RUMANIA/Virology - Viruses of Man and Animals. E
Viruses of Hepatitis.

Abs Jour : Ref Zhur Biol., No 6, 1959, 23891

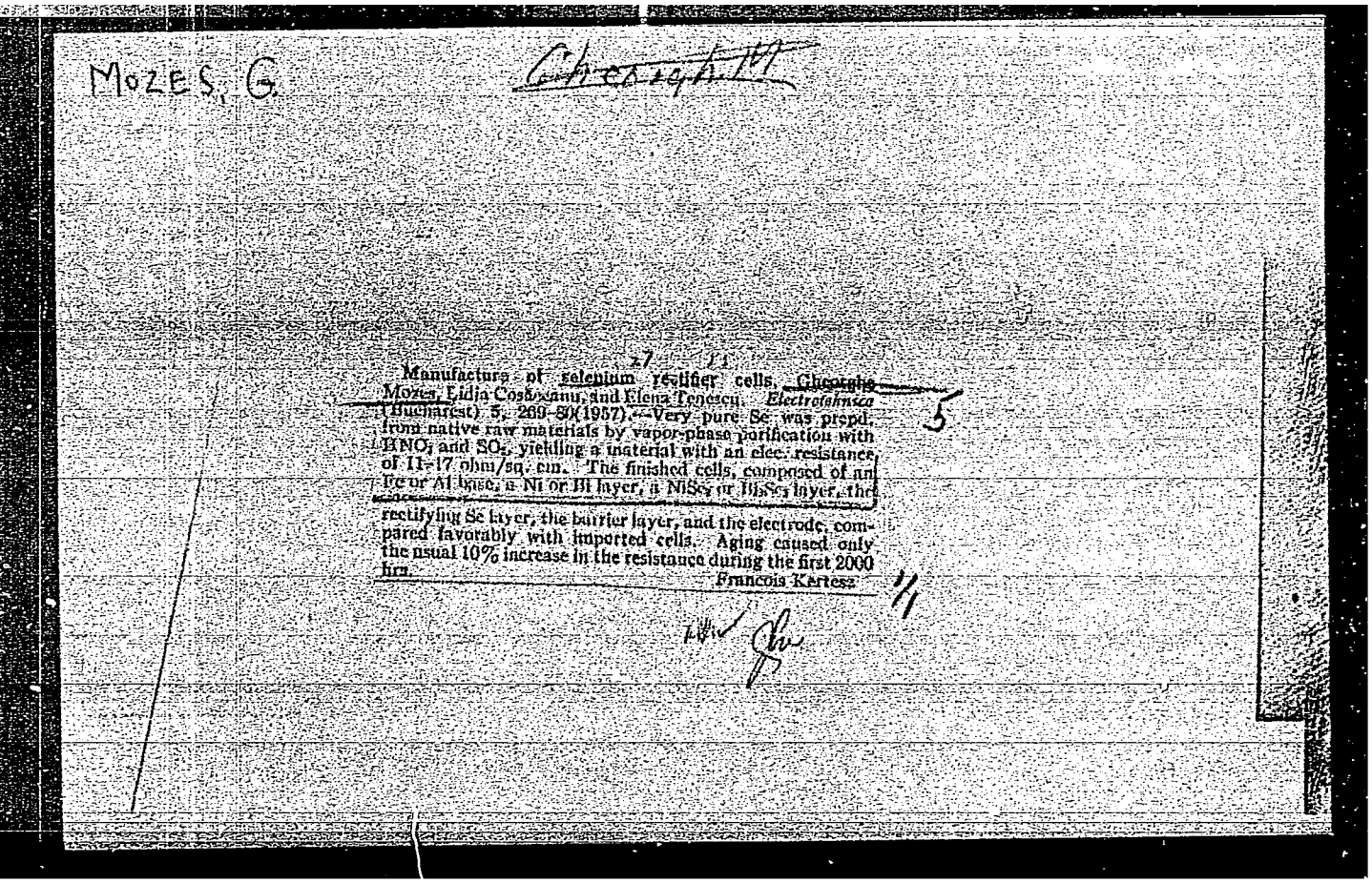
Author : Popper, A., Mezes, C.
Inst : -
Title : On the Problem of the Role of Epidemic Hepatitis in the Etiology of Diabetes Mellitus.

Orig Pub : Viata med., 1958, 5, No 5, 433-438

Abstract : No abstract.

#1226 END

Card 1/1



MOZES, G.

Manufacture of selenium rectifier cells. Gheorghe Mozes, Lidia Costăchescu, and Elena Teodosescu. *Electrotehnica* (Bucharest) 5, 269–80(1957).—Very pure Se was prepd. from native raw materials by vapor-phase purification with HNO_3 and SO_2, yielding a material with an elec. resistance of 11–17 ohm/sq. cm. The finished cells, composed of an Fe or Al base, a Ni or Bi layer, a $NiSe_2$ or Bi_2Se_3 layer, the rectifying Se layer, the barrier layer, and the electrode, compared favorably with imported cells. Aging caused only the usual 10% increase in the resistance during the first 2000 hrs.
François Kertesz

MUZES Gh.

RUMANIA/Chemical Technology. Chemical Products and Their Application, Part 3. - Treatment of Natural Gases and Mineral Oil, Motor and Rocket Fuel, Lubricants. H

Abs Jour: Referat. Zhurnal Khimiya, No 21, 1958, 71996.

Author : Gheorghe Mozes, Lidia Cosaceanu.
Inst :
Title : Study of Stability of Transformer Oil.

Orig Pub: Electrotehnica, 1957, 5, No 9, 299-304.

Abstract: The results of the study of the anti-oxidizing effect of 2,6-di-tert-butyl-n-cresol and n-oxydiphenylamine on transformer oils (TO) of various brands, as well as technico-economical considerations regarding the application of anti-oxidants for rising the TO stability are presented.

Card : 1/1

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R/003/60/011/008/003/00
A125/A0

AUTHORS: Roman, P., Mózes, Gh.

TITLE: Research on the Production of High-Purity Silicon for Semiconductors Report I. Production of Boron-Free Silicon Rods From Silicon Tetrachloride and Lithium-Aluminum Hydride

PERIODICAL: Revista de Chimie, 1960, Vol. 11, No. 8, pp. 464 - 468

TEXT: The production of pure silicon from silane was studied by Wilson (Ref. 1), Kreshevnikova (Ref. 4) and others (Ref. 5). This method has the advantage that only a single gaseous component i.e., silane, is introduced, which can be easily purified. The most important procedure for the preparation of silane can be divided into three cathegories: 1) Decomposition of silicons with acids (Ref. 6); 2) Disproportioning of the substituted silanes (Ref. 4), and 3) Reduction of silicon components with lithium-aluminum hydride, (Refs. 7, 8, 18). The last procedure where $SiCl_4$ is reduced by Li $[AlH_4]$ proved to be the most advantageous method. The application of this method is only influenced by the production of Li $[AlH_4]$, which is very expensive. Silicon tetrachloride was prepared in a pilot station made by I.C.E.T. (Ref. 9). Lithium-aluminum hydride was produced starting

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Research on the Production of High-Purity Silicon for Semiconductors Report I Production of Boron-Free Silicon Rods From Silicon Tetrachloride and Lithium-Aluminum Hydride

from Li_2CO_3 in successive phases as follows 1) Preparation of lithium: According to Refs. 10 and 12, lithium metal can be prepared by reduction of the lithium salt by vacuum metallurgy and by electrolysis of the LiCl melting. The second method is more advantageous. Lithium chloride was obtained by treating Li_2CO_3 with HCl. 2) Preparation of lithium hydride: According to Albert (Refs. 11 and 12), LiH can be obtained by direct hydrogenation of molten lithium at temperatures ranging from 450 - 700°C. Novotny (Ref. 13) produced lithium by hydrogenating lithium amalgam. Another procedure (Ref. 14) consists in the reduction of LiO_2 with Mg. The authors used the hydrogenation of lithium. 3) Preparation of lithium-aluminum hydride: $Li[AlH_4]$ studied by Schlesinger and Finholt (Ref 15) can be prepared by reaction of LiH and $AlCl_3$ or of LiH and $AlBr_3$ in etheric solution Although the secon method proved to be more advantageous $AlCl_3$ was used for the industrial production of $Li[AlH_4]$, because $AlBr_3$ is less accessible Silane was produced by introducing $SiCl_4$ into an etheric solution of $Li[AlH_4]$ having an excess of 10% against $SiCl_4$. The disengaged SiH_4 is passed through different devices into the decomposing chamber, where it is deposited on a 220 mm long, 2 mm

Card 2/3

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R/003/60/011/008/003/00[illegible]
A125/A02[illegible]

Research on the Production of High-Purity Silicon for Semiconductors. Report I Production of Boron-Free Silicon Rods from Silicon Tetrachloride and Lithium-Aluminum Hydride

in diameter, tube-shaped tantalum wire, having a wall thickness of 0 45 mm, and heated to a temperature of 1,000°C Thus, a homogeneous deposition of an 8 mm in diameter and 170 mm long rod-shaped silicon, was obtained. Traces of Cn, Mg and Al were detected in the silicon. Out of 145 gr of $SiCl_4$ a total of 22 5 gr of silicon with an efficiency of 94% were obtained. This silicon then has to be processed, in order to obtain a monocrystall. There are 2 figures and 18 references: 6 Soviet, 1 Rumanian, 1 Czechoslovak, 7 English, 2 German and 1 French. Subject article is based on a paper presented at the Meeting "Semicondu-toare şi aplicat-iile lor", (Semiconductors and Their Application) on December 9 to 11. 1959.

Card 3/3

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A125/A026

5.2400

AUTHORS: Nicolau, Fl.; Engineer, Mozes, Gh.; Grigorovici, E.; Chemists

TITLE: High-Purity Silicon for Semiconductors in Rods and Granular Shape by Silicon Decomposition. Report II.

PERIODICAL: Revista de Chimie, 1960, Vol. 11, No. 8, pp. 468 - 476.

TEXT: The article is based on a paper presented at the Meeting "Semiconductoare şi aplicaţiile lor" (Semiconductors and Their Application), held on December 9 - 11, 1959. Silicon is more and more used in the production of semiconductors. Pure silicon can be obtained by different methods, but the most efficient method proved to be the thermal decomposition of silane, which has a number of advantages (Refs. 1, 2, 3,). Silane can be obtained either by the reduction method of A. E. Finholt, or by the method of starting from $HSiCl_3$ (Ref. 2). The authors used the second method, studying it in two variations: a) Passing $HSiCl_3$ through SiH_4, and b) Direct thermal decomposition of $HSiCl_3$ or reduction with hydrogen (Ref. 3). Trichlorosilane was prepared following the methods by Buff and Wöhler; Combes; Gattermann; Kahler; Stock and Zeidler (Ref. 4); Kraus and Nelson; Broth and Stillwell; Witmore and Pitsusza-Sommer (Ref. 5). The authors produced trichlorosilane

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High-Purity Silicon for Semiconductors in Rods and Granular Shape by Silicon Decomposition. Report II

by direct synthesis, by passing dry HCl over Si granules at 280°C in the apparatus shown in Fig. 1. In contradiction to previous works, the reaction pipe was located vertically. Brief reference is made to the apparatus and the production procedure. The authors then studied the production of granule-shaped silicon by thermal decomposition of $HSiCl_3$ without H_2 addition in the quartz tube, at atmospheric pressure. This method has the disadvantage of leading to an contamination of the silicon by impurities such as boron. Reference is made to Stock and Zeidler (Ref. 4), Wilson (Ref. 1) and Theurer. Figure 3 shows the installation for thermal decomposition of $HSiCl_3$ on quartz tube. Rods or granule-shaped silicon can also be obtained by catalytic disproportioning of trietoxysilane to silane and the decomposition of silane. For preparation and purification and trietoxysilane, the authors adapted the method of Havill, Joffe and Post (Ref. 9). The catalytic disproportioning of trietoxysilane to silane and tetraetoxysilane was observed by Friedel and Ladenberg for the first time. Kreshevnikova, Pokrovskiy and Rumiantseva (Ref. 2) used this reaction for the preparation of silane and its thermal decompositions with the purpose of producing Si for semiconductors. They decomposed silane on a tantalum wire, obtaining polycrystalline Si bars. For the

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High-Purity Silicon for Semiconductors in Rods and Granular Shape by Silicon Decomposition. Report II

production of Si bars, the authors used the installation shown in Figure 5. Reference is made to the installation and the procedure The efficiency of the Si deposed in bars is 70%, the other Si being deposed on the walls of the installation. Si deposed on the quartz tube contains less than 10^{-3}% of B. Si deposed on tantalum wire contains the following impurities: Mg, Al, Cu, Fe, and B. The Si rod is treated for 48 hrs with concentrated HF in order to dissolve the tantalum wire and is then pickled with $HF+HNO_3$. This polycrystalline Si rod is physically purified by a zonal melting and passed over to monocrystal. The resistivity had a value of 50 ohm/cm. The boron impurity in the Si rods is a result of the "diboran" content of the silane, or the influence of the glass of the installation The authors finally mention the elimination of "diboran" from the silane There are 6 figures, 1 photograph, 2 tables and 14 references 5 Soviet, 2 Rumanian, 5 English and 2 German.

Card 3/3

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D014/D105

9.3150 (1020,1159,1331)

AUTHORS: Mozes, G., Lapedatu, E., Zaharia, C., Friedmann, A., Arabian, L., Radu, O., Bartos, V., and Dedulescu, L.,(Bucharest)

TITLE: New types of selenium rectifier-cells

PERIODICAL: Electrotehnica, no. 2-3, 1962, 72 - 86

TEXT: The article describes the possibilities of improving the performance of Rumanian selenium rectifiers and presents three new rectifiers developed by ICET=Institutul de cercetări electrotehnice (Electrotechnical Research Institute) and the Uzinele "Grigore Preoteasa" ("Grigore Preoteasa" Plant). The performance of Rumanian selenium rectifiers was improved either by increasing the inverse-peak voltage as in SV-1 rectifiers, by increasing the current density as in SV-3 rectifiers, or by increasing the inverse-peak voltage and the current density as in SV-2 rectifiers. The SV-1 cell was improved by introducing thallium in a concentration of 8.10^{-3} % into the SnCd counter-electrode and applying solid sulfur-in-selenium solution on the surface of the selenium layer. This gave the SV-1 cell in normal cooling conditions an inverse-peak

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voltage of 25 - 40 v_{ef}, a current density of 25 ma/sq cm, a specific rectifying power of 0.3 - 0.4 w/sq cm, an over-all efficiency of 95 - 97%, an operating temperature of 65 - 75°C, and a volt-ampere characteristic as shown in Fig.5. The SV-1 cells are produced in series by the "Grigore Preoteasa" Plant. An increase of the current density in SV-3 rectifiers was achieved without reducing the inverse-peak voltage by providing the SnCd counter-electrode with adequate thallium. The SV-3 cell has in natural cooling conditions an inverse-peak voltage of 25-30 v_{ef}, a current density of 50 ma/sqcm, a specific rectifying power of 0.8 w/sq cm, an over-all efficiency of 96%, an operating temperature of approx. 60°C, and a volt-ampere characteristic as shown in Fig.19. In forced cooling conditions, the specific rectifying power increases to 2.4 w/sq cm. Serial production of the SV-3 cell is being prepared. In SV-2 rectifiers, the aluminum base was first coated with a 0.5 - 1.5-μ-thick cadmium layer and then with a 60 - 70-μ-thick selenium layer. The non-rectifying junction was obtained by soldering under pressure a 40-μ-thick bismuth-coated aluminum sheet on the selenium layer. The SV-2 rectifier has in natural

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New types of selenium rectifier-cells

cooling conditions an inverse-peak voltage of 35 - 50 v_{ef}, a current density of 50 ma/sq cm, a specific rectifying power of 0.7 - 0.95 w/sq cm, an over-all efficiency of 96 - 97%, an operating temperature of 65 - 70°C and a volt-ampere characteristic as shown in Fig. 28. There are 31 figures.

ASSOCIATION: Mozes, L., Lapedatu, E., Zaharia, C., and Friedmann, A.: ICET; Arabian, L., Radu, O., Bartoş, V., and Dedulescu, L.: Uzinele "Grigore Precteasa" ("Grigore Preoteasa" Plant).

Card 3/6

MOZES, GY.

Mineral oil bitumens in the bri et e industry.

p. 182 (Magyar Kemikusok Lapja. Vol. 11, no. 5/6, May/June 195 , Budapest, ry)

Monthly Index of East European Accessions (EEA) . Vol. , no. 2, February 1958

COUNTRY : HUNGARY

CATEGORY : Chemical Technology. Chemical Products and Their Uses. Part 3. Processing of Natural*

ABS. JOURN. : RZKhim., No. 1 1960, No. 2402

AUTHOR : Tyml, T.; Zalan, I.; Mosey, G.

INST. : Hungarian Research Institute of Petroleum and**

TITLE : Explanation of Research Work on Bitumens in Hungary

ORIG. PUB. : Magyar kem. lapja, 1958, 13, No 11-12, 376-379

ABSTRACT : The article gives a review of research work on the production and application of bitumen, carried out at the Hungarian Research Institute of Petroleum and Natural Gas, particularly in view of producing, out of petroleum of the

*Gases and Petroleum, Motor and Rocket Fuels, Lubricants

**Natural Gas

CARD: 1/2

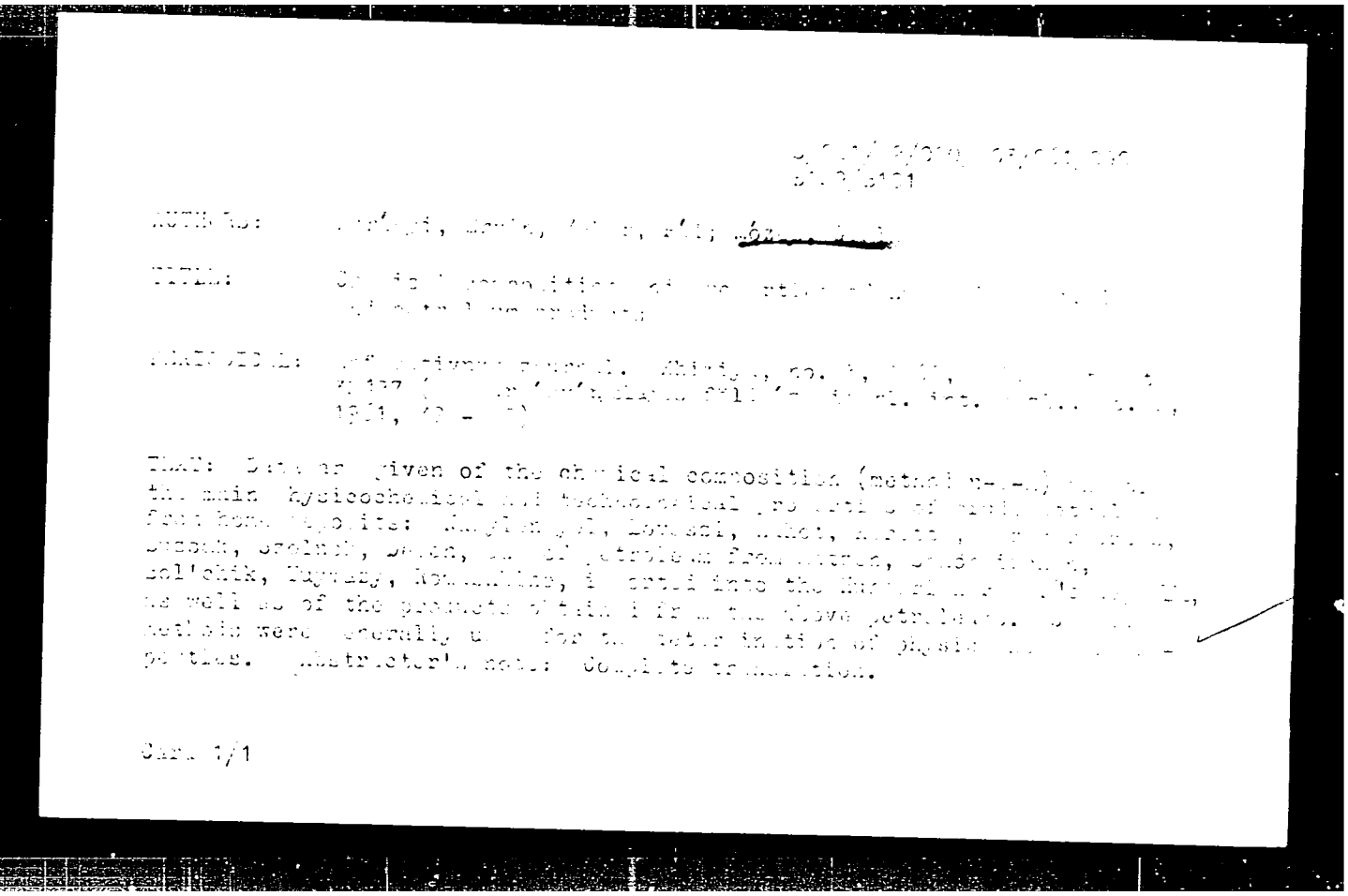
MOZES, Gyula

Penetration as a characteristic of bitumens. Veszprem vegyip egy kozl 4 no.4:361-362 '60

Viscosity of distillation and blown bitumens as reflected in the function of temperature and shearing tension. Ibid.:363-364

Refining the Tuymazy deparaffinized distillate heavy oil by using furfurole and phenol. Ibid.:365-366

1. Magyar Asvanyolaj es Foldgaz Kiserleti Intezet, Veszprem.



Card 1/1

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B167/B101

11.9700

AUTHORS: Mózes Gyula, Fényi Gyuláné

TITLE: Investigation of viscosity additives to lubricating oils

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 6, 1962, 538-539, abstract 6M246 (Magyar asvanyolajés földgaz kiserl. int. közl. no. 2, 1961, 130-142)

TEXT: A study of the basic properties of 12 Hungarian and foreign additives: (1) viscosity at 50, 70, and 100°C by a capillary viscometer, fluidity curve between 20 and 60°C by a rotating viscometer, true polymer content and chemical composition by IR spectroscopy, true viscosity and molecular weight from the equation $[\eta] = 3.51\ M^{0.56}$. (2) Effect of the additives on the viscosity, the viscosity index I_v, and the solidification temperature of oils. A new concept, the "efficiency of the additive" (H), is introduced to describe changes in the first two properties. It is defined as $H = \Delta I_v/\Delta\lambda$ 98.9°C, where the numerator is the change in I_v,

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and the denominator is the change in viscosity at 98.9°C. (3) The mechanical stability of the additives, studied on a specially constructed apparatus which enabled the sensitivity of the sample to shear in relation to velocity and pressure to be determined. The change in I_v and in viscosity at 98.9°C after shear is a criterion of the decomposition of polymer molecules as a result of shearing action. (4) The thermal stability was determined by N. I. Kaverina's method. The additives studied included polycetyl and polylauryl methacrylates and their copolymers. On raising the additive concentration (between 2 and 10%) the viscosity of the oils was found to increase almost linearly, and the I_v curve rose to an asymptote after a sharp initial increase (at 2 - 4%). The numerical value of H must therefore also be a function of additive concentration. The effect of additives on the solidification temperature varies considerably from oil to oil. Stability to shear stresses, i. e., the decrease in viscosity and in I_v as a result of shear, was found to be directly proportional to the average molecular weight of the additive. These results are confirmed by experiments with oils containing additives. There was no difference in thermal stability between the additives studied. [Abstracter's note: Complete translation.]

Card 2/2

MOZES, Gyula, dr.

Rheological characteristics of blown bitumens. Veszprem vegyip egy kozl 5 no.4:361-366 '61

1. Magyar Asvanyolaj es Foldgaz Kiserleti Intezet, Veszprem.

VAMOS, Endre, dr. (Budapest VIII, Szentikiralyi u.29); ZAKAR, Pal (Budapest V, Kecskemeti u.15); MOZES, Gyula, dr. (Veszprem, Kiss Eajos lakotelep 8); KESZTHELYI, Sandor (Veszprem, Jozsef Attila u.3)

Preparation of lubricating oils from Romashkino cude oil. Acta chimica Hung 31 no.1/3:267-280 '62.

1. Ungarisches Erdol- und Erdgas Forschungsinstitut, Veszprem.

ZAKAR, Pal (Budapest V, Kecskemeti u.2); MOZES, Gyula (Veszprem, Kiss Lajos lakotelep 8)

Soviet mineral oil bitumen. Acta chimica Hung 31 no.1/3:281-290 '62.

1. Ungarisches Erdol und Erdgas Forschungsinstitut, Veszprem.

ZAKAR, Pal; MOZES, Gyula; Zakar (Budapest V., Kecxkemeti u.2)
Mozes (Veszprem, Kiss Lajoslakotelep c)

The Nagylengyel and the foreign bitumens. Acta chimica hung 31 no.1-3:291-300. '62.

1. Ungarisches Erdol und Erdgas Forschungsinstitut, Veszprem.

ZAKAR, Pal; CSIKOS, Rezso; MOZES, Gyula; KRISTOF, Mihaly

Bitumen blowing in the presence of catalysts. Magy kem lap 18 no.4: 157-163 Ap '63.

1. Magyar Asvanyolaj es Foldgaz Kiserleti Intezet.

MOZES, Gyula (Veszprem, Wartha Vince u.2-6, Ungarn); FENYI, Marta (Mrs) (Veszprem, Wartha Vince u.2-6, Ungarn); FEHERVARI, Antal (Veszprem, Wartha Vince u.2-6, Ungarn); VAMOS, Endre, dr. (Veszprem, Wartha Vince u.2-6, Ungarn)

Rheological properties of petroleum products. Acta chimica Hung 37 no.2:191-202 '63.

1. Ungarisches Erdol und Erdgas Forschungsinstitut, Veszprem.

FENYINE DEMENY, Olga, tudomanyos munkatars; MOZES, Gyula, dr., tudomanyos fomunkatars; VAMOS, Endre, dr., tudomanyos osztalyvezeto

Rheology : the science of deformations. Term tud kozl 7 no.10: 433-435 O '63.

1. Magyar Asvanyolaj- es Foldgazkiserleti Intezet, Veszprem.

NOZES, Gyula

Concept of mathematical stress and deformation. Magy kem lap
20 no.2:101-108 F '65.

1. Hungarian Mineral Oil and Natural Gas Experimental Institute.

MOZES, Gyula

Elastic deformation. Magy Kem Lap [illegible] no.3:141-144 Mr '65.

1. Hungarian Mineral Oil and Natural Gas Experimental Institute, Veszprem.

MOZES, J., ing.

Scientific concern of f ture laboratory assistants. Constr Buc 16 nr. 757:2 11 July '64.

1. Head of the Section of Technical Quality Control, "Victoria socialista" Cement Works, Turda.

RUMANIA/Pharmacology and Toxicology - General Problems. V-1

Abs Jour : [illegible] - Biol., No 23, 1957, 53386

Author : Cral. V., Peszt, Gy., [illegible], Kelemen, A., Fal[illegible], [illegible], Iden, P.

Inst : -

Title : Investigation of the [illegible] a Number of Medicinal Preparations by Means of [illegible] tioned Reflexes.

Orig Pub : Rev. Med. (RPR), 1955, [illegible], 19-23.

Abstract : No abstract.

Card 1/1

- 3 -

ORAL, F.,; MOZES, M.,; KELEMEN, A.,; FALL, S.,; Technische Assistenz: J. Ravasz.

Role of the nervous system in hypothermic action of pentamethylenetetrazole. Acta physiol. hung. 7 no.3:211-221 1955.

1. Pathophysiologisches Institut und Pharmakologisches Institut der Medizinischen Universitat, Targu Mures, Rumanien.

(PENTYLENETETRAZOLE, effects,
hypothermic, role of nervous system)
(BODY TEMPERATURE, effect of drugs on,
pentylenetetrazole, role of nervous system in hypothermic action.)
(NERVOUS SYSTEM, physiology,
in hypothermic action of pentylenetetrazole)

OBAL, F.; MOZES, M.; ERDEI, P.; Technischer Mitarbeiter: J. Ravasz.

Role of the nervous system in the effect of drugs of various actions producing increased metabolic rate. Acta physiol. hung. 7 no.3:245-249 1955.

1. Physiologisches institut und pathophysiologisches institut der Medinischen Universitat, Targu Mures, Rumanien.

(AMPHETAMINE, effect,
on metab. rate, role of nervous system)
(NITROPHENOLS, effects,
dinitrophenol, on metab. rate, role of nervous system)
(NERVOUS SYSTEM, physiology,
in metab. response to amphetamine & dinitrophenol)
(METABOLISM, TISSUE, effect of drugs on,
amphetamine & dinitrophenol, role of nervous system)

RUMANIA / Pharmacology, Toxicology, Tranquillizers. V.

Abs Jour : Ref Zhur - Biol., No 20, 1958, No 94157

Authors : Feszt, Georgy; Mozes, F. Magda; Erdei, J. Piroska; Berczi, Andras.

Inst : Not given

Title : The Effect of Chlorpromazine (Largactil) on Metabolism and Body Temperature.

Orig Pub : Rev. med. (RPR), 1957, 3, No. 4, 28-34.

Abstract : 25 mg/kg of chlorpromazine (I) were hypodermically injected into rats and the consumption of O_2 was determined as well as the rectal temperature under surrounding temperatures of 10, 20, 28 and 38°. 5 mg/kg of benzedrine and 40-50 mg/kg pentazole (III) were injected together with (I) into some of the animals. Depending on the surrounding temperature I can cause not only hy-

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RUMANIA / Pharmacology, Toxicology, Tranquillizers. V

Abs Jour : Ref Zhur - Biol., No 20, 1958, No 94137

III intensifies the consumption of O2. The application of III and other analeptics during treatment with I is not recommended. -- E. A. Shoyabrum.

Card 3/3

EXCERPTA MEDICA Sec 18 Vol 4/3 Cardiovas. Dis. Mar 60

1024. **Pulmonary oedema induced by pentetrazole** A pentazol okozta tüdő... MOZES M., KALMAR G., BERSZAN M. and SIMON J. Marosvásárhely. Kísérl. Orv. Tud. Közl. Orv. Szle 1958, 4/6 (488-492) Tables 1

Pentetrazole in a dose of 12 mg./100 g. causes pulmonary oedema in white rats. This effect can be prevented by refrigeration, by anaesthesia with barbital and with chlorpromazine, promethazine and urethan, but not with procaine.

Medgyesi - Sopron (VI, 18)

FESZT, T.; MOZES, M.; ALMASI, S.

Changes in the effect of isonicotinic acid hydrazide on the thyroid gland following the administration of pyridoxine. Stud. cercet. endocr. 13 no.3:377-381 '62.

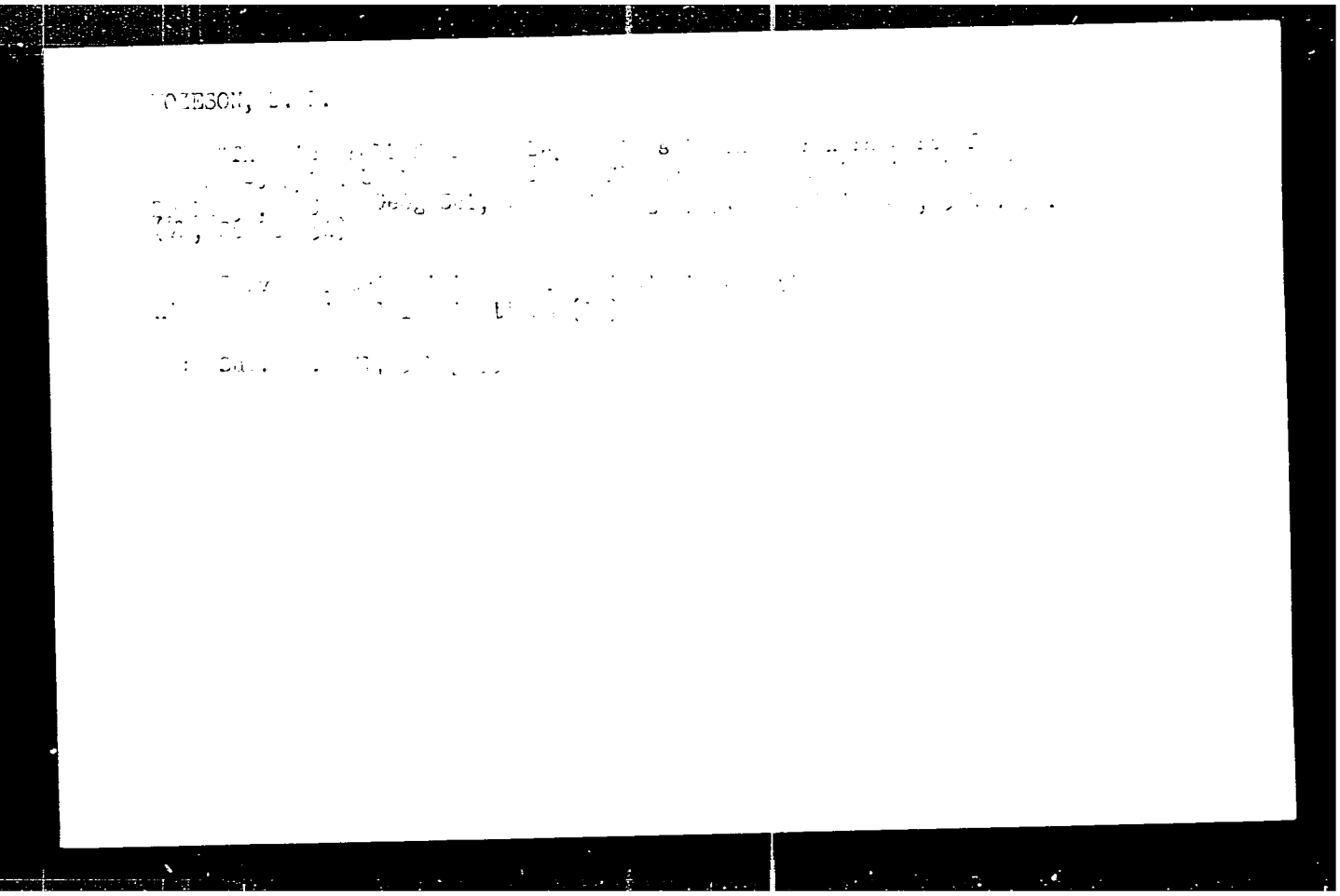
(THYROID GLAND pharmacology) (ISONIAZID pharmacology)
(PYRIDOXINE pharmacology)

GUKAYLO, Mikhail Yakovlevich; MOZES, Ye.M., inzh., retsenzent; KAGAN, M.A., inzh., red.; SOROKA, M.S., red.

[Basic principles in designing optical control and adjustment instruments] Osnovnye printsipy konstruirovaniia opticheskikh kontrol'no-iustirovochnykh priborov. Moskva, Gos.nauchno-tekhn. izd-vo mashinostroit.lit-ry, 1959. 124 p. (MIRA 12:7)
(Optical instruments)

BARDIN, Anatoliy Nikolayevich; MOZES, Ye.N., retsenzent; BEGUNOV, B.N., retsenzent; KHRUSTALEVA, N.I., red.; GRIGORCHUK, L.A., tekhn. red.

[Technology of optical glass manufacture] Tekhnologiia opticheskogo stekla. Izd.3., perer. i dop. Moskva, Vysshaia shkola, 1963. 518 p. (MIRA 16:12)
(Glass, Optical)



MOZESON, D. L.

USSR/ Geography - Agriculture

Card 1/1 Pub. 45 - 7/16

Authors : Moveson, D. L.

Title : About the details of the topography and reserves of land suitable for agriculture in the complex semi-desert region near the Caspian

Periodical : Izv. AN SSR. Ser. geog. 6, 68 - 77, Nov - Dec 1954

Abstract : A description is given of the waste lowlands in the region eastward from the city of Stalingrad between the Volga and the Ural Rivers. Figures are given for depth and area of depressions existing within these lowlands. A study of the soil and moisture supply in the depressions themselves reveals that they are adaptable to agriculture thus presenting the possibility of spot farming throughout the lowlands. Maps; tables.

Institution: Acad. of Sc., USSR, Institute of Geologic Sciences

Submitted: .....

MOZESON D.L.

KLENOVA,M.V. prof.; SOLOV'YEV,V.F.; ARTYUHOVA,N.M.; POPOV,P.G.; YASTREBOVA,L.A.; BATURIN,V.P.; KOPYLOVA,Ye.K.; TEODOROVICH,G.I., redaktor; TOPCHIYEV, A.V., akademik, redaktor; MIRONOV,S.I., akademik, redaktor; ALIYEV, M.M., redaktor; AKHMEDOV,G.A., redaktor; VARENTSOV,M.I., redaktor; DMITRIYEV,Ye.Ya., redaktor; DOLGOPOLOV,N.N., redaktor; IL'IN,A.A., redaktor; MEKHTIYEV,Sh.F., redaktor; MOZESON,D.L., redaktor; PUSTOVALOV,L.V., redaktor; FOMIN,A.V., redaktor; NOSOV,G.I., redaktor; KISELEVA,A.A., tekhnicheskiy redaktor

[Recent sediments of the Caspian Sea] Sovremennye osadki Kaspiiskogo moria; Moskva, Izd-vo Akademii nauk SSSR, 1956. 302 p. (MLRA 9:3)

1. Deystvitel'nyy chlen AN AzSSR (for Aliyev) 2. Chlen-korrespondent AN SSSR. (for Varentsov, Pustovalov) 3. Nachal'nik morskogo otryada Azerbaydzhanskoy neftyanoy ekspeditsii SOPS AN SSSR (for Klenova) (Caspian Sea)

MOZESON, D.L.

Using the quantitative method for studying small relief forms.
Izv.AN SSSR. Ser.geog. no.5:118-125 S-O '56. (MLRA 9:11)

1. Sovet po izucheniyu proizvoditel'nykh sil Akademii nauk SSSR.
(Physical geography)

MOZESON, D.L.

Main types and origin of shallow microrelief forms of the Volga-Ural interfluve. Trudy Inst.geog. no.69:37-92 '56. (MLRA 9:12)
(Volga Valley--Physical geography) (Ural Valley--Physical geography)

AUTHOR: Mozeson, D. L., Candidate of Geographical Sciences.

TITLE: The Development of Productive Forces on the Kamchatka Oblast. (Razvitiye proizvoditel'nykh sil Kamchatskoy oblasti).
Out-of-Town Scientific Session of the Commission on Problems of the North (Vyezdnaya sessiya Komissii po problemam Severa).

PERIODICAL: Vestnik AN SSSR, 1957, Vol. 27, No 10, pp. 94-96 (USSR).

ABSTRACT: From July 3 to July 9 the extended scientific session of the Commission for Northern Problems of the Council for the Study of Production Forces of the AN USSR took place at Petropavlovsk-Kamchatskiy. The session was held for the purpose of investigating the stage of the investigation of natural resources and the prospects for the development of production forces on Kamchatka. Work was carried out jointly by representatives of the AN USSR and their branches, the representatives of scientific organizations of sectorates etc. in Moscow, Sverdlovsk, Khabarovsk, Vladivostok, Magadan and the Sakhalin district. A total of 300 persons attended the session. In the plenary and sectional meetings 50 lectures were held and discussed. They dealt with problems of fishing, the mineral raw materials, agriculture, and other problems connected with the economic development of Kamchatka. In the first plenary session the lecturers showed the fact that the Indi-

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The Development of Productive Forces of the Kamchatskaya Oblast'. 30-12-27/45
Out-of-Town Scientific Session of the Commission for Northern Problems.

strial production of the area must be increased by 50% in the course of the 6. Five Years' Plan. In the section for mineral raw materials problems of geological structure and mineral resources were dealt with. 13 lectures were delivered. In this session it was found opportune to organize an independent geological administration with well-equipped laboratories on Kamchatka. In the section for Fisheries 24 lectures were held which pointed out the necessity of accelerating the development of fishing and the work connected with it. In the common sessions held by the sections for energetics, transport, and fishing ventures, problems of power supply and transport were discussed. Much attention was paid to agriculture and forestry. 17 lectures were delivered. The following was stressed in the resolution: Although agriculture on Kamchatka is still young and little developed, natural conditions make it possible to establish a station wide., already by the end of the 6th Five Year Plan, will be able to provide the population with milk, meat, vegetables, and potatoes. The session considered it necessary to establish a number of new Sovkhozes and to enlarge many small farms. It is also intended that Kamchatka be amply provided with fertilizers as well as with agricultural machines and machines for amelioration of the soil. The production of fertilizers

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as well as of fodder for cattle from fish waste is to be started on the spot. The stations for seed breeding and the testing of qualities are to be enlarged and extended. One of the most important economic branches on Kamchatka is deer breeding. 60 - 70% of the entire meat consumption consists of deer meat on Kamchatka. It was recommended in the session that by 1960 the number of deer be increased to 172.000. For this purpose it is necessary to organized veterinary and zootechnical work and breeding, to utilize pasture land, and to improve the living conditions of deer breeders. Kamchatka is also rich in furs. Shooting furred animals is a very important in exports. In the course of the last plenary session the chairman of the Commission for Northern Problems, member of the AN S.I.Shcherbakov, characterized the most important results of the congress and expressed the hope that the first steps had been made leading towards the exploration and development of production forces on Kamchatka. The secretary of the regional committee of the Communist Party of the Soviet Union, M. A. Orlov, pointed out that this was the first time in history of Kamchatka that so large a number of scientific institutes and institutes of industrial plants had participated in solving

The Development of the Productive Forces of the Kamchatskaya Oblast', Zo-12-27/45
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economic problems. He stressed the fact that Kamchatka is in need of scientific advice and support on the par of the AN USSR. Directives for the study and the development of production forces on Kamchatka were drafted the next 14 - 15 years. It was decided to request the president of the AN USSR to send a well-equipped scientific expedition to Kamchatka in 1958. In conclusion Corresponding Member of the AN USSR L. V. Pustovalov said that the natural resources of Kamchatka as well as the products of her soil warrant a rapid improvement of economic conditions. The session made an essential contribution towards the exploration of Kamchatka, and it must be hoped that scientific work on a wide scale will be performed here in the next years by prominent scientists.

AVAILABLE: Library of Congress

1. Industry--USSR 2. Industry--Development--USSR 3. Production --Development--USSR

Card 4/4

PUSTOVALOV, L.V., otvetstvennyy red.; DMITRIYEV, Ye.Ya., zamestitel' otvetstvennogo red.; TOPCHIYEV, A.V., akademik, red.; MIRONOV, S.I., akademik, red.; ALIYEV, M.M., red.; AKHMEDOV, G.A., red.; VARENTSOV, M.I., red.; DOLGOPOLOV, N.N., red.; IL'IN, A.A., red.; MEKHTIYEV, Sh.F., red.; MIRCHINK, M.F., red.; NOZEKOV, D.L., red.; RENGARTEN, V.P., red.; FOMIN, A.V., red.; IL'INA, N.S., red. izd-va; NOVICHKOVA, N.D., tekhn. red.

[Geology of the Talysh Mountains; papers of the expedition] Voprosy geologii Talysha; trudy ekspeditsii. Moskva, 1958. 151 p. (MIRA 11:9)

1. Akademiya nauk SSSR. Sovet po izucheniyu proizvoditel'nykh sil. Azerbaydzhanskaya neftyanaya ekspeditsiya. 2. Deystvitel'nyy chlen Akademii nauk AzSSR (for Aliyev). 3. Chlen-korrespondent Akademii nauk SSSR (for Varentsov, Mekhtiyev, Pustovalov, Rengarten).

(Talysh Mountains--Geology)

MOZESON, D.L.

Session of the Committee of the Academy of Sciences of the U.S.S.R. on the Problems of the North held in Petropavlosk-Kamchatskiy. Izv. AN SSSR Ser.geog. no.1:173-174 Ja-F '58. (MIRA 11:2)
(Kamchatka--Physical geography)
(Kamchatka--Economic conditions)

MOZESON, D.L.; UTEMKOV, N.A.

State of physicogeographical study of the northeastern part of the U.S.S.R. and tasks of future research. Probl.Sev. no.2:91-115 '58. (MIRA 12:4)

1. Sovet po izucheniyu proizvoditel'nykh sil AN SSSR.
(Siberia, Eastern--Physical geography)

MOZESON, D.L.

Protection of nature in the North. Probl.Sev. no.2:222-225 '58. (MIRA 12:4)

1. Sovet po uzucheniyu proizvoditel'nykh sil AN SSSR.
(Russia, Northern--Forest protection)
(Russia, Northern--Wildlife, Conservation of)

MOZESON, D. L.

26-58-5-9/57

AUTHORS: Shcherbakov, D.I., Academician, and Mozeson, D.L., Candidate of Geographical Sciences

TITLE: Prospects of the Development of the Productive Forces of Kamchatka (Perspektivy razvitiya proizvoditel'nykh sil Kamchatki). Scientific Session on Problems of the Study and Utilization of the Natural Resources of the Kamchatka Oblast' (Nauchnaya sessiya po problemam izucheniya i ispol'zovaniya prirodnykh resursov Kamchatskoy oblasti)

PERIODICAL: Priroda, 1958, Nr 5, pp 51-57 (USSR)

ABSTRACT: V.A. Obruchev has compiled a geological description of the Kamchatka Peninsula, with its still active volcanoes, geysers, mountain streams and waterfalls, cedar woods, the world's principal (80-85%) salmon grounds in the surrounding sea, and its rich mineral resources, such as gold, coal and rare metals. In 1908, F.P. Ryabushinskiy studied the local fauna, V.L. Komarov the flora. The Kompleksnaya ekspeditsiya AN SSSR (Complex Expedition of the USSR Academy of Sciences) of 1934-36, the prospecting teams of the Ministerstvo geologii i okhrany nedr SSSR (Ministry of Geology and Mineral Resources Preservation of the USSR), the Tikhookean-

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Prospects of the Development of the Productive Forces of Kamchatka Scientific Session on Problems of the Study and Utilization of the Natural Resources of the Kamchatka Oblast'

skiy institut rybnogo khozyaystva i okeanografii (Pacific Institute of the Fish Industry and Oceanography) and the Vulkanologicheskaya stantsiya (Volcanological Station), set up by the USSR Academy of Sciences, have conducted successful research over an extended period of time. Despite these endeavors, only 10% of the area is covered by geological maps of 1 : 200,000 or smaller scale. There are still areas that have not yet been mapped at all. Most of the peninsula has been explored along its central north-south axis. Along Kamchatka's western part, from the Penzhinsk Bay in the north to Ust'-Bol'sheretsk in the south, are situated 60 coal-bearing deposits. Sources rich in carbon dioxide and methane have also indicated oil, natural gas, and liquid bitumen. In the Kronotskiy District, in the east, geological indications also show oil-bearing layers. In the west, a 1,000-km long strip to the Ozerbaya Bay in the north, contains oil deposits that can probably be used for industrial purposes. Cinnabar is found all over a 1,500-km long stretch up to and including the Karyanskiy Mountain

Prospects of the Development of the Productive Forces of Kamchatka. Scientific Session on Problems of the Study and Utilization of the Natural Resources of the Kamchatka Oblast'

Range in the north. Copper is found in the East-Kamchatkin ore zone and the Central Mountain Range. In the latter's south part, gold which can be exploited industrially is also found. Kamchatka is rich in construction material. There are almost two billion cu m of pumice. In an area of the west coast of 3.4 million ha, there are 8 billion tons of peat. The forests cover 450,000 sq km. Agricultural projects include doubling of the present arable land to 18,500 ha by 1960, opening up of 10,000 ha of virgin land, an increase in the number of big-horned cattle to 24,500 and that of pigs to 21,000. The number of reindeer increased by 7 times between 1940 and 1957. There are 140,000 heads now. Available pasture area permits an increase to 180,000 Improved pastures will eventually feed 250,000 - 300,000 By 1960, raising of 172,000 heads of reindeer should be possible. This will correspond to a production of 2,500,000 kg of reindeer meat. Every year, 8,000 - 9,000 sable furs are obtained. Other furry animals of the region are also of economical value. In July 1957, the Komissiya po pro-

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blemam severa Soveta po izucheniyu proizvoditel'nykh sil Akademii nauk SSSR (Commission of the Problems of the North of the USSR Academy of Sciences' Council of the Study of the Productive Forces) held a scientific session in Petropavlovsk in order to find ways of exploiting the natural riches of Kamchatka. By 1959, the territory must be covered by maps of 1 : 500,000 and 1 : 1,000,000. With respect to oil, coal and minerals, a systematic geological large-scale mapping must be done. Geophysical and other up-to-date methods must be employed to obtain a thorough knowledge of the mineral resources. Problems in the catching and processing of fish are being investigated in detail. Large enterprises of the fish industry are to be established in the ports of Petropavlovsk and Ozernovskiy, and in the fish combine of Ust'-Kamchatskiy, Korf, Mikoyan and Kirov. Soil research is being conducted to help the farming and cattle breeding sectors. Organized scientific hunting and wild life preserving methods are stressed. The air transportation network will be expanded and small-river navigation increased

28-5e-5-9/57

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by devising special craft. Interior transportation problems will be solved. The Ozernovskiy sea port must be developed together with a land route on the west coast and the connection between the port and the Krutogorovskiy coal mines The Petropavlovsk sea port will be considerably expanded and new highways built. The Ust'-Kamchatskiy port will be improved and extended very soon, and the Kamchatka river made navigable. Airfields and landing areas will be set up in the most important industrial and administrative centers. Electric energy is still depended on other than local fuel. Of the scientifically confirmed 522 million tons of coal, only 13,000 to 15,000 tons are mined annually. Although the potential capacity of the mountain streams is 12 to 20 million kwh, many difficulties in the construction of hydroelectric power plants need to be overcome Hot water and steam escaping from the earth surface in certain places must be turned to economic use. The session proposed and agreed to have another Complex Scientific Kamchatka Expedition in 1958 and to bring into being a Kom-

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Prospects of the Development of the Productive Forces of Kamchatka (Scientific Session on Problems of the Study and Utilization of the Natural Resources of the Kamchatka Oblast')

pleksnyy nauchno-issledovatel'skiy institut (Complex Scientific Research Institute) in the town of Petropavlovsk-Kamchatskiy.
There are 1 map and 6 photos.

AVAILABLE: Library of Congress

Card 6/6

1. Kamchatka Peninsula - Exploration
2. Economic development - Kamchatka Peninsula

SHCHERBAKOV, D.I., akademik; MOZESON, D.L., kand. geogr. nauk.

Outlook for the development of the productive forces of Kamchatka.
Priroda 47 no.5:51-57 My '58. (MIRA 11:5)
(Kamchatka--Natural resources)

SHCHERBAKOV, D.I., akademik (Moskva); MOZESON, D.L., kand.geograf.nauk (Moskva)

"Rich and beautiful is Kamchatka" by K.E. Esaulenko. Reviewed by D.I. Shcherbakov. Priroda 51 no.11:120 N '62. (MIRA 15:11)

(Kamchatka—Economic conditions)

SHCHERBAKOV, D.I., akademik, glav. red.; YEROFEYEV, B.N., otv. red.; NALIVKIN, D.V., akademik, red.; AL'TGAUZEN, M.P., red.; DANCHEV, V.I., red.; MOZESON, D.L.; LEVCHENKO, S.V., red.; CHAYKOVSKIY, V.K., red.; SHEYNMAN, V.S., red. izd-va; DOROKHINA, I.N., tekhn.red.; LAUT, V.G., tekhn.red.

[Geochemistry, petrography, and mineralogy of sedimentary formations] Geokhimiia, petrografiia i mineralogiia osadochnykh obrazovanii. Moskva, 1963. 457 p. (MIRA 16:12)
(Rocks, Sedimentary)

LEVCHENKO, Serafim Vasil'yevich; MOZESON, David Lazarevich; SHCHERBAKOV, D.I., akademik, otv. red.; ULANOVSKAYA, I.A., red.izd-va; YEGOROVA, N.F., tekhn. red.

[Golden Kolyma; from the history of the discovery and mastering of northeastern U.S.S.R.] Zolotaia Kolyma; iz istorii otkrytiia i osvoeniia Severo-Vostoka SSSR. Moskva, Izd-vo AN SSSR, 1963. 93 p. (MIRA 16:12)
(Russia, Northern--Discovery and exploration)
(Russia, Northern--Mines and mineral resources)

LAVCHENKO, S.V., otv. red.; GRAYZER, [illegible], red.; MO[illegible]K, D.[illegible], red.

[Metallogenia [illegible] Altae-Sayanskoi [illegible]. Moskva, Nauka, 1965. 209 p.

[illegible] Akademiya nauk SSSR. [illegible] Iskopayemykh.

MOZETIC, B.

Yugoslavia (430)

General - Serials

Does the problem of unemployment appear in Slovenia? p. 6. LJUDSKA PRAVICA. (Komunisticna Partija Slovenije) Ljubljana. (Weekly illustrated organ of the Communist Party of Slovenia). Vol 12, No 177, December 22, 1951.

East European Accessions List. Library of Congress, Vol 1, No 13, November 1952.

UNCLASSIFIED

MOZETIC, B.

Work of the illegal station at Trieste. p.99.

RADIOAMATER. (Savez radioamatera Jugoslavije) Beograd, Yugoslavia
Vol. 13, no.4, April 1959.

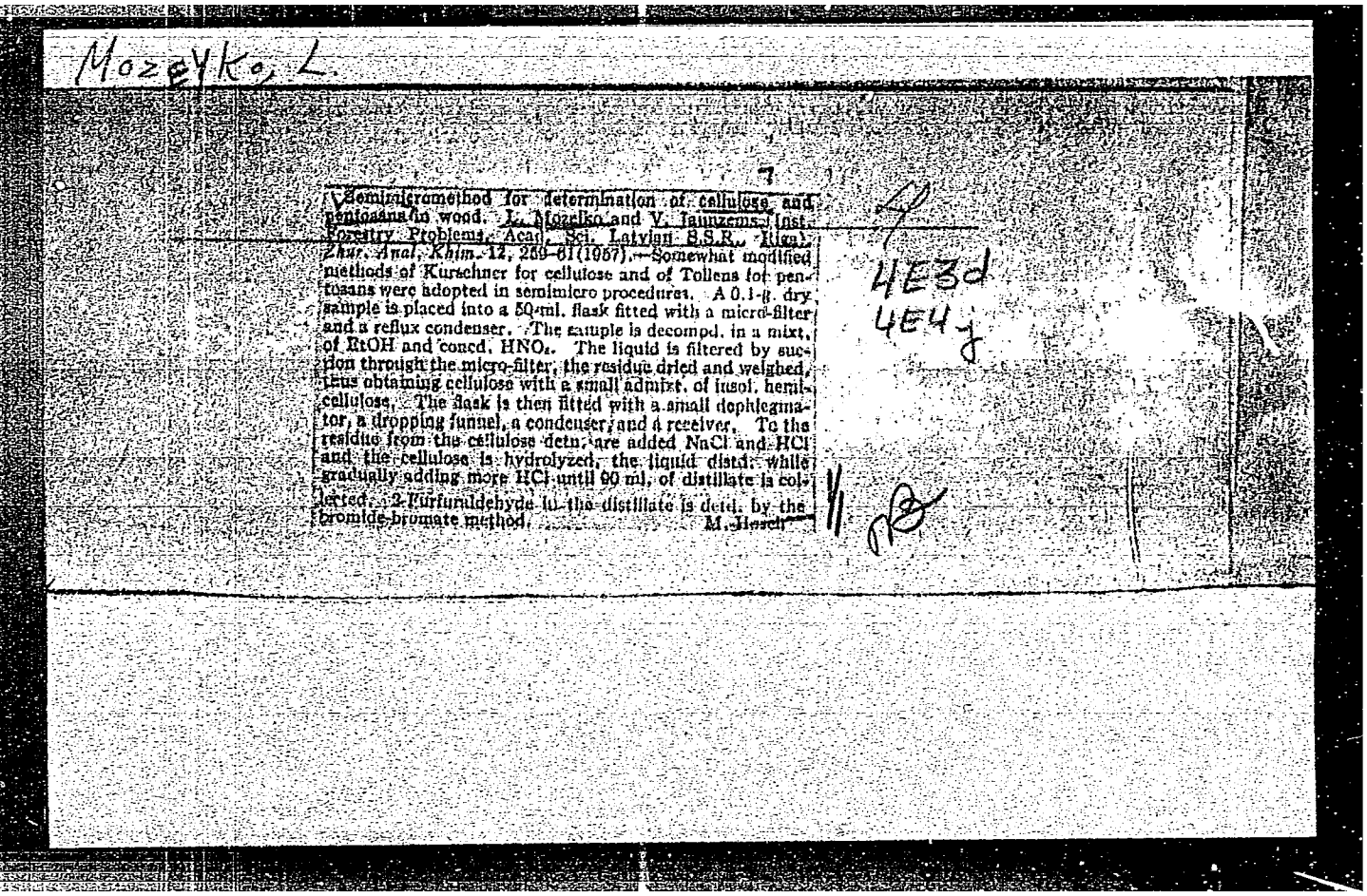
Monthly list of East European Accessions (EEAI) LC, Vol.8, no.9, Sept. 1959

Uncl.

MATJACIC, M.; [illegible], N.; [illegible], M.; OSLOVIC, B.; [illegible] O.

Isolation, bi[illegible] characteristics and [illegible] identification of adenoviruses in man. Zarz. zdrav. [illegible] : 320-326 '64.

1. Zavod SRH za zdravstveno zaštitu, virusni laboratorij, Ljubljana (Ravnatelj: prof. dr. Saša Cvahte).



Mozeyko, L.

7

Semimicromethod for determination of cellulose and pentosans in wood. L. Mozeiko and V. Jaunzems (Inst. Forestry Problems, Acad. Sci. Latvian S.S.R., Riga). *Zhur. Anal. Khim.* 12, 259–61(1957).—Somewhat modified methods of Kurschner for cellulose and of Tollens for pentosans were adopted in semimicro procedures. A 0.1-g. dry sample is placed into a 50-ml. flask fitted with a micro-filter and a reflux condenser. The sample is decompd. in a mixt. of EtOH and concd. HNO_3. The liquid is filtered by suction through the micro-filter, the residue dried and weighed, thus obtaining cellulose with a small admixt. of insol. hemicellulose. The flask is then fitted with a small dephlegmator, a dropping funnel, a condenser, and a receiver. To the residue from the cellulose detn. are added NaCl and HCl and the cellulose is hydrolyzed, the liquid distd. while gradually adding more HCl until 90 ml. of distillate is collected. 2-Furfuraldehyde in the distillate is detd. by the bromide-bromate method. M. Hirsch

4

4E3d

4E4g

SERGEYEVA, Varvara Nikolayevna; MOZEYKO, L.; JAUNZEMS, V.; FELDHUNE, A., red.; BOKMANIS, R., tekhn. red.

[Lignin and its use] Lignins un ta izmantosana. Riga, Latvijas PSR ZA izdevnieciba, 1963. 63 p. (MIRA 16:5)
(Lignin)

DYLKOWSKI, Wladyslaw; MOZGA, Tadeusz

Activity of gibberellic acid under various conditions of germination of brewer's barley. Przemysl fermentacyjny 6 no.3:64-65 Mr '62.

1. Instytut Przemyslu Fermentacyjnego, Warszawa

MOZGALEVSKIY, A.V., kand. tekhn. nauk; BUZHINSKIY, Yu.Yu., inzh.

Selecting a type of asynchronous motor for throttling control systems. Sudostroenie 25 no.7:27-31 Jl '59. (MIRA 12:12)
(Electric motors, Induction) (Electricity on ships)

S/122, 60/000/005/006/017
A161/A130

AUTHOR: Mozgalevskiy, A. , Candidate of Technical Sciences

TITLE: Approximate expression for the transmission function of reciprocative hydro-electric drive

PERIODICAL: Vestnik mashinostroyeniya, no. 5, 1960, 31-35

TEXT: Hydraulic transmissions are coming into extensive use in transport and industry but the hydro-electric drive element properties have not yet been treated sufficiently in special literature, and it is generally assumed that the operation of such drive can only be described in a system of rather complex differential equations. The author suggests a simplified calculation. The system of reciprocative hydro-electric drive (Fig.) with a variable-capacity pump with short-circuit induction motor and a reciprocative hydraulic drive is analyzed and the transmission function of the system is determined considering the variation of electromotive force (e) of the pump as the input, and the hydraulic piston displacement (x) as the output. It is proven that the transmission function of the system transforming the pump electricity into variable piston motion speed can be presented as a transmission function of a static link of the first

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order, and have this form for a system with elastic feedback (Fig. 3, where CF is the summing element)

$$K_{...}(p) = \frac{K_4}{...p^2 - ...p - ...} \qquad (13)$$

where p is the pressure, $K_4 = \frac{...}{K_{...}}$ (K - see Fig. 3 - the rated specific volume of the pump);

$$T_1 = \frac{...}{kK_2K_{oc}} \quad \text{and} \quad T_2 = \frac{...}{kK_2K_{oc}}.$$

The formula (13) is finally simplified by omission of the first term in the denominator (after analysis proving that it can be omitted) and becomes

$$K_{...}(p) = \frac{K_4}{...p - ...} \qquad (14)$$

An oscillogram taken from electronic MH-7 (MN-7) simulator simulating a vessel ship steering machine confirmed the theoretical deductions (Fig. 4). Curves 2 and 3 illustrate the transition process on the system output at linear variation of the control parameter (e), which happens when an astatic link of the first order is connected in line with the system under study. The following basic conclusions

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are made: 1) If the main pipelines are not long and the rpm of the electric pump motor is constant, a reciprocative hydro-electric drive may be considered a static link of the first order. 2) If the basic conditions are same (as in Point 1) and the amplification factors of the summing element and feedback are higher than 1 (i.e., $k > 0$ and $k_{oc} > 0$), and the reduced mechanical time constant is low, a reciprocative hydro-electric drive with elastic feedback also may be considered a static link of the first order. 3) The values of the amplification factors k_2, k_4 and of time constants T, T_1 and T_2 can be determined by calculation when the drive is being designed. There are 4 figures and 3 Soviet-bloc references.

Fig. 1: System principle without feedback.

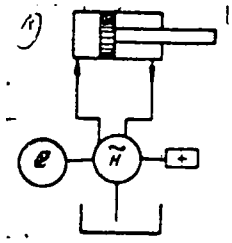

Fig. 3: System with elastic feedback.

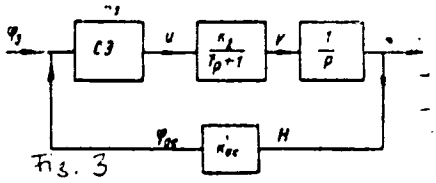

Fig. 3

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MOZGALEVSKIY, A.V., kand.tekhn.nauk; LUKOMSKIY, Yu.A., inzh.

Use of electronic models to determine the value of coefficients of reverse connections in the throttle control of direct-current electric driving of the steering gear. Sudostroenie 26 no.3(209):36-37 Mr '60. (MIRA 14:11)
(Steering gear—Electromechanical analogies)

MOZGALEVSKIY, A.V., kand.tekhn.nauk

Calculating the size of an electric motor for a pump with a varying delivery rate. Sudostroenie 26 no.9:33-35 S'60. (MIRA 13:10)
(Pumping machinery, Electric)

MOZGALEVSKIY, Andrey Vasil'yevich, kand. tekhn. nauk, dotsent; LUKOMSKIY, Yuriy Aleksandrovich, aspirant

Operational stability of a hydraulic and electric drive with reciprocating motion and clearance. Izv. vys. ucheb. zav.; elektromekh. 6 no.9:1123-1125 '63. (MIRA 16:12)

1. Leningradskiy elektrotekhnicheskiy institut.

L 18548-66 EWT(d)/EWP(1) IJP(c) BC

ACC NR: AP6002186 SOURCE CODE: UR/0146/65/008/006/0156/0160

AUTHOR: Gaskarov, D. V.; Mozgalevskiy, A. V.

ORG: Leningrad Electrotechnical Institute (Leningradskiy elektrotekhnicheskiy institut im. V. I. Lenina)

TITLE: Predicting changes in the state of an automatic system

SOURCE: IVUZ. Priborostroyeniye, v. 8, no. 6, 1965, 156-160

TOPIC TAGS: automatic control, automatic control system, automatic control theory

ABSTRACT: The possibility of predicting changes in the state of an automatic-control system is discussed. The extrapolation problem involved in such a prediction can be reduced to determining the system principal parameters $X_i(t)$ in the future at $t = t_0 + m\Delta t$ when the past values $X(t_0 - k\Delta t)$ are known, where m and k are positive integers. In many practical cases, where the state information arrives continuously, a linear extrapolation could be used: $X_i(t_0 + m\Delta t) = \sum_{k=1}^{n} a_k X(t_0 - k\Delta t)$,

Card 1/2 UDC: 62.523.8

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ACC NR: AP6002186

where a_k could be determined from the conditions of the minimum mean square value of extrapolation error. The latter quantity can be expressed in terms of the correlation function of a stationary random process. Technically, the prediction problem can be solved by a special automatic computing device which would calculate the appropriate autocorrelation function and send it to an equation solver upon each measurement of the monitored parameter (a block diagram is shown). Thus, a solution of the above prediction problem is held possible; it may help in forestalling various faults in automatic-control systems. Orig. art. has: 7 formulas.

SUB CODE: 13 / SUBM DATE: 30May64 / ORIG REF: 002 / OTH REF: 002

09

Card 2/2 MJS

BLINOV, I.N. (Leningrad); MOZGALEVSKIY, A.V. (Leningrad)

Choice of system parameters for automatic fault detection. Avtom. i telem. 26 no.10:1809-1812 O '65. (MIRA 18:10)

L 11228-67 EWP(k)/EWT(d)/EWP(h)/EWP(l)/EWP(v) GD

ACC NR: AT6022378 SOURCE CODE: UR/0000/66/000/000/0057/0064

18

AUTHOR: Mozgalevskiy, A. V.; Gaskarov, D. V.

ORG: n[redacted]

TITLE: On probabilistic prediction

SOURCE: Vsesoyuznaya nauchnaya sessiya, posvyashchennaya Dnyu radio. 22d, 1966. Sektsiya kibernetiki. Doklady. Moscow, 1966, 57-64

TOPIC TAGS: statistic analysis, probability, mathematic prediction, control theory 14

ABSTRACT: A change in the state of a system can be determined from the change in the system's controlled parameters, which are regarded as time functions. If a sufficient amount of information about the controlled parameters is accumulated, the next change in the system's state may be predicted. In cases where the causal relationships between changes are difficult to establish, the problem of predicting a change in the state of a system may be solved by means of the mathematical apparatus of the probability theory, by methods of probabilistic prediction. Then the problem is formulated as follows: Given: a controlled function X(t) which assumes the values $X(t_1)$, $X(t_2)$, ..., $X(t_n)$ at time instants $t_1 < t_2 \ldots < t_n$, $t_i \in T_1$, $i = 1, 2, 3,$

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L 11228-67
ACC NR: AT6022378

..., n (Fig. 1).

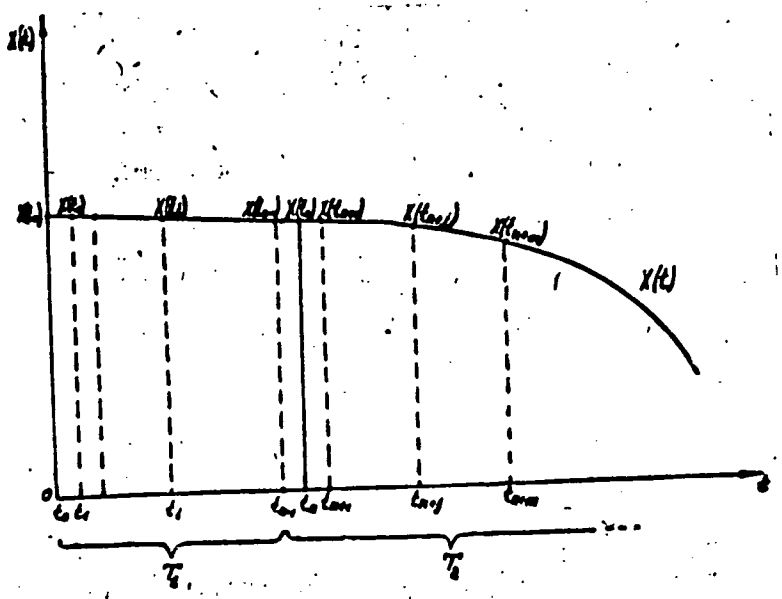

Fig. 1.

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Find from the known values of $X(t_1)$ the probability that the values of the function will not exceed the permissible limits, i.e.

$$\Gamma_x \{ | X(t_{n+j}) - X_{nom}(t) | \geqslant \epsilon_{perm} \}, \qquad (1)$$

where $X(t_{n+j})$ represents the values of the controlled function at the time instants $t_{n+j} \in T_2$, $i = 1, 2, 3, \ldots, m$; $X_{nom}(t)$ is the nominal value of the function; ϵ_{perm} is the permissible deviation of $X(t)$ in the region of T_2. Two variants may be solved with respect to this problem. Variant 1: A change in the mathematical expectation m_x of the controlled function $X(t)$ causes a change in the inequality $\sigma < \sigma_{x\ perm}$, where $\sigma_{x\ perm}$ is the permissible mean square deviation of the function $X(t)$, although σ_x = const with respect to m_x. Variant 2: We have m_x = const and only σ_x undergoes a change; this disturbs the inequality $\sigma_x < \sigma_{x\ perm}$. It is shown that these problems may be solved by utilizing a property of normal distribution: the calculated probability of the presence of the values of $X(t_1)$ within the sector of, e.g. from x_1, to x_2. In practice, m_x and σ_x are time functions, $m_x = m_x(t)$, $\sigma_x = \sigma_x(t)$ and so the tendency of the change in the controlled function $X(t)$ may be characterized by the variation in $m_x(t)$ and $\sigma_x(t)$. A for-

mula for the normal law of distribution of the values of X(t) in the T_1 region is presented and derived to show the pattern (tendency) of variation in the probability $P_x(l)$ of reliable operation of the system. This method of calculation is illustrated with a specific example: the prediction of the variation in grid-plate transconductance S(ma/v) for three different electron tubes (pentodes) over 5000 hr (Fig. 2).

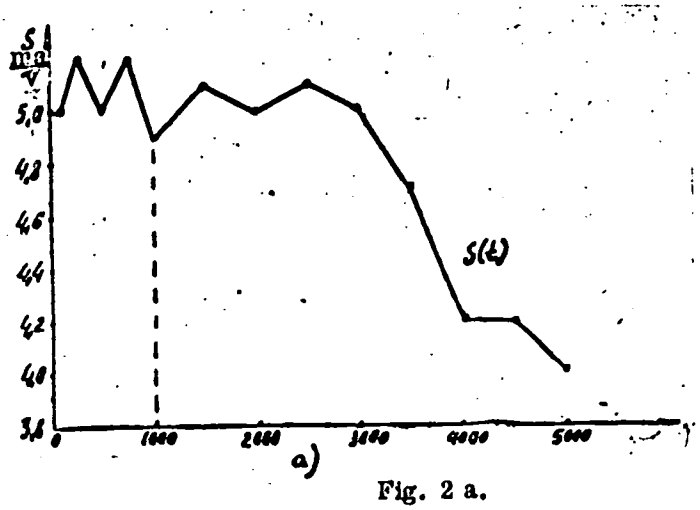
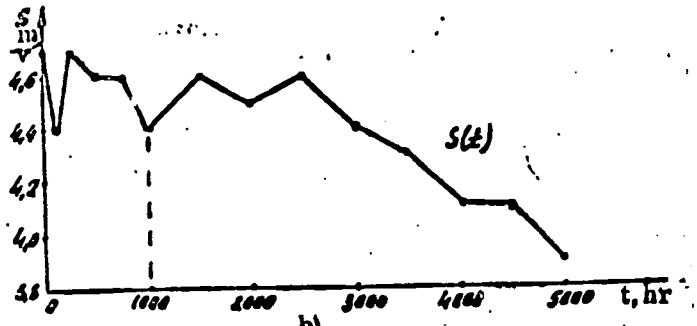


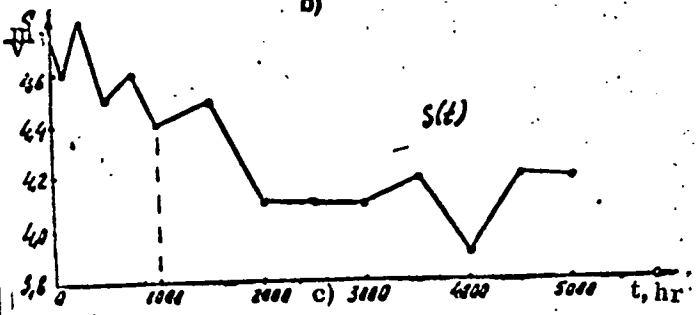
Fig. 2 a.

L 11228-67

ACC NR: AT6022378



b)



c)

The values of $P_x(l)$ after 5000 hr were determined from the known values of S_i for the first 1000 hr and found to be $P_{x(a)} = 0.9936$, $P_{x(b)} = 0.8384$ and $P_{x(c)} = 0.9725$, correct to 7.25, 10.4 and 1.84%, respectively. Orig. art. has: 3 figures, 18 formulas.

Fig. 2. b, c.

SUB CODE: 09, 12/ SUBM DATE: 05Mar66/ ORIG REF: 002

Card 5/5

L 25466-66

ACC NR: AP6011205 SOURCE CODE: UR/0413/66/000/006/0041/0042

INVENTOR: Gaskarov, D. V.; Glazunov, L. P.; Yerastov, V. D.; Mozgalevskiy, A. V. 31

ORG: none

TITLE: A device for checking the qualitative indices of a dynamic link. Class 21, No. 179817 [announced by Leningrad Electrical Engineering Institute im. V. I. Ul'yanov (Lenin) (Leningradskiy elektrotekhnicheskiy institut)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 6, 1966, 41-42

TOPIC TAGS: computer circuit, flip flop circuit

ABSTRACT: This Author's Certificate introduces: 1. A device for checking the qualitative indices of a dynamic link during a step reaction. The unit contains a number of identical flip-flops, shaping circuits, switches, delay circuits and counters. The rise time of the transient at the output of the link is compared with the required value by connecting two structurally identical parallel channels at the link output. Each of these channels contains a series-connected asymmetric flip-flop with a switch connected to a delay circuit based on a driven multivibrator and a clamping circuit. 2. A modification of this device in which simultaneous evaluation of maximum overcontrol, oscillation index, control time and control error is simplified by connecting four structurally identical channels to the link output with an asymmetric flip-flop

UDC: 621.3.078:
:681.178.1

Card 1/2

L 25466-66
ACC NR: AP6011205

and clamping circuit connected in series in each of the channels. Switches are included in the asymmetric flip-flop circuits in the channels for evaluating control time and control error. These switches are connected to a second delay circuit based on a driven multivibrator. A counter is connected in the channel for evaluating the oscillation index between the asymmetric and symmetric flip-flop of the clamper.

SUB CODE: 09/ SUBM DATE: 04Feb65/ ORIG REF: 000/ OTH REF: 000

Card 2/2

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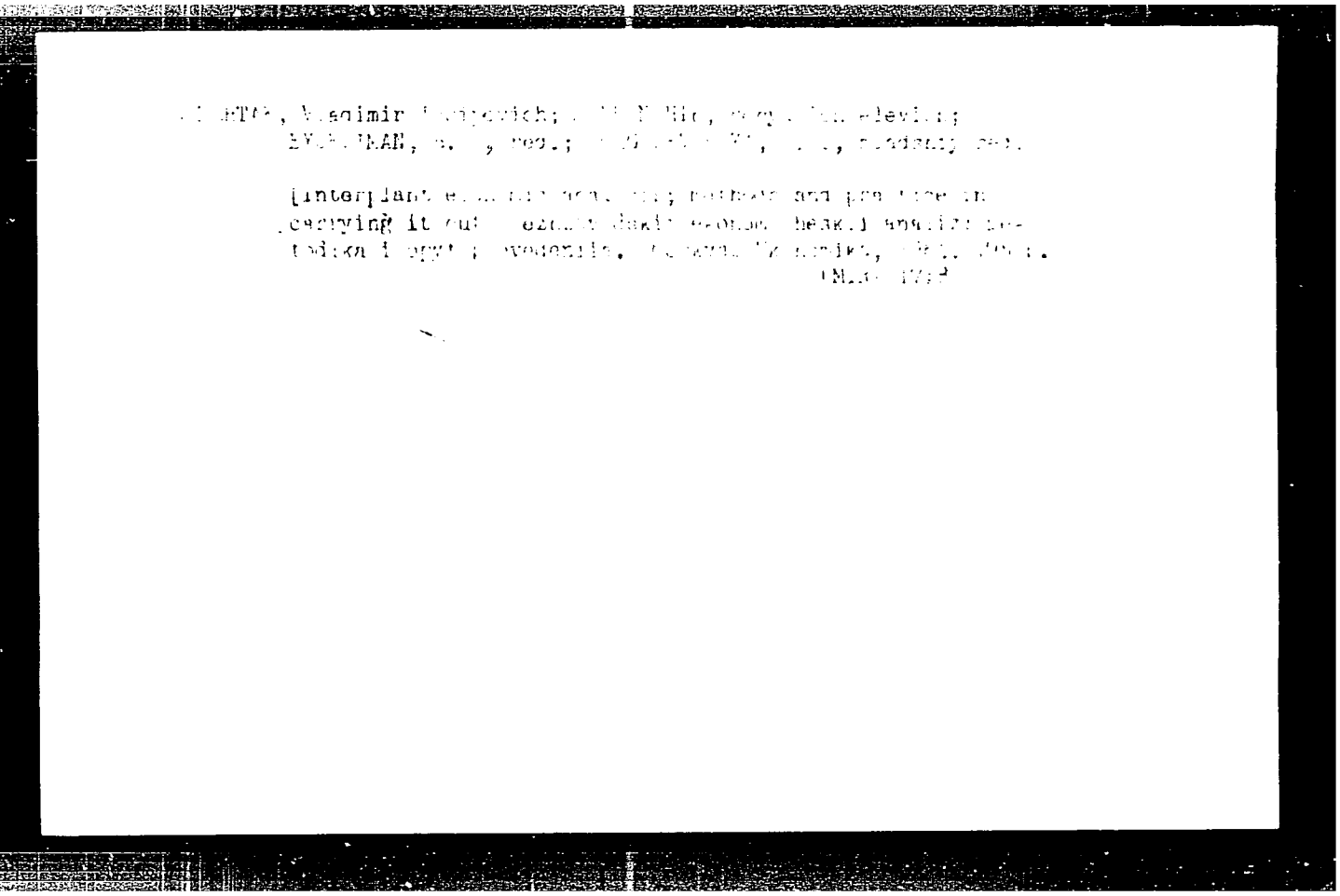

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