NECHAYEV, B.I., dotsent

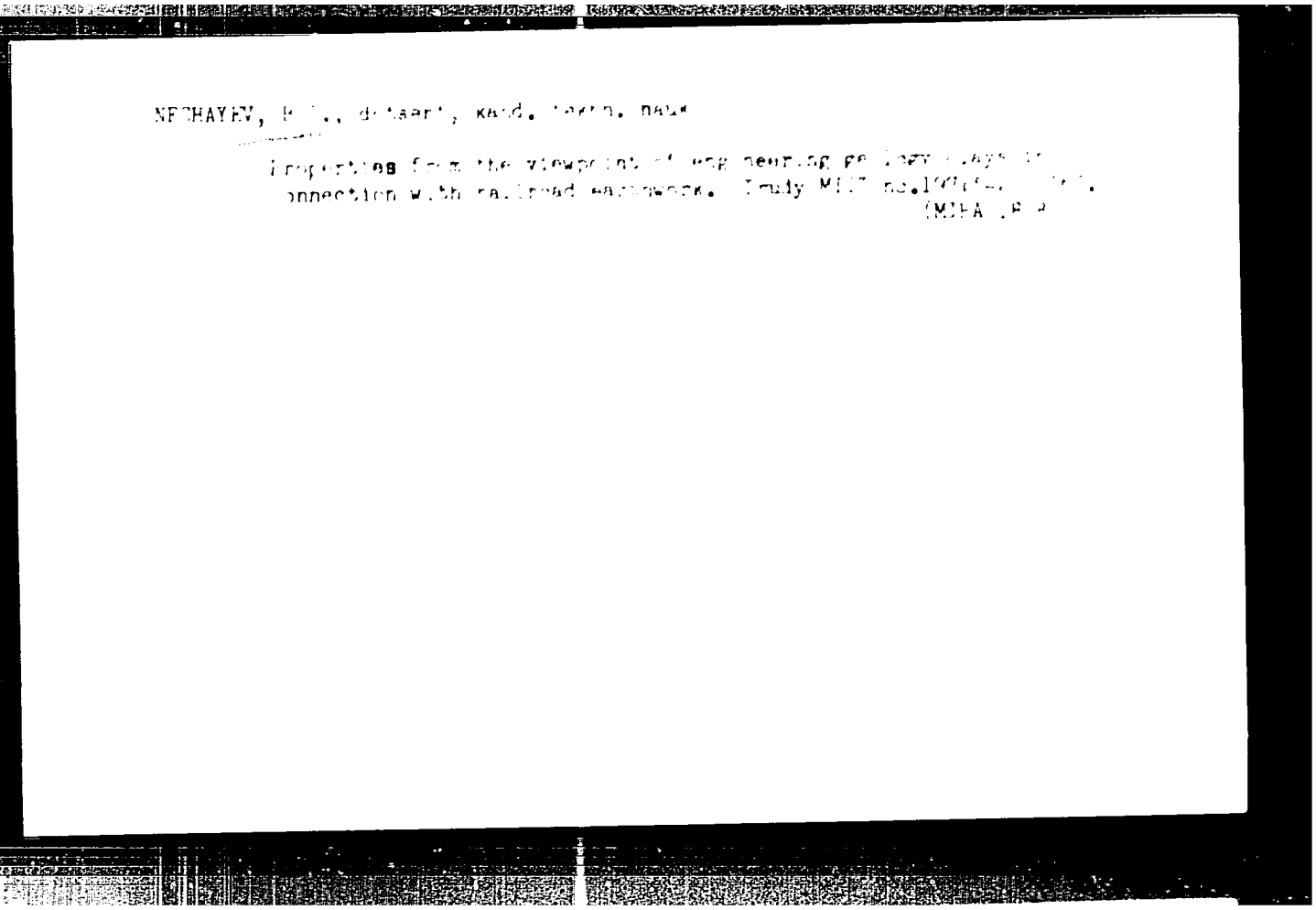
Index of literature on the sliding and stability of slopes.
Put' i put. khoz. 7 no.5:46 '63. (MIRA 16:7)

(Soil mechanics)

VISHNYAKOVA, R.S. (Ivanovo (obl.), Letnyaya ul., d.70, kv.10);
NECHAYEV, B.K.

Three cases of complications in intraosseous metal osteosynthesis of the hip. Ort. travm. i protez. 23 no.10:72-74 O '62. (MIRA 17:10)

1. Iz travmatologicheskogo otdeleniya (rukovoditel'- dotsent L.S. Khavkin) Ivanovskogo oblastnogo gospitalya invalidov Otechestvennoy voyny (nachal'nik - V.K. Shilov).



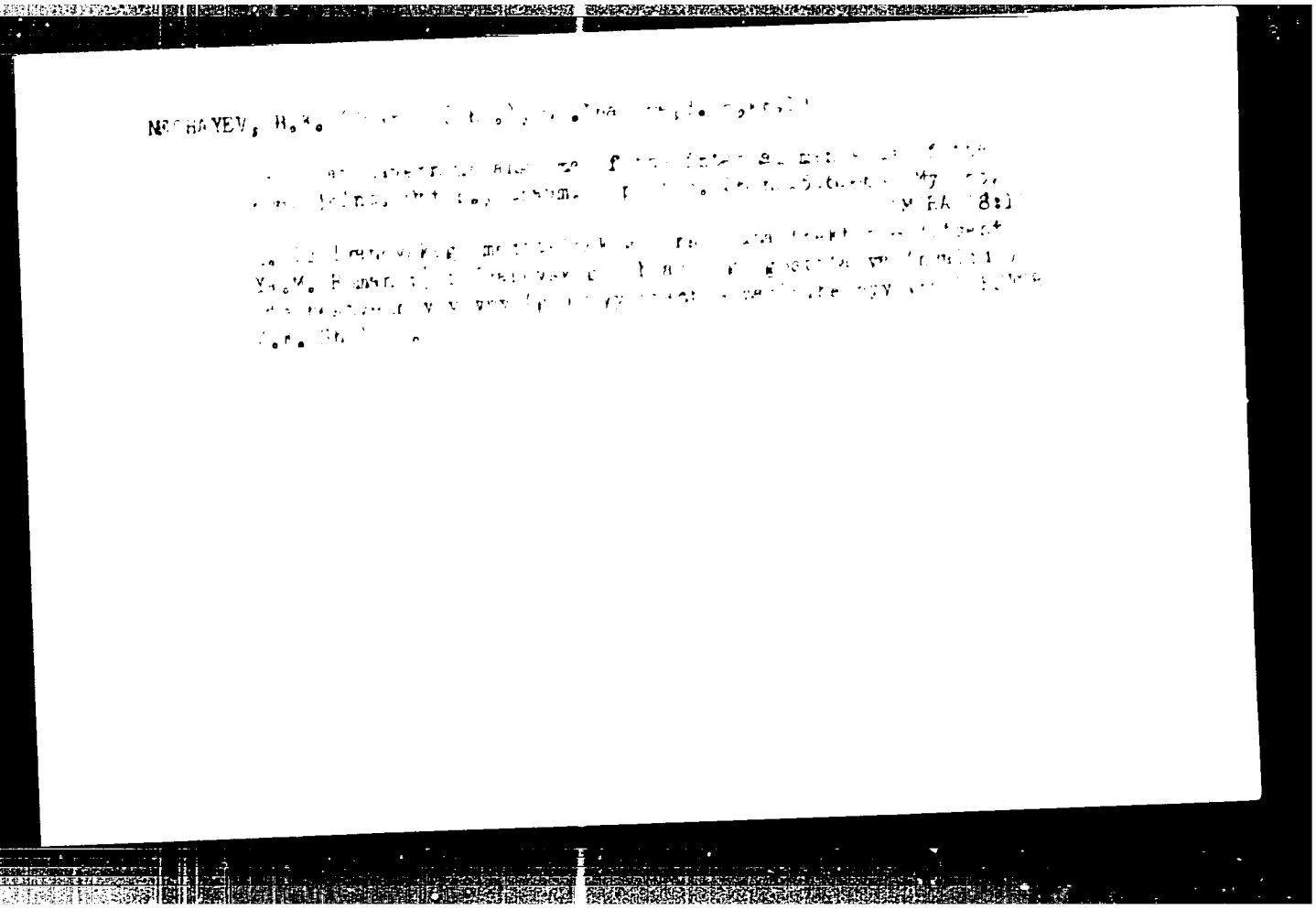
NECHAYEV, P[illegible], docent, kand. tekhn. nauk

Improvements from the viewpoint of user demands of [illegible] in connection with railroad mechanization. Trudy MIIT no.[illegible] (MIRA [illegible]

NECHAYEV, B.K.

Immediate and late results of surgical treatment of meniscus lesions. Klin. khir. no.3:62-64 '65. (MIRA 18:8)

1. Ivanovskiy meditsinskiy institut i oblastnoy gospital' dlya invalidov Otechestvennoy voyny. Rukovoditel' raboty - prof. N.D. Florenskiy.



MAKAROV, A.F.; OBOROTOV, I.Ye.; KALYADIN, I.I.; FELENKO, L.I.; PEREPELITSA, V.R.; MECHAYEV, B.M.; DAVYDOV, A.M.; IVANOV, M.G.; CHUVAKOV, P.F.; FIL'KOV, P.V.; LAR'KIN, G.D.; SVYATKIN, V.V.; SHARIFULLIN, M.

Railroad workers address metallurgists. Put' i put.khoz. 4 no.8:14 Ag '60. (MIRA 13:8)

1. Kovylkinskaya distantsiya puti i putevaya mashinnava stantsiya No.66, stantsiya Kovylkino, Kuybyshevskoy dorogi. 2. Nachal'nik Kovylkinskoy distantsii puti (for Makarov). 3. Sekretari partbyuro, stantsiya Kovylkino, Kuybyshevskoy dorogi (for Oborotov, Mechayev). 4. Predsedatel' mestkoma, stantsiya Kovylkino, Kuybyshevskoy dorogi (for Kalyadin). 5. Sekretari Vsesoyuznogo Leninskogo kommunisticheskogo soyuza molodeshi, stantsiya Kovylkino, Kuybyshevskoy dorogi (for Felenko, Ivanov). 6. Nachal'nik putevoy mashinnoy stantsii No.66, stantsiya Kovylkino, kuybyshevskoy dorogi (for Perepelitsa). 7. Chlen mestkoma, stantsiya Kovylkino, Kuybyshevskoy dorogy (for Davydov). 8. Rukovoditeli brigad i udarniki kommunisticheskogo truda distantsii i putevoy mashinnoy stantsii No.66, stantsiy Kovylkino, Kuybyshevskoy dorogi (for Chuvakov, Fil'kov, Lar'kin, Svyatkin, Sharifullin).

(Railroads--Rails)

TKACHENKO, R.F., master po remontu PMS-36 (stantsiya Bredy, Yuzhno-Ural'skoy dorogi).; KHOROSHEV, V.A., starshiy mekhanik puteukladchika PMS-26 (stantsiya Tuapse, Severo-Kavkazskoy dorogi).; VISICH, A.D., master po ekspluatatsii mashin (raz"yezd Kutan, Severo-Kavkazskoy dorogi).; NECHAYEV, B.N., master po ekspluatatsii mashin (stantsiya Karaul-Kuyu, Ashkhabadskoy dorogi).; SYCHEV, A.P., mekhanik puteukladochnogo krana (stantsiya Dzegam, Azerbaydzhanskoy dorogi).; SEREBROV, Yu.T., mekhanik putekladochnogo krana (stantsiya Dzegam, Azerbaydzhanskoy dorogi).; SHMELEV, V.V.; master po remontu (stantsiya Girey, Severo-Kavkazskoy dorogi).; MIROHENKO, V.I., mekhanik-puteukladchik (stantsiya Girey, Severo-Kavkazskoy dorogi).

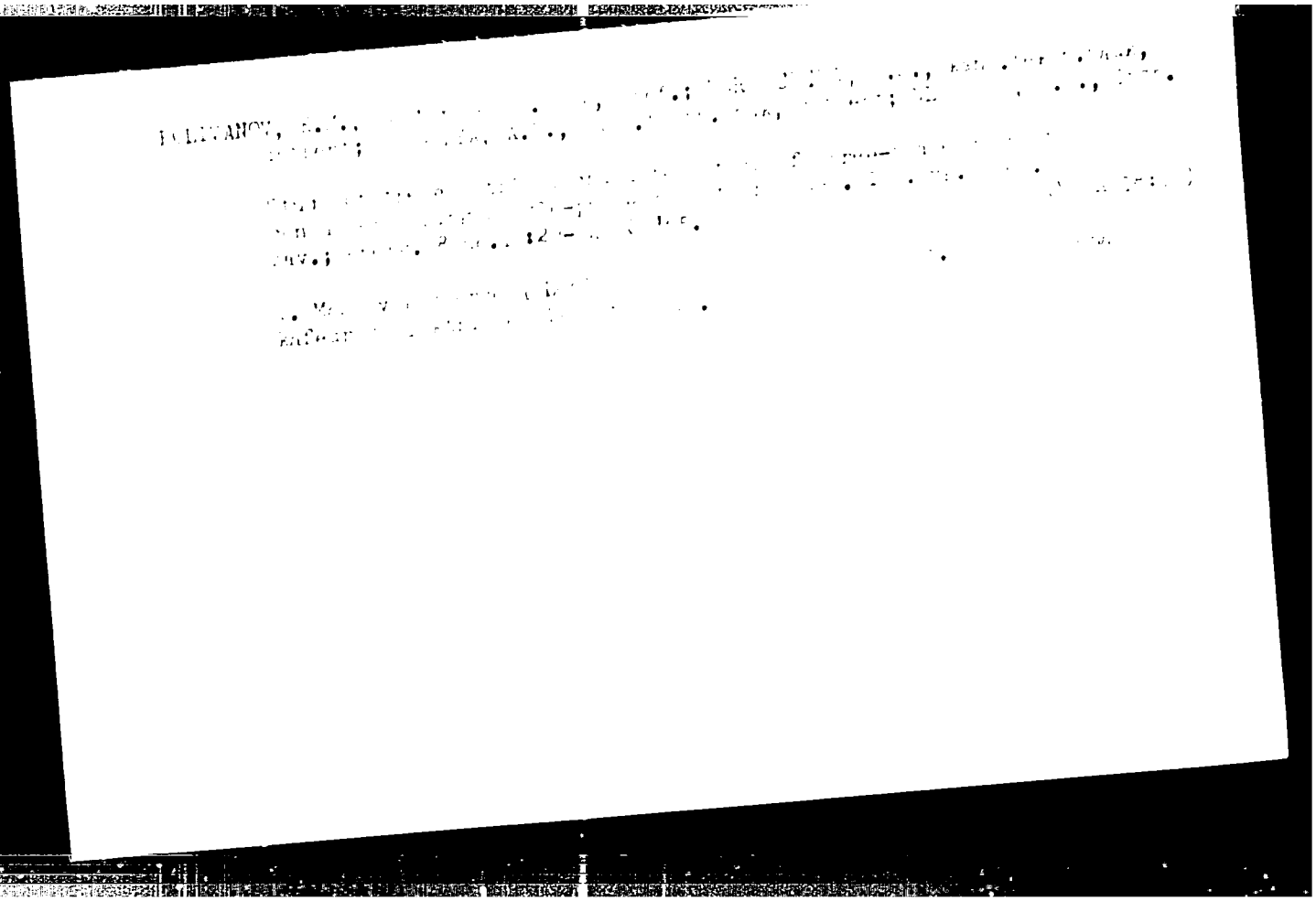
According to the operators of railroad machinery, the equipment could be utilized in a better way. Put' i put.khoz.5 no.2:30-33 F '61. (MIRA 14:3)

(Railroads--Equipment and supplies)

NECHAYEV, B.P.; NEFEDOV, V.D.; KHARITONOV, N.P.; SKOROBOGATOV, G.A.

Chemical effects of N^{14} (n, p) C^{14} reaction in triethylallylmethylamine. Izv. AN SSSR. Ser. khim. no.7:1266-1267 '65. (MIRA 18:7)

1. Institut khimii silikatov AN SSSR i Leningradskiy gosudarstvennyy universitet im. A.A.Zhdanova.



RUSHCHINSKIY, V.M., kand.tekhn.nauk; DUEL', M.A., kand.tekhn.nauk; DEMENT'YEV, V.A., inzh.; NECHAYEV, B.Ya., inzh.; [redacted], V.A., inzh.; SHTEFAN, V.Ye., inzh.

Experimental system for the control of the 67-2SP boiler and K-50-90 turbine block by means of a control computer. Teploenergetika 9 no.10:32-35 O '62. (MIRA 15:9)

1. TSentral'nyy nauchno-issledovatel'skiy institut kompleksnoy avtomatizatsii i Khar'kovskoye upravleniye energokhozyaystva. (Automatic control) (Electric power stations)

DEMENT'YEV, V.A., kand.tekhn.nauk; OKHAPKIN, D.A., kand.pedagog.nauk; VENDA, V.F., inzh.; ERGUNDOV, R.K., inzh.; MEL'NIKOV, [illegible], inzh.; NECHAYEV, B.Ya., inzh.; RYBACHEV, N.V., inzh.; SMOLENSKIY, [illegible], inzh.; STEPANOV, V.I., inzh.; TIMOFEYEV, V.A., inzh.; [illegible] HENRIY, V.I., inzh.

Control of the operation of an overall automatic block. Mekh. i avtom.proizv. 19 no.2:47-52 F '65.

(MIRA 18:3)

NECHAYEV, D.K.

AID P - 1902

Subject : USSR/Engineering

Card 1/1 Pub. 29 - 7/25

Author : Nechayev, D. K., Eng.

Title : Reconstruction of the Shukhov-Berlin steam boiler

Periodical : Energetik, 2, 14-16, F 1955

Abstract : To increase the productivity and efficiency of the A-7 type Shukhov-Berlin steam boiler certain changes were made which improved its performance significantly, according to the author, who describes the innovations.

Institution: TsAGI (Central Aero-Hydrodynamical Institute im. Zhukovskiy)

Submitted : No date

MECHAYEV, D.K.

Investigating the strength of expanded joints of steel pipes. Izv.Sib.otd.AN SSSR no.11:70-82 '58. (MIRA 12:2)

1. Tomskiy politekhnicheskiy institut im. S.M.Kirova.
(Pipe, Steel)

NECHAYEV, D.K., insh.

Repair of a high-pressure boiler drum. Elek.sta. 29 no.3:86-87 Mr '58. (MIRA 11:5)
(Boilers--Maintenance and repair)

NECHAYEV, D.K., insh.

Strength of rolled joints of boiler tubes. Izv.vys.ucheb. zav.; energ. 3 no.5:129-137 My '60. (MIRA 13:6)

1. Tomskiy ordena Trudovogo Krasnogo Znameni politekhnicheskiy institut imeni S.M.Kirova. Predstavlena kafedroy prikladnoy mekhaniki.

(Boilers)

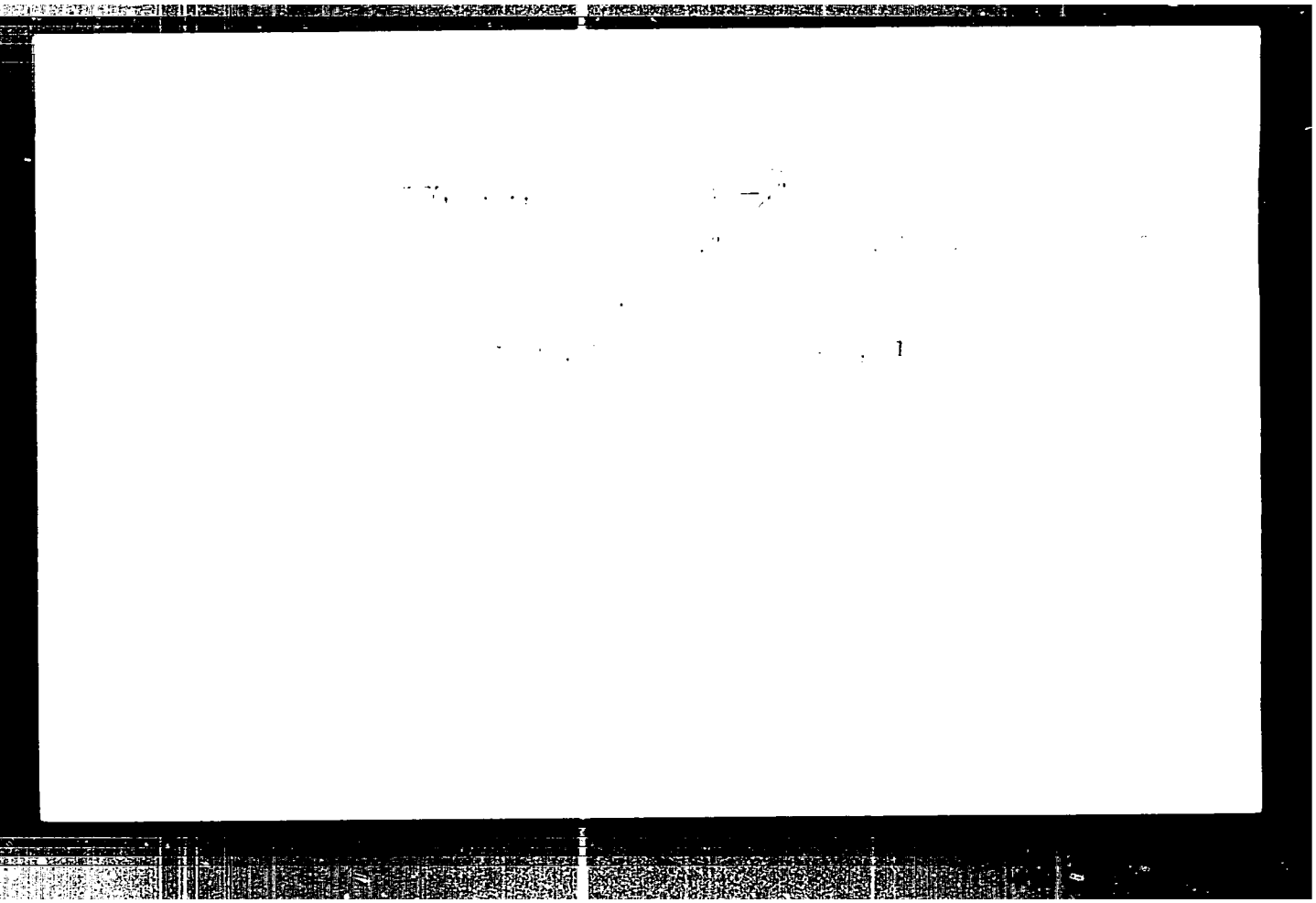
NEC:A/EV, D. K., and Tech Sci -- "Study of the stability of the rolling-[illegible] compounds." Tomsk, Pub House of Tomsk U, 1961. (Min of Higher and Sec Spec Ed RSFSR. Tomsk Order of Labor Red Banner Polytech Inst im S. M. Kirov) (KL, 8-61, 246)

MECHAYEV, G.A., inshener.

Raising the soil-bearing capacity of water-deposited sandy soils under deep level water lowering. Stroi.prom.32 no.7:37 Jl '54. (MLRA 7:7)
(Soil mechanics)

NECHAYEV, G., inzhener.

Measures for protecting foundations from moisture. Strel.prom. 33 no.10:16-17 O '55. (MLRA 9:1)
(Foundations) (Waterproofing)



MECHAYEV, G.A., inzh.

Testing the stability of water-repellent soil materials.
Prom. stroi. 37 no.7:52-55 Jl '59. (MIRA 12:10)
(Waterproofing) (Clay--Testing)

NECHAYEV, Georgiy Aleksandrovich, inzh.; KOMAROVSKIY, M.F., red.; SHILLING, V.A., red. izd-va; GVIETS, V.L., tekhn. red.

[Using water-repellent earth to waterproof underground elements] Opyt primeneniia gidrofobnykh gruntov dlia gidroizoliatsii podzemnykh konstruktsii. Leningrad, 1961. 17 p. (Leningradskii Dom nauchno-tekhnicheskoi propagandy. Obmen peredovym opytom. Seriia: Stroitel'naia promyshlennost', no.1) (MIRA 14:7)
(Waterproofing)

POPCHENKO, Sergey Nikolayevich, kand. tekhn.nauk; MECHAYEV, G.A., inzh., nauchnyy red.; ROTENBERG, A.S., red.izd-va; CHERKASSKAYA, F.T., tekhn.red.

[Cold asphalt waterproofing] Kholodnaia asfal'tovaia gidroizoliatsiia. Leningrad, Gosstroiizdat, 1963. 235 p. (MIRA 16:5)

(Waterproofing) (Asphalt)

POPCHENKO, Sergey Nikolayevich, kand. tekhn. nauk; NECHAYEV, G.A., inzh., nauchn. red.; ROTENBERG, A.S., red.izd-va; CHERKASSKAYA, F.T., tekhn.red.

[Cold asphalt waterproofing]Kholodnaia asfal'tovaia gidroizoliatsiia. Leningrad, Gosstroiizdat, 1963. 235 p. (MIRA 17:2)

NECHAYEV, G.A. (Leningrad)

Use hydrophobic powders for the heat insulation of pipelines in permafrost regions. Stroi. truboprov. 9 no.8:32-33 Ag '64. (MIRA 17:12)

NECHAYEV, G.A.; FEDOTOV, Ye.D.; BELYAYEV, L.N., kand. tekhn. nauk, nauchn. red.

[Use of plastics for waterproofing buildings] Primenenie plasticheskikh mass dlia gidroizoliatsii zdanii. Leningrad, Stroiizdat, 1965. 175 p. (MIRA 18:7)

MECHAYEV, G.A., inzhener.

Construction yards. Shakht.stroi. no.2:19-20 F '57. (MLRA 10:3)
(Precast concrete construction) (Warehouses)

NECHAYEV, G.A., inzhener.

Continuous molding of reinforced concrete beams (from "Concrete Building and Concrete Products" no.2, 1957). Shakht. stroi. no.7: 3 of cover Jl '57. (MLRA 10:8)
(United States--Reinforced concrete construction)

MIKHAYEV, G.A., insh.

Stability of a system of columns supporting an elastic cable (wire-rope). Sbor. trud. MISI no.27:70-81 '57. (MIRA 11:3)
(Columns) (Stability)

BOGUSHEVICH, Ye.N. (Moscow); SHEVELEV, A.P. (Moscow); BORTNIKOV, V.B. (Kishinev); MIKHAYLOV, G.A. (Leningrad); KARAKOV, I.I. (Kiyev); KLOPOTOVSKIY, I.S. (Leningrad); GALAKHOV, G.K.; POSYSAYEV, N.S. (Moscow).

Discussionon methods for determining the coefficient of prefabrication in construction. Stroit. prom. 36 no.6:38-45 Je '58. (Precast concrete construction) (MIRA 11:6)

SOV/97-59-3-12/19

AUTHOR: Nechayev, G. A., engineer

TITLE: V. I. Malyugin, "Efficient Use of Precast Reinforced Concrete in Building", Gosstroyizdat 1958

PERIODICAL: Beton i zhelezobeton, 1959, Nr 3 p 144

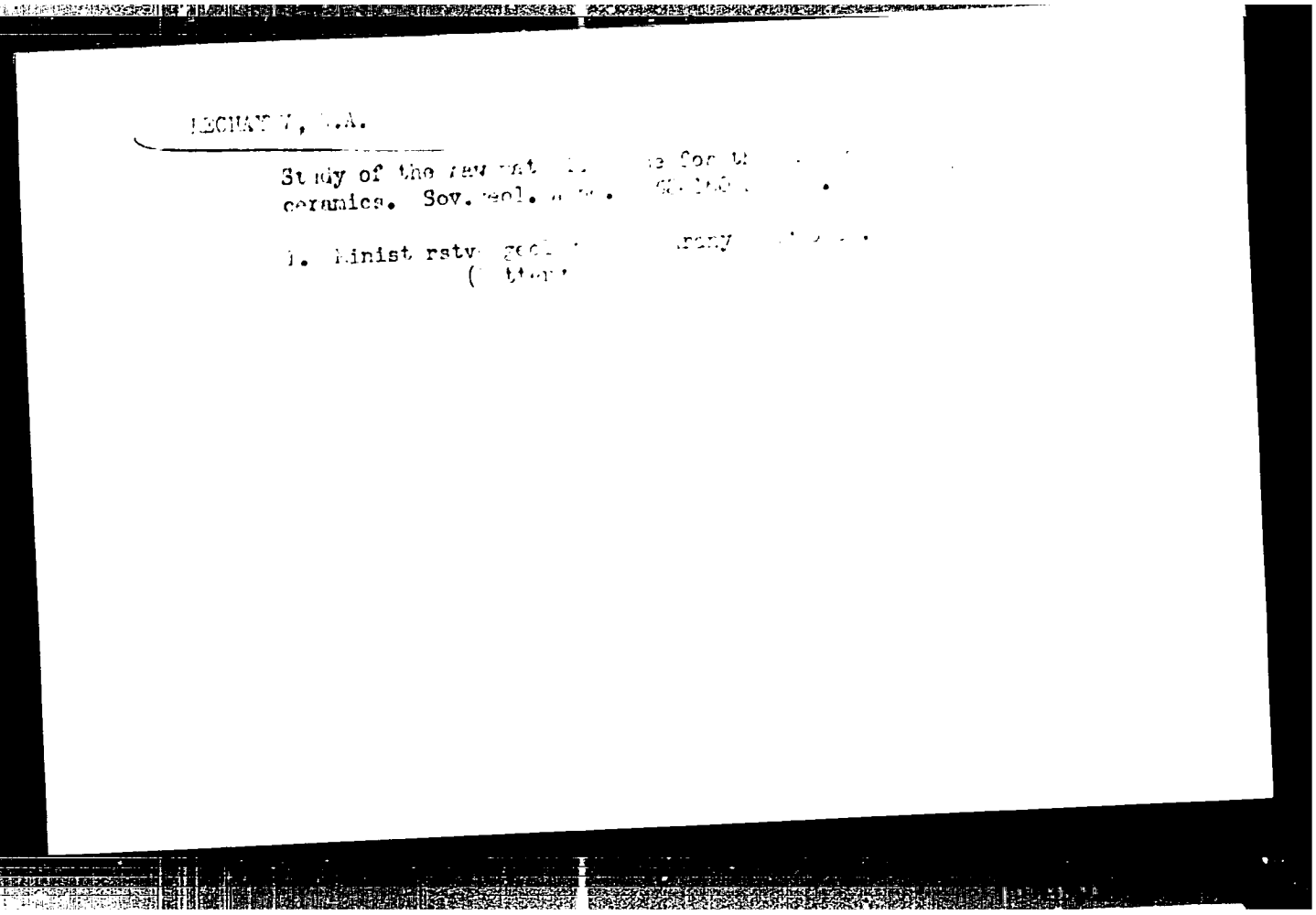
ABSTRACT: The theme of the book is the development of the industry of precast reinforced concrete related to the general industrialization of all building activities with the object of achieving higher economy. The criticism is generally favourable.

Card 1/1

USCOMM-DC-61,760

MECHAYEV, G., inzh.-stroitel' (g.Leningrad)

Technlogogical charts are needed. Zhil.-kom. khoz. 10 no.11:4 '60. (MIRA 13:11)
(Leningrad--Apartment houses--Maintenance and repair)



NECHAYEV, G.A.

Weight method of determining core recovery. Razved. i okh. nedr 27 no.10:32 O '61. (MIRA 15:3)

1. Ministerstvo geologii i okhrany nedr SSSR.
(Core drilling)

NECHAYEV, Grigoriy Aleksandrovich; DERZHAVINA, M.G., red.izd-va; SHMAKOVA, T.M., tekhn. red.

[Raw material for the production of binding structural materials]Syr'e dlia proizvodstva viazhushchikh stroitel'nykh materialov. Izd.2., ispr. Moskva, Gosgeoltekhizdat, 1962. 23 p. (MIRA 16:3)
(Binding materials)

VAYDMAN, S.I.; NECHAYEV, G.A.; LUKACHEV, V.Ye., inzh., retsenzent; BESPALOV, I.V., inzh., nauchnyy red.; PENOVA, Ye.I., red. izd-va; VORONETSKAYA, L.V., tekhn. red.

[Manufacture and assembly of wooden elements] Izgotovlenie i montazh dereviannykh konstruktsii. Leningrad, Gosstroiizdat, 1962. 256 p. (MIRA 15:6)

(Carpentry)

NECHAYEV, G.A.; MAKASHEV, S.D.

Extending the raw material base. TSement 28 no.2:3-5 Mr-Ap '62. (MIRA 15:8)

1. Ministerstvo geologii i okhrany nedr SSSR.
(Cement industries)

NECHAYEV, G.A.

Evaluation of the quality of cement raw material by chemical composition. TSement 28 no.5:6-7 S-O '62. (MIRA 15:11)
(Cement--Analysis)

MECHAYEV, G.A.

State and development of polytechnical education in Bulgarian schools. (MLRA 10:4)
Politekh. obuch. no.1:90-92 Ja '57.
(Bulgaria--Technical education)

MECHAYEV, G.A.

Development of polytechnical education in Czechoslovak schools. Politekh. obuch. no.1:92-93 Ja '57. (MLRA 10:4)
(Czechoslovakia--Technical education)

L 38266-66 EWT(1)

ACC NR: AP6

AUTHOR:

ORG:

TITLE:

SOURCE:

TOPIC TAGS: cerebral cortex, biochemistry, nervous system

ABSTRACT: The authors studied the effect of acetylcholine on the activity of acid ribonuclease of various subcellular fractions of cerebral cortex tissue. In concentrations of $1 \cdot 10^{-7}$ - $1 \cdot 10^{-4}$ g per ml, acetylcholine had no effect that was statistically reliable on ribonuclease activity of homogenates of cerebral cortex tissue. Ribonuclease of the nuclear fraction also proved insensitive to acetylcholine. In concentrations of $1 \cdot 10^{-4}$ and $1 \cdot 10^{-3}$ g per ml it increased ribonuclease activity in the colored mitochondrial fraction by an average of 10.9 and 9.1% ($p<0.02$), respectively. No effect was observed on this fraction by lower concentrations. No statistically reliable effect was noted on ribonuclease activity of the colorless mitochondrial fraction. This article was presented by V. M. Chernigovskiy [illegible]. Orig. art. has: 1 table.

SUB CODE: 06 / SUBM DATE: 07Apr65 / OTH REF: 005 / OTH REF: 006

Card 1/1

UDC: 612.8.015

0911 3344

ISMAILOV, Sh.Yu.; KORICHNEV, L.P.; NECHAYEV, G.I.

Analysis of the performance of a parametric amplitude-phase modulator. Izv. vys. ucheb. zav.; prib. 8 no.5:10-14 '65. (MIRA 18:1

1. Ryazanskiy radiotekhnicheskiy institut. Rekomendovana kafedroy sistem avtomaticheskogo upravleniya.

USSR/Electricity - Thermistors
Automatic Control

Mar 51

"The Relay Effect in Circuits With Thermistors," G. K. Nechayev, Cand Tech Sci, Inst of Elec Eng, Acad Sci Ukrainian SSR

"Elektrichestvo" No 3, pp 53-58

Considers the possibility of obtaining a relay effect (sudden change of current in a circuit accompanied by change in the parameters of circuit components) under certain conditions in a circuit containing a thermistor. Analyzes the qual aspects of this effect and gives examples

201T29

USSR/Electricity - Thermistors (Contd)

Mar 51

of its use in solving certain problems of automatic control. Describes in detail a circuit for thermal protection of elec motors using this effect. Submitted 26 Sep 50.

201T29

NECHAYEV, G. K.

NECHAYEV, G. K.

USSR/Electricity - Thermistors Oct 51
Semiconductors

"Temperature Compensation of Elements of Electric Circuits," G. K. Nechayev, Cand Tech Sci, Elec Eng Inst, Acad Sci Ukrainian SSR

"Elektrichestvo" No 10, pp 55-59

Discusses the problem of temp compensation of active resistors and low-power semiconducting rectifiers with the help of thermistors. Examples given are compensation of a relay over the temp interval 20°-80° C and compensation of a selenium rectifier over the interval 20°-70° C. Submitted 10 Feb 51.

201T46

'ECHAYEV, G. Y.

Electric Motors

Heat protection of an alternating current electric motor by a heat resistor. Prom. energ. 2 no. 3, 1947.

Describes heat-protection system for induction motors developed at Inst of Elec Engr, AS Ukr SSR, using thermistor (R- approx 500,000 ohm at 20°C). Indludes rough circuit diagram. Mentions application to motors TPF 80/6 and MA 11/1144; use of starter P-322, rebuilt with substitution of relay RPT-100 (rewound to approx 24 v), for thermal relay. Cites advantages and disadvantages of system.

253T36

9. Monthly List of Russian Accessions, Library of Congress, December 1952. Unclassified.

NECHAYEV, G.K.

"Techniques of Fast Computing Machines," Report submitted at the Second All-Union Conference on Automatic Control Theory, Moscow, 1953

Sum 1467

NECHAYEV, G. K.

Elec (2)

Electrical Engineering Abst.
Vol. 57 No. 675
Mar. 1954
Mechanical and Civil Engineering
Technology

654.94 : 621.316.8Y

1336. System of temperature signalling with thermistors. G. K. NECHAEV AND M. M. PINEVICH. *Elektrichestvo*, 1953, *No.* 9, 48-9. *In Russian.*

The system described is designed for bearings (e.g. of hydro-generators) and the thermistors consist of semiconductors. Such a thermistor must have a VA-characteristic the angle of slope of which must be negative in the working temperature range. The operating current of the thermistor must be higher than the starting current of the relay or of the flash lamp in series with the relay. The characteristic of the thermistor must also remain unchanged at instantaneous temperature rises up to 400-450°C, occurring at the instant of the relay effect. The inertia of such thermistors is very small, the time constant ~ 18-20 sec. B. F. KRAUS

INOSOV, V.L.; MICHAYEV, G.K.

Note on Candidate in Technical Sciences V.L.Konin's article "Dimensionless parameters of choke-coupled magnetic amplifiers." Sbor. trud.Inst.elektrotekh. AN URSR no.10:133 '53. (MLRA 8:5)
(Magnetic amplifiers)

NECHAYEV, G. K.

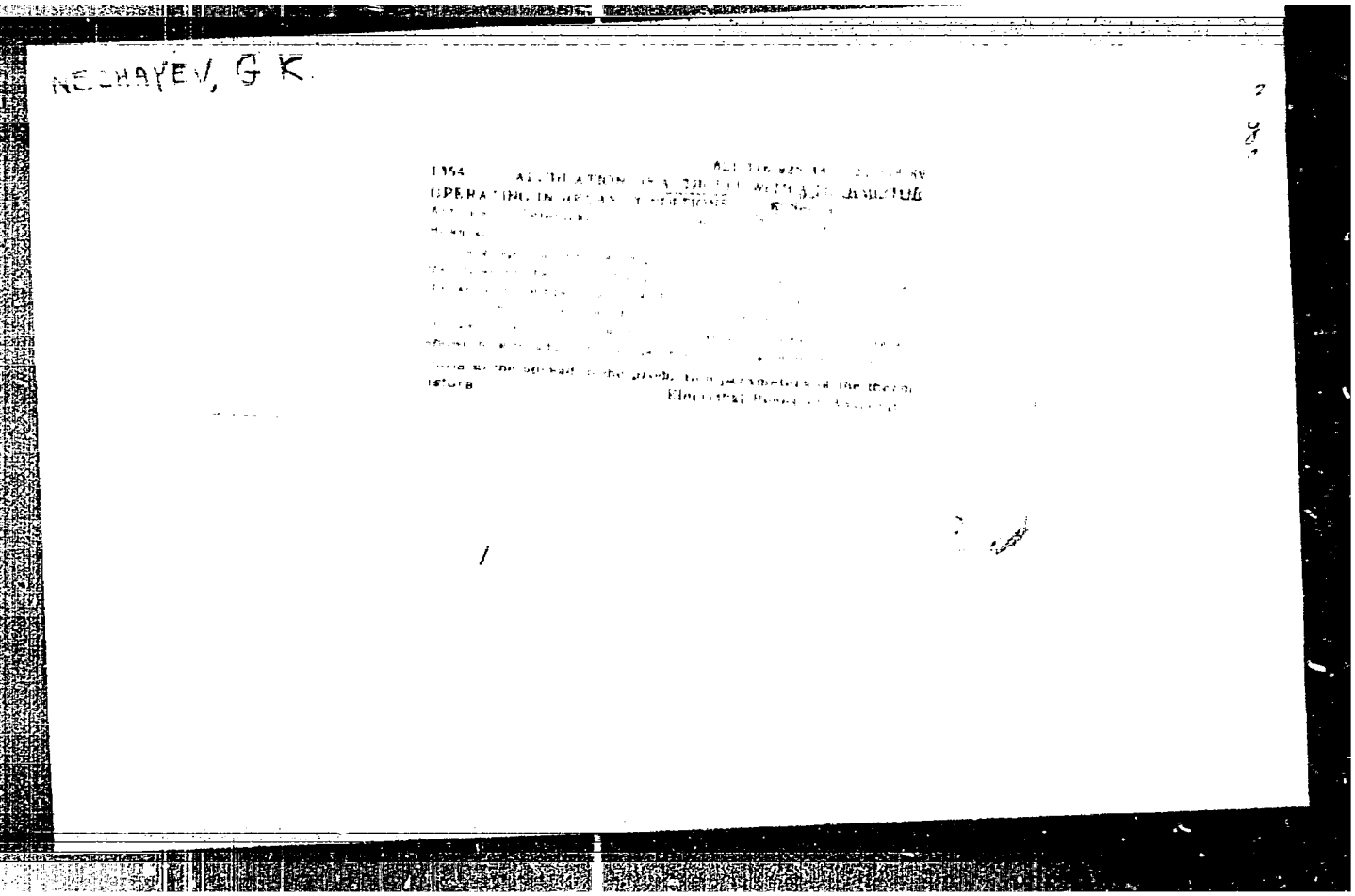
14254* (The Application of Thermal Resistance to Measurement of Temperature.) K voprosy o primenenii termosoprotivlenii dlia izmerenila temperatury. G. K. Nechaev. Doklady Akademii Nauk SSSR, v. 98, no. 1, May 1, 1954, p. 73-76. Theory and equipment. Graphs, diagram. 1 ref.

Inst. Electrical Engineering, AS USSR

MECHAYEV, G.K.

Analysis and calculation of a bridge circuit including a thermistor for temperature measurement. Sbor.trud. Inst.elektrotekh.AN URSR no.12:87-98 '55. (MLRA 9:11)

(Electric circuits)
(Thermistors)
(Temperature--Measurement)



APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R00113

NECHAYEV, G. K., Cand. Tr. Tech. Sci. and MALINOVSKIY, B.N., Cand. Tr. Te n. Sci.

"Analysis and Investigation of Trigger Circuits Employing Load Switch Transistors," a paper presented at the Conference on Methods of Development of Semiconductor Materials, Machine Building and Instrument Building, ... March ...

Translator: N. ...

NECHAYEV, G.K.; PANASYUK, L.S.

Thermostatic control of electric motors. Avtomatyka no.2:25-30 '56. (MLRA 9:10)

1.Institut yelektrotekhniki Akademii nauk URSR.
(Thermostat) (Electric motors)

MECHAYEV, G.K., kandidat tekhnicheskikh nauk.

Heat control of electric machinery and equipment. Energetik 4 no.1:16-17 Ja '56. (MLRA 9:4)
(Remote control) (Electric machinery)

NECHAYEV, G. K.

621.317.39

3411. TEMPERATURE MEASUREMENTS WITH THERMISTORS IN SERIES. G.K.Nechaev. Elektrichestvo, 1956, No. 4, 65-7. In Russian.

Despite their suitability for temperature measurements, commercial thermistors have the disadvantage that their parameters may show a dispersion of up to ± 20% in the same batch. These discrepancies can be corrected by series resistances to be determined by given formulae. A two-stage correction method is suggested by which a considerable number of thermistors of the same rating can be obtained from a single batch. The preliminary selection of pairs of thermistors for the temperature corresponding to the middle of the intended measuring range enables the minimum dispersion of the characteristics to be achieved. The method suggested for the connection of the series resistances renders the thermistors interchangeable.

B.F.Kraus

NECHAYEV, O.K., kand. tekhn. nauk.

Thermistor as a temperature indicators in a circuit including a ratiometer. Elektrichestvo no.12:52-55 D '56. (MIRA 11:3)

1. Institut elektrotekhniki AN USSR.
(Thermistors) (Temperature--Measurement)

8(4) SOV/112-58-3-3664

Translation from: Referativnyy zhurnal Elektrotekhnika 1958, Nr 3, p 18 (USSR)

AUTHOR Nechayev, G. K.

TITLE: Calculation of Some Transient Thermal Conditions in Heat Exchangers Having a Specified Law of Heat Supply (Raschet nekotorykh nestatsionarnykh teplovykh rezhimov teploobmennykh apparatov pri zadannom zakone podvoda tepla)

PERIODICAL: Tr Krasnodarsk in-ta pishch. prom-sti, 1956, Nr 14, pp 81-89

ABSTRACT: The problem is examined of temperature change of a liquid heated by an electric heater placed in it with simultaneous heat losses into the ambient medium. It is assumed that the entire mass of liquid has a constant temperature over a given time period and the mass of the heater has a different temperature. Equations are set up for any law of heat production with time; solutions are presented for constant and for linearly changing heat production

V L L

Card 1/1

105-9-13/32

AUTHORS Mechayev G.K., Sorokejev D.V., Candidates of Technical Sciences.

TITLE A Relay Effect in Circuits Regulating Temperature. (Releynyy effekt v skhemakh regulirovaniya temperatury - Russian)

PERIODICAL Elektrichestvo, 1957, Nr 9, pp 53 - 54 (U.S.S.R.)

ABSTRACT Only direct current-jump is made use of in temperature indicators and heat protection; the authors here show that for temperature regulation also the whole cycle, that is to say the direct-and the rebound of the current can be used. If a relay is connected in series with a thermal resistance, response of the relay at θ_1 and a disconnection at θ_2 can be attained in the case of a corresponding parameter selection. θ_1 is a temperature at which the amperage increases, and θ_2 is that at which it decreases. If the characteristics on the occasion of the increase of current are recorded and the process is then arranged the reverseway, a coincidence of the curves can not always occur. Such a coincidence was obtained in the case of a thermal resistor KMT-11; this was the case with a diameter of the closed donor of d=53 mm. Therefore this resistance is recommenced for works in plants using the relay effect. The scheme given here was checked experimentally and showed the best results. The temperature could be regulated within the limits of $\theta=\theta_1-\theta_2=2^{\circ}C$. θ_2 -is the temperature of negative reaction (5 illustrations and 5 Slavic references)

Card 1/2

A Relay Effect in Circuits Regulating Temperature 105-9-13/32

ASSOCIATION Institute for Electrical Engineering of the A.N. of the Ukrainian SSR (Institut elektrotekhniki AN UkrSSR) and Minsk Institute for the Electrification and Mechanization of Agriculture (Minskiy institut elektrifikatsii i mekhanizatsii sel'skogo khozyaystva -).

SUBMITTED March 18,1957
AVAILABLE Library of Congress.

Card 2/2

NECHAYEV, G.K.

Some problems in studying nonstationary processes by the graphic and analytic method. Trudy KIPP no.16:151-156 '57. (MIRA 12:7)

1. Krasnodarskiy institut pishchevoy promyshlennosti, Mekhanicheskiy fakul'tet, kafedra energetiki.
(Graphic methods)

103-8-5/8

AUTHOR: NECHAYEV,G.K. (Kiyev)

TITLE: Concerning some Properties of Circuits Possessing Thermoresistances. (O nekotorykh svoystvakh tsepey, soderzhashchikh termosoprotivleniya, Russian)

PERIODICAL: Avtomatika i Telemekhanika, 1957, Vol 18, Nr 8, pp 740-748,(U.S.S.R.)

ABSTRACT: The most general case of a bipolar is investigated here, which contains a thermoresistance and three linear resistances and is independent of temperature. The dependence of conductivity and of the resistance of the bipolars upon temperature are investigated. The conditions are derived for the purpose of obtaining these relations for those cases in which they have a linear course. A method of computation for the determination of the temperature compensator for linear resistances is given. Besides, calculation is carried out by way of an example. (With 6 Illustrations, 2 Tables and 2 Slavic References).

ASSOCIATION: Not given
PRESENTED BY:
SUBMITTED: 26.11.1956
AVAILABLE: Library of Congress

Card 1/1

MECHAYEV, G.K., kandidat tekhnicheskikh nauk.

Heat control device using thermistors. Elek.sta. 28 no.1:59-61 Ja '57. (MLRA 10:3)
(Electric power stations) (Thermistors)
(Remote control)

28(1,5) PHASE I BOOK EXPLOITATION SOV/2988

Nechayev, Georgiy Kuz'mich

Termosoprotivleniye v temperaturnom kontrole (Thermistors in Temperature Control) Kiyev, Gostekhizdat UkrSSR, 1959. 205 p. 2,500 copies printed.

Ed.: O. Namchunova; Tech. Ed.: V. Balashov.

PURPOSE: This book is intended for scientific workers and engineers [illegible] of thermoregulation and automation. It [illegible] senior students at power engineering [illegible]

COVERAGE: The author describes the physical properties and characteristics of thermistors, and presents methods for the calculation of bridge circuits with thermistors in temperature measurements. He also describes the utilization of serially fabricated thermistors. He also describes temperature control devices and automatic control circuits with thermistors. No personalities are mentioned. There are 30 references: 22 Soviet, 3 German, 2 French, and 3 English.

Card 1/4

TABLE OF CONTENTS:

Card 2/4

Thermistors in Temperature Control SOV/2988

Card 3/4

Thermistors in Temperature Control SOV/2985

Bibliography

AVAILABLE: Library of Congress

Card 4/4

NECHAYEV, G.K.

9(4) PHASE I BOOK EXPLOITATION SOV/2773

Poluprovodnikovyye termosoprotivleniya; sbornik statey (Thermistors; Collection of Articles) Moscow, Gosenergoizdat, 1959. 229 p. 15,000 copies printed.

Ed. (Title page): B. S. Sotskov, Doctor of Technical Sciences, Professor; Ed. (Inside book): V. A. Petrov; Tech. Ed.: G. I. Matveyev; Editorial Board: B. S. Sotskov, Doctor of Technical Sciences, Professor (Chief Ed.), S. P. Odalov, Candidate of Technical Sciences, S. S. Zaytsev, Engineer, Ye. S. Shaparev, Engineer, and V. I. Turmalets, Engineer.

PURPOSE: This collection of articles is intended for engineering and technical personnel of plants, OKB, NII and also instructors and students of vuzes.

COVERAGE: The book contains articles dealing with problems of manufacture of thermistors and determining thermistor parameters and characteristics. The authors also discuss problems of industrial application of thermistors as control elements. The book is an effort of cooperation by scientists of a number of vuzes, members of NII and engineers of one of the plants (name is not given) of Mosgorsovnarkhoz. No personalities are mentioned. References appear at the end of some articles.

Odalov, S.P. [illegible] 62
The author discusses optimum parameters of thermistors with direct and indirect heating and presents methods of calculating temperature characteristics, constant B and power dissipation coefficient. He also discusses thermistor volt-ampere characteristics and presents methods of constructing a heating characteristic as well as methods of experimental determining of thermistor parameters. There are 4 references, all Soviet.

Nechayev, G. K. Problems of Design of Thermistors for Circuits Based on Relay Effect 73
The author discusses operating conditions of thermistors used in circuits based on relay effect and calculates thermistor parameters required in the design of thermistors. There are 3 references, all Soviet.

Andrievskiy, A. I., and I. D. [illegible] Temperature Characteristics of Thermistors Made From Two-oxide Mixtures 88
The authors present experimental temperature characteristics of thermistors made from the following two-oxide mixtures: $MnO-Cu_2O$; $MgO-Cu_2O$; $CaO-Cu_2O$; $ZnO-Cu_2O$; MnO_2-Cu_2O; and SiO_2-Cu_2O. They describe the importance of these mixtures in the design of new types of thermistors. There are 4 references, all Soviet (including 1 translation).

[illegible], Ye. A. Thermistors for Controlling Heating of an Automobile Engine 95
The author discusses fundamentals of manufacture of laboratory types of thermistors used as thermosensitive elements in the automobile cooling system and presents thermistor characteristics. There are [illegible] references, both Soviet.

Grushkin, P. P. Experimental High-temperature Thermistor 101
The author discusses the manufacture and operation of a laboratory-type thermistor used at temperatures 1,000 - 1,500°C and presents its basic characteristics. There are 9 references: 4 Soviet, 2 English and 3 German.

Sotskov, B. S. Analytical Methods of Determining Operating Conditions for Thermistors Using Alternating Current 116
The author discusses operating conditions of a-c thermistors with the time constant much larger than the period of alternating current used. He also presents a method of calculating thermistor circuit parameters such as current values, function [illegible] etc. There are no references.

Soiskov, B. S. Voltage Stabilizer Circuits With Thermistors 119
The author presents fundamentals of voltage stabilizer circuits [illegible] thermistors and discusses methods of calculating circuit parameters. There is 1 Soviet reference

Odalov, S. P. Transients in Simple Circuits With Thermistors
The author presents a method of calculating dynamic [illegible] of thermistors. The method can be used in the design of time [illegible] lays utilizing lag in thermistor circuits. He also [illegible] transients in simple circuits with thermistors. There [illegible] ences, both Soviet

Sorokin, N. F. Dynamic Parameters of Thermist[illegible]
The author [illegible]
automatic control [illegible]
[illegible]
and [illegible]
There are [illegible]

NEUHAYEV, [illegible]

9(4) PHASE I BOOK EXPLOITATION SOV/2773

Poluprovodnikovyye termosoprotivleniya; sbornik statey (Thermistors; Collection of Articles) Moscow, Gosenergoizdat, 1959. 229 p. 13,000 copies printed.

Ed. (Title page): B. S. Sotskov, Doctor of Technical Sciences, Professor; Ed. (Inside book): V. A. Petrov; Tech. Ed.: G. Ye. Matveyev; Editorial Board: B. S. Sotskov, Doctor of Technical Sciences, Professor (Chief Ed.), N. P. Udalov, Candidate of Technical Sciences, B. S. Zaytsev, Engineer, Ye. S. Shegurov, Engineer, and V. I. Turmalets, Engineer.

PURPOSE: This collection of articles is intended for engineering and technical personnel of plants, OKB, NII and also instructors and students of vuzes.

COVERAGE: The book contains articles dealing with problems of manufacture of thermistors and determining thermistor parameters and characteristics. The authors also discuss problems of industrial application of thermistors as control elements. The book is an effort of cooperation by scientists of a number of vuzes, members of NII and engineers of one of the plants (name is not given) of Mosgorsovnarkhoz. No personalities are mentioned. References appear at the end of some articles.

Kagunov, R. A. Calculation of Parameters of Measuring Bridge Circuits With Thermistors 151
The author discusses a method of calculating bridge circuits with thermistors used in temperature measuring devices. There are no references.

Bochayev, G. K. Some Advantages of Thermistor Heat Detector Cells in Circuits for Measuring Temperature 155
The author discusses the advantages of thermistor heat detector cells over wire resistance thermometers in devices for measuring temperature. He also describes a method of calculating parameters of a high-sensitivity measuring bridge. There are 4 references, all Soviet.

Afanas'yeva, [illegible] Determination of a Coefficient of Thermal Inertia for Thermistors and Air Flow Rate Meter 162
The author discusses a method of determining the coefficient of thermal inertia for [illegible]-1 and T-8 types of thermistors under the condition of motion of the media. She also describes an air flow rate meter operating at various temperatures and densities. There are no references.

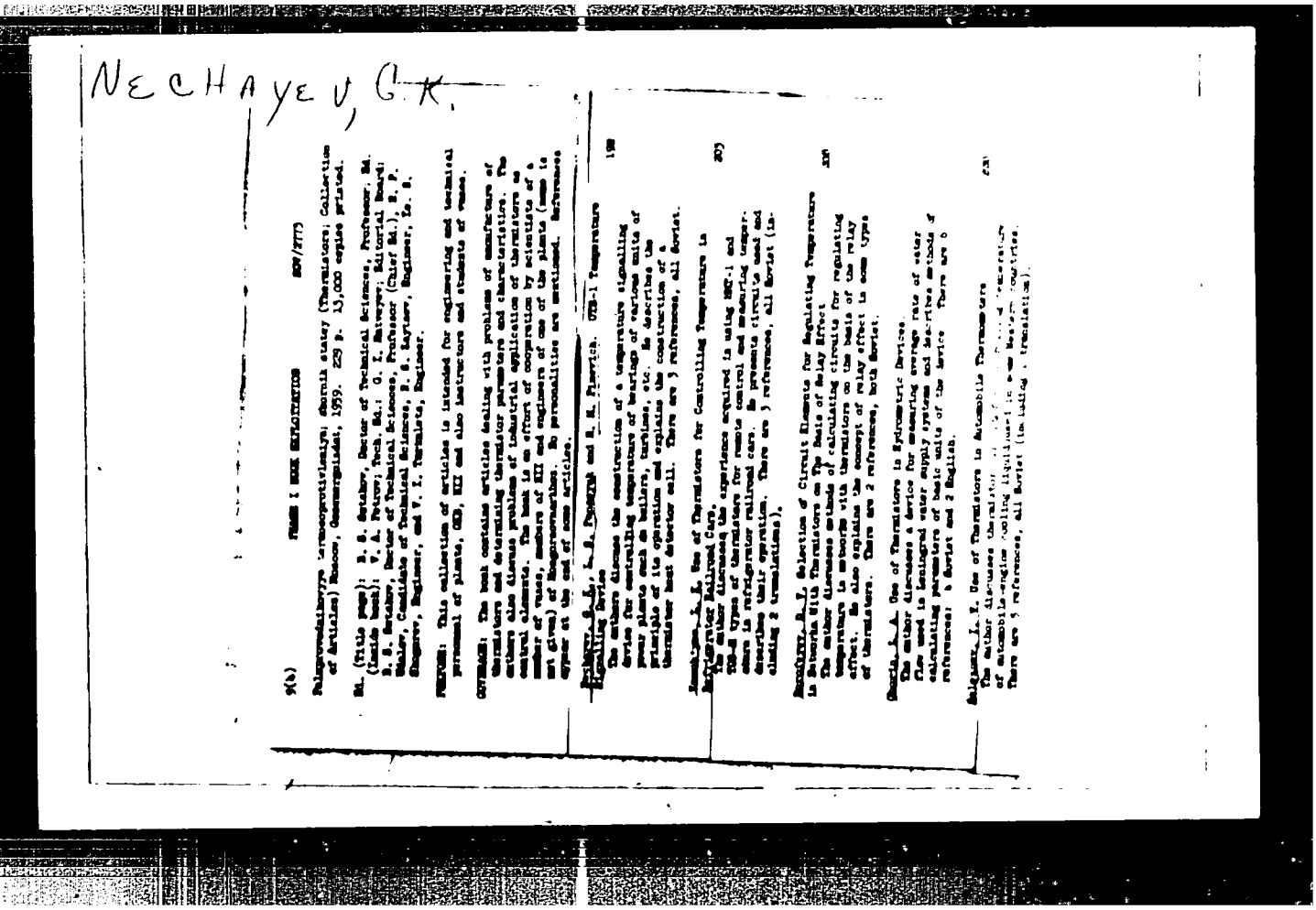
Udalov, N. P., V. I. Turmalets and N. A. Balashov. Low-inertia Thermistor Level Indicator 168
The authors discuss an experimental device for controlling and measuring the level of liquids and loose substances. There are no references.

Abrosimov, N. V. Thermistors for Superhigh Frequencies 17[illegible]
The author discusses thermistors used in thermistor heads for measuring superhigh-frequency power and describes methods of eliminating the error of measurement, of decreasing amplitudes of higher harmonics and calibration errors as well as methods of increasing electrical stability and the coefficient of heat transfer. There are 6 references, all Soviet.

Smolyanskiy, [illegible] A. Thermoregulator Using [illegible] Type Thermistors 182
The author discusses circuits of automatic temperature regulators used in bread-baking industry and presents recommendations for regulator manufacture. There are no references.

Kagunov, R. A. Use of Thermistors for Compensating Thermocouple Error 184
The author discusses a method of compensating the error of temperature measurement due to temperature difference of thermocouple [illegible]. He also explains a method of calculating parameters of [illegible] circuits containing thermistors. There are [illegible] references, [illegible] Soviet.

NECHAYEV, G. K.



PHASE I BOOK EXPLOITATION SOV/4526

Soveshchaniye po teorii invariantnosti i yeye primeneniyu v avtomaticheskikh ustroystvakh. Kiyev, 1958

Teoriya invariantnosti i yeye primeneniye v avtomaticheskikh ustroystvakh; trudy soveshchaniya (Theory of Invariance and Its Applications to Automatic Devices. Transactions of the Conference Oct. 16-20, 1958) Moscow, 1959. 357 p. No. of copies printed not given.

Sponsoring Agency: Akademiya nauk Ukrainskoy SSR. Otdeleniye tekhnicheskikh nauk.

Resp. Ed.: V.S. Kulebakin, Academician; Editorial Commission: V.A. Bodner, Doctor of Technical Sciences, A.G. Ivakhnenko, Doctor of Technical Sciences, A.Yu. Ishlinskiy, Academician, Academy of Sciences UkrSSR, N.A. Kachanova, Candidate of Technical Sciences, P.I. Kuznetsov, Doctor of Physics and Mathematics, A.I. Kukhtenko, Doctor of Technical Sciences, B.N. Petrov, Corresponding Member, Academy of Sciences USSR, Ye.P. Popov, Doctor of Technical Sciences, G.M. Ulanov, Doctor of Technical Sciences, A.A. Khramoy, Academician, Academy of Sciences UkrSSR, P.I. Chinayev, Candidate of Technical Sciences, and N.M. Chumakov, Candidate of Technical Sciences, Tech. Ed.: G.F. Kruglov.

PURPOSE: This collection of papers is intended for engineers and other specialists working in various fields of automation.

COVERAGE: The collection includes reports and papers presented at the Conference on the Theory of Invariance and Its Applications to Automatic Devices which was called by the Otdeleniye tekhnicheskikh nauk (Department of Technical Sciences) and the Institut elektrotekhniki (Institute of Electrical Engineering) of the Academy of Sciences of the Ukraine and convened in Kiyev October 16-20, 1958. The papers presented are concerned with high-quality automatic control systems designed on the basis of compensating for the effects of disturbances or maintaining the invariance of the quality to be regulated with respect to the disturbances acting on the system. The reports treat the physical and mathematical foundations of invariance in automatic control systems. They also consider methods for designing and calculating invariant systems and problems connected with specific cases of practical applications of compensation in various automatic systems. On the basis of these reports it was established by the Conference that, by utilization of the conditions of compensation and the principle of invariance, it is possible to produce automatic systems and various arrangements which are more perfect from the viewpoint of quality of the regulation and control process, stability, simplicity of construction, and reliability of operation. The following members of the Kiyev Seminar on Automatic Control are mentioned as organizers of the conference: A.I. Kukhtenko, A.G. Ivakhnenko, Yu.G. Korailov, O.M. Kryzhanovskiy, N.M. Chumakov, N.A. Kachanova, and P.I. Chinayev. References accompany each article.

6

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333

AUTHORS: Nechayev, G. K., Raykhman, S. K. (Kyyiv)

TITLE: Temperature Regulator of Gyroscopic Instruments

PERIODICAL: Avtomatika, 1960, No. 3, pp. 70-75

TEXT: The authors propose a three-point regulator for stabilizing the temperature of gyroscopic instruments dependent on temperature. They use a thermal resistance as measuring instrument. A calculation of the optimum parameters for the bridge arms shows that an unsymmetrical bridge is most favorable (contrary to J. Doucet (Ref.2) who recommends a symmetric bridge). Thereby the sensitivity can exceed that of the Doucet regulator (Ref 2) up to 8 times. Because of the high sensitivity a two-stage amplifier with a resonance circuit for noise suppression is sufficient for amplifying the output signal. The work of the regulator is controlled by means of four thermal resistances which are installed at different points of the instrument and which allow a temperature measurement with accuracy of 0.01°C. As a result of tests under various working conditions it was found that the regulator attains the given precision of ± 0.1°C.

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Temperature Regulator of Gyroscopic Instruments

There are 4 figures, 1 table, and 3 references: 1 Soviet, 1 French and 1 American.

SUBMITTED: July 1, 1959

Card 2/2

MECHAYEV, G.K., kand.tekhn.nauk

Temperature control circuit using thermistors. Elektrichestvo no.6:85-88 Je '60. (MIRA 13:7)

1. Institut elektrotekhniki AN USSR.
(Thermistors) (Temperature regulators)

83983

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9.7800

S/119/60/000/010/006/014
B012/B063

AUTHORS: Nechayev, G. K., Candidate of Technical Sciences, and Raykhman, S. R., Engineer

TITLE: The Use of a Relaxation Generator in an Apparatus Producing Numerical Codes of the Values of Physical Quantities

PERIODICAL: Priborostroyeniye, 1960, No. 10, pp. 16 - 18

TEXT: In the existing apparatus used to produce numerical codes of the values of physical quantities, transformation takes place in two stages. First, a voltage is generated, which is a function of the value of the quantity to be transformed. Then, this voltage is transformed into a numerical code. The present paper shows a possibility of obtaining numerical codes directly without transformation into a voltage. The block diagram of such an apparatus is shown in Fig. 1 and explained. The mode of operation of the scheme is also described. One of the elements of this apparatus is the transforming pulse generator whose oscillation frequency is a function of a certain variable resistor. The well-known blocking

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The Use of a Relaxation Generator in an Apparatus Producing Numerical Codes of the Values of Physical Quantities

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oscillator or multivibrator circuits are used for transformation. These circuits are particularly advantageous because pulses are directly obtained at their outputs. The two circuits are examined. The circuit diagram of the blocking generator is shown in Fig. 2 and described. On the basis of the data given in this paper, the authors carried out an approximate calculation of the blocking generator according to a method described by L. A. Meyerovich (Ref., Footnote on p. 17). Fig. 3 shows two curves one of which was obtained experimentally. It expresses the dependence of the blocking generator frequency on the variable resistor. The second curve shows the temperature dependence of this frequency for the case in which a variable resistor is taken as a thermistor. It is found that in the range from 10°C to about 70°C the frequency spread attains up to 9%. The circuit diagram of the multivibrator is shown in Fig. 4. The positive bias is given with the help of the variable resistor in the network. Also in this case, a thermistor is used as a variable resistor. Fig. 5 shows the dependence of the frequency of the generated pulse on the variable resistor. A study of this circuit diagram indicates that the frequency spread is about 15% when the tube parameters

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83983

The Use of a Relaxation Generator in an Apparatus Producing Numerical Codes of the Values of Physical Quantities

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B012/B063

are changed within the limits of technical conditions. It is found that the stability of the dependence of frequency on the variable resistor is the same for both circuits. The circuit of the blocking generator has the following advantage: a smaller number of parts and the possibility of obtaining pulses of any polarity from the transformer winding which is connected to the anode circuit. This circuit worked continuously for one month, and showed satisfactory stability. There are 5 figures and 1 Soviet reference.

Card 3/3

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S/105/60/000/010/004/004
B116/B206

9.4320 (1001, 1139, 1482)

AUTHOR: Nechayev, G. K., Candidate of Technical Sciences

TITLE: Correction of temperature characteristics of thermistors

PERIODICAL: Elektrichestvo, no. 10, 1960, 62-65

TEXT: When using nonlinear elements, their operation characteristics must be corrected. The latter determine the dependence of the resistance R and the conductivity Y on a certain parameter x. The author studies here the problems connected with the deformation of the R(x)-curve of a thermistor. In order to eliminate parameter spread in industrially produced thermistors, correction resistances were proposed by L. G. Anderson (Ref. 1: Bull. of American Meteorolog. Society, 1949, v. 30, no. 50) and M. A. Kaganov (Ref. 2: Osnovy elektricheskogo rascheta priborov dlya izmereniya temperatur pri pomoshchi termistorov (Principles of the electrical calculation of instrument for temperature measurement by means of thermistors), "Avtomatika i telemekhanika", 1952, no. 1). Some general initial conditions can be assumed as a basis for the calculation of such circuits. A circuit with a thermistor is assumed. The resistance of the thermistor changes within a certain temper-

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Correction of temperature ...

ature range from R_1 to R_2 Then holds

$$\Delta I = U \left(\frac{1}{R_2} - \frac{1}{R_1}\right) = U\Delta Y = U \frac{\Delta R}{R_1 R_2} \qquad (1)$$

This circuit can be characterized by the mean specific resistance sensitivity

$$S_o = \frac{\Delta I}{\Delta R} \cdot \frac{1}{U} = \frac{\Delta Y}{\Delta R} = Y_1 Y_2 = \frac{1}{R_1 R_2} \qquad (2).$$

Thus, the specific sensitivities of several circuits must be equal so that their characteristics coincide. First of all, circuits with 3 correction resistances (Fig. 1) are studied. These permit to obtain 3 points in which the temperature characteristic of the circuits coincides with that of the thermistor, the divergence between the two characteristics being thus reduced. Two of these points are chosen at the limits of the temperature range and one point within it. Circuits with 2 correction resistances (Fig. 2) are used in practice. These circuits permit to obtain 2 points (in which the temperature characteristic of the circuit coincides with that of the thermistor) within the temperature range to be measured. In these points the resistances of all circuits are equal to R_1 and R_2, respectively.

Starting from the possible maximum of the specific sensitivity, the latter is

Card 2/[illegible]

...rrection of temperature ...

characterized for all circuits by

$$S_{max} = \Delta Y_{T.min} / \Delta R_{T.min} \quad (14)$$

, where $\Delta R_{T.min}$ and $\Delta Y_{T.min}$ are the minimum change of the resistance and the conductivity, respectively, of the thermistors subjected to a correction. Since the correction resistances reduce the values of ΔR_T and ΔY_T, two poles can be obtained by means of them with equal resistance- and conductivity changes. Formulas

$$r_1 = \frac{R_{T1} + R_{T2} + \Delta R_T \sqrt{1 + \frac{4}{\Delta Y_T \Delta R_{T.мин}}}}{2\left(\frac{\Delta R_T}{\Delta R_{T.мин}} - 1\right)}; \quad (17)$$ and

$$r_2 = \frac{\Delta R_{T.мин}}{2}\left[\sqrt{1 + \frac{4}{\Delta R_{T.мин}\Delta Y_{T.мин}}} - \sqrt{1 + \frac{4}{\Delta R_{T.мин}\Delta Y_T}}\right]. \quad (16)$$

are written down for the determination of r_1 and r_2 respectively, the index

Card 3/

Correction of temperature ...

M + denoting minimum. In order to evaluate the efficiency of the correction circuits with two and three linear resistances, calculations for two thermistors were made. These showed a spread of 20% of R_{20} and 10% of B (constant coefficient characterizing the thermistor properties). The maximum divergence between the temperature characteristics of these thermistors amounted to $\varepsilon = \frac{R_{1T2} - R_{2T2}}{R_{1T2}} = 38\%$. With a correction by means of 3 resistances, ε amounted to 0.3% ($T_w = 50°C$), (T_w is the temperature of the point of inflection of the temperature characteristic of the circuit). In the range of 0 to 100°C, $k_1 = R_{1T1}/R_{1T2} = 8.5$ dropped, however, to $k = 1.815$. If correction is made by means of two resistances, $\varepsilon = 11.2\%$ and $k = 6.12$. It follows therefrom that in this case there is a great divergence between the characteristics, which would exclude the use of thermistors with such a parameter spread. This divergence, however, can be reduced by reducing the calculated value of $\Delta R_{T.min}$. For the same thermistors, calculations were made for $\Delta R_{min} = (0.1 \div 0.9)\ \Delta R_{T.min}$. The

Card 4/6

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B116/B206

Correction of temperature ...

results are shown in Fig. 3. The $\gamma = f(\Delta R_{min})$-curve shows that it is thus possible to reduce the divergence between both curves considerably. If, nevertheless, γ exceeds the permissible value and K cannot be reduced, the thermistor pairs are to be connected in parallel or in series. There are 3 figures and 3 Soviet-bloc references.

ASSOCIATION: Institut elektrotekhniki AN USSR (Electrotechnical Institute of the AS UkrSSR)

SUBMITTED: May 4, 1960

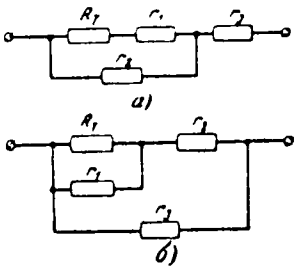

Fig. 1

Card 5/6

MECHAYEV, G.K. (Kiyev)

Temperature stabilization of thermistors. Avtom. i telem. 21 no.4:548-554 Ap '60. (MIRA 13:7)
(Thermistors)

NECHAYEV, Georgiy Kuz'mich, kand. tekhn. nauk; UDALOV, N.P., kand. tekhn. nauk, dots., retsenzent; NEMCHUNOVA, O.A., red.izd-va; SHAFETA, S.M., tekhn. red.

[Semiconductor thermistors in automatic control] Poluprovodnikovye termosoprotivleniia v avtomatike. Kiev, Gostekhizdat, USSR, 1962. 253 p. (MIRA 15:12)

1. Moskovskiy aviatsionnyy institut imeni S.Ordzhonikidze (for Udalov).
(Thermistors) (Automatic control)

NECHAYEV, G.K., kand.tekhn.nauk; VASIL'YEV, Yu.K., kand.tekhn.nauk; BOGAYENKO, I.N., inzh.; BEREZYUK, B.S., inzh.; SHERMAREVICH, M.G., inzh.

Devices for temperature control in large d.c. machines. Vest. elektroprom. 33 no.11:31-34 N '62. (MIRA 15:11)
(Electric motors, Direct current)

VENEDIKTOV, M.V., red.; PECHUK, V.I., red.; NECHAYEV, G.K., kand. tekhn. nauk, red.; RUDNYY, N.M., red.; RUDNAYA, A.I., kand. tekhn. nauk, red.; KUDRYAVTSEVA, K.G., otv. za vyp.; PAVLENKO, V.N., red.; BUKEYEV, A.L., tekhn. red.

[Industrial control, equipment and the means of automatic control] Pribory promyshlennogo kontrolia i sredstva avtomatiki; doklady i soobshcheniia. Kiev, Gos.izd-vo tekhn. lit-ry USSR, 1963. 370 p. (MIRA 16:12)

1. Nauchno-tekhnicheskaya konferentsiya po priboram promyshlennogo kontrolya i sredstvam avtomatiki. 2. Institut avtomatiki Gosplana Ukr.SSR (for Nechayev).
(Automatic control)

KOTOVA, V.G.; NECHAYEV, G.K., doktor tekhn. nauk

Optimalizer of a noncontact device for measuring speed in metal rolling. Avtom. i prib. no.1:51-54 Ja-Mr '65.
(MIRA 18:8)

NECHAYEV, G.K.; MGEBRISHVILI, T.V.

Device for the regulation and measurement of the strength of brandy alcohol. Trudy KIPP no.22:227-229 '61. (MIRA 16:4)
(Liquors--Gauging and testing)

NECHAYEV, I.A., inzhener.

Metal molds for making precast reinforced concrete elements.
Nov. tekh. i pered. op. v stroi. 18 no.9:17-19 S '56. (MLRA 9:10)

(Precast concrete)

L 25624-65

ACCESSION NR: AP4045105 S/0020/64/158/001/0214/0217 10

AUTHOR: Nechayev, I. A. 6

TITLE: Age-related radiosensitivity of various breeds of mice

SOURCE: AN SSSR. Doklady*, v. 158, no. 1, 1964, 214-217

TOPIC TAGS: age related radiosensitivity, mouse radiosensitivity, genotype radiosensitivity

ABSTRACT: Radiosensitivity and age are correlated in this study for 2 breeds of mice (VALV/s and SS57VR); these differ considerably in respect to radiosensitivity at the age of 2 1/2 months, with a DL 50/30 of 440 r as against 538 r. The animals of both sexes were irradiated with X-ray doses of 300, 400, 500 and 600 r at the age of 1, 15, 30, 45 and 60 days. The data on deaths after 30 days were processed according to the probit method. Results showed lowest radiosensitivity in the newborn, close to the figures found for the DL 50/30, while highest radiosensitivity was found on the 30 and 45th day. No alteration of the genotypical

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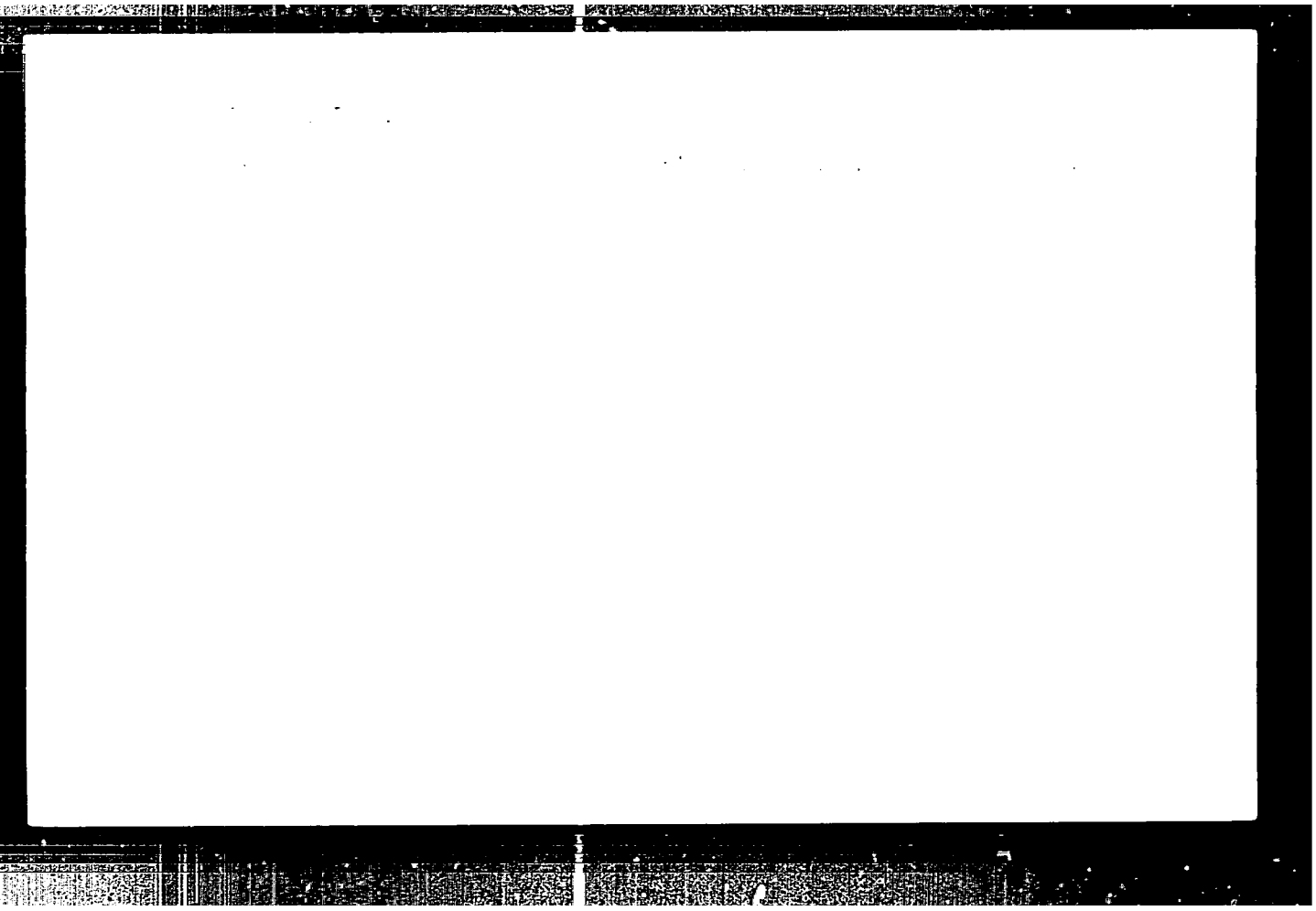
ACCESSION NR: AP4045105

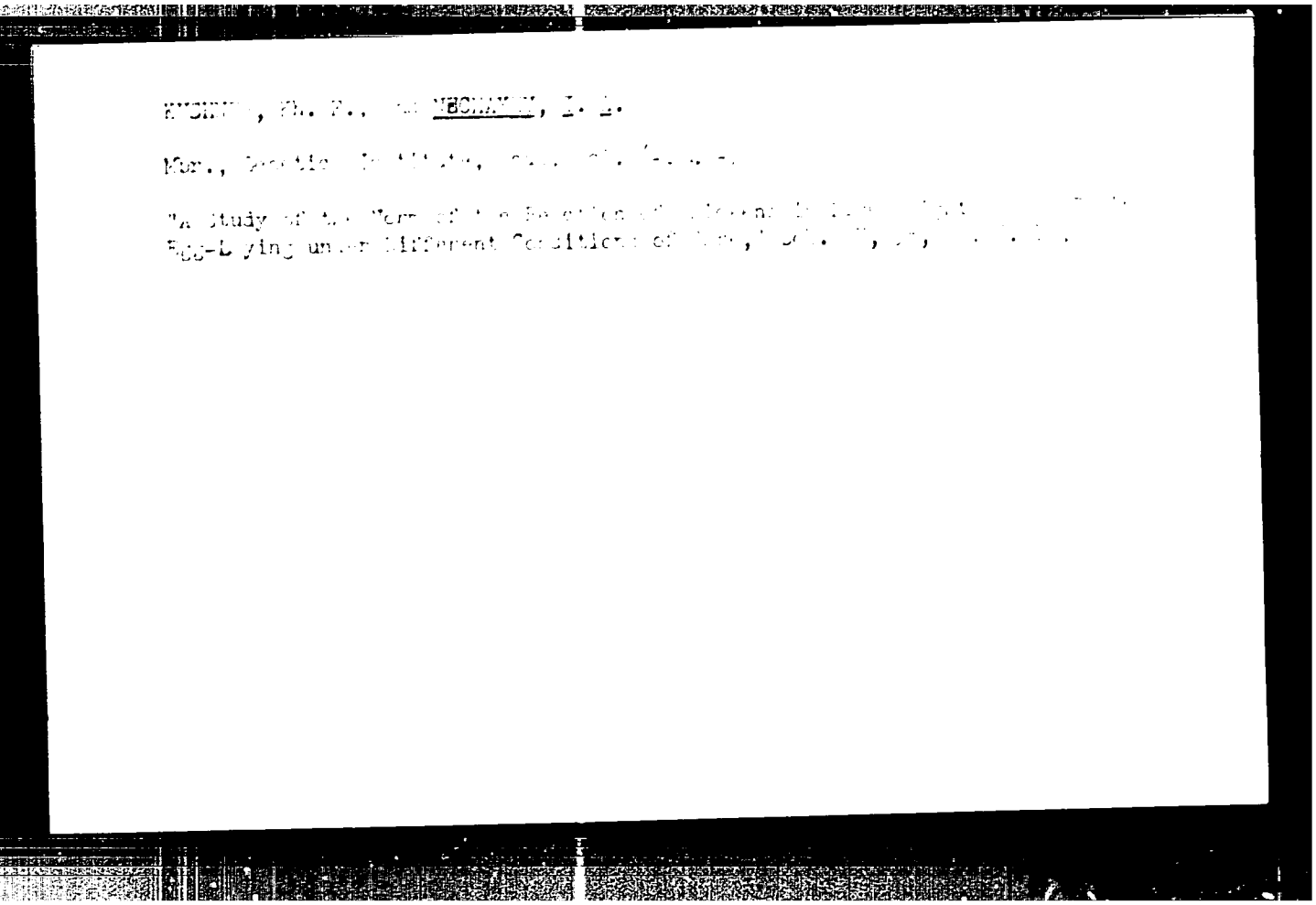
radiosensitivity was observed in the progeny. The probit lines differed only by their slope which was lower in the second group due to greater scattering. Essential radiosensitivity may be seen from Fig. 1 of the enclosure. An attempt was made to determine the causes of death. The animals of the first group had a more sensitive gastro-intestinal tract and a high death quota from gastroenteritis in the following age order: 45, 30 and 600 days (600 r). Radiation sickness in newborn mice (600 r) caused paresis and paralysis of the limbs, in 15 day-old loss of hair which grew back after 8-12 days. "The author wishes to thank N. I. Nuzhdin, member-correspondent of the AN SSSR, for his guidance and help with these studies". Orig. art. has: 3 figures and 2 tables

ASSOCIATION: Institut genetiki Akademii nauk SSSR (Institute of Genetics, Academy of Sciences, SSSR)
SUBMITTED: 01Feb64 ENCL: 01 SUB CODE: LS, CB

NR REF SOV: 009 OTHER: 008

Card 2/3





NECHAYEV, I.A.

KUZHDIN, N.I.; KOPYLOVA, Ye.N.; NECHAYEV, I.A.

Cytological picture of the change in chromosomes in the case of propagation of closely related organisms. Trudy Inst.gen. no.20:127-149 '53. (MLRA 7:1)

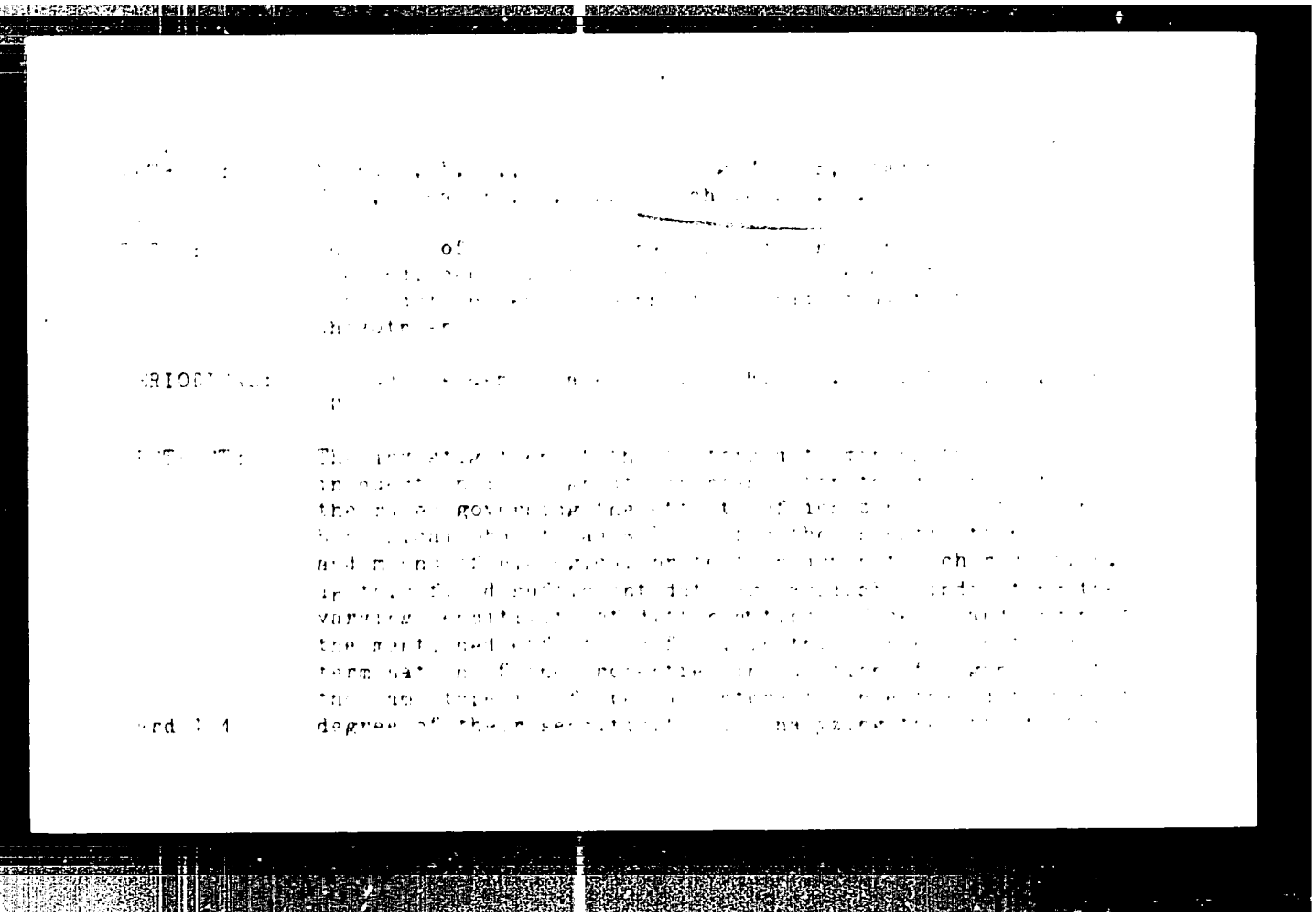
(Fruit flies) (Inbreeding)

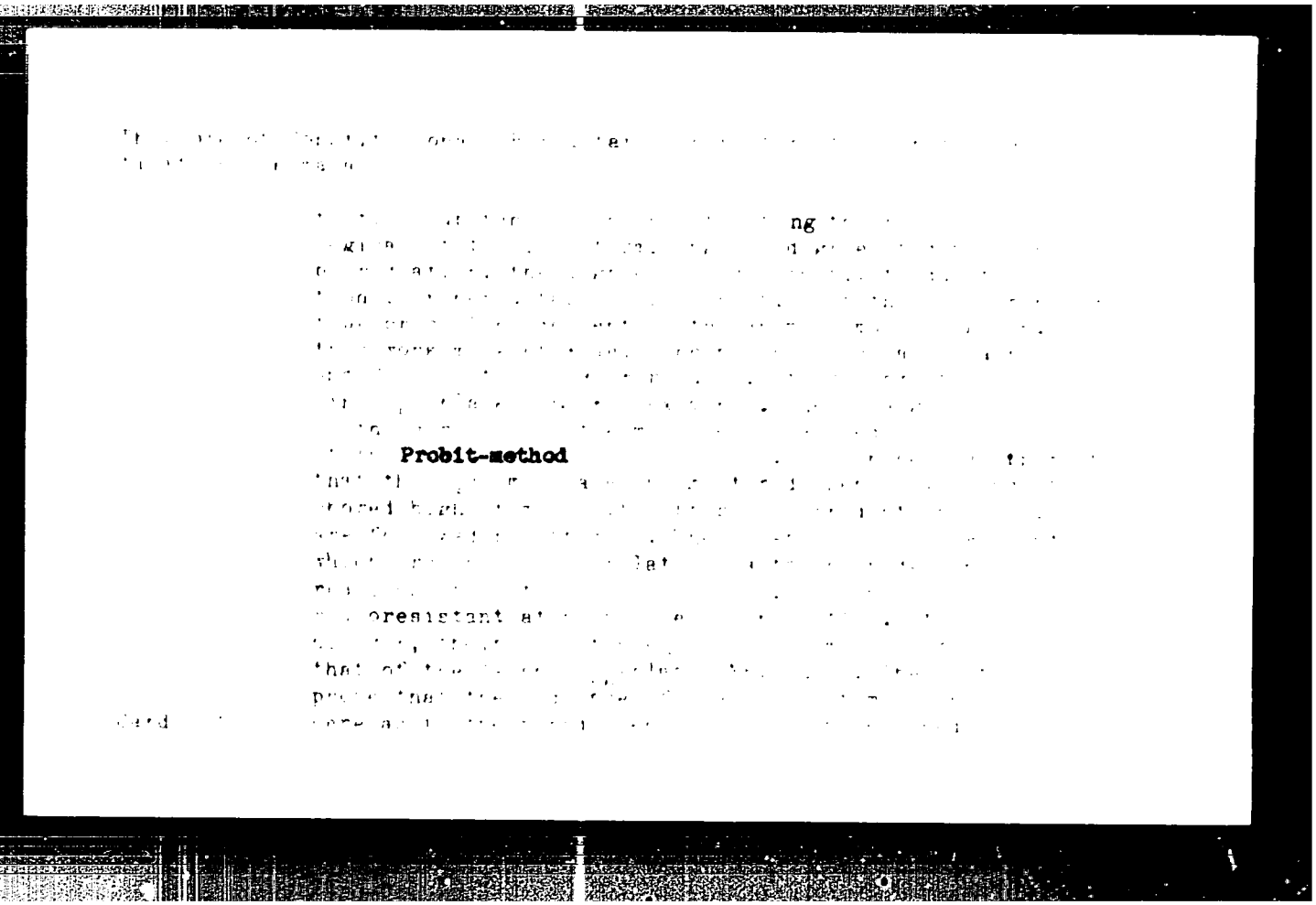
NEC HHVE I , I M

NUZHDIN, N.I.; DOZORTSEVA, R.L.; NECHAYEV, I.A.

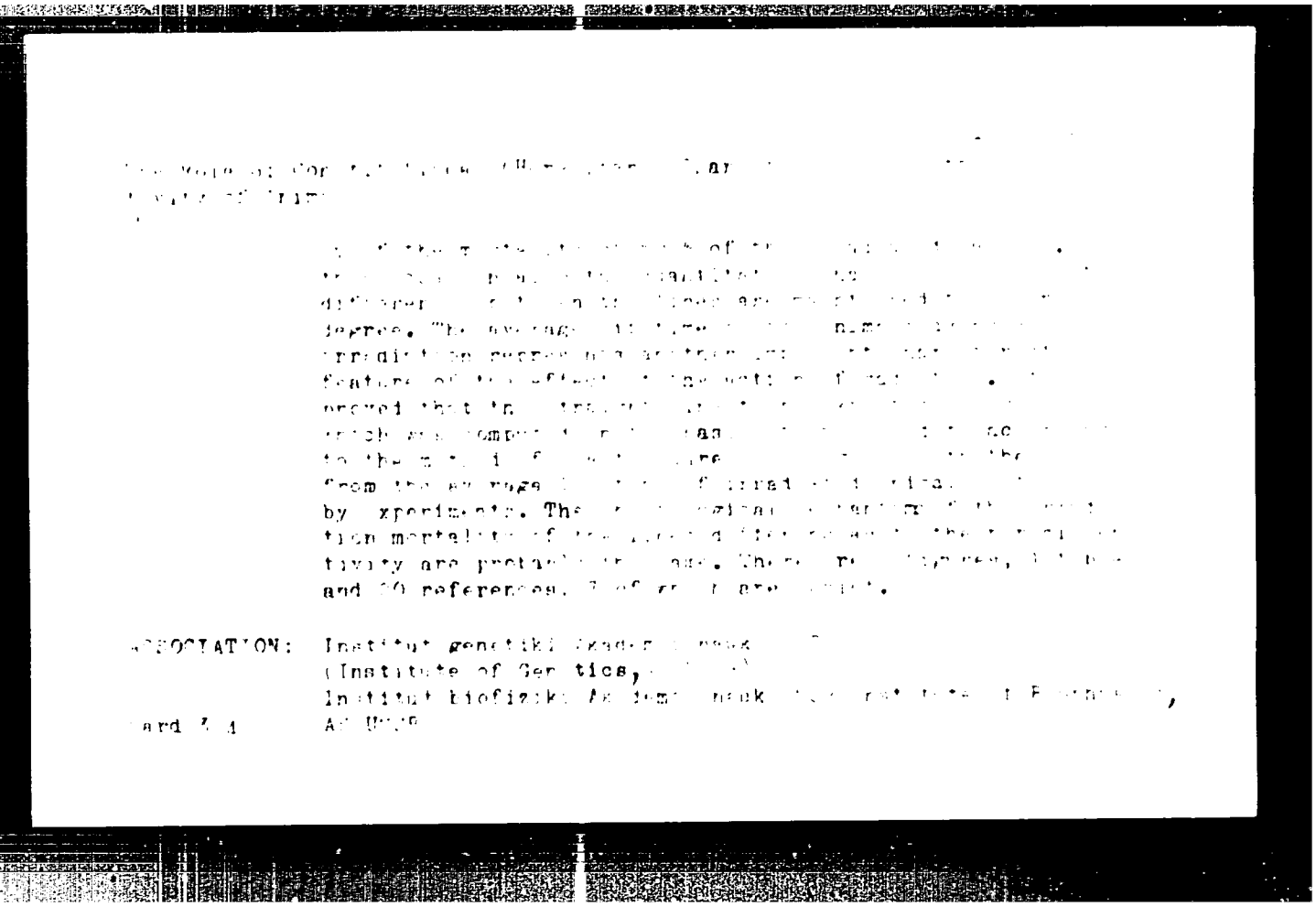
Changes in the chromosomes in the Crepis genus due to interspecific crossing and grafting. Izv.AN SSSR.Ser.biol. no.3:71-96 My-Je '55. (MLRA 8:7)

1. Institut genetiki Akademii nauk SSSR.
(CHROMOSOMES)
(CHICORY)





Probit-method



ASSOCIATION: Institut genetiki [illegible]
(Institute of Genetics,
Institut biofiziki [illegible]

Card 2/4

The Role of Constitutional [illegible] in the [illegible] of Animals

[illegible]: March [illegible], 1968

1. Animals--Genetic factors 2. Animals--Physiological factors
3. Animals--Effects of radiation 4. Radiation injuries--Counter-measures

and A[illegible]

NUZHDIN, N.I.; NECHAYEV, I.A.

Inherited interlinear differences in the radiosensitivity of mice. (MIRA 14:11)
Trudy Inst. gen. no.28:381-401 '61.
(X RAYS—PHYSIOLOGICAL EFFECT)

NECHAYEV, I.A.; PETROVA, O.N.; CHUDINOVSKAYA, G.A.

Survival rate of golden hamsters following whole-body X irradiation and its change due to the effect of β-mercaptoethylamine. Trudy Inst. gen. no.28:410-420 '61. (MIRA 14:11)
(RADIATION PROTECTION) (MERCAPTO COMPOUNDS)
(X RAYS--PHYSIOLOGICAL EFFECT)

NEUHAVEL, I H

(e)

Some Physiological and Biochemical Peculiarities of Mice with Differing Inborn Radiosensitivity

B. M. Gravevskaya, N. I. Nurbiia, I. A. Nechayev and R. Ya. Schedrina

Investigations on the radiosensitivity of different strains of animals do not, as a rule, involve the analysis of physiological, metabolic or anatomic peculiarities defining the given strains. In contrast, studies of physiological and biochemical differences between strains are generally carried out without relation to radiosensitivity.

A comparison was made of the body weight and weight of liver, spleen, suprarenal glands, thymus and testicles, and of the level of adrenal and carbohydrate metabolism, between three strains in a normal state (BALB/c, C_3H and CC_{57}-Br) and one population (albino) of mice characterized by differing radiosensitivity as defined by the LD 50/30 dose.

It has been shown that radioresistant strains of mice (CC_{57}-Br and albino population), as compared with radiosensitive ones (BALB/c and C_3H) have greater weights of liver, spleen and thymus, a higher content of catecholamines in the suprarenal glands, and a reduced glycogen level in the liver tissue. The latter phenomenon appears to be of a secondary order and depends to a considerable extent on the intensity of the catecholamine metabolism in the suprarenal glands.

Institute of Genetics, USSR Academy of Sciences, Moscow

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