

42681

S/747/62/000/000/002/025  
D268/D307

AUTHORS: Muzhain, N. I., Shapiro N. I. and Nechayev, I. A.

TITLE: Comparative characteristics of radiosensitivity in different lines of mice in relation to genetics. The role of hereditary characteristics in animal radiosensitivity

SOURCE: Radiatsionnaya genetika; sbornik rabot. Otd. biol. nauk AN SSSR. Moscow, izd-vo AN SSSR, 1962, 24-38

TEXT: Radiosensitivity was studied in ca. 2 1/2 month-old male and female mice in 4 lines and 1 subline, irradiated with single x ray doses at 350, 425, 500, 575 and 650 r. Interlinear differences in radiosensitivity were observed. For males LD<sub>50/30</sub> fluctuated in the range 538 - 413 r and for females in the range of 559-465 r. A close similarity in irradiation reaction in intralinear males and females was indicated by the high positive correlation coefficient for LD<sub>50</sub> values for males and females of a single line determined in inter-linear mortality comparisons. The data showed that females were

Card 1/2

Comparative characteristics of ...

5/747/62/000/000/002/025  
0268/0307

Somewhat more resistant ...  $LD_{50/30}$  for males of line 3, NA was 12.8% above that for females, and 3 - 4% for the other lines. Average life duration ... at the dose increased. Interlinear differences in life duration were more pronounced at 350 and 425 r, evening out somewhat as ... lethal effects were approached. In contrast to males, females showed little interlinear differences in life duration. Comparison of life duration in males and females in 3 lines showed it to be somewhat higher in the former than in the latter at 350 and 425 r. It was good in females at 575 and 650 r. The physiological mechanisms of radiation death in animals of lines differing in radiosensitivity seemed to be uniform. There are 3 figures and 6 tables.

ASSOCIATION: Institut Genetiki AN SSSR (Institute of Genetics AS USSR) and Institut Biologicheskoy fiziki AN SSSR, Moskva (Institute of Biological Physics AS USSR, Moscow)

Card 2/2

11919

S/072/62/000/000/005/006  
B144/B186

21.11.62

AUTHORS: Nuzhdin, N. I., Nechayev, I. A.

TITLE: Effect of radiation blockers on survival and changes in the internal organs of x-ray irradiated mice of different radio-sensitivity (Diethyl stilbestrol effect)

SOURCE: Deystviye ioniziruyushchikh izlucheniye na organizm. Inst. genetiki AN SSSR. Ed. by N. I. Nuzhdin. Moscow, Izd-vo AN SSSR, 1962, 173 - 197

TEXT: Three inbred strains of mice, CC<sub>57</sub>-brown (I), C<sub>3</sub>H (II) and BALB/c (III), were subjected to a single whole-body irradiation of 600 r in order to study the effect of one prophylactic sc injection of 0.2 mg diethyl stilbestrol propionate (D) administered 10 days before irradiation. The LD<sub>50/30</sub> for these mice were 538, 490 and 442 r, respectively. Administration of D reduced the total mortality by 50 % in I and II and by 66.7 % in III, the first peak (up to 5 days) being significantly reduced and the second peak (10-12 days) disappearing almost completely. The weights of  
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Effect of radiation blockers on ...

S/872/62/000/000/005/006  
B144/B186

thymus, liver, spleen, suprarenal glands and testes were determined. 2, 4, 7, 14, 21, 30 and 60 days after irradiation. Groups II and III differed originally only in the weight of the testes, but group I had distinctly higher liver and spleen weights than the two others. In non-irradiated mice, D administration did not affect the total body weight. The radiation-induced weight variations of the thymus were similar in the 3 groups and not affected by D. The highest weight of liver with the least fluctuations was found in the most radioresistant strain I. The effect of D on this organ became evident 2 weeks after the irradiation. The weight curves of the spleen whose radiosensitivity is reflected in the second peak of the mortality curve (failure of the hematopoietic system) showed the highest absolute values and an earlier period of overcompensation in group I. D accelerated regeneration, inhibited overcompensation and equalized the otherwise differing spleen reactions of the 3 strains. The weight increases of the suprarenal glands produced by separate and combined irradiation and D administration were similar in the 3 groups. The difference in natural radiosensitivity was not reflected in the weight curves of the testes whose regeneration was not improved by D. The divergent radioresistance of the 3 strains is attributed to the different radioresistance of their spleen and liver, which is evident from the  
Card 2/3

Effect of radiation blockers on ...

S/872/62/000/000/005/006  
B144/B186

weight curves as well as the diethyl stilbestrol effect. There are  
10 figures and 20 tables.

Card 3/3

01911  
S/872/62/000/000/006/006  
B183/B144

AUTHOR: Mechayev, I. A.  
TITLE: Protective action of diethyl stilboestrol in golden hamsters irradiated with X-rays  
SOURCE: Deystviye ioniziruyushchikh izlucheny na organizm. Inst. genetiki AN SSSR. Ed. by N. I. Nuzhdin. Moscow, Izd-vo AN SSSR, 1962, 198-203

TEXT: To obtain further data on the protective effect of diethyl stilboestrol (D), male golden hamsters weighing 120-125 g were subjected to a single, whole-body X-ray treatment of 400 r or 600 r (50 r/min). 9-10 days before irradiation the test animals but not the controls were injected 1.2 mg D subcutaneously. Test and control animals were weighed every 4 days during the first month after irradiation, then on the 45th and 60th day, and afterwards every 30 days. The protective effect of D was found to be less than that of mercapto ethylamine (M), but the staphyloma-like eye damages which occurred in the surviving animals after M application could not be observed after D. The death rate for golden hamsters

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Protective action of diethyl ...

S/872/67/001/000/006/006  
B183/3144

differed from that for rats and mice. Three maxima were observed: the first (4th - 7th day after irradiation) corresponds to a lethal effect of the gastrointestinal syndrome which previous experiments had shown to occur only after radiation doses from 1000 r upwards. The second (8th - 12th day) is due to a damage of the hematopoietic system. This maximum may be reduced (at 600 r) or eliminated (at 400 r) by applying D, contrary to the third maximum (17th - 20th day), which is hardly changed. The time of surviving from the 60th day after irradiation onwards was not affected by D. On comparing the weights of the golden hamsters on the 20th day after irradiation the natural increase in weight of the surviving animals after irradiation with 400 r and 600 r was found to be somewhat less than without irradiation. A prophylactic treatment with D results in an additional delay of growth, but this decreases in the course of time and is no longer observed on the 270th day after irradiation. After that time the initial weight of non-irradiated animals was increased to 160%, that of animals irradiated with 400 r to about 135%, and that of animals irradiated with 600 r to ca. 120%. There are 2 figures and 1 table.

X

Card 2/2

S/020/62/143/004/027/027  
B144/B138

27.12.20

AUTHORS: Nushdin, N. I., Corresponding Member AS USSR, Nechayev, I. A., Grayevskaya, B. M., and Shchedrina, R. N.

TITLE: Some physiological and biochemical peculiarities of mice with different congenital radiosensitivity

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 143, no. 4, 1962, 997-1000

TEXT: The radiosensitivity of the following three strains was studied: CC<sub>57</sub>-brown and BALB/c from the breeding station in Stolbovaya, CH<sub>3</sub> with 2 sublines from Stolbovaya near Moscow (m) and Rappolovo near Leningrad (1); and of a mixed population (MP) of mice from the breeding station at Kryukovo. The body weight, the weights of liver, spleen, suprarenal glands, thyroid, and testes, the catecholamine (CA) content in the suprarenal glands and the glycogen content in the liver were determined after whole-body irradiation with 350 - 650 r. The LD<sub>50/30</sub> was much higher for MP and CC<sub>57</sub> than for CH<sub>3</sub> and BALB/c. This was consistent with

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S/020/62/143/004/027/027  
B144/B138

Some physiological and...

the significant weight increase of liver and spleen found in the former two groups, whose thyroids were equally heavier; whereas no relation could be established between the weight of suprarenal glands or testes and radiosensitivity. Histochemical and quantitative studies revealed that MP had the lowest CA content. CH<sub>3</sub> sublines m and l had different CA levels. Radiosensitivity changed in the same order. Although this parallelism is no proof of a direct interrelation between CA metabolism and radiosensitivity, it may be assumed that adrenalin is an important mediator between radiation perception and reaction. The glycogen level in the liver showed the reverse order and is probably dependent on the CA level in the suprarenal glands. There are 2 figures and 1 table.

SUBMITTED: January 5, 1962

X

Card 2/2

MECHAYEV, I.A.

Age and sex of subject: ... (AN USSR  
158 no. 1:14-17 ... 164 ... (1954 ... 17:8)

1. Institut ...  
T.D. Lyuzko.

L 8203-66 EWT(m)

ACC NR: AT5024250

SOURCE CODE: UR/2670/65/000/032/0177/0191

AUTHOR: Nechayev, I. A.

ORG: Institute of Genetics, Academy of Sciences SSSR (Institut genetiki, Akademiya nauk SSSR)

TITLE: Age and radiosensitivity in various strains of mice

SOURCE: AN SSSR. Institut genetiki. Trudy, no. 32, 1965. Deystviye ioniziruyushchikh izlucheniya na rastitel'nyy i zhivotnyy organizmy (Effect of ionizing radiation on plant and animal organisms), 177-191

TOPIC TAGS: radiation biologic effect, x ray irradiation, mouse, digestive system

ABSTRACT: Experiments were conducted to examine the relationship between the age of animals and their radiosensitivity. Mice of three strains with different natural radiosensitivity were subjected to single x-ray irradiation in doses of 300, 400, 500, and 600 rad with dose power of 47.2 rad/min. Animals were irradiated when newborn, and when 15, 30, 45, and 60 days old. Experimental results showed that the radiosensitivity of mice increases until they are 30 days old, after which the LD<sub>50</sub> index drops. Differences in radiosensitivity in the strain led to differences in the radiosensitive level of mice of the

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L 8203-66

ACC NR: AT5024250

same age group. Thus, the LD<sub>50</sub> of radioresistant strains CC<sub>57</sub>Br and C<sub>57</sub>Bl in all the age groups studied was higher than the LD<sub>50</sub> of the radiosensitive strain BALB/c (see Fig. 1).

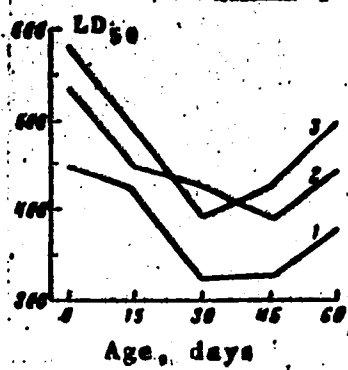


Fig. 1. Radiosensitivity of mice of the BALB/c, CC<sub>57</sub>Br, and C<sub>57</sub>Bl strains at various ages.

Dispersion analysis showed that both the strain of the animal and its age are significant factors in its radiosensitivity, although it has been established that they operate independently. It was determined that age effects can be related to species characteristics, and genotype effects to characteristics made complex as a result of the selec-

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L 8203-66

ACC NR: AT502425G

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tion and stabilization of strains. During irradiation with small doses (300 and 400 rad) both of these factors are significant. However, with a dose of 500 rad, only the genotype factor is significant, while during irradiation with 600 rad both age and genotype factors are eliminated. Death of animals from radiation sickness can be associated with different syndromes, depending on genotype, age, and dose. Experimental results showed that in 30- and 60-day old mice, the gastrointestinal system is significantly more sensitive than in newborn and 15-day old mice. BALB/c mice irradiated with 600 rad had an 80-90% mortality from injury to the gastrointestinal system. The CC57Br and C57Bl strains were much more resistant to "gastrointestinal death." It was shown that the lethal effect of irradiation of newborn mice is not limited to the period of radiation sickness (30 days). For 90 days after irradiation with the doses used, the only dose which did not have any serious aftereffects was 300 rad. Doses of 400, 500, and 600 rad eliminated a significant number of the specimens which had survived radiation sickness. Higher doses caused a greater radiation effect. C57Bl mice were much more resistant in this test than BALB/c and CC57Br mice. The injurious radiation effect on newborn mice (with a dose of 300 rad) is a definite lag in the growth rate during the period of radiation sickness. This loss is not completely compensated by sub-

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L 8203-66

ACC NR: AT5024250

sequent acceleration of the growth rate. A dose of 400 rad retards growth even more, apparently because of deeper destructive changes. The growth retardation effect is more strongly expressed for radio-sensitive BALB/c mice than for radioresistant CC57Br mice. Orig. art. has: 7 figures and 5 tables. [JS]

SUBMCODE: LS/ SUBM DATE: none/ ORIG REF: 018/ OTH REF: 027

Card <sup>nw</sup> 4/4

L B206-66 ENT(m)

ACC NR: AT5024253

SOURCE CODE: UR/2670/65/000/032/0206/0222

AUTHOR: Mushdin, N. I. (Corresponding member AN SSSR); Nechayev, I. A.ORG: Institute of Genetics, Academy of Sciences SSSR (Institut genetiki, Akademiya nauk SSSR)TITLE: The effect of <sup>19</sup>protective substances on survival and changes in internal organs of mice of various radiosensitivities after x-ray irradiations: Effect of carbon monoxide

SOURCE: AN SSSR. Institut genetiki. Trudy, no. 32, 1965. Deystviye ioniziruyushchikh izlucheniy na rastitel'nyy i zhivotnyy organizmy (Effect of ionizing radiation on plant and animal organisms), 206-222

TOPIC TAGS: radiation biologic effect, animal physiology, x ray . irradiation, mouse, liver, thymus gland, spleen, carbon monoxide, diethylestilbestrol

ABSTRACT: Differences between the effects of carbon monoxide on two different strains of mice irradiated with the same dose of x-rays were determined. Male mice of CC<sub>57</sub>Br (radioresistant) and C<sub>3</sub>H (radio-sensitive) strains were used. These strains are also characterized by differences in body weight and in the weight of certain organs—thymus, liver, spleen, and testes—which were used as indicators of the radia-

Card 1/3

UDC: 577.391

E. 8206-65

ACC NR: AT5024253

tion effect. Males 2.5 months old were irradiated with x-rays in a dose of 600 rad with dose power of 74-75 rad/min. Experimental animals were irradiated in an atmosphere of 0.5% carbon monoxide; controls were irradiated in a normal atmosphere. Results showed differences in the mortality rate when mice of these different strains were irradiated with CO as a protector. Irradiation with 600 rad caused death in only 39% of mice of the radioresistant strain (CC<sub>57</sub>Br) protected with CO, as compared with a 74% mortality in the controls. Sixty-nine percent of the radiosensitive mice (C<sub>3</sub>H) protected with CO died, as against 90% of the controls. It was noted that with the use of carbon monoxide as a radioprotector, unlike diethylstilbestrol, the characteristics of the strain influenced the results of irradiation. The coefficient of protection of the organism with this dose is 0.47 for CC<sub>57</sub>Br mice and 0.23 for C<sub>3</sub>H mice. With CC<sub>57</sub>Br mice, CO protected the gastrointestinal and hematopoietic systems equally; however, for the other strain the protective effect of CO was more evident on the gastrointestinal system. Both with and without the protection of carbon monoxide, CC<sub>57</sub>Br mice recovered lost body weight more rapidly after irradiation than C<sub>3</sub>H mice. Similar data were obtained in previous experiments with diethylstilbestrol. For C<sub>3</sub>H mice regeneration of the thymus gland took longer than for CC<sub>57</sub>Br mice. Carbon monoxide had no positive effect on thymus recovery. Once again these results agree with results of other experiments by the authors,

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L 8206-66

ACC NR: AT5024253

in which the lack of a specific protective effect on the thymus gland was noted when mice were irradiated with the use of diethylstilbestrol as a protector. Experimental results also showed that carbon monoxide reduces overcompensation of the weight of the liver after irradiation with 600 rad (by the 21st—30th day after irradiation). The reaction of the spleen to irradiation in a carbon monoxide atmosphere was identical for both strains of mice. In CC<sub>57</sub>B<sub>6</sub> mice protected with CO, a sharp increase in the weight of the adrenals was observed on the 7th day after irradiation. When diethylstilbestrol was used as the protector, this phenomenon was observed on the 2nd—4th day after irradiation. It was noted that with 600 rad of x-rays, CO does not affect the change in weight of the testes. This lack of protection was also observed during irradiation of mice with the use of diethylstilbestrol. Orig. art. has: 12 figures and 9 tables. [JS]

SUB CODE: LS/ SUBM DATE: none/ ORIG REF: 020/ OTH REF: 014

Cord 3/3 *ju*

NECHAYEV, I.D., inzh.

Organization of the construction of a mountain road. Avt.dor.  
25 no.12:18 D '62. (MIRA 16:2)

(Mountain roads)

NECHAYEV, I. I.

USSR/Miscellaneous - Tool storages

Card 1/1 Pub. 103 - 15/22

Authors : Yegorov, M. P., and Nechayev, I. I.

Title : Storage of tools

Periodical : Stan. 1 instr. 12, 29-30, Dec 54

Abstract : The design of various wooden and metal cabinets, for the storage of machine tools in the metallurgical industry, is reported. Illustrations.

Institution : .....

Submitted : .....

MEMORANDUM FOR THE DIRECTOR, CIA

Subject: [Illegible]

NECHAYEV, I. N.

0000

19-172  
 356,529.5:551,578.60  
 by Mikhail V. Zhelezov of "O metodike subladeniya temperatury poverkhnosti snega." *Trudy*  
 Leningrad, on an experimental plot of the Division of Methods of Observations, to determine  
 the cause of experimental error in measuring snow surface temperatures and to find a better  
 method of installing thermometers, as well as to determine the cause of errors. Several  
 thermometers were installed: 1) on the snow surface, 2) under the snow surface. Several  
 positive temperatures owing to incoming radiation (in daytime) and to "undermelting"  
 of snow leads to the thermometer recording only its own temperature. Graphs show magnitude  
 of error for the different installations during the course of a clear or a cloudy day, or night,  
 respectively. (For abstract of original see item J.A. 156, Aug. 1952, *U.S.A.R.*) Subject headings:  
 1. Snow surface temperature measurements 2. Snow temperature measurement accuracy  
 3. Observation techniques 4. Translations. I. Zhelezov, M. T. (Trans.)... I. N.

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~~NECHAYEV, I. N.~~  
NECHAYEV, I. N.

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12  
Nechaev, I. N. and Svarchevskij, V. N., Metallicheskie konstruksii dlia ustanovki priborov na meteorologicheskikh stantsiyakh. [Metal supports for instruments at meteorological stations.] *Leningrad, Glavnoe Gosfizicheskoe Observatornoye Upravleniye*, No. 1406, 77-83, 1952. 4 figs., 4 tables. DLC The superiority of metallic over wooden supports for instruments is discussed and various experimental metal structures developed by the construction section of the Principal Geophysical Observatory, are diagrammed and described. They include a metal fence to enclose the weather station compound, anemometer masts, bases for the psychrometer, self-recording instruments and rain gage, collapsible stairs for instrument shelters, bases for the rain gage and for actinometric instruments. The results of tests on the use of these metallic structures under different climatic conditions are discussed. *Subject Headings: 1. Meteorological instrument supports 2. Instrument shelters. - I.L.D.*

*Base*

12

33

*mji*

MECHAYEV, I.E., nauchnyy sotrudnik; LAZAREV, M.P., otvetstvennyy redaktor;  
SHEKHINSKAYA, I.V., redaktor; BRAYNINA, M.I., tekhnicheskiy  
redaktor

[Instructions for hydrometeorological stations and posts] Nastavlenie  
gidrometeorologicheskikh stantsiy i postey. Leningrad, Gidrometeor.  
izd-vo. No.10. [Inspection of hydrometeorological stations and  
posts] Inspektsiya gidrometeorologicheskikh stantsiy i postey. Pt.1.  
[Checking of meteorological observations at stations] Inspektsiya  
meteorologicheskikh nabludeni na stantsiyakh. 1957. 195 p.

(MIRA 10:7)

1. Russia (192)- U.S.S.R.) Glavnoye upravlenie gidrometeorolo-  
gicheskoy sluzhby. 2. Metodicheskiy otdel Glavnoy Geofizicheskoy  
observatorii (for Mechayev) 3. Nachal'nik otdela seti Severo-  
Zapadnogo upravleniya gidrometsluzhby (for Lazarev)  
(Meteorology--Observations)

DASHKEVICH, L.L.; SURAZHSKIY, D.Ya.; USOL'TSEV, V.A.; AZHEL', M.Ye.;  
BOZHEVIKOV, S.N.; VORZHENEVSKIY, N.S.; MANUYLOV, K.N.;  
GLAZOVA, Ye.F.; KARPUSHA, V.Ye.; FOTOPPOV, N.G.; SHADRINA,  
Ye.N.; IGRUNOV, V.D.; NECHAYEV, I.N.; BESPALOV, D.P.;  
ILLARIONOV, V.I.; GLEBOV, F.A.; GLAZOVA, Ye.F.; KAULIN, N.Ya.;  
GORYSHIN, V.I.; GAVRILOV, V.A.; TIMOFEYEV, M.P., retsenzent;  
YEFREMYCHEV, V.I., retsenzent; KRASOVSKIY, V.B., retsenzent;  
V'YUNNIK, A.P., retsenzent; STERNIZAT, M.S., otv. red.;  
RUSIN, N.P., otv. red.; YASNOGORODSKAYA, M.M., red.; VOLKOV,  
N.V., tekhn. red.

[Instructions to hydrometeorological stations and posts] Nastavle-  
nie gidrometeorologicheskim stantsiiam i postam. Leningrad,  
Gidrometeorizdat. No.3. Pt.3. [Meteorological instruments and  
observation methods used on a hydrometeorological network] Me-  
teorologicheskie pribory i metody nabludenii, primenyaemye na  
gidrometeorologicheskoi seti. 1962. 295 p. (MIRA 15:5)

(Continued on next card)



DASHKEVICH, L.L.— (continued) Card 2.

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye gidrometeorologicheskoy sluzhby. 2. Glavnaya geofizicheskaya observatoriya Nauchno-issledovatel'skogo instituta gidrometeorologicheskikh priborov i Gosudarstvennogo gidrologicheskogo instituta (for Dashkevich, Surazhskiy, Usol'tsev, Azbel', Bozhevnikov, Vorzhenevskiy, Manuylov, Glazova, Karpusha, Protopopov, Shadrina, Igrunov, Nechayev, Besspalov, Illarionov, Glebov, Glazova, Kaulin, Gorysnin, Gavrilov). 3. Komissiya Glavnogo upravleniya gidrometeorologicheskoy sluzhby pri Sovete Ministrov SSSR (for Nechayev, Usol'tsev, Timofeyev, Yefremychev, Krasovskiy, V'yunnik)  
(Meteorology)

NECHAYEV, I.N.

Improving the visual method of determining visual range. Trudy  
GOD no.129:134-145 '62. (MIRA 16:2)  
(Visibility)

DROZDOV, O.A.; ZURENOK, I.I.; NECHAYEV, I.N.

Errors in calculating atmospheric precipitation. Trudy GGO  
no.175:24-30 '65. (MIRA 18:8)

1. Glavnaya geofizicheskaya observatoriya im. A.I.Voyeykova,  
Leningrad.

NECHAYEV, I.N.

Precipitation losses due to wetting of the precipitation gauges  
and the methodology of correcting the precipitation totals. Trudy  
GGO no.175:76-86 '65. (MIRA 18:8)

1. Glavnaya geofizicheskaya observatoriya im. A.I.Voyeykova,  
Leningrad.

STRUZER, L.P., kand. fiz.-mat. nauk; NIKITIN, I.N.:

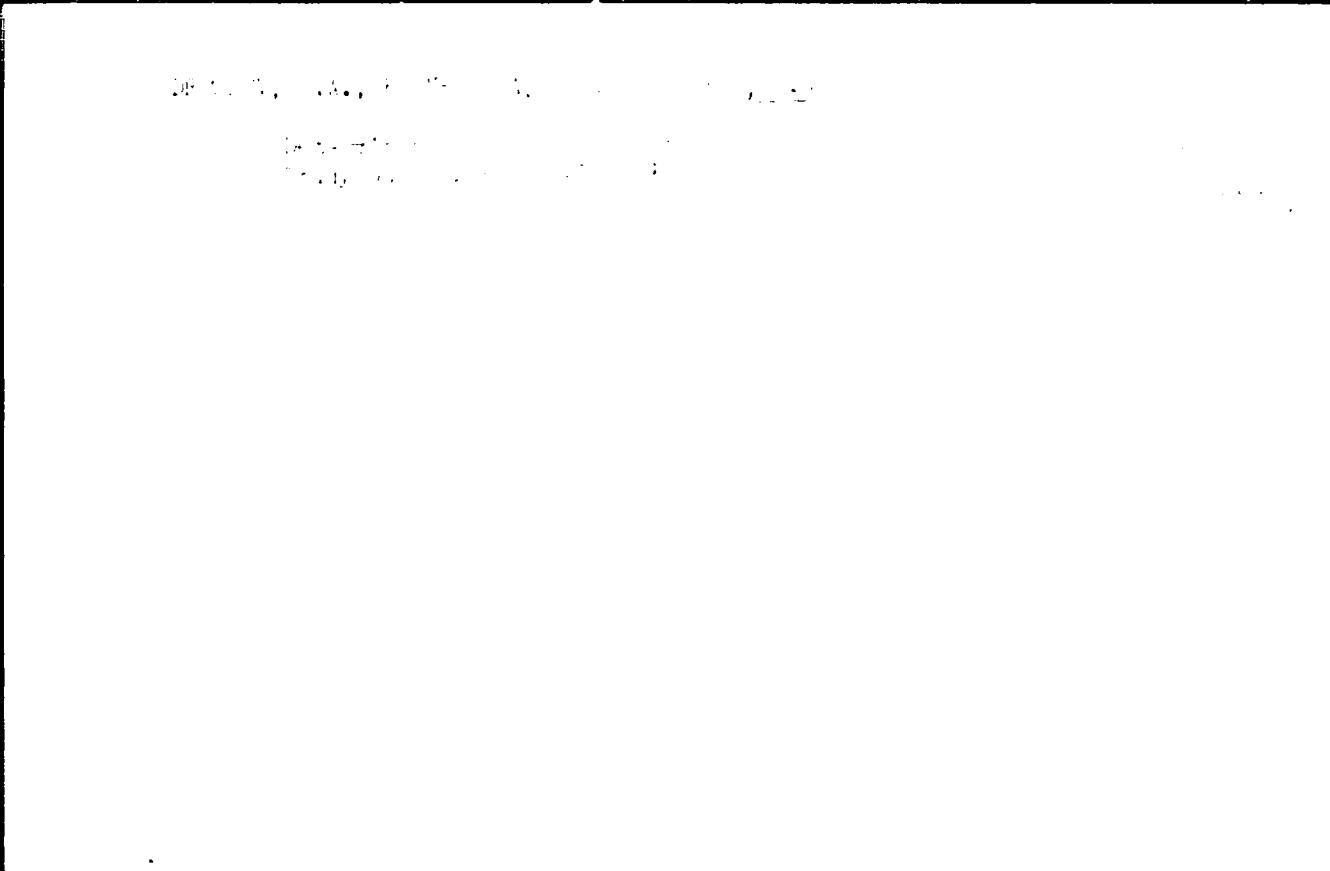
Systematic errors in the measurement of atmospheric pressure  
Meteor. i gidrol. no. 1: 4-6, 1965.

1. Glavnaya rezul'tatsivnaya tablititsa.

STRUZER, L.R., kand. fiz.-matem. nauk; NECHAYEV, I.N.; BOGDANOVA, E.G.;  
FEDOROVA, Ye.A.

Methodology of correcting the precipitation norms of a  
period of several years. Meteor. i gidrol. no.11:43-50  
N '65. (MIRA 12:11)

1. Glavnaya geofizicheskaya observatoriya.



L 14020-66 EWT(1)/FCC GH

ACC NR: AT6004189 (N)

SOURCE CODE: UR/2531/65/000/174/0050/0056

AUTHOR: Nezhayev, I. N.

ORG: none

TITLE: Comparison of methods for reducing atmospheric pressure to the sea level

SOURCE: Leningrad. Glavnyaya geofizicheskaya observatoriya. Trudy, no. 174, 1965. Metodika meteorologicheskikh nabludeniy i obrabotki (Methods of meteorological observation and processing observation data), 50-56

TOPIC TAGS: hydrometeorology, atmospheric pressure, pressure effect, pressure measurement

ABSTRACT: The author gives a comparative evaluation of the accuracy of methods for reducing atmospheric pressure to the sea level used by the Hydrometeorological Service SSSR and recommended by the World Meteorological Organization (WMO). It is shown that the above method leads to errors and that it is suitable only for meteorological stations located at an altitude not higher than 100 m above the sea level. The methods of A. P. Mal'tsev and V. K. Dombrovskiy, adapted by the Hydrometeorological Service, USSR, are suitable for altitudes from 150 to 500 m, and are convenient for calculation. Orig. art. has: 4 formulas and 2 tables. [Based on author's abstract].

SUB CODE: 04/ SUMM DATE: none/ ORIG REF: 003/ OTH REF: 001/

Card 1/1

34  
B+1

12,44,55



L 29139-66 EMT(1)/PCC CM

ACC NR: AP6018681

SOURCE CODE: UR/0050/65/000/010/0050/0050

AUTHORS: Strasser, I. E. (Candidate of physicomathematical sciences); Nezhgov, I. E. (Candidate of physicomathematical sciences); Bogdanova, E. G. (Candidate of physicomathematical sciences)

18  
B

ORG: Main Geophysical Observatory (Glavnaya geofizicheskaya observatoriya)

TITLE: Systematic errors in measurement of precipitation

SOURCE: Meteorologiya i gidrologiya, no. 10, 1965, 30-34

TOPIC TAGS: atmospheric precipitation, atmospheric evaporation

ABSTRACT: This is a brief description of the principal results of a quantitative determination of the principal systematic errors in measurement of precipitation. Emphasis is on the following sources of error: losses of collected precipitation due to wetting of the receiver, losses of collected precipitation due to evaporation from the receiver and losses of precipitation due to distortions of the wind field over the receiver. Quantitative relationships are derived between the systematic errors and the factors responsible for their occurrence. The computation system proposed here makes it possible to determine the errors for any point in an area and for different time intervals such as a month or year. Orig. art. has: 4 figures and 1 table. [APR]

SUB CODE: 04 / SUBM DATE: none / ORIG REF: 007

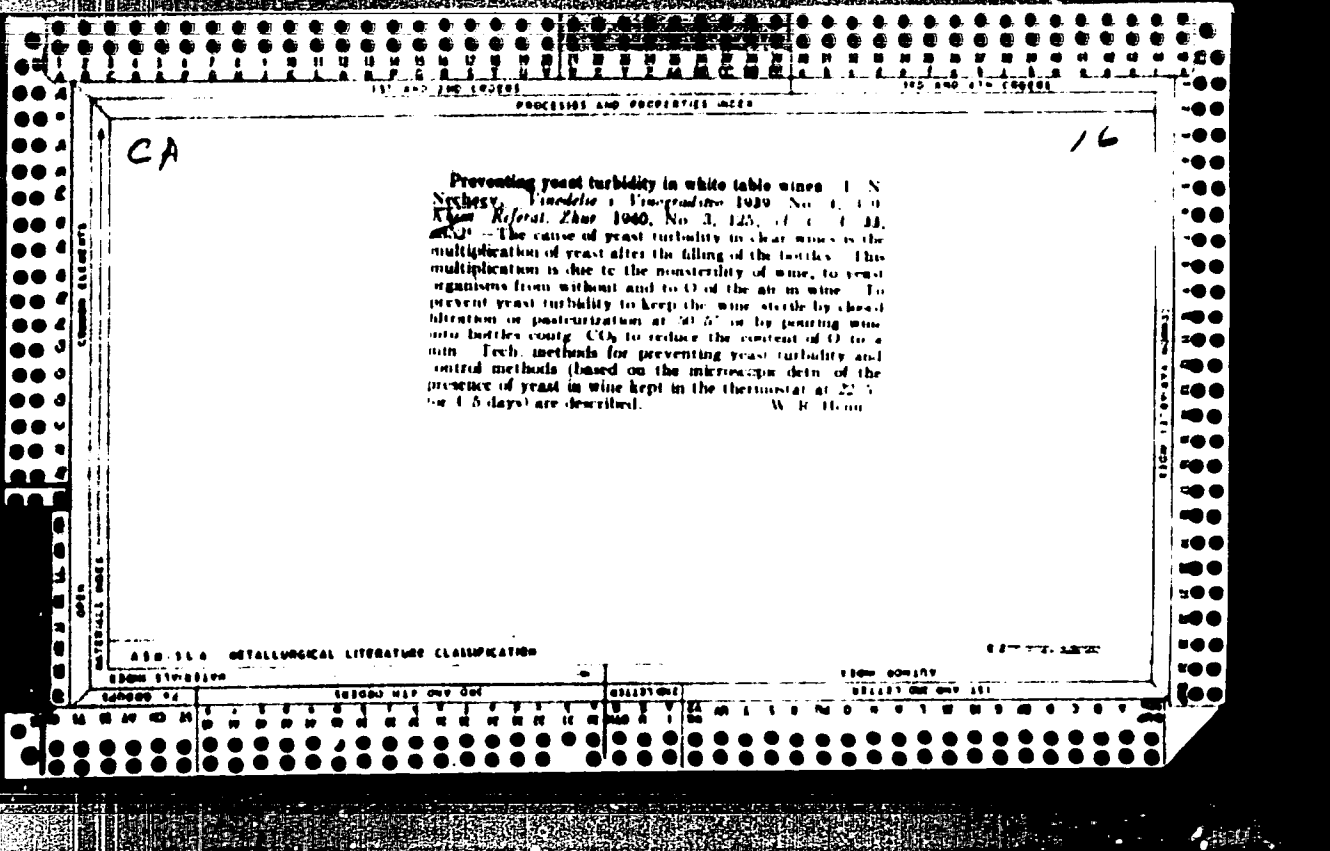
Card 1/1 UDC: 551.502.777

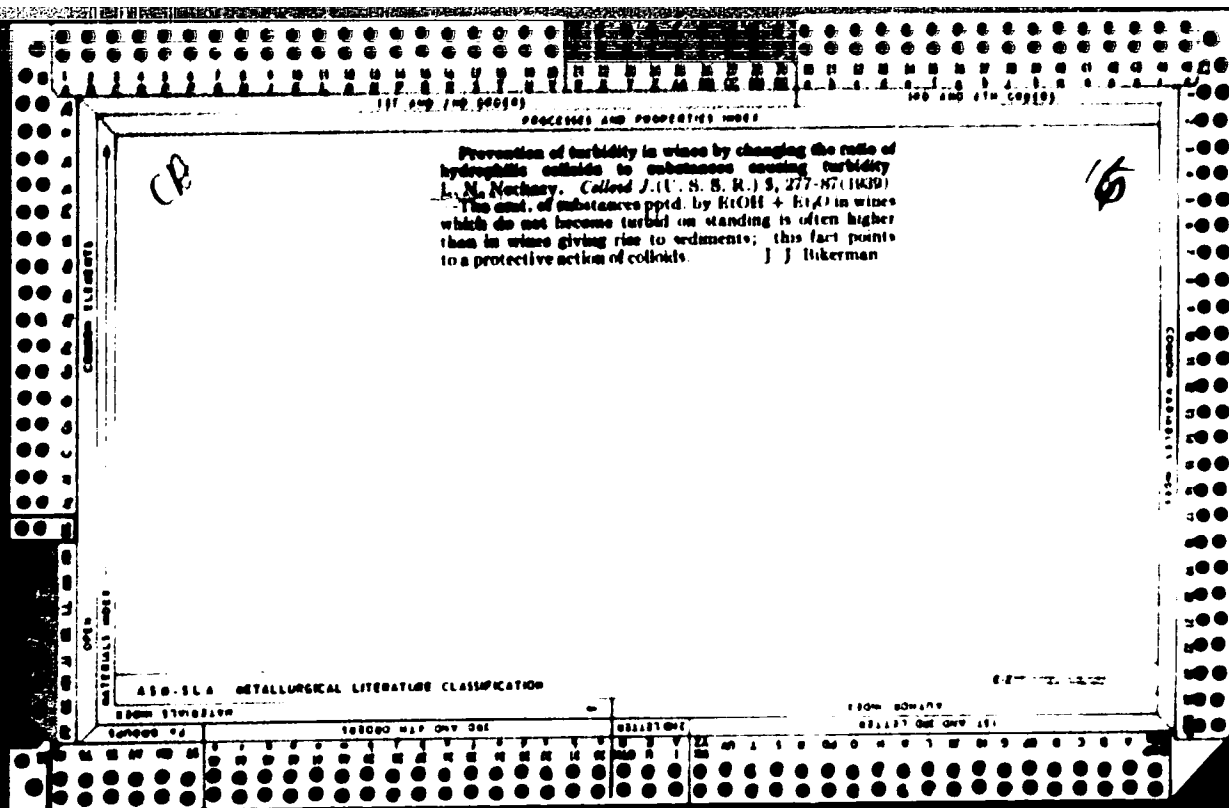
MECHAYEV, I. P., inzh.

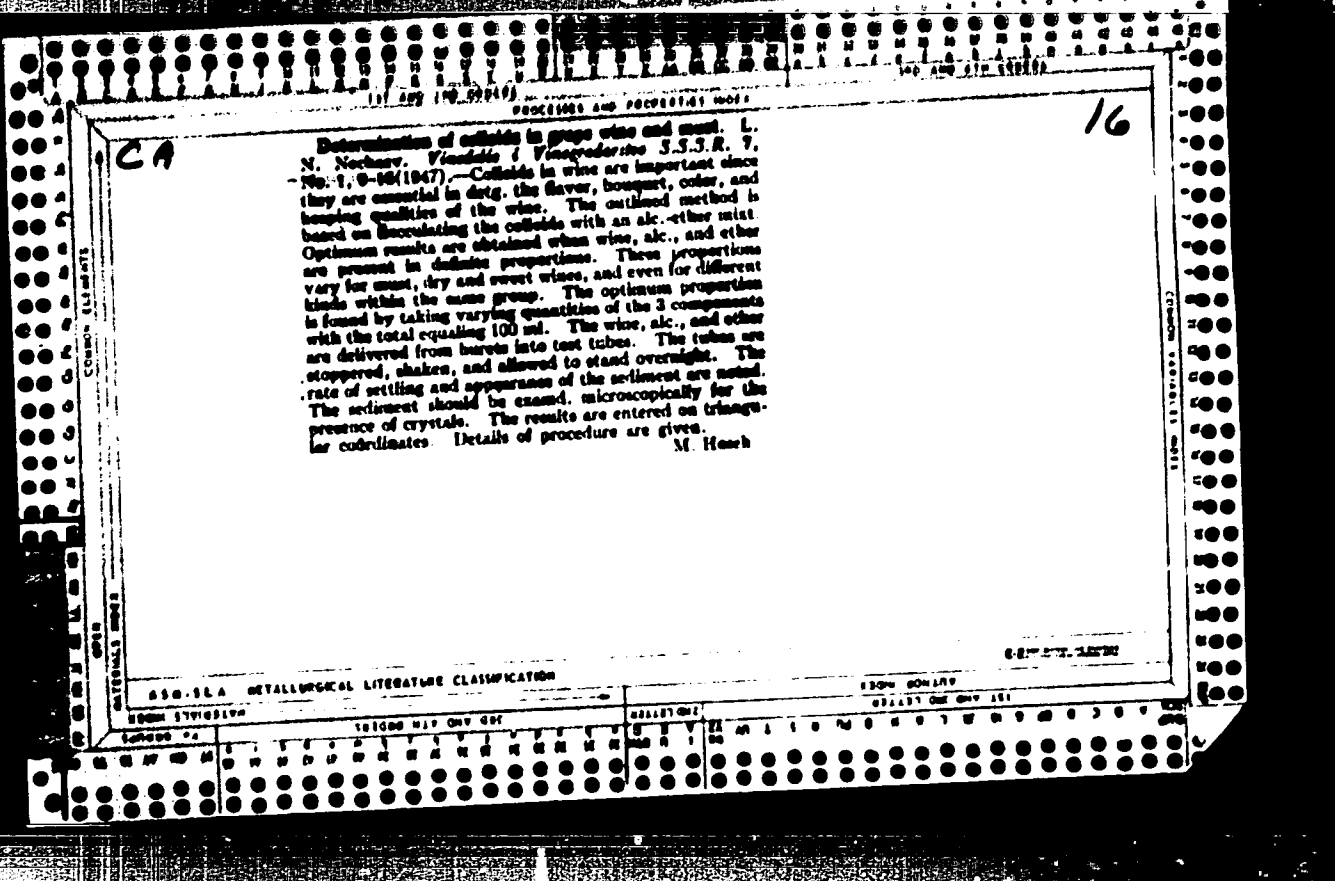
Developed by Kharkov efficiency promoters. Mekh. sil'. hosp.  
11 no.7:17-18 J1 '60. (MIRA 13:10)  
(Kharkov Province--Farm equipment)

NECHAYEV, K.A.; NOVOSLAVSKAYA, O.Ya.; FROLOV, K.M.; KHANINSON,  
Ya.G.; VOLKOVA, K.V., red.; VOROTILINA, L.I., tekhn. red.

[Novosibirsk; notable places and sights] Novosibirsk; pe-  
miatnye mesta i dostoprimechatei'nosti. Novosibirsk, Novo-  
sibirskoe knizhnoe izd-vo. 1961. 174 p. (MIRA 15:8)  
(Novosibirsk---Guidebooks)







POTAPENKO, Ya.I.; LUK'YANOV, A.D.; LAZAREVSKIY, M.A.; DYUZHEV, P.K.;  
ZAKHAROVA, Ye.I.; KOVALEV, A.A.; RUZAYEV, K.S.; MECHAYEV, L.E.;  
BASAN'KO, A.A.; MASHINSKAYA, L.P.; ALIYEV, A.M.; MANOKHIN, P.A.;  
LITVINOV, P.I.; KOROTKOVA, P.I.; ZAYTSEVA, Yu.F.; GRAMOTENKO, P.M.;  
TAIROVA, V.N., red.; PROKOP'YEVA, L.N., tekhn.red.

[Viticulture] Vinogradarstvo. Moskva, Gos.izd-vo sel'khoz.lit-ry,  
1960. 612 p. (MIRA 14:1)

(Viticulture)

NECHAYEV, L.V.

Role of oxygen in biochemical processes taking place in grapes and  
grape juice. Biokhim. vin. no.6:235-252 '60. (MIRA 13:10)

1. Nauchno-issledovatel'skiy institut vinogradarstva i vinodeliya  
RSFSR.

(Oxygen) (Grapes--Storage) (Grape juice--Preservation)



NECHAYEV, L.N.

Role of the intensity of sugar accumulation and of the amino acids composition of grapes in the formation of the organoleptic qualities of wine and juices. Biokhim. vin. no.7:25-42 '63. (MIRA 1964)

1. Nauchno-issledovatel'skiy institut vinogradarstva i vinodeliya Ministerstva sel'skogo khozyaystva RSFSR.  
(Wine and wine making) (Plants—Chemical analysis)

MARTYNOV, O.V.; USTYUZHANIN, V.N.; NECHAYEV, L.S.; GORLOV, S.M.

Smelting and continuous pouring of steel 20 in ingots with a  
cross section of 280x320 mm. Metallurg 8 no.12:13-15 D '63.  
(MIRA 17:4)

1. Novotul'skiy metallurgicheskiy zavod.

NECHAYEV, L.V.

Operation of the fluid cooling system of an engine under unrated conditions. Avt. prom. 30 no.5:12-15 My '64.

(MIRA 17:9)

1. Altayskiy politekhnicheskiy institut.

NECHAYEV, L.V., starshiy prepodavatel'

Heating characteristics of vehicle engines with a fuel heating  
system. Izv. vys. ucheb. zav.; mashinost. no. 2: 1964, no. 1, p. 11.  
1964

NECHAYEV, M., inzhener.

Spoilage of fats through oxidation. *Mias.ind,SSSR* 27 no.3:46-49  
'56. (MIRA 9:9)

1. Moskovskiy tekhnologicheskiy institut myasnoy i mlechnoy  
promyshlennosti.  
(Oils and fats) (Oxidation)

NOZHAYEV, M., ins'ener.

Change in animal fat during the processing period      Issledovaniya  
23 no.4 26-28 '57.      (K.A. 10 7)

1. Moskovskiy tekhnologicheskii institut myasnoy i molochnoy  
promyshlennosti.

(... and fats--Analysis)

**MECHAYEV, M.A., inzhener**

Chemical method of controlling carbon formation in locomotive boilers.  
Tekh.shef.dor.7 no.7:26-27 J1'48. (MLRA 8:11)  
(Locomotive boilers)

NECHAYEV, M.A.

Steam Boilers

Remark on the article "Chemical cleaning of the outer surfaces of steam boilers."  
Rab. energ. 2 no. 4, 1952.

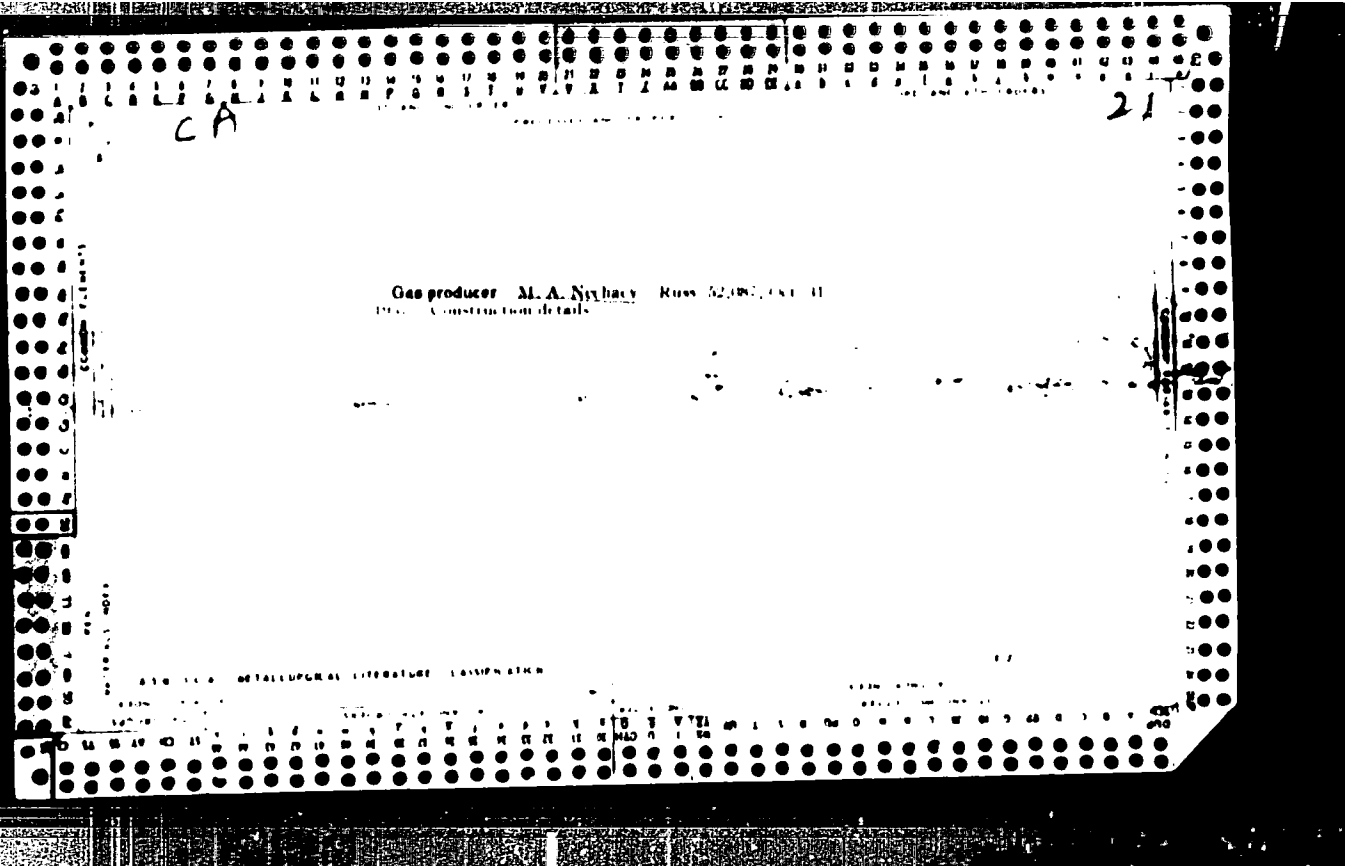
9. Monthly List of Russian Accessions, Library of Congress, July 195<sup>2</sup>, Uncl.

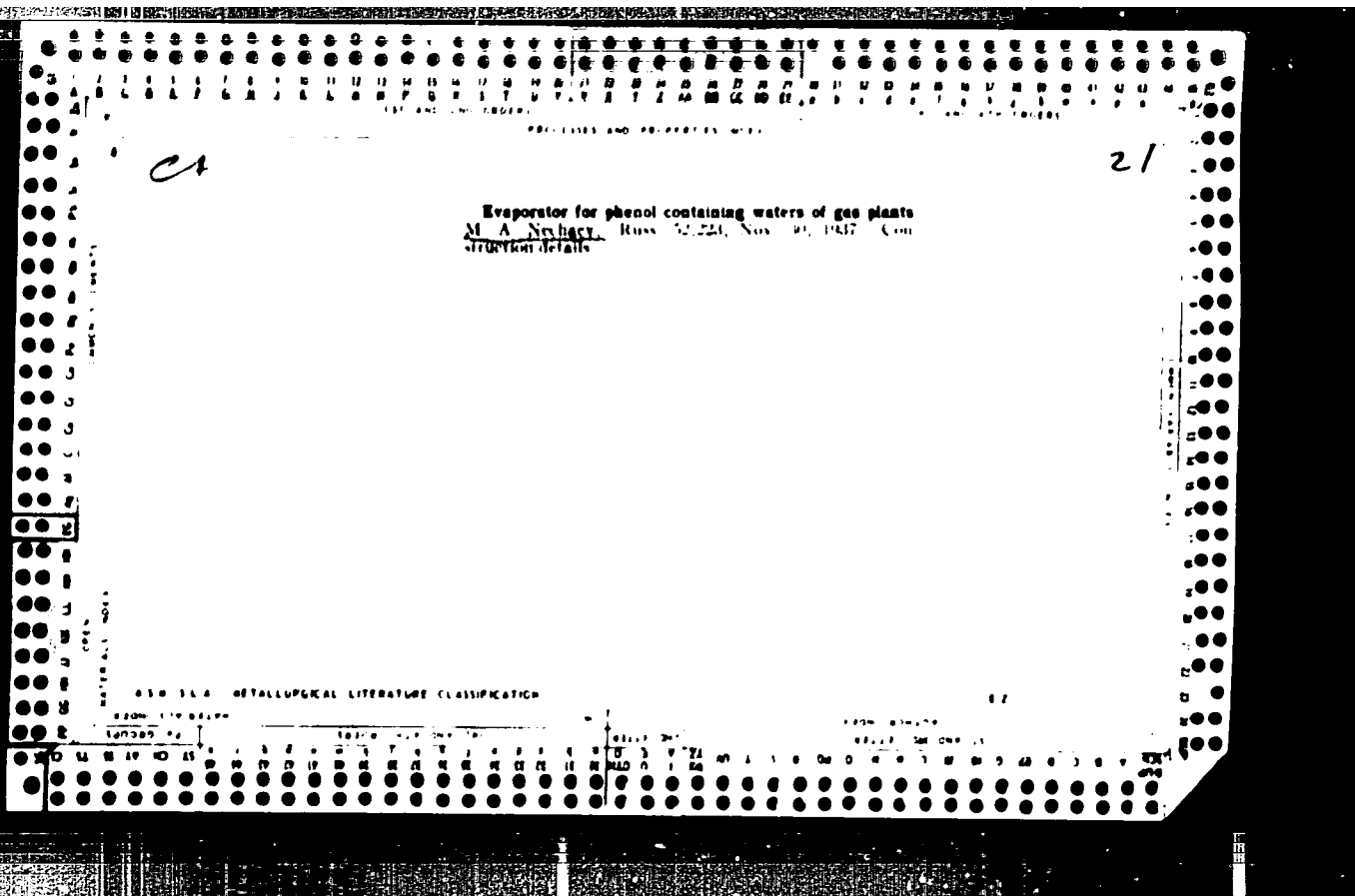


SECRET, U.S.

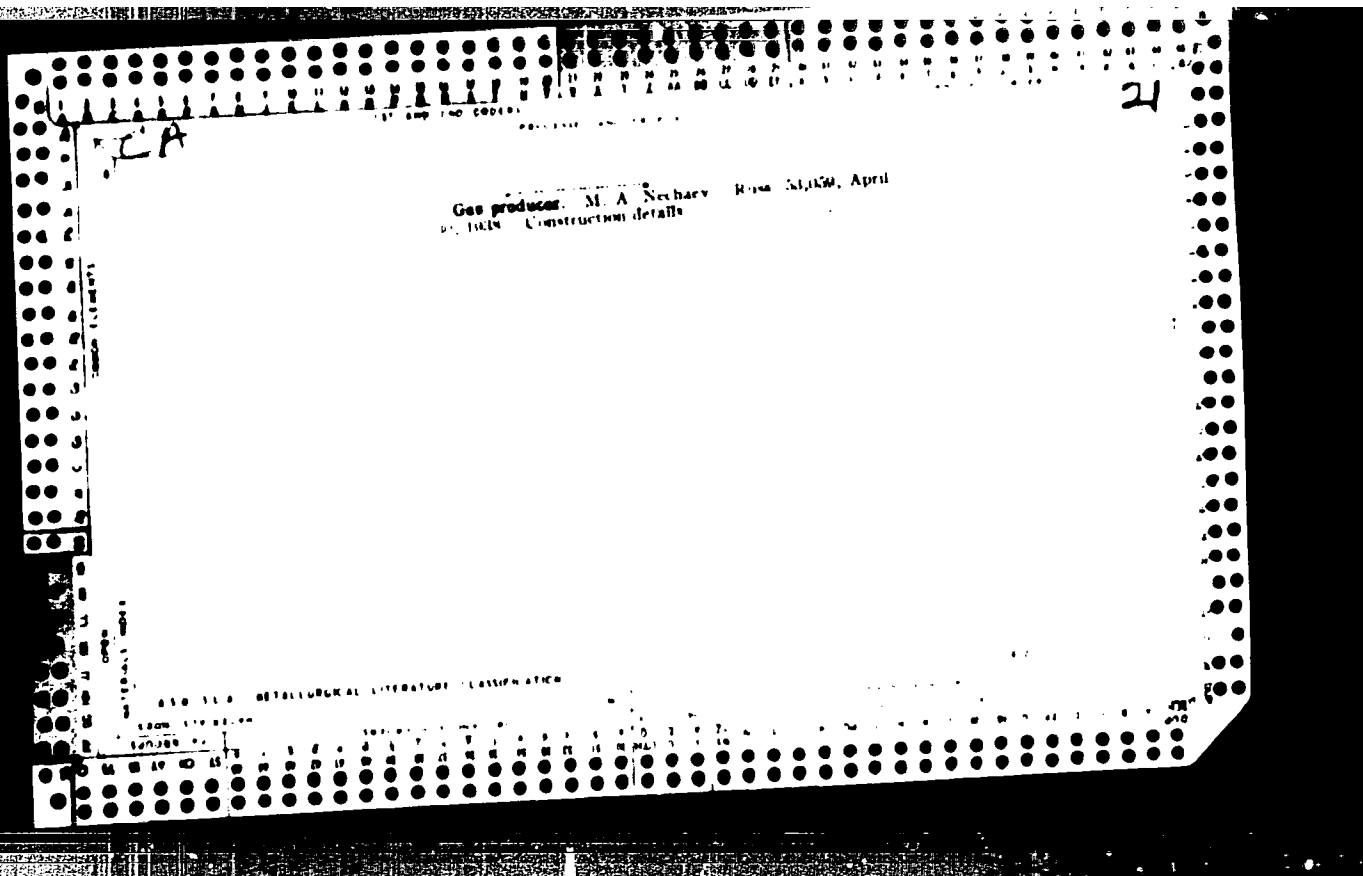
SECRET, U.S. "The... ..  
Material: ... ..

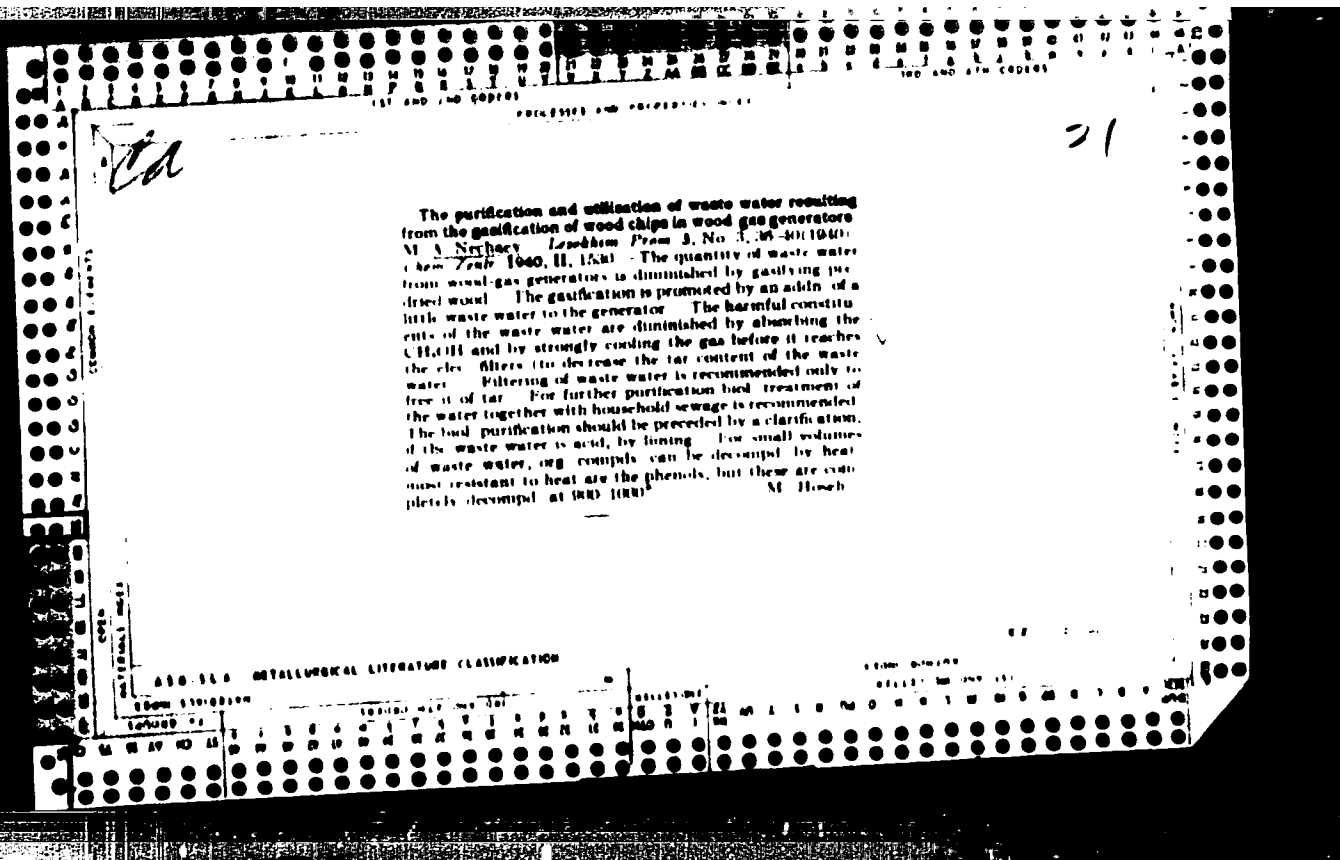
... ..

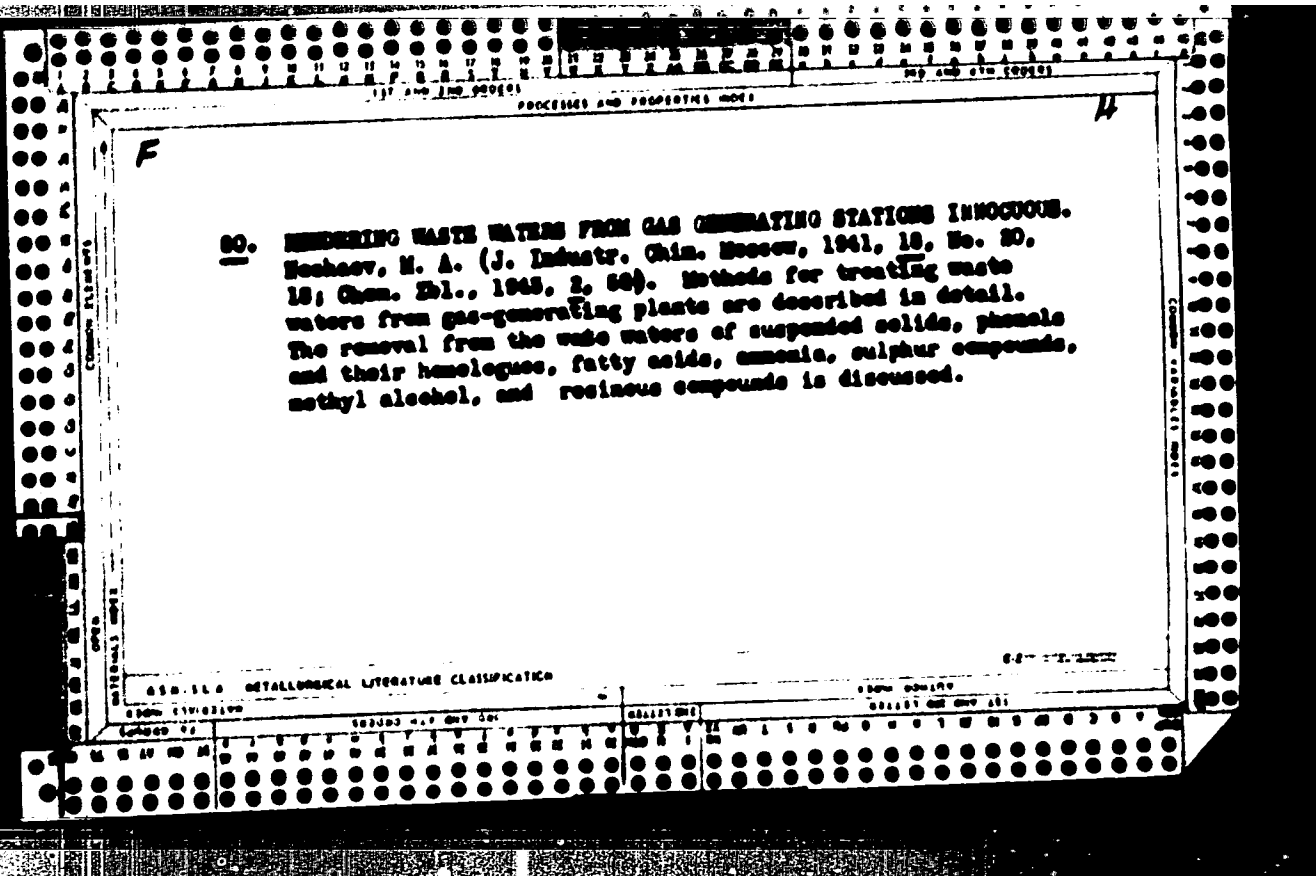












1. NECHAYEV, M., Eng.
2. USSR (600)
4. Gas - Heating and Cooking
7. Guarantee of safe and rational use of household gas. Zhil. -khom. khoz. 2 no. 9, 1952

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



NECHAYEV, M. A.

[City gas supply] Gasosnabzhenie gorodskogo khoziaistva. Moskva.  
Izd-vo Ministerstva kommunal'nogo khoziaistva RSFSR, 1953. 186 p.  
(MLRA 7:6)

(Gas manufacture and works)

MECHAYEV, M.A., redaktor; KOLBENKOV, S.P., redaktor; LIBER, I.S., redaktor.

[Problems of municipal gas supply; lectures at conference-courses on municipal gas supply] Voprosy gasosnabzheniia gorodov; trudy Konferentsii-kursov po gasosnabzheniiu gorodov. [Redaktirovanie osushchestvili M.A.Mechayev i I.S.Liber] Leningrad, Gos. nauchno-tekhn. izd-vo neftianoi i gorno-toplivnoi lit-ry, Leningradskoe otd-nie, 1953. 207 p. (MLBA 7:1)

1. Vsesoyuznoye nauchnoye inzhenerno-tekhnicheskoye obshchestvo energetiki.  
(Gas appliances) (Gas manufacture and works)

STASKOVICH, N.L.; NECHAYEV, M.A., redaktor; MOLOKOVA, Ye.I., redaktor;  
SOKOLOVA, Ye.V., tekhnicheskly redaktor

[Municipal gas supply] Gasosnabzhenie gorodov. Leningrad, Gos.  
nauchno-tekhnicheskoe izd-vo neftianoi i gorno-toplivnoi lit-ry.  
Pt.4. [Operating gas-distribution] Eksploatatsiia sistem raspre-  
deleniia gaza. 1953. 312 p. (MLRA 8:2)  
(Gas distribution)

NECHAYEV, M.A.; CHERNOV, S.M., inzhener, nauchnyy redaktor; KAPLAN, M.Ya.,  
redaktor; FUL'KINA, Ye.A., tekhnicheskiy redaktor.

[To the architect and builder on supplying dwellings with gas] Ar-  
khitekturu i stroitel'iu o gasosabsheni shilogo doma. Leningrad,  
Gos. izd-vo lit-ry po stroitel'stvu i arkhitekture, 1954. 67 p.  
(MLRA 8:1)

(Architecture, Domestic) (Gas--Heating and cooking)

NECHAYEV, M.

ROMANOVSKIY, G., inzhener; NECHAYEV, M., inzhener.

Domestic gas appliances. Zhil.-kom.khos. 4 no.5:12 '54.(MLRA 7:9)  
(Gas appliances)

NECHAYEV, M.A.

*Handwritten initials*

2534. HANDBOOK FOR THE WORKER IN A TOWN'S GAS UNDERTAKING. Nechaev, M.A. (Moscow: Ministry of Municipal Affairs, R.S.F.S.R., 1955, 351pp.) title in *Gigiena Sanit. (Hyg. & Sanit., Moscow)*, Aug. 1956, vol. 21, (1).

1

~~NECHAYEV, M.A.~~; FILIMONOV, A.A., redaktor; AKATOVA, V.G., redaktor;  
KOMYASHINA, A., tekhnicheskiy redaktor.

[Manual of employees of city gas works] Spravechnik rabotnika  
gorodskogo gazovogo khoziaistva. Moskva, Izd-vo Ministerstva  
kommunal'nogo khoziaistva **ESFSR**, 1955. 349 p. (MLRA 914)  
(Gas manufacture and works)

LIBER, I.S.; FEDOROV, M.K.; ~~MECHAYEV, M.A.~~ inzhener, nauchnyy redaktor;  
KARPOV, V.V., redaktor izdatel'stva; PUL'KINA, Ye.A., tekhnicheskiy  
redaktor

[Concrete sanitary engineering blocks and heating installations]  
Betonye sanitarno-tekhnicheskie bloki i nagrevatel'nye pribory.  
Leningrad, Gos. izd-vo po stroit. i arkhitekture, 1956. 65 p.  
(Concrete blocks) (MIRA 9:10)  
(Heating)



NECHAYEV, M.A.

In the Scientific and Technical Power Engineering Society. Gas.prom.  
no.3:38 Mr '56. (MLRA 10:1)  
(Gas as fuel) (Combustion)

NECHAYEV, M.A.

Improving hygienic conditions in kitchens equipped with gas ranges.  
Gas.prom.no.5:27-28 My '56. (MLRA 10:1)  
(Stoves, Gas) (Hygiene, Public)

~~ESCHAYEV, Mikhail Aleksandrovich; STOLPNER, Ye.B., inzhener, redaktor;~~  
~~IONINA, I.N., vedushchiy redaktor; OBNAD'YEVA, I.M., tekhnredaktor~~

[Safety engineering for gas pipelines and gas apparatus] Tekhnika  
besopasnosti na gasoprovodakh i gasovykh ustanovkakh. Leningrad,  
Gos.nauchno-tekhn.isd-vo neft. i gorno-toplivnoi lit-ry, Leningr.  
otd-nie, 1957. 200 p. (MIRA 10:7)  
(Gas pipes) (Gas manufacture and works)

MECHAYEV, M:

~~In the Scientific and Technical Society of the Power Industry. Gas.~~  
prom. no.2:37-38 F '57. (MIRA 10:7)  
(Power engineering) (Fuel)

NECHAYEV, M.

"A New Kind of Liquefied Gaseous Fuel," by M. Nechayev,  
Gazovaya Promyshlennost', No 3, Mar 57, p 37

According to a report by M. Garms in Grundlagen der Brenngasver-  
wendung, (Fundamentals of the Application of Combustible Gases),  
Fachbuchverlag, Leipzig, 1956, page 160, a new kind of liquefied  
gaseous fuel, namely, dimethyl ether, is being used in East Germany.  
This fuel is produced by the Walter Ulbricht Leuna Plant.

The Leuna plant supplies this new gas under the name of "fuel  
ether." It consists of approximately 95% of dimethyl ether, the  
remaining 5% being carbon dioxide and light hydrocarbons.

As far as its physicochemical properties are concerned, fuel  
ether resembles liquefied propane-butane gas. It has the same com-  
bustion characteristics as the latter, but is soluble in water. In  
the combustion of dimethyl ether less oxygen is used, because this  
substance already contains oxygen in its molecule.

JUN 13 77

NECHAYEV, MI:

The principal physicochemical characteristics of dimethyl ether are as follows: specific gravity, 2.1 kg per cubic meter; vapor pressure at 20° C, 5 atmospheres gauge; boiling point at 760 mm Hg, 24.8°; limits of detonation when mixed with air, lower limit, 2%, and upper limit, 20%; and heat produced in combustion, 6,700 kilocalories per kg.

Fuel ether is used for household and industrial applications. The adaptation of burners designed for city gas is much easier in the case of dimethyl ether than that of propane.

Dimethyl ether is also used as a refrigeration agent. (U)

Some 1374

EMCHAYEV, M.

In the Scientific and Technical Society of the Power Industry.  
Gaz. prom. no.3:38 Mr '57. (MIRA 12:3)  
(Gas as fuel)

NECHAYEV, M.A.

The effectiveness of odorizing of shale gas. M. A. Nechaev, M. N. Troitskaya, and A. E. Drabkin. *Gazovaya Prom.* 1957, No. 6, 29-31. --- Expts. on the odorizing of a shale gas purified with activated C were made to det. the feasibility of substituting a shale gas benzine,  $d_4^{20} = 0.83$ , mol. wt. 103, b.  $65^{\circ}\text{--}140^{\circ}$ , with its strong characteristic odor, for the usual ethyl mercaptan. To the gas of compn.  $\text{CO}_2$  15.8,  $\text{C}_2\text{H}_6$  4.8,  $\text{CO}$  11.0,  $\text{O}_2$  0.9,  $\text{H}_2$  24.5,  $\text{C}_2\text{H}_4$  17.8,  $\text{N}_2$  25.7%, and  $\text{H}_2\text{S}$  trace, dild. with air to a  $\text{CO}$  content of 0.04% by vol. was added the benzine in amts. of 5, 10, 15, 20, and 40 g./cu. m. Such addn., however, proved in general to be ineffective for imparting a perceptible and permanent odor to the dild. gas. The use of ethyl mercaptan, therefore, remains the best means of warning of explosive or toxic concns. of the gas in the atia. H. L. Olin

3



NEW YORK, N.Y.

Using oxygen hose for distribution of bottled gas in apartments.  
See report no. 8:20-21 A: 152. (MLRA 1019)  
(Gas appliances)

AUTHOR: Nechayev, L.A.

133-10-03/0

TITLE: Gas Turbines as a Direct Source of Blast for Blast Furnaces  
(Gazovyye turbiny kak neposredstvennyy istochnik dorennoy  
dut'ya)

PERIODICAL: Stal', 1957, No. 12, pp. 1140 - 1141 (USSR)

ABSTRACT: The use of gas leaving a gas turbine (about 18%  $O_2$  and  
3%  $CO_2$  - temperature 340 - 370 °C) as a direct source of  
blast for blast furnaces is proposed. A description of the  
proposed scheme (diagram) is given. It is pointed out in the  
editorial note that the application of this scheme will depend  
on the furnace operation with a blast of a lower oxygen and  
containing 3-4% of  $CO_2$  which can be tested in normal install-  
ations. There is a figure.

ASSOCIATION: Scientific-technical Society of Power Industry  
(Nauchno-tekhnicheskoye obshchestvo energeticheskoy  
promyshlennosti)

AVAILABLE: Library of Congress

Card 1/1

POLAND/Chemical Technology - Processing of Solid Fuels  
(Naturally Deposited)

H.

Abs Jour : Ref Zhur - Khimiya, No 16, 1958, 55110

Author : Nechaev, M.A.

Inst :

Title : Manufacture of City Gas from Shale Oil.

Orig Pub : Gaz. woda techn. sanit., 1957, 31, No 12, 472-473

Abstract : A report on Soviet work concerning the manufacture of city gas from shale on Kokhtla-Yarv and Slanets combi-nats.

Card 1/1

NECHAYEV, M.A.

All-Union Scientific and Technical Conference on the Use of Natural  
Gas in Industrial Furnaces. Gaz. prom. no.1:52-55 Ja '58.  
(Gas, Natural--Congresses) (MIRA 11:2)

MECHAYEV, M.A.

Laying gas pipelines in industrial areas. Gaz.prom. 4 no.6:  
33-35 Je '59. (MIRA 12:8)  
(Gas, Natural.-Pipeline)

NECHAYEV, N.

Work of the gasification section of the Central Committee  
of the Scientific and Technical Society for Natural Fuel.  
Gaz. prom. no.12:50-51 D '59. (MIRA 13:3)  
(Gas industry)

NECHAYEV, Mikhail Aleksandrovich. Prinsipal uchastiyе MITROFANOV, I.A., inzh..  
STOLPNER, Ye.B., nauchnyy red.; DESHALYT, M.G., vedushchiy red.;  
YASHCHURZHINSKAYA, A.B., tekhn. red.

[Safety measures in the transportation, distribution and uses of gas  
fuel] Tekhnika bezopasnosti pri transportirovke, raspredelenii i  
ispol'zovanii gazovogo topliva. Izd.2., perer. i dop. Leningrad,  
Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry. Leningr.  
otd-nie, 1960. 259 p. (MIRA 13:9)

(Gas as fuel--Safety measures)

NECHAYEV, Mikhail Aleksandrovich; SHATSILLO, O.I., inzh., red.; FREGER, D.P.,  
red. izd-va; GVIRTS, V.L., tekhn. red.

[Safety in handling gas-operated equipment of industrial furnaces and  
boilers] Bezopasnaia ekspluatatsiia gazovogo oborudovaniia promyshlen-  
nykh pechai i kotlov. Leningrad, 1961. 18 p. (Leningradskii Dom nauchno-  
tekhnicheskoi propagandy. Obmen peredovym opytom. Seriya: Energetika,  
no.5) (MIRA 14:7)

(Boilers)

(Furnaces)



NECHAYEV, M.A., inzh. (Leningrad)

Inspection tubes are both necessary and useful. Stroi. truboprov.  
6 no. 2:22-23 P '61. (MIRA 14:5)

(Gas pipes)

v

NECHAYEV, M.A.

In the Main Administration of the Gas Industry of the U.S.S.R.  
Gaz.prom. 6 no.4:56'61.  
(Gas Industry)

NECHAYEV, Mikhail Aleksandrovich. Prinsipal uchastiye MITROFANOV, I.A.,  
inzh.; ZUBAREV, S.A., retsenzent; LEVIN, A.M., retsenzent;  
SIGAL, I.Ya., retsenzeng; KOLIADA, I.A., retsenzent; STOLPNER,  
Ye.B., nauchnyy red.; FEDOTOVA, M.I., ved. red.; SAFRONOVA, I.M.,  
tekhn. red.

[Safety measures in the transportation, distribution, and use  
of gas fuel] Tekhnika bezopasnosti pri transportirovke, ras-  
predelenii i ispol'zovanii gazovogo topliva. Izd.3., perer.  
i dop. Leningrad, Gostoptekhizdat, 1962. 299 p.

(MIRA 15:4)

(Gas as fuel—Safety measures)

NECHAYEV, M.A.; ISSERLIN, A.S.; FLODOK, B.I.; PLCTNIKOVA, A.B.;  
STOLPNER, Ye.B., nauchnyy red.; DESHALYT, K.G., ved. red.;  
YASHCHURZHINSKAYA, A.B., tekhn. red.

[Pocket guide for the gas distribution workers] karmannyi spravochnik rabotnika gazovo o khoziaistva. Leningrad, Gostoptekhnizdat, 1962. 526 p. (MIRA 1<sup>st</sup>:12)  
(Gas distribution) (Gas appliances)

~~NECHAYEV, Mikhail Aleksandrovich; LAPER'YE, I.R., nauchnyy red.;~~  
~~DASHALYT, M.G., ved. red.; YASHCHURZHINSKAYA, A.B.,~~  
tekh. red.

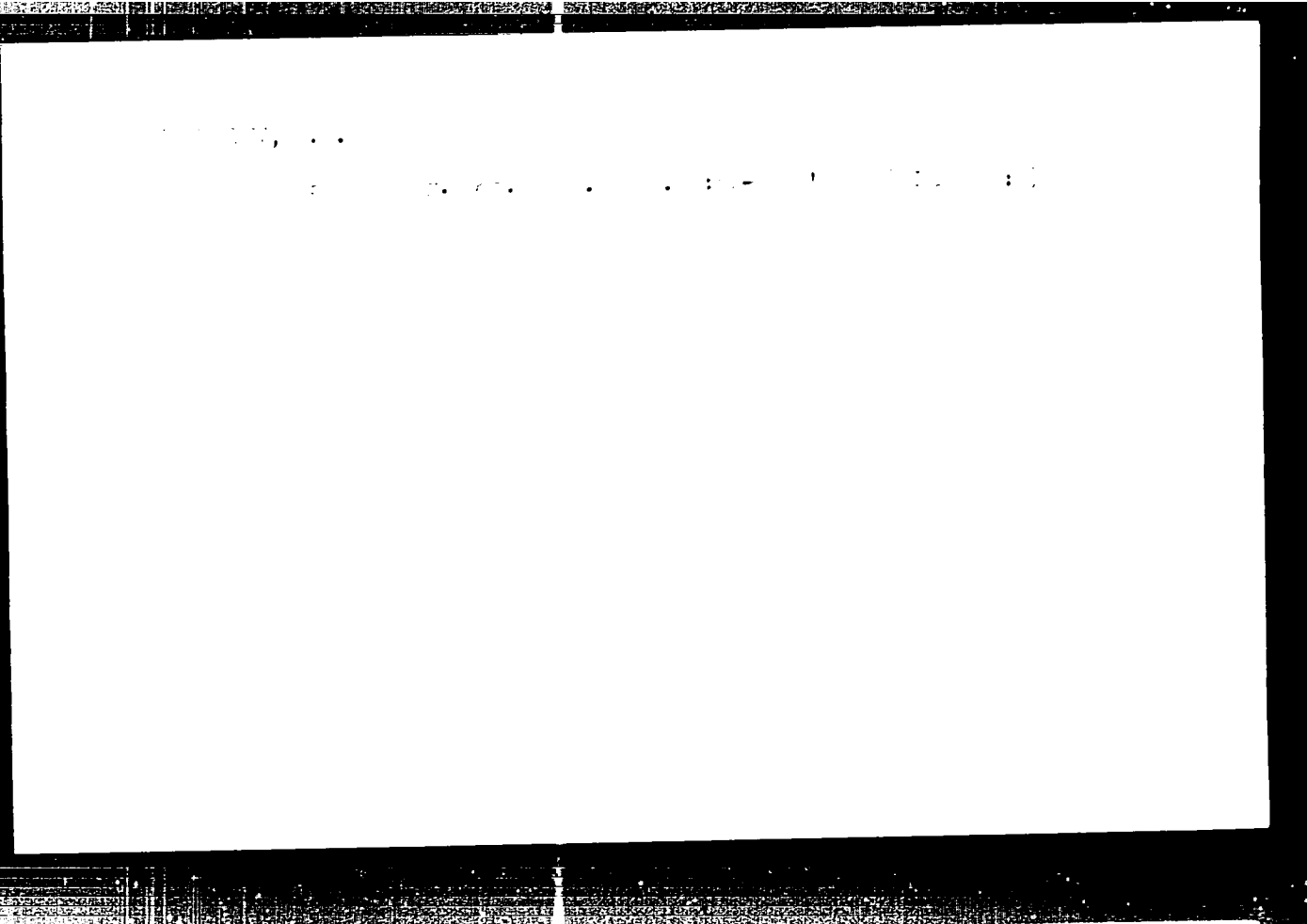
[Equipment and devices used for safety control in the gas  
industry] Inventar' i pribory gazovoi tekhniki besopasnosti.  
Leningrad, Gostoptekhnizdat, 1963. 69 p. (MIRA 16:7)  
(Gas industry--Safety measures)

ANDREYEV, German Sergeyevich; KHOR'KOV, A. I., red.; BARMIN, S. F.,  
nauchn. red.; LEBEDEV-TSVETKOV, Yu. Yu., red.; MITROPANOV,  
I. A., red.; NECHAYEV, M. A., red.; RUSAKOVA, L. Ya., ved.  
red.; YASHCHURZHINSKAYA, A. B., tekhn. red.

[Firing-line method on main gas pipes] Vedenie ognevykh ra-  
bot na magistral'nom gazoprovode. Leningrad, Gostoptekhiz-  
dat, 1963. 110 p. (MIRA 16:10)  
(Gas, Natural--Pipelines)

SKRYABIN, Viktor Georgiyevich; NECHAYEV, M.A., nauchn. red.;  
RUSAKOVA, L.Ya., ved. red.

[Scavenging and testing gas pipelines] Produvka i ispy-  
tanie magistral'nykh gazoprovodov. Leningrad, Gostoptekh-  
izdat, 1963. 106 p. (MIRA 17:3)



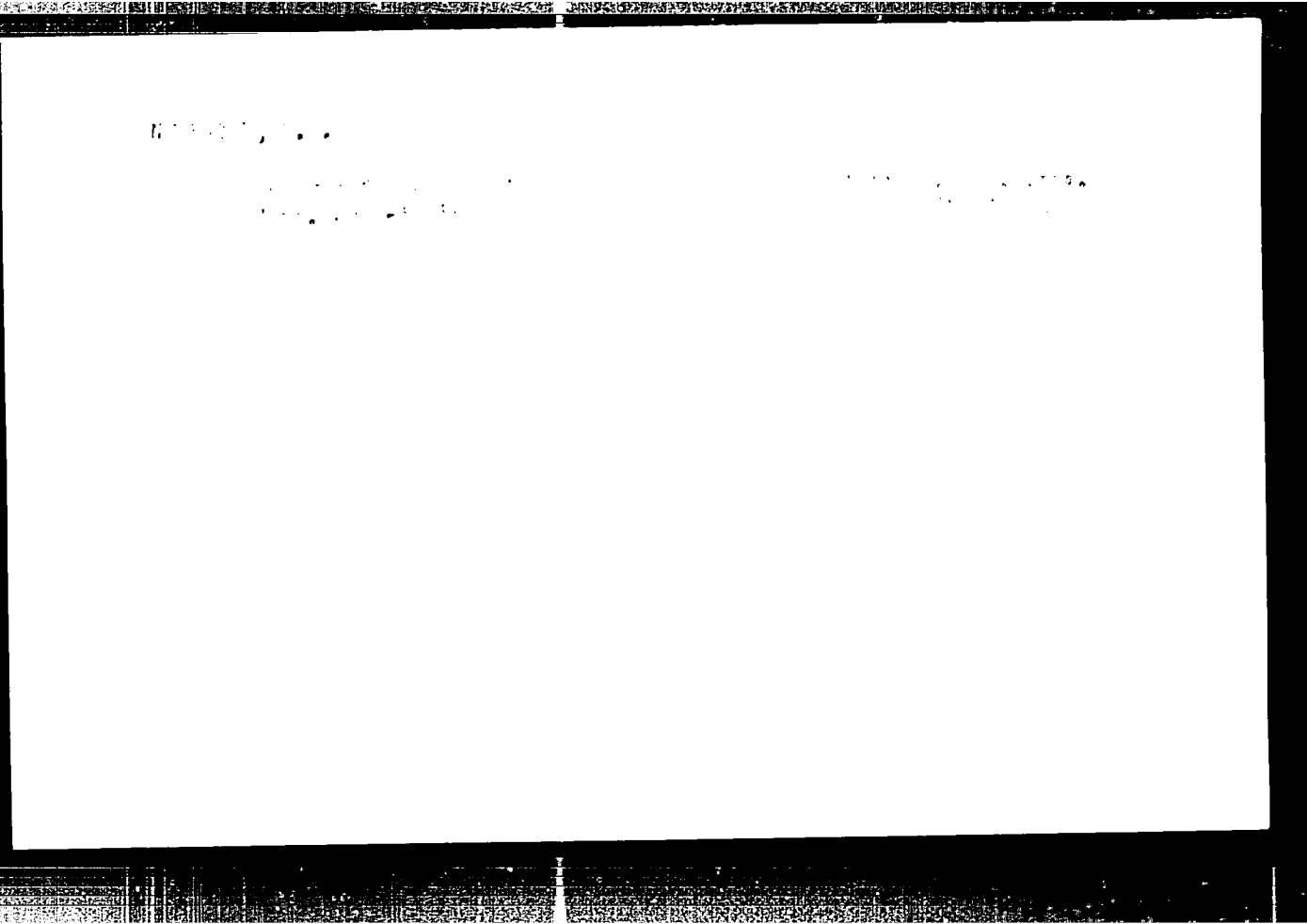


NECHAYEV, M.A. (Leningrad); SKAFTYAMOV, N.A. (Rostov-na-Donu)

Is it necessary to test gas pipelines for tightness? S. prof. tribo-  
prov. 9 no. 2:33-34 P '64. (MIRA 17:3)

...BILIRIN, Mikhail Ivanovich; ...red.; ...  
...red.; TIKHONIKOV, Yelena; ...red.; ...  
...red.; ...U.S.A., ...red.; ...red.

...safety technique ...  
...spannosti na ...  
...vo "Neizvestno" ...



TIKHOMIROV, Yevgeniy N. kolayevich; KHOR'KOV, A. I., red.; BARMIN,  
S.F., red.; KIROFANOV, I.A., red.; NECHAYEV, M.A., red.  
OL'VOVSKIY, I.G., nauchn. red.; NEVEL'SKIY, V.I., red.  
red.

[Assembly, adjustment, and operation of devices for the  
electrical protection of pipelines] Montazh, naibokh i  
ekspluatatsiya ustroystv elektrozashchity naizvestnykh  
truboprovodov. Leningrad, Nedra, 1974. 126 p.  
(MIRA 17:12)

PETROV, Vladimir Petrovich; NECHAYEV, M.A., nauchn. red.;  
Z.G., ved. red.

[Gas fuel in agriculture - Iazovoe toplivo dlya  
zlaistv Leningrad, Neura, 1965. 146 p.  
(CIA 1049)

NECHAYEV, Mikhail Aleksandrovich; ISSERLIN, Aleksandr Semenovich;  
MLODOK, Boris Iosifovich; PLOTNIKOVA, Anfusa Nikolayevna;  
NECHAYEV, M.A., nauchn. red.; RUSAKOVA, L.Ya., ved. red.

[Handbook for workers in the gas industry] Spravochnik ra-  
botnika gazovogo khoziaistva. Izd.2., perer. i dop. Lenin-  
grad, Nedra, 1965. 430 p. (MIRA 18:7)

NECHAYEV, M.A.

Is a second exhaust duct always needed for bathrooms having  
gas-fired water heaters? Gas. prom. 10 no.7:15-16 '65.  
(MIRA 18:8)

NECHAYEV, M.A.; KAPTYMOV, N.A.

Some remarks on the protective zone of the...  
trubotrov. 10 no.8:34-40, 3 of cover and 165.

1. Vektelya gazifikatsiy leuchno-tekhnologiya...  
energeticheskoj imeriyh ennosti, Leningrad (for Nechayev).
2. Rostovskiy inzhenerno-traitte Iny institut (for Kaptymov).



SKAFTYMOV, N.A.; NECHAYEV, M.A.

Simplification and acceleration of tests of municipal gas pipelines. Stroil. truboprov. l. no. 11130-28 N 105.

(MIRA 18:12)

1. Inzhenerno-stroitel'nyy institut, Rostov-na-Donu (for Skafymov). 2. Sektsiya gazifikatsii Nauchno-tekhnicheskogo obshchestva energeticheskoy promyshlennosti, Leningrad (for Nechayev).

KON'KOV, N.G., inshener-podpolkovnik; MECHAYEV, M.M., inshener-polkovnik,  
SHLYAKHTUROV, V.I., inshener-podpolkovnik, Priznani uchastiye:  
FILIPPOV, V.V., inshener-polkovnik, PANOVA, N.N., inshener-podpolkovnik

Transport planes prepare for flight. Vest.Vozd.Fl. no.1:60-69 Ja  
'61. (MIRA 13:12)

(Transport planes)

NECHAYEV V. N.

1. TITLE

Investigation of the interaction of a convergent cylindrical wave with a plane shock wave

2. AUTHOR

NECHAYEV V. N., V. I. ...  
1974-1975, U.S.S.R.

3. SUMMARY

The paper studies the interaction of a convergent cylindrical wave in the case of plane shock waves, where the initial transition region from the initial state to the final state is narrow. The generation of a wave at its front with a half-space filled with an ideal conductor is considered by a vacuum with a static magnetic field  $H_0$  along the plane  $x = 0$ . Furthermore, a plane shock wave is supposed to pass through this conductor, the entire surface of this conductor is moving uniformly with the velocity  $u$  in the direction towards the field. In the field, however, the electromagnetic wave proceeds with the velocity  $c$ . A conservation law holds for the magnetic field strength analogous to that in matters  $H_{\parallel} = H_0 - u$ ,  $H_{\perp} = H_0$  indicating the field strength in the rear of the wave. There exists no electric field in the coordinate system moving with the wall. Subsequently, the pressure of the field on the moving wall is computed, and the interaction of the wave with the plane shock wave, which is caused by the wave proceeding from the wall, is investigated. It is shown that the wave with a finite amplitude can be reflected from a very small gap with a width of the front can be reflected from a

and 1.3

Shock Waves at a Cylindrical Junction

1971

cooling the conductors. The junction of cylindrical waveguides is a  
 A convergent wave is formed in the entire surface of the  
 under, in principle, it is a plane wave. A circular current, and by  
 the reflexion of a plane wave at a cylindrical junction  
 by the motion of a piston in a cylindrical waveguide.  
 The amplitude of the convergent wave is a function of the  
 radius of the cylinder and the length of the terminal. The  
 range of applicability of the convergent cylindrical wave  
 is determined by the range of applicability of the  
 plane wave. There are also acoustic waves. There are also

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