KHLATIN, S.A.; SINITSYN, S.G.; SVETLAYEVA, A.S., red.izd-va; GRECHISHCHEVA, V.I., tekhn.red.

[Timber stock of the R.S.F.S.R.; statistical abstract (based on the calculation of the timber stock as of January 1, 1961)] Lesnoi fond RSFSR; statisticheskii sbornik (po materialam ucheta lesnogo fonda na 1 ianvaria 1961 g.) Moskva, Goslesbumizdat, 1962. 627 p. (MIRA 16:10)

1. Russia (1917- R.S.F.S.R.) Glavnoye upravleniye lesnogo khozyaystva i okhrany lesa.
(Timber)

SINITSYN, S. I.

14-57-7-14283

Translation from: Referativnyy zhurnal, Geografiya, 1957, Nr 7, pp 12-13 (USSR)

AUTHORS: Kozlovskiy, B. A., Telyatnikov, P. I., Kapura, M. P., **Sinitsyn, S.I.**

TITLE: Colored Aerial Photographs Should be More Widely Used in Forest Operations (Shire primenyat' tsvetnuyu aerofotos"yemku pri lesoustroystve)

PERIODICAL: Leso. kh-vo, 1957, Nr 1, pp 19-21

ABSTRACT: The following conclusions can be drawn from the efforts of the Central Trust "Forest Project" intended to broaden the use of spectrozonal (colored) aerial photographs. The quality of aerial photographs will be improved if spectrozonal emulsions are used; this, in turn, will permit a more detailed analysis of the forest as it appears in the photograph (to determine the composition of the forest, chief tree types, etc.),

Card 1/2

SOKOLOV, Vasiliy Stepanovich, MATIN, S.D., nauchnyy red.; TOMOCHENKO, L.K., nauchnyy red.; YAKUBOVICH, T.S., nauchnyy red.; SINITSYN, S.N., nauchnyy red.; KORIKOVSKIY, I.K., red.; MEDVEDEV, L.Ya., tekhn.red.

[Detection of flaws in materials] Defektoskopiia materialov. Moskva, Gos.nerg.izd-vo, 1957. 239 p. (MIRA 11:2)
(Metals--Testing)

SINITSYN, S.N.

25(1) (6) PHASE I BOOK EXPLOITATION SOV/1279

Sokolov, Vasiliy Stepanovich, and Sergey Nikolayevich Sinitsyn

Ul'trazvuk v promyshlennosti (Ultrasonics in Industry) [Moscow] Moskovskiy rabochiy, 1958. 105 p. 17,000 copies printed.

Ed.: Gurov, S.; Tech. Ed.: Yakovleva, Ye.

PURPOSE: This booklet is intended for engineers and technicians working in the field of industrial ultrasonics.

COVERAGE: The booklet covers fundamental principles of ultrasonics and industrial applications of ultrasonics for such processes as: machining hard materials, non-destructive testing, checking of manufacturing processes, cleaning parts, measurement of velocity and flow of fluids, and other purposes. Various types of ultrasonic transducers and flow-detecting instruments are described. No personalities are mentioned. There are no references.

TABLE OF CONTENTS:

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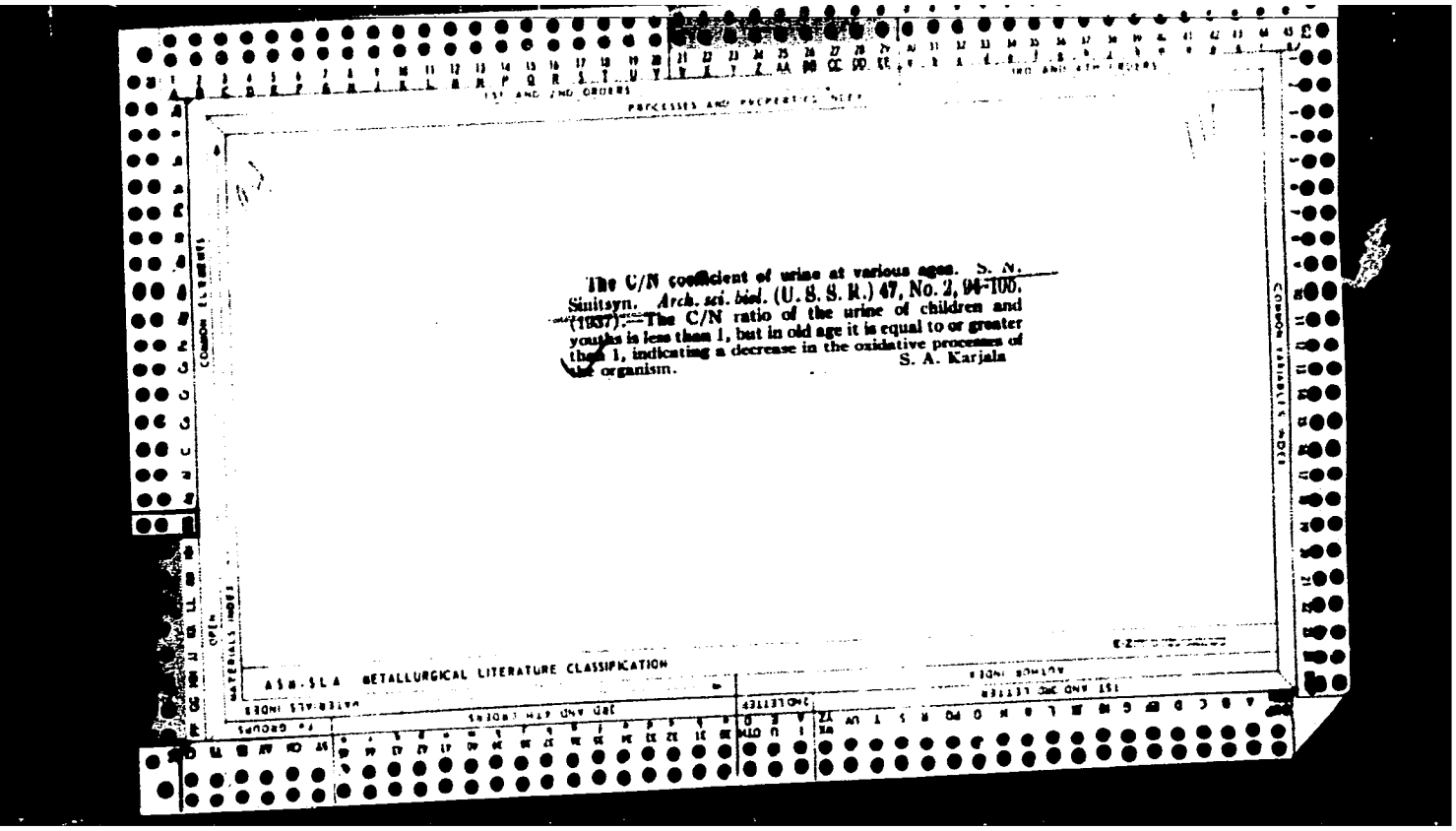
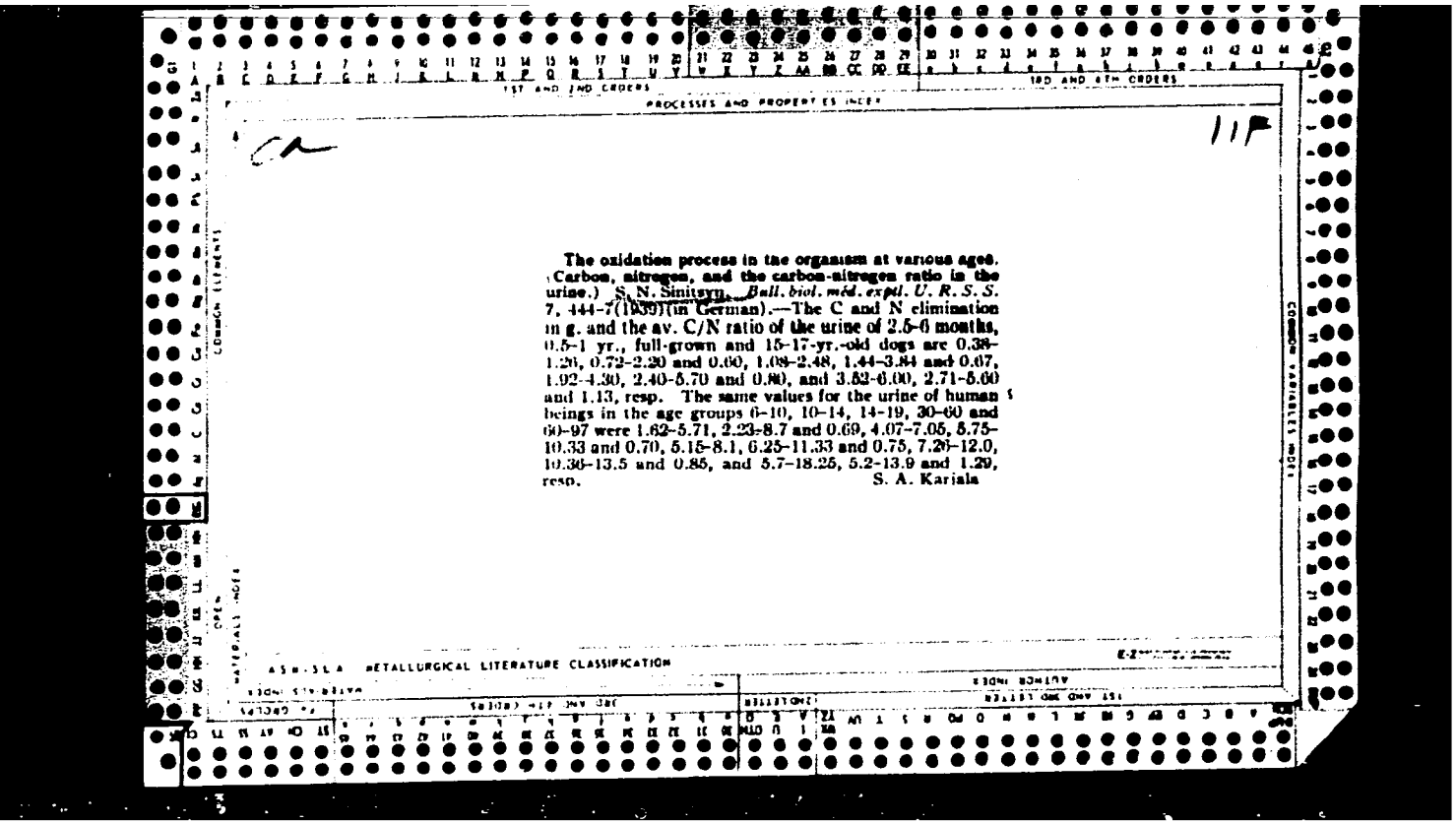
GERSHGAL, David Abramovich; FRIDMAN, Viktor Mironovich; NOVIK, G.K., red.; SINITSYN, S.N., red.; LARIONOV, G.ye., tekhn. red.

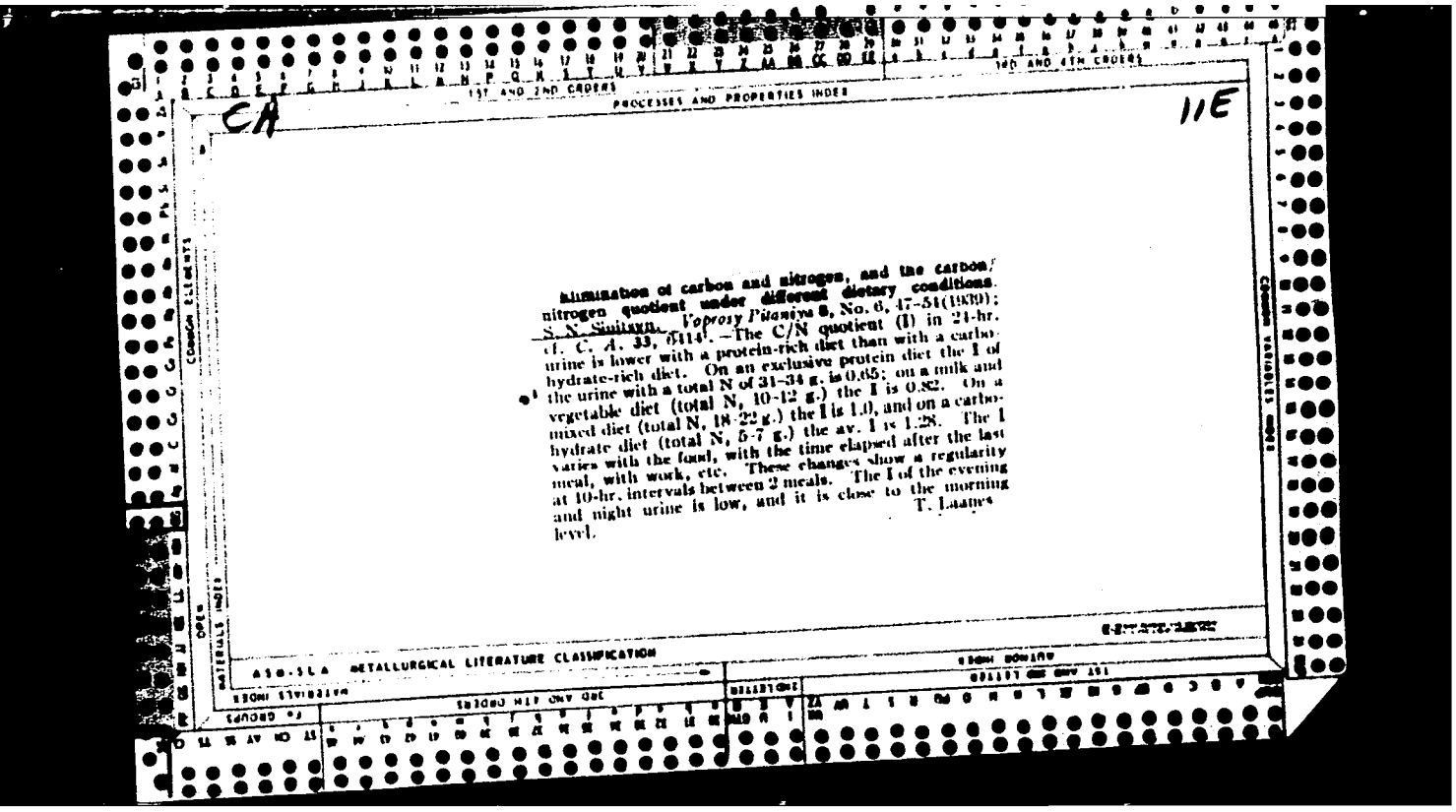
[Ultrasonic apparatus] Ul'trazvukovaia apparatura. Moskva, Gos. energ. izd-vo, 1961. 246 p. (MIRA 14:11)
(Ultrasonic waves—Industrial applications)



The C/N coefficient of urine at various ages. S. N. Siniitsyn. *Arch. sci. biol.* (U. S. S. R.) 47, No. 2, 94-100. (1937).—The C/N ratio of the urine of children and youths is less than 1, but in old age it is equal to or greater than 1, indicating a decrease in the oxidative processes of the organism.
S. A. Karjala



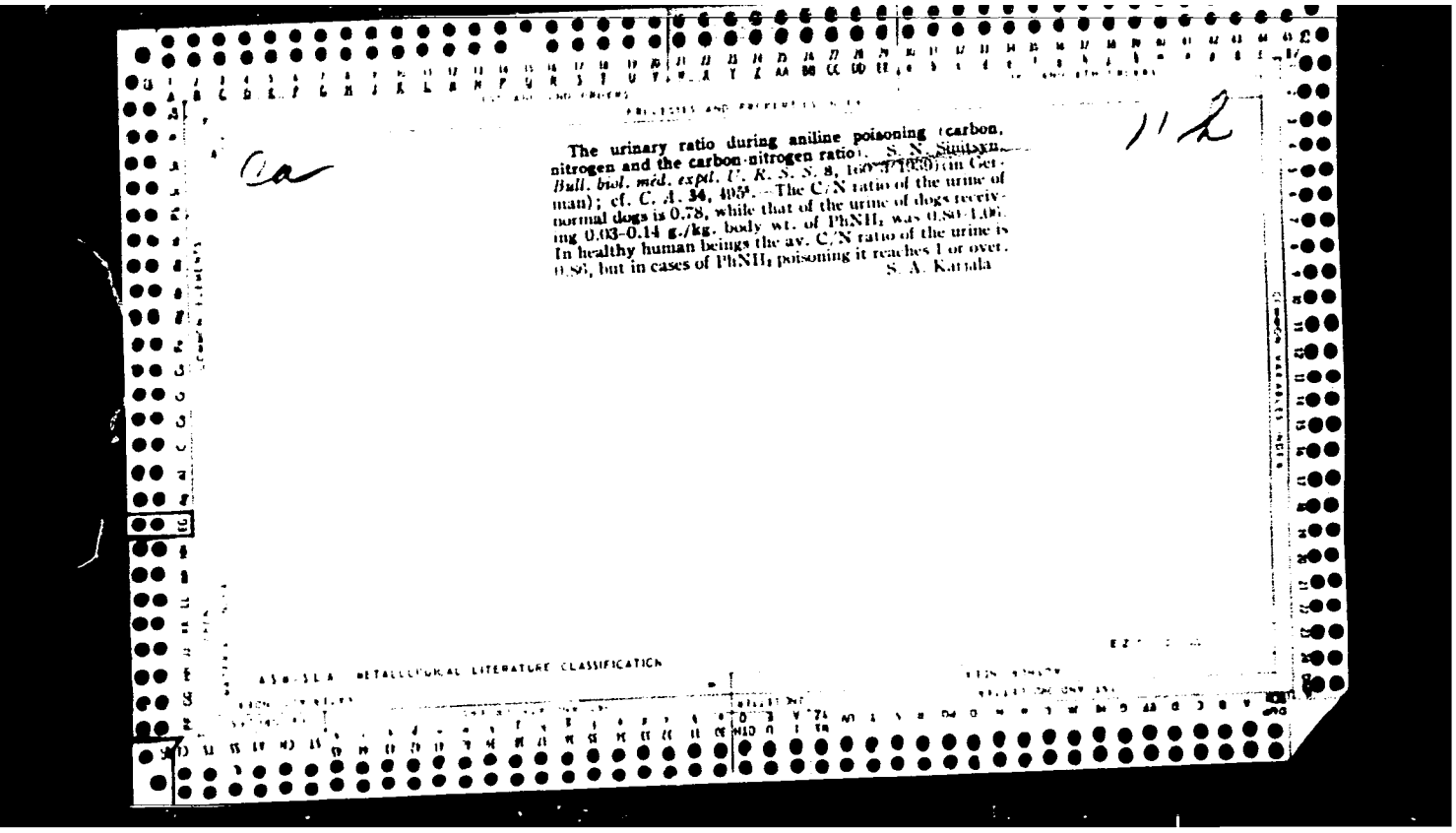
The oxidation process in the organism at various ages. Carbon, nitrogen, and the carbon-nitrogen ratio in the urine.) S. N. Sinitsyn. *Bull. biol. méd. expl. U. R. S. S.* 7, 444-7(1939)(in German).—The C and N elimination in g. and the av. C/N ratio of the urine of 2.5–6 months, 0.5–1 yr., full-grown and 15–17-yr.-old dogs are 0.38–1.26, 0.72–2.20 and 0.60, 1.08–2.48, 1.44–3.84 and 0.67, 1.92–4.30, 2.40–5.70 and 0.80, and 3.52–6.00, 2.71–5.00 and 1.13, resp. The same values for the urine of human beings in the age groups 6–10, 10–14, 14–19, 30–60 and 60–97 were 1.62–5.71, 2.23–8.7 and 0.69, 4.07–7.05, 5.75–10.33 and 0.70, 5.15–8.1, 6.25–11.33 and 0.75, 7.26–12.0, 10.36–13.5 and 0.85, and 5.7–18.25, 5.2–13.9 and 1.29, resp. S. A. Kariala



CA

11E

Elimination of carbon and nitrogen, and the carbon/nitrogen quotient under different dietary conditions. S. N. Sinitsyn. *Voprosy Pitaniya* 8, No. 6, 47–54(1939); cf. C. A. 33, 6414. —The C/N quotient (I) in 24-hr. urine is lower with a protein-rich diet than with a carbohydrate-rich diet. On an exclusive protein diet the I of the urine with a total N of 31–34 g. is 0.65; on a milk and vegetable diet (total N, 10–12 g.) the I is 0.82. On a mixed diet (total N, 18–22 g.) the I is 1.0, and on a carbohydrate diet (total N, 5–7 g.) the av. I is 1.28. The I varies with the food, with the time elapsed after the last meal, with work, etc. These changes show a regularity at 10-hr. intervals between 2 meals. The I of the evening and night urine is low, and it is close to the morning level. T. Laatsch

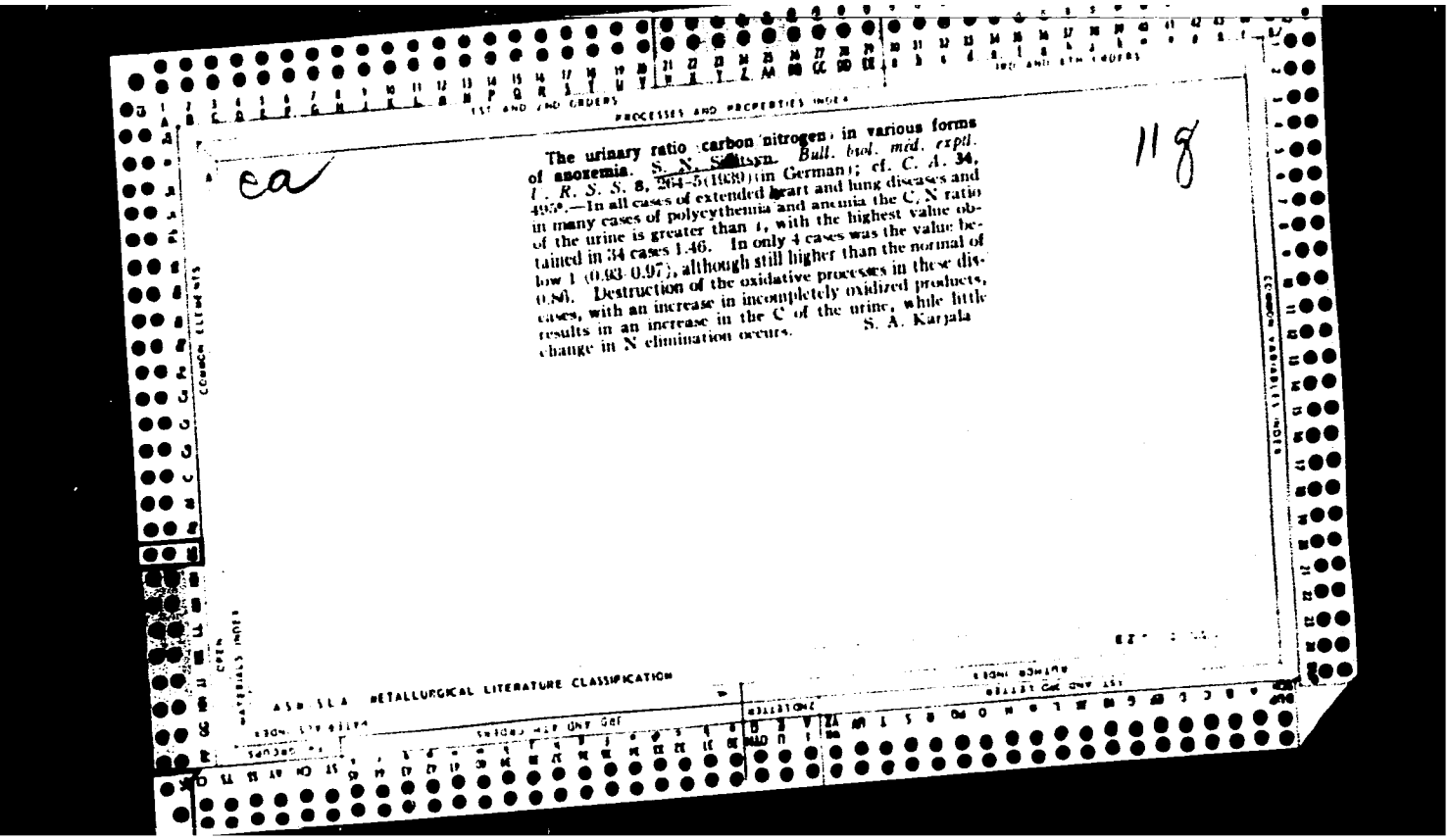


Ca

112

The urinary ratio during aniline poisoning (carbon, nitrogen and the carbon-nitrogen ratio). S. N. Simkova. *Bull. biol. méd. expl. U. R. S. S.* **8**, 169–71(1939)(in German); cf. *C. A.* **34**, 405⁹.—The C/N ratio of the urine of normal dogs is 0.78, while that of the urine of dogs receiving 0.03–0.14 g./kg. body wt. of $PhNH_2$ was 0.80–1.00. In healthy human beings the av. C/N ratio of the urine is 0.86, but in cases of $PhNH_2$ poisoning it reaches 1 or over.
S. A. Kanala

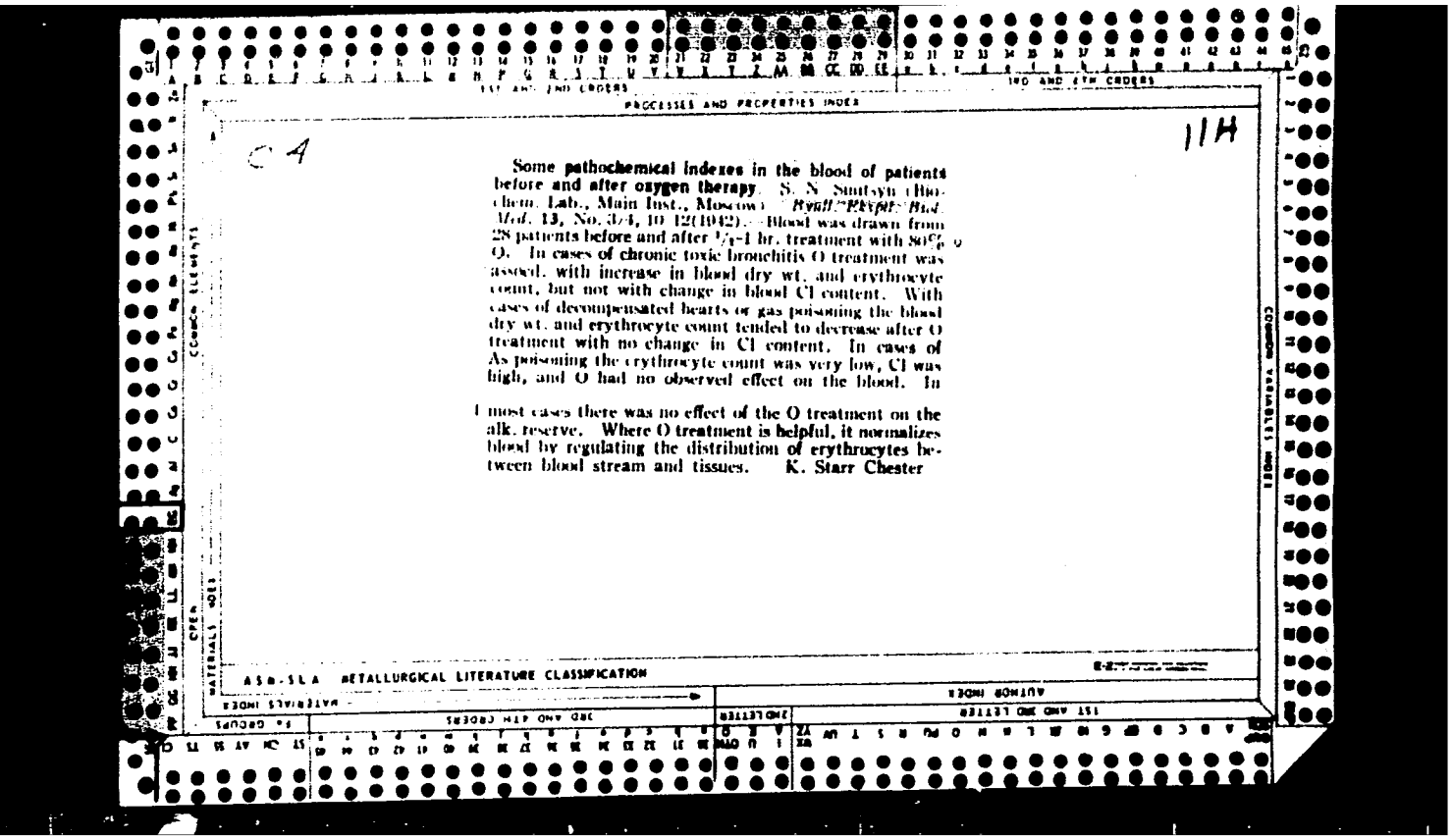
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



ea

118

The urinary ratio carbon nitrogen in various forms of anoxemia. S. S. Sittsyn. *Bull. biol. méd. expti. U. R. S. S.* 8, 284–5(1939)(in German); cf. *C. A.* 34, 4959.—In all cases of extended heart and lung diseases and in many cases of polycythemia and anemia the C, N ratio of the urine is greater than 4, with the highest value obtained in 34 cases 1.46. In only 4 cases was the value below 1 (0.93–0.97), although still higher than the normal of 0.86. Destruction of the oxidative processes in these diseases, with an increase in incompletely oxidized products, results in an increase in the C of the urine, while little change in N elimination occurs. S. A. Karjala



C 4

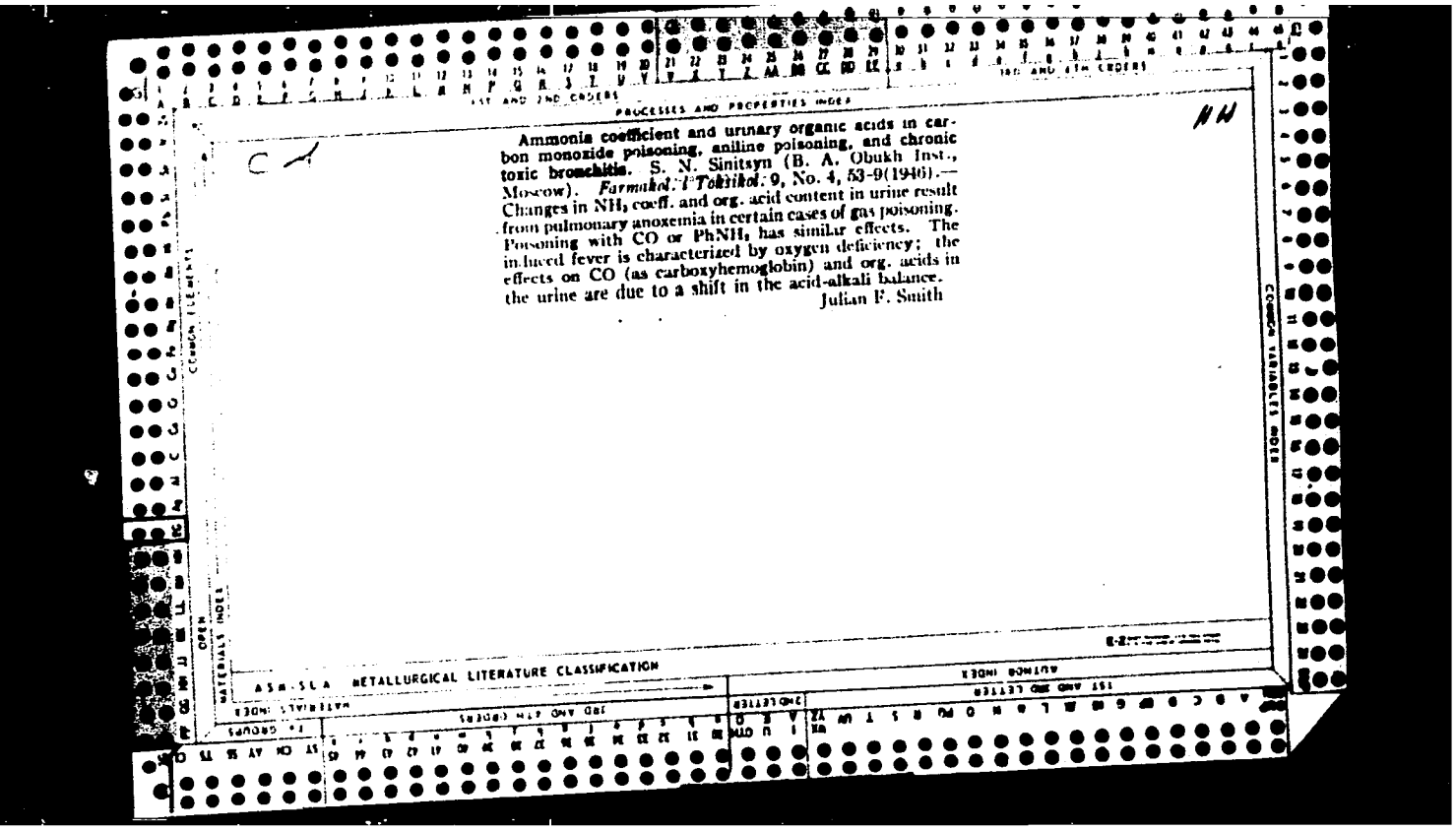
11H

Some pathochemical indexes in the blood of patients before and after oxygen therapy. S. N. Smirnyn (Biochem. Lab., Main Inst., Moscow). *Ryazh. Klinich. Med.* 13, No. 3/4, 10-12(1942).—Blood was drawn from 28 patients before and after ½-1 hr. treatment with 80% O. In cases of chronic toxic bronchitis O treatment was assocd. with increase in blood dry wt. and erythrocyte count, but not with change in blood Cl content. With cases of decompensated hearts or gas poisoning the blood dry wt. and erythrocyte count tended to decrease after O treatment with no change in Cl content. In cases of As poisoning the erythrocyte count was very low, Cl was high, and O had no observed effect on the blood. In most cases there was no effect of the O treatment on the alk. reserve. Where O treatment is helpful, it normalizes blood by regulating the distribution of erythrocytes between blood stream and tissues. K. Starr Chester

SINITSIN, S. N.

"Carbon Coefficient of Urine in Acute Aniline Poisoning," Farmakol. i Toksicol., 9, No. 2, 1946. Mbr., Biochemistry Lab., Inst. Ind. Hygiene & Occupational Diseases im. B. A. Obukh, -1946-.

"Ammoniacal Coefficient and Organic Acids of Urine in Poisonings with Carbon Oxide and Aniline and in Chronic Toxic Bronchitis," No. 4, 1946.



PROCESSES AND PROPERTIES INDEX

C-1

HH

Ammonia coefficient and urinary organic acids in carbon monoxide poisoning, aniline poisoning, and chronic toxic bronchitis. S. N. Sinitsyn (B. A. Obukh Inst., Moscow). *Farmakol. i Toksikol.* 9, No. 4, 53-9(1946).—Changes in NH_3 coeff. and org. acid content in urine result from pulmonary anoxemia in certain cases of gas poisoning. Poisoning with CO or $PhNH_2$ has similar effects. The induced fever is characterized by oxygen deficiency; the effects on CO (as carboxyhemoglobin) and org. acids in the urine are due to a shift in the acid-alkali balance.

Julian F. Smith

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

YELIZAROVA, O.N.; SINITSYN, S.N.; SHUR.R.L.; URANOVA, Ye.V.

Change in the higher nervous activity and other functions in animals under the influence of small concentrations of the components of explosive gases. Uch.zap.Mosk.nauch.-issl.inst. san. i gig. no.3:62-67'60. (MIRA 16:7)
(CONDITIONED RESPONSE) (GASES—TOZICOLOGY)

SINITSYN, S.N. (Moskva)

Changes in the cholinesterase activity of the blood serum of petroleum refinery workers. Gig. truda i prof.zab. 5 no.6: 22-26 Je '61. (MIRA 15:3)

1. Moskovskiy nauchno-issledovatel'skiy institut gigiyeny imeni F.F. Erismana.

(CHOLINESTERASE)
(PETROLEUM WORKERS--DISEASES AND HYGIENE)

SINITSYN, S.N.

Studying the toxicity of a phenol compound (dimethylphenyl-p-cresol). Uch. zap. Mosk. nauch.-issl. inst. san. i gig. no.9: 20-24 '61. (MIRA 16:11)

SINITSYN, S.N.

Change in cholinesterase activity under the influence of cyanides and alcohol acting separately and in combination. Farm. i toks. 24 no.5:540-541 S-O '61. (MIRA 14:10)

1. Moskovskiy nauchno-issledovatel'skiy institut sanitarii i gigiyeny imeni F.F.Erismana.
(CHOLINESTERASE) (CYANIDES)
(ALCOHOL--PHYSIOLOGICAL EFFECT)

GRUZDEVA, R. A.[deceased]; SINITSYN, S. N. (Moskva)

Working conditions for using dimethylphenyl paracresol as a plastic fixing agent for synthetic rubber. Gig. truda i prof. zab. no.3:12-16 '62. (MIRA 15:4)

1. Moskovskiy nauchno-issledovatel'skiy institut gigiyeny imeni F. F. Erismana.

(CRESOL) (RUBBER INDUSTRY--HYGIENIC ASPECTS)

SINITSYN, S.N.

Blood sugar change under the influence of cyanides and alcohol following their separate and combined action. Farm. i toks. 25 no.1:113-114 Ja-F '62. (MIRA 15:4)

1. Toksikologicheskaya i patofiziologicheskaya laboratoriya (zav. - prof. A.G. Bukhtiyarov) Moskovskogo nauchno-issledovatel'skogo instituta sanitarii i gigiyeny imeni F.Erismana.
(BLOOD SUGAR) (CYANIDES) (ALCOHOL--PHYSIOLOGICAL EFFECT)

SINITSYN, S.N.

Age sensitivity of rats to hydrogen sulfide. Farm. i toks. 25 no.2:232 Mr-Ap '62. (MIRA 15:6)

1. Toksikologicheskaya laboratoriya (zav. - prof. A.G. Bukhtiyarov) Moskovskogo nauchno-issledovatel'skogo instituta gigiyeny imeni F.F. Erismana.
(HYDROGEN SULFIDE--TOXICOLOGY)

SHITSKOVA, A.P., kand.med.nauk; Prinimali uchastiye: KALININA, K.A., kand. biolog.nauk; SINITSYN, S.N., kand. biolog. nauk; SHAROVA, M.A. mladshiy nauchnyy sotrudnik; VASIL'YEVA, O.I., mladshiy nauchnyy sotrudnik; YUN'KOVA, A.A., laborant.

Interrelation of vitamins A,D,C, and B_{12} and their effect on calcium phosphorus, and nitrogen metabolism in growing animals. Gig. sanit. 28 no.2:41-49 '63 (MIRA 17:2)

1. Iz Moskovskogo nauchno-issledovatel'skogo instituta gigiyeny imeni F.F. Erismana.

ACCESSION NR: AP4038143 S/0240/64/000/005/0044/0048

AUTHOR: Sinitsy*n, S. N.; Rumyantsev, G. I.; Voronova, K. V.

TITLE: Some changes in the carbohydrate metabolism caused by total-body vibration

SOURCE: Gigiyena i sanitariya, no. 5, 1964, 44-48

TOPIC TAGS: vibration, carbohydrate metabolism, sugar blood content, glycogen blood content, glykemic curve

ABSTRACT: Experiments were conducted with rabbits and dogs for 70—85 days. The rabbits were exposed to total-body vibration with amplitudes of 15, 20, and 200 μ and a frequency of 75 cps, and the dogs were exposed to total-body vibration with an amplitude of 750 μ and a frequency of 50 cps. The experimental data showed that a single exposure to total-body vibration with an amplitude of 200 μ and a frequency of 75 cps for a period of 4 hours decreased the amount of sugar and glycogen in the blood of the test animals. Repeated exposure to the same vibration resulted in a more significant decrease of the sugar and glycogen blood content in the test animals;

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ACCESSION NR: AP4038143

namely, the amount of sugar decreased by 18—27.5 mg% and glycogen by 1.4—3.25 mg%. These changes, however, were only temperary, and on the day following the exposure the sugar level returned to normal and the amount of glycogen returned to normal a little later. Repeated exposure (20 times) to vibration resulted in a decrease of the sugar level to 83—90 mg%; after 30 times to 82—85 mg%; and after 40 times to 74—85 mg%. The glycogen content of the blood decreased correspondingly to 11.5—9.7 mg%. In animals exposed 70 times to total-body vibration with an amplitude of 50 μ and a frequency of 75 cps, no marked changes in the blood content of sugar and glycogen were detected. In rabbits exposed to vibration with an amplitude of 15 μ and a frequency of 75 cps, no marked changes were observed either at a single exposure or at repeated exposures. The following results were obtained in experiments with dogs exposed to total-body vibration with an amplitude of 750 μ and a frequency of 50 cps: After a single exposure for a period of 4 hours, a slight

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ACCESSION NR: AP4038143

decrease of the sugar content in the blood was observed (82 mg% compared to normal 89.5 mg%). After repeated exposure to vibration (55 times), the sugar level in the blood of the dogs decreased to 62 mg%, while the sugar level in the control group remained at the normal amount of 80 mg%; the glycogen level in the test animals, after repeated exposure to vibration, decreased considerably. Experimental data indicate that the action of total-body vibration with an amplitude of 200 μ and a frequency of 75 cps caused changes in the glykemic curves and a reduction in the sugar and glycogen blood contents in the test animals. Orig. art. has: 2 tables and 2 figures.

ASSOCIATION: Moskovskiy nauchno-issledovatel'skiy institut gigiyeny* im. F. F. Erismana (Moscow Scientific Research Institute of Hygiene)

SUBMITTED: 13Feb63 DATE ACQ: 05Jun64 ENCL: 00

SUB CODE: LS NO REF SOV: 002 OTHER: 001

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SINITSYN, S.N.

Oxygen consumption by the animal tissue under the effect of combinations of some gases. Farm. i toks. 27 no.4:470-471 Jl-Ag '64. (MIRA 17:11)

1. Moskovskiy nauchno-issledovatel'skiy institut gigiyeny imeni F.F. Erismana.

SINITSYN, S.P.

Synoptic conditions in the Southern Ocean during the whaling period in the summer of 1961-1962. Trudy TSIP no. 37:94-100 '64. (MIRA 17:9)

SINITSYN, S. T.

*Emission of Zinc from Brass Due to Electron Impact. G. I. Pokrovskiy and S. T. Sinitsyn (Zhur. Eksper. i Teoret. Fiziki (J. Exper. Theoret. Physics), 1938, 8, 1174-1177; C. Abs. 1930, 33,7660).- (In Russian) A thin brass plate was subjected to electron bombardment in a vacuum tube. In the initial stages, when zinc is lost from near the surface, the temperature of the plate remains constant; when the electrons must penetrate farther into the plate to effect zinc atom emission, the temperature of the plate increases by several hundred degrees.

SOV/64-59-6-2/28

25(5)

AUTHORS: Karpov, V. L., Malinskiy, Yu. M., Mitrofanova, L. V., Sinitsyn, S. T., Finkel', E. E., Fridman, A. S., Cherntsov, S. M.

TITLE: Increase in the Thermostability of the Polyethylene Insulation of Cables by Means of Exposure to Ionizing Radiation

PERIODICAL: Khimicheskaya promyshlennost', 1959, Nr 6, pp 463 - 474 (USSR)

ABSTRACT: The thermostability of polyethylene can be increased by the action of ionizing radiations (Ref 1). Polyethylene exposed to a sufficiently large dose of radiation at 110-115° possesses properties similar to those of rubber (Ref 3). An investigation was made of the irradiation conditions and testing methods of cables (1 mm thick copper wire) insulated with polyethylene (type OKhK-501). The insulating material was exposed to γ-rays of Co^{60} (gamma plant "K-20000" (Ref 8)) with a capacity of 0.6-0.9 Mrad/h or to fast electrons from a linear accelerator of 1 Mev. The tensile strength of the exposed samples was tested by means of a dynamometer designed by V. A. Belynskiy, S. D. Prokudin, and B. I. Zverev at the Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physico-chemical Institute imeni L. Ya. Karpov). The thermostability of the irradiated samples was determined by means of an apparatus (Ref 10). At the same time, the dependence of the deformation on time was investigated at

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a definite load and a constant rate of temperature increase (50°C/h). The thermodynamic curves obtained (Figs 2-10), the tensile-strength coefficients (Table 1), and the data of electric resistance (Table) as well as data concerning the thermal aging of the irradiated samples permit the following statements: an irradiation of either of the two above-mentioned kinds permits an increase in the temperatures to which polyethylene insulations may be exposed. The optimum mechanical properties of the insulation were reached in the case of γ-irradiation in a vacuum with doses up to 100-150 Mrad and in the case of electrons in air during 2-4 minutes at a tension of 1 mgv or during 8 minutes at 0.6 mgv and a current density of approximately 15 $\mu a/cm^2$. The cables irradiated with the optimum dose operate without failure for some hours at temperatures up to 230-250°, some ten hours at 130°, and several hundred hours at 110°. The use of corresponding stabilizers may essentially lengthen the life of irradiated polyethylene insulation and increase the maximum working temperature. There are 10 figures, 3 tables, and 11 references, 7 of which are Soviet.

BRATKOV, Yu.; MORGUNOVA, G.; SINITSYN, V.

OS-4, 5 grain-cleaning machine. Tekh.v sel'khoz. 21 no.8:50-55 Ag '61. (MIRA 14:7)

(Grain--Cleaning)

21(8), 11(7), 21(3) SOV/89-7-4-25/28

AUTHORS: Simitsyn, V., Leshchinskiy, N., Gusev, A.

TITLE: A New Container for Radiation Sources of High Activity

PERIODICAL: Atomnaya energiya, 1959, Vol 7, Nr 4, pp 399 - 4oo (USSR)

ABSTRACT: The necessity arose of transporting high-activity radiation sources and also of filling them immediately from the transport containers. The containers hitherto used were destined for the transport radiation sources having an activity of 4oo gram equivalents of radium. From these containers the sources could be taken only in certain water-vessels, and therefore it was not possible to use them for immediately filling devices provided with a dry protective system. Therefore, a new type of containers was now developed, which is destined especially for the transport of high-activity radiation sources and for the direct filling of apparatus with radiation sources. In such a container it is possible simultaneously to transport up to 4 standard cobalt radiation sources having an activity of up to 7oo gram equivalents of radium. These containers consists of cast iron cases containing the principal lead shield and the mechanism for conveying the sources into the container, for keeping these

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sources in the container, and for discharging them. This mechanism may be controled from the upper part of the container. The sources are filled into the container under a protective shield of water in a basin. In order to avoid the accumulation of random impurities, the surface of the container has as few protruding parts as possible. The sources can be discharged under a protective shield of water or also immediately into the discharge channels of the apparatus by means of a dry shielding system. The container may be transported by means of ordinary conveyances. For this purpose, the case and the lead shield are constructed in such a manner that the dose rate of the radiation at a distance of 0.5 m from the container surface does not exceed 2.5 millicurie/sec. The container weighs about 1 ton. There are 2 figures.

SINITSYN, V.

Seminar on the Use of Isotopes and radiations in Industry and Medicine. Atom. energ. 19 no.4:410-412 O '65. (MIRA 18:11)

84237

S/089/60/009/004/017/020
B006/B070

21.8300
AUTHORS: Lokhanin, G., Sinitsyn, V.

TITLE: A Wash Cabinet

PERIODICAL: Atomnaya energiya, 1960, Vol. 9, No. 4, pp. 341 - 344

TEXT: The authors describe here a type of washing machine that is used for cleaning vessels, instruments, and small appliances which are radioactively contaminated and show α-, β-, or γ-activity. Photographs of the machine are shown in Figs. 1 and 2; the machine is manufactured in the Soviet Union, and is designated as type ШМ (ShM). "Shkaf moyechnyy". The cabinet consists of three separate chambers connected by flanges. It is 3,580 mm long, 825 mm broad, 2,320 mm high, and weighs in all 860 kg. Each chamber has a capacity of 0.4 m^3. The cabinet is made of stainless steel. The contaminated vessels and instruments are introduced into the first chamber (on the left in the photograph) through an antechamber, and are washed with special deactivating solutions (acids, lyes, etc.). Another washing with cold water is done in the second chamber. The waste water comes into a receptacle which can be hermetically sealed (Fig. 3).

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A Wash Cabinet

81237
S/089/60/009/004/017/020
B006/B070

Each time the washing is done in three tanks (two round, and one rectangular, 8 and 12 l in capacity). The vessels and instruments to be cleaned are brought from one chamber to another through doors. They are dried in the third chamber, and their radioactivity is checked with a "Tiss" dosimeter; they are then taken out of the wash cabinet through an antechamber. Ventilators remove the contaminated air in the chambers and bring in fresh air. The air removal is checked by a draft gauge of the type ТИМ-890 (TIM-890). The filter system, which has ФПП (FPP) filter material in the second stage, is described. The sump for waste water has a capacity of 10 liters and weighs 8 kg; it is designated as type 10КЖО (10KZhO). The used washing liquids are partly collected in it, and partly they get in the sewage through an overflow arrangement. For collecting solid waste material a container of the type КТО (KTO) of 10 l capacity and 8 kg weight is used (Fig. 4). There are 4 figures.

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SINITSYN, V.

Forty years. Zdorov'e 8 no.8:32 Ag '62. (MIRA 15:8)

1. Zamestitel' glavnogo redaktora zhurnala "Fizkul'tura i sport".
(PHYSICAL EDUCATION AND TRAINING--PERIODICALS)

SOV-69-58-4-8/18

AUTHORS: Kiselev, A.V., Kovaleva, N.V., Sinitsyn, V.A., Khrapova, Ye.V.

TITLE: Adsorbate-Adsorbate Interactions in Vapor Adsorption on Graphitized Carbon Blacks (Proyavleniye vzaimodeystviya adsorbat-adsorbat pri adsorbtsii parov na grafitirovannykh sazhakh)
2. Application of Adsorption Isotherm Equations for Description of Experimental Data (2. Primeneniye uravneniy izoterm adsorbtsii dlya opisaniya eksperimental'nykh dannykh)

PERIODICAL: Kolloidnyy zhurnal, 1958, Vol XX, Nr 4, pp 444-455 (USSR)

ABSTRACT: In the article, the equations of Reference 1 for the isotherms of mono- and polymolecular adsorption of vapors are applied to the description of the experimental isotherms of adsorption on graphitized carbon black. The adsorption of n-alkanes is described by the isotherm equations 1 and 4, which are similar to the equations of Langmuir and Brunauer-Emmett-Teller. The isotherm of cyclopeptan adsorption has two inflexion points and is described by equation 4. The experimental isotherms and adsorption heats of nitrogen, argon, and krypton vapors on the carbon black R-33, graphitized at 2,700° C. At a tempera-

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Adsorbate-Adsorbate Interactions in Vapor Adsorption on Graphitized Carbon Blacks. 2. Application of Adsorption Isotherm Equations for Description of Experimental Data

ture of -183° C, the pure initial adsorption heat is 0.8 kcal/mole. It has been found that the adsorption isotherms follow for values $\theta < 0.1$ the equation of Henry, from 0.1-0.5 the equation of Hill (2) and for higher values the equation of Langmuir. θ is the general degree of filling of the surface by the monolayer. Figure 1 shows that the adsorption isotherms for nitrogen vapors calculated according to Hill's equation coincide with the experimental values only to $\theta = 0.4$ and then incline downward. The Langmuir equation is applied for higher values. Figure 4 shows the adsorption heats of argon vapors and the adsorption isotherms calculated according to the equations 1 and 2. The pure initial adsorption heats amount to 0.7 kcal/mole. Figure 5 represents the experimental adsorption isotherms of krypton vapors at -183° C and -195° C from Reference 13 as well as the calorimetric adsorption heats at -183° C from Reference 15. The pure initial adsorption heat is 1.5 kcal/mole. It has been found that equation 3 corresponds well to the experimental data. Figure 7 shows the

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Adsorbate-Adsorbate Interactions in Vapor Adsorption on Graphitized Carbon Blacks. 2. Application of Adsorption Isotherm Equations for Description of Experimental Data

adsorption isotherms for nitrogen, argon, and krypton vapors at high vapor pressure values. In the case of nitrogen and argon at these values, polymolecular adsorption sets in. Equation 4 gives good results for nitrogen. For argon, the calculated values are higher. The adsorption isotherms of krypton have a step-shaped character. Equation 4 is used. Figure 8 shows the isotherm and the adsorption heat for SO_2 vapors at 0° C on carbon black sferon-6 graphitized at $2,700^\circ$ C. The pure initial adsorption heat is approximately equal to the condensation heat and reaches a maximum of 1.5 kcal/mole at a vapor pressure of 0.2. The experimental facts are well described by the equations 1 and 2. Figure 11 shows the isotherms and the adsorption heats for ammonia at -78.8° C and methylamin at 0° C. The ammonia isotherm has no inflexion point, whereas the methylamin isotherm has two inflexion points. Equation 4 and Hill's equation are applied to the experimental data. It has been established, that in the same measure as the adsorbate-adsorbent interactions decrease and the adsorbate-

Adsorbate-Adsorbate Interactions in Vapor Adsorption on Graphitized Carbon Blacks. 2. Application of Adsorption Isotherm Equations for Description of Experimental Data

adsorbate interactions relatively increase, the isotherms change their shape from convex at the initial part with single points of inflexion (n-alkanes) to initially concave, with two points of inflexion (nitrogen, argon, krypton, sulfur dioxide, methylamin, etc.) and to concave throughout with no inflexion (water).
There are 12 graphs, 1 table, and 29 references, 14 of which are Soviet and 15 English.

ASSOCIATIONS: Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova, Laboratoriya adsorbtsii (Moscow State University imeni M.V. Lomonosov, Laboratory of Adsorption)
Institut fizicheskoy khimii AN SSSR, Laboratoriya sorbtsionnykh protsessov (Institute of Physical Chemistry of the Academy of Sciences of the USSR Laboratory of Sorption Processes)

SINITSYN, V.A.; POLUDNIKOV, V.N.; GURVICH, V.B.; YEGOROV, V.M.; RETUYEV, V.I.

Design defects and improvement of PPM-10 drives. Prom. energ. 20 no.7:14-19 Jl '65. (MIRA 18:12)

1. Permskiy neftepererabatyvayushchiy zavod (for Sinitsyn).
2. Mariyskiy tsellyulozno-bumazhnyy kombinat (for Poludnikov).
3. Zavod "Elektroapparat" (for Gurvich, Yegorov, Retuyev).

SINITSYN, V. A.

SINITSYN, V. A. "Investigation of the possibility of Developing a Small Mine Gyrocompass." Min Higher Education USSR. Leningrad Order of Lenin and Order of Labor Red Banner Mining Inst. Leningrad, 1956. (Dissertation for the Degree of Candidate in Technical Science)

So: Knizhnaya Letopis', No. 18, 1956,

SINITSYN, V.A., starshiy nauchnyy sotrudnik.

New mine surveying instrument, small MG gyrocompass for mines. (MIRA 10:10)
Ugol' 32 no.9:38-39 S '57.

1.Vsesoyuznyy nauchno-issledovatel'skiy marksheyderskiy institut.
(Mine surveying) (Gyrocompass)

SINITSYN, V.A., kand.tekhn.nauk

Small surveying gyrocompass. [Trudy] VNIMI no. 33:62-75 '58. (MIRA 14:5)

(Mine surveying--Instruments) (Gyrocompass)

Sint Tsyn, U.A.

3(5) PHASE I BOOK EXPLOITATION SOV/2682

Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy neftyanoy institut

Voprosy poiskov, razvedki i dobychi nefti i gaza na territorii USSR; doklady na vyezdnoy sessii uchenykh sovetov VNIGRI i VNII, prokhodivshey v g. L'vove v maye 1957 g. (Problems in the Exploration and Production of Oil and Gas in the Ukrainian SSR; Reports Presented at a Session of the Scientific Councils of the All-Union Petroleum Scientific Research Institute for Geological Survey and the All-Union Scientific Research Institute, in L'vov, May 1957) Moscow, Gostoptekhizdat, 1959. 282 p. 1,000 copies printed.

Additional Sponsoring Agency: USSR. Ministerstvo geologii i okhrany nedr.

Eds.: I. O. Brod, V. V. Glushko, and A. S. Morozova; Executive Eds.: E. E. Tongina, and L. I. Zavitkaya; Tech Ed.: I. O. Fedotova.

PURPOSE: This book is intended for petroleum geologists and Ukrainian area specialists.

COVERAGE: This book contains 27 reports originally read at a meeting of the scientific councils of the VNIGRI (All-Union Petroleum Scientific Research Institute for Geological Survey), the VNII (All-Union Scientific Research Institute), the Vilkul', Ukrgaz, Ukrnefteprovodstroy, Ukrnefteprovodremstroy, and Ukrnefteprovodtrest held in L'vov in May 1957. The papers deal with the petroleum geology of the Dnepr-Donets Depression, the Carpathians, Ciscarpathia, the southwestern prong of the Russian Platform, and the northern Black Sea area. Particular attention is given to describing the geological features of those regions most likely to bear oil. Other articles discuss oil production techniques and ways of increasing drilling speed in deep wells. No personalities are mentioned. References accompany individual articles.

SINITSYN, V.A., kand. tekhn. nauk; SMIRNOV, A.S., inzh.

Dip needle for surveying frozen vertical holes in shaft sinking. Shakht. stroi. 7 no.8:11-13 Ag '63. (MIRA 16:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy marksheyderskiy institut.

L 1343-66 EWT(d)/EWT(l)/EED-2 GW/JT/BC

ACCESSION NR: AP5020912 UR/0006/65/000/008/0015/0021
528.517

AUTHOR: Borodulin, G. I.; Sinitsyn, V. A.; Popov, I. A.; Mal'tsev, B. N.; Plyushchev, A. N.

TITLE: Results of tests of a prototype of the TD-1 optical range finder

SOURCE: Geodeziya i kartografiya, no. 8, 1965, 15-21

TOPIC TAGS: geodetic instrument, range finder, geodimeter, TD 1 range finder, mining survey

ABSTRACT: Two prototypes of the TD-1 small optical range finder, originally developed in 1960 by the Vsesoyuznyy nauchno-issledovatel'skiy institut gornoy geomekhaniki i marksheyderskogo dela (All-Union Scientific Research Institute of Mining Geomechanics and Mine Surveying), to measure distances in the 150—5000-m range with a mean square error ±1.5 cm, were produced in 1963 and field tested in 1964 by the Electronics Instruments Laboratory of the Institute. Simultaneous testing was carried out with a Swedish NASM-4B geodimeter. Comparative measurements were made against those of the Institute's field comparator, highly precise traverse, second- and third-order triangulation, and invar wires. Subsequent field tests

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L 1343-66
ACCESSION NR: AP5020912

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were made by an interdepartmental commission set up by the USSR Administration of Measuring Instruments of the State Committee of Standard Measures and Measuring Instruments. Results of these tests showed these instruments to be highly precise. The mean square error of a single measurement for the first prototype was ±9 mm and for the second ±16 mm; the systematic error was +1 mm and +8 mm, respectively; and the mean value of the deviation of the number of waves computed from the total number of waves was ±0.02 for both prototypes. Orig. art. has: 2 figures and 5 tables. [ER]

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: ES, OP

NO REF SOV: 000 OTHER: 000 ATD PRESS: 4092

Card 2/2

SINITSYN, V. A. (Candidate of Technical Sciences)

"Gyroscope-type inclinometer for surveying vertical freezing wells."

report presented at the Scientific-technical Conference on Modern Gyroscope Technology Ministry of Higher and Secondary Special Education RSFSR, held at the Leningrad Institute of Precision Mechanics and Optics, 20-24 November 1962.

(Izv. vysshikh uchebnykh zavedeniy. Priborostroyeniye, v. 6, no. 2, 1963)

L 29821-66 EWT(d)/EWT(m)/EWP(w)/T/EWP(t)/ETI/EWP(k) IJP(c) JD/HW/EM

ACC NR: AP6010410 (A,N) SOURCE CODE: UR/0126/66/021/003/0452/0460

AUTHORS: Novikov, S. A.; Sinitsyn, V. A.; Ivanov, A. G.; Vasil'yev, L. V.

ORG: none

TITLE: Elastoplastic properties of a number of metals under destructive loadings

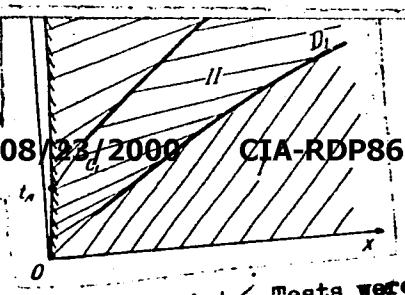
SOURCE: Fizika metallov i metallovedeniye, v. 21, no. 3, 1966, 452-460

TOPIC TAGS: elastic property, material testing, destructive testing, impact loading, elastoplasticity, shock wave, material flow, compression wave/ M1 copper, D1 aluminum alloy, D16 aluminum alloy, LS59-1 brass

ABSTRACT: The results of testing copper, brass, and two aluminum alloys under destructive loads are presented. The test method used is that described by A. G. Ivanov, S. A. Novikov, and V. A. Sinitsyn (FTT, 1963, 5, 269). The process of formation of a system of two compression waves (elastic and plastic) is shown in Fig. 1. The thin lines on the diagram are the characteristics of the process. D_1 and D_2 are respectively the first and second shock waves, t_A is the moment in time when the pressure on the surface of the specimen reaches a value corresponding to the adiabatic break-off point. II is the domain of constant flow. In the domains I and III the flow is completely determined by parts of the adiabatic above and below the break-off point. The limiting boundaries of domain II are the characteristics corresponding to

Card 1/3 UDC: 534.222.2/539.37

Fig. 1. Diagram of the flow in length-time coordinates for a system of two compression waves --elastic and plastic.



the two speeds of sound at the break-off point. Tests were conducted on specimens made of M1 copper, aluminum alloys D1 and D16 and LS59-1 brass. The time variation of the rate of deformation over very short time intervals is plotted in Fig. 2. In discussing the test results, the authors note that beyond the front of the elastic wave in the studied materials there occurs a more or less clear appearance of a domain of increased pressure in simple wave compression. This phenomenon is related to the flow limits of the materials and to the mechanical properties and deformation rates.

Card #2/3

L 29821-66

ACC NR: AP6010410

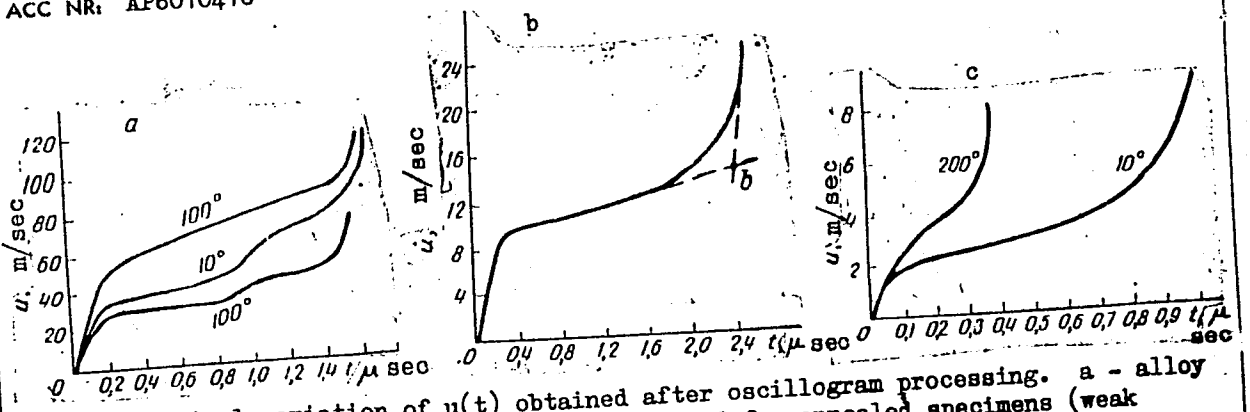


Fig. 2. Typical variation of u(t) obtained after oscillogram processing. a - alloy D16 (specimen height 30 mm); lower curves obtained for annealed specimens (weak plastic waves are visible), upper - tempered specimens; b - brass (specimen height 80 mm); c - copper (specimen height 30 mm).

Orig. art. has: 6 tables, 6 figures, and 3 equations.

SUB CODE: 11/ SUBM DATE: 29Apr65/ ORIG REF: 004/ OTH REF: 011

Card 3/3

BEREZIN, G.I.; KISELEV, A.V.; SINITSYN, V.A.

Heat capacity of the adsorption system silica gel - water. Dokl. AN SSSR 135 no.3:630-641 N '60. (MIRA 13:12)

1. Institut fizicheskoy khimii Akademii nauk SSSR. Predstavleno akad. V.I. Spitsynym.
(Heat capacity) (Silica)

BEREZIN, G.I.; KISELEV, A.V.; SINITSYN, V.A.

Dependence of the average molar heat capacity of an adsorbate on the differential heat of adsorption. Koll.zhur. 23 no.5: 638-639 S-O '61. (MIRA 14:9)

1. Institut fizicheskoy khimii AN SSSR, Gruppa khimii poverkhnosti, Moskva.
(Heat of adsorption) (Heat capacity)
(Systems (Chemistry))

BEREZIN, G.I.; KISELEV, A.V.; SINITSYN, V.A.

Heat capacity of the adsorption systems silica gel - water - benzene - n - hexane. Zhur.fiz.khim. 37 no.2:325-332 F '63. (MIRA 16:5)

1. Institut fizicheskoy khimii AN SSSR.
(Silica) (Benzene) (Hexane) (Heat of adsorption)

S/181/63/005/001/042/064
B108/B180

AUTHORS: Ivanov, A. G., Novikov, S. A., and Sinitsyn, V. A.

TITLE: Elastoplastic waves in iron and steel under blast

PERIODICAL: Fizika tverdogo tela, v. 5, no. 1, 1963, 269-278

TEXT: A method for the direct and continuous recording of the rate of movement of the free surface of a specimen under blast was developed earlier (A. G. Ivanov, S. A. Novikov. Pribory i tekhnika eksperimenta - Experimental equipment and techniques -). A special capacitor pickup is used, where the free surface of the sample acts as one of the capacitor plates. The possible types of elastoplastic waves are examined in the light of the Hugoniot P-V shock compression adiabates of the materials. The results obtained with Armco iron and several steels showed that the elastoplastic wave parameters depend on the material, length of sample and length of charge. The results agree with those of other publications (e.g. S. Minshall. Journ. Appl. Phys., 26, 463, 1955). The already known increase in yield point with loading rate (brisance of explosive) was observed. Pressure attenuation was observed in the front of the elastic

S/181/63/005/001/042/064
B108/B180

Elastoplastic waves in iron ...

wave as it passed through the specimens. There are 10 figures and 2 tables.

SUBMITTED: August 10, 1962

Card 2/2

SOV/16-60-3-5/37

17(2,12)

AUTHOR: Sinitsyn, V.A.

TITLE: Using the Indirect Hemagglutination Reaction for Detecting Botulin Toxins. I. Detecting Botulin Toxins Type A and B With the Indirect Hemagglutination Reaction (in Rytsai's Modification)

PERIODICAL: Zhurnal mikrobiologii, epidemiologii i immunobiologii, 1960, Nr 3, pp 22 - 27 (USSR)

ABSTRACT: The author studied the efficacy of the indirect hemagglutination reaction in Rytsai's modification as a method for rapidly detecting botulin toxin in food products or objects of the external environment. Using homologous and heterologous (diphtheria and tetanus) antisera, the method proved suitable for differentiating botulin toxin A from botulin toxin B. The method was more sensitive than tests with white mice and gives an answer in 3 1/2 - 4 hours. The method also needs improvement, since negative results are sometimes obtained with established botulin toxin, despite strict adherence to the method of performing the test. In determining an unknown concentration of botulin toxin, the erythrocytes must be sensitized with various doses of botulin antiserum. The optimum temperature for sensitization and

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Using the Indirect Hemagglutination Reaction for Detecting Botulin Toxins. I. Detecting Botulin Toxins Type A and B With the Indirect Hemagglutination Reaction (in Rytsai's Modification)

hemagglutination was 37°C. This increases the stability and sensitivity of the test and cuts the reaction time from the usual 2 1/2 to 1 1/2 hours. The optimum concentration of tannic acid for treating the sheep erythrocytes ranges from 0.2 to 0.1 °/oo. During sensitization of the treated erythrocytes the pH value should be maintained between 6.4 - 7.0. If allowed to rise to pH 7.2, the sensitivity of the reaction was cut by two. This, then, is a very specific method for differentiating botulines A and B.
There are: 2 tables, 2 diagrams and 1 Polish reference.

ASSOCIATION: Chitinskiy institut epidemiologii, mikrobiologii i gigiyeny (Institute of Epidemiology, Microbiology and Hygiene, Chita)

SUBMITTED: April 9, 1959

SOV/16-60-4-25/47

17 (2, 12)

AUTHOR: Sinitsyn, V.A.

TITLE: Using the Indirect Hemagglutination Reaction for Detecting Clostridium Botulinum Toxins. II. Modification of the Indirect Hemagglutination Reaction and Its Comparison With Other Tests Used to Detect Botulinum Toxin.

PERIODICAL: Zhurnal mikrobiologii, epidemiologii i immunobiologii, 1960, Nr 4, pp 102 - 107 (USSR)

ABSTRACT: Part I of the work was presented in Zhurnal mikrobiologii, epidemiologii i immunobiologii, 1960, Nr 3. Subject section deals with the author's modification of the indirect hemagglutination reaction and a comparison of its merits with other methods of detecing Cl. botulinum toxin, i.e. the biological test with mice, Rytsai's modification of the hemagglutination reaction and Minervin's method. The author's method was found to surpass all the other methods as to sensitivity. Minervin's modification enabled Cl. botulinum toxin to be detected in the liquid under study with a common salt concentration not exceeding 2%. With the author's modification, however, toxin could be detected in

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Using the Indirect Hemagglutination Reaction for Detecting Clostridium Botulinum Toxins. II. Modification of the Indirect Hemagglutination Reaction and Its Comparison With Other Tests Used to Detect Botulinum Toxin.

liquid with a salt concentration of up to 15%. Only 3 hours are required to determine a 1/8 MLD of Cl. botulinum toxin for white mice. There are 5 tables and 5 Soviet references.

ASSOCIATION: Chitinskiy institut epidemiologii, mikrobiologii i gigiyeny (Institute of Epidemiology, Microbiology and Hygiene, Chita)

SUBMITTED: September 11, 1959

Card 2/2

SINITSYN, V.A., mayor med.sluzhby

Use of the indirect hemagglutination reaction for detection of botulinus toxin. Voen.-med.zhur. no.10:65-68 O '61. (MIRA 15:5)

(CLOSTRIDIUM BOTULINUM) (MICROBIOLOGY)
(TOXINS AND ANTITOXINS) (BLOOD--AGGLUTINATION)

SHVARTSMAN, Ya.S.; SINITSYN, V.A.

Reactions of indirect hemagglutination. Zhur. mikrobiol., epid. i immun. 32 no.9:97-102 S '61. (MIRA 15:2)
(BLOOD--AGGLUTINATION)

SINITSYN, V.A.; SHVARTSMAN, Ya.S.

Reaction of indirect hemagglutination with preserved erythrocytes; preliminary report. Lab. delo 8 no.2:30-35 F '62. (MIRA 15:2)
(BLOOD--AGGLUTINATION) (ERYTHROCYTES)

SINITSYN, V.B.

SINITSYN, V.B., inzhener.

Experience operating "integral" type hydroelectric power stations. (MLRA 10:9)
Elek.sta.28 no.7:81-82 Jl '57.
(Hydroelectric power stations)

SINITSYN, V.D., kand.med.nauk

Effectiveness of filling teeth with inserts of various materials. Stomatologiia 40 no.2:7-11 Mr-Ap '61. (MIRA 14:5)

1. Iz kafedry ortopedicheskoy stomatologii (zav. - prof. V.Yu. Kurlyandskiy) Moskovskogo meditsinskogo stomatologicheskogo instituta (direktor - dotsent G.N.Beletskiy).
(DENTISTRY)

SINITSYN, V.D., kand.med.nauk

Clinical bases for constructing jointed bridge-like prostheses. Stomatologiia 41 no.4:75-79 Jl-Ag '62. (MIRA 15:9)

1. Iz kafedry ortopedicheskoy stomatologii (zav. - prof. V.Yu. Kurlyandskiy) Moskovskogo meditsinskogo stomatologicheskogo instituta.

(DENTAL PROSTHESIS)

STARSHINOV, B.N., knad.tekhn.nauk; SINITSKIY, V.D., inzh.; LAVRENT'YEV, M.L., inzh.; KOTEL'NIKOV, I.V., inzh.

Processes of deexidation and slag formation in blast furnaces operating on natural gas. Stal' 22 no.10:871-876 O'62. (MIRA 15:10)
(Blast furnaces)

SINITSYN, V. F.

Vliianie parametrov kryla na ves ego konstruktsii. (Tekhnika vozdushnogo flota, 1946, no. 10, p. 1-6, tables, diagrs.)

Title tr.: Effect of the parameters of a wing on the weight of its structural elements.

TL504.T4 1946

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

SINITSYN, V. G. Cand Tech Sci -- (diss) "Study of asymmetrical height rolling." Mos, 1958. 16 pp with graphs (Glavniiproyekt under Gosplan USSR. Central Sci Res Inst of Ferrous Metallurgy), 150 copies (KL, 36-58, 113)

(Copyright)

SINITSYN, V.G., inzh.

Production of rectilinear bimetallic strips on rolling mills having rolls of various diameters. Biul. TSNIICHM no.5:32-35 '58.
(Rolling (Metalwork)) (MIRA 11:5)

GOLOVANENKO, S.A.; CHERNOV, A.N.; SAPOZHNIKOV, V.M.; SINITSYN, V.G.; GULYAYEV, V.V.

Extrusion of bimetal shapes. Kuz.-shtam. proizv. 5 no.10: 7-9 O '63. (MIRA 16:11)

PHASE I BOOK EXPLOITATION SOV/5940

Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii.
Institut pretsizionnykh splavov

Pretsizionnyye splavy (Precision Alloys) Moscow, Metallurgizdat, 1959. 268 p.
(Series: Its: Sbornik trudov, vyp. 22) 2,150 copies printed.

Additional sponsoring Agency: USSR. Gosudarstvennyy planovyy komitet

Ed.: D. I. Gabrielyan; Ed. of Publishing House: Ye. I. Levit; Tech. Ed.:
P. G. Talant'yeva.

PURPOSE: This collection of articles is intended for technical personnel and scientific workers in the metallurgical, instrument-manufacturing, and electrical-equipment-manufacturing industries. It may also be useful to students of schools of higher technical education.

COVERAGE: This collection of articles presents the results of studies of precision alloys made in recent years by the Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii (Central Scientific Research Institute of Ferrous Metallurgy). Properties of metal alloys which can be soldered (soft or hard) with glass and ceramic materials and alloys used for making springs are discussed. Anomalies of electrical resistance and thermal expansion and the effect of irradiation on properties of alloys are considered. Problems connected with the determination of magnetic susceptibility and with rolling of bimetallic strips are reviewed. An analysis of alloys used in manufacturing high-temperature transducers and strain gages is presented. No personalities are mentioned. References follow several of the articles.

Ivanushkina, A. Z., and E. A. Solov'yeva. New Alloy for Instrument Parts 52

Kolesnik, A. S., E. P. Belova, and V. A. Sol'ts. Utilization of the 36KhNM Alloy for Making Drive Springs 57

Borodkina, M. M., Z. A. Golovanenko, and V. A. Sol'ts. Structural Transformation of the 40KhNKM Alloy in the Range of Hot-Deformation Temperatures 71

Borodkina, M. M., M. O. Mekhanov, and V. A. Sol'ts. On the Problem of Cold Working of the 40KhNKM Spring Alloy 81

Sol'ts, V. A., and Ya. Z. Rosin. Effect of Molybdenum on Properties of the 42KhNTYu (EI702) Alloy 91

Chemova, E. G. Elinvar Alloys Used for Elastic Sensing Elements 104

Borisova, A. K. The Modified 42KhNTYu (A) Alloy for Spiral (Hair) Springs for Watch Mechanisms 111

Fedotov, L. N., and V. I. Smirn. Investigation of the Dependence of Saturation Magnetization on the Loading of Iron-Nickel Alloys With Inver Composition 121

Kiniayn, V. G., and E. P. Gromov. Study of the Bending of Bimetallic Strips in Boiling 134

Semenova, E. V., and L. L. Zhukov. Methods of Short-Time Testing of Alloys Used for Electrical Heating Elements 150

Al'tgauzen, O. N., O.V. Lyubetskaya, and V. A. Sol'ts. Determination of Magnetic Susceptibility of a Thin Wire Made of Low-Magnetic Material 160

Artamonovskiy, M. A., S. S. Vasil'yev, G. V. Kozhalyayev, and Ya. P. Selisskiy. Effect of Pressure Irradiation on Electrical Resistance of Self-Ordering and Aging Alloys 168

Aprelev, I. L. On the Problem of the Nature of the K-state in Alloys 177

Polyutin, O. P. High-Ohmic-Resistance Alloy Used for Strain Gages 183

Polyutin, O. P. Alloys for High-Temperature Transducers 205

Semenova, E. V. On the Problem of the Electrical-Resistance Anomaly of the 81pr Alloy 226

Semenova, E. V., and M. A. Semenova. Electrical Properties of Nichrome and Iron-Chrome-Aluminum Alloys 248

Category ; USSR/Nuclear Physics - Nuclear Reactions C-5

Abs Jour : Ref Zhur - Fizika, No 3, 1957, No 6075

Author : Artsimovich, L.A., Andrianov, A.M., Dobrokhotov, YE.I., Luk'yanov, S.Yu., Podgornyy, I.M., Sinitsyn, V.I., Filippov, N.V.

Title : Hard Radiation from Pulse Discharges.

Orig. Pub : Atom. energyia, 1956, No 3, 84-87

Abstract : It was observed that high-power pulse discharges in light gases can be sources of hard radiation. In 1952 the authors detected neutron radiation accompanying pulse discharges in D_2. The discharges were carried out in cylindrical tubes 20 -- 40 cm in diameter, 50 -- 100 cm long. The current reached several hundreds of kiloamperes, and its rate of rise amounted to 5×10^{10} -- 1.5×10^{11} amp/sec. Silver targets were placed in paraffin blocks and scintillation counters were used to count the neutons. In discharge tubes with porcelain walls, neutron emission is observed if the initial pressure of D_2 ranges from 0.01 to 0.3 mm Hg, while in tubes with metal side-walls the emission is observed up to 10 mm. At a maximum

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Category ; USSR/Nuclear Physics - Nuclear Reactions C-5

Abs Jour : Ref Zhur - Fizika, No 3, 1957, No 6075

current 250 -- 300 kiloamperes and a D_2 pressure of approximately 0.1 mm Hg, the neutron y ield is approximately 10^7 -- 10^8 per discharge pulse and varies greatly from pulse to pulse. The neutron radiation is exceedingly sensitive to small impurities of foreign gases. The neutrons are emmitted in brief pulses at the instant when the discharge column experiences the second compression. Synchronized oscillograms of the current and the neutron yeild are given. Certain control experiments are described.

A high power pulse discharge is also a source of hard X-rays, occuring simultaneously with the neutrons and having energies up to 300 -- 400 kev. Certain possible explanations for the occurrence of hard radiations are given.

Card : 2/2/

Sinitsyn, V. I.

Category : USSR/Nuclear Physics - Nuclear Reactions C-5

Abs Jour : Ref Zhur - Fizike, No 3, 1957, No 6076

Author : Luk'yanov, S.Yu., Sinitsyn, V.I.

Title : Spectroscopic Investigation of High Power Pulse Discharge in Hydrogen.

Orig Pub : Atom. energiya, 1956, No 3, 88-96

Abstract : Description of an experimental spectroscopic investigation of a high power pulse discharge in hydrogen. The discharge was produced in a glass cylindrical chamber with inside diameter 185 mm, filled with hydrogen at a pressure 0.04 -- 5 mm mercury. The maximum discharge current reached 270 -- 300 kiloamperes, the duration of the first half cycle was approximately nine microseconds. The spectroscopic measurements were carried out in two methods: photographic and photoelectric. The ISP-51 spectrograph was used to photograph visible region of the discharge spectrum. The time variation of the intensity of the various spectral lines were recorded with the aid of a UM-2 monochromator with a special attachment containing a FEU-19M photomultiplier. Characteristic photographs of the spectrum

Card : 1/2

SINITSYN, V. I.

USSR/ Chemistry - Laboratory equipment

Card 1/1 Pub. 147 - 26/35

Authors : Aleksandrov, A. V.; Sinitsyn, V. I.; and Chmutov, K. V.

Title : Simple device for the control of cryostat temperature

Periodical : Zhur. fiz. khim. 30/1, 204-205, Jan 1956

Abstract : Description is given of a simple device for controlling the temperature of a cryostat by means of a cylindrical thermostat made of organic glass and placed on the cold transmitter. The accuracy of temperature stabilization accomplished by means of this device is 0.25°C. Three references: 2 USSR and 1 Israel (1953-1954). Drawing.

Institution : Acad. of Sc., USSR, Inst. of Phys. Chem., Moscow.

Submitted : October 27, 1955

AUTHORS: Leshchinskiy, N. I., Shtan', A. S., Sinitsyn, V. I. 32-11-59/60

TITLE: On the Problem of the Organization of Laboratories for Work With Radioactive Substances (K voprosu ob organizatsii laboratoriy dlya raboty s radioaktivnymi veshchestvami).

PERIODICAL: Zavodskaya Laboratoriya, 1957, Vol. 23, Nr 11, pp. 1396-1398 (USSR).

ABSTRACT: In the introduction to this article it is explained that the problem concerned has not been dealt with sufficient clearness in scientific publications. A publication with the title "Planning of Laboratories for Work with Radioactive Isotopes" by I. V. Malashenko is declared most descidedly to be at fault because it is based upon wrong and obsolete conceptions. The article mainly criticizes several measures mentioned in the publication by Malashenko, and the allegedly "correct measures" are given in order to be compared with the former. The article contains a sample plan for the laboratory concerned, from which it is possible to distinguish strictly between "contaminated rooms","passage rooms" and "pure (uncontamined) rooms". According to the plan the laboratory consists of the following parts: 1. A storage room for radioactive substances. 2. A repair room to deal with the "contaminated zone" from within. 3. Medical and dressing stations, shower baths, and rooms where clothes can be changed. 4.

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On the Problem of the Organization of Laboratories for Work With Radioactive Substances. 32-11-59/60

Washroom with special facilities for conveying "contaminated washing", and a device for taking over "pure (decontaminated) clothes". 5. A room for work carried out with little active substances with built-in chest of drawers. A "pure corridor" with doors leading to "pure rooms". 7. Emergency exit from the "contaminated zone". An automatic manipulating device for the transport and handing out of radioactive substances to the row of protective chambers ("boxes"), where work is carried out. It is pointed out in the article that the use of wooden material (also if painted) for boxes, chests, etc., in the "contaminated zone" is not permitted. Provision is made for thorough ventilation and corresponding filtering of rooms. Filters may be exchanged only on the "contaminated side". "Contaminated waste" must be examined as to the degree of their contamination, and must be removed and isolated. In conclusion it is said that planning of the sanitary installations is further studied and developed in various different forms to suit scientific institutes as well as technical and agricultural institutes.
There are 1 figure, and 3 Slavic references.

AVAILABLE: Library of Congress.

Card 2/2

FROLOV, Yu.S., otvetstvennyy red.; ZHAVORONKOV, N.M., red.; AGLINTSEV, K.K., red.; ALEKSEYEV, B.A., red.; BOCHKAREV, V.V., red.; LESHCHINSKIY, N.I., red.; MALKOV, T.P., red.; SINITSYN, V.I., red.; POPOVA, G.L., red.; NOVICHKOVA, N.D., tekhn.red.

[Obtaining isotopes. Heavy gamma-units. Radiometry and dosimetry. Proceeding of the Conference on the Use of Radioactive and Stable Isotopes and Radiation in the National Economy and in Science] Poluchenie izotopov. Moshchnye gamma-ustanovki. Radiometriia i dozimetriia; trudy Vsesoiuznoi nauchno-tekhnicheskoi konferentsii po primeneniiu radioaktivnykh i stabil'nykh izotopov i izlucheniĭ v narodnom khoziaistve i nauke. Moskva, Izd-vo Akad.nauk SSSR, 1958. 293 p. (MIRA 11:6)

1. Vsesoyuznaya nauchno-tekhnicheskaya konferentsiya po primeneniyu radioaktivnykh i stabil'nykh izotopov i izlucheniĭ v narodnom khozyaystve i nauke. 1957.
(Isotopes) (Gamma rays--Equipment and supplies) (Radiation--Dosage)

KOMEL'KOV, V. S. and SINITSYN, V. I.

"A Piezo-Electric Method of Investigating a Strong Gas Discharge." (Work - 1952); pp. 234-242.

"The Physics of Plasmas; Problems of Controlled Thermonuclear Reactions." Vol. I. 1958, published by Inst. Atomic Energy, Acad. Sci. USSR.
resp. ed. M. A. Leontovich, editorial work V. I. Kogan.

Available in Library.

"[illegible] RADIATION RESEARCH"

by A. V. Sivergal, V. I. Sinitsyn

Report presented at the UN Atoms-for-Peace Conference, Geneva, 9-13 Sept 1958

SAVOSIN, I.V.

LUKYANOV, S. Y., SINITSYN, V. I. and KOGAN, V. I.

"Spectroscopic Investigations of Strong Pulse Discharges."

paper to be presented at 2nd UN Intl. Conf. on the peaceful uses of Atomic Energy, Geneva, 1 - 13 Sep 58.

Sinitsyn, G. I.

PHASE I BOOK EXPLOITATION SOV/1297

Vsesoyuznaya nauchno-tekhnicheskaya konferentsiya po primeneniyu radioaktivnykh i stabil'nykh izotopov i izlucheniy v narodnom khozyaystve i nauke, Moscow, 1957

Primeneniye izotopov. Moskhnyye gamma-ustanovki. Radiometriya i defektoskopiya; trudy konferentsii... (Isotope Production. Gamma-Radiation Facilities. Radiometry and Dosimetry; Transactions of the All-Union Conference on the Use of Radioactive and Stable Isotopes and Radiation in the National Economy and Science) Moscow, Izd-vo AN SSSR, 1958. 293 p. 5,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR; Glavnoye upravleniye po ispol'zovaniyu atomnoy energii SSSR.

Editorial Board: Prolov, Yu.S. (Resp. Ed.), Zhavoronkov, N.M. (Deputy Resp. Ed.), Aglintsev, K.K., Alekseyev, B.A., Bochkarev, V.V., Lebedinskiy, M.I., Malkov, T.P., Sinitsyn, V.I., and Popova, O.L. (Secretary); Tech. Ed.: Novichkov, N.D.

PURPOSE: This collection is published for scientists, technologists, persons engaged in medicine or medical research, and others concerned with the production and/or use of radioactive and stable isotopes and radiation.

COVERAGE: Thirty-eight reports are included in this collection under three main subject divisions: 1) production of isotopes 2) high-energy gamma-radiation facilities, and 3) radiometry and dosimetry.

TABLE OF CONTENTS:

LUK'YANOV, S.Yu.; SINITSYN, V.I.

Spectroscopic investigations of a high-power impulsive discharge in hydrogen. Fiz.sbor. no.4:71-73 '58. (MIRA 12:5)

1. Laboratoriya izmeritel'nykh priborov AN SSSR.
(Hydrogen--Spectra) (Electric discharges through gases)

AUTHORS: Luk'yanov, S. Yu., Sinitsyn, V. I. 56-34-4-1o/6o

TITLE: Spectroscopic Investigations of a Powerful Pulse Discharge in Hydrogen. II (Spektroskopicheskiye issledovaniya moshchnogo impul'snogo razryada v vodorode. II)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol. 34, Nr 4, pp. 849 - 855 (USSR)

ABSTRACT: The author investigates the spectral properties of the radiation of a hydrogen plasma of a gaseous discharge at low pressure at amperages unto 5.10^5 amperes by means of the method of the mirror unfolding. The method used here permits to investigate the discharge spectrum in the visible range. The experimental conditions were already previously described by the authors (Ref 1). The impulse device consisted of a capacitor battery with 86 μ F capacitance and of a discharge tube made of farfor. Also the determination of the development of the spectrum with respect to time is discussed in short. The image of the development of the spectrum with respect to time allowed a synchronisation with the course of the discharge current. A diagram illustrates

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Spectroscopic Investigations of a Powerful Pulse Discharge in Hydrogen. II

the development with respect to time of the discharge spectrographs for some particularly characteristic cases. The first 2 spectrographs refer to a discharge in pure hydrogen at the initial pressures p_0 = 0,05 and p_0 = 0,1 torr. Two further spectrographs refer to mixtures of 95 % H_2 + 5 % N_2 and 70 % H_2 + 30 % He. If the discharge takes place in pure hydrogen the lines of the admixture atoms occur only after the second compression. If the discharge, however, takes place in a mixture of hydrogen with helium or nitrogen in the moment of the maximum constriction of the plasma thread a short flashing of spectral lines in the spectrograph is observed, which is not characteristic of the following states of the discharge. These lines are to be ascribed to nitrogen or helium in relatively highly excited states. Altogether the totality of the obtained optical data gives an agreeing image of the phenomena which take place in a pulse discharge of high power. There are 5 figures, 2 tables, and 7 references, 5 of which are Soviet.

SUBMITTED: November 26, 1957

Spectroscopic Investigations of a Powerful Pulse Discharge in Hydrogen. II 56-34-4-10/60

1. Magnetohydrodynamic waves—Theory

Card 3/3

USPENSKIY, D.D.; SAVITSKIY, P.S.; SINITSYN, V.I.; SHTAN', A.S.; ANDREYENKO, Z.D., red.; MAZEL', Ye.I., tekhn.red.

[Manual on dosimeters, radiometers, electronic and physical instruments, counter tubes, scintillation counters, and photoelectric multipliers] Spravochnik po dozimetricheskim, radiometricheskim i elektronno-fizicheskim priboram, schetchikam, stsintilliatoram i fotoumnozhiteliam. Moskva, Izd-vo Glav.upr. po ispol'zovaniiu atomnoi energ., 1959. 252 p. (MIRA 12:5)

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye po ispol'zovaniyu atomnoy energii.

(Nuclear counters)

SINITSYN, V.I.

(4) PHASE I BOOK EXPLOITATION SOV/2713

International Conference on the Peaceful Uses of Atomic Energy. 2nd, Geneva, 1958

Doklady sovetskikh uchenykh; polucheniye i primeneniye izotopov (Reports of Soviet Scientists; Production and Application of Isotopes) Moscow, Atomizdat, 1959. 388 p. (Series: Its: Trudy, vol. 6) 8,000 copies printed.

Eds. (Title page): G.V. Kurdyumov, Academician and I.I. Novikov, Corresponding Member, USSR Academy of Sciences; Ed. (Inside book): Z.D. Andreyenko; Tech. Ed.: Z.D. Andreyenko.

PURPOSE: This book is intended for scientists, engineers, physicians, and biologists engaged in the production and application of atomic energy to peaceful uses; for professors and graduate and nongraduate students of higher technical schools where nuclear science is taught; and for the general public interested in atomic science and technology.

COVERAGE: This is volume 6 of a 6-volume set of reports delivered by Soviet scientists at the Second International Conference on the Peaceful Uses of Atomic Energy held in Geneva from September 1 to 13, 1958. Volume 6 contains 32 reports on: 1) modern methods for the production of stable radioactive isotopes and their labeled compounds, 2) research results obtained with the aid of isotopes in the field of chemistry, metallurgy, machine building, and agriculture, and 3) dosimetry of ionizing radiation. Volume 6 was edited by: S.F. Levinskiy, Candidate of Medical Sciences; V.N. Prusakov, Candidate of Chemical Sciences; and V.V. Sedov, Candidate of Medical Sciences. See Sov/2081 for titles of volumes of the set. References appear at the end of the articles.

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PHASE I BOOK EXPLOITATION SOV/2081

International Conference on the Peaceful Uses of Atomic Energy, 2d., Geneva, 1958

Doklady sovetskikh uchenykh; yadernaya fizika (Reports of Soviet Scientists; Nuclear Physics) Moscow, Atomizdat, 1959. 552 p. (Series: Its: Trudy, Vol. 1) 8,000 copies printed.

Eds. (Title page): A.I. Alikhanov, Academician; V.I. Veksler, Academician; and N.A. Vlasov, Candidate of Physical and Mathematical Sciences; Ed. of this volume: S.I. Drozdov and B.T. Zaretskiy, Candidates of Physical and Mathematical Sciences; Ed. (Inside book): O.L. Smolyan; Tech. Ed.: Ye.I. Mazel'.

PURPOSE: This collection of articles is intended for scientific research workers and other persons interested in nuclear physics. The volume contains 43 papers presented by Soviet Scientists at the Second Conference on Peaceful Uses of Atomic Energy, held in Geneva in September 1958.

COVERAGE: It is divided into two parts. Part I contains 17 papers dealing with plasma physics and controlled thermonuclear Reactions, and Part II contains 26 papers on nuclear physics, including problems of particle acceleration and of cosmic ray physics. The first paper by L.A. Artsimovich presents a review of Soviet work on controlled thermonuclear reactions. The remaining papers in Part I deal with particular problems in this field.

Papers in Part II deal in detail with various problems in nuclear physics, such as the fission of heavy atoms and their isotopes, and with the study of cosmic radiation by means of artificial earth satellites and rockets, described in a paper by S.N. Vernov. The Russian-language edition of the proceedings of the conference is published in 16 volumes. The first 6 volumes contain all the papers presented by Soviet scientists as follows: Volume (1), Yadernaya fizika (Nuclear Physics); Volume (2), Yadernyye reaktory i yadernaya energetika (Nuclear Reactor and Nuclear Power); Volume (3), Yadernoye goryucheye metally (Nuclear Fuel and Reactor Metals), Volume(4), Khimiya radioelementov i radiatsionnykh prevrashcheniy (Chemistry of Radioelements and of Radiation Transformations); Volume 5, Radiobiologiya i radiatsionnaya meditsina (Radiobiology and Radiation Medicine); Volume (6) Polucheniye i primeneniye izotopov (Production and Use of Isotopes). The other 10 volumes contain selected papers presented at the Conference by non-Soviet scientists. In the present volume discrepancies between the English and Russian language edition of the proceedings have been noted in three articles where the texts are not identical; viz; Andrianov, et al, "High Current Pulsed Discharge"; Akhiyezer, et al, "High Frequency Plasma Oscillation"; and Bogolyubov, "Investigations of the Many-body Problem". The serial numbers of reports 2302 and 2504 are reversed in the English edition. Report 2211, by Sinel'nikov, et al, is numbered 2536 in the English edition.

TABLE OF CONTENTS:

Reports of Soviet Scientists; Nuclear (Cont.) SOV/2081

Card 5/13

KURDYUMOV, G.V., akademik, red.; SINITSYN, V.I., red.; PANASENKOVA, Ye.I., red.; MAZEL', Ye.I., tekhn. red.

[Transactions. Selected reports by foreign scientists] Trudy. [Izbrannye doklady inostrannykh uchenykh] Moskva, Izd-vo Glav. uprav. po ispol'zovaniiu atomnoi energ. pri sovete Ministrov SSSR. Vol.10. [Production and use of isotopes] Poluchenie i primenenie izotopov. Pod obshchei red. G.V.Kurdiumova. 1959. 603 p. (MIRA 14:7)

1. Vtoraya mezhdunarodnaya konferentsiya po mirnomu ispol'zovaniyu atomnoy energii, Zheneva, 1958.

(Radioisotopes)

21(7), 24(7) SOV/56-36-6-2/66

AUTHORS: Luk'yanov, S. Yu., Sinitsyn, V. I.

TITLE: Spectroscopic Investigations of Powerful Pulsed Discharges in Hydrogen.III (Spektroskopicheskiye issledovaniya moshchnogo impul'snogo razryada v vodorode. III)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959, Vol 36, Nr 6, pp 1621 - 1624 (USSR)

ABSTRACT: The authors give a report on spectroscopic determinations of the parameters of a high-temperature plasma at the instant of maximal constriction in a cylindrical chamber connected in a shock circuit (cicuit parameters:C = 86 μF , V_0 = 35 kv, J_{max} = 460 ka, dJ/dt = $1.5.10^{11}$ a/sec (at t=0)). For the purpose of evaluating electron temperature the energy distribution in the continuous plasma spectrum is investigated and the density of the charged particles is determined from the absolute intensity of the continuum. Intensity measurements were carried out photoelectrically. Ion temperature was determined from the Doppler broadening of the line N IV 3479(3^3F - 3^3P) with introduction of several % of nitrogen into the discharge (observation

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along the discharge axis, quadratic Stark effect). The lines were Gaussian in shape, Zeeman splitting-up did not exceed 0.05 Å, which was beyond the limits of measuring accuracy. The authors used the spectrograph ISP-28 and quartz object lenses. The method has already been described by an earlier paper. In such a discharge (in 95% H_2 and 5% N_2) also lines of highly ionized nitrogen are recorded besides the continuous spectrum. For 9 N II-, N IV-, and N V-lines the table gives the wavelengths, transitions, and excitation energies. From an analysis of the energy distribution in the continuous spectrum it follows that $T_e > 10$ev. The density of the charged particles at $p_o = 0.05$ torr amounted to $n = 1.2 \cdot 10^{17}$ cm^{-3}, i.e. in the case of 100% ionization it exceeds the initial density of the neutral molecules in the chamber axis by the 35-fold ($T_e = 100$ ev). Figure 1 shows the development of such a discharge with respect to time, figure 2 shows in a diagram the variation of charged particle density with pressure (straight line), and figure 3 shows the ion temperature measured by means of the Doppler broadening of the line N IV 3479

at the instant of molecular constriction, in dependence on the nitrogen admixture. Ion temperature was determined as amounting to $1.2.10^6$ °K (at 0.05 Hg). There are 2 figures, 1 table, and 6 references, 1 of which is Soviet.

SUBMITTED: December 16, 1958

SINITSYN, V. I., Cand Phys-Math Sci -- (diss) "Spectroscopic measurement of heated hydrogen plasma." Moscow, 1960. 8 pp; (Moscow Engineering Physics Inst); 140 copies; price not given; (KL, 22-60, 131)

PHASE I BOOK EXPLOITATION SOV/5366

Bibergal', A. V., V. I. Sinitsyn, and N. I. Leshchinskiy

Izotopnyye gamma-ustanovki (Isotopic Gamma-Ray Sources) Moscow, Atomizdat, 1960. 137 p. 4,000 copies printed.

Ed. (Title page): B. M. Isayev. Ed.: V. V. Pereverzev. Tech. Ed.: Ye. I. Mazel'.

PURPOSE: This book is intended for specialists working with strong radiation sources.

COVERAGE: The book is a purported first attempt to deal systematically with the whole complex of problems in radiation technique and equipment. Present-day methods of designing gamma emitters of various configurations are discussed, and examples of the calculation of the individual characteristics of strong gamma-ray sources given. There are appendixes to facilitate design calculations. Chs. I to III and V were written by the authors jointly. while Ch. IV was written by A. V. Bibergal'. References follow each chapter.

Card 1/4

GRUZIN, P.L., doktor fiz.-mat. nauk, otv. red.; BRYANTSEVA, V.P., inzh., ved. red.; SHKOVSKAYA, I.Yu., inzh., ved. red.; SINITSYN, V.I., inzh., nauchnyy red.; LADONINA, L.V., tekhn. red.

[Use of radioactive isotopes and nuclear radiations in hydraulic engineering and construction] Primenenie radioaktivnykh izotopov i iadernykh izluchenii v gidrotekhnike i stroitel'stve. Moskva, (Peredovoi nauchno-tekhnicheskii i proizvodstvennyi opyt. Tema 19) No.14. 1960. 35 p. (MIRA 15:3)

1. Moscow. Institut tekhniko-ekonomicheskoy informatsii.
(Construction industry) (Hydraulic engineering)
(Radioactive substances--Industrial applications)

0153

S/170/60/003/02/25/026
B008/B005

AUTHORS: Grafov, G. I., Sinitsyn, V. I.

TITLE: Application of High-intensity Radiation Sources in Industry

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1960, Vol. 3, No. 2, pp. 128-132

TEXT: This is a short survey of the material dealt with at the Conference* in Warsaw from September 8 to 12, 1959. The Conference which was devoted to problems of applying high-intensity radiation sources in industry was organized by the Mezhdunarodnoye agentstvo po atomnoy energii (International Atomic Energy Agency). It was the first great international conference on the role of ionizing radiation in industrial processes. More than 60 reports were delivered and discussed. In these reports, concrete problems of the application of radiation in industry, as well as some related scientific, theoretical, and economic problems were dealt with. Among the reports dealing with the action of radiation on plastics and elastomers, the following are mentioned: A report by the British scientist S. K. Pinner "Fizicheskiye svoystva poli-

Card 1/3 * Conference on Use of Powerful Sources of Radiation in Industry

vinilkhloridnykh obednennykh tsepey sopolimerov, poluchennykh v rezul'tate vozdeystviya ioniziruyushchey radiatsii" (Physical Properties of Exhausted Polyvinyl Chloride Chains of Copolymers Obtained by the Action of Ionizing Radiation); several reports delivered by Japanese scientists, among them A. Danno and M. Matsumoto, Sunichi Onisi, et al., as well as a report by Dzh. Oster. The action of radiation on the processes of polymerization and accumulation, the effect on chemical reactions, were dealt with in reports by the following scientists: S. S. Medvedev, Ye. V. Barelko, F. Dalton, and R. Roberts (England), S. Okamura, I. Sakurada et al. (Japan), J. V. Sutherland, A. O. Allen, A. Henglein (USA), M. Dyuryu, F. Trenar, P. Verr'ye (France). A. S. Kuz'minskiy et al. (USSR) used ionizing radiation for vulcanizing silicon rubber. A. V. Topchiyev, L. S. Polak et al. (USSR) delivered the report "Perspektivy promyshlennogo ispol'zovaniya radiatsionno-termicheskogo krekinga normal'nykh uglevodorodov" (Prospects of Industrial Application of Radiothermal Cracking of Normal Hydrocarbons). A. Danno (Japan), D. U. Georg and D. N. Gregory (Australia), as well as the Soviet scientists N. P. Syrkus, A. Kh. Brecher, and B. I. Vaynshteyn reported on high-intensity radiation sources and on methods of their application in industry. Further, problems of the application of rays in treating foodstuffs, plants, and