BRUSENTSEV, N.Kh.; YESELEV, A.I.

New method for making worms. Mashinostroitel' no.9:23 S '60.
(MIRA 13:9)
(Machine-shop practice)

BRUSENTSEV, V.F., kand.tekhn.nauk

Measures preventing seepage from farm distributing ditches.
Nauch. zap. MIIVKH 19:234-248 '57. (MIRA 15:3)
(Irrigation canals and flumes)
(Seepage)

SITKOVSKIY, P.A.; KOMAROV, G.V.; BRUSENTSEV, V.F.; KREMENETSKIY, N.N.; MAMAYEV, M.G., kand.tekhn.nauk; SMIRNOV, A.V., kand.tekhn.nauk; AFANAS'YEV, I.V.; VOLOD'KO, I.F., kand.tekhn.nauk; BEGLYAROV, S.A.; KONDRAT'YEV, V.V.; KARLINSKAYA, M.I.; NIKOLAYEV, M.I., kand.tekhn. nauk; DOROKHOV, S.M.; PISHCHUROV, P.V.; KLIMENTOVA, A.V.; ROZENBLAT, Zh.I.; FANDEYEV, V.V., kand.tekhn.nauk; KULIKOV, P.Ye.; SHIMANOVICH, S.V.; DELITSIN, M.V., retsenzent; BRAUDE, I.D., retsenzent; BARYSHEV, A.M.; retsenzent; GRIGORYANTS, A.S., retsenzent; IGNATYUK, G.L., retsenzent; KALABUGIN, A.Ya., retsenzent; KREMENETSKIY, N.D., retsenzent; POPOV, K.V., retsenzent; ORLOVA, V.P., red.; LETNEV, V.Ya., red.; SOKOLOVA, N.N., tekhn.red.; FEDOTOVA, A.F., tekhn.red.

[Handbook for hydraulic and agricultural engineers] Spravochnik gidrotekhnika melioratora. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1958. 766 p. (MIRA 12:3)

(Hydraulic engineering) (Agricultural engineering)

30(1) SOV/99-59-11-5/15

AUTHOR: Brusentsev, V.F., Candidate of Technical Sciences and Aydarov, I.P., Engineer

TITLE: The Use of Bentonite Loams in Antifiltration Screens for Farm Irrigation Canal Networks in the Golodnaya Steppe

PERIODICAL: Gidrotekhnika i melioratsiya, 1959, Nr 11, pp 21-23 (USSR)

ABSTRACT: This article deals with the use of Bentonite loams in anti-filtration screens for irrigation canal systems at farms on the Golodnaya Steppe; a number of experiments recently conducted are briefly described, and their results outlined and discussed. It is stated that sovkhozy (state farms), with a land area of 10-15,000 hectares each, are planned for newly irrigated lands in the Golodnaya Steppe. Loss of water by filtration from the canals of the extensive irrigation system can be very considerable; the authors assert that the effectiveness of antifiltration measures on periodically operating canals - such as these - is about 5-10 times lower than that for constantly ope-

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The Use of Bentonite Loams in Antifiltration Screens for Farm Irrigation Canal Networks in the Golodnaya Steppe

rating systems, and thus the cost of these measures must be greatly cut, which is possible by using a new type of antifiltration covering for the canal beds. Antifiltration screen structure and its requirements are briefly discussed; screens of a dense mixture of soil and Bentonite, or of pure Bentonite, are recommended. The advantages of using Bentonite loams are outlined; such screens meet all requirements. The use of Bentonite loams in the USA and Japan is also mentioned. In 1957 loams from the Azkamar deposit in the Bukhara oblast', with a swelling index of 500-700%, were tested by the laboratories of the "Sredazgiprovodkhlopok" and MIIVKh imeni V. R. (Vil'yams) institutes; the purposes and results of these tests are briefly outlined. In 1958, further laboratory tests, briefly outlined, were conducted by the Laboratoriya kafedry sel'skokhozyaystvennykh melioratsiy MIIVKh (Laboratory of the Department of Agricultural Land Reclamations of the MIIVKh); the results are enumerated. In the summer of 1957, field tests of

The Use of Bentonite Loams in Antifiltration Screens for Farm Irrigation Canal Networks in the Golodnaya Steppe

antifiltration screens of a mixture of soil and Bentonite loam from the Azkamar deposit were conducted at the state cotton farm "Druzhba" in the Golodnaya Steppe; testing conditions are presented briefly. The results of these field tests established that in canals with a flat soil-Bentonite screen, filtration losses are decreased 3-4 times. The results of both laboratory and field tests showed that the use of soil-Bentonite screens is the most acceptable antifiltration measure for periodically operating canal systems under the soil conditions of the Golodnaya Steppe; the Bentonite content of screens should not exceed 15% by weight. The authors conclude with a note on present costs of manually processing Bentonite loams and producing screens using this loam, indicating the reduction in costs which would result from mechanization of this work.

ASSOCIATION: MIIVKh imeni Vil'yamsa (MIIVKh imeni Vil'yams)

BRUSENTSEV, V.F.; AYDAROV, I.P.

Seepage preventing measures in intrafarm distributing canals of the Golodnaya Steppe. Mat. po proizv. sil. Uzb. no.15:179-196 '60. (MIRA 14:8)

1. Moskovskiy institut inzhenerov vodnogo khozyaystva im. V.R. Vil'yamsa.
(Golodnaya Steppe—Irrigation canals and flumes)
(Seepage)

BRUSENTSEV, V.F., kand.tekhn.nauk; VEDENYAPIN, V.Ye., inzh.

Studying the seepage-reducing properties of hydrophobic soils.
Nauch.zap. MIIVKH 22:219-228 '60. (MIRA 13:8)
(Soil percolation)

AYDAROV, I.P., mladshiy nauchnyy sotrudnik; BRUSENTSEV, V.F., starshiy nauchnyy sotrudnik

Antipercolation bentonite linings of irrigation canals in the Golodnaya Steppe. Izv. TSKHA no.3:160-170 '62. (MIRA 15:9)
(Golodnaya Steppe—Irrigation canals and flumes)

BRUSENTSEV, Ye.I.

Unit for manufacturing knitting needles with eyes. Biul.tekh.ekon. Inform. Gos.nauch.-issl.inst.nauch.i tekh. inform. 17 no.10:74-75 O '64. (MIRA 18:4)

BRUSENTSEVA, S. A., DOLIN, P. I.

"The Influence of Potassium Bromide and Potassium Chloride Concentration on the Yield of Molecular Products From Radiolysis of Water Solutions" p.40

Trudy Transactions of the First Conference on Radioaction Chemistry, Moscow, Izd-vo AN SSSR, 1958. 330pp.
Conference -25-30 March 1957, Moscow

DOLIN, I. I. and BRUSENTSEVA, S. A. (Inst of Physical Chemistry)

"The Action of Ionizing Radiation on Concentrated Water Solutions of Inorganic Substances"

Isotopes and Radiation in Chemistry, Collection of Papers of 2nd All-Union Sci.Tech. Conf. on Use of Radioactive and Stable Isotopes and Radiation in National Economy and Science, Moscow, Izd-vo AN SSSR, 1958, 120pp.

This volume publishes the reports of the Chemistry Section of the 2nd All Sci Tech Conf on Use of Radioactive and Stable Isotopes and Radiation in Science and the National Economy, sponsored by Acad. Sci. USSR and Main Admin for Utilization of Atomic Energy under Council of Ministers USSR, Moscow, 4-12 April 1957.

BRUSENTSEVA, S. A., Cand Chem Sci -- (diss) "Determination of the relative constants of ion-radical reactions, during radiolysis, of aqueous solutions of KBr, KCl, KI, and KBr with $FeSO_4$." Moscow, 1960. 15 pp; (Moscow State Univ im M. V. Lomonosov); 150 copies; price not given; (KL, 32-60, 145)

S/076/60/034/011/013/024
B004/B064

AUTHORS: Brusentseva, S. A. and Dolin, P. I. (Moscow)

TITLE: Radiative Oxidation of Fe^{2+} Ions in Solutions Containing KBr

PERIODICAL: Zhurnal fizicheskoy khimii, 1960, Vol. 34, No. 11, pp. 2513-2516

TEXT: The authors wanted to determine the ratio between the rate constants of the reaction of Fe^{2+} and Br^-, and of Fe^{2+} and Cl^- ions with OH radicals. The $3 - 4.10^{-4}$ M $FeSO_4$ solutions were irradiated in 0.8 N H_2SO_4 with Co^{60} (dose rate, $(2 + 4).10^{15}$ ev/cm^3.sec) at various concentrations of the added KBr or KCl. In $FeSO_4$ solutions saturated with air, the $G(Fe^{3+})$ yield decreases from 15.6 to 12.3 if the KBr concentration is 10^{-1} M. A rise of the KBr concentration entails an increase of $G(Fe^{3+})$ to 16.5-16.9. In an evacuated $FeSO_4$ solution, $Ge(Fe^{3+})$ falls from 8.8 to 4.4 in the presence of 0.1 M KBr and rises again with an increase of the KBr concentration.

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'Radiative Oxidation of Fe^{2+} Ions in Solutions Containing KBr

S/076/60/034/011/013/024
B004/B064

When KCl is added, $G(Fe^{3+})$ does not decrease but rises again at high KCl concentrations. This effect of KBr is explained by the compatible reaction rates $Fe^{2+}+OH \rightarrow Fe^{3+}+OH^-$ (1) and $Br^-+OH \rightarrow Br+OH^-$ (7), as well as $H+H^+ \rightarrow H_2^+$ (5) and $Br+H \rightarrow Br^-+H^+$ (8). At KCl the rate of the reaction $Cl^-+OH \rightarrow Cl+OH^-$ is incompatible with the reactions of Fe^{2+} and therefore, remains without effect. The $G(Fe^{3+})$ increase observed at high KBr and KCl concentrations is explained by the oxidation of Fe^{2+} by the liberated halogens. The ratio of the reaction constants of the Fe^{2+} and Br^- ions with the OH radicals determined from the dependence of the Fe^{2+} oxidation on the ratio $[Fe^{2+}] : [Br^-]$ of the concentrations was found to be 90. There are 3 figures and 5 references: 1 Soviet, 2 US, 1 British, and 1 Canadian.

ASSOCIATION: Akademiya nauk SSSR, Institut elektrokhimii (Academy of Sciences of the USSR, Institute of Electrochemistry)

SUBMITTED: February 24, 1959

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5.4500(B)

68818

AUTHORS: Brusentseva, S. A., Dolin, P. I. S/020/60/131/01/032/060
B004/B011

TITLE: Radiolysis of KBr Solutions Under the Action of 660-Mev Protons

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 131, Nr 1, pp 117 - 119 (USSR)

ABSTRACT: The aim of the present paper is that of investigating the action of a heavy radiation having such a high energy that the value -dE/dx approaches that of a light radiation, in order to determine those difference as arise with heavy radiation due to central collisions. In the case of the 660-Mev proton radiation used for this investigation, the value of -dE/dx was almost equal to that of a 1-Mev electron radiation. As this causes the same radiochemical processes as the gamma radiation of Co^{60}, the latter was taken for a comparison. The energy absorbed by the solution was determined by measuring the total proton flux by two methods: (1) by measuring the C^{11} activity of a graphite plate that was placed in the proton flux; (2) by the use of an ionization chamber calibrated according to the Faraday cylinder. Measuring results differed by 25 - 30%.

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Radiolysis of KBr Solutions Under the Action of 660-Mev Protons

S/020/60/131/01/032/060
B004/B011

Radiolysis was investigated on solutions of $FeSO_4$, KBr, and on pure water. $G(Fe^{3+})$ was spectroscopically determined in $FeSO_4$ solutions (Fig 1), and the same value was found as in the gamma radiation of Co^{60}. In KBr solutions the authors measured the amount of hydrogen that was burned in a vacuum apparatus on platinum wire at 180 - 200°. As is shown by figure 2, $G(H_2)$ increases with rising KBr concentration up to 10^{-3} M, remains constant between 10^{-3} and 10^{-2} M, and rises again with higher concentrations. The same result was obtained for gamma radiation of Co^{60}. Hence, it follows from experiments made with $FeSO_4$ and KBr that the radiochemical effect is solely dependent on a single index of radiation, namely, on the energy loss per unit of distance. The determination of $G(H_2)$ in pure water in the case of gamma radiation yielded 0.07 molecules per 100 ev, and 0.15 - 0.19 in the case of proton radiation. The authors, however, do not consider the explanation of this difference by central collisions to be probable,

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Radiolysis of KBr Solutions Under the Action of 660-Mev Protons

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B004/B011

but assume the action of impurities. There are 2 figures and 7 references, 3 of which are Soviet.

PRESENTED: November 20, 1959 by A. N. Frumkin, Academician

SUBMITTED: November 10, 1959

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BRUSENTSEVA, S. A.

(6)

The Role Played in Electrode Processes by Stable Products Formed when Aqueous Solutions Are Exposed to Radiation

3

P. I. Dolin, D. V. Kokoulina and S. A. Brusentseva

The participation of the short-lived products of water radiolysis in the establishment of the electrode potential and in the electrode process has been discussed in the literature. The experimental results obtained by the authors with a Pt electrode in a solution of sulphuric acid find a complete interpretation in those electrode reactions in which only the molecular products of water radiolysis (H_2 and H_2O_2) take part.

An investigation of the effect of radiation on the rate of electrochemical oxidation of formic acid and ethyl alcohol on a rotating Pt electrode showed that the observed effects are also determined in general by stable products formed when radiation acts on these solutions. The fundamental part in the formic acid solution is played by hydrogen peroxide, and in the ethanol solution by acetaldehyde and hydrogen peroxide. The participation of short-lived radiolysis products has not been detected in these processes.

Radiation Chemical Laboratory, Electrochemical Institute, Academy of Sciences, Moscow, USSR

report presented at the 2nd Intl. Congress of Radiation Research, Harrogate/Yorkshire, Gt. Brit. 5-11 Aug 1962

DOLIN, P.I.; KOKOULINA, D.V.; BRUSENTSEVA, S.A.; KABAKCHI, S.A.

Effect of X rays on the electrochemical oxidation of formic acid on Pt anode. Dokl. AN SSSR 144 no.5:1081-1084 Je '62. (MIRA 15:6)

1. Institut elektrokhimii AN SSSR. Predstavleno akademikom A.N.Frumkinym.

(Formic acid) (Oxidation, Electrolytic) (X rays)

BRUSENTSEVA, S.A.; KOKOULINA, D.V.; DOLIN, P.I.

Effect of X rays on the electrochemical oxidation of ethyl alcohol on a Pt-anode. Dokl. AN SSSR 147 no.3:649-652 N '62.

(MIRA 15:12)

1. Institut elektrokhimii AN SSSR. Predstavleno akademikom A.N. Frumkinym.

(Ethyl alcohol) (Electrochemistry) (X rays)

BRUSENTSEVA, S. A., kand. khim. nauk

Symposium on Radiochemistry. Vest. AN SSSR 33 no.1:83-84 Ja '63. (MIRA 16:1)

(Radiochemistry—Congresses)

BRUSENTSEVA, S.A.; DOBREV, D.D.; SHUBIN, V.N.; DOLIN, P.I.

Radiation-chemical oxidation of potassium iodide in solutions saturated with nitrous oxide. Dokl. AN SSSR 162 no.5:1083-1085 Je '65.(MIRA 18:7)

1. Institut elektrokhimii AN SSSR. Submitted December 26, 1964.

GOLUBTSOV, V.K.; BRUSENTSOV, A.N.; USENKOV, F.M.

Coal yield prospects of coal deposits of the Pripet Lowland.
Dokl.AN BSSR 3 no.10:408-412 O '59. (MIRA 13:2)

1. Predstavleno akademikom AN BSSR K.I.Lukashevym.
(Pripet Valley--Coal)

BRUSKNTSOV, A. N.

Analytical Chemistry

Dissertation: "A new Fast Method of Determining the Value of Pharmaceutical Preparations." Cand Chem Sci, Moscow Pharmaceutical Inst, Moscow, 1953. (Referativnyy Zhurnal--Khimiya, Moscow, No 3, Feb 54)

SO: SUM 213, 20 Sept 1954

BRUSENTSOV, A.N.

SHEMYAKIN, Fedor Mikhaylovich; KARPOV, Aleksey Nikiforovich; BRUSENTSOV, Aleksandr Nikolayevich; KUVSHINSKIY, M.N., red.; LYUDKOVSKAYA, N.I., tekhn.red.

[Analytical chemistry] Analiticheskaia khimiia. Moskva, Gos. izd-vo med.lit-ry. Pt.1. [Qualitative chemical semimicroanalysis for students at pharmaceutical institutes] Kachestvennyi khimicheskii polumikroanaliz dlia studentov farmatsevticheskikh institutov. 1957. 389 p. (MIRA 11:6)

(Chemistry, Analytical--Qualitative)

SHEMYAKIN, F.M.; KARPOV, A.N.; BRUSENTSOV, A.N.; KUVSHINSKIY, M.N., red.; LYUDKOVSKAYA, N.I., tekhn.red.

[Analytical chemistry] Analiticheskaia khimiia. Moskva, Gos. izd-vo med.lit-ry. Pt.2. [Quantitative chemical analysis] Kolichestvennyi khimicheskii analiz. 1960. 389 p. (MIRA 13:12)

(Chemistry, Analytical--Quantitative)

SHEMYAKIN, F.M.; BRUSENTSOV, A.N.; VOLKOVA, M.N.

Analysis of mixtures of certain cations by means of paper-strip chromatography. Sbor. nauch. rab. MFI 2:66-69 '59. (MIRA 14:1)

1. Kafedra analiticheskoy khimii (zav. - prof. F.M. Shemyakin) Moskovskogo farmatsevticheskogo instituta.

(CHROMATOGRAPHIC ANALYSIS) (COPPER SULFATE)
(IRON SULFATE) (COBALT SULFATE)

GOLUBTSOV, V.K.; BRUSENTSOV, A.N.

Sediments of the Moscow stage in the Pripet Graben. Dokl.AN BSSR 4 no. 11:474-477 N '60. (MIRA 13:12)

1. Institut geologicheskikh nauk AN BSSR. Predstavleno akademikrom AN BSSR K.I. Lukashevym.
(Pripet Valley--Geology, Stratigraphic)

BASOV, S.Ye., inzh.; BRUSENTSOV, P.A., inzh.; LOVITSKIY, A.K., inzh.

Conveyer line for transferring ore concentrate over great distances. Prom. stroi. 40 no.5:30-33 '62. (MIRA 15:5)
(Conveying machinery)
(Ore handling)

SOV/144-58-8-14/18

AUTHOR: Brusentsov, L.V., Assistant

TITLE: Automation of the Recording and Evaluation of Graphs of the Progress of Processes as Applied to Electrical Energy Studies in Industry (Avtomatizatsiya zapisi i obrabotki grafikov protekaniya protsessov v primenenii k elektroenergeticheskim issledovaniyam v promyshlennosti)

PERIODICAL: Izvestiya Vysshikh Uchebnykh Zavedeniy, Elektromekhanika, 1958, Nr 8, pp 108-118 (USSR)

ABSTRACT: A set of equipment is described for recording and handling data about individual machines, power demands of whole factories and loads imposed by entire areas. The load, current, power factor etc. are recorded on a photographic recorder (which is described); the mean load, etc. is measured from the blackening on the film by a photoelectric device with facilities for changing the time scale of the averaging. Some accessories for linearising the scales of the instruments are described. An instrument is dealt with which produces histograms from the recorded curves; so is one which gives the correlation function, though not many details are given.

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SOV/144-58-8-14/18

Automation of the Recording and Evaluation of Graphs of the Progress of Processes as Applied to Electrical Energy Studies in Industry

The diagrams and drawings are not very good and few exact dimensions are given, though principles are adequately dealt with.
There are 17 figures and 5 Soviet references.

ASSOCIATION: Kafedra elektrifikatsii promyshlennykh predpriyatiy Novocherkasskogo politekhnicheskogo instituta (Chair for Electrification of Industrial Undertakings of Novocherkassk Polytechnical Institute)

SUBMITTED: July 29, 1958

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S/144/60/000/02/012/019
E194/E155

AUTHOR: Brusentsov, L.V. (Leonid Vas'yevich), Assistant

TITLE: The Use of Integrating Instruments for Investigating Electrical Loads

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Elektromekhanika, 1960, Nr 2, pp 110-126 (USSR)

ABSTRACT: It is becoming increasingly necessary to have accurate information about the load consumption of various types of electrical equipment in order to design supply systems accurately. Induction-type integrating meters are commonly used for this purpose, though they are not always suitable. The present article sets out to determine the field of application of these instruments and to extend this field by suggesting special additional devices. In industry, integrating meters operate under conditions widely different from those obtaining in the laboratory. The instruments are particularly subject to error when the load curve undergoes many sudden variations. This dynamic error occurs because the rate of acceleration or deceleration of the rotating disc does not correspond exactly to the rate of

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change of current, or other property measured. Previous authors have considered the dynamic error of induction meters when the load curve is rectangular but other cases have received less attention. For example, in starting induction motors the acceleration of the disc on application of the load may be many times greater than the free deceleration as the load falls. The dynamic error has not been determined for this case, and the present article endeavours to do so. No attempt was made to determine the error exactly for each particular type of load curve. The main object was to assess the error in order to consider whether the instrument is suitable for investigating industrial loads. For study of the dynamic error it is convenient to compare the equations of motion of an actual and an ideal inertia-less meter; Eqs (1) and (2) correspond to the two cases. In the ideal instrument the coefficient of proportionality between the disc speed and the measured power is a constant. In the real meter it is not, because of the presence of additional retarding moments due to friction, eddy

The Use of Integrating Instruments for Investigating Electrical Loads

currents and features of the magnetic system. The difference between the coefficient for the two cases is not great and corresponds to the static error of the instrument at various loads. In determining the dynamic error between 10% and 200% rated load, a mean value of the proportionality coefficient may be used, thus simplifying the equation of motion. The oscillogram of the load curve when starting an induction motor is given in Fig 2. For the purpose of the examination it is considered in two separate sections using different coefficients of proportionality between disc speed and load, one when the motor is connected to the supply and the other when it is not. In considering the motor driving torque, the load curve may be divided into four sections, each with linear change of torque, as shown in Fig 2. The modified curve is used when assessing the dynamic error. The resultant error is shown to be the difference between the error on starting and that when the meter is over-running. For a rectangular load curve

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the relative error is given by expression (21). This expression can often be used in practice, particularly if the time of connection of the load is substantially greater than the time-constant of the meter. The case is then considered of short-term connection of an induction motor, when the meter disc speed does not reach a steady value before the motor is disconnected. In this case the relative error for the cycle is given by expression (32). This expression is complicated and unsuitable for practical calculations but its use may be avoided by showing, with its help, whether the dynamic error is of acceptable magnitude for actual load cycles. In order to evaluate the dynamic error of a three-phase induction meter type IT2 the meter characteristics necessary for the calculations were determined experimentally and oscillograms of the starting of an induction motor were taken. Calculations were also made by formula (32) and compared with the experimental results. The dynamic error of the meter was determined by continuous photography of the rotating disc, using the

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special automatic camera illustrated in Fig 3. The test circuit is shown in Fig 4 and the experimental and calculated values of dynamic error are given in Table 1. It will be seen that in most of the tests the error is not greater than that corresponding to the class of the instrument. Recording-type instruments are not very convenient for determining industrial load curves because the graphical calculations tend to be laborious. Integrating meters can generally be applied, using them to give a mean value of the magnitude measured over an interval of time. The smaller the time-interval, the more closely the true curve is represented but, of course, this tends to give a large number of readings. Experience shows that in most cases readings taken at intervals of 15-30 minutes are usually sufficiently accurate and it is only occasionally necessary to reduce the intervals to 5-10 minutes. Statistical methods must be used in assessing the possible error. By way of example, the error due to parallax in a three-phase induction meter type IT with a scale of 0.02 kWh per division is

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considered. For each measurement the possible parallax error is half a division or ± 0.01 kWh. Each measurement is the difference of two readings and so the error per measurement may be double this. It is then shown that the effect of the variable load curve may be to increase the error by a factor of 6 as compared with that obtained with a steady load. Fig 5 shows a graph of the relationship between the possible error of reading and the time interval of measurement. The shaded part of the curve corresponds to the possible error of reading in making power measurements on an induction motor with a meter type IT. As current transformers are made in only a limited number of ratings it is possible that in a particular case the meter may be more lightly loaded than in the case considered and the error correspondingly greater. The examples quoted show that in using an induction-type meter the errors due to parallax alone may be considerable when short time intervals are used. Errors due to play in the meter mechanism are of the same order as those due to parallax and are random in nature.

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Therefore, the use of induction meters when taking load curves with small time intervals is not to be recommended. Errors of time-measuring devices are then considered. Special instruments for automatically measuring the time for which equipment is connected to supply are not produced in the Soviet Union and people concerned with investigating load curves have to make their own instruments. Usually a synchronous motor type SD-2 or SD-60, to standard GOST 2641-44, is adapted for the purpose. Its accuracy for time measurement depends on the stability of the system frequency. There is also a dynamic error whilst the motor rotor is accelerating or decelerating. It is of interest to determine experimentally the dynamic error of motors types SD-60 and SD-2. Laboratory tests of several instruments fitted with motor type SD-60 have shown that the absolute positive dynamic error is from 0.1 to 0.4 revolutions, which corresponds to the same number of seconds error per cycle of load connection. The voltage drop in industrial circuits may increase the absolute error of the instrument to 0.15 sec

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per cycle. What has been said above about errors in readings made with induction-type instruments applies also to time-measuring devices of this kind. However, such timing devices are usually left connected for considerable periods so that this factor is not very important. Integrating instruments may be improved both by increasing their accuracy and by making them easier to use. In recent years devices for recording integrating-meter readings have been described but none of them has been good enough to be generally adopted. The author has developed an improved instrument which has given good service in industry and in coal mines. The integrating meter is provided with an impulse-signalling device consisting of a slip-ring with insulated sections, as illustrated diagrammatically in Fig 7. When the drum rotates periodic signals are given. The recording device, a photograph of which is given in Fig 9, contains 35 mm film driven at a speed of about 200 mm per hour by a synchronous motor type SD-2. Signals from the meter are applied to a lamp and thereby recorded on the film.

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The Use of Integrating Instruments for Investigating Electrical Loads

The device can record eight signals simultaneously, so that one instrument will serve four integrating meters each with two commutator drums. The instrument is small and can work in any position and could be adapted to automatic operation, by the use of photo cells. Its main disadvantage is the need to develop the photographic film. The dynamic error of the instrument may be improved by disconnecting the counter mechanism when the rotating disc free-wheels after the load has been disconnected. A more convenient alternative is to apply a brake, and in this way the positive and negative dynamic errors on starting and stopping may be equated and compensate one another. A device of this kind is, however, rather complicated and it appears best to incorporate an electro-magnet to allow not only for the starting time but also for the times for which the electrical load is on and off. A device of this kind is illustrated diagrammatically in Fig 10; an electro-magnet is used to couple the continuously-rotating shaft of the synchronous motor to one of two counters. Because of its inherent

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characteristics, the on-load and off-load currents necessary to actuate the electromagnet differ considerably. The author has reduced this discrepancy by arranging for the armature motion to shunt the current coil of the electromagnet by a resistance. There are 10 figures, 1 table and 6 Soviet references.

ASSOCIATION: Kafedra elektrifikatsii promyshlennykh predpriyatiy, Novocherkasskiy politekhnicheskiy institut (Chair for Electrification of Industrial Undertakings, Novocherkassk Polytechnical Institute)

SUBMITTED: October 20, 1959

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S/144/60/000/05/012/014
E194/E255

AUTHORS: Kayalov, G. M., Candidate of Technical Sciences, and Brusentsov, ~~L. V~~ Leonid Vasil'yevich, assistant.

TITLE: Correlation Functions of Load Curves of the Electrical Drives of Machine Tools and Their Practical Significance

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Elektromekhanika, 1960, Nr 5, pp 123-129 (USSR)

ABSTRACT: The meaning of the term "correlation function" is first defined; it is a limit of the form given by expression (1). Correlation functions are becoming widely used for a variety of purposes, including analysis and calculation of the loads on industrial electrical systems. The correlation function gives the variation of possible mean values of load over a given time interval. Thus if the correlation function of the load curve is known, the statistical three sigma rule may be used to calculate maximum loads of any duration, such as half an hour or fifteen minutes. Moreover, knowledge of the correlation function of load curves of individual current-consuming devices is very useful for assessing whether the manufacturing process is sufficiently

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S/144/60/000/05/012/014
E194/E255

Correlation Functions of Load Curves of the Electrical Drives of Machine Tools and Their Practical Significance

rhythmic and organised. The present article considers both these applications of the correlation function. Hitherto, the correlation functions of load curves of industrial electric power systems have not been studied experimentally: the authors describe such a study carried out in the machine shops of an Electric Locomotive Works and of a Tractor Works. The measurements in the shops were carried out by a student A. Derevyanchenko and Engineer S. Pronin. Determination of each individual point on the curve of the correlation function requires laborious integration and the work was greatly facilitated by the use of two special semi-automatic measuring instruments designed by one of the present authors. These instruments, a recorder and an analyser, were described in Izvestiya vysshikh uchebnykh zavedeniy, Elektromekhanika, Nr 8, 1958. The recorder was used to determine the load curves in the form of special photographs and the analyser was used as a correlator to make automatic calculations of the right-hand side of formula (1). In practice, the infinite

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limits of integration given in formula (1) must be replaced by finite limits. Figs 1a and 3a give typical examples of correlation function curves for the individual load curves of machine tools determined in this way. If the machine is running rhythmically, that is, if the load curve is strictly periodic, the correlation function is also periodic. In practice, this applies only to automatic machines: in other cases the duration of the operating cycle varies in a random manner from one cycle to the next. Therefore, the correlation function of the individual load curve is no longer periodic but ranges between the rms and the mean ordinates of the load curve during the shift. Figs 1b and 3b give curves of the distribution of the duration of an individual cycle obtained directly from the load curves of individual machines. The actual load curves are not given because their shape during a single cycle of the machine tool does not influence the damping time of the correlation
Card 3/6 function curve. It will be seen that the graph of Fig 1a,

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which corresponds to a relatively small dispersion in the value of the cycle time (see Fig 1b) has the most nearly periodic correlation function. A summated effect arises from the super-position on a strictly periodic but weak signal of stronger irregular interference. If graphs of the correlation functions are constructed, they can be used to reveal the presence of the signal and to determine its periodicity from the periodicity of the damped wave of the correlation function. This principle may be used to detect machine stoppages in the common case when the dispersion is relatively great and the stops are relatively small. Under such conditions, it is difficult to establish the presence and duration of stops directly from the load curve and the indirect method is to be preferred. First the mean value of the duration of the cycle is determined. It corresponds to the required normal law on a load curve without stoppages, and suffices to determine the period of damped waves on the correlation function graph. Then, on the experimental

 distribution curve, experimental values of the cycle time

Correlation Functions of Load Curves of the Electrical Drives of Machine Tools and Their Practical Significance

are laid off from the origin to determine the mean value of the standing time. It has been found that variations in the cycle time depend almost entirely on variations in the stopping time, whilst the time which the machines are in operation is usually constant. This has been observed in many workshops and it also applies to the load curves of underground sub-stations in coal mines. Fig 4 shows the correlation function of a feeder load curve which is aperiodic, whilst that in Fig 5 contains a damped periodic oscillation associated with the presence in the load of one large item of current-consuming apparatus. In general, the presence of damped waves in the graph of the correlation function of the total load of a group of power-consuming equipment has no important influence on the dispersion of the mean loads over particular intervals of time. If there are waves in the graph the envelopes of the maxima and minima may have different time-constants, as may be seen in the graphs of Figs 3a and 5. Attempts by the authors to obtain a simple graphical experimental relationship between the time

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constant of damping of the correlation relationships and other constants was unsuccessful; but in no case did the ratio of this time constant to the cycle time exceed 4, so that expression (5) was generally valid. The method of using the data obtained in the present article to calculate the loading of industrial electric power systems falls outside the scope of the present article. There are 5 figures and 6 Soviet references.

ASSOCIATION: Kafedra elektrifikatsii promyshlennykh predpriyatiy Novocherkasskiy politekhnicheskiy institut (Novocherkassk Polytechnical Institute)

SUBMITTED: January 28, 1960

Card 6/6

AVILOV-KARNAUKHOV, Boris Nikolayevich, doktor tekhn.nauk, prof.; KAYALOV, Georgiy Mikhaylovich, kand.tekhn.nauk, dotsent; BRUSENTSOV, Leonid Vasil'yevich, assistent; SHALYGIN, Igor'Vladimirovich, assistent

Devices for studying the long-term processes. Izv. vys. ucheb. zav.; elektromkh. 3 no.7:92-98 '60. (MIRA 13:9)

1. Zaveduyushchiy kafedroy elektrifikatsii promyshlennykh predpriyatiy Novocherkasskogo politekhnicheskogo institut (for Avilov-Karnaukhov). 2. Novocherkasskiy politekhnicheskiy institut (for Kayalov). 3. Kafedra elektrifikatsii promshlennykh predpriyatiy Novocherkasskogo politekhnicheskogo institut (for Brusentsov). 4. Kafedra elektrifikatsii promyshlennykh predpriyatiy Novocherkasskogo politekhnicheskogo institut (for Shalygin).
(Recording instruments)

BRUSENTSOV, L. V.

Cand Tech Sci - (diss) "Methods of test electric-power studies on the performance of industrial electrical receiving containers." /Khar'kov/, 1961. 19 pp with illustrations; (Ministry of Higher and Secondary Specialist Education RSFSR, Khar'kov Polytechnic Inst imeni V. I. Lenin); 200 copies; price not given; list of author's works on pp 18-19 (11 entries); (KL, 6-61 sup, 214)

BRUSENTSOV, L.V.; BOZHKOV, K.B.

Methodology of studying the expenditure of working time and the utilization of equipment in time and by capacity. Trudy NPI 139:15-25 '62. (MIRA 16:6)
(Time study) (Machine tool industry—Production standards)

L 54558-65 EWT(1)/EWA(h) Peb

ACCESSION NR: AP5015317 UR/0286/65/000/009/0075/0075
681.2.087

AUTHOR: Brusentsov, L. V.; Burok, V. S.

TITLE: Statistical analyzer of time-interval distribution. Class 42, No. 170698

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 9, 1965, 75

TOPIC TAGS: time interval distribution, statistical analyzer

ABSTRACT: To combine amplitude and time selection of the input signal, the proposed analyzer (see Fig. 1 of the Enclosure) contains a time gate circuit which includes a differentiating shaper-amplifier with two outputs. One amplifier output is connected through an oscillator of standard time intervals to one input of the gate trigger, while the second amplifier output is connected directly to the second trigger input. The trigger output is in turn connected to one of the valve inputs. [DW]

ASSOCIATION: none

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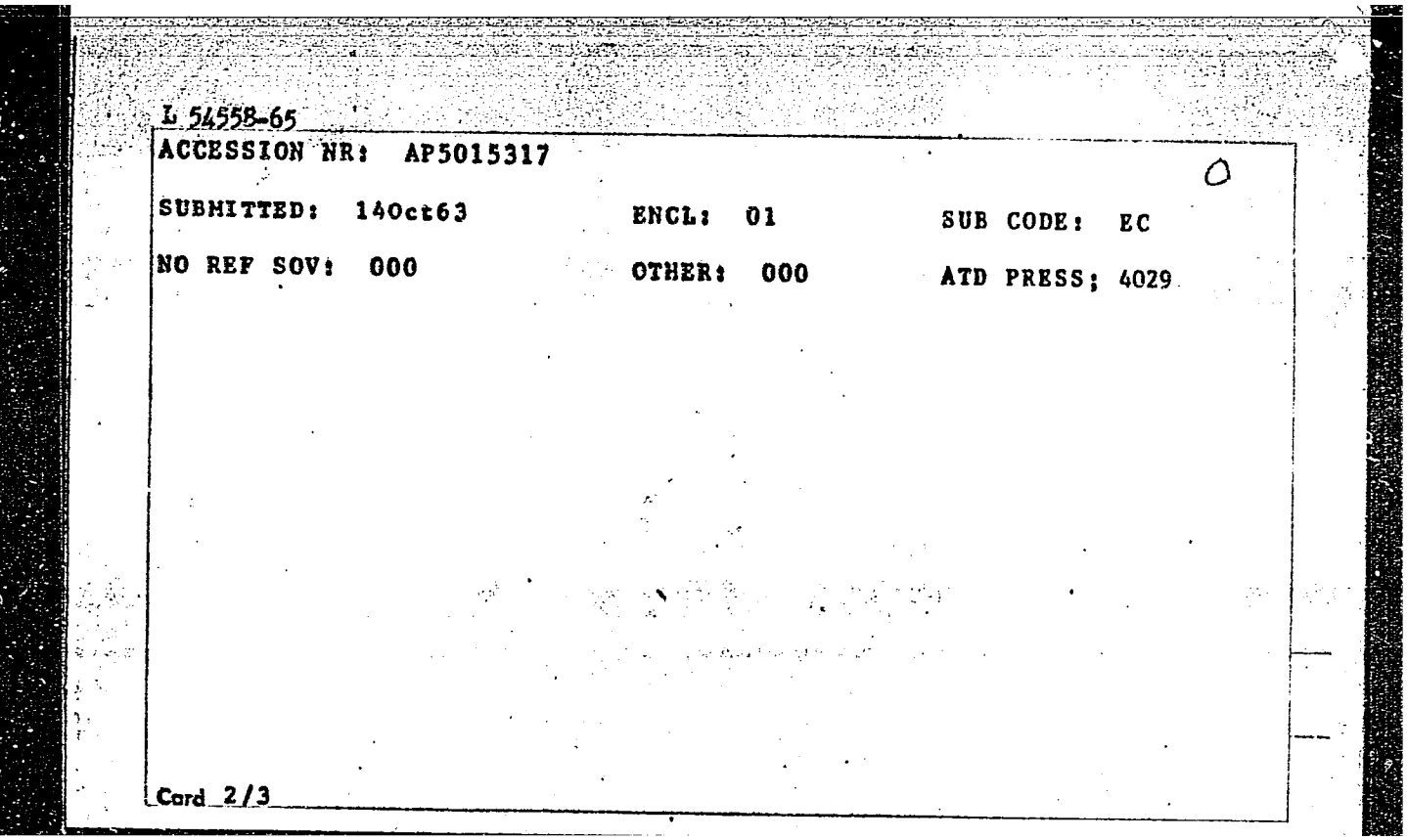

L 54558-65

ACCESSION NR: AP5015317

SUBMITTED: 14Oct63 ENCL: 01 SUB CODE: EC

NO REF SOV: 000 OTHER: 000 ATD PRESS: 4029

Card 2/3

L 54558-65

ACCESSION NR: AP5015317 ENCLOSURE: 01

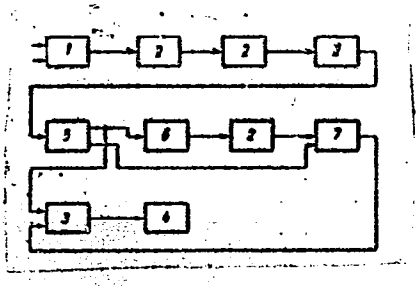

Fig. 1. Statistical analyzer

1 - Amplitude selector; 2 - shaper; 3 - valve; 4 - counter; 5 - differentiating shaper-amplifier; 6 - oscillator of standard time intervals; 7 - trigger.

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BRUSENTSOV, L.V.

Calculation of the average cycle of a random process. Izv. vys. ucheb. zav.; elektromekh. 8 no.5:602-603 '65. (MIRA 18:7)

AVILOV-KARNAUKHOV, B.N.; BOGUSH, A.G.; GIKIS, A.F.; DROZDOV, A.D.; MALOV, D.I.; SINEL'NIKOV, Ye.M.; BRUSENTSOV, L.V.; DENISOV, A.A.; PAL'SHAU, M.V.; POLYAKOV, F.I.; CHERNYAVSKIY, F.I.; BUROK, V.S.; GORDEYEV, V.I.; KAZHDAN, A.E.; KOVALEV, V.Ye.; KURENNYY, E.G.; POTAPENKO, V.Ya.

Professor Georgii Mikhailovich Kaialov, 1905- ; on his 60th birthday and the 37th anniversary of his theoretical and educational work. Izv. vys. ucheb. zav.; elektromekh. 8 no.10:1181-1182 '65. (MIRA 18:11)

L 23216-66 EWT(d)/EWP(k)/EWP(1)

ACC NR: AP6013582 SOURCE CODE: UR/0144/65/000/010/1181/1182

AUTHOR: Avilov-Karnaukhov, B. N.; Bogush, A. G.; Gikis, A. F.; Drozdov, A. D.; Malov, D. I.; Sinel'nikov, Ye. M.; Brusentsov, L. V.; Denisov, A. A.; Pal'shau, M. V.; Polyakov, B. A.; Chernyavskiy, F. I.; Burok, V. S.; Gordeyev, V. I.; Kazhdan, A. E.; Kovalev, V. Ye.; Kurennyy, E. G.; Potapenko, V. Ya.

ORG: none

TITLE: Professor G. M. Kayalov on the occasion of his 60th birthday and 37 years of pedagogical activities

SOURCE: Izvestiya vysshikh uchebnykh zavedeniy. Elektromekhanika, no. 10, 1965, 1181-1182

TOPIC TAGS: electric engineering personnel, academic personnel

ABSTRACT: Doctor of Engineering Sciences, Professor of RIIZhT [Rostovskiy institut inzhenerov zheleznodorozhnogo transporta; Rostov Institute of Railroad Engineers], Georgiy Mikhaylovich KAYALOV was born on 26 September 60 years ago. He began his working career as a standby electrical construction worker at the Novorossiysk cement factory. In 1929 he graduated from the Novocherkassk Polytechnical Institute, and between 1928 and 1947 worked in the designing section of the "Elektroprom" trust. Sub-

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L 23216-66
ACC NR: AP6013582

sequently, he joined the Rostov department of the GPI /Gosudarstvennyy proyektnyy institut; State Designing Institute/ "Tyazhpromelektroproyekt" where he advanced from a technician of the designing department to its chief engineer. From 1933 to 1962 he was docent of the department of electrification of industrial enterprises of the NPI /Novocherkasskiy politekhnicheskiy institut imeni Sergo Ordzhonikidze; Novocherkassk Politechnic Institute im. Sergo Ordzhonikidze/; he taught as professor until 1965 and presently is a professor of the RIIZhT. He published more than 70 scientific works, including studies of flywheel-containing electric motors, investigations of electrical loads of industrial enterprises, analyses of basic features of real load graphs, (including their probabilistic modeling), proposals for peak load calculation methods (based on the theory of mass servicing) and developments of methods for the calculation of extremal loads of heavy consumers, for the study of random graphs of reactive loads, for the evaluation of electric load fluctuations, and the like. G. M. KAYALOV was also active in the Party, professional, and scientific organizations. He is a holder of the "For Outstanding Work During the Great Patriotic War of 1941-1945 gg." medal and the "Badge of Honor" decoration. Orig. art. has: 1 figure. [JPRS]

SUB CODE: 09, 05 / SUBM DATE: none

Card 2/2 RB

PAVLENKO, Timofey Aleksandrovich, kand. tekhn. nauk; BRUSENTSOV, N.N., red.; PROTANSKAYA, I.V., red. izd-va; VDOVINA, V.M., tekhn. red.

[Precast reinforced concrete for construction in the lumber industry] Sbornyi zhelezobeton na stroitel'stve v lesnoi promyshlennosti. Moskva, Goslesbumizdat, 1961. 268 p. (MIRA 14:9)
(Lumbering) (Precast concrete construction)

BRUSENTSOV, N. N.

FD-1500

USSR/Mathematics - Mathieu—Bessel functions

Card 1/1 : Pub. 129-3/18

Author : Brusentsov, N. N.

Title : Wave functions of an elliptic cylinder

Periodical : Vest. Mos. un. Ser. fizikomat. i. yest. nauk, 9, No 5, 23-30, Sep 54

Abstract : Generalization of circular wave functions and polar coordinates leads the author to equations of elliptic cylinder wave functions. Analyzes such Mathieu-Bessel functions of first kind as well as functions of second and third kind. Represents functions in graphs. One Soviet and two foreign references.

Institution :

Submitted : June 26, 1953

9 (1) SOV/112-57-5-11224

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1957, Nr 5, p 238 (USSR)

AUTHOR: Kocherzhevskiy, G. N., Brusentsov, N. P.

TITLE: The Radiation Pattern of a Radiator Placed Near an Elliptical Cylinder as a Function of the Cylinder Parameters (Diagramma napravlennosti izluchatelya, raspolozhennogo vblizi ellipticheskogo tsilindra, kak funktsiya parametrov tsilindra)

PERIODICAL: Tr. Mosk. energ. in-ta, 1956, Vol 21, pp 32-48.

ABSTRACT: Radiation directivity is examined for the following cases: (1) an electric radiator oriented along the axis of the elliptical cylinder; (2) an electric radiator oriented at right angles with the axis of the elliptical cylinder (in the plane normal to the cylinder axis); (3) a magnetic radiator oriented along the cylinder axis (a longitudinal slot) and placed on the surface of the elliptical cylinder. Derivation of formulae for radiation patterns is made in the following way: field is determined in the space surrounding the cylinder as

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SOV/112-57-5-11224

The Radiation Pattern of a Radiator Placed Near an Elliptical Cylinder as a . . . .

a function of angles of incidence of a plane wave at the cylinder; a radiation pattern of a receiving antenna placed at some point is determined; from the principle of reciprocity, the radiation pattern of the radiator placed near the cylinder is determined. Formulae are presented for calculating the radiation patterns in a plane perpendicular to the cylinder axis. The formulae establish a relationship between the radiation pattern and the size and parameters of the cylinder. Estimated radiation patterns are presented which illustrate the dependence of the radiation pattern on the following factors: radiator placement with respect to the cylinder, eccentricity of the cylinder cross-section, cross-section perimeter, and cylinder-radiator distance. Experiments were needed to clarify how much of the error in calculations was due to the assumption of an infinitely long cylinder. A comparison of experimental data with calculations showed that, with a short cylinder, the discrepancy is considerable, particularly in the rear half-space. A good agreement was obtained with

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SOV/112-57-5-11224

The Radiation Pattern of a Radiator Placed Near an Elliptical Cylinder as a . . . .

cylinders up to 4λ long for the case of electric radiator and up to 2λ long for the slot (in the latter case, the cylinder turned into a strip, because the elliptic cylinder had unity eccentricity). Bibliography: 5 items.

G.I.Zh.

Card 3/3

BRUSENTSOV, N.P.

KARTSEV, M.A.; ALEKSANDRIDI, T.M.; KNYAZEV, V.D.; TANETOV, G.I.; LEGEZO, L.S.; LAVRENYUK, Yu.A.; SHCHUROV, A.I.; BRUSENTSOV, N.P.; KUZNETSOVA, V.P.; BRUK, Isaak Semenovich, red.; BEZBORODOV, Yu.M., red.; GAVRILOV, S.S., tekhn.red.

[The M-2 high-speed calculating machine] Bystrodeistvuiushchaia vychislitel'naia mashina M-2. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry, 1957. 228 p. (MIRA 11:3)

1. Chlen-korrespondent AN SSSR (for Bruk)
(Electronic digital computers)

BRUSENTSOV, N.P.

Ellipsoidal coordinates. Nauch.dokl.vys.shkoly; radiotekh. i elektron.no.1:235-238 '58. (MIRA 12:1)

1. Kafedra antennykh ustroystv i rasprostraneniya radiovoln Moskovskogo energeticheskogo instituta.
(Field theory) (Coordinates)

BRUSENTSOV, N.P.; ZHOGOLEV, Ye.A.; VERIGIN, V.V.; MASLOV, S.P.; TISHULINA, A.M.

Small-size automatic digital computer "Setun'." Vest. Mosk. un. Ser. 1: Mat.,mekh. 17 no.4:3-12 Jl-Ag '62. (MIRA 15:7)
(Electronic digital computers)

L 44343-65 EWT(d)/T/EED-2/EWP(1) Pq-4/Pg-4/Pk-4 IJP(c) BB/GG
ACCESSION NR: AP5009261 S/0055/65/000/002/0039/0048

37
B

AUTHOR: Brusentsov, N. P.

TITLE: Experience in the development of a ternary computer 15

SOURCE: Moscow. Universitet.* Vestnik. Seriya 1. Matematika, mekhanika, no. 2, 1965, 39-48

TOPIC TAGS: ternary electronic computer, switching circuitry, ternary shift register, ternary adder, computer component

ABSTRACT: Experience gained in the development of the Setun' ternary computer is reviewed. The discussion includes the advantages found in the use of the ternary system, the synthesis of switching circuitry, and switching-circuit components. Comparisons of Setun' with a binary variant showed a 50% savings in arithmetic and operating unit components. Coding was found to be somewhat more economical with ternary notation, requiring 1.58 times less ternary than binary digits. When the ternary system is symmetrical with reference to zero, a single digit is sufficient to represent 0, 1, and -1. Though logic operations are more complex, the ternary system proved better suited than the

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ACCESSION NR: AP5009261

binary in the processing of relative numbers. The switching scheme in the Setun' is based on the representation of a three-state variable with a two-state component. At any given value of a three-state variable, one element is equal to unity and two are equal to zero. High-speed magnetic amplifiers with two-phase pulse-current feed are the basic unit of the switching circuitry. Fig. 1 of Enclosure shows one link of a ternary shift register consisting of two elements connected one behind the other and fed by opposing phases of pulse current. Each element consists of two amplifiers; each amplifier contains a transformer with ferrite core and a diode. The input windings are so wired that a pulse through input 1 excites the upper amplifier and blocks the lower. A pulse atinput -1 has the opposite effect. Thus, ternary-code transmission occurs along two channels, the upper representing +1 and the lower, -1. The 0 state is represented by simultaneous pulse feed at both inputs. Logic summing operations are performed with the outputs of two elements connected in parallel to the inputs of a third element. The independent outputs of the magnetic amplifiers allow decoding by the digit. The number of components and the power requirements are no greater than those for binary shift registers with compensating transformers for noise suppression. Multi-

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ACCESSION NR: AP5009261

plication operations can be performed with the same basic circuit elements. Fig. 2 is a schematic of the ternary adder used in the tum Setun'. It has two inputs and consists of two half-adders. It is claimed to be the most economical of the present generation of ternary adders. Orig. art. has: 5 figures. [PW]

ASSOCIATION: Vychislitel'nyy tsentr mekhaniko-matematicheskogo fakul'teta

SUBMITTED: 14Jul64 ENCL: 02 SUB CODE: DP, EC

NO REF SOV: 004 OTHER: 002 ATD PRESS: 3241

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L 51504-65 EWT(d)/EED-2/EWP(1) Pq-4/Pg-4/Pk-4 IJP(c) BB/GG

ACCESSION NR: AP5015330 UR/0286/65/000/009/0089/0089
681.142.652.2

AUTHOR: Brusentsov, N. P.; Verigina, V. V.; Maslov, S. P. 40 B

TITLE: A method for recording information in a permanent memory. Class 42, No. 170745

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 9, 1965, 89

TOPIC TAGS: magnetic core storage, information recording, computer memory

ABSTRACT: This Author's Certificate introduces a method for recording information in a permanent magnetic core memory by threading the read-out (or energizing) wire through the core openings. Ternary information is recorded by threading this wire through the core opening in one direction when recording the code "+ 1" in the opposite direction when recording the code "- 1" and by passing the wire outside the core when recording the code "0".

ASSOCIATION: none

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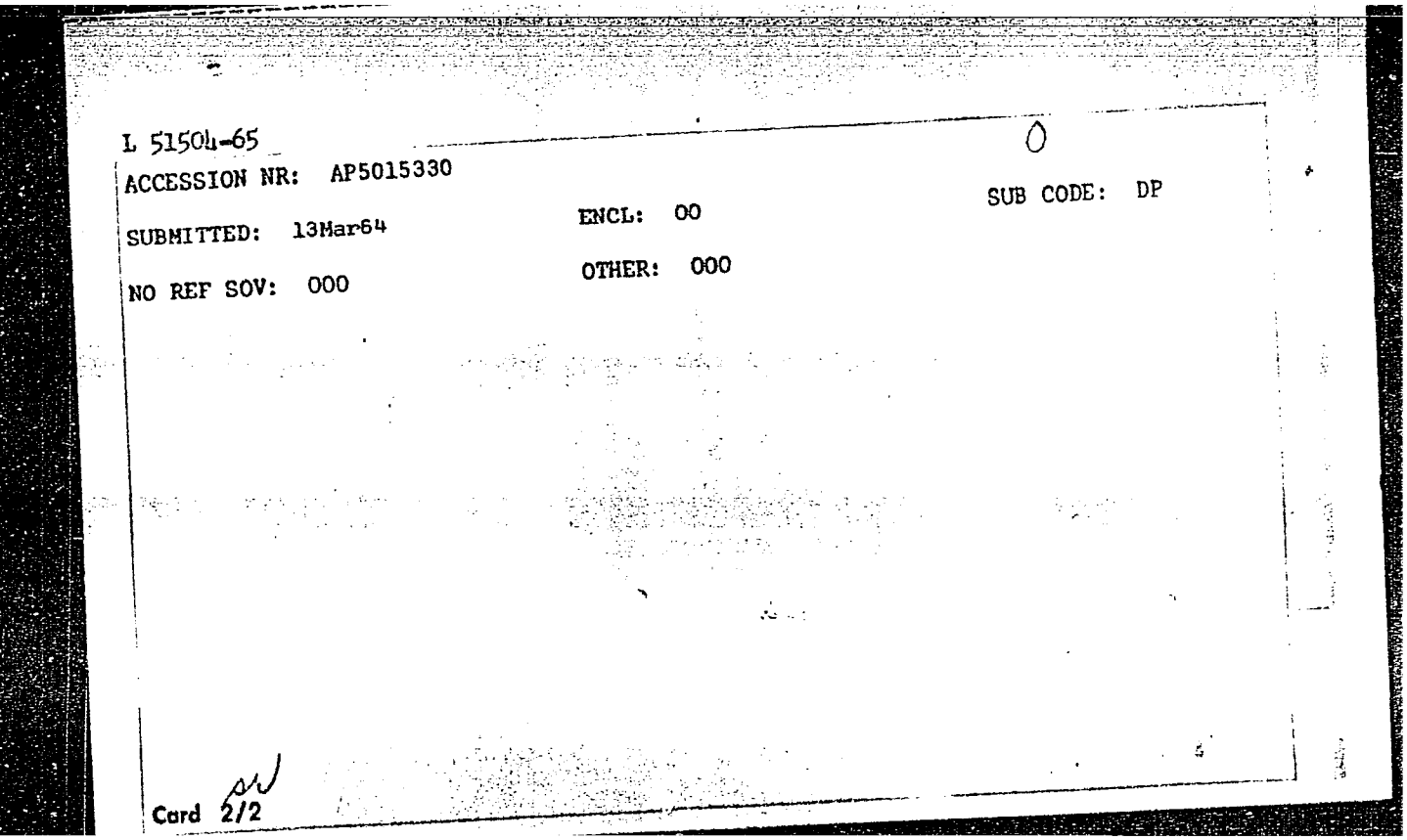

L 51504-65

ACCESSION NR: AP5015330

SUBMITTED: 13Mar64

ENCL: 00

SUB CODE: DP

NO REF SOV: 000

OTHER: 000

Card 2/2

BRUSENTSOV, Nikolay Petrovich; MASLOV, Sergey Petrovich; ROZIN, Vladlen Petrovich; TISHULINA, Antonina Mikhaylovna

["Setun'", a small digital computer] Malaia tsifrovaia vychislitel'naia mashina "Setun'." Moskva, Izd-vo Mosk. univ., 1965. 129 p. (MIRA 18:8)

BRUSENTOV, P.M., assistent.

Dynamic loads in the transmission of an automobile with hydraulic torque converter. Izv. vys. ucheb. zav.; mashinostr. no.10:61-68 '58. (MIRA 12:11)

1. Moskovskiy avtomekhanicheskiy institut.
(Automobiles--Transmisson devices)

BRUSENTSOV, P. M., Cand Tech Sci -- (diss) "Dynamic loading in the transmission of automobiles with hydrotransformers." Moscow, 1960. 16 pp; (Ministry of Higher Secondary Specialist Education RSFSR, Moscow Automechanics Inst, Chair of "Automobile"); 150 copies; price not given; (KL, 17-60, 151)

CHERKASSKIY, M.A., prof.; IVANOV, V.M., ordinator; BRUSENTSOV, V.I., ordinator; BRUSENTSOVA, M.S., vrach

Distribution of hypertension among the workers of a footwear factory. Sbor. trud. Kursk. gos. med. inst. no.16:83-87 '62. (MIRA 17:9)

1. Iz Kurskoy gorodskoy klinicheskoy bol'nitsy No.2 (glavnyy vrach - M. Ya. Nekhlyudov) i Kurskoy kliniki propedvetiki vnutrennikh bolezney (zav. - prof. M.A. Cherkasskiy) 2. Zdravpunkt Kurskoy obuvnoy fabriki (for Brusentsova).

L 13019-63 EPF(c)/EPR/EWP(j)/EWT(m)/BDS AFFTC/ASD Pr-4/Ps-4/Pc-4 RM/WW

ACCESSION NR: AP3000408 S/0191/63/000/005/0067/0068

AUTHOR: Nikolayev, A. F.; Levitskaya, O. M.; Brusentsova, L. M.; Katsnel'son, Ye. Z.

TITLE: Some characteristics of an epoxy-phenol binder for SVAM

SOURCE: Plasticheskiye massy*, no. 5, 1963, 67-68

TOPIC TAGS: SVAM, epoxy-phenol binder, epoxy phenol resin

ABSTRACT: SVAM is prepared from a basic material containing 70% epoxy resin (ED-6) and 30% resol resin; its physico-mechanical properties are dependent on the composition and properties of the epoxy-phenol resin. The resin described here was obtained by combining acetone solutions of ED-6 resin (17-18% epoxy-groups) with a resol phenol-formaldehyde resin (9-10% free phenol) in a ratio of 70:30. It kept well for 60 days, but did not undergo satisfactory hardening even after 30 minutes at 140-200C. An insoluble (non-hardening) portion of 15% or more always remained, lowering the thermostability and rigidity of the material and affecting its physico-mechanical properties. It is suggested that thermosetting might be improved by modifying the composition of the epoxy-phenol resin, matching it with a special resol phenol-formaldehyde resin, and using a catalyst. Orig. art. has: 3 figures.

Card 1/2

AUTHORS: Tsvetayeva, N.Ye., Brusentsova, M.N. SOV/89-4-6-13/30

TITLE: The Measurement of β-Activities With a Window Counting-Tube (Izmereniya β-aktivnosti na tortsovom schetchike)

PERIODICAL: Atomnaya energiya, 1958, Vol. 4, Nr 6, pp. 583-585 (USSR)

ABSTRACT: When determining β-activities by means of window counting-tubes a number of corrections must be carried out. The correction for the thickness of the window of the counting tube and the absorption of air between the window and the preparation can be determined jointly by means of the formula

$$T = 2\,\frac{t_\omega + t_a}{t_{1/2}}$$

where t_ω denotes the thickness of the window, t_a - the thickness of the interspace of air, $t_{1/2}$ - the thickness of half-width absorption (in each case expressed in mg/cm^2).
The value of $t_{1/2}$ was measured for the following nuclei:

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The Measurement of β-Activities With a Window Counting-Tube SOV/89-4-6-13/30

	E_0(MeV)	$t_{1/2}$ in mg/cm^2
S^{35}	0.167	2.8
Ca^{45}	0.254	3.9
Tl^{204}	0.765	15.1
Sr^{90}	0.54	8.7
RaE	1.17	19
P^{32}	1.7	34

Furthermore, for the nuclei N^{95}, S^{35}, Ca^{45}, Co^{60}, Zr^{95}, Cs^{137}, Tl^{204}, RaE and Rh^{106} the correction coefficients for the β-absorption of these nuclei in air was determined and the corresponding curve was plotted.
The following window counting tubes were used: BFL-25, MST-17.
With these correction coefficients the absolute β-activity of Cs^{137}, Sr^{90}-Y^{90}, Co^{60} was determined; satisfactory agreement

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The Measurement of β-Activities With a Window Counting-Tube

SOV/89-4-6-13/30

with the values obtained by means of a 4π -counting device was attained. Thre are 3 figures, 2 tables and 5 references, 3 of which are Soviet.

SUBMITTED: December 20, 1957

1. Beta rays--Counting methods 2. Mathematics--Applications

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BRUS-RNTSoud M.N.

PHASE I BOOK EXPLOITATION 807/5599

Sbornik radiobiologicheskikh i dozimetricheskikh metodik (Collection of Radiobiological and Dosimetric Methods) Moscow, Medgiz, 1959. 459 p. Errata slip inserted. 9,000 copies printed.

Eds. (Title page): S.G. Ousey, U.Ya. Margulis, A.M. Marey, M.Ya. Yarmonko, M.M. Shtilenberg; Ed. (Inside book): V.I. Lebedinskiy; Tech. Ed.: A.I. Zakharova.

PURPOSE: This collection of articles is intended for physicists, sanitation and public health doctors, chemists and other specialists working in radioactive dosimetry.

COVERAGE: This work discusses the following subjects: (1) principles of organizing sanitation and dosimetric control in institutions where work is carried on with radioactive substances; (2) radio-chemical and chemical methods for determining certain radioactive substances in samples of air, water, soil and foodstuffs; (3) physical methods of measuring contamination of the air by radioactive gases, vapors, aerosols, and methods for determining the level of contamination of external surfaces, clothes and leather coverings; (4) methods of measuring external stresses of X- and gamma-radiation, and methods of individual dosimetric monitoring; (5) absolute and relative methods of measuring the activity of solid and liquid radioactive sources. There are four appendixes dealing with methods of calculating the total dosage from sources of ionizing radiation, units of activity, and doses from natural (background) radioactivity in the calcium of foodstuffs; sanitary regulations observed during transportation, storage, and handling of radioactive substances are discussed, as well as the permissible level of ionizing radiation. Ten editors thank N.V. Sivintsev and D.P. Shishkov. References appear at the end of each chapter.

Card 11/11 TM/mas 6-2-60

CHERKASSKIY, M.A., prof.; IVANOV, V.M., ordinator; BRUSENTSOV, V.I., ordinator; BRUSENTSOVA, M.S., vrach

Distribution of hypertension among the workers of a footwear factory. Sbor. trud. Kursk. gos. med. inst. no.16:83-87 '62. (MIRA 17:9)

1. Iz Kurskoy gorodskoy klinicheskoy bol'nitsy No.2 (glavnyy vrach - M. Ya. Nekhlyudov) i Kurskoy kliniki propedvetiki vnutrennikh bolezney (zav. - prof. M.A. Cherkasskiy) 2. Zdravpunkt Kurskoy obuvnoy fabriki (for Brusentsova).

BRUSENTSOVA, V. A. Cand Med Sci -- (diss) "On the pathogenesis and treatment of obliterating endarteritis." Mos, 1957. 11 pp (Inst of Surgery im Professor A. V. Vishnevskiy, Acad Med Sci USSR), 110 copies (KL, 44-57, 101)

BRUSENTSOVA, V.A.

AUTHOR: Brusentsova, V.A., Physician 25-7-49/51

TITLE: Answers to Questions (Otvety na voprosy) Spontaneous Gangrene (Spontannaya gangrena)

PERIODICAL: Nauka i Zhizn', 1957, # 7, p 63 (USSR)

ABSTRACT: Spontaneous gangrene is an ailment of the vascular and nervous systems of the human organism. Its main characteristic is the gradual contraction of the blood vessels, which stops the blood supply to the tissues. It is caused by tobacco smoking, after effects of diseases, especially typhoid fever, relapsing typhoid, and freezing of the extremities. As a cure intravenous infusion of salt solutions, sodium citrate, and ions of various metals are applied. The Institute of Surgery imeni A.V. Vishnevskiy of the USSR Academy of Medical Sciences has developed a therapy based on a slight irritation of the nervous system by a solution of novocaine. Preventive treatment, in time, can arrest the illness entirely.

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BRUSENTSOVA, V., kand. med. nauk

Thrombophlebitis. Nauka i zhizn' 25 no. 6:77 Je '58. (MIRA 11:8)

(THROMBOSIS)

BRUSENTSOVA, V.A.

Study of the vessels of the fundus oculi in obliterating endarteritis. Sov.med. 23 no.1:100-110 Ja '59. (MIRA 12:2)

1. Iz Instituta khirurgii (dir. - deystvitel'nyy chlen AMN SSSR prof. A.A. Vishnevskiy) AMN SSSR imeni A.V. Vishnevskogo.

(ARTERIOSCLEROSIS OBLITERANS, pathol.
ocular fundus, vasc. changes (Rus))
(THROMBOANGLITIS OBLITERANS, pathol.
same)
(EYE, blood supply
fundus, vasc. dhanges in obliterating endarteritis (Rus))

BRUSENTSOVA, V. A., kand. med. nauk

Activation of mesenchymal reaction in endarteritis obliterans.
Vest. khir. no.12:82-85 '61. (MIRA 15:2)

1. Iz Instituta khirurgii im. A. V. Vishnevskogo (dir. - prof. A. A. Vishnevskiy) AMN SSSR. Adres avtora: Moskva, B. Serpukhovskaya, 27, Institut khirurgii im. A. V. Vishnevskogo AMN SSSR.

(ARTERIES--DISEASES)

BRUSENTSOVA, V.A., kand.med.nauk

Obliterating endarteritis is intermittent claudication. Med. sestra 20 no.1:54-56 Ja '61. (MIRA 14:3)
(ARTERIES--DISEASES)

BRUSENTSOVA, V.A.

Testing new instruments in developing present-day restorative operations on the blood vessels in endarteritis obliterans. Trudy NIIEKHAI no.5:272-276 '61. (MIRA 15:8)

1. Iz Instituta khirurgii im. A.V.Vishnevskogo AMN SSSR.
(ARTERIES--DISEASES) (BLOOD VESSELS--SURGERY)
(SURGICAL INSTRUMENTS AND APPARATUS)

PSHENICHNIKOV, Vladimir Il'ich; BRUSENTSOVA, Valentina Aleksandrovna; SIMONYAN, K.S., red.; BASHMAKOV, G.M., tekhn. red.

[Pathogenetic treatment of obliterating diseases of the extremital arteries] Patogeneticheskaia terapiia obliteriruiushchikh zabolevanii arterii konechnostei. Moskva, Medgiz, 1963. 175 p. (MIRA 16:6)
(EXTREMITIES (ANATOMY))--BLOOD SUPPLY)
(ARTERIES--DISEASES)

L 1625-66 EWT(l)/EWT(m)/EPF(c)/EWP(j)/T/EWA(c) IJP(c) GG/RM

ACCESSION NR: AP5021890 UR/0020/65/163/006/1408/1411

AUTHORS: Prolova, A. A.; Brusentsova, V. G.; Kozlov, P. V.; Kargin, V. A. (Academician)

TITLE: Investigation of the relaxation phenomena in crystalline polycaprylamide

SOURCE: AN SSSR. Doklady, v. 163, no. 6, 1965, 1408-1411

TOPIC TAGS: polycaprylamide, relaxation process, crystalline polymer

ABSTRACT: Relaxation properties of crystalline polymers have been studied using specimens of polycaprylamide with a definite structure but of varying degree of crystallization. This work is a continuation of the study of relaxation processes, undertaken previously by the authors, on amorphous crystallizable polymers (DAN, 160, 875, 1965). The experimental conditions and equipment were the same as those described earlier, except that the temperature interval was now -30 to 220C and the heating rate during the thermomechanical experiments was 2C per minute. The specimens were prepared in form of tablets 10 mm in diameter and 2.3-2.4 mm thick. They were compressed at 220C and 300 kg/cm^2 pressure and then cooled by liquid nitrogen to -50C. Specimens so obtained were of crystalline structure (density 1.145 g/cc). Several specimens were investigated directly at

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ACCESSION NR: AP5021890

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1400, 140, 14, 1.4, and 0.14 vibrations per minute. Others were heated at 180C for 1 hour, giving a material of higher crystallization order (density of 1.153 g/cc), whose deformation was then studied at 14, 1.4, and 0.14 vibrations per minute. It was discovered that in these frequency intervals thermomechanical curves are functions of the effective force frequency. An analogy was found in properties of rigid polymers and polycaprylamide made rigid by crystallization. Study of the relaxation properties of the unheated and heated (less and more crystalline, respectively) specimens established a linear relationship between the maximal deformation values ($epsilon_{max}$) and the logarithm of the effective force frequency, as indicated by Fig. 1 on the Enclosure. It is shown that hardening of the polymer by crystallization results in a decrease in $epsilon_{max}$ value and is the cause of the increase of T_g and its independence of effective force frequency. The obtained data are explained in terms of the "bundle" structure theory offered by V. A. Kargin, A. I. Kitaygorodskiy, and G. L. Slonimskiy (Koll. Zhurn., 19 131, 1957). Orig. art. has: 3 figures.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University)

SUBMITTED: 24Mar65 ENCL: 01 SUB CODE: OC

NO REF SOV: 008 OTHER: 000

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L 1625-66

ACCESSION NR: AP5021890

ENCLOSURE: 01

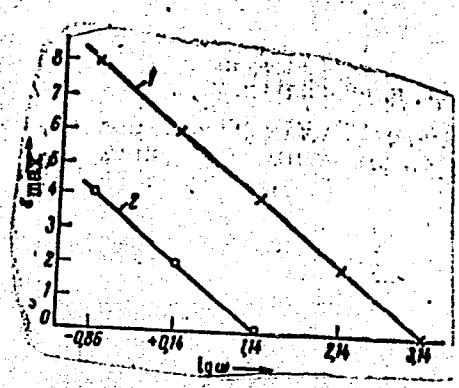

Fig. 1. Maximal deformation value (in arbitrary units) as function of the logarithm of the frequency for polycaprylamide: 1- unheated; 2- heated at 180° for 1 hour

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S/123/59/000/010/048/058
A004/A001

Translation from: Referativnyy zhurnal, Mashinostroyeniye, 1959, No. 10, p. 132, # 38211

AUTHOR: Brusentsova, V. M.

TITLE: The Use of Bakelite Lacquer to Protect Large-Size Equipment From Corrosion

PERIODICAL: Prom-ekon. byul. Sovnarkhoz Luganskogk ekon. adm. r-na, 1958, No. 6, pp. 20-21

TEXT: The author reports on the positive practice of the Lisichanskiy khimicheskiy kombinat (Lisichansk Chemical Combine) of using spiral electric heating for the polymerization of bakelite lacquer. The No. 86 bakelite lacquer is applied with the aid of brushes on the inner surface of the tube which was subjected to preliminary cleaning by sandblast. After a 12-hour air drying, the first and second lacquer layer were subjected to a 4-hour heat treatment: 1 hour at 60°C, two hours at 80°C and 1 hour at 90°C. The heat treatment of the third layer continued for 49 hours. Heating was effected with the aid of a two-section

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S/123/59/000/010/048/068
A004/A001

The Use of Bakelite Lacquer to Protect Large-Size Equipment from Corrosion

electric heater. The use of bakelite lacquer with electric spiral polymerization makes it possible efficiently and easily to protect large-size equipment from corrosion.

K. S. A.

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

BRUSENTSOVA, V.N.

CA

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Replacing grinding of porous chromium by electrolytic finishing. D. V. Pletnev and V. N. Brusentsova. *Khromirovanie i Traktor. Prom.* 1951, No. 3, 15.—Tedious grinding of Cr-coated valves was successfully replaced by anodic treatment. Following Cr plating the valves were treated anodically for 11 min. in an electrolyte contg. CrO_3 250 and H_2SO_4 2.63 g./l. at 50° and c.d. of 45 amp./sq. dm. To remove the oxide films, at the beginning of anodic treatment, pulses of current 2-3 times greater than the normal current of 2-3 min. duration each, were applied. To carry out this process successfully the anodic treatment should follow immediately chrome plating without changing the position of the anode and the position of the rings.

M. Hosch

BRUSENTSOV, V.N.

USSR/Miscellaneous - Book review

Card 1/1 Pub. 128 - 23/25

Authors : Garkunov, D. N.

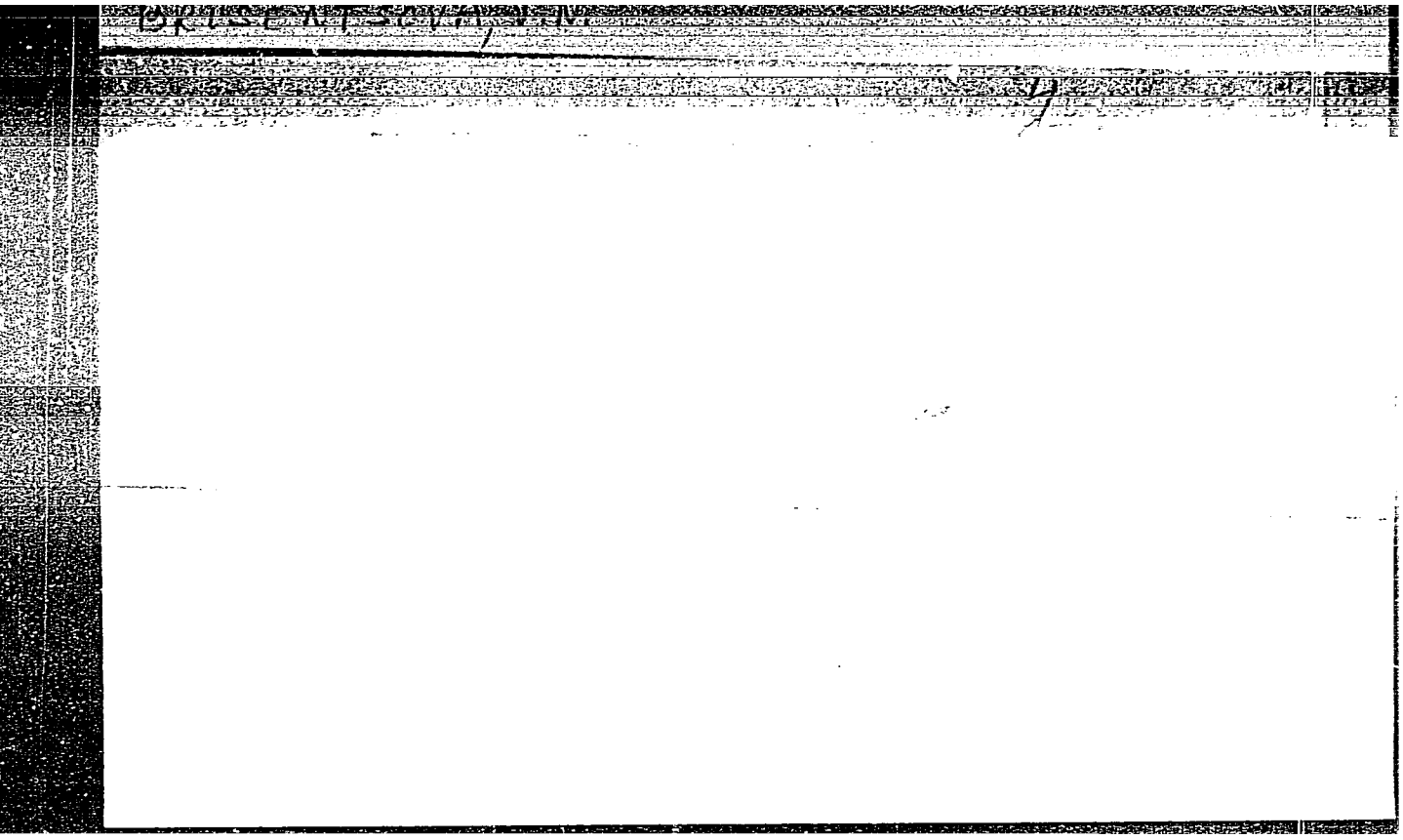
Title : Book review

Periodical : Vest. mash. 1, 89-93, Jan 1955

Abstract : A review is presented of D. V. Pletnev, and V. N. Brusentsov's book, "Technological Principles of Resistant-to-Wear Chrome Plating", published by "Mashgiz" in 1953. The book describes the characteristics of electrolytic plating and theory and methods of resistant-to-wear chrome plating of machine components and tools. Table.

Institution : .....

Submitted : .....



BRUSENTSOVA, V.N., inzh.; KRYLOV, V.P., inzh.; SAVEL'YEVA, Ye.G., inzh.

Increasing the wear resistance of aluminum alloys by chromium plating. [Trudy] NATI no.18:3-21 '59. (MIRA 12:7)
(Aluminum alloys) (Chromium plating)

S/119/63/000/002/007/014
A004/A127

AUTHORS: Brusentsova, V.N., Pletnev, D.V.

TITLE: High-hardness lustrous nickel plating in oxalic acid electrolytes

PERIODICAL: Priborostroyeniye, no. 2, 1963, 19 - 21

TEXT: The authors give a description of a nickel-plating bath on the basis of a complex oxalic acid electrolyte, operating with a high pH-value (up to pH 10) and rendering it possible to obtain very fine-grained and hard bright and lustrous platings which, after heating up to 300°C, are getting even harder, i.e. nearly as hard as chromium platings. This electrolytic bath has been developed at the NATI under the supervision of D.V. Pletnev, and was later on improved by NIISchetmash and, under production conditions, by the Moscow "Gotoval'nya" Plant. It was found that ammonium oxalate, which poorly dissolves in water, considerably better dissolves if a complex compound with nickel sulfate is formed. The optimum composition of a nickel oxalate bath is: nickel sulfate - 140 g/l, ammonium oxalate - 300 g/l, sodium or ammonium chloride - 3-5 g/l, sodium or ammonium fluoride - 15 g/l.

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High-hardness lustrous nickel plating in... S/119/63/000/002/007/014
A004/A127

The optimum operation conditions are as follows: current density - 10-20 amp/dm^2, pH-value in the range of 7 - 10 (standard 7.8 - 8.2), electrolyte temperature 80 - 85°C (optimum 78 - 82°C), periodical alkalization by an ammonia solution of up to pH 8. The authors present a number of specific features of oxalic acid nickel plating and enumerate the advantages of this method in comparison with ordinary nickel-plating or chromium-plating baths. There are 3 figures.

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