Automation of the Electrical Equipment of Supporting Repeater Stations on Cable Trunks

riations in input voltage to the equipment of from -20 to +5%; net power output is 24 kw. Basic power for the equipment is from an external AC line, or a local diesel power plant. Normal operation of the unit is with a synchronous generator driven by an asynchronous motor fed by the AC power line; alternately the generator may be driven by a battery powered DC motor, and switching from one drive to the other is automatic in case of AC line failure or other trouble. The principle of operation of the equipment is outlined in detail with the aid of the diagram (Fig 1). The unit includes a type VSS rectifier unit; voltage for remote feed is fed through a Scott transformer. A reserve unit is included which is automatically started and switched into the circuit in case of failure of the basic unit. The second unit (Fig 2), for balanced cable trunks, supplies locally powered OUP and remote powered NUP equipment with DC voltages of -24 V,

Automation of the Electrical Equipment of Supporting Repeater Stations on Cable Trunks

+220 V, and 250 - 450 V, stable within ±3% for variations in input voltage and frequency of from -15 to +5% and -4 to +2% respectively. Basic power for the equipment is taken from an external AC line; reserve power is from an automatic diesel power plant. The batteries in the unit are continually connected to the load circuit insuring uninterrupted operation of station apparatus. Normal operation of the unit is through a VSS rectifier unit powered by the AC line. Failure of the AC line causes the VSS unit to be switched out of the circuit, to be replaced by the batteries, and, in case of prolonged line failure, automatically by the diesel power plant. A reserve rectifier unit is included in the equipment. The principle of operation of the circuit is described in detail with the aid of the diagram (Fig 2). Operation of protective equipment in the unit is also briefly out-

Automation of the Electrical Equipment of Supporting Repeater Stations on Cable Trunks

lined. There are 2 circuit diagrams.

ASSOCIATION: Laboratoriya TsNIISa (Laboratory of the TsNIIS)

ADZHEMOV, S.A.; MURADYAN, A.G., kand.tekhn.nauk; PUSTOVOYTENKO, O.D., starshiy inzh.; SERYAKOV, N.I.

High-frequency communication system using single quadded cables with unattended transistorized booster stations. Vest. sviazi 21 no.11:13-16 N '61. (MIRA 14:11)

1. Zamestitel' nachal'nika TSentral'nogo nauchno-issledovatel'skogo instituta svyazi Ministerstva svyazi SSSR. (for Adzhemov).
(Telecommunication)

BOVKUN, Viktor Georgiyevich; KAZARINOV, Ivan Alekseyevich; KOKOSHKIN, Pavel Aleksandrovich; LYUBSKIY, Gennadiy Severianovich; MEDOVAR, Anatoliy Isayevich; PETROV, Viktor Vasil'yevich; PIONTKOVSKIY, Bronislav Aleksandrovich; SERYAKOV, Nikolay Ivanovich; ELINSON, Mikhail Mikhaylovich; SERGEYCHUK, K.Ya., red.; GRIGOR'YEV, B.S., red.; FORTUSHENKO, A.D., red.; BUSANKINA, N.G., red.; SHEFER, G.I., tekhn. red.

[Engineering manual on electric communications; electric equipment] Inzhenerno-tekhnicheskii spravochnik po elektrosviazi; elektroustanovki. Moskva, Gos. izd-vo lit-ry po voprosam sviazi i radio, 1962. 671 p. (MIRA 15:6)
(Telecommunication--Handbooks, manuals, etc.)
(Electric engineering--Handbooks, manuals, etc.)

SERYAKOV, N.I.; SHEYKINA, T.S.; PETROV, V.V.; IDBRIL', Z.Ya.; SHESTERIKOV, V.G.; PRONIN, V.M.; LYUBSKIY, G.S.; ISAKOV, I.K.; VOLODARSKAYA, V.Ye., red.

[Automated power supply guarantee systems for telecommunication apparatus] Avtomatizirovannye ustroistva garantirovannogo pitaniia apparatury sviazi; informatsionnyi sbornik. Moskva, Izd-vo "Sviaz'," 1964. 132 p. (MIRA 17:6)

FIONTKOVSKIY, Bronislav Aleksandrovich; SEMYONOV, Nikolay Ivanovich; [illegible]VEL'YEV, V.M., otv. red.; GRIGOROVSKAYA, M.A., red.

[Electric power supply of wire broadcasting enterprises] Elektropitanie predpriiatii provodnoi sviazi. Moskva, Izd-vo "Sviaz'," 1964. 591 p. (MIRA 17:4)

IBRAGIMOV, E.S.; MELIKOV, D.K.; SERYAKOV, V.F.

AzINMASh-30 assembly for acidization of wells bottom areas. Mash. i neft. obor. no.2:27-31 '63. (MIRA 17:8)

1. Azerbaydzhanskiy nauchno-issledovatel'skiy institut neftyanogo mashinostroyeniya.

IBRAGIMOV, E.S.; GORBOV, V.G.; SERYAKOV, V.F.

4An-700 pump unit for hydraulic fracturing and sandjetting. Mash. i neft. obor. no. 12:9-14 '63. (MIRA 17:4)

1. Azerbaydzhanskiy nauchno-issledovatel'skiy institut neftyanogo mashinostroyeniya.

3 (4)

AUTHOR: Seryakov, V. T.

SOV/6-59-5-9/26

TITLE: Multi-purpose Work in the Position and Elevation Preparation of Aerial Photographs (Kompleksnyye raboty pri planovo-vysotnoy podgotovke aerosnimkov)

PERIODICAL: Geodeziya i kartografiya, 1959, Nr 5, pp 25-26 (USSR)

ABSTRACT: Up to 1958 the position and elevation preparations for stereotopographical surveys on scales of 1 : 25000 and 1 : 10000 were as a rule carried out separately by team Nr 58 of the Kazakhskoye AGP (Kazakh Aerogeodetic Enterprise). That is to say that parallel work was done by some teams working on the positional conjunctions, by other teams working on the elevation datum, and others still working on the topographical identification of the aerial photographs. Practical experience has shown this working organization to be inappropriate, and in 1958 16 multi-purpose teams were set up with the brigade. These teams carried out an elevation and position preparation on 94 trapezoids on a 1 : 25000 scale, mainly in high mountains. Each team in the high mountains consisted of 1 topographer, 1 foreman, 3 rodmen, and 1 transport worker. In flat regions the team was composed of

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5 men. The multi-purpose brigade carried out simultaneously the surveying of the altitude traverses and the positional conjunction of the aerial photographs. The topographer carried out the identification at each ground control point as well as at the transitions from one point to the other. In the sections between the altitude traverses, the terrain was identified by means of additional inspection. - The advantages of multi-purpose work are as follows: (1) reduction in the number of workers required, (2) reduced transport costs, (3) saving of time and means involved in the selection, study and preparation of data for the work, fewer sets of aerial photographs and lithographic map prints required, (4) the party work on a smaller area and are therefore in a better position to study the terrain, (5) increased output and increased responsibility, on the part of the head of party, for the entire scope of work done. - A serious disadvantage is constituted by the delays caused by the additional tours of the topographer for the identification of aerial photographs and for the computation and processing of data for the position and elevation preparations. This shortcoming can be remedied

Multi-purpose Work in the Position and Elevation Preparation of Aerial Photographs

SOV/6-59-5-9/26

by a change in the composition of the party. - It seems desirable to include one assistant topographer in each multi-purpose party. The following composition of teams seems recommendable: 1 head of party, who is at the same time a topographer, 1 topographer, and 4-5 workers. Besides, the entire technical personnel of the team would have to be trained for this multi-purpose work during the winter months.

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GERYAKOV, Ye. I.

Possibility of predicting the thermal state of waters in the nonfreezing part of the Barents Sea for a five-year period. Trudy Len. gidromet. inst. no.17:57-61 '64.

(MIRA 18:6)

Seryakov, Ye. I., Water exchange of the Baltic Sea with the North Sea and its variability over many years Tr. Leningr. gidrometeorol. in-ta (Works of the Leningrad Hydrometeorological Institute), No 4, 1956, No 4, p 185-197; (RZhGeogr 9/57-19368)

SERYAKOV, Ye. I.

Cand Geog Sci - (diss) "Heat balance of the unfrozen part of the Barents Sea and its changes." Leningrad, 1961. 13 pp; (Main Board of the Northern Sea Routes of the Ministry of Maritime Affairs USSR, Arctic and Antarctic Scientific Research Inst); 150 copies; free; (KL, 6-61 sup, 201)

KUZNETSOV, V.I., prof., doktor khim.nauk; SERYAKOVA, I.V.

Extraction analysis of elements by means of low-melting organic substances. Zav.lab. 23 no.10:1176-1180 '57. (MIRA 10:12)

1.Institut geokhimii i analiticheskoy khimii im. V.I. Vernadskogo AN SSSR.

(Chemistry, Analytical)
(Extraction (Chemistry)

5(2), 5(3)

SOV/75-14-2-3/27

AUTHORS: Kuznetsov, V. I., Seryakova, I. V.

TITLE: Low-melting Extracting Agents in Analytical Chemistry (Legkoplavkiye ekstragenty v analiticheskoy khimii)

PERIODICAL: Zhurnal analiticheskoy khimii, 1959, Vol 14, Nr 2, pp 161-166 (USSR)

ABSTRACT: In the present paper a list of low-melting solid mixtures of extracting agents which are suited for work at various pH values is given. The extracting agents mentioned were selected in connection with investigations of the extraction of iron (as $FeCl_4^-$) and cadmium (as CdJ_4^-). Iron and cadmium were selected because the complex anions mentioned are stable in wide ranges of pH. The good values of the distribution coefficients which were obtained for the two elements suggest that the extracting agents investigated are suited also for the extraction of other elements on the condition that they form easily extractable complex anions in the corresponding pH range. By using solid low-melting extracting agents the separation of elements is simplified because separation may be carried out in a simple flask without using a separating

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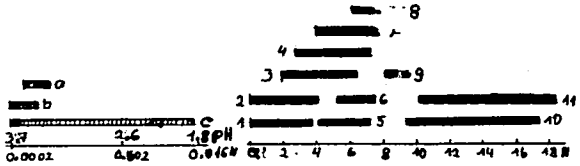
funnel. The following oxygen-containing solvents were investigated in a mixture with approximately 25% paraffin: methyl-ethyl ketone, cyclohexanone, diethyl ketone, methyl-butyl ketone, methyl-isobutyl ketone, propyl acetate, butyl acetate, amyl acetate, butyric acid ethyl ester, isovaleric acid ethyl ester, and benzoic acid ethyl ester. Due to the addition of paraffin all these compounds form solid or semi-solid mixtures which become easily fusible already if the temperatures are only slightly increased. The mixtures described are suited for extractions from 0.1 N to 18 N acid solutions. In the case of the extraction from 0.1 - 5 N acid solutions it is appropriate to add alkali salts of the corresponding halide which forms the anion complex in order to increase the distribution coefficient. Further, low-melting amines and mixtures of liquid amines with paraffin were investigated: α-naphthylamine, mixtures of dimethyl aniline and paraffin, and of o-chloro aniline and paraffin. These mixtures are especially suited for the extraction from weakly acid solutions (pH 1.8 - 3.7). They are, however, easily oxidizable. Thus, e.g. by using these mixtures iron cannot be extracted because under the conditions of extraction it is reduced to the bivalent stage which cannot be extracted. All mixtures

investigated, the pH ranges of their applicability and the corresponding distribution coefficients for cadmium and iron are tabulated. A further table contains the applicability of the mixtures to the various pH-ranges:



a - α-naphthylamine
b - dimethyl aniline
c - o-chloroaniline

1 - methyl-ethyl ketone
2 - cyclohexanone
3 - diethyl ketone
4 - methyl-isobutyl ketone
5 - methyl-butyl ketone
6 - propyl acetate
7 - butyl acetate
8 - ethyl butyrate
9 - isoamyl acetate
10 - ethyl-isovalerianate
11 - ethyl benzoate

The production of the extraction mixtures is described in detail in this paper. There are 3 tables and 8 references,

Low-melting Extracting Agents in Analytical Chemistry

4 of which are Soviet.

ASSOCIATION: Institut geokhimii i analiticheskoy khimii im. V. I. Vernadskogo AN SSSR, Moskva
(Institute of Geochemistry and Analytical Chemistry imeni V. I. Vernadskiy AS USSR, Moscow)

SUBMITTED: February 3, 1958

Card 4/4

5.4000,16.7100

78337
SOV/89-8-3-22/32

AUTHOR: Seryakova, I. V.

TITLE: Symposium on Extraction Theory. News in Science and Technology

PERIODICAL: Atomnaya energiya, 1960, Vol 8, Nr 3, pp 269-270 (USSR)

ABSTRACT: The symposium on theory of extraction processes was held on December 3-4, 1959, at the (Institute of Geochemistry and Analytical Chemistry imeni V. I. Vernadskiy AS USSR (Institut geokhimii i analiticheskoy khimii imeni V. I. Vernadskiy AN SSSR). The aim was to evaluate the most important problems of the extraction theory. There were five papers on questions of chemistry and thermodynamics of extraction equilibria, on the influence of the nature of extragents and salting-out agents, on the composition of the extracted compounds and their interaction with molecules of water and the extragent. V. I. Kuznetsov reported on "The Chemistry of Extraction Processes," based on the theory of action analytical organic reagents. He attempted to compare

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the tendency of ions to form extracting compounds with the quantity z/n of that ion, where z is the charge of the ion, and n is the number of atoms in that ion K. B. Yatsimirskiy and M. M. Senyavin were critical of such an oversimplified approach. V. V. Fomin presented a paper on "Extraction Equilibria," in which the investigated those chemical reactions in which the extragent participates in both phases. He notes that an element during the extraction process need not lose its hydrophilic nature. A. A. Lipovskiy and V. A. Mikhaylov together with the author discussed the merits of the accepted view of the oxonium mechanism of extraction of elements. The paper by A. V. Nikolayev, N. M. Sinitsyn, and A. M. Shubina, "Donor-Acceptor Properties of Extragents," dealt with the influence of the nature of organic solvent on extraction. According to their data, an increase in dipole moments augments the degree of element extraction. N. N. Basargin pointed out in the discussion that in the case of elements having a tendency to build covalent bonds, the result may be just the opposite.

V. G. Timoshev discussed the decisive role of donor-acceptor properties of phosphorus-containing extragents. The salting out in extraction processes was investigated in the paper by O. Ya. Samoylov and V. I. Tikhomirov using statistical inquiry into the thermal motion of molecules. Basically, the explanation given took into account the dehydrating properties of salting-out cathions. A. A. Nemodruk pointed out during discussion that one should take into account also the anion concentration of the salting-out agent and other factors. A. M. Rozen presented in his paper the use of thermodynamics in describing the extraction equilibria. It was noted during discussion that many thermodynamic quantities should be measured in tests at different temperatures. V. M. Vdovenko, A. K. Babko, D. D. Suglobov, I. R. Krichevskiy, and A. A. Chaykhorskiy participated also in the general discussion. The symposium determined the main course of future investigations of the theory of extracting processes, in particular: to explain the reasons for the selectivity of the solubility of anorganic and organic compounds in various solvents; to

expend the investigations of solvation, and particularly hydration of ions and molecules, to study further the chemism and thermodynamics of extraction equilibria; and to expand inquiries determining the composition and nature of the extracting compounds. The symposium recommended the establishment of a permanent seminar dealing with the theory of extraction. The basic materials of this symposium will be published in 1960 by Atomizdat.

ZOLOTOV, Yu.A.; SERYAKOVA, I.V.; ANTIPOVA-KARATAYEVA, I.I.; KUTSENKO, Yu.I.; KARYAKIN, A.V.

Effect of the organic solvent on the formation of the tetrachloroferrate ion during extraction of iron from chloride solutions. Zhur.neorg.khim. 7 no.5:1197-1203 My '62. (MIRA 15:7)
(Iron) (Chlorides) (Extraction (Chemistry))

SERYAKOVA, I.V.

Conference on extraction in analytical chemistry. Zhur.anal.tekh. 17 no.2:269-271 Mr-Ap '62. (MIRA 15:4)
(Chemistry, Analytical--Congresses) (Extraction (Chemistry)

ZOLOTOV, Yu.A.; SERYAKOVA, I.V.; KARYAKIN, A.V.; GRIBOV, L.A.; ZUBRILINA, M.Ye.

Hydrate-solvate mechanism of extraction. Dokl.AN SSSR 145 no.1:100-103 Jl '62. (MIRA 15:7)

1. Institut geokhimii i analiticheskoy khimii imeni V.I.Vernadskogo AN SSSR. Predstavleno akademikom A.P.Vinogradovym.
(Extraction (Chemistry))

S/830/62/000/001/003/012
E071/E192

AUTHORS: Kuznetsov, V.I., and Seryakova, I.V.

TITLE: On the mechanism of extraction of elements with oxygen-containing solvents

SOURCE: Ekstraktsiya; teoriya, primeneniye, apparatura. Ed. by A.P. Zefirov and M.M. Senyavin. Moscow, Gosatomizdat, 1962. 104-111

TEXT: Using as an example the extraction of chloride anion of iron (III) with dimethylpyrone and cyclohexanine, the authors confirmed the oxonium mechanism of extraction of elements. Iron was determined radiometrically using Fe^{59} and at higher concentration photometrically with sulphosalicylic acid, the concentration of chloride ion by the Folgard method, and of cyclohexanone by the hydroxylamine method. The experimental procedure consisted of shaking a solution of iron containing a given amount of hydrochloric acid and lithium chloride (total 1 ml) with a solution of the extracting agent in chloroform or toluene (1 ml) and subsequent re-extraction of iron from the organic phase with water. By comparing the increase in the solubility of cyclohexanone in the

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On the mechanism of extraction of ... S/830/62/000/001/003/012
E071/E192

aqueous phase with the degree of extractability of iron, it was found that the more extracting agent transferred into the acid phase, the higher was the degree of iron extraction. The limit of this process was determined by the fraction of dissolved cyclohexanone which is not the same for various conditions. The maximum degree of extraction and the maximum solubility of cyclohexanone were shifted towards higher acid concentrations in the aqueous phase. Such relationship between the degree of extraction of iron and the transfer of the extracting agent into the aqueous phase was explained by the oxonium cations, forming during the interaction between the extracting agent and acid, and participating in the extraction. On extraction of iron, from solutions practically free from hydrochloric acid but containing a high concentration of lithium chloride, iron was extracted by oxygen containing solvents in the form of $LiFeCl_4$. When a part of the lithium chloride is replaced by hydrochloric acid (with the retention of chloride ion concentration), oxonium cation of the extracting agent is formed and part of the iron is extracted in the form of oxonium salt. This was confirmed by determining the dependence of the Li/Fe

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ratio in the extract on the acidity of the starting solution. A comparison of the dependence of the extracting ability of dimethylpyrone and diethylether on the acidity of the aqueous phase indicated that oxygen in dimethylpyrone possessed a higher ability to coordination as it began to extract iron well at a lower acid concentration. It was concluded that with oxygen containing substances iron can be extracted in the form of oxonium salts. This is possible at such acidity, at which the extracting agent used is able to form the necessary concentration of oxonium cations. Of the extracting agents investigated, dimethylpyrone formed oxonium salts at the lowest acidity.
There are 4 figures and 1 table.

Card 3/3

KUZNETSOV, V.I.; SERYAKOVA, I.V.

Extraction separation of vanadium and uranium. Ekstr.; teor., prim., app. no.2:227-234 '62. (MIRA 15:9)
(Uranium--Analysis) (Vanadium--Analysis)
(Extraction (Chemistry))

SERYAKOVA, I.V.; ZOLOTOV, Yu.A.; KARYAKIN, A.V.; GRIBOV, L.A.; ZUBRILINA, M.Ye.

Possibility of the solvation of a tetrachloroferrate ion in the extraction of iron from chloride solutions. Zhur. neorg. khim. 7 no.8:2013-2018 Ag '62. (MIRA 16:6)

1. Institut geokhimii i analiticheskoy khimii imeni V.I. Vernadskogo AN SSSR.
(Ferrates) (Solvation) (Chlorides)

SERYAKOVA, I.V.; ZOLOTOV, Yu.A.; KARYAKIN, A.V.; GRIBOV, L.A.

Hydration and solvation of strong acids during their extraction. Zhur.neorg.khim. 8 no.2:474-480 F '63. (MIRA 16:5)

1. Institut reokhimii i analiticheskoy khimii imeni V.I.Vernadskogo AN SSSR.
(Acids--Spectra) (Extraction (Chemistry)) (Solvation)

ZOLOTOV, Yu.A.; SERYAKOVA, I.V.; KARYAKIN, A.V.; GRIBOV, L.A.; ZUBRILINA, M.Ye.

Infrared spectra of some strong acids extracted with oxygen-containing solvents. Zhur.neorg.khim. 8 no.2:481-485 F '63. (MIRA 16:5)

1. Institut geokhimii i analiticheskoy khimii imeni V.I.Vernadskogo AN SSSR.
(Acids--Absorption spectra) (Solvents)

SERYAKOVA, I.V.; ZOLOTOV, Yu.A.

Extraction of iron from solutions of chlorides of various metals. Zhur. neorg.khim. 9 no.1:187-189 Ja '64.

Extraction of a chloride complex of iron from solutions of perchloric and sulfuric acids. Ibid.:190-191 (MIRA 17:2)

1. Institut geokhimii i analiticheskoy khimii imeni V.I.Vernadskogo AN SSSR.

ANTIPOVA-KARATAYEVA, I.I.; ZOLOTOV, Yu.A.; SERYAKOVA, I.V.

Spectrophotometric study of chloride complexes of iron (III) in relation to the extraction of iron by oxygen-containing solvents. Zhur. neorg. khim. 9 no.7:1712-1719 Jl '64. (MIRA 17:9)

1. Institut geokhimii i analiticheskoy khimii imeni Vernadskogo AN SSSR.

SERYAKOVA, L.P.

Determination of evaporability and calculations of irrigation rates.
Izv. AN SSSR. Ser. geog. no.6:112-117 N-D '57. (MIRA 11:1)

1. Leningradskiy gidrometeorologicheskiy institut.
(Irrigation) (Evaporation)

SERYAKOVA, L.P., Cand Geog Sci -- (diss) "Determination of evaporability and a study of the effect of climatic factors upon irrigation norms." Len, 1959, 10 pp (Main Administration of the Hydrometerological Service under the Council of Ministers USSR. Main Geophysical Observatory im A.I. Voyeykov) 150 copies (KL, 33-59, 117)

GAL'PERIN, B.M.; SERYAKOVA, L.P.

Scattered and total solar radiation under various conditions.
Trudy GGO no.152:96-109 '64. (MIRA 17:7)

L 12989-66 EWT(1) GW

ACC NR: AR6000801 SOURCE CODE: UR/0169/65/000/009/B022/B023

SOURCE: Ref. zh. Geofizika, Abs. 9B187

AUTHOR: Gal'perin, B. M.; Seryakova, L. P.

TITLE: Basic characteristics of short-wave radiation and diurnal radiation balance

CITED SOURCE: Tr. Leningr. gidrometeorol. in-ta, vyp. 22, 1964, 11-34

TOPIC TAGS: solar radiation, optic albedo, solar radiation scattering

TRANSLATION: The authors consider time and space variability in the intensity of scattered and total solar radiation and the radiation balance for the snowless period (from April to October). The basic materials for the work were data from analysis of routine actinometric observations from several groups of stations in various regions of the Soviet Union (northwest, central and southern European sections, far east and middle Asia), as well as previously published data. The short-wave radiation and radiation balance is considered for all regions under clear, partly cloudy and low overcast conditions. Data from individual climatic regions only was used when cloudiness was less than 10 points. Data for each month was used to analyze

Card 1/2 UDC: 551.521

L 12989-66

ACC NR: AR6000801 O

the time variability in streams of short-wave radiation and in the radiation balance, while seasonal data were used for other conditions. The average values of scattered and total solar radiation and the radiation balance are found under various conditions for the height of the sun, the number and form of clouds and the intensity of the solar halo. Albedo values from natural surfaces were also taken into account for the radiation balance. The average characteristics of the entire region are considered, and the singularities of individual stations are discussed in special cases where there is sufficient material.

SUB CODE: 03/

Card 2/2 HW

SERYAPIN, A.D.

VARVAROV, N.A.; DOBRONRAVOV, V.V., professor, doktor fiziko-matematicheskikh nauk; MERKULOV, I.A., inzhener-konstruktor; SERYAPIN, A.D., laureat Stalinskoy premii; STANYUKOVICH, K.P., professor, doktor tekhnicheskikh nauk; KHLEVTSEVICH, Yu.S., kandidat tekhnicheskikh nauk; SHTERNFEL'D, A.A., laureat mezhdunarodnoy pooshchritel'noy premii po astronavtike.

Enroute to the stars. Tekh.mol. 22 no.7:1-7 Jl '54.

1. Predsedatel' sektsii astronavtiki pri TSentral'nom aeroklube SSSR imeni Chkalova (for Varvarov). 2. Zamestitel' predsedatelia nauchno-tekhnicheskogo komiteta po kosmicheskoy navigatsii, sektsiia astronavtiki (for Dobronravov). 3. Predsedatel' nauchno-tekhnicheskogo komiteta po raketnoy tekhnike, sektsiia astronavtiki (for Merkulov). 4. Predsedatel' nauchno-tekhnicheskogo komiteta po biologii kosmicheskogo poleta, sektsiia astronavtiki (for Seryapin). 5. Chlen nauchno-tekhnicheskogo komiteta po astronomicheskim i fizicheskim problemam (for Stanyukovich), sektsiia astronavtiki. 6. Predsedatel' nauchno-tekhnicheskogo komiteta po radio-teleupravleniyu (for Khlebtsevich), sektsiia astronavtiki. 7. Predsedatel' nauchno-tekhnicheskogo komiteta po kosmicheskoy navigatsii (for Shternfel'd), sektsiia astronavtiki.
(Interplanetary voyages) (Space ships) (MLRA 7:6)

Translation 900302-V, in Branch #5

VOLYNKIN, Yu.M.; YAZDOVSKIY, V.I.; GENIN, A.M.; VASIL'YEV, P.V.; GYURDZHIAN, A.A.; GUROVSKIY, N.N.; GORBOV, F.D.; SERYAPIN, A.D.; BELAY, V.Ye.; BAYEVSKIY, R.M.; ALTUKHOV, G.V.; KOPANEV, V.I.; KAS'YAN, I.I.; YEGOROV, A.D.; SIL'VESTROV, M.M.; SIMPURA, S.F.; TERENT'YEV, V.G.; KRYLOV, Yu.V.; FOMIN, A.G.; USHAKOV, A.S.; DEG'YAREV, V.A.; VOLOVICH, V.G.; STEPANTSOV, V.I.; MYASNIKOV, V.I.; YAZDOVSKIY, V.I.; KASHIN, P.S., tekhn. red.

[First space flights of man; the scientific results of the medicobiological research conducted during the orbital flights of the spaceships "Vostok" and "Vostok-2"] Pervye kosmicheskie polety cheloveka; nauchny rezul'taty mediko-biologicheskikh issledovanii, provedennykh vo vremia orbital'nykh poletov korablei-sputnikov "Vostok" i "Vostok-2." Moskva, Izd-vo Akad. nauk SSSR, 1962. 202 p. (MIRA 15:11)
(SPACE MEDICINE) (SPACE FLIGHT TRAINING)

7.

S/065/62/001/000/015/033
A028/A185

AUTHORS: Antipov, V.V., Bayevskiy, R.M., Gazenko, O.G., Genin, A.M., Gyurdzhian, A.A., Zhukov-Verezhnikov, N.N., Zhuravlev, B.A., Karpova, L.I., Parfenov, G.P., Seryapin, A.D., Shepelev, Ye.Ya., Yazdovskiy, V.I.

TITLE: Some results of medical and biological investigations in the second and third satellites

SOURCE: Problemy kosmicheskiy biologii. v.1. Ed. by N.M.Sisakyan. Moscow, Izd-vo AN SSSR, 1962. 267-284

TEXT: The maintenance of life conditions is discussed with special reference to the second Soviet satellite. During the flight the proportion of oxygen in the air of the cabin could be maintained at 21 to 24%, whereas the relative humidity rose from 37 to 47%. The temperature ranged from 16 to 19°C. Water and food were provided together in a mixture solidified with agar, in order to facilitate automatic dispensing in conditions of weightlessness. This was carried out twice daily by command signals from Earth. Telemetric recording of the physiological parameters of the dogs Belka and Strelka during space flight showed the

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S/865/62/001/000/015/033
E028/E185

occurrence of tachycardia as a result of acceleration, noise and vibration; there was also a rise in the respiration rate: a return to normal pre-flight values occurred during the condition of weightlessness. Movements of the animals were observed by television cameras and also by potentiometric sensors mounted in the harness. No abnormalities were observed in the behavior of the animals after return to earth or during the following 3 months. It was concluded from the experiments carried out in the second satellite that dogs could readily be accustomed to space flight conditions. Genetic changes were noted in the progeny of actinomycetes, plant seeds and fruit flies after return from space flight. The third space satellite contained two dogs (Pchelka [illegible] Mushka), two guineapigs, two rats, twenty six mice, fruit flies, [illegible] and other biological materials which were included in order to study the effects of cosmic radiation. The results are not described.

S/865/62/001/000/018/033
E028/E185

AUTHOR: Scryapin, A.D.

TITLE: An air regeneration system for sealed capsules

SOURCE: Problemy kosmicheskoy biologii. v.1. Ed. by N.M. Sisakyan. Moscow, Izd-vo AN SSSR, 1962. 309-320

TEXT: A system has been developed for regenerating the air in sealed capsules occupied by animals during space flights. A chemical method was used [the actual compounds are not specified], and the air was brought in contact with the regenerator by electric fans. The total weight of the installation was 1/8 that of a conventional system using soda-lime, silica gel and oxygen gas. The air in sealed containers occupied by dogs weighing 5 - 7 kg could be maintained in a satisfactory condition by means of the installation for periods as long as 30 days, and the system was subsequently used in the second space flight with the dog Layka. There are 6 figures.

Card 1/1

BALAKHOVSKIY, I.S.; GAZENKO, O.G.; GYURDZHIAN, A.A.; GENIN, A.M.; KOTOVSKAYA, A.R.; SERYAPIN, A.D.; YAZDOVSKIY, V.I.

Results of investigations in an artificial satellite. Probl. kosm.biol. 1:359-370 '62. (MIRA 15:12)
(SPACE FLIGHT—PHYSIOLOGICAL EFFECT)

VOLYNKIN, Yu.M.; YAZDOVSKIY, V.I., prof.; GENIN, A.M.; GAZENKO, O.G.; GUROVSKIY, N.N.; YEMEL'YANOV, M.D.; MIKHAYLOVSKIY, G.P.; GORBOV, F.D.; SERYAPIN, A.D.; BAYEVSKIY, R.M.; ALTUKHOV, G.V.; KOPANEV, V.I.; KAS'YAN, I.I.; MYASNIKOV, V.I.; TERENT'YEV, V.G.; BRYANOV, I.I.; FEDOROV, Ye.A.; FOMIN, V.S.; ARUTYUNOV, G.A.; ANTIFOV, V.V.; KOTOVSKAYA, A.R.; KAKURIN, L.I.; TSELIKIN, Ye.Ye.; USHAKOV, A.S.; VOLOVICH, V.G.; SAKSONOV, P.P.; YEGOROV, A.D.; NEUMYVAKIN, I.P.; TALAPIN, V.F.; SISAKYAN, N.M., akademik, red.; KOLPAKOVA, Ye.A., red.izd-va; ASTAF'YEVA, G.A., tekhn.red.

[First group space flight; scientific results of medical and biological studies carried out during the group orbital flight of manned satellites "Vostok-3" and "Vostok-4] Pervyi gruppovoi kosmicheskii polet; nauchnye rezul'taty mediko-biologicheskikh issledovanii, provedennykh vo vremia gruppovogo orbital'nogo poleta korablei-sputnikov "Vostok-3" i "Voskot-4." Moskva, Izd-vo "Nauka," 1964. 153 p. (MIRA 17:3)

VOLYNKIN, Yu.M.; ARUTYUNOV, G.A.; ANTIPOV, V.V.; ALTUKHOV, G.V.; BAYEVSKIY, R.M.; BELAY, V.Ye.; BUYANOV, P.V.; BRYANOV, I.I.; VASIL'YEV, P.V.; VOLOVICH, V.G.; GAGARIN, Yu.A.; GENIN, A.M.; GORBOV, F.D.; GORSHKOV, A.I.; GUROVSKIY, N.N.; YESHANOV, N.Kh.; YEGOROV, A.D.; KARPOV, Ye.A.; KOVALEV, V.V.; KOLOSOV, I.A.; KORESHKOV, A.A.; KAS'YAN, I.I.; KOTOVSKAYA, A.R.; KALIBERDIN, G.V.; KOPANEV, V.I.; KUZ'MINOV, A.P.; KAKURIN, L.I ; KUDROVA, R.V.; LEBEDEV, V.I.; LEBEDEV, A.A.; LOBZIN, P.P.; MAKSIMOV, D.G.; MYASNIKOV, V.I.; MALYSHKIN, Ye.G.; NEUMYVAKIN, I.P.; ONISHCHENKO, V.F.; POPOV, I.G.; PORUCHIKOV, Ye.P.; SIL'VESTROV, M.M.; SERYAPIN, A.D.; SAKSONOV, P.P.; TERENT'YEV, V.G.; USHAKOV, A.S.; UDALOV, Yu.F.; FOMIN, V.S.; FOMIN, A.G.; KHLEBNIKOV, G.F.; YUGANOV, Ye.M.; YAZDOVSKIY, V.I.; KRICHAGIN, V.I.; AKULINICHEV, I.T.; SAVINICH, F.K.; STMPURA, S.F.; VOSKRESENSKIY, O.G.; GAZENKO, O.G., SISAKYAN, N.M., akademik, red.

[Second group space flight and some results of the Soviet astronauts' flights on "Vostok" ships; scientific results of medical and biological research conducted during the second group space flight] Vtoroi gruppovoi kosmicheskii polet i nekotorye itogi poletov sovetskikh kosmonavtov na korabliakh "Vostok"; nauchnye rezul'taty medikobiologicheskikh issledovanii, provedennykh vo vremia vtorogo gruppovogo kosmicheskogo poleta. Moskva, Nauka, 1965. 277 p. (MIRA 18:6)

S/903/62/000/000/037/044
B102/B234

AUTHORS: Osokina, R. M., Seryapin, V. G.

TITLE: Photoprotons from Sb^{121} and Sb^{123}

SOURCE: Yadernyye reaktsii pri malykh i srednikh energiyakh; trudy Vtoroy Vsesoyuznoy konferentsii, iyul' 1960 g. Ed. by A. S. Davydov and others. Moscow, Izd-vo AN SSSR, 1962, 504-507

TEXT: The great effect of the nuclear shell structure on the nuclear photoeffect has already been observed in the closed-shell region Z = 28. It is now investigated for the Z = 50 region. The isotopes Sb^{121} and Sb^{123} whose photoproton energy spectra and angular distributions were measured differ as regards the state of the "valency protons" above the closed shell: for Sb^{121} it is in the $2d_{5/2}$ state and for Sb^{123} in the $1g_{7/2}$ state. The contribution of the valency protons may be estimated from the difference of the spectra. The targets used for the measurements were enriched in Sb^{121} to 95.5% and in Sb^{123} to 81.5%. The method of measuring was the same as

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Photoprotons from Sb^{121} and Sb^{123}

described here on page 498. The targets were again exposed to bremsstrahlung (E_{max} = 19.5 Mev) from the FIAN synchrotron and the protons recorded with nuclear emulsions. The background was separately determined. The photoproton yield ratio was (1.2±0.3) : 1 for Sb^{121} : Sb^{123}. The energy spectra of the protons differ greatly: for Sb^{121} it has a flat and broad maximum between 5 and 8 Mev, for Sb^{123} it has a high peak at ~5 Mev and perhaps a second smaller peak at ~7 Mev and then it drops continuously and forms a small high-energy tail. The angular distributions are isotropic for low-energy protons and have a flat maximum between 80-100° for $E_p > 7$ Mev which is somewhat higher for Sb^{123}. The investigations are still proceeding. There are 4 figures and 3 tables.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva AN SSSR (Physics Institute imeni P. N. Lebedev AS USSR)

L 29626-66 EWT(l)/EWT(m)/T/EWP(t)/ETI IJP(c) AT/JD
ACC NR: AR6004654 SOURCE CODE: UR/0275/65/000/010/B001/B002

45
B

AUTHOR: Karasik, Ye. A.; Seryapina, N. V.

TITLE: Electrical properties of epitaxial p-n junctions

SOURCE: Ref. zh. Elektronika i yeye primeneniye, Abs. 10B9

REF SOURCE: Sb. Vychisl. sistemy. Vyp. 15, Novosibirsk, 1965, 133-138

TOPIC TAGS: pn junction, epitaxial junction, semiconductor, germanium

ABSTRACT: P-n junctions obtained by epitaxial building up of single-crystal p-Ge on an n-Ge backing were investigated. The junction thickness was determined by means of an oblique cut of 1°, with either a thermal probe or visually (by electrolytic etching in a 10% KOH solution). A square-law relation between the charge capacitance and the bias voltage, which corresponded to an abrupt junction, was observed. The I-V characteristics measured within +25 -196C revealed considerable reverse currents even at a low negative bias which may be associated with a high density of structural defects in both the film and the backing. The forward-current vs. bias-voltage plot is exponential, $I \approx \exp qv/\beta kT$; $\beta = 6$ at 20C. At voltages 0.7--0.75 v, an inversion of forward-current vs. temperature relation was observed which agrees with the theory of p-n junction at high injection levels. Bibliography of 6 itles. V. P. [Translation of abstract]

SUB CODE: 09

UDC: 621.382.002

Card 1/1

IL'IN, Ye.M.; SERYAYEV, V.A.

"Supple"- system honing and lapping heads. Stan.i instr. 28 no.4: 26-29 Ap '57. (MLRA 10:5)
(Grinding machines)

ACC NR: AT6023380 (N) SOURCE CODE: UR/0000/65/000/000/0044/0049

AUTHOR: Ser'yeznov, A. N. (Novosibirsk)

ORG: none

TITLE: Measuring thermal electromotive force in the presence of noise

SOURCE: Vsesoyuznaya konferentsiya po avtomaticheskomu kontrolyu i metodam elektricheskikh izmereniy. 5th, Novosibirsk, 1963. Avtomaticheskiy kontrol' i metody elektricheskikh izmereniy; trudy konferentsii. t. I: Metody elektricheskikh izmereniy. Tsifrovyye izmeritel'nyye pribory. Elementy izmeritel'nykh sistem (Automatic control and electrical measuring techniques; transactions of the conference. v. 1: Electrical measuring techniques. Digital measuring instruments. Elements of measuring systems). Novosibirsk, Izd-vo Nauka, 1965, 44-49

TOPIC TAGS: thermal EMF, thermocouple, signal noise separation, interference reduction, interference immunity

ABSTRACT: A study is made to determine the best methods of measuring thermocouple voltages in the presence of common mode interference and noise due to the difference in potentials between the ground points of thermocouples and the measuring instruments. In tests involving 5 types of thermocouples (length, 10m; wire diameter, 0.5mm) it was established that the noise may attain 390μV. The ground loops contribute a major portion of the noise. The author recommends four methods of noise control. 1) Utili-

Card 1/2

ACC NR: AT6023380

zation of a compensating transformer between the three-terminal thermocouple and the measuring instrument. The transformer connection is such that the noise in one thermocouple arm will upon transformation tend to cancel the noise originating in the other arm. The maximum possible common mode rejection by this method is 80db. 2) Utilization of a sampling capacitor which is switched back and forth between the thermocouple and the measuring instrument. Since the instrument is always completely isolated from the thermocouple, the noise caused by ground loop voltages will be reduced by 140db. 3) Utilization of a bridge circuit which may reduce the noise by as much as 60db. 4) For practical situations when both noise sources are present, the most effective method is to use a combination of the first two circuits. In this case, the noise level may be reduced by as much as 180db. Orig. art. has: 1 formula, 2 tables, and 8 figures.

SUB CODE: 20,09/ SUBM DATE: 20Sep65/ ORIG REF: 004/ OTH REF: 002

Card 2/2

L 63250-65 EWT(d)/EWA(d)/EWP(v)/EWP(k)/EWP(h)/EWP(l) Pf-4 GS

ACCESSION NR: AT5013046 UR/0000/64/002/000/0171/0177

AUTHOR: Ser'yeznov, A. N. (Novosibirsk)

TITLE: Method of temperature measurement under high noise conditions

SOURCE: Vsesoyuznaya konferentsiya po avtomaticheskomu kontrolyu i metodam elektricheskikh izmereniy. 4th, Novosibirsk, 1962. Avtomaticheskiy kontrol' i metody elektricheskikh izmereniy; trudy konferentsiy, t. 2: Teoriya izmeritel'nykh informatsionnykh sistem. Sistemy avtomaticheskogo kontrolya. Elektricheskiye izmereniya neelektricheskikh velichin (Automatic control and electrical measuring techniques; transactions of the conference, v. 2: Theory of information measurement systems. Automatic control systems. Electrical measurements of nonelectrical quantities). Novosibirsk, Redizdat Sib. otd. AN SSSR, 1964, 171-177

TOPIC TAGS: three electrode thermocouple, temperature measurement

ABSTRACT: The problem of measuring the temperature of a rapidly heated body is considered; heating by electrical means creates strong electromagnetic fields

Card 1/3

L 63250-65

ACCESSION NR: AT5013046

which produce noise in the thermocouple circuits. To suppress this noise, a 3-electrode thermocouple (alumel to 2 chromels) with a "compensating" transformer is suggested (see Enclosure 1); this simple circuit is self-explanatory. Its use results in a marked reduction of noise (oscillograms supplied). Orig. art. has: 7 figures, 25 formulas, and 1 table.

ASSOCIATION: none

SUBMITTED: 17Nov64 ENCL: 01 SUB CODE: EC, IE

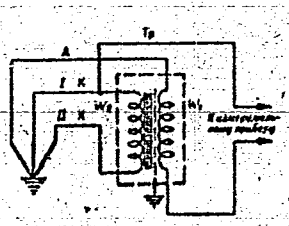
NO REF SOV: 003 OTHER: 000

Cord 2/3

L 63250-65

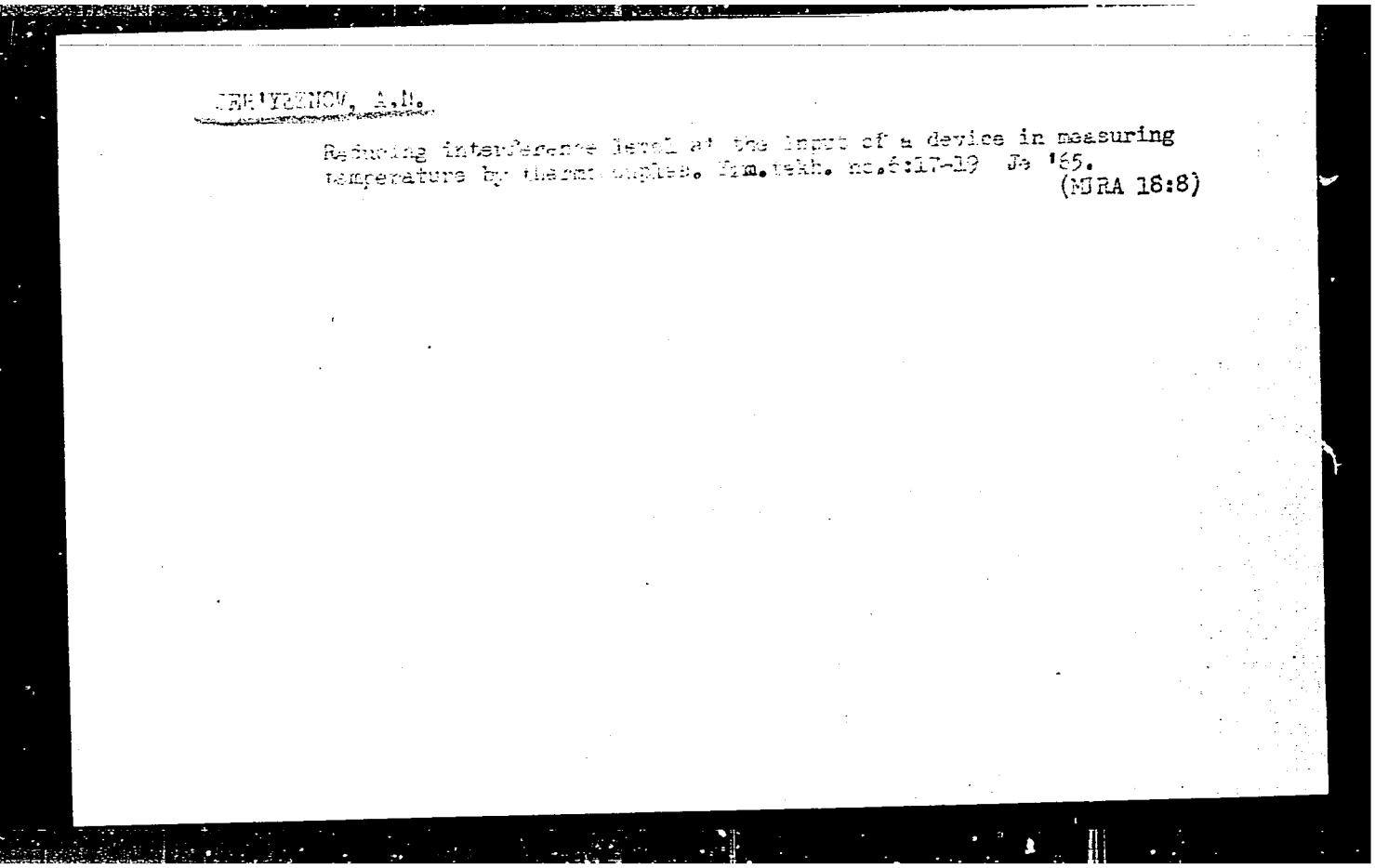
ACCESSION NR: AT5013046

ENCLOSURE: 1



A 3-electrode thermocouple with a noise-compensating transformer

Card 3/3



ZAKHVATKIN, A.N.

Reducing interference level at the input of a device in measuring temperature by thermocouples. Izm.tekh. no.6:17-19 Je '65. (MIRA 18:8)

SERYKH, D.I.

Using electric welding for reconditioning main rods. Zhel. dor. transp. 37 no.8:72-73 Ag '55. (MIRA 12:8)

1.Inzhener sluzhby lokomotivnogo khozyaystva Yugo-Vostochnoy dorogi, Voronezh.

(Locomotives--Welding)

L 08394-67 EWT(d)/EWT(m)/EWP(w)/EWP(v)/EWP(k)/EWP(h)/EWP(l) IJP(c) EM
ACC NR: AP6032512 SOURCE CODE: UR/0413/66/000/017/0084/0084

INVENTOR: Ser'yeznov, A. N.; Skotnikov, A. A.

ORG: none

TITLE: Device for measuring deformation under conditions of changing temperatures. Class 42, No. 185533

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 17, 1966, 84

TOPIC TAGS: strain gages, measurement, deformation, deformation measurement, resistance strain gage, temperature variation

ABSTRACT: A device (see Fig. 1) is described for measuring deformation under conditions of changing temperatures. It consists of a measuring unit, working and compensation resistance strain gages (attached, respectively, to the investigated object and a plate made from the same material as the object), a differential thermocouple, a temperature regulator, and a unit which supplies electric current to the plate with the compensation strain gage. Deformation experienced at the

Card 1/2 UDC: 531.781.2:539.3:621.317.39-555.621

moment of minimum temperature difference, between the working and compensation strain gages, is measured by an electron comparator circuit which connects the temperature regulator to the measuring unit.

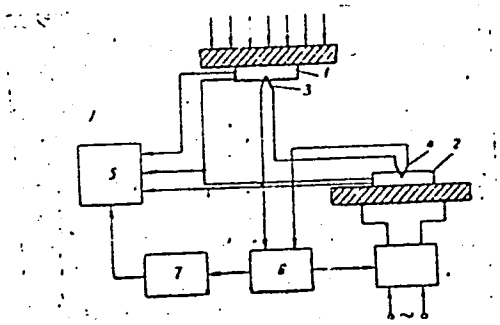


Fig. 1. Deformation measuring device
1—Operating strain gage; 10
2—compensation strain gage;
3 and 4—thermocouples; 14
5—measuring unit;
6—temperature regulator;
7—electronic circuit

SUB CODE: 14/ SUBM DATE: 25May65/

SERYKH, D.P.

Automatic emergency system for switching on turbine pumps. Sakh. prom. 35 no.8:52-53 Ag '61. (MIRA 14:8)

1. Sakharnyy zavod "Bol'shevik".
(Sugar industry--Equipment and supplies)
(Pumping machinery--Electric)

80313
SOV/81-59-7-23605

24.5200
Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 7, p 283 (USSR)

AUTHOR: Serykh, G.M.

TITLE: The Problem of the Heat Conductivity of Porous Materials

PERIODICAL: Izv. Tomskogo politekhn. in-ta, 1958, Vol 101, pp 59 - 70

ABSTRACT: The effective heat conductivity λ_{ef} of a solid porous body was investigated with allowance made for the heat transfer in the pores by convection, heat conductivity and radiation. The experimental data were analyzed on the basis of the theory of similarity, and the following equation was derived:

$$\lambda_{ef} = (\lambda^{c}_{cond.\ mean} + \lambda^{r}_{cond.\ mean}) Lm^{\frac{n}{4}} + \lambda_{o}(1-Hm^{\frac{n}{3}} - \varphi),$$

where $\lambda^{c}_{cond.mean}$ is the mean value of the conditional coefficient of heat conductivity making allowance for the heat transfer in the pore by heat conductivity, $\lambda^{r}_{cond.mean}$ is the mean value of the conditional coefficient of heat conductivity making allowance for the heat transfer in the pore by radiation, λ_{o} the heat conductivity

Card 1/2

Card

65997

24.5200

SOV/81-59-8-27701

Translation from: Referativnyy zhurnal, Khimiya, 1959, Nr 8, pp 308 - 309 (USSR)

AUTHORS: Serykh, G.M., Ponomarev, O.A.

TITLE: On the Analytical Solution of the Plane Problem of Heat Conductivity of Porous Bodies

PERIODICAL: Izv. Tomskogo politekhn. in-ta, 1958, Vol 101, pp 71 - 75

ABSTRACT: Based on the assumption that the pores do not conduct heat at all, and under the condition of the absence of heat propagation over the thickness of the plate, the equation has been derived:

$$\lambda_{ef} = \lambda_M (1 - \sqrt{m}) (1 + 0.35\ m),$$

where λ_{ef} is the heat conductivity of the plate, λ_M is the heat conductivity of the material of the plate, m is the porosity of the plate.

V. Gertsovskiy

Card 1/1

SERYKH, G. M.: Master Tech Sci (diss) -- "The problem of thermal conductivity of porous materials". Tomsk, 1959. 9 pp (Min Higher Educ USSR, Tomsk Order of Labor Red Banner Polytech Inst im S. M. Kirov, Chair of Theoretical and Gen Heat Engineering), 150 copies (KL, No 15, 1959, 117)

SERYKH, G.M.

Relationship between plane and volume porosity. Izv. vys. ucheb. zav.; fiz. no.6:167-168 '60. (MIRA 14:3)

1. Tomskiy politekhnicheskiy institut imeni S. M. Kirova.
(Porosity)

S/196/63/000/003/004/012
A052/A126

AUTHORS: Boykov, G.P., Kuchin, V.D., Serykh, G.M.

TITLE: On the character of the temperature field of an irradiated solid dielectric

PERIODICAL: Referativnyy zhurnal, Elektrotekhnika i energetika, no. 3, 1963, 6, abstract 3B44. (Izv. Kurganskogo mashinostroit. in-ta, 1, 1962, 23 - 26)

TEXT: Using the elementary-balance method an analytical calculation is carried out of the temperature field in a solid dielectric subjected to ionizing irradiation. The expressions derived make it possible to determine the temperature distribution over the thickness of the lamella of the irradiated dielectric. There is 1 figure and 1 reference.

N. Torbin

[Abstracter's note: Complete translation.]

Card 1/1

L 15736-63 EPR/EWT(1)/EPF(n)-2/BDS AFFTC/ASD/IJP(C)/SSD Pu-4/Pz-4 WW
ACCESSION NR: AR3002676 S/0124/63/[illegible]0/005/B095/B095

SOURCE: Rzh. Mekhanika, Abs. 5B566 66

AUTHOR: Serykh, G.M.

TITLE: The effect of vibration on heat transfer

CITED SOURCE: Izv. Kurganskogo mashinostroit.in-ta, v. 1, 1962, 19-22

TOPIC TAGS: vibration, oscillation, heat transfer, heat exchange, Reynolds number

TRANSLATION: An experimental investigation was conducted of the influence of the frequency of transverse oscillations of a tube put in a basin with water on the coefficient of thermal transmission from the surrounding water to the liquid which penetrates inside the tube. The amplitudes of oscillations of the tube were equal to 5 cm, the frequency of oscillations was varied from 50 to 1500 cycles in 1 minute. The studies conducted in the range of Reynolds numbers from $3 \cdot 10^3$ to $4 \cdot 10^4$ showed that the author's experiments agree with the experiments of Martinelli and Bolter (Martinelli, R.C., Boelter, L.M.K. Heat. Piping and

Card 1/2

L 15736-63
ACCESSION NR: AR3002676

Air Conditioning 1939, no. 8 529) and that for identical R numbers the coefficient of heat transfer to petroleum residue, oil and gas is lower than to water. Bibl. 5 citations. L.V. Kozlov.

DATE ACQ: 14Jun63 SUB CODE: PE ENCL: 00

Card 2/2

SERYKH, M.M., aspirant

Studying internal pancreatic secretion in calves as related to age and feeding. Izv.TSKhA no.6:161-172 '59. (MIRA 13:6)

(CALVES) (PANCREAS--SECRETIONS)

SERYKH, M.M., aspirant

Effect of the physiological condition of calves on their pancreatic secretion [with summary in English]. Izv. TSKhA no.5:210-215 '60. (MIRA 13:11)

(Pancreas--Secretions) (Calves)

ZHEREBTSOV, P.I., doktor biolog.nauk, prof.; SERYKH, M.M., kand.biolog.nauk

Changes with age in the external secretion of the pancreas in calves as related to the live weight and chemical composition of food rations. Izv.TSKHA no.4:214-217 '62. (MIRA 15:12)
(Calves--Feeding and feeds) (Pancreas--Secretions)

SERYKH, N.

36664. Serkyh, N. Vozmozhnosti ratsionalizatsii paresilovykh ustanovok. Izvestiya akad. Nauk latv. SSR, 1949, No. 10, c. 77-88

SO: Letopis' Zhurnal'nykh Statey, Vol. 50, Moskva, 1949

SERYKH, V.I.; YASHCHENKO, N.Ya.

Porphyroblastic granites of the Zerenda Massif (northern Kazakhstan). Izv. AN SSSR Ser. geol. 28 no.9:34-43 S '63. (MIRA 16:10)

1. TSentral'no-Kazakhstanskoye geologicheskoye upravleniye, Karaganda.

GABOV, Yu.A.; SERYKH, V.I.; MIKHAYLOVA, Ye.K.

Hafnium in zirconiums from granitoids in the Zerena Massif. Izv. AN Kazakh. SSR. Ser. geol. 22 no.4:65-68 Jl-Ag '65. (MIRA 18:9)

1. TSentral'no-Kazakhstanskoye geologicheskoye upravleniye, g. Karaganda.

YEFIMENKO, N.Ya.; SHRYKH, V.I.; LARINA, T.F.

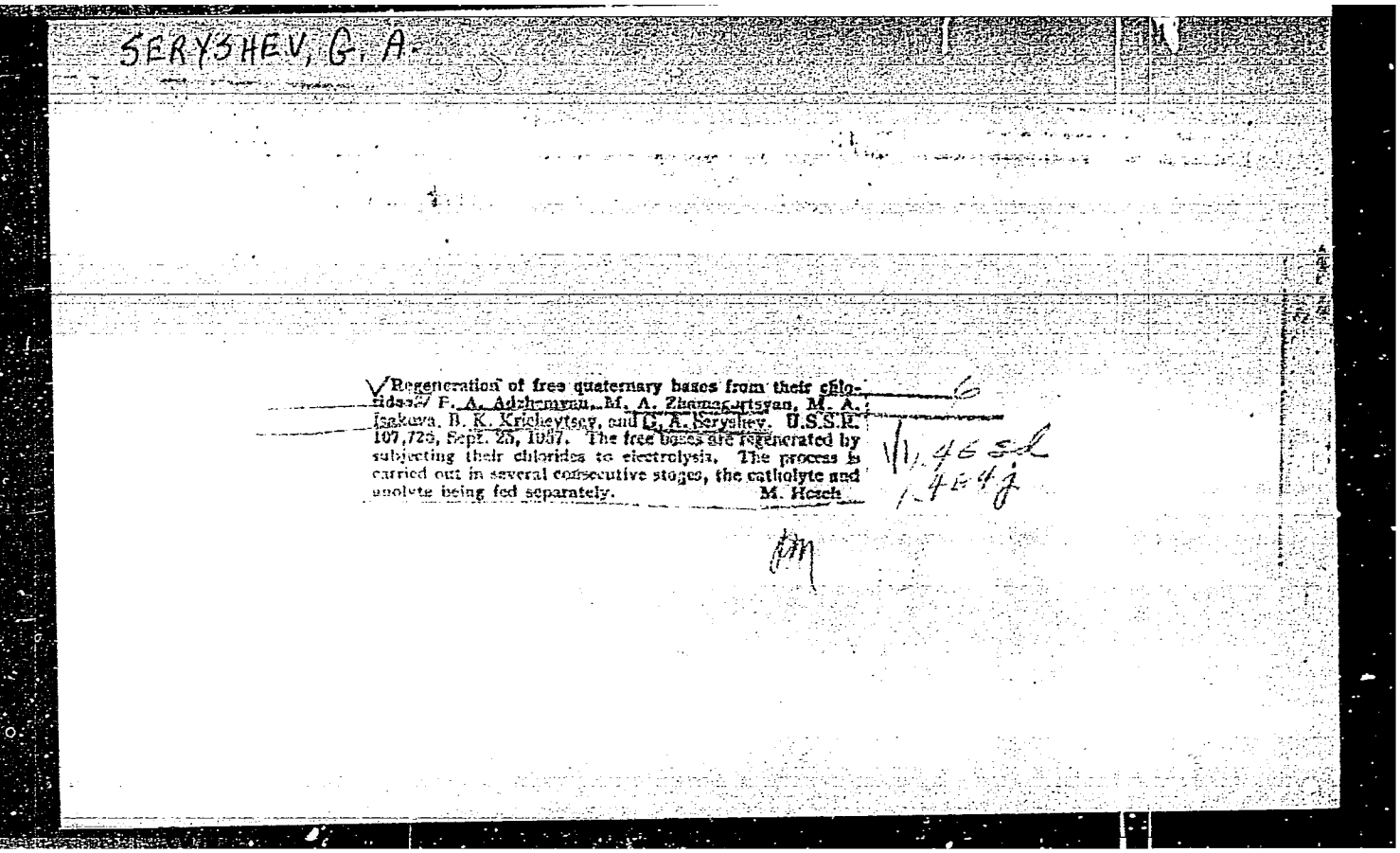
Igneous rocks containing magnetite. Zap. Vses. min. ob-va
94 no.6:732-734 '65. (MIRA 18:12)

OBREZKOV, V.I., kand.tekhn.nauk; SERYSHEV, A.I., inzh.; CHELNOKOV, N.I., inzh.

Using continuous calculating machines for water-power calculations. Gidr.stroi.31 no.2:40-42 F '61. (MIRA 14:3)
(Electronic calculating machines)(Hydraulics—Tables, calculations, etc.)

SERYSHEV, A.I., assistent

Calculation of hydroelectric power engineering problems using electronic analog computers. Trudy MEI no.35:125-134 '61. (MIRA 15:12)
(Hydroelectric power stations) (Electronic analog computers)



SERYSHEV, G. A.

Regeneration of free quaternary bases from their chlorides. F. A. Adzhemyan, M. A. Zhamagortsyan, M. A. Isakova, B. K. Krichevtsov, and G. A. Seryshev. U.S.S.R. 107,726, Sept. 25, 1957. The free bases are regenerated by subjecting their chlorides to electrolysis. The process is carried out in several consecutive stages, the catholyte and anolyte being fed separately. M. Hesch

3(5)

AUTHORS: L[illegible]enko, M. P., Seryshkov, O. S.

SOV/20-127-3-55/71

TITLE: Some Recent Data on the Composition and Properties of Buried Loess Rocks of South-Ukraine

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 3, pp 669 - 672 (USSR)

ABSTRACT: The buried horizons enriched with humus existing within the mass of South-Russian loess have been insufficiently investigated. The formations vary with regard to genetic relations. In addition to the buried soils as such they comprise accumulations of erosion products of humus material (dislocated soil), accumulations of organic substances from subsoil water, etc. In general, these levels are used for determining the stratigraphy of the loess masses of individual regions. The results of the investigation of the substance and fraction composition as well as the physico-mechanical properties of humus from the divide Dnepr-Ingulets are described in this paper. The geological structure of this divide consists of crystalline pre-Cambrian Tertiary sediments and quaternary loess rocks. It is difficult to di-

Card 1/3

stinguish the genetic horizons in buried soils except the carbonate stratum. The investigation is so difficult because their morphological appearance, composition, and their salt content are mainly secondary and connected with diagenetic processes. Thus the investigation of the fraction composition seems to be the most reliable method for the determination of the soil type. The humus composition varies with the soils. It varies according to the zones as do the soils (Ref 4). Humus is a very resistant substance and it is comparatively difficult and takes very long time to change it chemically (Refs 3,4). A. V. Baranovskaya advised the authors during the investigations. Tables 1-4 show the investigation results. They show that the assumption that buried soils are zones of probable dislocations and are less solid than loesses is not right. There is only little humus in buried soils. It lost most of its colloidal nature by aging and other diagenetic processes. The properties of the buried soils investigated differ hardly from the loesses upon which these soils immediately rest (except the plasticity indices of the second buried soil). There are 4 tables and 5 Soviet references.

Some Recent Data on the Composition and Properties of Buried Loess Rocks of South-Ukraine SOV/20-127-3-55/71

ASSOCIATION: Leningradskiy gosudarstvennyy universitet im. A. A. Zhdanova (Leningrad State University imeni A. A. Zhdanov)

PRESENTED: March 9, 1959, by D. Ye. Nalivkin, Academician

SUBMITTED: March 6, 1959

Card 3/3

1. SERYUGINA, M.A.

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AUTHORS: Seryy, I.M., Aspirant; and Yanko-Trinitskiy, A.A., Doctor of Technical Sciences, Docent, Head of the Chair.

TITLE: A Practical Method of Checking the Dynamic Stability of Synchronous Motors in Drives with Shock Loading

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Elektromekhanika, 1960, Nr 2, pp 52-60 (USSR)

ABSTRACT: In recent years synchronous motors have come to be widely used, even in drives with shock-loading. For example, synchronous motors without flywheels are used to drive rolling mills in which shock-loading may increase the torque to 3 - 3½ times the r.m.s. value. The motor must take up all these shocks without assistance from a flywheel. The problem of the overload capacity of a synchronous motor, making allowance for its dynamic properties, is essentially a problem of its dynamic stability on shock-loading. This is a very complicated function of time, as typified by Fig 1 which is part of the load diagram of a five-stand sheet mill. The dynamic stability in the case of a single shock load of rectangular wave shape is then considered. The

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corresponding torque/time diagram is shown in Fig 2a. With this type of loading, the dynamic stability of a synchronous motor may be represented as a graph of the maximum torque against the time for which it is applied. The corresponding formulae are given by expressions (1), (2) and (3). As the shock load comes on, the terminal voltage on the machine may fall, further reducing the dynamic stability. The curve of maximum torque against time can only be used to check the dynamic stability when the load curve of the motor is a series of rectangular shocks of varying magnitudes and durations separated from one another by intervals long enough for the electro-mechanical transient processes set up by the previous shock load to die down. A diagram of this kind is obtained in a single-stand mill when rolling strip in several passes and is illustrated in Fig 3. Load diagrams of non-reversing rolling mills are more complicated and represent a combination of the four types of load curves illustrated in Fig 2. In this case,

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Eq (1) may be used to check the dynamic stability of the motor only after the influence of the nature of the motor load curve on the curve of maximum torque as function of time applied has been allowed for. It is difficult to calculate this coefficient but when it has been done and introduced into Eq (1) it takes the form of expression (4). The load coefficient is best determined experimentally on a model of a synchronous motor for the four main types of loading shown in Fig 2. These various cases are considered and compared, to see which is the most severe. Usually, load curves have one or more torques that exceed the maximum static torque, and others which are smaller than it. Such load curves are not specially severe, even if the interval between shock loadings is less than 1 second. Therefore, for the majority of load curves encountered in practice, the load coefficient may be taken as 0.85 and then expression (4) may be used to check the dynamic stability. This is done by constructing a curve of the additional torque as a function of its time of application, using Eq (4), and checking that the

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load-curve torques which exceed the maximum static torque of the motor are not greater than the permissible duration of such torques. Expression (4) involves the characteristics of the motor and the flywheel effect of the load, but as such data are seldom available it is desirable to modify the expression. For large machines the magnitudes entering into expression (4) vary over quite narrow limits and by accepting mean values, Eq (8) is obtained. The above recommended method of calculating the dynamic stability of a synchronous motor was checked by tests and calculations. The tests were made on a rig representing a continuous single-stand mill operating with the load curve shown in Fig 3. The r.m.s. power was 9.4 kW, and the motor characteristics are given; its rated output was 15 kVA and its speed 1500 r.p.m. The check on the dynamic stability is illustrated in Fig 4 which indicates that the motor operates stably. For the experimental verification the load curve of Fig 3 was reproduced on a model. An oscillogram of the conditions

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during the first two passes is reproduced in Fig 5 and it is found that the motor operates stably. The proposed method was checked by the calculations on a synchronous motor operating on the load curve shown in Fig 1; the motor characteristics are given. The check on dynamic stability by the proposed method is shown in Fig 6 from which it will be seen that the motor should operate stably. The dynamic stability was also checked by a more accurate method described in another article. The results of the calculations, plotted in Fig 7, disregard the damper winding which would, in fact, improve matters. It will be seen from Fig 7 that even in the worst circumstance the motor operates stably. The checks were made on a synchronous motor type MS-324-12/20 at the request of the Verkh-Isetskiy Metallurgical Works, who contemplated replacing a worn-out induction motor by a synchronous motor. It is concluded that the recommended method of checking the dynamic stability of synchronous motors is simple and reliable, and its general use is recommended.

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There are 7 figures and 6 Soviet references.

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