

L 10418-66 EWT(m)/EWP(w)/T/EWP(t)/EWP(z)/EWP(b)/EWA(h)/EWA(c) IJP(c) JD/HW  
AM5026676 BOOK EXPLOITATION UR/

79  
73  
Q+1

Luzhnikov, Leonid Pavlovich

Deformable aluminum alloys used for work at increased temperatures (Deformiruyemye alyuminiyevyye splavy dlya raboty pri povyshennykh temperaturakh) [Moscow] Izd-vo "Metallurgiya", 1965. 0289 p. illus., biblio. 2,210 copies printed.

TOPIC TAGS: alloy, alloy system, aluminum alloy, alloy composition, phase composition, chemical composition, metal property, metal physical property, thermo-mechanical property, high-temperature strength, rupture strength, binary alloy, ternary alloy

PURPOSE AND COVERAGE: The book concerns a study of the nature, structure and properties of deformable aluminum alloys, intended for work in increased temperatures. It presents the results of systematic research of an important group of industrial aluminum alloys. It explains in detail the dependence of alloy properties on their structure, phase and chemical composition. It presents the physical and mechanical properties, conditions for heat treatment, and also examines the influence of technological factors on the properties of the alloys. The book is intended for engineering-technological workers working in the field of the production and utilization of aluminum alloys, for workers

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UDC: 669.715

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of scientific-research organizations, and for students in advanced courses of the corresponding specialties. 6

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SUB CODE: MM  
NO. REF. SOV: 048  
Card 2/2 PC

SUBMITTED: 15 Apr 65  
OTHER: 024

LUZHNIKOV, Ye.A.; DAGAYEV, V.N.

Clinical aspects and treatment under first aid conditions of acute poisonings with phosphorus organic compounds. Sov. med. 27 no.11:76-80 N '64.  
(MIRA 18:7)

1. Terapevticheskaya klinika (rukovoditel' - prof. P.L.Sukhinin) Moskovskogo gorodskogo nauchno-issledovatel'skogo instituta skoroy pomoshchi imeni Sklifosovskogo (dir. M.M.Tarasov) i Stantsiya skoroy meditsinskoy pomoshchi (nachal'nik L.B.Shapiro), Moskva.

ACC NR: AP6028156 (N) SOURCE CODE: UR/0391/66/000/008/0036/0042

AUTHOR: Luzhnikov, Ye. A. (Moscow)

ORG: Rapid Aid Institute im. N. V. Sklifosovskiy (Institut skoroy pomoshchi)

TITLE: Certain clinical and therapeutic problems of treating cases of acute poisoning by organophosphorus insecticides

SOURCE: Gigiyena truda i professional'nyye zabolevaniya, no. 8, 1966, 36-42

TOPIC TAGS: insecticide poisoning, toxicology, pharmacology, cholinesterase, poison treatment, clinical medicine, therapeutics, organic phosphorus compound, insecticide

ABSTRACT: One hundred and twenty three patients poisoned by thiophos and chlorophos were examined and treated. Neurological, respiratory, hemodynamic, visceral and blood chemistry changes were recorded. In general, there were three distinct stages involved in which there was inhibition of whole blood cholinesterase and 16 deaths. Artificial respiration and other symptomatic treatment was given along with atropine, metacin, chlorpromazine, magnesium sulfate and ganglionic blocking agents. [WA-50; CBE No. 11]

SUB CODE: 06/ SUBM DATE: 24May65/ ORIG REF: 008/ OTH REF: 004

Card 1/1

JDC: 615.777.25-099-036.11

LUZHNIKOVSKAYA, M.A.

Errors in the shape of parts machined on lathes with radial fee. Izv.  
vys.ucheb.zav.; prib. 6 no.3:149-160 '63. (MIRA 16:9)

1. Moskovskiy aviatsionnyy institut.

LUZHNICOVSKAYA, M. A.

Calculating errors in machining parts by the method of trans-  
verse turning with a radial feed. Izv. vys. ucheb. zav.;  
prib. 6 no. 2:147-153 '63. (MIRA 16:4)

1. Moskovskiy aviatsionnyy institut.

(Turning)

L 08854-67 EWP(k)/EWT(l)/EWT(m)/EWP(t)/ETI LJP(c) JD

ACC NR: AP6010784

SOURCE CODE: UR/0146/66/009/001/0152/0158

AUTHOR: Luzhnikovskaya, M. A.

ORG: Moscow Aviation Institute (Moskovskiy aviatsionnyy institut)

43  
B

TITLE: Calculation of errors in forming lathe work

SOURCE: IVUZ. Priborostroyeniye, v. 9, no. 1, 1966, 152-158

TOPIC TAGS: lathe, forming ~~lathe~~, error measurement, *metal forming*

ABSTRACT: The error due to elastic deformations in the SPEED metal-turning system is evaluated; a shaped profile and a radial tool crossfeed are considered. A differential equation of the thickness of removed metal is solved on a digital computer, and the results are tabulated. The error is defined as a difference between the overall feed and the area of a removed-metal-thickness diagram, the latter representing the thickness of the actually-cut metal. Triangular, rectangular, and semicircular tool profiles are considered. Orig. art. has: 3 figures, 18 formulas, and 2 tables.

SUB CODE: 13 / SUBM DATE: 15Mar65 / ORIG REF: 002

Card 1/1

UDC: 621.9.015

*LUZHNOV, G. I.*  
FOMIN, B. S., POLUBOYARINOV, V. I. and LUZHNOV, G. I. (Engr.)

"Removal of Ash and Slag Deposits."

A Scientific-Technical Conference on Auxiliary Equipment for Power Station  
Boiler Houses. Moscow, 17 - 20 Dec 1957.

Teploenergitika, 1958, No. 4, pp. 90-91 (USSR)



LUZHNOV, G.I.

KUZNETSOV, N.V., doktor tekhn. nauk; LUZHNOV, G.I., inzh.; BULOBOURODOV, P.M.,  
inzh.

Cast-iron shot cleaning of the convective surfaces of boiler units.  
Teploenergetika 4 no.12:3-9 B '57. (MERA 10:11)

1. Vsesoyuznyy teplotekhnicheskii institut i Omskaya TETs - 3.  
(Boilers)

LUZHNOV, G.I.

96-1-2/31

AUTHORS: Kuznetsov, N.V., Doctor of Technical Sciences and  
Luzhnov, G.I., Engineer.

TITLE: Problems in the Design of Equipment for Cleaning Con-  
vection Surfaces of Boilers by Shot (Voprosy proyektirovaniya  
ustroystv dlya dobevoy ochildki konvektivnykh pover-  
khnostey kotel'nykh agregatov)

PERIODICAL: Teploenergetika, 1958, Vol.5, No.1, pp. 8 - 12 (USSR)

ABSTRACT: In an article in Teploenergetika, 1957, No.12, the authors described an equipment installed at a power station for removing slag from boiler surfaces by means of iron shot. The main disadvantage was the high wastage of shot, much of which was found in the horizontal gas way beyond the convection shaft, in the furnace, and elsewhere. A diagram (Fig.1) shows how shot falling from above rebounded from the walls and could fall into the horizontal gas way. To prevent this, the boilers of Omsk Heat and Electric Power Station No.3 were modified by fitting special screen grids on the sloping walls of the lower bunkers, as seen in Fig.2. Re-designed shot cleaning equipment will use these deeper bunkers of different wall shape. Shot is also carried away by the flow of air when the plane shutters in the gas way are open. The difficulty may be overcome Card1/3 by N.I. Zverev's method of cleaning the shot of ash. This

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Problems in the Design of Equipment for Cleaning Convection Surfaces of Boilers by Shot.

system is applied in the new design of shot cleaning equipment for the boiler type T $\Gamma$ -230, as illustrated in Fig.3. A special chamber used to regulate the air flow is illustrated in Fig.4 and a new type of shot-distributing device, shown in Fig.5, is recommended.

In the first installations, the shot was lifted by compressed air but it is uneconomical to use a stationary compressor for this purpose. Lifting by steam is inconvenient because condensation occurs when the equipment is cold. It is best to follow non-Russian practice and to use a high head extraction fan. Alternatively, steam ejectors can be used as a temporary measure, but occasioned some difficulty in adjusting the air flow to suit the required flow of shot. A newly-designed feeder (illustrated in Fig.6) gives regular and stable delivery of shot at any flow required.

The pneumatic delivery often became blocked in service; remedies are described. Wear in parts exposed to flow of shot was also overcome. In the design of boilers to burn fuel that forms hard ash deposits, all convective surfaces should be located in vertical gas ways with horizontal tubes. In this

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case, shot cleaning can completely overcome interruptions caused by deposits.

Tests at the Zakamsk Heat and Electric Power Station (Zakamskaya TETs) show that when the temperature is below the dew point, heavy ash deposits are formed and more frequent cleaning is required. Therefore, equipment operating below the dew point should also be arranged in vertical shafts suitable for shot cleaning. Further recommendations are made about the arrangement of the equipment. There are 6 figures.

ASSOCIATION: All-Union Thermo-technical Institute (Vsesoyuznyy Teploekhnicheskiiy Institut)

AVAILABLE: Library of Congress.  
Card 3/3

SOV/96-59-10-9/22

AUTHORS: Kuznetsov, N.V. (Dr. Tech. Sci.); Luzhnov, G.I. (Engineer);  
Varichev, V.A. (Engineer); Pavlenko, L.I. (Engineer);  
and Kurganov, B.G. (Engineer)

TITLE: Experience of the Adjustment of Shot-blast Installations  
for Removing Ash Deposits from Boiler Heating Surfaces

PERIODICAL: Teploenergetika, 1959, Nr 10, pp 49-54 (USSR)

ABSTRACT: Previous articles in Teploenergetika Nr 12, 1957, and  
Nr 1, 1958, described the use of shot-blasting to clean  
boilers type TP-230-2 at the Omsk Heat and Electric Power  
Station when burning fuel oil of high ash, and high  
sulphur content. Subsequently the design of the equipment  
was improved and it was tried out at a number of power  
stations burning anthracite dust, including the Nesvetay GRES  
(power station) on the Rostov Power system. When  
anthracite dust is burned, heating surfaces quickly  
become contaminated and cleaning is particularly important.  
In the Nesvetay station shot-blasting equipment was  
installed on boilers of 110 tons per hour operating at  
steam conditions of 122 ats. and 485 °C. The boilers are  
briefly described: the proportion of unburned material  
in their carry-over is of the order of 8-12%. Until the  
shot-blasting installation was put in, the boilers could

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operate for 1 to 1½ months, during which the resistance of the convection duct increased by more than 100 mm water and the outgoing flue gas temperature rose by 25-30 °C. Typical curves showing the increase in resistance and flue gas temperature during a month's operation are given in Fig 1. The shot-blasting installation was generally similar to that previously described, but various changes were made and are described in some detail. Outline drawings of the modified shot-blasting installation are given in Fig 2. To reduce losses of shot to atmosphere, the shot traps were reconstructed, to the form illustrated in Fig 3. It was found necessary to fit pieces of wire 1 mm diameter on the conical shutters at the bottom of the shot traps so that a certain amount of air could leak round the shutter and equalise the pressure above it. The results of pressure measurements using the modified shutter are plotted in Fig 5. Minor modifications were made to the ash bunkers to prevent loss of shot to them. The shot bunkers were made of conical section instead of square, and the shot feeders were modified, a new type of

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shutter being used. A few other modifications were also made. To clean convective heating surfaces efficiently it is necessary to pass 200-300 kg of shot per square metre of duct section. The area of the convective ducts of the boilers in question was 20.7 m<sup>2</sup>, and shot was delivered at a total rate of 4700 kg/hr, which corresponds to 230 kg/m<sup>2</sup>/hr. If the equipment is used regularly an operating time of one hour twice a shift is satisfactory. Tests were made to see whether shot-blasting could be used to clean up badly-contaminated surfaces. The results are plotted in Fig 7 and it will be seen that although about 9 tons of shot were passed through the convection shaft there was no reduction either in the resistance to flow or in the flue gas temperature. Subsequent examination showed that some of the shot was resting on top of the existing deposits, which were not removed. Therefore, for shot-blasting to be effective the heating surfaces must be cleaned in the first place and the equipment must be used regularly. Data on the resistance to flow and flue gas temperatures during six weeks' operation with regular use of the shot blasting equipment are plotted in Fig 8.

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Experience of the Adjustment of Shot-blast Installations for  
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The resistance to flow was maintained constant throughout this period and variations in flue gas temperature resulted only from variations in feed-water temperatures. After 45 days' operation with shot-blasting, the economiser and water heater remained clean and ash deposits were found only in places not reached by the shot. The loss of shot was about 0.6% of the total quantity passed and this could be further reduced by minor design changes. The equipment is reliable and the main parts may be used for the design of similar installations for boilers of other types burning other fuels.

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There are 8 figures and 2 Soviet references.

ASSOCIATION: Vsesoyuznyy teplotekhnicheskii institut, Rostovenergo and Nesvetay GRES (All-Union Thermo-Technical Institute, Rostovenergo (Power System) and Nesvetay Regional Electric Power Station)



KUZNETSOV, N.V., doktor tekhn.nauk; LUZHNOV, G.I., inzh.; GAVRILOV,  
A.F.; SEME NOVA, T.F.

Preventing peening in shot blasting cleaning of heating  
surfaces. Teploenergetika 7 no.10:27-31 O '60. (MIRA 14:9)

1. Vsesoyuznyy teplotekhnicheskiy institut.  
(Boilers--Cleaning)

LUZHNOV, G.I., inzh.; ZVEREV, N.I., kand.tekhn.nauk; GAVRILOV, A.F., inzh.;  
FIGAL'EV, V.P., inzh.

Pneumatic transportation of shot in boiler systems and methodology  
for its designing. Elek.sta. 33 no.11:12-19 N '62. (MIRA 15:12)

(Boilers)

LUZHNOV, G.I., kand. tekhn. nauk; TITOVA, Ye.Ya., inzh.

Study of heat transfer and aerodynamic resistance of convective heating surfaces. Teploenergetika 10 no.7:42-47 J1 '63.  
(MIRA 16:7)

1. Vsesoyuznyy teplotekhnicheskiy institut.  
(Heat-Transmission) (Boilers)

LUZHNQV, K.V.

Primary sarcoma of the lungs. Khirurgiia 32 no.8:66-68 Ag '56.  
(MLRA 9:12)

1. Iz fakul'tetskoy khirurgicheskoy kliniki (zav. kafedroy prof.  
Ye.D.Dobychin) Irkutskogo meditsinskogo instituta.

(LUNG NEOPLASMS, case reports  
sarcoma, primary)

(SARCOMA, case reports  
lungs, primary sarcoma)

DOBYCHIN, B.D., prof. (Irkutsk, Vuzovskaya naberezhnaya, d.18); LUZHNOV, K.V.;  
(Irkutsk, Vuzovskaya naberezhnaya, d.18)

Operative treatment of hemorrhoids complicated by acute thrombophlebitis.  
Nov. khir. arkh. no.3:38-43 My-Je '60. (MIRA 15:2)

1. Kafedra fakul'tetskoy khirurgii (zav. - prof. B.D.Dobychin)  
Irkutskogo meditsinskogo instituta.  
(HEMORRHOIDS) (PHLEBITIS)

LUZHNOV, K.V. (Irkutsk, ul. Khalturina, d.9, kv.1)

Treatment of hemorrhoids in the stage of acute thrombophlebitis.  
Vest.khir. no.1:81-84 '62. (MIRA 15:1)

1. Iz fakul'tetskoy khirurgicheskoy kliniki (zav. - prof. B.D. Dabychin) Irkutskogo meditsinskogo instituta (dir. - prof. A.I. Nikitin).

(HEMORRHOIDS)

(PHLEBITIS)

LUZHNOV, M.I., inzhener.

Eliminating leakage of oil into an exciter by reconstructing  
the packing. Elek. sta. 24 no. 12:50 D '53. (MLRA 6:12)  
(Dynamoa)

LUZHNOV, M.I.

LUZHNOV, M.I., inzhener; TYUTRIN, A.P., tekhnik.

Reversible scraper feeder for shale. Elek.sta. 25 no.1:51-52  
Ja '54. (MIRA 7:1)

(Furnaces) (Conveying machinery)

APPROVED FOR RELEASE: 06/20/2000 ~~CIA-RDP86-00513R001031010004-1~~

AUTHORS: Gulyayev, V. N. (Candidate of technical sciences); Luzhnov, M. I.  
(Engineer)

TITLE: Choice of material for condenser tubes

SOURCE: Teploenergetika, no. 3, 1961, 66-70

TOPIC TAGS: condenser tube, brass tube, stainless steel tube, steel 304, copper alloy 88 10 2, steel OKh13, steel Kh17, steel Kh17NiAG9, steel Kh22Ni5Cu9, steel OKh20Ni4Ag10, steel Kh14G14N, copper zinc, tin, chromium, manganese, nickel, trace element

ABSTRACT: A comparison is made between the use of copper alloy (88-10-2) tubes and of steel tubes for condenser application in turbine installations. The composition of copper alloy was: 88% Cu, 10% Zn, 2% Sn. It was found that the Cu<sub>2</sub>O and CuO formed in copper tubes was deposited on the turbine blades and lowered the efficiency. After mentioning the success achieved with stainless steel 304 tubes at the Rivesville plant (R. Long. Electric Light and Power, Vol. 39, No. 2, 1961), the authors discuss the use of Cr and Cr-Mn-Ni steels as a more economical



ACCESSION NR: AP4019087

expedient. Primary emphasis is placed on the cost of the required alloying elements for different types of steel. This type of comparison results in the following cost estimates per ton of 26 x 0.5 mm tubes made from the different steels: OKh13 (12% Cr) - 1615 rubles, Kh17 (17% Cr) - 1634 rubles; Kh17N4AG9 (17% Cr, 4% Ni, 9% Mn) - 1806 rubles; Kh22N5G9 (22% Cr, 5% Ni, 9% Mn) - 1852 rubles; OKh20N4AG10 - 1824 rubles; Kh14G14N (14% Cr, 1% Ni, 14% Mn) - 1751 rubles. Although application of one particular type of steel depends on prior field testing, it is suggested that the application of these steels rather than the Cr-Ni steels is justified both on economic and technical grounds. Orig. art. has: 8 tables.

ASSOCIATION: VoFVTI

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ENCL: 00

SUB CODE: IE, MM

NO REF SOV: 010

OTHER: 004

Card 2/2

LUZHNOV, Ye. I.; FAT'YANOV, N.I.; KHOTIMCHENKO, N.M.; KUSHKO, I.M., redaktor; RAKHLINA, N.P., tekhnicheskij redaktor.

[Cyclical work schedule for coal mines of the Donets Basin]  
Grafic tsiklichnoi raboty ugol'nykh shakht Donbassa. Kiev,  
Izd-vo Akademii nauk Ukrainskoi SSR, 1953. 52 p. (MIRA 8:2)  
(Donets Basin--Coal mines and mining)

LUZHN OV, Yu.M., nauchnyy sotrudnik; KOSIKOV, S.I., kand.tekhn.nauk [deceased]

A cause of the slippage of locomotives. Elek. i topl. tiaga 7  
no.4:44-45 Ap '63. (MIRA 16:5)

1. Institut fizicheskoy khimii AN SSSR (for Luzhnov).  
(Railroads--Track) (Locomotives)

MELEKHINA, V.P.; PINIGIN, M.A.; Primalni uchastiye: KHRUSTALEVA, V.A.;  
SELINA, I.A.; VULIKH, S.L.; PANOVA, M.K.; LUZHNOVA, M.A.; BUNIM, T.N.

Materials for evaluating the pollution of air by wastes in the  
production of phenol and acetone by the cumene method. Uch.  
zap. Mosk. nauch.-issl. inst. san. i gig. no.9:25-29 '61.  
(MIRA 16:11)

1. Moskovskiy nauchno-issledovatel'skiy institut gigiyeny  
imeni F.F.Erismana (for Khrustaleva, Selina). Sotrudniki sa-  
nitarno-epidemiologicheskoy stantsii goroda Groznogo (for Vulikh,  
Panova, Luzhnova, Bunim).

\*

FONGAUZ, M.I. Prinimali uchastiye: KHRUSTALEVA, V.A.; SELINA, I.A.; VULIKH,  
S.L. · PANOVA, M.K.; LUZHNOVA, M.A.; BUNIM, T.N.

Principal problems of hygiene in the production of phenol and  
acetone by the cumene method. Uch.zap. Mosk.nauch.-issl. inst.  
san. i gig. no.9:5-12 '61 (MIRA 16:11)

1. Moskovskiy nauchno-issledovatel'skiy institut gigiyeny imeni  
Erismana (for Selina). 2. Groznenskaya gorodskaya sanitarno-  
epidemiologicheskaya stantsiya (for Bunim).

\*

RAYKHBAUM, Ya.D.; MALYKH, V.D.; LUZHOVA, M.A.

Scintillation method for spectral analysis of tantalum and  
niobium in ores. Zav. lab. 29 no.6:677-680 '63.  
(MIRA 16:6)

1. Irkutskiy gosudarstvennyy nauchno-issledovatel'skiy institut  
redkikh metallov.

(Tantalum ores—Spectra)  
(Niobium ores—Spectra)

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C) LUZHNOVA, M-I

Effect of gas regime in storage of acorns on metabolism of materials in the leaves of the seedlings. N. S. Turkova and M. I. Lushnova (M. V. Lomonosov State Univ., Moscow). *Doklady Akad. Nauk S.S.S.R.* 84, 817-9 (1952). Acorns were stored 80 days at 12-15° either in N<sub>2</sub>, in 10% O<sub>2</sub>-10% CO<sub>2</sub>, 10% O<sub>2</sub>-5% CO<sub>2</sub>, in normal atm., or in O<sub>2</sub>-rich atm. (the concn. was twice brought up to 40%). They were then planted in moist sand and the leaves of the plants were examined in midsummer. The semiaerobic treatment (added CO<sub>2</sub>) caused highest accumulation of dry matter and greatest leaf area. Resilience in N<sub>2</sub> was adverse in respect to general growth in the early stages of growth, but in later months these plants were substantially normal. The intensity of respiration was highest for plants from those treated with excess O<sub>2</sub> (some 10-15% increase noted). The semiaerobic treatment led to the highest concn. of reducing sugars in the leaves; the aerobic varieties showed low sugar throughout the summer. N<sub>2</sub>-treated specimens showed enhanced sucrose formation, but low reducing sugars. Thus no correlation between intensity of growth and intensity of respiration could be found. Intense growth did parallel the concn. of reducing sugars present. G. M. Kosolapoff

LUZHNOVA, M. I.

"The Significance of the Conditions of Crop Nourishment During the Light Stage." Card Biol Sci, Moscow Order of Lenin State University M. V. Lomonosov, 29 Oct 54) (VM, 19 Oct 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions. (10)

So: Sum. No. 481, 5 May 55



LUZHNYKH, L.A.; STERLIGOV, I.N.; YEVSYUKOV, P., red.; PORTYANSKIY, B.,  
red. izd-va; BARSKAYA, Ya., tekhn. red.

[Automation; collection of articles in English] Avtomatika; sbornik  
tekstov na agliiskom iazyke. Podbor tekstov, kommentarii i slovar'  
L.A.Luzhnykh i I.N.Sterligova. Moskva, Izd-vo lit-ry na inostr.  
iazzykakh, 1961. 129 p. (MIRA 14:7)  
(Automation)

GRESIKOVA, M.; HAVRANEK, I.; GORNER, F.; technical assistance: LUZICOVA, V.;  
MARTINOVIC, K.

The effect of pasteurisation on the infectivity of tick-borne  
Encephalitis virus. Acta virol. Engl. Ed. Praha 5 no.1:31-36 Ja '61.

1. Institute of Virology, Czechoslovak Academy of Sciences,  
Bratislava.

(ENCEPHALITIS EPIDEMIC virol)

SOLOPAYEV, B.P.; SOLOV'YEVA, G.A.; LUZIKA, B.

Stimulation of restorative regeneration of the liver by subcutaneous  
glycogen administration. Biul. eksp. biol. i med. 53 no. 4:104-108  
Ap '62. (MIRA 15:4)

1. Iz Instituta eksperimental'noy patologii i terapii (dir. - doktor  
meditsinskikh nauk B.A.Lapin) AMN SSSR, Sukhumi. Predstavlena  
deystvitel'nym chlenom AMN SSSR V.V.Parinyam.  
(LIVER) (GLYCOGEN) (REGENERATION (BIOLOGY))

1-8669-65 ENT(4) P-4/Pack AMJ RM

ACCESSION NR: AP4034550

9/0020/64/155/005/1205/1208

AUTHORS: Luzikov, V. N.; Burlakova, Ye. B.

TITLE: The nature of thermal aftereffects in solutions of trypsin irradiated with X-rays

B

SOURCE: AN SSSR. Doklady\*, v. 155, no. 5, 1964, 1205-1208

TOPIC TAGS: trypsin, x ray, thermal aftereffect, propyl gallate, molecule inactivation, EPR analysis, heat deactivation

ABSTRACT: The inhibiting action of propyl gallate on the thermal inactivation of X-ray irradiated trypsin was investigated and the free radical aspect of the thermal aftereffect was discussed wherein the intramolecular breakdown of the macromolecules was assumed due to the formation of free radicals which transfer the molecule into an inactive state and cause loss of fermentation activity. Examination of the log of the ratio of the activity of a trypsin solution after irradiation, but before heating, to the activity after heating

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at 73.5 or 96.8C for varied time periods indicated that the addition of propyl gallate definitely retarded the thermal activity loss, especially at the higher temperature. Examination of irradiated solutions of trypsin by e.p.r. at liquid nitrogen temperatures revealed that the number of free radicals was far less than the number which would be expected from kinetic data indicating the thermal aftereffect is caused by a complex reaction system. Data was also obtained on the influence of the addition of  $H_2O_2$  and irradiated ribonucleic acid as well as irradiated trypsin on the thermal inactivation of trypsin. The effect of propyl gallate was more noticeable when the active groups content or radiation dosage, was increased. It was concluded that the heat deactivation of irradiated trypsin proceeds through at least the following reactions: (1) a true aftereffect over which the typical free radical inhibitor propyl gallate exerts no influence; (2) a "pseudo" aftereffect, inactivation caused by adding  $H_2O_2$  or irradiated albumin (dependent on irradiation dosage, albumin content, temperature) and controlled by propyl gallate; and (3) a reaction initiated by hydroperoxides formed during strong irradiation of trypsin solutions. The authors

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E 8669-65

ACCESSION NR: AP4034550

express sincere thanks to AN SSSR Asaoc. Member N. M. Emanuel for discussing the paper, and also to V. A. Shabalkin and A. I. Prokof'teyev for conducting measurements on the EPR-2 apparatus.\* Orig. art. has: 3 figures.

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR  
(Institute of Chemical Physics Academy of Sciences SSSR)

SUBMITTED: 14 Nov 63

ENCL: 00

SUB CODE: IS, 00

NR REF SOV: 004

OTHER: 007

Card 3/3

LUZIKOV, V.N.

Chemical modification of trypsin under the effect of irradiation by  
ultraviolet light. Izv. AN SSSR. Ser. khim. no.3:559-561 '65.  
(MIRA 18:5)

1. Institut khimicheskoy fiziki AN SSSR.

LUZIKOV, V.N.

Nature of thermal aftereffects in trypsin solutions irradiated  
with X rays and ultraviolet light. Radiobiologia 5 no.1:11-16  
'65. (MIRA 18:3)

1. Institut khimicheskoy fiziki AN SSSR, Moskva.



L 59478-65

ACCESSION NR: AP5010362

UR/0205/65/005/002/0312/0313

AUTHOR: Luzikov, V. N.; Ivoshkina, T. V.

TITLE: Nature of the latent injury state in irradiated trypsin.  
EPR investigation method. 16  
B

SOURCE: Radiobiologiya, v. 5, no. 2, 1965, 312-313

TOPIC TAGS: trypsin, protein, radiation injury, molecule,  
ultraviolet irradiation, X-ray irradiation, free electron,  
electron paramagnetic resonance, free radical

ABSTRACT: Two series of experiments were carried out to determine the validity of the hypothesis that longlived latent injuries in proteins may be related to their preservation of unpaired electrons. In earlier studies the author established that in irradiated and lyophilized pepsin solutions the latent injured molecules disappear with the EPR signals during the heat inactivation period, but he did not establish the number of free radicals in the system nor whether the latent injured molecules remain in the system when radicals are no longer found. In the first of the two experimental series, trypsin

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L 5947 B-65

ACCESSION NR: AP5010362

solutions were UV-irradiated, kept at  $3-4^{\circ}$  for 24 hrs, and dried. The number of free spins in the dry residue (40 mg samples) was determined by electron paramagnetic resonance (EPR-2 unit) and the number of latent injured molecules was determined by heat inactivation kinetics using methods described in earlier studies. In the second series, trypsin solutions were X-irradiated with a  $2 \times 10^5$  r dose, kept in ice water for 3 hrs, lyophilized, and analyzed by EPR. In the first series according to kinetic data the 40 mg sample (24,000 mol wt) is inactivated by 70% and contains  $2.4 \times 10^{17}$  latent injured molecules. If the radical mechanism of each latent injured molecule does contain one or more unpaired spins, the number of radicals found in the sample should have been at least  $2.4 \times 10^{17}$ . However, the EPR-2 unit with a sensitivity of  $5 \times 10^{12} - 1 \times 10^{13}$  spins per oersted did not register any signals characteristic of irradiated proteins. In the second series, the signals for 20 mg trypsin samples corresponded to  $2 - 5 \times 10^{15}$  radicals. The number of spins was determined using 2 chemical standards and the depth of the heat effect was also determined. Only 5-7% of the fixed number of radicals were related to the latent injured molecules in the second series. Moreover, after the samples were kept at room temperature for 48 hrs the EPR signals

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L 59478-65

ACCESSION NR: AP5010362

disappeared, but the heat effect was reduced insignificantly. Thus, the free radicals detected by EPR do not appear to be related to the heat effect observed in UV- and X-irradiation of trypsin solutions and do not explain the nature of latent injured molecules. Orig. art. has: 1 figure. 0

ASSOCIATION: Institut khimicheskiy fiziki AN SSSR, Moscow  
(Chemical Physics Institute AN SSSR)

SUBMITTED: 05Oct64

ENCL: 00

SUB CODE: LS

NR REF SOV: 005

OTHER: 001

Card

3/3

81402

S/020/60/132/06/24/068  
B011/B126

5.1190

AUTHORS: Agronomov, A. Ye., Luzikov, V. N.

TITLE: An Investigation of the Catalytic Properties of Pyrophoric  
Manganese ^

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 132, No. 6,  
pp. 1315 - 1318

TEXT: In order to obtain pyrophoric manganese black, the authors used the method described in Refs. 1, 2, 6, and 7. To do this, manganese amalgam was thermally decomposed in a vacuum. The amalgam is obtained by the electrolysis of an aqueous solution of manganese chloride on a mercury cathode. The manganese black produced is covered with absolute benzene in a vacuum, to preclude the introduction of air. The authors then tested the purity of the black obtained, while they used mercury with an  $Hg_{203}$  content as cathode in an additional experiment. Manganese obtained in the above manner is of high chemical activity. There is an exothermic reaction with ignition when a hydrogen-air mixture is drawn through a freshly produced

Card 1/4

81402

An Investigation of the Catalytic Properties of  
Pyrophoric Manganese

S/020/60/132/06/24/068  
B011/B126

sample. The authors have established from the roentgenograms of manganese black, that  $\alpha$ -manganese is produced on the decomposition of the amalgam, which crystallizes into a complicated cubic lattice of the type A-12 ( $a$ -parameter  $\approx 8.923 \pm 0.020 \text{ \AA}$ ). The authors say that this lattice is less tightly packed than in metallic manganese. The roentgenogram showed no lines of manganese oxide or its other compounds. As pyrophoric manganese is oxidized by  $\text{H}_2\text{O}$ ,  $\text{CO}_2$ , and even  $\text{CO}$ , as well as by oxygen, the

authors have restricted themselves to the hydrogenation and dehydrogenation of hydrocarbons. A continuous system with an automatic filling device was used for the experiments. 23-23.5 ml of manganese black was brought into the tube without being touched by air. Benzene and air were removed from the system at low temperature for two hours by deoxidized hydrogen. Cyclohexene was dehydrogenated at  $320-400^\circ\text{C}$ . The gaseous products analyzed on the BTI-(VTI) device contained, apart from 98.5-99.5% hydrogen, 0.5-1.5% saturated hydrocarbons. The ultraviolet absorption spectra of the catalyst showed, apart from the cyclohexene used, the presence of benzene. Cyclohexadiene frequencies were not present. The activity of the catalyst was not stable during the first

Card 2/4

81402

An Investigation of the Catalytic Properties of  
Pyrophoric Manganese

S/020/60/132/06/24/068  
B011/B126

four or five experiments. Only in later ones were reproducible results obtained (Table 1). From this it follows that hydrogen does not form on manganese black only by dehydrogenation of the cyclohexene. The stabilized catalyst is far less active than a freshly produced one. The authors believe that no parallel, irreversible catalysis occurs here. The lattice of the catalyst was somewhat strengthened (according to roentgenogram) after eight experiments. There were no manganese oxide lines here, either. Thus newly produced manganese black not only catalyzes the dehydrogenation of cyclohexene, but also cracks it. Manganese carbide, and an additional quantity of hydrogen are formed. Cyclohexane is negligibly dehydrogenated at 440-500°C, forming cyclohexene. Ethyl-benzene is partially cracked between 300 and 450°C. Carbon and hydrogen are formed. Neither benzene nor cyclohexene are hydrogenated between 150 and 215°C. There are 1 table and 13 references: 5 Soviet, 1 German, 1 French, 1 British, and 1 US. 4

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

PRESENTED: February 11, 1960, by A. A. Balandin, Academician

Card 3/4

81402

An Investigation of the Catalytic Properties of  
Pyrophoric Manganese

S/020/60/132/06/24/068  
B011/B126

X

SUBMITTED: February 8, 1960

Card 4/4

GISS, A.N.; LUZIN, A.G.; KICHA, I.N.

Chelyabinsk Metallurgical Plant. Metallurg 9 no.11:15-16 H '64.  
(MIRA 18:2)

1. Chelyabinskiy metallurgicheskiy zavod i Chelyabinskiy  
institut ogneuporov.



BYKOVA, Anna Leonidovna. Prinsipali uchastiye: VEYSMAN, M.I. [deceased];  
LUZIN, A.L.; SHCHENKOV, S.A., prof., red.; MEDVEDEVA, R., red.  
izd-va; TELEGINA, T., tekhn. red.

[The theory of accounting] Teoriia bukhgalterskogo ucheta. Pod  
red. S.A. Shchenkova. Moskva, Gosfinizdat, 1962. 352 p.  
(MIRA 15:7)

(Accounting)

L 36393-66 EWT(d)/EWT(1)/EWT(m)/EWP(w)/T/EWP(t)/ETI IJP(c) EM/JD

ACC NR: AP6014032

SOURCE CODE: UR/0056/66/050/004/0926/0935

65  
64  
P

AUTHOR: Luzin, A. N.

ORG: Physicotechnical Institute of Tomsk State University (Fiziko-tehnicheskiy institut Tomskogo gosudarstvennogo universiteta)

TITLE: Certain problems in the dynamics of a crystal lattice and the theory of elasticity

SOURCE: Zhurnal eksperimental'noy teoreticheskoy fiziki, v. 50, no. 4, 1966, 926-935

TOPIC TAGS: crystal lattice, atom, waveguide, crystal decay, perturbation, elasticity theory

ABSTRACT: The following two problems of the dynamics of an infinite crystal were solved: a) two semibound crystal parts possess equal but opposite velocities perpendicular to the interface at the initial time (collision) and b) external forces act on the atoms of an arbitrary crystal plane. It was shown that the solutions, which are integrals of superpositions of plane waves, can be separated into decaying and nondecaying perturbations. The nondecaying perturbations have the form of "step-like" waves, and they are solutions of the problems in the elasticity theory. The decaying perturbations are a refinement of the macroscopic theory. They move with the velocities other than that of sound. Perturbations connected with inflec-

Card 1/2

L 36393-66

ACC NR: AP6014032

tion points of the dispersion curves decay the least. The relation between the problems considered and similar problems in the theory of frequency filters and diaphragm waveguides was noted. The author thanks V. A. Zhdanov for discussing the results of the work. Orig. art. has: 14 formulas. [Based on author's abstract] [NT]

SUB CODE: 20/ SUBM DATE: 14Jul65/ ORIG REF: 005/ OTH REF: 002/

Card 2/2 *MLP*

LUZIN, F.

A logging camp floats lumber. Sel' stroi. 13 no.8:17 Ag '58.  
(MIRA 11:9)

1.Direkto: Kuybyshevskogo lesopromkheza.  
(Lumber--Transportation)

LUZIN, I.F.

For high labor productivity in petroleum refining. Neft. khoz.  
34 no.12:1-7 D '56. (MIRA 10:8)  
(Labor productivity)  
(Petroleum--Refining)

LUZIN, I.F.

N/5  
740.161  
66

APPROVED FOR RELEASE: 06/20/2000

CIA-RDP86-00513R001031010004-1"

I.F.LUZIN

Planirovaniye truda i zarabotnoy platy v kontore burnity planning the work  
and wages in oil drilling. a practical handbook, by (ye. Grekulov I  
Grekulov Yevgeniy Fedorovich

Moskva, gostoptekhnizdat 1957

77 p. graph, tables

ORLOV, P.G., inzh.; LUZIN, I.L., inzh.; ABAKSHIN, D.M., inzh.

Designing an electric drive for universal crank presses. Vest.  
mashinostr. 42 no.8:37-38 Ag '62, (MIRA 15:8)  
(Power presses--Electric driving)

SOKOLOV, D.A.; LUZIN, I.L.; POMOGAYEV, V.A.; BAKHAREV, E.V.

Improved sizing technology. Tekst.prom. 25 no.11:42-44 N '65.  
(MIRA 18:12)

1. Nachal'nik laboratoriy Barnaul'skogo nauchno-issledovatel'skogo instituta tekstil'noy promyshlennosti (for Sokolov, Luzin).
2. Nachal'nik tkatskogo proizvodstva Barnaul'skogo melanzhevogo kombinata (for Pomogayev).
3. Vedushchiy konstruktor Barnaul'skogo nauchno-issledovatel'skogo instituta tekstil'noy promyshlennosti (for Bakharev).

*LUZINA, K.A.*

LUZINA, A.V., vrach; LUZIN, K.A., inzhener

Portable stroboscope. ~~est. oto-rin.~~ 19 no.1:94-96 Ja-F '57  
(MLRA 10:4)

1. Iz kliniki bolezney ukha, gorla i nosa (zav.-dotsent Yu. K. Korotkova) Yaroslavskogo meditsinskogo instituta.

(OTORHINOLARINGOLOGY, apparatus and instruments,  
laryngeal stroboscope) (Rus)



LUZINA, A.V., assistant; LUZIN, K.A., inzh.

Olfactometer based on the principle of ejection. Vest. otorin. 22  
no.1:79-81 Ja-F '60. (MIRA 14:5)

1. Iz kliniki bolezney ukha, gorla, nosa (zav. - dotsent Yu.K.  
Korotkova) Yaroslavskogo meditsinskogo Instituta.  
(PHYSIOLOGICAL APPARATUS) (SMELL)

LWZIN, L.E.

2

3298. HIGH PRODUCTIVITY OF LABOUR IN OIL REFINING. Lucia, I.E.  
(Nert. Khaz. (Oil Ind., Moscow), Dec. 1956, 1-7). A review of progress and  
suggestions for improvement in refineries. Among the means of improvement  
mentioned are increasing the size of units of plants, better organization and  
more automation in sampling and testing, loading and unloading of tankers and  
tanks, and better organization of repairs. (L)

Frank  
GMB  
mk

LUZIN, Nikolay Nikolayevich [deceased]; SRETENSKIY, L.N., otv.red.toma;  
LAVRENT'YEV, M.A., akademik, red.; GERMOGENOV, A.V., red.izd-va;  
SHEVCHENKO, V.G., tekhn.red.

[Collected works] Sbranie sochinenii. Moskva, Izd-vo Akad.  
nauk SSSR. Vol.3. [Studies on various problems in mathematics]  
Raboty po razlichnym voprosam matematiki. 1959. 505 p.  
(MIRA 12:8)

1. Chlen-korrespondent AN SSSR (for Sretenskiy).  
(Mathematics)

LUZIN, Nikolay Nikolayevich (1883-1950), akademik; NOVOSELOV, S.I.,  
otv. red.; GUBER, A., tekhn. red.

[Differential calculus] *Differentsial'noe ischislenie. Izd.5.,*  
Moskva, Sovetskaia nauka, 1955. 476 p. (MIRA 16:9)  
(Calculus, Differential)

*LUZIN, P.G.*

DOVGOPOL, V.I.; LUZIN, P.G.; PISARENKO, G.A., inzhener, retsentsent;  
DOBROTVOORSKIY, M.M., professor, retsentsent; BELYHSKIY, S.V., doktor  
tekhnicheskikh nauk, retsentsent; PYATNITSKIY, A.N. I. o. glavnogo  
redaktora; DUGINA, N.A., tekhnicheskij redaktor.

[Casting chilled-rim cast-iron wheels] Otlivka koles iz otbelennogo  
chuguna; opyt Uralvagonzavoda. Moskva, Gos.nauchno-tekhn.izd-vo ma-  
shinostroit. i sudostroit. lit-ry, 1953. 85 p. [Microfilm](MLRA 7:10)

1. Uralo-Sibirskoye otdeleniye Mashgiza (for Pyatnitskiy)  
(Wheels) (Iron founding)

ANAN'IN, Anatoliy Andreyevich; BRILAKH, Mikhail Mikhaylovich; CHERNO-  
BROVKIN, Viktor Petrovich; FILIPPOV, A.S., kand.tekhn.nauk,  
retsensent; MAKURIN, P.I., kand.tekhn.nauk, retsenzent; LUZIN,  
P.G., inzh., retsenzent; ZIMIN, V.M., inzh., retsenzent; ~~DOVINA,~~  
N.A., tekhn.red.

[Cupola furnace operator] Vagranshchik. Izd.2., dop. Moskva,  
Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1959. 175 p.  
(MIRA 12:12)

(Cupola furnaces)

CHERNOGOROV, Pavel Vasil'yevich; VASIN, Yuriy Petrovich; LUZIN, P.G., inzh.,  
retsenzent; TSAREVSKIY, B.V., inzh., retsenzent; SIDORENKO, R.A., kand.  
tekhn. nauk, red.; DUGINA, N.A., tekhn. red.

[Making castings with a smooth surface] Poluchenie otlivok s chistoi  
poverkhnost'iu. Moskva, Gos. izd-vo mashinostroit. lit-ry, 1961. 143 p.  
(MIRA 14:7)

(Founding)

TURLO, Aleksey Afanas'yevich, kuznets. LUZIN, P.G., inzh., retsenzent;  
ANTSIFEROV, Yu.G., red.; BOGOSLAVETS, N.P., tekhn. red.

[New developments in free forging] Novoe v svobodnoi kovke.  
Moskva, Gos. nauchno-tekhn.izd-vo mashinostroit. lit-ry,  
1961. 22 p. (Biblioteka rabochego-mashinostroitelia.  
Seria: Peredovaia tekhnika - osnova kommunisticheskogo  
truda, no.11) (MIRA 15:4)

1. Ural'skiy vagonostroitel'nyy zavod (for Turlo).  
(Forging)



VOLOSHCHENKO, Yuriy Iwanovich; ANBINDER, Aleksandr Danilovich;  
LUZIN, P.G., inzh., retsenzent; KOVALENKO, A.V., inzh.,  
red.; DUGINA, N.A., tekhn. red.

[Manufacture of bimetallic bushings] Izgotovlenie bimetal-  
licheskikh vtulok. Pod red. A.V.Kovalenko. Moskva, Mashgiz,  
1961. 35 p. (MIRA 15:4)  
(Laminated metals) (Bearing industry)

ANTONOV, Petr Georgiyevich, Geroy Truda; LUZIN, P.G., inzh.,  
retsenzent; OSIN, I.A., inzh., red.; DUGINA, N.A., tekhn.  
red.

[Advice to a young foundryman] Sovety molodomu liteishchiku.  
Moskva, Mashgiz, 1961. 53 p. (Biblioteka rabochego-  
mashinostroitelia. Serii: Peredovaia tekhnika - osnova  
kommunisticheskogo truda, no.5) (MIRA 15:7)  
(Founding)

LUZIN, P.M., Inzh.

Grinding process in a hammer mill. Teploenergetika 12 no.6:  
10-14 Je '65. (MIRA 18:9)

1. Tsentral'nyy kotloturbinnyy institut.

SOKOLOV, N.V., doktor tekhn. nauk; LUZIN, P.M., inzh.

Study of the motion of fuel in a hammer mill using a  
model. Energomashinostroenie 10 no.2:41-43 F '64.

(MIRA 17:6)

IRZIN, P.M., inzh.

Effect of moisture on the milling of Hazarovo coal in hammer mills.  
Teploenergetika 12 no.2:66-68 P '65.

1. Tsentral'nyy kotloturbinnyy institut.

(MIRA 18:3)

LUZIN, P.M., inzh.

Study of the wear of beaters made from different materials and  
alloys. Elek. sta. 36 no.1:21-23 Ja '65. (MIRA 18:3)

LUZIN, S.

23T105

USSR/Radio - Training  
Communications - Equipment

Sep 1946

"Well-equipped Classes," Lt Col S. Luzin, Engrs, 6 pp

"Voyenny Svyazist" No 9

This article is a general description of the training conducted by the Ger'kiy Radio School and the Nth Communications Unit, as they are supposed to be the ideal training units from the standpoint of completeness of equipment, type of courses, and quality of the instructors and instruction. Brief description of the class in radio-electro technique, class in electromechanics, class in radio stations, class for operators, class in radio for officers, etc.

23T105

LUZIN, V.I.

Gas supply to agriculture of the Bashkir ASSR. Gaz.prom. 6  
no.8:26-28 '61.

(MIRA 14:10)

(Bashkiria--Gas distribution)



RUZIN, V. I.

Economic efficiency of the combined preparation of petroleum  
in the field. *Naft. khoz.* 43 no. 5:26-30 My '65.

(MIRA 18:6)

KHAYRULLIN, A.Kh.; LUZIN, V.I.; SAMIGULLIN, A.S.

Compensation for expenditures on geological prospecting.  
Geol. nefi i gaza 6 no.2:23-27 F '62. (MIRA 15:2)

1. Bashkirskiy filial AN SSSR.  
(Petroleum industry—Accounting)

LUZIN, V.I.

Economic evaluation of the products of petroleum stabilization;  
a topic for discussion. Neft. khoz. 42 no.12:39-42 D '64  
(MIRA 18:2)

IUZIN, V.I.

Calculating the production of gasoline plants. Gaz. prom. 9 no.2:  
54-3 of cover '64. (MLPA 17:12)

LUZIN, Vasily Ivanovich; BRENTS, A.D., red.; DUBROVINA, N.D.,  
ved. red.; YAKOVLEVA, Z.I., tekhn. red.

[Economic efficiency of capital investments in petroleum  
production based on the example of the Urals and the Volga  
Valley] Ekonomicheskaya effektivnost' kapital'nykh vlo-  
zhenii v neftedobyvaiushchuiu promyshlennost'; na primere  
Uralo-Povolzh'ia. Moskva, Gostoptekhizdat, 1962. 130 p.  
(MIRA 16:4)

(Ural Mountain region--Petroleum industry--Finance)  
(Volga Valley--Petroleum industry--Finance)

LUZIN, V.I.

Certain economic indices in obtaining liquid products from petroleum  
(casinghead) gas. Gaz. delo no.8:47-50 '63. (MIRA 17:3)

1. Ufimskiy neftyanoy nauchno-issledovatel'skiy institut.

LUZIN, V.I.; SEGAL', S.Z.

Calculating the stabilization products of petroleum. Neft.  
khoz. 41 no.2:8-10 F '63. (MIRA 17:8)

LUZIN, Vasilii Ivanovich; DUBROVINA, N.D., ved. red.

[Economics of the field preparation of oil and the re-  
finement of oil-field gas] Ekonomika promyslovoi podgo-  
tovki nefti i pererabotki neftepromyslovogo gaza. Moskva,  
Izd-vo "Nedra," 1964. 141 p. (MIRA 17:7)



S/120/62/000/004/035/047  
E192/E382

AUTHORS: Luzin, V.N., Radkevich, I.A. and Sokolovskiy, V.V.

TITLE: An instrument for continuous measurement and recording of slowly-changing magnetic fields

PERIODICAL: Pribory i tekhnika eksperimenta, no. 4, 1962, 192 - 196

TEXT: A block schematic of the instrument is shown in Fig. 1. A permalloy pick-up (K.N. Shorin, Yu.N. Metal'nikov, G.M. Bozin and L.V. Yeregin, PTE, no. 4, 1958, 25) consisting of a thin permalloy wire 2 is situated inside a balancing coil 1; a signal coil 3 is also wound on the permalloy wire. The pick-up is situated inside an alternating magnetic field produced by means of an audio-generator 5 by using an additional coil 4; the field has an amplitude of 5 Oe and a frequency of 10 kc/s. The signal from the pick-up is applied to an electronic-control system 6, whose output voltage controls an automatic potentiometer 7, the balancing coil 1 being connected into the slide-wire circuit of the potentiometer. The balancing current of the coil 1 is controlled by the Card 1/2

S/120/62/000/004/035/047  
E192/E382

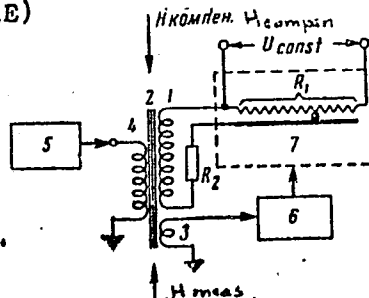
An instrument for ....

potentiometer and the balancing field is made equal to the measured field. A detailed description of the electronic-control circuit is given. The potentiometer is a laboratory instrument, type БП-102 ЦЛА (BP-102 TsLA). The instrument can measure the field with an error of  $\pm 0.03$  Oe. If its full-scale deflection is 4.5 Oe, the instrument can record fields varying at a rate of less than 4.5 Oe/sec. There are 5 figures.

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki GKAE (Institute of Theoretical and Experimental Physics, GKAE)

SUBMITTED: September 26, 1961

Fig. 1:



Card 2/2

24,6730

L07575

S/120/62/000/004/036/047  
E039/E420

AUTHORS: Luzin, V.N., Radkevich, I.A., Sokolovskiy, V.V.

TITLE: The change in field in C-magnets of the proton  
synchrotron after the completion of cycle

PERIODICAL: Pribory i tekhnika eksperimenta, no.4, 1962, 196-199

TEXT: The magnetic field in the interval between cycles is measured by means of a self-recording magnetometer using a permalloy probe. The operation of the magnetometer is based on automatic compensation of the measured fields. A description of the instrument is given. At a given moment of time  $t$  the measured value of the field  $B(t)$  is given by

$$B(t) = k_d I_d + kI(t) \quad (1)$$

where  $k_d$ ,  $k$ ,  $I_d$  and  $I$  correspond to calibration coefficients and currents in the auxiliary and compensating coils of the probe. Experimentally determined values of coefficients are  $k_d = 0.4256$  gauss/mA  $\pm 0.02\%$  and  $k = 0.54$  gauss/mA  $\pm 0.2\%$ . In order to measure the field at one point 5 to 10 cycles are required. An account of the method of measurement is given.  
Card 1/2

The change in field in ...

S/120/62/000/004/036/047  
E039/E420

It is shown that the value of

$$\Delta = \frac{B_{10} - B_{res}}{B_{res}} \cdot 100\%$$

✓

varies with the azimuthal distance  $\ell$  from the centre of the magnet block.  $B_{10}$  is the value of the field immediately before the beginning of a cycle when the cycling rate is 10 cycles/min.  $B_{res}$  is the residual field. At the edge of the magnet  $\Delta \sim +4.5\%$  and decreases practically to zero at the centre. With an increase in the maximum field in the cycle  $B_{res}$  and  $B_{10}$  decrease, the new value being established after 15 to 20 cycles. The mean square of the scatter of  $B_{10}$  from cycle to cycle does not exceed 0.04 gauss at the edge of the magnet and is less at the middle. The dependence of the field on cycling rate is also investigated. There are 2 figures.

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki  
GKAE (Institute of Theoretical and Experimental

SUBMITTED: March 31, 1962  
Card 2/2

Physics GKAE)

LUZIN, V. N.

6

10761

S/120/62/000/004/042/047  
E140/E420

74 6750  
AUTHORS: Barmin, V.V., Bysheva, G.K., Tumanov, G.K.,  
Agapkin, I.I., Andreyev, V.N., Veselov, N.A.,  
~~Gor'din, E.L.~~, Luzin, V.N., Radkevich, I.A.,  
~~Sokolovskiy, V.V.~~, Stadnikov, A.G.

TITLE: Investigation and correction of the horizontal  
component of the low-induction magnetic field of the  
proton synchrotron

PERIODICAL: Pribery i tekhnika eksperimenta, no.4, 1962, 223-229

TEXT: Permalloy probes modulated at 10 Kcs were used to measure  
the position of the neutral plane of the magnetic field. It was  
found that the distortion of the neutral plane in the residual  
field was determined mainly by the neutral pole. This distortion  
decreased as the excitation of the C-blocks was increased.  
Due to hysteresis effects, the measurements had to be carried out  
under operating conditions. A description of the probe and its  
associated circuits is given. The measurements show that 67 of  
the magnets have a deviation of the neutral plane in the range  
+ 0.5 mm, 16 magnets have 0.5 to 0.6 mm, 3 magnets 0.6 to 0.7 mm  
Card 1/2

Investigation and correction ...

S/120/62/000/004/042/047  
E140/E420

and 12 magnets  $\geq 0.7$  mm. The average error of measurement is  $\pm 0.17$  mm. The method of correcting the neutral plane errors by means of windings on the neutral poles is described. There are 11 figures. ✓

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki  
GKAE (Institute of Theoretical and Experimental  
Physics GKAE)

SUBMITTED: April 11, 1962

Card 2/2

LUZIN, V. N.

1:076h

24.6739

S/120/62/000/004/045/047  
E039/E420

AUTHORS: Sokolovskiy, V.V., Radkevich, I.A., Gol'din, L.L.,  
Kleopov, I.F., Kulakov, F.M., Luzin, V.N.,  
Mozalevskiy, I.A., Okorokov, I.S., Talyzin, A.N.,  
Trokhachev, G.V.

TITLE: The effect of changes in the regime of the proton  
synchrotron supply systems on the magnetic  
characteristics of the blocks

PERIODICAL: Pribory i tekhnika eksperimenta, no.4, 1962, 240-244

TEXT: Measurements are made of the effect on the field and  
gradient in the C and X-blocks at a level of 90 gauss when the  
final smoothing condensers are either disconnected or connected  
symmetrically or non-symmetrically; in addition, the case when  
the final smoothing condensers are in circuit but the primary  
smoothing condensers are reduced to one quarter of their usual  
value is examined. The effect of a shunting thyatron and  
resistance is also investigated. Changes in the value of the  
field caused by any of the above do not exceed  $\pm 0.6\%$  while the  
difference between blocks is about  $\pm 1\%$ . The effect of these  
Card 1/2

S/120/62/000/004/045/047  
E039/E420

The effect of changes ...

circuit changes on the rate of growth of the field covers the range +3.2 to -8.3% and for the difference between blocks +5.2 to -6.9%. Changes of the working range without altering the circuit produce significantly smaller effects than are produced by circuit changes, e.g. changes in the average field of separate blocks are 0.2 to 0.3% while the difference between their fields changes only by 0.02 to 0.05%. The introduction of an auxiliary control on the value of the residual field noticeably increases the accuracy of the results, i.e. error reduced to less than a half its previous value. There are 3 figures and 4 tables. ✓

ASSOCIATIONS: Institut teoreticheskoy i eksperimental'noy fiziki GKAE (Institute of Theoretical and Experimental Physics GKAE)  
Nauchno-issledovatel'skiy institut elektrofizicheskoy apparatury GKAE (Scientific-Research Institute of Electrophysical Apparatus GKAE)

SUBMITTED: April 11, 1962  
Card 2/2



LUZIN, V.N.; RADKEVICH, I.A.; SOXOLOVSKIY, V.V.

Apparatus for continuous measurement and recording of slowly  
varying magnetic fields. Prib. i tekh. eksp. 7 no.4:192-196  
Jl-Ag '62. (MIRA 16:4)

1. Institut teoreticheskoy i eksperimental'noy fiziki Gosu-  
darstvennogo komiteta po ispol'zovaniyu atomnoy energii SSSR.  
(Magnetic measurements)

LUZIN, V.M.; RADKEVICH, I.A.; SOKOLOVSKIY, V.V.

Variation in the magnetic field in the S-magnet of a proton  
synchrotron after completion of a cycle. Prib. i tekhn. eksp. 7  
no. 4:196-199 J1-Ag '62. (MIRA 16:4)

1. Institut teoreticheskoy i eksperimental'noy fiziki Gosu-  
darstvennogo komiteta po ispol'zovaniyu atomnoy energii SSSR.  
(Electromagnets) (Synchrotron)

SOKOLOVSKIY, V.V.; RADKEVICH, I.A.; GOL'DIN, L.L.; KLEPOV, I.F.;  
KULAKOV, F.M.; ~~LUZIN, V.M.~~; MOZALEVSKIY, I.A.; OKOROKOV, I.S.;  
TALYZIN, A.M.; TROKHACHEV, G.V.

Effect of variations in the power supply system of a proton  
synchrotron on the magnetic characteristics of its units.  
Prib. i tekhn. eksp. 7 no.4:240-244 J1-Ag '62.

(MIRA 16:4)

1. Institut teoreticheskoy i eksperimental'noy fiziki Gosu-  
darstvennogo komiteta po ispol'zovaniyu atomnoy energii SSSR  
i Nauchno-issledovatel'skiy institut elektrofizicheskoy  
apparatury Gosudarstvennogo komiteta po ispol'zovaniyu  
atomnoy energii SSSR.

(Electromagnets) (Synchrotron)

BARMIN, V.V.; BYSHEVA, G.K.; TOMANOV, G.K.; AGAPKIN, I.I.;  
VESELOV, M.A.; ANDREYEV, V.M.; GOL'DIN, L.L.; LUZIN, V.N.;  
RADKEVICH, I.A.; SOKOLOVSKIY, V.V.; STADNIKOV, A.G.

Study and correction of the horizontal component of the mag-  
netic field in a proton synchrotron on low densities. Prib.  
i tekh. eksp. 7 no.4:223-229 J1-Ag '62. (MIRA 16:4)

1. Institut teoreticheskoy i eksperimental'noy fiziki Gosu-  
darstvennogo komiteta po ispol'zovaniyu atomnoy energii SSSR.  
(Magnetic measurements) (Synchrotron)

LUZIN, V. P.

Luzin, V. P. - "On the problem of the state of geodetic studies of the region near the Caspian Sea in the light of new ideas and tasks of geodesy", (Report to the Scientific Conference of the Saratov State University, 1945), Uchen. zapiski (Sarat. gos. un-t im. Chernyshevskogo), Vol. XXII, Geography issue, 1949, p. 42-57

SO: U-4392, 19 August 53, (letopis 'Zhurnal 'nykh Statey, No. 21, 1949).

NEBOSKLONOV, A.; LUZIN, Yu.; SMIRNOV, A.

Making prestressed reinforced concrete girders. Bet. 1 zhal.-bet.  
no.10:476-477 0 '60. (MIRA 13:10)

1. Glavnyy inzhener Stroytresta No.4, Chernigov (for Nebosklonov).
2. Zamestitel' glavnogo inzhenera Stroytresta No.4, Chernigov (for Luzin).
3. Direktor zavoda zhelezobetonnykh izdeliy, Chernigov (for Smirnov).

(Girders)

LUZIN, Yu., inzh.; BELINSKIY, I., inzh.

Reinforced concrete crane girders with 12 spans under cranes  
with a 50-75 t. lifting capacity. Prom. stroi. i inzh. soor 5  
no.5:35-40 S-0 '63. (MIRA 16:12)

S/137/61/000/011/050/123  
A060/A101

AUTHORS: Okley, L. N., Lomsadze, D. M., Luzin, Yu. F.

TITLE: Pierceability of steel mark 20 as a function of temperature

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 11, 1961, 33, abstract  
11D197 ("Shromebi, Tr. Gruz. politekhn. in-t", 1959, no. 3(64)  
87-91)

TEXT: The effect of temperature upon the pierceability of steel mark 20  
was verified both under laboratory and plant conditions. On the basis of the  
experiments, a curve was constructed expressing the dependence of the critical  
reduction upon the temperature. The tendency of steel mark 20 to fracture under  
oblique rolling is reduced as the temperature increases. ✓

K. Ursova

[Abstracter's note: Complete translation]

Card 1/1



TETERIN, P.K.; LUZIN, Yu.F.

Developing a technology for the rolling of pipe made of low nickel-  
alloy stainless steels. Sbor. trud. TSNIICHM no.39:191-199 '65.

(MIRA 18:7)

L 00558-66

MJW/JD/HW

EWT(m)/EWP(w)/EWA(d)/T/EWP(t)/EWP(k)/EWP(b)/EWP(z)/EWA(c)

ACCESSION NR: AP5019945

UR/0133/65/000/008/0730/0734  
621.774.35

AUTHORS: Teterin, P. K.; Luzin, Yu. F.; Kats, G. I.; Kaufman, M. M.; Kukarskikh, V. N.

TITLE: Manufacture of stainless steel pipes with low nickel content

SOURCE: Stal', no. 8, 1965, 730-734

TOPIC TAGS: stainless steel pipe, stainless steel, steel alloy / EP53 steel, EP54 steel, OKh21N6M2T steel, OKh21N5T steel

ABSTRACT: The plastic properties and structure of new low-nickel alloys OKh21N5T (EP53) and OKh21N6M2T (EP54), recommended as substitutes for steels OKh18N9T and OKh18N12M2T, were investigated at TsNIICM; the technology of pipe rolling from these steels was developed and introduced at Novotrubnyy zavod. By hot twisting it was found that plasticity of the steels increased steadily with working temperature (1000-1250C) and rose sharply above 1200C. Thirty specimens were pierced at different temperatures (3 of each steel at 1050, 1100, 1150, 1200, 1250C), and impact strength and microstructure were investigated. It was found that the impact strength at room temperature decreased as piercing temperature increased,

Card 1/2

L 00558-66

ACCESSION NR: AP5019945

dropping sharply above 1200C (from 20 and 14 kgm/cm<sup>2</sup> at 1200C to 14 and 7 kgm/cm<sup>2</sup> at 1250C for EP53 and EP54 respectively) and that the grain size increased above 1200C. Thus for satisfactory mechanical and surface properties the working temperature should be kept at  $\approx$  1150C. Comparison of pressure on the rollers and power requirements between these steels and expensive alloys 1Kh18N9T and 1Kh18N12M2T showed these to be 30-40% lower (on the average) for the new alloys. After hot-rolling into 41 x 4.5-mm pipes (at 7° feed, roller speed 2.0 m/sec, wall thickness reduction 32%, drawing coefficient 1.8-1.85, final temperature 950-1000C) the alloy properties were found to be  $\sigma_B = 70.1, 63.0 \text{ kg/mm}^2$ ;  $\sigma_5 = 29.3,$

29.5%;  $a_k = 19.8, 16.1 \text{ kgm/cm}^2$  for EP53 and EP54 respectively after quenching from 1050C in water. Based on these results, technical parameters were defined for making pipes (ChMTU/UkrNITI No 313-61) and pipe blanks (ChMTU/TsNIChM No 569-61). After rolling 108 x 5.5 mm and 89 x 4.5 mm pipes under industrial conditions it was found that the best heat treatment consisted of 8-10 minutes at 970C and quenching in water (for both steels). Orig. art. has: 4 figures and 6 tables.

ASSOCIATION: TsNIChM (TsNIChM); Novotrubnyy zavod (New Pipe Plant)

SUBMITTED: 00 ENGL: 00 SUB CODE: MM, IE

NO REF SOV: 000

OTHER: 000

Card 2/2

NEBOSKLONOV, A.L.; LUZIN, Yu.M.

Nylon combine in Chernigov. Prom. stroi. i insh. soor. 1 no.1:18-  
21 0 '59. (MIRA 13:12)

1. Glavnyy inzhener tresta No.4, Chernigo (for Nebosklonov).
2. Zamestitel' glavnogo inshenera tresta No.4, Chernigov (for  
Luzin).

(Chernigov--Textile factories)