ^{\alpha}$ was taken at pressures of 100-2000 kg./sq. cm. and at currents of 1 and 20 amp. $U_{1\,amp.}$ and α change with pressure. From 650 to 1850 kg./sq. cm. U_1 decreases by 28% and α increases 1.06 times. With increasing grain size the elec. cond. and α increase, in agreement with some theoretical considerations. Different "electrotech." and "abrasive" SiC powders were investigated. α increases in layers that are farther distant from the core in an Acheson oven (on all tests α varied between ~0.2 to 0.5). Fe^{+++} and Cr^{+++} increase the cond. but decrease nonlinearity; Al^{+++} increases nonlinearity. Addn. of Al to an otherwise stoichiometric SiC gives good "electrotech." SiC.

S. Pakswer

Chem

2

M.A. YOUTZ
Zoopics

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

Pruzhinina-Granovskaya, V.I.

Distr: 4E2c

2861. CARBORUNDUM RESISTORS OF VYLITE AND THYRITE TYPES. 621.315.56 : 621.316.86

V.I.Pruzhinina-Granovskaya, T.K.Ivanova and L.V.Yamanova. Elektrichestvo, 1958, No. 2, 51-5. In Russian.

Comparison of experimental results with theories so far suggested for the mechanism of the non-linear characteristics of this type of resistor shows that none of these theories explains the observed phenomena correctly. Of special interest are the experimental data on current-carrying capacity and the progressive breakdown process of these resistors.

Electrical Research Association

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

66339

~~24(6)~~ 24.7700

SOV/181-1-10-14/21

AUTHORS: Aleksandrov, V. V., Pruzhinina, V. I., Rekov, A. I., Tarakanova, T. S., Teplov, ~~Ye. A.~~

TITLE: Some Electric Properties of Boron-Silicon Carbides

PERIODICAL: Fizika tverdogo tela, 1959, Vol 1, Nr 10, pp 1587 - 1591 (USSR)

ABSTRACT: Boron-silicon carbides (BSC) were burned in furnaces at ~2000°C. End product: approximately 50-70 kg. Sample Nr 1, BSC-1 (composition: B_2SiC), is likely to be produced according to the reaction equation $2H_3BO_3+SiO_2+6C=B_2SiC+3H_2O+5CO$, while BSC-2 (composition: $B_4C.2SiC=B_4Si_2C_3$) is probably formed according to the reaction equation $4H_3BO_3+2SiO_2+13C = B_4Si_2C_3+6H_2O+10CO$. Results of chemical analysis of the two druse-shaped samples are given in table 1. For results of electric measurements see figure 1 (dynamic volt-ampère characteristics of BSC-1, BSC-2 and Si(samples), figure 2 (volt-ampère characteristics of BSC-1, BSC-2 and SiC samples) and figure 3 (dependence of voltage on temperature of BSC-1,

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Some Electric Properties of Boron-Silicon Carbides SOV/181-1-10-14/21

BSC-2 and SiC samples at constant current). Analysis of the results permits the following conclusions: 1) The nonlinearity of BSC used in engineering is interior to that of SiC applied in electrical engineering. 2) The resistivity of the barrier layer of BSC is lower than that of the corresponding SiC layer, while the resistivity of thick BSC crystals exceeds that of thick SiC samples. The high resistivity of thick BSC grains allows to produce high-resistance volume resistors from them. They are virtually linear and may have great or small temperature coefficients. Results of measurement concerning the electric properties of BSC resistors will later be published. There are 3 figures, 2 tables, and 6 references, 4 of which are Soviet.

SUBMITTED: February 10, 1959

Card 2/2

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

24.7700
9.4300

S/109/60/005/06/018/021
E140/E163

AUTHORS: Kudryavtsev, O.M., and Pruzhinina, V.I.

TITLE: Controlled Non-Linear Semiconductor Resistances

PERIODICAL: Radiotekhnika i elektronika, 1960, Vol 5, Nr 6, pp 1006-1008 (USSR)

ABSTRACT: The principle of controlling the parameters of a non-linear semiconductor resistance using a transverse electric field permits the development of a number of function-conversion circuits distinguished by simplicity, reliability and stability as well as by low cost. Such devices may be used for phase discriminators, modulators, voltage stabilisers, corrective networks with variable parameters, controlled voltage dividers, multiplier and divider circuits, automatic gain controls, oscillator frequency controls, etc. The authors have worked on this subject since 1957. Polycrystalline silicon carbide was used for these experiments. The properties are relatively stable in a wide temperature interval (-60 +50 °C) at frequencies up to 20 kcs. Four-electrode, six-electrode, and other configurations are described.

Card 1/2

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S/109/60/005/06/018/021
E140/E163

Controlled Non-Linear Semiconductor Resistances

There are 5 figures, 1 table and 5 references, of which 4 are Soviet and 1 is Czech.

Card 2/2

SUBMITTED: December 18, 1959

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

SAVEL'YEV, V.P. kand.tekhn.nauk; SHMATOVICH, V.V., kand.tekhn.nauk
PRUZHININA, V.I., kand.tekhn.nauk; PUGACHEV, V.K., inzh.

Combination magnetic-valve discharger for 500 kv. voltages.
Elektrichestvo no.4:13-20 Ap '61. (MIRA 14:8)

1. Vsesoyuznyy elektrotekhnicheskiy institut imeni Lenina.
(Electric protection)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001343420007-7

PRUZHININA-GRANOVSKAYA, V.I., kand.fiziko-matematicheskikh nauk;
KOZLOVA, N.M.

Nonlinear resistances for networks with small circuits. Vest. elektroprom. 32 no.11:64-66 N '61. (MIRA 14:11)
(Electric resistors) (Electric networks)

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S/196/61/000/009/038/052
E194/E155

AUTHORS: Bezrukov, F.V., Vol'kenau, V.A., Galkin, Yu.P., Pruzhinina-Granovskaya, V.I., Savel'yev, V.P., and Shmatovich, V.V.

TITLE: A standard series of main parameters of valve and tubular type lightning arresters (for discussion)

PERIODICAL: Referativnyy zhurnal, Elektrotekhnika i energetika, no.9, 1961, 38, abstract 9I 245. (Vestn. elektroprom-sti, no.12, 1960, 27-31)

TEXT: The article proposes the classification of valve and tubular lightning arresters into a standard series of main parameters. Magnetic-valve arresters developed for 110-120 kV are of improved protective characteristics, so permitting reduction in impulse test voltages and also facilitating insulation of transformers and equipment. In order to improve the technical and economic characteristics of Soviet 220-500 kV transformers it is necessary to improve the protection ratio of lightning arresters to 2.0 - 1.9 and of machine arresters to 1.8 - 1.9. On the basis of analysis of the current standard for valve-type arresters, of a

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draft standard for magnetic-valve arresters, and of the prospects of developing new arresters with improved protection, the following series of protection ratios is recommended for arresters rated from 3 to 500 kV: 3.3-3.1; 3.0-2.8; 2.6-2.5; 2.5-2.3; 2.2-2.1; 2.0-1.9; 1.9-1.8. It is recommended that the standard series of arresters rated from 3 to 220 kV should be arranged according to the parameters of the maximum value of short-circuit current interrupted in each voltage class, with an indication of the minimum permissible value of the ratio of highest to lowest short-circuit current interrupted. It is possible to increase the interrupting capacity of tubular arresters type PTB (RTV) by reinforcing them by a multi-layer winding of glass fibre cloth grade ЭСТВ-6 (ESTV-6) applied to the thin-walled arc-suppression tube, which is made of hard polyvinyl chloride plastic. In this way arresters have been developed for voltages of 35 - 110 kV and short-circuit currents of 20 kA. However, it is not yet technically possible to develop tubular arresters for voltages of 35 - 220 kV for interrupting short-circuit currents exceeding 30 kA, and coordinating gaps combined with automatic repeated reclosure of the lines are the recommended alternative.

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A standard series of main parameters.. S/196/61/000/009/038/052
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A standard series of tubular arresters from 3 to 220 kV selected according to the maximum values of short-circuit current interrupted can be: 2.5; 5; 10; 20; and 30 kA effective. Here the minimum ratio of the maximum permissible short-circuit current to the minimum for tubular arresters of 3 - 6 - 10 kV should be 8; for those of 35 - 60 - 110 - 220 kV the recommended figure is 5. In conformity with the existing standard series of tubular arresters, the nomenclature РТФ (RTF), RTV, and РТВУ (RTVU) is applied to the new arresters in the range from 3 to 220 kV. They should be developed and manufactured for various voltages and ranges of short-circuit current interrupted, and each voltage class should be provided with fittings for mounting and recording operations. It is proposed to develop tubular arresters for voltages of 3 - 6 - 10 kV using cheap, strong and moisture-resistant materials, and to satisfy the demand for tubular arresters for 35 - 60 - 110 - 220 kV by types RTV and RTVU. The proposed classification will help to avoid duplication of manufacture of electrical equipment and will most conveniently satisfy the design organisations, operating companies and

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industry in respect of range and parameters of protective devices. Tables are given indicating the nomenclature and main parameters of the valve-type and the tubular dischargers which are in production or will be produced.

[Abstractor's note: Complete translation.]

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PRUZHININA-GRANOVSKAYA, V.I., kand.fiz.-matem.nauk; VOL'KENAU, V.A., inzh.

Dependence of lagging voltages in a discharger on the length of the current wave front. Elektrichestvo no.10:53-54 O '61. (MIRA 14:10)

1. Vsesoyuznyy elektrotekhnicheskiy institut im. Lenina.
(Electric protection)

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[illegible]UKOV, F.V., inzh.; VOL'[illegible]AJ, V.A., inzh.; GALKIN, Yu.P., kand.tekhn.nauk;
P[illegible]A-G[illegible]OVS[illegible], V.I., kand.fiz.-matem.nauk

Standardized principal parameters of tubular and valve dischargers.
Vest. elektorprom. 31 no.12:27-31 D '60. (MIRA 14:2)
(Electric lines--Overhead) (Lightning protection)

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