BASOVA, L.V., starshiy nauchnyy sotrudnik; BLINOV, V.A., kand.tekhn.nauk, starshiy nauchnyy sotrudnik; SIMANOVSKAYA, Ye.L.; PODSHIBYAKINA, N.D.; RUMBA, A.Ya.

Applying the emulsion method for wool dyeing. Tekst.prom. 23 no.11: 83-84 N 63. (MIRA 17:1)

1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov i krasiteley (for Basova, Blinov). 2. Rukovoditel' gruppy Informatsionno-tekhnicheskogo byuro Nauchno-issledovatel'skogo instituta organicheskikh poluproduktov i krasiteley (for Simanovskaya). 3. Nachal'nik laboratorii Latviyskogo kompleksnogo nauchno-issledovatel'skogo instituta legkoy promyshlennosti (for Podshibyakina). 4. Master krasil'nogo tsekha fabriki "Rigas Tekstils" (for Rumba).

BLINOV, V.A., starshiy nauchnyy sotrudnik, kand. tekhn. nauk; BASOVA, L.V., starshiy nauchnyy sotrudnik, kand. tekhn. nauk

Variant of the emulsion dyeing method of wool. Tekst. prom. 24 no.11:55-56 N '64. (MIRA 17:12)

1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov i krasiteley.

BLINOV, V.A.; KALYUZHNAYA, S.N.

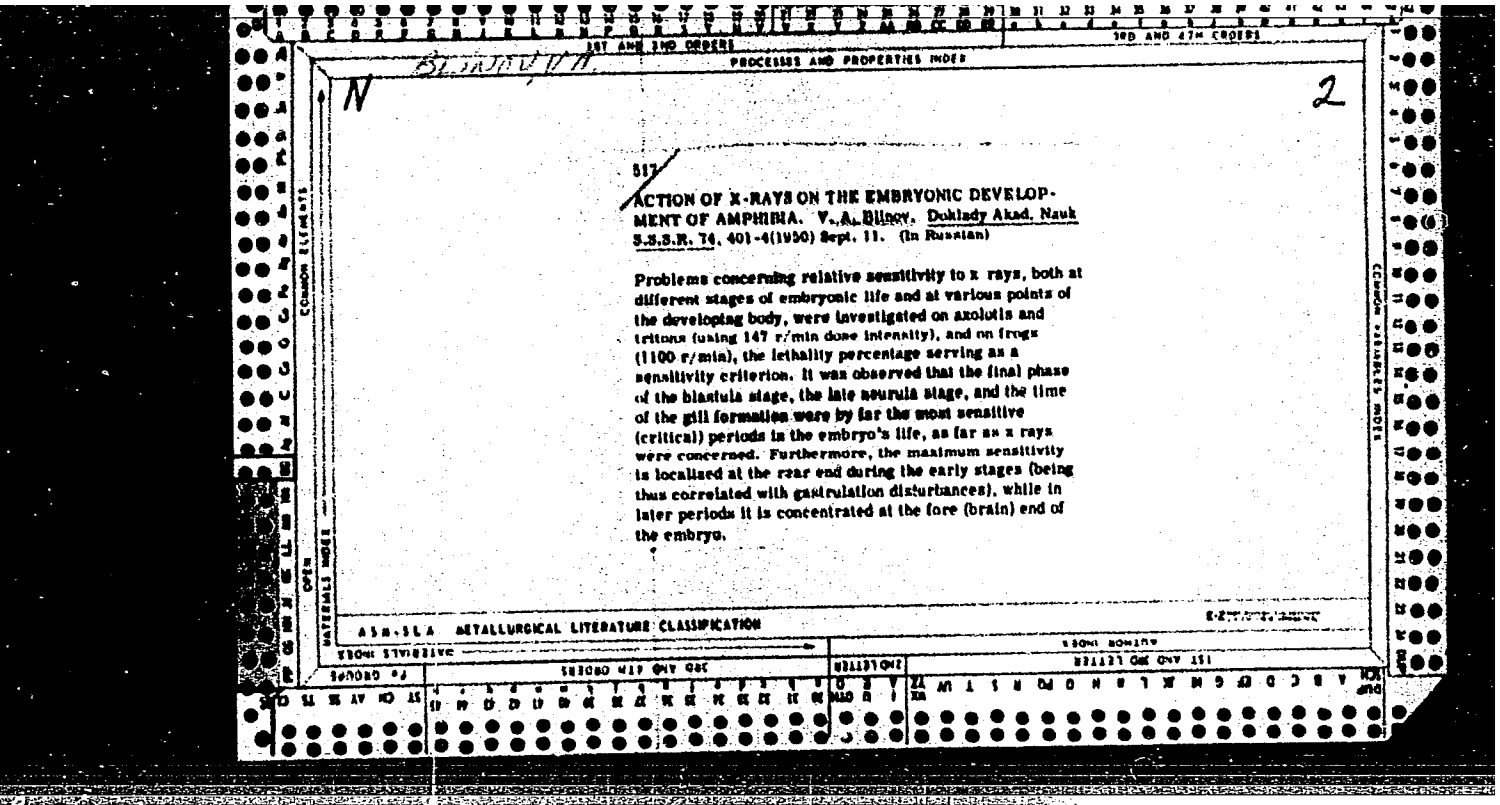
Characteristics of the distribution of complex zirconium-titanium placers in Mesozoic and Cenozoic sediments. Lit. i pol. iskop. no.6:19-26 N-D '64. (MIRA 18:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya, Moskva.

BLINOV, V. A.

"The Question Of The Initiation And Differentiation Of Cartelegeneous Tissues In Avian Embryos. Laboratory Of Experimental Embriology (Chief: Prof. P. G. Svetlov), Kazan Medical Institute." (p. 311) by Blinov, V. A.

SO: PREDECESSOR OF JOURNAL OF GENERAL BIOLOGY. (Biologicheskii Zhurnal) Vol. VII, 1938 No; 2



1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

N

2

517

ACTION OF X-RAYS ON THE EMBRYONIC DEVELOPMENT OF AMPHIBIA. V. A. Bilnov. Doklady Akad. Nauk S.S.S.R. 74, 401-4(1950) Sept. 11. (In Russian)

Problems concerning relative sensitivity to x rays, both at different stages of embryonic life and at various points of the developing body, were investigated on axolotls and tritons (using 147 r/min dose intensity), and on frogs (1100 r/min), the lethality percentage serving as a sensitivity criterion. It was observed that the final phase of the blastula stage, the late neurula stage, and the time of the gill formation were by far the most sensitive (critical) periods in the embryo's life, as far as x rays were concerned. Furthermore, the maximum sensitivity is localized at the rear end during the early stages (being thus correlated with gastrulation disturbances), while in later periods it is concentrated at the fore (brain) end of the embryo.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

USSR / General Biology. Individual Development. B

Abs Jour : Ref Zhur - Biol., No 19, 1958, No 85583

Author : Blinov, V. A.
Inst : Not Given
Title : Sensitivity of Amphibia Embryos at Different Stages of Their Development to Action of X-Rays.

Orig Pub : V sb.: Vopr. radiobiologii, L., 1956, 159-184

Abstract : Axolotl embryos (EA) were irradiated by doses of 10 to 3,200 r. Irradiation before the beginning of fission by doses > 10 r caused retardation or stoppage of their development, and malformation or destruction. Life duration of embryos was inversely proportional to the radiation dosage. Doses of > 480 r caused 100% destruction in

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[illegible] delay in differentia-

USSR / General Biology. Individual Development. B

Abs Jour : Ref Zhur - Biol., No 19, 1958, No 85583

Irradiation at the early gastrula stage produced a somewhat diminished radiosensitivity of EA. In such cases, at a dosage of >40 r a third destruction peak appeared, corresponding to those of later stages of development. A further diminution of radiosensitivity was observed with irradiation at the neurula and tail gemmation stages. The duration of life in this case was lengthened, and the dose to put a stop to further development was raised to 9,600 r. Histological analysis showed that at early stages of development the most prominently expressed disturbances of development are observed in the tail sector, in late stages in the head sector, especially in the nervous system. -- A. S. Shevelev.

Card 3/3

BLINOV, V.A.

Effect of hypoxia on the embryonic development of the mollusk Limnaeus stagnalis. Uch. zap. Per. gos. un. 13 no.1:99-102 '60. (MIRA 14:11)

(Embryology--Mollusks)
(Anoxemia)

L 37668-65 EWT(l)/EWT(m)/EWP(b)/EWP(c) Pi-4/Pq-4 IJP(c) WH

ACCESSION NR: AP5009224 S/0020/65/161/001/0118/0121

AUTHOR: Kitaygorodskiy, I. I.; Blinov, V. A.; Artamonova, M. V.; Burkov, O. D. 25

TITLE: Effect of the composition of neodymium-activated glass on the absorption spectra and the luminescence lifetime

SOURCE: AN SSSR. Doklady, v. 161, no. 1, 1965, 118-121

TOPIC TAGS: silicate glass, germanate glass, neodymium activated glass, laser system, light absorption spectrum, luminescence lifetime, glass composition

ABSTRACT: In connection with the problem of devising more powerful laser systems, the light absorption and luminescence of neodymium-activated alkali silicate and germanate glasses have been studied. The interest in activation by the Nd^{3+} ion was prompted by the reported relative facility of population inversion with Nd, without cooling to a low temperature. The purpose of the study was to determine the effect of the ratio of glass-forming oxides (SiO_2 or GeO_2) to modifiers (Na_2O or K_2O) and the neodymium concentration in the Na_2O—SiO_2, K_2O—SiO_2, and K_2O—GeO_2 glass systems. Absorption spectra were plotted, maximum specific absorption (E) for the principal bands and luminescence lifetimes (τ) were measured at room temperature for RO_2:R_2O ratios in the 1:1 to 1:11 range and for 1—10% Nd_2O_3 in the glass systems studied. The glasses were prepared by melting chemically pure materials at 1300° to

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L 37688-65

ACCESSION NR: AP5009224

1500C. Luminescence was excited with an IFK-2000 lamp. In the silicate systems, at a constant Nd_2O_3 content (2% by weight), the width of absorption bands and E maxima increased with an increase in alkali content. Simultaneously [illegible] to a maximum, then started to decrease. The maximum [illegible] was [illegible] $SiO_2:K_2O$ = 1:7, much lower for the same ratio in the Na_2O—SiO_2 system, and [illegible] for the $GeO_2:K_2O$ = 1:3. In the K_2O—GeO_2 system, the fine structure of absorption spectrum and E maximum for 573 mu were observed at the same 1:3 ratio. The width of the absorption bands in K_2O—GeO_2 system varied in the direct [illegible] in the K_2O—SiO_2 system, i.e., decreased when the K_2O content [illegible] finest absorption structure was observed in the K_2O—SiO_2 system [illegible] decreased with an increase in the Nd_2O_3 concentration in the [illegible] $1K_2O \cdot 3GeO_2$ glasses, because of concentration quenching of luminescence [illegible] data were discussed on the basis of coordination between ions in glass [illegible] and the interaction of Nd^{3+} with surrounding oxygen ions. In rubidium glasses [illegible] was found to be significantly higher than in potassium glasses. Orig. art. has 2 figures and 1 table.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut im. [illegible] (Moscow Institute of Chemical Technology)

Card 2/3

CHERNOSVITOV, Yu.L.; TUKAL'SKAYA, E.M.; BLINOV, V.A., nauchn. red.; SERGEYEVA, N.A., red.izd-va; [redacted], tekhn.red.

[Industry's requirements as to the quality of mineral raw materials; handbook for geologists] Trebovaniia promyshlennosti k kachestvu mineral'nogo syr'ia; spravochnik dlia geologov. Izd.2., perer. Moskva, Gosgeoltekhizdat. No.73. [Titanium] Titan. 1962. 74 p. (MIRA 16:7)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya.
(Titanium)

BLINOV, V.A.; DYUBYUK, K.A.; KUZ'MINA, L.S.; ODOKIY, B.N.

Concentration of titanium in volcanic sedimentary formations of the Yastrebovo horizon in the southern part of Voronezh Province. Geol.rud.mestorozh. 5 no.1:109-113 Ja-F '63. (MIRA 16:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya, Moskva, i Voronezhskaya ekspeditsiya Geologicheskogo upravleniya TSentral'nykh rayonov.
(Voronezh Province--Titanium)

BLINOV, V.A.; KVYATKOVSKIY, Ye.M.

Geochemical characteristics of granitoids in the Khapcheranga region. Zap. LGI 45 no. 2:31-33 '63. (MIRA 17:5)

BLINOV, V.A.

Second Conference on the Geology of Mineral Placers. Sov. geol. 7 no.8:165-170 Ag '64. (MIRA 17:10)

BLINOV, V. A. Cand Tech Sci -- (diss) "Titanium-containing glass and certain of its physicochemical properties." Mos, 1957. 11 pp. (Min of Higher Education USSR. Mos Order of Lenin Chem-Technological Inst im D. I. Mendeleyev. Chair of Technology of Glass), 120 copies (KL, 44-57, 100)

BLINOV, V.A.

KITAYGORODSKIY, I.I., prof.; BLINOV, V.A.

Titanium glass as a dielectric material for capacitors. Stek.i ker. 14 no.8:4-7 Ag '57. (MIRA 10:10)
(Glass manufacture--Chemistry) (Dielectrics)

KITAYGORODSKIY, I.I.; BLINOV, V.A.

Thin glass films and their use. Trudy MKHTI no.24:314-317 '57.
(Glass manufacture) (MIRA 11:6)

Blinov, V.A.

20-2-42/60

AUTHORS: Kitaygorodskiy, I. I. , Blinov, V. A.

TITLE: "Pireksil" (Pyrexyl) Heat-Resistant Glass (Termostoykiye stekla "Pireksil")

PERIODCIAL: Doklady AN SSSR, 1958, Vol. 118, Nr 2, pp. 351 - 353 (USSR)

ABSTRACT: The authors give a survey of works whose aim is the synthesis of a glass which in its properties approaches quartz glass. They succeeded in producing a glass in the Chemical-Technological Institute Moscow (Moskovskiy khimiko-tekhnologicheskiy institut) which is close to "Vikor"-glass (references 1, 2), but which does not require any leaching of glass and no repeated heat-treatment. Further the problem of the influence exerted by the overrefined crushing of the mixture upon the melting process and upon the formation of glass is discussed. There exists no uniform opinion on this problem (references 3 - 5). Highly disperse quartz-sand and chemically pure materials were used for glass- melting. The melting lasted 6 - 8 hours at 1600 - 1650°C in an oxidizing medium. Boron--silicate-glass of the type "Pireks" (pyrex) was used as initial glass. B_2O_3 was gradually replaced by SiO_2 in the original composition during the synthesis of the new glass "Pireksil" (Pyrexyl). At a constant content of alkalies the content of silica amounted

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"Pireksil" (Pyrexyl) Heat-Resistant Glass

to 80 - 94 %. The composition of the individual series of galss is shown in table 1. The sand fraction from 20 to 1 μ yielded the best results. For glass melting on an industrial scale the authors recommend the compositions Nr 186, 192 and 212, which possess small moduli of extension (25.10^{-7}, $21.8.10^{-7}$ and $16,9.10^{-7}$). In the State Optical Institute imeni S. I. Vavilov (Gosudarstvennyy opticheskiy institut im. S. I. Vavilova) a semi-industrial melting of the glass KS-192 (KC-192 Russian) was carried out in a quartz container (80 l) at 1650°C in a high-frequency furnace. The obtained glass had a good quality. Finally moduli of extension of the glass-series I - IV are given (table 1). There are 1 table, and 5 references, 3 of which are Slavic.

PRESENTED: June 14, 1957, by I. P. Bardin, Academician

SUBMITTED: June 11, 1957

AVAILABLE: Library of Congress

AUTHORS: Kitaygorodskiy, I.I., Blinov, V.A. SOV/20-121-6-31/45

TITLE: The Production of Super-Thin Film Glass and Its Fields of Application (Polucheniye sverkhtonkogo plenochnogo stekla i oblasti yego primeneniya)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 121, Nr 6, pp 1060 - 1062 (USSR)

ABSTRACT: Recently informations were published on the production of the glass mentioned in the title (Refs 1-3). These glass films are advised for the production of artificial mica, condensers, cover glasses and for other purposes. Since 1955 the authors have tried to organize a continuous production of super-thin glass films in form of an endless strip; these attempts were made at the kafedra tekhnologii stekla Moskovskogo khimiko-tekhnologicheskogo instituta im. D.I. Mendeleyeva (Chair of Glass Technology of the Moscow Chemical Technological Institute imeni D .I. Mendeleyev). After an investigation of the methods described in publications the method of extracting the melted glass vertically downward was chosen. It is widely applied in the production of glass fibers. Figure 1 shows a pattern of the furnace with a boat made of ceramics or plastin. Due to its own weight the fluid

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glass flows out through a split in the bottom of the boat. The strip forming by this method is wound up on a drum with varying velocity (according to the required thickness of the strip). A ceramic holder (bortoderzhatel') prevents a narrowing of the strip. The strip adheres to it and thus mainteins its original breadth; it amounted from 2 - 100 mm. The length of the strip reached several dozens of meters as well as a uniform thickness of 5 - 50 μ. It is also possible to reach other thicknesses. The flexibility of the strip is determined by its super-thinness. It has the same electrophysical properties as the glass from which the strip was made. The composition of the glass is of great importance. Apart from the properties of the strip, table 1 shows the last of 4 types of glass. Artificial mica produced from it shows several advantages in comparison with mica (Table 2). This fact refers to the condensers produced of the strip. There are 1 figure, 2 tables, and 3 references.

The Production of Super-Thin Film Glass and Its Fields of Application

SOV/20-121-6-31/45

PRESENTED: April 24, 1958, by I.P. Bardin, Member, Academy of Sciences, USSR

SUBMITTED: April 23, 1958

Card 3/3

KITAYGORODSKIY, I.I.; BLINOV, V.A.

Investigation of physicochemical properties of glasses containing titanium dioxide. Trudy MKHTI no.27:6-22 '59. (MIRA 15:6)
(Glass—Analysis) (Titanium oxide)

5(1,2) SOV/20-127-2-44/70

AUTHORS: Kitaygorodskiy, I. I., Blinov, V. A.

TITLE: Production of Heatproof Glass by Enriching Glass With Silica

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 2, pp 392 - 395 (USSR)

ABSTRACT: The closer the interatomic bonds of a crystalline structure, the less the structure is capable of an expansion caused by heat (Ref 1). The ion crystals with the closest bonds have comparatively low expansion coefficients (Refs 2-4). The quartz glass which is very suitable for the production of different resistant products is too expensive since its production requires a high temperature. Therefore glass types with high silica content were necessary. The glass "Vikor" was found which is similar to the quartz glass. It contains 96% SiO_2. Vikor-glass is produced from the glass of the system SiO_2-B_2O_3-Na_2O by heating until a slight opalescence occurs. This proves apparently the formation of alkaline borates and the separation

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of the glass into 2 phases: a) silica and b) the sodium- and boron oxides soluble in mineral acids. Then the glass is rinsed in a hot mineral acid. The phase (b) is leached, and glasses with microscopical pores produced. Then the glass products are rinsed in water, dried, and heated up to 1000-1100°. Thus the pores are "fused". By this method transparent products with not porous surface and the mentioned 96% SiO_2 are produced. The glass is equivalent to melted quartz, is however, more easily to be worked in the gas burner flame than quartz. No thick-walled (more than 3 mm) products can, however, be produced from this glass. In the present paper the production method of the glass mentioned in the title is developed. First an aggressive alkali-free lead glass with low viscosity is melted: this is the difference between this and the hitherto used method. A quantity of vibro-pulverized quartz and as high as possible (grain size 1-20μ or silicic acid gel) was additionally solved in this liquid phase with a small quantity (3%) of sodium chloride. 1) Borosilicate of the "Pyrex" type, 2) highly silica-containing glass, and 3) alkali-free lead glass (Table 1) were used as initial glasses. These glass types were pulverized

in a ball mill and 50% sand was added to each. The quartz grains do not melt in the heating up to 1660-1670°, but are gradually solved in the liquid phase (in glass). The grains are first subjected to polymorphous changes and burst. The diasolution proceeds mainly on the surface of the cracks so that the quartz grains are "etched". The glass Nr 3 (above) is best suitable for this. A series of alkali-free lead glasses were melted on the strength of the obtained results (Table 2). They had a yellow color. Table 3 shows the composition of the initial glass types and those enriched with quartz with the thermal expansion coefficient. Prescriptions are given. There are 3 tables and 4 references, 1 of which is Soviet.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut im. D. I. Mendeleyeva (Moscow Institute of Chemical Technology imeni D. I. Mendeleyev)

PRESENTED: March 19, 1959, by I. P. Bardin, Academician
SUBMITTED: March 19, 1959

BLINOV, V. A.

"The effect of high pressure on glass structure."

report submitted for 4th All-Union Conf on Structure of Glass, Leningrad, 16-21 Mar 64.

BLINOV, V.A.; KLUSHIN, I.G.

Determining the ratio between the averaging of geophysical anomalies and their analytic altitudinal continuation. Prikl. geofiz. no.40: 136-142 '64 (MIRA 18:1)

ACC NR: AP6013498 SOURCE CODE: UR/0120/66/000/002/0071/0073

AUTHOR: Blinov, V. A.; Kuznetsov, M. I.

ORG: Radium Institute, AN SSSR, Leningrad (Radiyevyy institut AN SSSR)

TITLE: Low-noise β-counter using a solid state anticoincidence circuit

SOURCE: Pribory i tekhnika eksperimenta, no. 2, 1966, 71-73

TOPIC TAGS: radiation counter, β counter

ABSTRACT: A compact, light-weight, low-noise β-counter, built on the basis of the DP-100 decade-counting device, is described. An STS-5 counter, surrounded by a ring of anticoincidence-coupled counters of the same type, serves as the active counter and is placed in a lead housing. During the measurement of the activity of high-energy β-sources, some of the electrons may pass through the main active counter and then through one of the protective counters, thereby activating the anticoincidence circuit. To prevent this, a plexiglass cylinder, 7—8 mm thick, is placed between the main and protective counters to cut off β-particles with an energy of up to 2 Mev. Five P16 transistors are used in the anticoincidence circuit shown in Fig. 1. Pulse amplitude of the STS-5 counter reaches 150 v and varies as a function of supply voltage. Pulse duration is 150 μsec. All diodes used in the anticoincidence circuit are either type D9B or D2E. Stable operation of the circuit is not affected

Card 1/2 UDC: 621.387

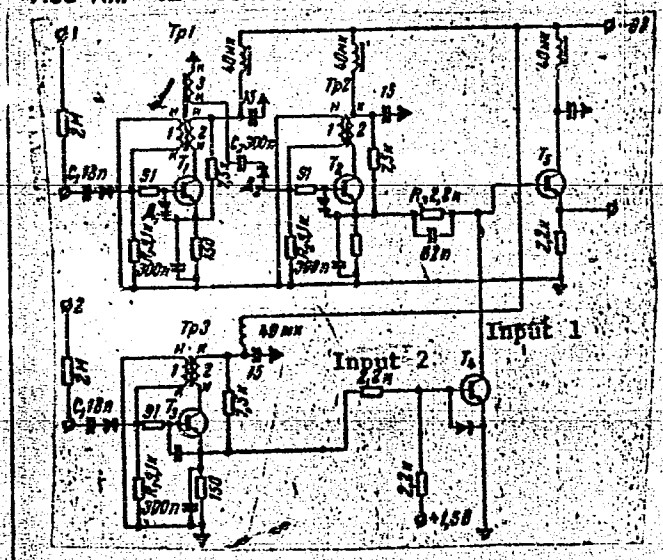

Fig. 1. Anticoincidence circuit diagram

by voltage variations of 7.5 to 10 v. The required current in the absence of a signal is about 1 ma and, when loaded with a frequency of 2—3 kc, about 10 ma. The device, which has a noise of 0.8—1 pulse/min, can be used under fixed conditions as well as under conditions of increased humidity and temperature. Orig. art. has: 4 figures and 1 table. [JR]

Card 2/2 SUB CODE: 20/ SUBM DATE: 27Aug64/ ORIG REF: 001/ OTH REF: 002/ ATD PRESS: 4247

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000205520010-6"

BLINOV, V.A.

USSR/Nuclear Physics - Energy levels of Li FD-2355

Card 1/1 Pub. 146 - 20/34

Author : Khromchenko, L. M., and Blinov, V. A.

Title : Study of the energy levels of the lithium nucleus by the method of magnetic analysis

Periodical : Zhur. eksp. i teor. fiz. 28, 741-743, Jun 1955

Abstract : By the method of magnetic analysis of the products of nuclear reactions (method described by L. M. Khromchenko, Doklady Akad. Nauk SSSR, 93, 451, 1953) the authors investigated the energy spectrum of the lithium nucleus, this method making it possible to obtain on a photoplate lines visible to the eye, instead of the localization of discrete groups of particles. They present a reproduction of photoplates obtained in the case of the irradiation of lithium oxide by deuterons; they also present a table of data for the levels of excitation of Li^{7}* nucleus compared with data of others from the reaction $Li^{6}(d,p)$. They thank the late Academician P. I. Lukirskiy and also Professor Yu. A. Nemilov. Nine references, including 3 USSR (L. M. Khromchenko, DAN SSR, 94, 1954; B. S. Dzhelepov and L. N. Zyryanova, Uspekhi fiz. nauk, 47, 1952).

Institution : Radium Institute, Academy of Sciences USSR

Submitted : January 24, 1955

AUTHORS: Blinov, V.A., Gedeonov, L.I. 89 -1-7/18

TITLE: Number of Active Atoms and Expected Decay Reactions in Total Fragmentation Activity Tests (Chislo aktivnykh atomov i predstoyaschikh aktov raspada v probakh summarnoy oskolochnoy aktivnosti).

PERIODICAL: Physics and Thermotechniques of Reactors (Fizika i teplotekhnika reaktorov), Supplement Nr. 1 to Atomnaya energiya, 1958, (USSR)

ABSTRACT: pp 96-103

The number of active atoms and the remaining number of acts of decay for the sum of fission products of the prompt fission of uranium-235 is computed. This is of importance, for example, for the problem of calculating the concentration of active atoms in the air, the presence of which may influence the electric properties of the atmosphere. This is also important for the case that the dose of the fission products obtained from the atmosphere is intended to be estimated. In this case it is necessary to determine the acts of decay which took place during the life of the sample from a certain time onwards. There are 3 figures, 1 table, and 8 references, 3 of which are Slavic.

AVAILABLE: Library of Congress

Card 1/1 1. Uranium isotopes (Radioactive)-Decay-Mathematical analysis
2. Uranium 235-Radioactivity 3. Fission fragments-Analysis

21(3), 21(8) SOV/89-5-5-18/27

AUTHORS: Shvedov, V. P., Blinov, V. A., Gedeonov, L. I., Ankudinov, Ye. P.

TITLE: Radioactive Fall-Out in the Neighborhood of Leningrad (Radioaktivnyye vypadeniya v okrestnostyakh Leningrada)

PERIODICAL: Atomnaya energiya, 1958, Vol 5, Nr 5, pp 577-582 (USSR)

ABSTRACT: The samples to be investigated were obtained in the following manner:
1) A piece of absorbent paper, on which the dust from the atmosphere and from precipitation collects, is placed upon the bottom of a cuvette with walls of 10 cm height and a ground surface of 1 m^2. The cuvette is posted in a free space for a period of 24 hours. Collective effectivity: 80 %.
2) The fall-out is collected in a porcelain vessel with high walls, the bottom of which is covered by acidified water. Collective effectiveness: 100 %.
The collected material (water, snow, absorbent paper) is evaporated and the ashes are dried at 500°C. The activity of the residues in a ground state is measured by means of a

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Radioactive Fall-Out in the Neighborhood of Leningrad

window-counter.
In order to be able to draw conclusions with respect to absolute activity from the impulses per minute measured by means of the counter used, comparative measurements were carried out. (A 4π counter developed by S. A. Baranov and R. M. Polevoy was used).
The density of fall-out is represented graphically in the logarithmic scale for the period of from April 1, 1954 to December 31, 1957 (daily measurements). The annual distribution is as follows:

Density per day in mC/km^2

	mean annual temperature	mean annual background	maximum value with date	number of "signal" fall-outs
1954	0,73	0,31	12,48 (10,XI.)	36
1955	1,28	0,40	93,00 (13,III.)	53
1956	0,70	0,45	16,41 (26,XI.)	40
1957	1,67	0,50	43,42 (19,IV.)	94
1958 (1. June)	-	-	-	42

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Radioactive Fall-Out in the Neighborhood of Leningrad

Summated activities were calculated as amounting to:

	mC/km^2		mC/km^2
July 1, 1954	13	July 1, 1956	68
Jan. 1, 1955	56	Jan.1, 1957	87
July 1, 1955	87	July 1, 1957	142
Jan. 1, 1956	72	Jan. 1, 1958	151

A more detailed graphical representation of these values is given in an affixed appendix. There are 5 figures, 2 tables, and 13 references, 3 of which are Soviet.

SUBMITTED: July 30, 1958

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42556

S/089/62/013/005/008/012
B102/B104

24.7000
24.6830

AUTHORS: Blinov, V. A., Karamyan, S. A., Matveyev, O. A., Nemilov, Yu.A., Selitskiy, Yu. A.

TITLE: On some peculiarities of measuring the energy spectra of α-particles and fission products with semiconductor detectors

PERIODICAL: Atomnaya energiya, v. 13, no. 5, 1962, 476-478

TEXT: Semiconductor detectors of charged particles have various known advantages. Chatham-Strode et al., however, have found that these detectors cause a low-energy tail in the pulse-height spectrum of monochromatic α-particles (IRE Trans. Nucl. Sci., 8, 59, 1961). In the tail region the integral count amounts to about 1% only. This effect being attributed to the presence of certain traps in the pn junction which reduce the pulse heights, the reduction was now studied for α-particles and fission fragments. All measurements were made with semiconductor surface-barrier detectors designed in the Leningradskiy fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR (Leningrad Physicotechnical Institute imeni A. F. Ioffe AS USSR) of 5·5 mm size and having a resistivity of 150 ohm·cm. The voltage

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applied to the detector was 20v. In various experiments with Am^{241}, U^{233} and U^{235} the causes of the low-energy tails in the energy spectra of α-particles and fission fragments were investigated. It was found that the recording zone of the pn junction does not contain any regions that reduce the pulse heights. Only boundary effects could explain this reduction quantitatively. In special experiments the kinetic energy of fragments from thermal fission of U^{235} was determined as a function of the fragment mass ratio. The drop in total kinetic energy of the fragments observed with symmetric fission was in agreement with other papers (e. g. J. Milton, J. Fraser, Phys. Rev. 7, No. 2, 27, 1961). The data obtained from the semiconductor counters were corrected for the low-energy tail. An integral neutron flux of $\sim 5 \cdot 10^{11} cm^{-2}$ was found to raise the detector resistivity from 150 ohm·cm to 1000 ohm·cm. There are 3 figures.

SUBMITTED: April 5, 1962

Card 2/2

S/089/62/013/001/004/012
B102/B104

AUTHORS: Blinov, V. A., Konstantinov, I. O., Litvin, V. F., Nemilov, Yu. A.

TITLE: A polygonal magnetic multispectrograph-analyzer

PERIODICAL: Atomnaya energiya, v. 13, no. 1, 1962, 59-60

TEXT: Details are given of a particle distribution analyzer similar to those already described by S. Hinds and R. Middleton (Proc. Intern. Conf. Nucl. Structure, Kingston, Canada, 1960). It is designed as a multi-spectrograph with a Van-de-Graaff accelerator; the gap field, produced by permanent magnets can be varied within a range of $7 \cdot 10^3$ oe. The gap width is 1 cm. Nine sections with diaphragms correspond to nine angle intervals between 5 and 95°, each diaphragm serving to separate a solid angle of $\sim 3 \cdot 10^{-4}$ steradian into its "own" spectrograph. The charged particles coming from the target, which is placed in the uniform part of the magnetic field, pass through the corresponding diaphragm and are focused onto the nuclear emulsion plates arranged along the focal curve. By contrast with the analyzers described by Hinds-Middleton it is possible with this

Card 1/2

analyzer to raise the upper limit of particle energy by several times on account of the aperture ratio, without having to change the magnetic field strength in the gap. As an example, the energy spectrum of 2.55-Mev protons elastically scattered through 90° by a gold target (ninth section of the analyzer) is given. The energy resolution was 300. There are 2 figures.

SUBMITTED: January 26, 1962

BLINOV, V.A.; DMITRIYEV, V.N.; KUZNETSOV, M.I.

Use of a gamma-spectrometer for summing coincidences in analysing a mixture of radioisotopes. Atom. energ. 19 no.4:342-346 O '65. (MIRA 18:11)

4444

1,1800

S/120/62/000/005/029/036
E032/E314

AUTHORS: Baranov, A.I., Blinov, V.A., Lepnev, G.P. and Selitskiy, Yu.A.

TITLE: Vacuum evaporation of materials onto thin organic films

PERIODICAL: Pribory i tekhnika eksperimenta, no. 5, 1962, 173 - 174

TEXT: A method is described for the removal of heat from thin organic filmsso that materials with high melting points can be deposited by vacuum evaporation onto the films. The authors have used collodion films, 10 - 30 μg/cm^2 thick, attached to light dural rings with the aid of shellac. A ring carrying the film was placed on the polished end of a solid brass cylinder and the whole assembly was inserted into a vacuum system. After the pressure was reduced to 0.1 mm Hg, the film was charged by placing an electrode at about 1 500 V near it, so that a very low discharge was produced. The results was that the film came into very close contact with the supporting brass cylinder. The molecular cohesive force between the film and the brass surface

Card 1/2

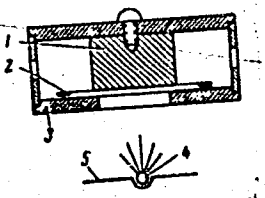
S/120/62/000/005/029/036
E032/E314

Vacuum evaporation of ....

was sufficiently large for the film to remain in tight contact with the brass surface, even when the latter was turned upside down, in which position the high melting-point material was evaporated onto it. The overall system is illustrated schematically in the figure, in which 1 is the polished brass cylinder, 2 is the ring carrying the film, 3 is the screen, 4 is the substance to be evaporated and 5 is a tantalum evaporating boat. The brass cylinder was found to be an efficient heat sink and the system has been used to produce uniform films of uranium and thorium up to 250 $\mu g/cm^2$ thick. Chromium and iron films have also been obtained ($\sim$100 $\mu g/cm^2$). There is 1 figure.

SUBMITTED: December 3, 1961

Fig.



Card 2/2

L 25968-66 EWT(m) DIAAP

ACC NR: AP5026438 SOURCE CODE: UR/0089/65/019/004/0342/0346

38
B

AUTHOR: Blinov, V. A.; Dmitriyev, V. N.; Kuznetsov, M. I.

ORG: None

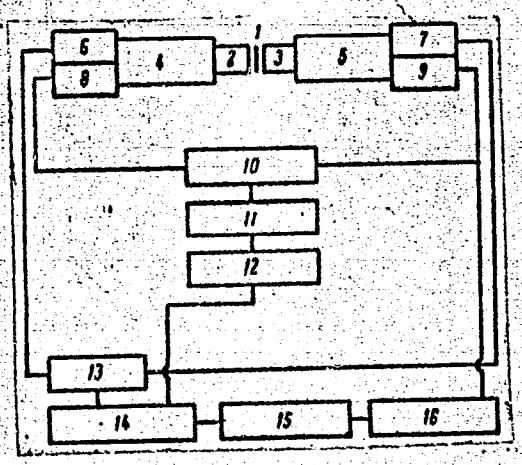
TITLE: Application of the gamma-ray spectrometer of a sum-coincidence type to the analysis of radioisotope mixtures

SOURCE: Atomnaya energiya, v. 19, no. 4, 1965, 342-346

TOPIC TAGS: gamma detection, gamma spectrometer, radioisotope, radiation measurement, gamma radiation, scintillation spectrometer, gamma ray absorption

ABSTRACT: In reviewing various methods and devices used for detection and measurement of gamma radiations, the authors chose for their experiments, the method developed by A. M. Hoogenboom (Nucl. Instrum. 3, 57, 1958). In this method, a two-crystal scintillation spectrometer was used to measure the gamma radiation emitted in cascade disintegrations. This method with improved resolution was especially suited to measure gamma coincidence spectra as well as to sum up relevant peaks. The authors adapted this method with some modifications to the analysis of radioisotope mixtures. In their arrangement (see Fig. 1 - Card 2/3) a system of fast-slow coincidences was employed. The resolving time for fast coincidences could be changed between 0,5x10-9 and 5x10-8 sec. A

Card 1/3 UDC: 539.107



1-Sample
2 and 3 - Crystals NAI(Tl)
4 and 5 - FEU photomultipliers
6 and 7 - Pulse shapers
8 and 9 - Cathode followers
10 - Linear summator
11 - Amplifier
12 - Differential discriminator
13 - Fast coincidence device
14 - Slow coincidence device
15 - Analyzer of A1-100 type
16 - Delay line

Fig. 1

Gamma-ray spectrometer of sum-coincidence type

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R000205520010-6"

L 25968-66

ACC NR: AP5026438

multi-channel analysing device checked only coinciding pulses, the sum of which represented the full energy emitted by two cascading gamma quanta. Only the full gamma absorption peaks were checked. The effect of Compton scattering was eliminated. The results of experiments are illustrated by six graphs showing the spectra obtained for Co-60, Mo-99, Ru-106, and Ce-144 isotopes. In order to reduce the back-scattering effect, the crystals are protected by lead cones. It is mentioned, however, that the lead protection could be ommitted in cases where weak samples were used. In conclusion, it is stated that this method can be applied to measurements of Ce-143, Ce-144, Mo-99, I-131, I-132, Ru-160, Ba-140, Co-60, U-235 and all other isotopes having a cascading gamma radiation. This quantative analysis can be used also for isotope disintegrations caused by the successive emissions of one electron and one gamma ray. Finally, it is also stressed, that this method could serve as a reliable tool for determining the contents of isotopes having a gamma radiation of 3 to 4 pct. of the total amount of gamma rays emitted by the mixture. Orig. art. has: 2 diagrams, 4 graphs.

SUB CODE: 24/18/ SUBM DATE: 10Oct65 / ORIG REF: 003 / OTH REF: 007

Card 3/3 FW

BLINOV, V.A., nauchnyy sotrudnik, kand.tekhn.nauk; RUMYANTSEVA, L.P., nauchnyy sotrudnik; ANISHCHUK, Ye.N., nauchnyy sotrudnik; SHVELEVA, L.S., inzh.; GORBACHENKOVA, A.V., inzh.

Emulsion dyeing of cotton and blended cotton-lavsan goods with the leuco esters of vat dyes. Tekst.prom. 25 no.2:65-67 F '65. (MIRA 18:4)

1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov i krasiteley (for Blinov, Rumyantseva, Anishchuk). 2. Kombinat "Trekhgornaya manufaktura" imeni Dzerzhinskogo (for Shmeleva, Gorbachenkova).

BLINOV, V.D.

Simple method of obtaining vlood for the determination of the prothrombin content. Lab.delo 6 no.3:35 My-Je '60.

(MIRA 13:7)

(PROTHROMBIN)

BLINOV, V.D. (Murmansk)

Epidemiology of ascariasis in the Kola Peninsula. Med.paraz.i paraz.bol. no.3:308-311 '62. (MIRA 15:9)
(KOLA PENINSULA—ASCARIDS AND ASCARIASIS)

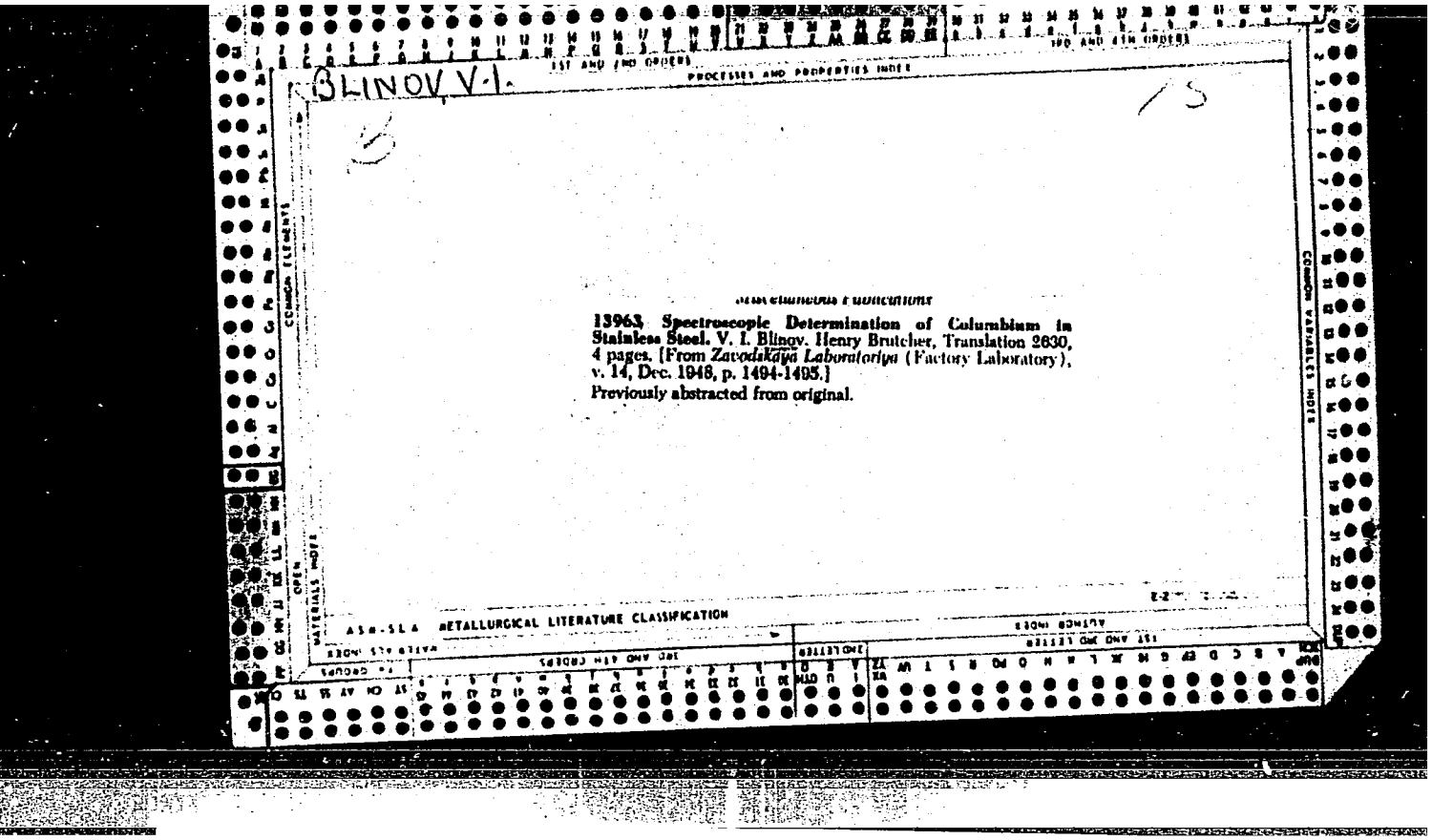
BLINOV, V.D. (Murmansk)

Graphic representation of the proteinogram. Vop. med. khim. 8 no.4:435-436 Jl-Ag '62. (MIRA 17:11)

BLINOV, V.I.

Machine-Shop Practice

Collar for testing of presses
Stan. i instr., 23, no. 2, 1952



BLINOV, V.I.

PROCESSES AND PROPERTIES INDEX

Miscellaneous Publications

13963. **Spectroscopic Determination of Columbium in Stainless Steel.** V. I. Blinov. Henry Brutcher, Translation 2630, 4 pages. [From *Zavodskaya Laboratoriya* (Factory Laboratory), v. 14, Dec. 1948, p. 1494-1495.]
Previously abstracted from original.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

BLINOV, V.I., inzh.

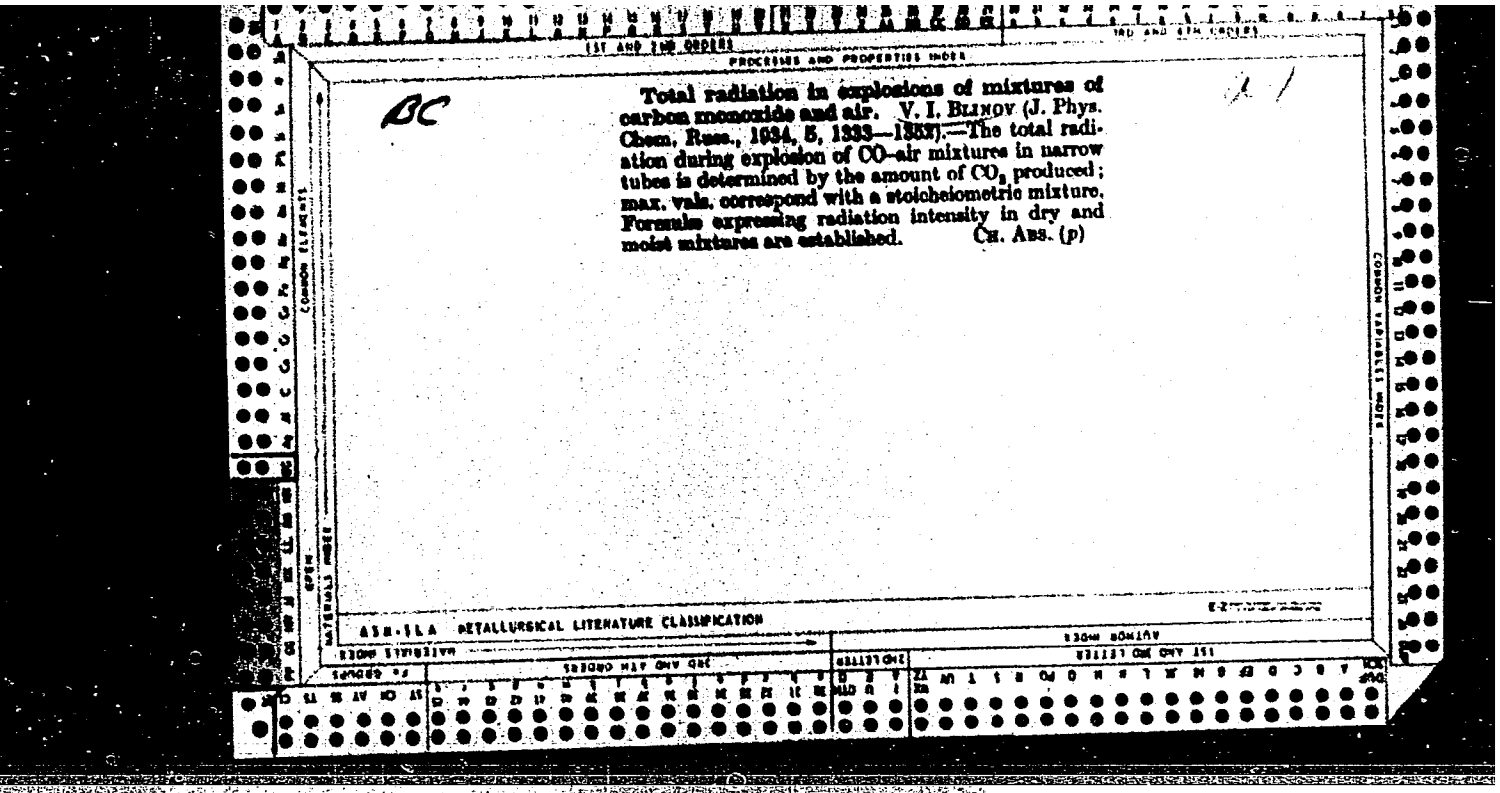
Refrigerating machinery manufacture during 1961 and its tasks for 1962. Khol.tekh. 39 no.2:1-3 Mr-Ap '62. (MIRA 15:4)

1. Gosplan SSSR.
(Refrigeration and refrigerating machinery--Design and construction)

BLINOV, V.I., inzh.; UGLOV, P.A., inzh.

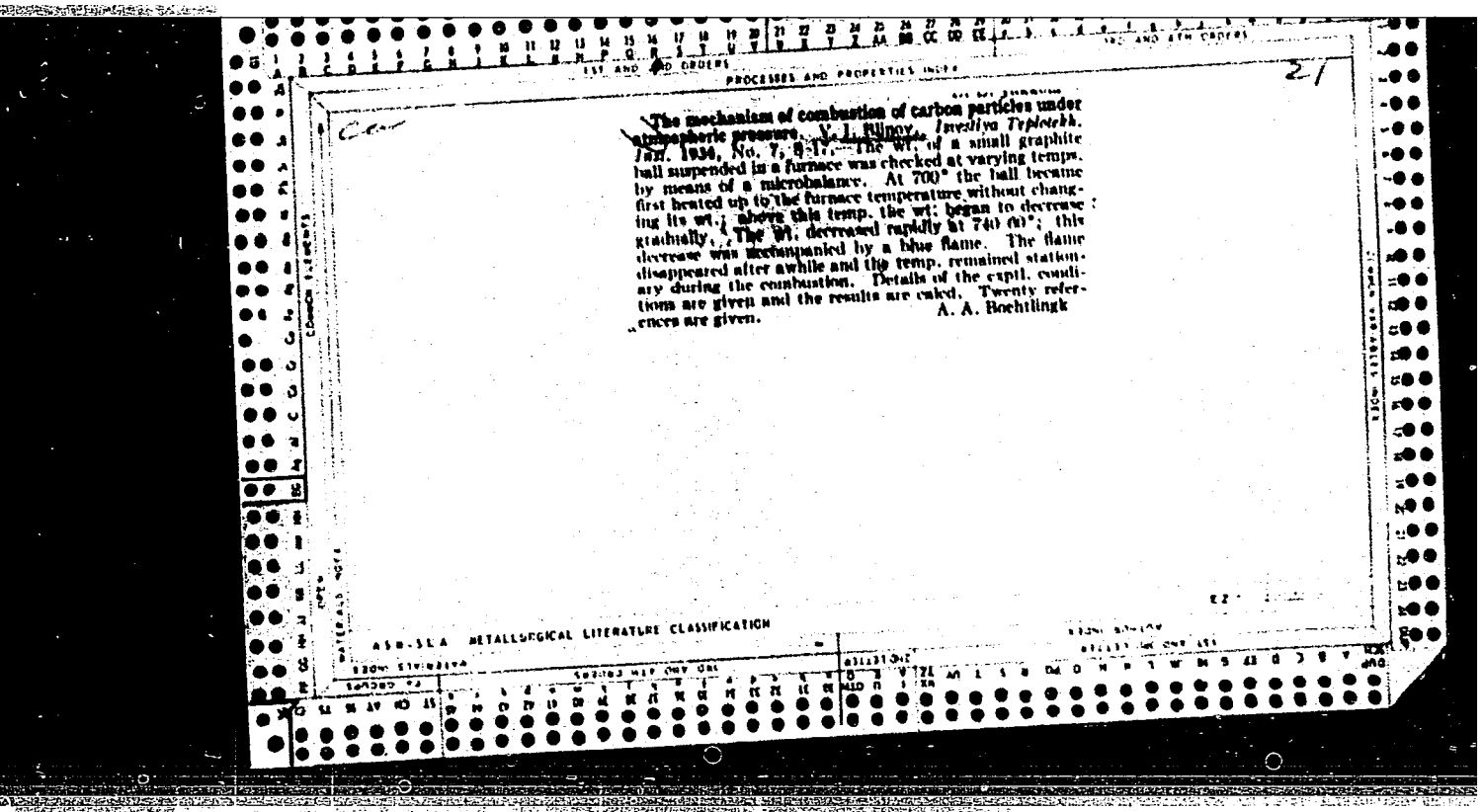
Overload protection of the TT-1 measuring device. Avtom., telem. i sviaz' 6 no.6:41-42 Je '62. (MIRA 15:7)

1. Ufimskiy filial laboratorii signalizatsii i svyazi Kuybyshevskoy dorogi.
(Railroads--Electronic equipment)



BC

Total radiation in explosions of mixtures of carbon monoxide and air. V. I. Blinov (J. Phys. Chem, Russ., 1934, 5, 1333—1353).—The total radiation during explosion of CO–air mixtures in narrow tubes is determined by the amount of CO_2 produced; max. vals. correspond with a stoichiometric mixture. Formulæ expressing radiation intensity in dry and moist mixtures are established. Ch. Abs. (p)



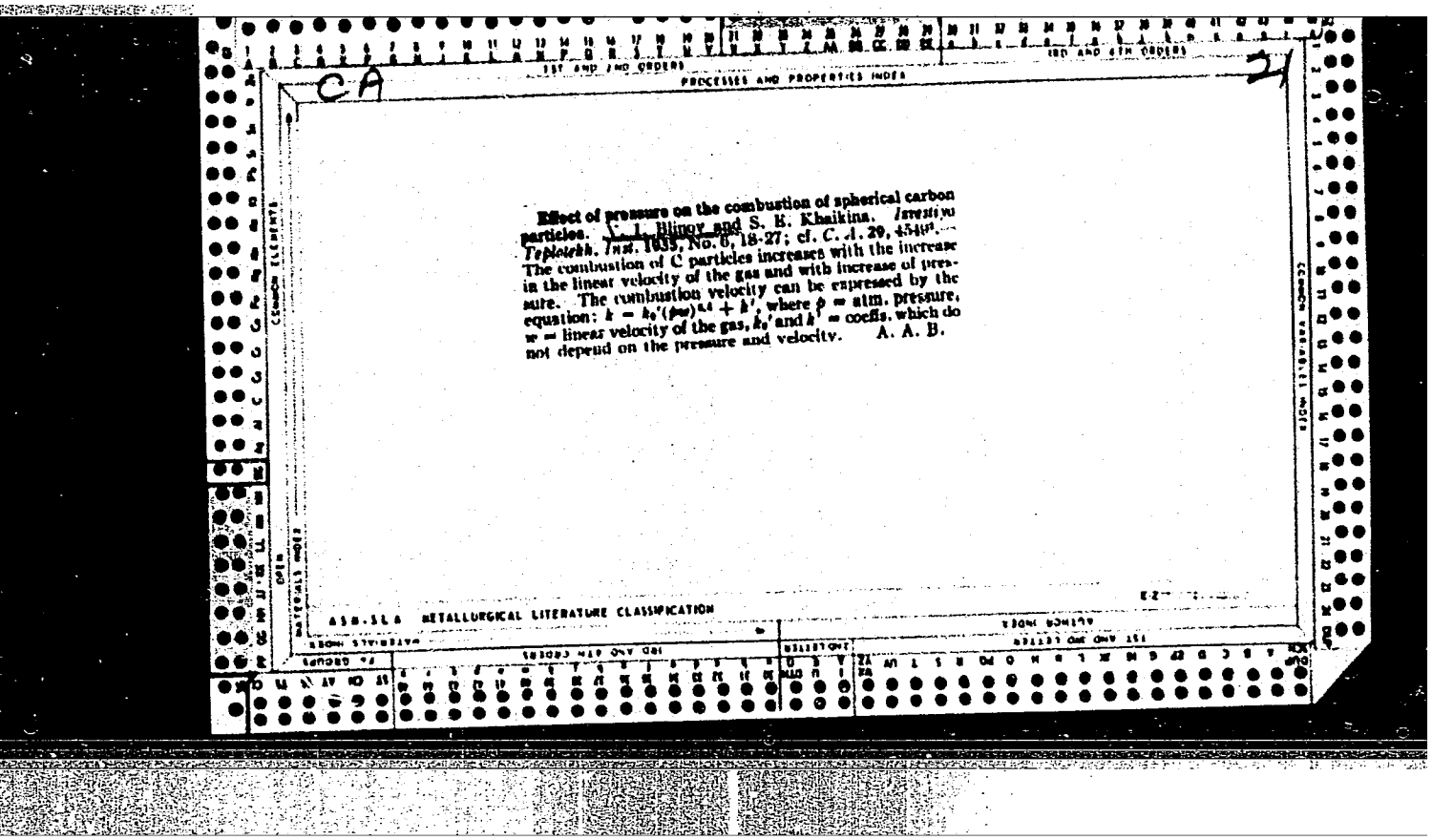
PROCESSES AND PROPERTIES INDEX

21

The mechanism of combustion of carbon particles under atmospheric pressure. V. I. Rijnov. *Investiya Teplotekh. Inst.* 1934, No. 7, 8-17.—The wt. of a small graphite ball suspended in a furnace was checked at varying temps. by means of a microbalance. At 700° the ball became first heated up to the furnace temperature without changing its wt.; above this temp. the wt. began to decrease gradually. The wt. decreased rapidly at 740-60°; this decrease was accompanied by a blue flame. The flame disappeared after awhile and the temp. remained stationary during the combustion. Details of the exptl. conditions are given and the results are caked. Twenty references are given.

A. A. Boehtlingk

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

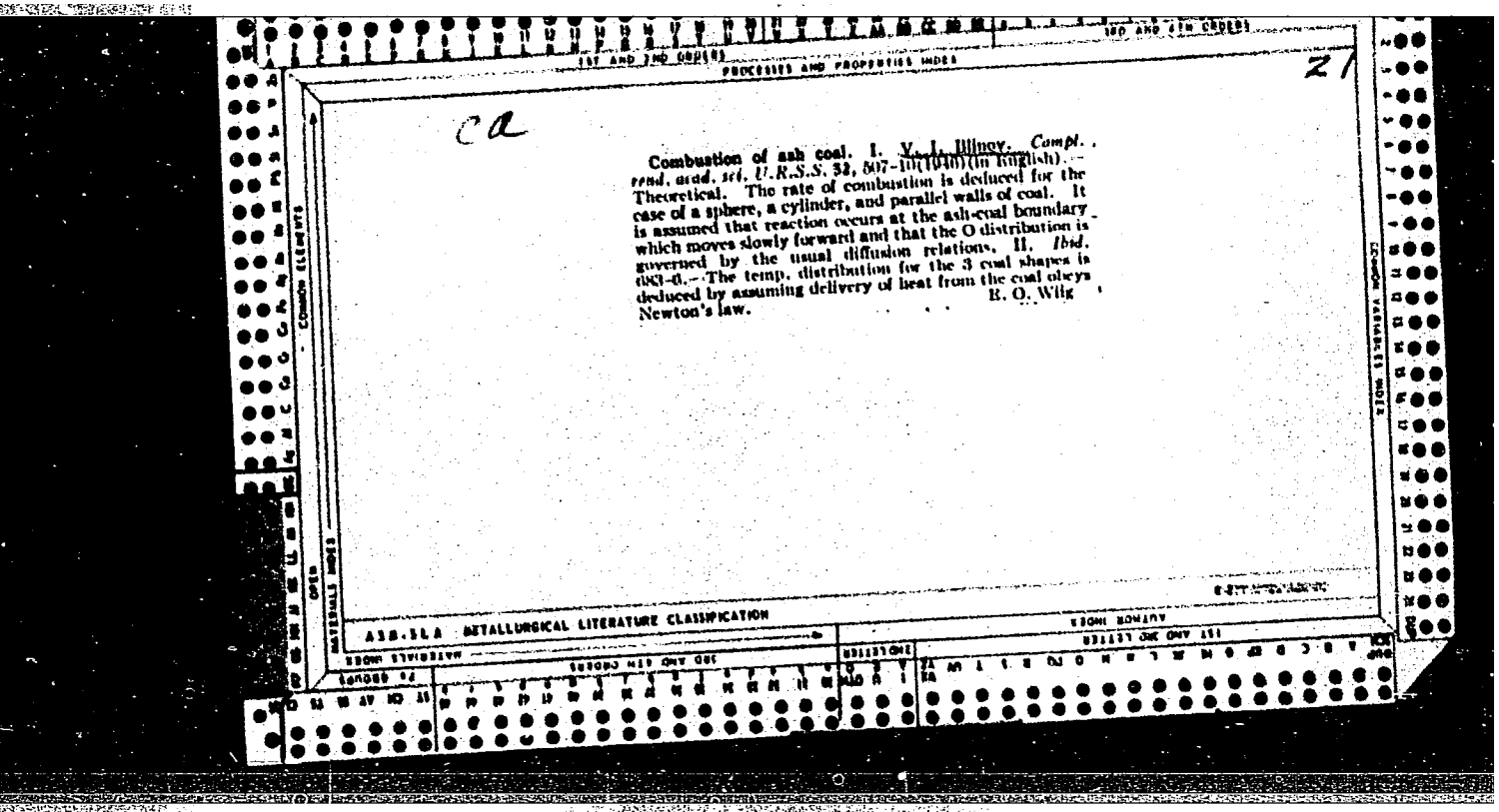

CA

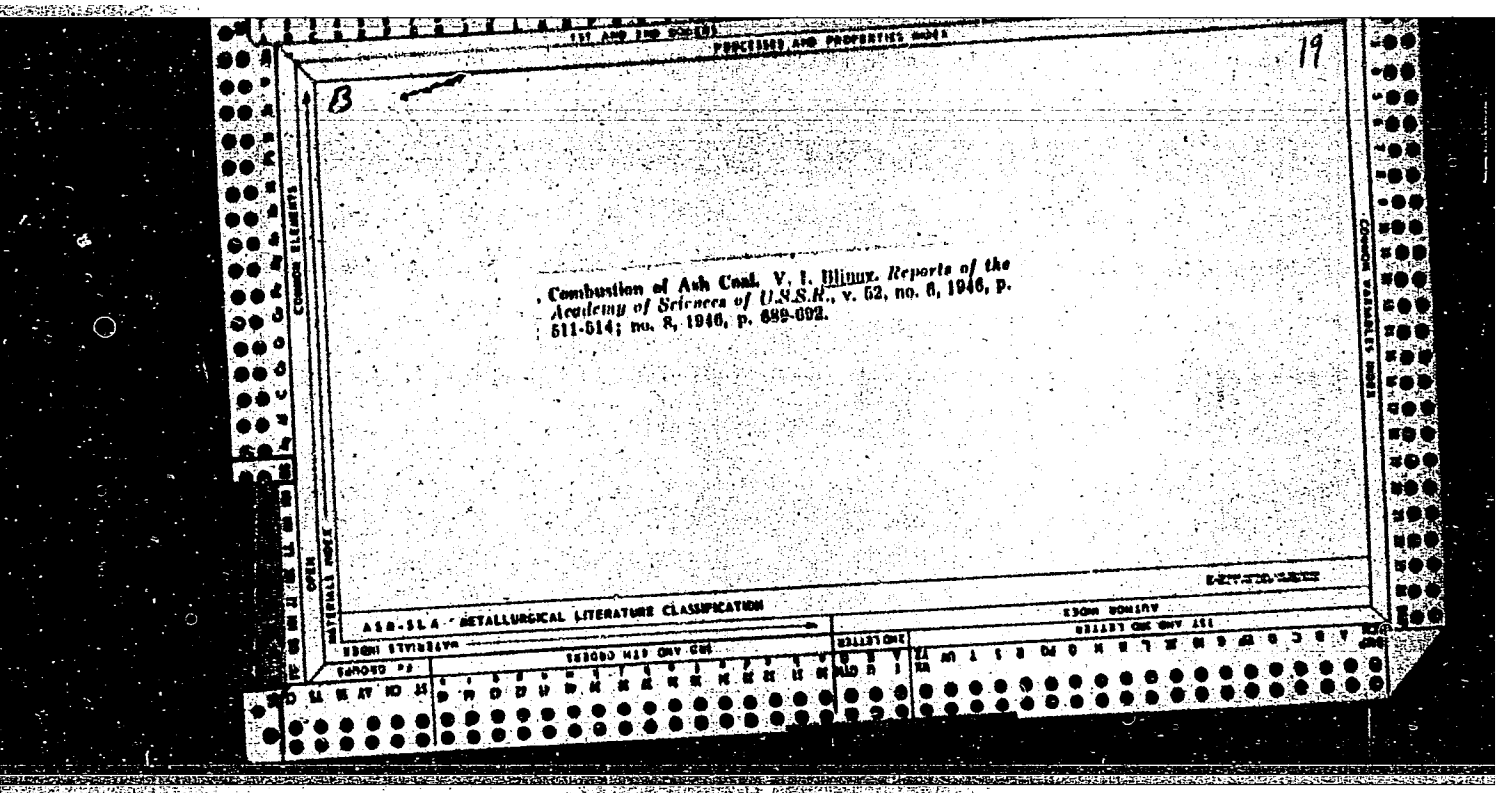
PROCESSES AND PROPERTIES INDEX

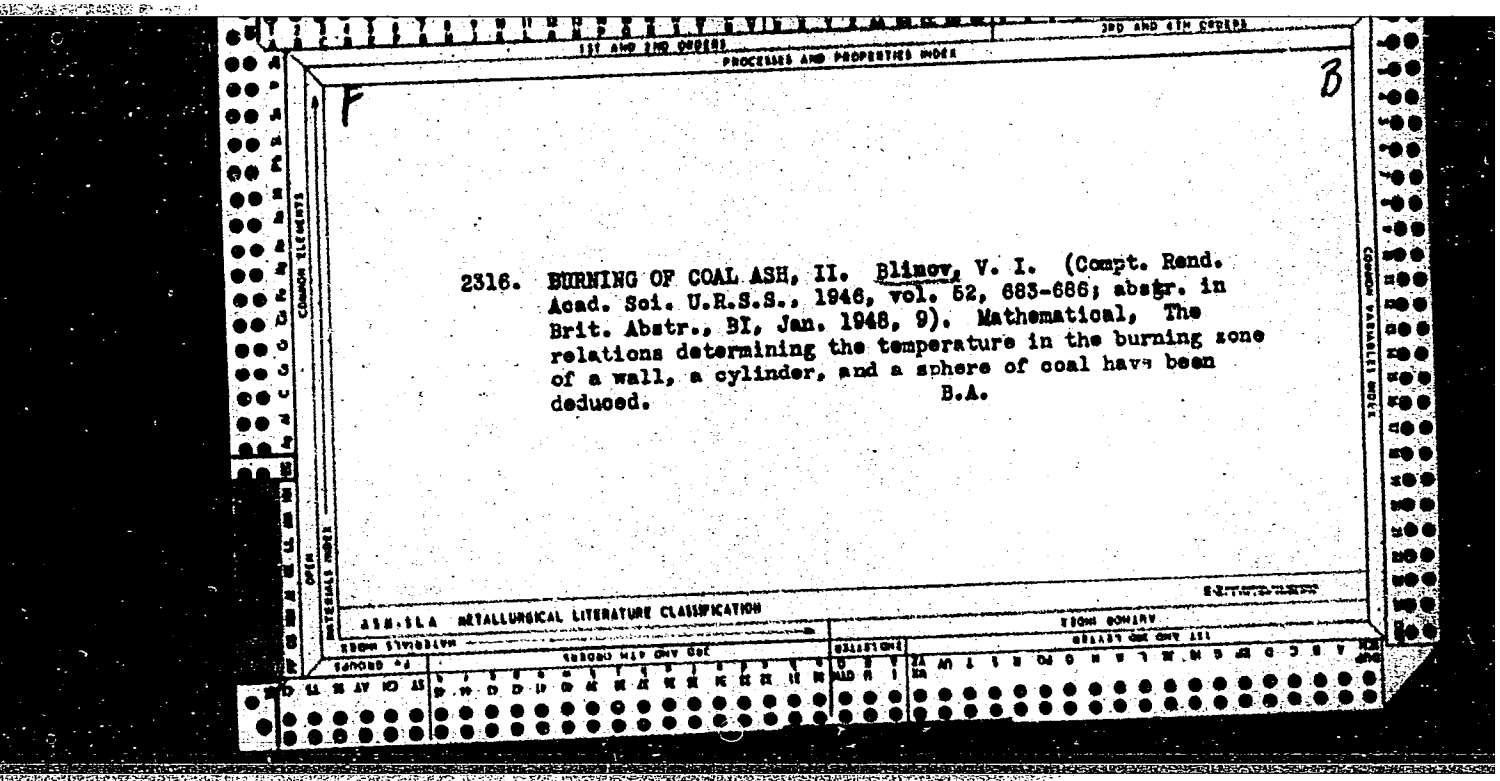
21

Effect of pressure on the combustion of spherical carbon particles. V. I. Blinov and S. E. Khaikina. *Izvestiya Teplotekh. Inst.* 1935, No. 6, 18-27; cf. *C. A.* 29, 4544[8]. The combustion of C particles increases with the increase in the linear velocity of the gas and with increase of pressure. The combustion velocity can be expressed by the equation: $k = k_0'(pw)^{a.t} + k'$, where p = atm. pressure, w = linear velocity of the gas, k_0' and k' = coeffs. which do not depend on the pressure and velocity. A. A. B.

A58.SL6 METALLURGICAL LITERATURE CLASSIFICATION



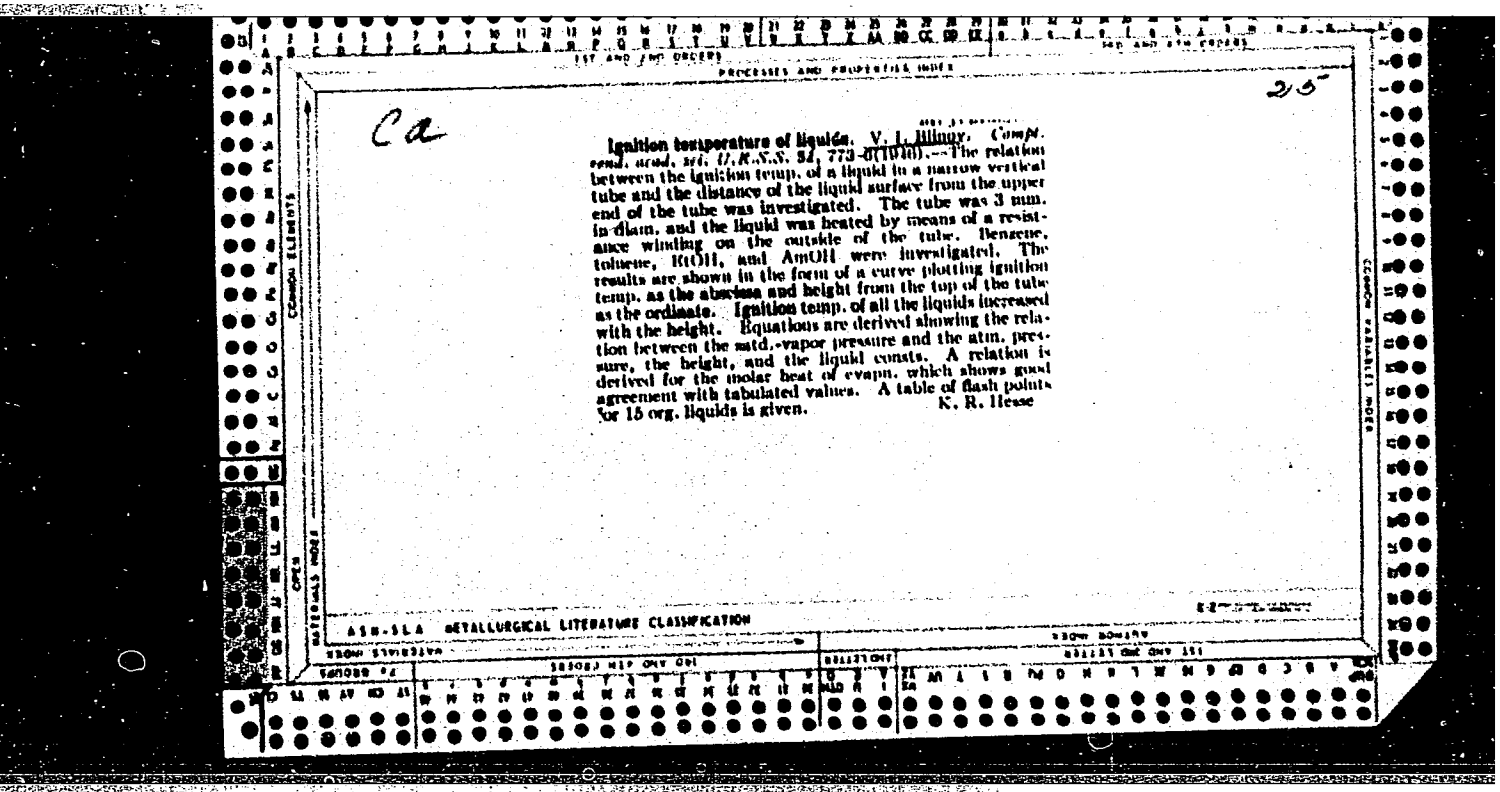




F

B

2316. BURNING OF COAL ASH, II. Blinov, V. I. (Compt. Rend. Acad. Sci. U.R.S.S., 1946, vol. 52, 683-686; abstr. in Brit. Abstr., BI, Jan. 1948, 9). Mathematical, The relations determining the temperature in the burning zone of a wall, a cylinder, and a sphere of coal have been deduced. B.A.



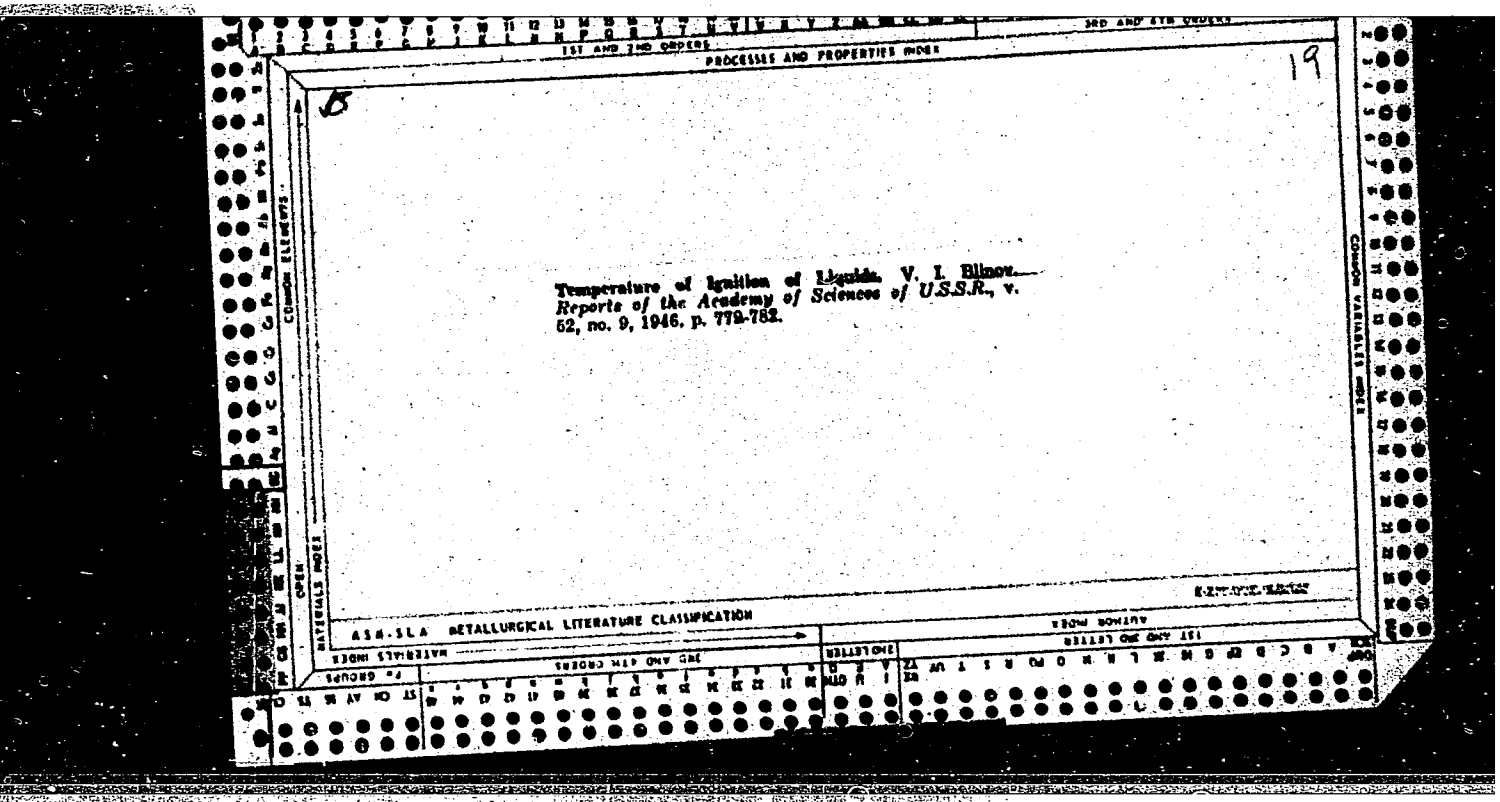
PROCESSES AND PROPERTIES INDEX

25

Ca

Ignition temperature of liquids. V. I. Illinov. *Compt. rend. acad. sci. U.R.S.S.* 34, 773-8(1941).—The relation between the ignition temp. of a liquid in a narrow vertical tube and the distance of the liquid surface from the upper end of the tube was investigated. The tube was 3 mm. in diam. and the liquid was heated by means of a resistance winding on the outside of the tube. Benzene, toluene, RtOH, and AmOH were investigated. The results are shown in the form of a curve plotting ignition temp. as the abscissa and height from the top of the tube as the ordinate. Ignition temp. of all the liquids increased with the height. Equations are derived showing the relation between the satd.-vapor pressure and the atm. pressure, the height, and the liquid consts. A relation is derived for the molar heat of evapn. which shows good agreement with tabulated values. A table of flash points for 15 org. liquids is given. K. R. Hesse

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



BLINOV, V. I.

Novye ammiachnye kompressory. (Vestn. Mash., 1948, no. 3, p. 20-22)

Refers to Moscow "Compressor" plant.

New ammonium compressors.

DLC: TN4.V4

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

BLINOV, V. I. PA 43/43787

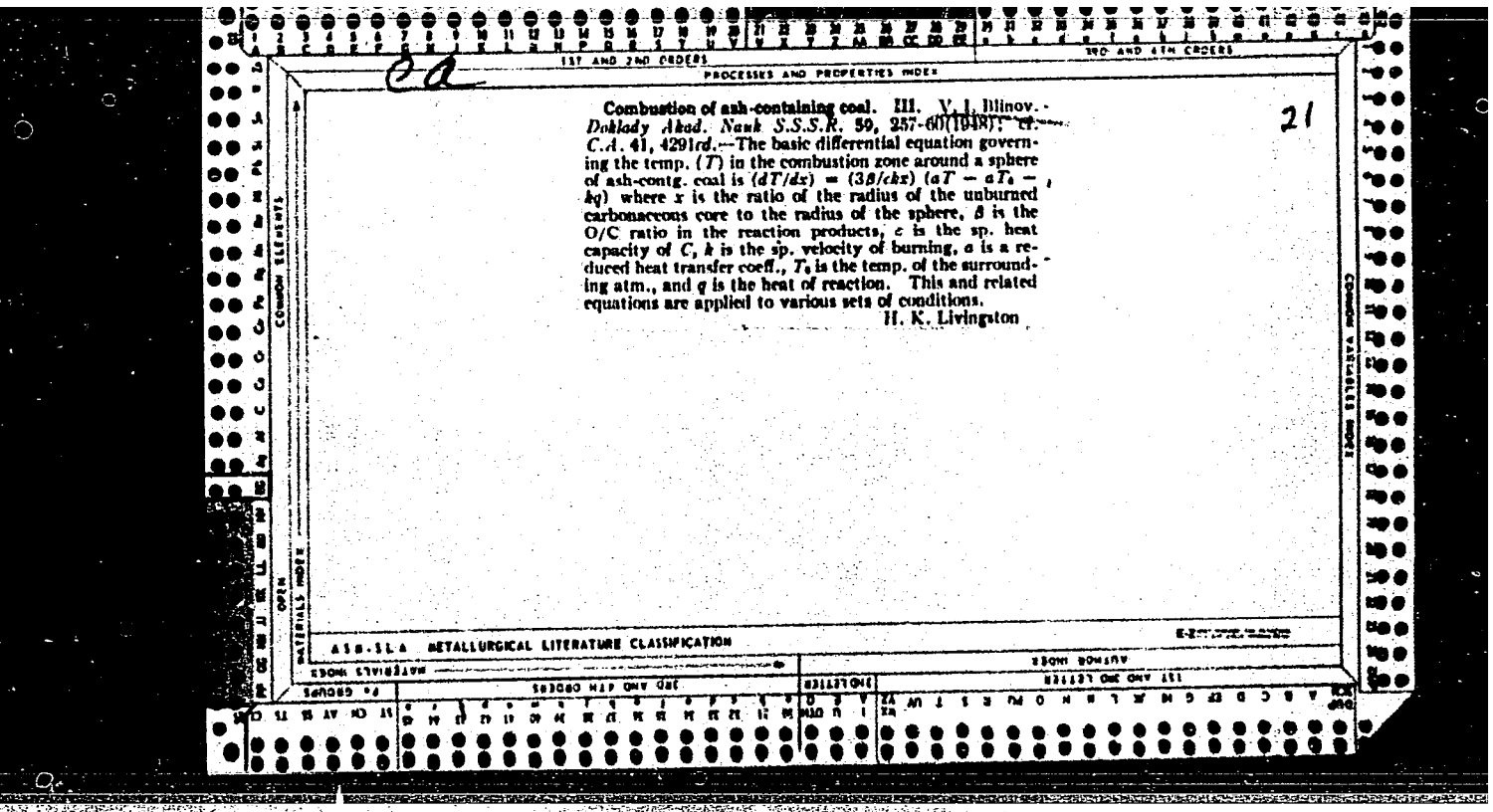
USSR/Minerals 11 Jan 1948
Combustion
Coal

"Combustion of Ash Coal," V. I. Blinov, Leningrad Inst Aviation Equipment Construction, 4 pp
Just Read

"Dok Akad Nauk SSSR, Nova Ser" Vol LIX, No 2

Examines some questions in kinetics of combustion of ash coal. Presents equations describing changes over time of temperature and speed of combustion of sphere of ash coal depending upon conditions in which combustion takes place. Submitted by Academician N. P. Chizhevskiy, 24 Oct 1947.

43787



1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

21

Combustion of ash-containing coal. III. V. I. Ilinov.- *Doklady Akad. Nauk S.S.S.R.* 59, 257-60 (1948); cf. *C.A.* 41, 4291*d*.—The basic differential equation governing the temp. (T) in the combustion zone around a sphere of ash-contg. coal is $(dT/dx) = (3\beta/ckx)(aT - aT_0 - kq)$ where x is the ratio of the radius of the unburned carbonaceous core to the radius of the sphere, β is the O/C ratio in the reaction products, c is the sp. heat capacity of C, k is the sp. velocity of burning, a is a reduced heat transfer coeff., T_0 is the temp. of the surrounding atm., and q is the heat of reaction. This and related equations are applied to various sets of conditions.

H. K. Livingston

A 58-5 L A METALLURGICAL LITERATURE CLASSIFICATION

COMMON ELEMENTS

OPEN

MATERIALS INDEX

COMMON VARIABLES INDEX

PA 150T41

USSR/Fuel - Coal 21 Jul 49
Combustion

"Certain Problems in the Theory of Coal Combustion," V. I. Blinov, T. A. Rozet, Leningrad Inst of Avn Instr Constr, 4 pp

"Dok Ak Nauk SSSR" Vol LXVII, No 3

Complete theoretical discussion of coal combustion with tables based on given formulas. States that speed of combustion is determined not only by speed of reaction, but by rate of oxygen supply to combustion area from surrounding region. Compares results of two methods in

USSR/Fuel - Coal (Contd) 150T41
21 Jul 49

solving this problem: for plate combustion and for combustion of a coal cylinder. Submitted by Acad A. N. Frumkin 23 May 49.

150T41

BLINOV, V. I.

CA

21

Combustion of a carbon sphere. V. I. Blinov and T. A. Rozet (Leningrad Inst. Aviation Implementation). *Doklady Akad. Nauk S.S.S.R.* 73, 363–6(1950); cf. *C.A.* 44, 2729*i*.—The previously derived equation is modified for the case of a burning sphere to $\bar{k}_s = kSc_0/(\sqrt{3} + k/\alpha)$, where S is a function of the position of the sphere in a flowing gas stream and the other symbols have the same meaning as in the previous abstr. H. K. Livingston

Blinov, V. I.

62

3334. Blinov, V. I. Combustion of coal in a zone of low temperatures (In Russian), *Izv. Akad. Nauk SSSR Otd. tekh. Nauk* no. 5, 733-740, May 1953.

Paper is an addition to the earlier published facts that the combustion of the coal at low temperature occurs not only on the outside surfaces but also on the inside walls of the pores of the sample. Author attempts to clarify the different activity of various types of coal, particularly in regard to their porosity. Study of the combustion process is carried out on a sample of spherical shape. Analytical treatment of the problem assumes cylindrical or conical pores arranged perpendicularly to the sphere surface. Expressions for specific velocity of combustion for region of low and high temperatures are derived. The computed values are compared with the test data and found to be in close agreement. It is shown that the energy of activation has a maximum value for electrode coal and is approximately twice higher than the value for Moscowvian coal. Reaction between carbon and oxygen depends upon the concentration of oxygen among the pores. This concentration decreases considerably with the distance from burning surface, especially with increasing temperatures; therefore, the retardation of the process will occur at lower temperature for coal with fine pores than for the coal with large pores.

D. Furtovich, USA

BLINOV, V. I.

"The Change in Composition of Binary Mixtures of Liquids During Burning"
DAN SSSR, vol. 89, no. 1, pp. 101-104, 1 March 1953

A mixture of two liquids, when burned, becomes enriched with that component which has a lower concentration in the vapor phase than in the liquid. When burned, a mixt does not change if the compn in the vapor and liquid phases is the same. Presented by Acad A.N. Frumkin 24 Dec. 1952

259T4

BLINOV, V. I.

5370. Blinov, V. I. Rukovodstvo k prakticheskimzanyatiyam po fizike. (Elektrichestvo. Magnetizm Akustika). L., 1954. 95 s soskhem. 20 sm. (M-vo uyssh. obrazova ya SSS R. Leningr. in-t auiatspriborostroyeniya). 1.000 ekz B. ts---(55.1017) 53(076.5)

SO: Knizhnaya Letopis', Vol. 1, 1955

USSR/Engineering - Fuels FD-2244

Card 1/1 Pub 41-12/17

Author : Blinov, V. I., Leningrad

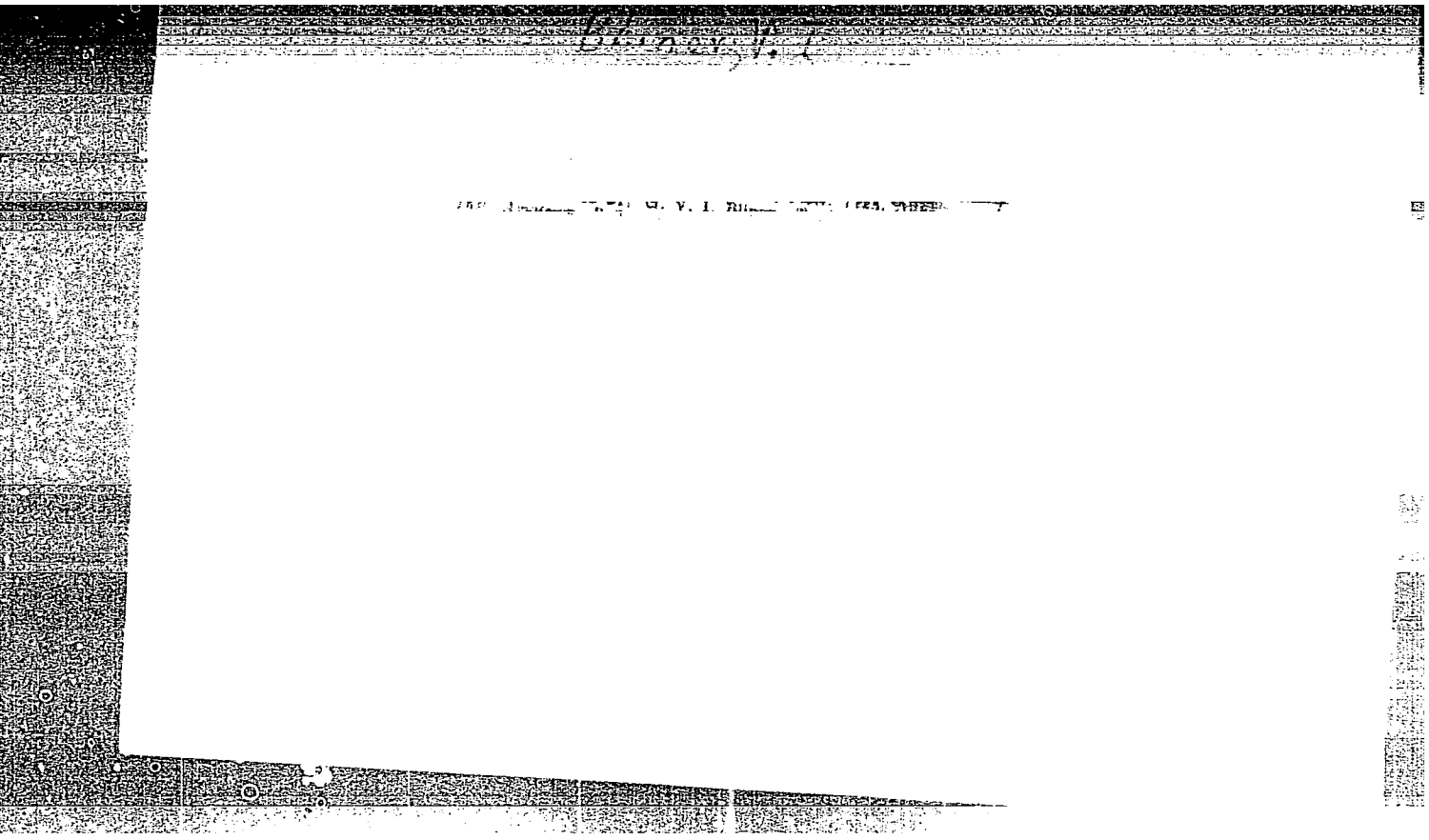
Title : On the ejection of liquid fuel during combustion

Periodical : Izv. AN SSSR, Otd. Tekh. Nauk 2, 122-131, Feb 1955

Abstract : A further study and investigation of the belief that burning oil is ejected (or sprayed upwards) from a tank due to water, mixed in the oil, which has been heated to above its boiling point. Description of apparatus used in experiment. Discussion of test results. Graphs, drawings. Seven references, all USSR

Institution:

Submitted : December 30, 1954



Blinov, V.I.

124-1957-10-11333

Translation from: Referativnyy zhurnal, Mekhanika, 1957, Nr 10, p 21 (USSR)

AUTHOR: Blinov, V. I.

TITLE: On the Laminar Combustion of Liquids in Containers (O laminarnom gorenii zhidkostey v rezervuarakh)

PERIODICAL: Tr. Leningr. in-ta aviats. priborostr., 1956, Nr 14, pp 3-12

ABSTRACT: An experimental study on the laminar combustion of ethyl, butyl, and iso-amyl alcohols and benzine in both glass and metal burners of various diameters was carried out in order to complete certain information and clarify some questions that have not yet been solved on the theory of combustion of liquids in containers. The calculations obtained from an analysis of the experimental results are as follows: 1) For a given liquid, the ratio of the amount of liquid burned to the height of the flame remains constant and does not depend on other factors, such as the diameter and the material of the burner or on the liquid level therein; 2) the velocity of the combustion of benzine is higher than the velocity of combustion in other alcohols because of the greater emissivity of the benzine flame; 3) the decrease of combustion velocity accompanying an increase in the diameter can be ex-

Card 1/2

On the Laminar Combustion of Liquids in Containers

plained by the decrease of thermal losses through the walls of the burner; 4) the combustion velocity in metal burners is somewhat smaller than that in glass burners because of higher losses through the walls of the burner into the surrounding space; 5) during the experiments some deviations were noted from the theoretical laminar-combustion formula: $\beta M/\delta$ = const, where β is a coefficient numerically equal to the amount of grams of oxygen used for 1 g of steam; M is the amount of g of liquid burned per unit time, and δ is the height of the flame. It is assumed that the deviation is caused by the different combustion efficiency of the liquids tested in the experiments, and that it would be helpful to introduce a correction factor in order to establish better agreement with the formula.

M. V. Krasnoglyadova

Card 2/2

BLINOV, V.I.

AUTHOR BLINOV, V.I., KHUDYAKOV, G.N., 20-5-42/67

TITLE On certain Laws in the Diffusion Burning of Liquids.
(O nekotorykh zakonomernostyakh diffuzionnogo goreniya zhidkostey - Russian)

PERIODICAL Doklady Akademii Nauk SSSR, 1957, Vol 113, Nr 5, pp 1094-1097, (U.S.S.R.)

Received 7/1957 Reviewed 8/1957

ABSTRACT The investigation of the combustion of motor spirit, petroleum, Diesel oil, solar oil and a number of other mineral oil products in containers of different diameters makes it possible to determine a number of laws governing this kind of diffusion combustion of liquids. Illustration Nr 1 shows different kinds of flames produced by motor spirit burned in cylindrical containers of 1,1; 3; 15; 30 and 130 cm. Combustion of liquids is a combustion of the vapor jet. Table 1 gives Reynold's numbers for some of the investigatied mineral oil products; they were computed on the basis of experimental results. In the case of the combustion of liquids in containers there are two regimes; the laminar with small diameters, and the turbulent with diameters exceeding 1 m. The entire domain of the rising diameter is divided into 3 parts: at $d > 10$ cm, ($d = \phi$) the velocity v rises simultaneously, at $d > 1$ m practically does not change with a change of d. The re-values for different d and the flame recordings lead to the conclusion that the first part of the domain corresponds ot the laminar re-

Card 1/3

On Certain Laws in the Diffusion Burning of Liquids.

gime, the third to the turbulent combustion regime of the liquid, whereas the second forms a transition zone. Uncomplicated computations show that the reduction of the specific velocity of the laminar combustion is, on the whole, due to the relative decrease of the amount of heat in the case if an increasing diameter of the container. Table 4 shows that inthe case of laminar combustion the ratio between the volume Q of the liquid combusted in a time unit and the height of the flame δ does not depend on the diameter of the container, and thus the value $u=Q/\sqrt{d}$, which characterizes the combustion velocity which was referred to the unit of the flame surface. The value u is modified proportional to the fraction 1/d, which is explained in the following. From the experimental results shown in a table 1 it follows that the specific velocity of the turbulent combustion is practically independent of d: with an 18-fold increase of diameter the combustion velocity of motor spirit and petroleum hardly changed at all. In this way the following conclusion is arrived at: the constancy of turbulent combustion shows that the amount of radiation energy absorbed by 1 cm^2 of the surface of the liquid within a time unit is independent of d. Also the relative height of flame $\sqrt{}/d$ is independent of the diameter of the container in the case of turbu-

20-5-42/67

On Certain Laws in the Diffusion Burning of Liquids.

lent combustion.
(1 illustration, 1 table, 3 Slavic references)

ASSOCIATION Institute for Energetics "KRZHIZHANOVKIY, G.M." of the Academy of Science of the U.S.S.R.
PRESENTED BY KRZHIZHANOVSKIY, G.M., Member of the Academy
SUBMITTED 25.5.1956
AVAILABLE Library of Congress
Card 3/3

BLINOV, V. I., and KHUDYAKOV, G. N.,

"Certain Regularities in the Combustion of Petroleum Products in Containers." (Study of Combustion Processes; Collection of Articles on Work, Done by the Power Institute imeni G. M. Krzhizhanovskogo AS USSR) Moscow Izd-vo AN SSSR, 1958. 123 p.

(Laboratory for the Intensification of Furnace Processes).

for abstract see Khitrin, L.N.

BLINOV, V.I.; KHUDYAKOV, G.N.; PETROV, I.I.; REUTT, V.Ch.

Motion of liquid agitated by a jet of air in a tank. Inzh.-fiz. zhur. no.11:6-13 N '58. (MIRA 12:1)

1. Energeticheskiy institut AN SSSR, g. Moskva.
(Hydrodynamics)

BLINOV, V.I.

Pulsation of diffusion flames. Inzh.-fiz.zhur. no.8:15-22 Ag '59.
(MIRA 12:11)

1. Energeticheskiy institut im. G.M. Krzhizhanovskogo, Moskva.
(Flame)

PHASE I BOOK EXPLOITATION SOV/5381

Blinov, Vasiliy Ivanovich, and Georgiy Nikitovich Khudyakov

Diffuzionnoye goreniye zhidkostey (Diffusion Combustion of Liquids) Moscow, Izd-vo AN SSSR, 1961. 206 p. Errata slip inserted. 2,500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Energeticheskiy institut im. G. M. Krzhizhanovskogo.

Resp. Ed.: L. N. Khitrin, Corresponding Member of the Academy of Sciences of the USSR; Ed. of Publishing House: G. B. Gorshkov; Tech. Ed.: O. G. Ul'yanova.

PURPOSE: This book is intended for engineers and others concerned with the combustion of liquids and means for the extinction of burning liquids.

COVERAGE: The authors have reviewed the considerable experimental material and theoretical data published on the physics of liquid combustion during the last fifteen years in sources not widely circulated. They have collected and generalized the results. The subject matter was restricted to diffusion

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Diffusion Combustion of Liquids

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combustion of liquids in containers. The first part of the book deals with ignition and combustion of liquids. Properties of mixtures of liquids are described in detail. The second part treats the burning of liquids and problems related to the shapes and dimensions of the flame, pulsation, temperature, radiation, and various combustion regimes of liquids. Changes in the composition of liquids during combustion are discussed and the results of measuring burning speeds are described. The second part also deals in detail with temperature distribution in burning liquids and gives reasons for the appearance and increase of a heated constant-temperature layer in burning gasoline, petroleum, and several other liquids. Finally, the phenomenon of ejection of hot liquid during combustion and its consequences are considered. The third part of the book discusses the mechanism of extinguishing flames of burning liquids in containers by agitation using foam and water spray and with combined methods. The data in this book were obtained from the joint work of members of the Laboratory for Intensification of Heating Processes of the Power-Engineering Institute of the Academy of Sciences USSR and the Thermophysics Laboratory of the Central Scientific Research Institute for Fire Prevention (TsNIIPO). Members of this group, besides the authors, were: I. I. Petrov, V. Ch. Reutt, L. A. Volodina, I. V. Gerasimov, and N. V. Obukhova. Work done at the Baku Laboratory of the TsNIIPO was taken into consideration. The first part of the book was written by V. I. Blinov, the second and third parts by V. I. Blinov jointly with G. N. Khudyakov. There are 184 references:

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Diffusion Combustion of Liquids SOV/5381

159 Soviet, 18 English, 2 German, 2 French, 2 English in Russian translation, and 1 German in Russian translation.

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S/170/61/004/002/010/018
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AUTHOR: Blinov, V. I.

TITLE: Rules Observed to Govern the Inflammation of Mixtures of Combustible Liquids

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1961, Vol. 4, No. 2, pp. 95-98

TEXT: The author has shown in a previous paper that the relation $p = p_o(1 - e^{-bh})$ (1) holds for the inflammation of individual liquids in cylindrical tubes, where p denotes the pressure of saturated vapor, p_o is the atmospheric pressure, h the distance from the tube end, $b = 7.5 \cdot 10^4 M_o R/p_o \beta D_o T_z$, D_o is the diffusion coefficient of vapor at 0°C, T_z is the ignition temperature in °K, β the number of oxygen moles required for the combustion of one mole of vapor, and M_o the number of oxygen moles required by the flame in one second. P. G. Ipatov showed that the relation (1) holds also for binary mixtures, when putting

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Rules Observed to Govern the Inflammation of Mixtures of Combustible Liquids

$D_o = D_{10}y_1 + D_{20}y_2$ and $\beta = \beta_1 y_1 + \beta_2 y_2$ (2), where y_1 and y_2 are the mole fractions of the mixing components in the vapor phase. A study was made of the dependence of ignition temperature on the composition of the mixture of combustible liquids. If M_o is supposed to be the same for different substances, and the tube diameter and oxygen concentration in the atmosphere are allowed to remain unchanged, one may then assume b_o = const for p_o = const for various liquid mixtures whose ignition temperatures differ only little. Then, $b = b_o/D_o\beta$ (3). If $D_o\beta$ changes only little on a change in the mixture, $p \cong$ const for a given h. In this case, the ignition temperature as a function of the composition of liquid and gaseous phase coincides with a curve indicating the relationship between the boiling temperature and the phase composition. It may then happen that the ignition temperature of the mixture be lower than that of the two components at a determined mixing ratio. Experimental results concerning mixtures of toluene and benzene are then dealt with, in which the ignition temperature in ideal mixtures is a linear function of the mixture. The relation $\vartheta_m = \vartheta_1 - (\vartheta_1 - \vartheta_2)y_2$ (7) is obtained, where ϑ_m is the

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Rules Observed to Govern the Inflammation of Mixtures of Combustible Liquids

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ignition temperature of the mixture, ϑ_1 and ϑ_2 are corresponding temperatures of the components. This formula coincides with the empirical formula by Ipatov. The definition of the flame temperature of a liquid is then given and it is stated that it is closely associated with the lower concentration limit of the inflammable vapor - air mixture. If the ignition temperature is near the flame temperature, the relation $k = B/D\beta$ (10), where B = const, can be put for the concentration limit $k = \frac{V_D}{V_D + V_L} 100 = \frac{p_D}{p_D + p_L} 100$. V_D and V_L are the volumes and p_D and p_L the partial pressures of air and vapor. It is shown on the basis of experimental data that (10) is well usable. There are 2 figures and 4 Soviet references.

ASSOCIATION: Institut aviatsionnogo priborostroyeniya, g. Leningrad (Institute of Aviation Instrument Construction, Leningrad)

SUBMITTED: July 1, 1961

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L 13823-63 EPF(c)/EWT(m)/BDS AFFTC/APGC Pr-4 MN

ACCESSION NR: AP3004739 S/0170/63/006/008/0045/0051

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AUTHOR: Anisimov, V. Ye.; Blinov, V. I.; Reutt, V. Ch.

TITLE: Dependence of burning rate of a liquid on the temperature of its surface

SOURCE: Inzhenerno-fizicheskiy zhurnal, v. 6, no. 8, 1963, 45-51

TOPIC TAGS: liquid combustible, burning rate, liquid burner, liquid surface temperature

ABSTRACT: The dependence of the burning rate of a liquid combustible on its surface temperature was studied with the following experimental arrangements: 1) glass burners 5, 10, and 23 mm in diameter in which ethanol, butanol, gasoline, or kerosene were burned at various heights of the liquid level to yield plots of the flame height and distance of the liquid level from the burner outlet versus surface temperature; 2) quartz burner 29.5 mm in diameter provided with a water-cooled copper cylinder for cooling the surface of the liquid; 3) glass, steel, and brass burners of various diameters; and 4) cylindrical and rectangular open containers in which copper tubes for cooling were mounted 2 mm below the liquid surface. The study showed that the burning rate decreases gradually as the surface

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temperature is lowered. The burning rate is controlled mainly by the diffusion of vapors through the boundary layer. Correlation of the experimental data by earlier derived formulas is discussed. Orig. art. has: 4 figures.

ASSOCIATION: Severo-zapadny*y zaochny*y politekhnicheskiy institut, Leningrad (Northwestern Correspondence Polytechnic Institute)

SUBMITTED: 14Dec62 DATE ACQ: 27Aug63 ENCL: 00

SUB CODE: PR NO REF SOV: 003 OTHER: 000

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ANISIMOV, V.Ye.; BLINOV, V.I.; REUTT, V.Ch.

Relation between the rate of burning of a liquid and its surface temperature. Inzh.-fiz. zhur. 6 no.8:45-51 Ag '63. (MIRA 16:10)

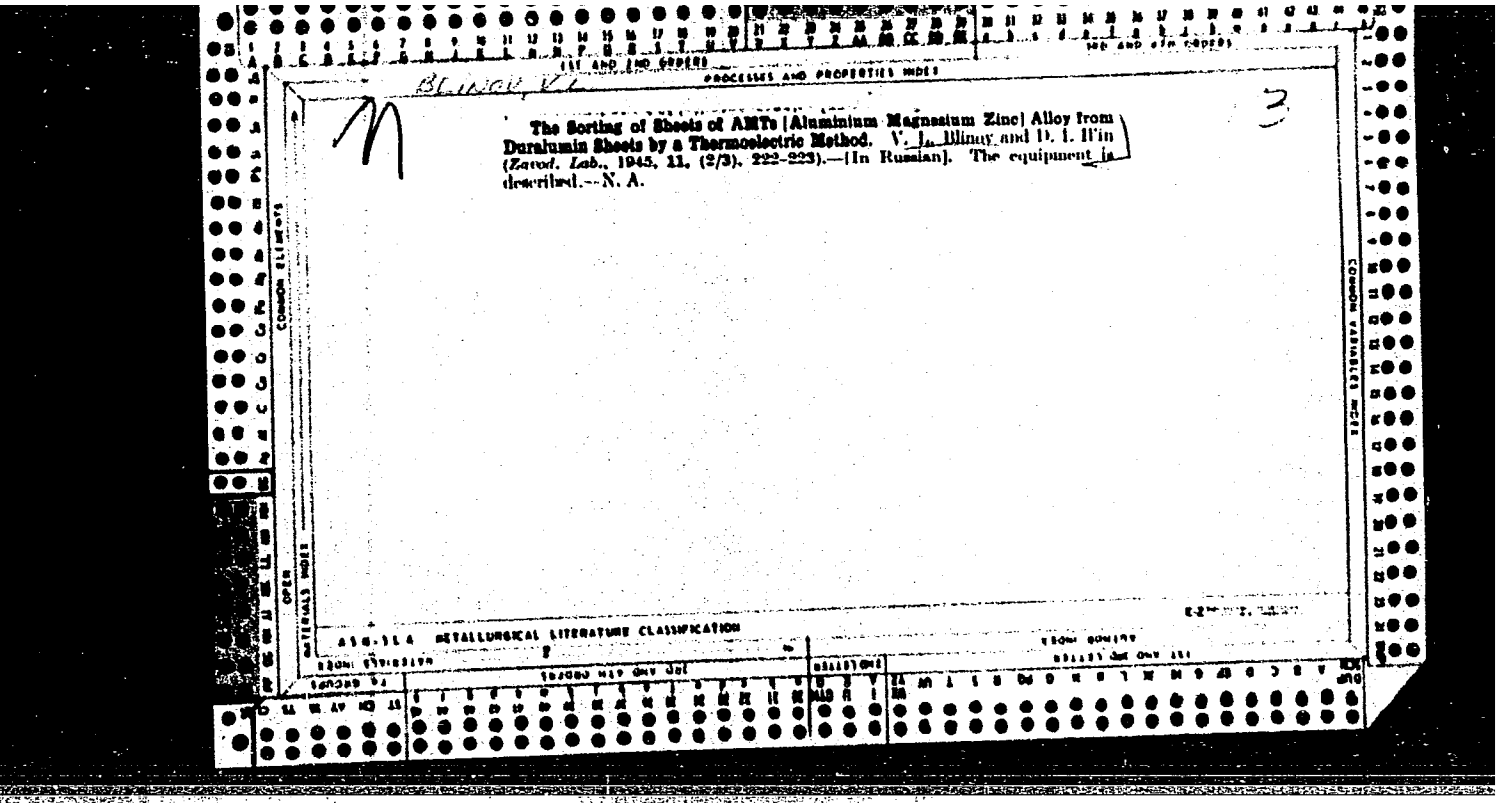
1. Severo-zapadnyy zaochnyy politekhnicheskiy institut, Leningrad.

BLINOV, V.I.

Using the semiautomatic eight-spindle vertical drilling machine with extensible spindles. Biul. tekh.-ekon. inform. Gos. nauch.-issl. inst. nauch. i tekh. inform. 18 no.7:32-33 Jl '65. (MIRA 18:9)

ARTEMENKO, Yelizaveta Semenovna; BLINOV, V.I., nauchn. red.; VOL'PE, L., red.

[Solid state physics; textbook for a general physics course] Fizika tverdogo tela; uchebnoe posobie po kursu obshchei fiziki. Leningrad, Severo-Zapadnyi zaochnyi politekhnicheskii in-t, 1963. 67 p. (MIRA 17:3)



The Sorting of Sheets of AMTs [Aluminium Magnesium Zinc] Alloy from Duralumin Sheets by a Thermoelectric Method. V. Ja. Illiny and D. I. Il'in (*Zavod. Lab.*, 1945, 11, (2/3), 222–223).—[In Russian]. The equipment is described.—N. A.

BLINOV, V.N., mashinist ekskavatora (Borispol', Kiyevskoy obl.)

Changing an attachment on the chassif of the ER-4 excavator.
Stroi. truboprov. 8 no.12:30 D '63. (MIRA 17:4)

1. BLINOV, V. P.

2. USSR (600)

4. Lukoyanov District-Fire Clay

7. Report on the prospecting work for refractory and molding clays in the territory of the Lukoyanov, Arzamas, and Vyksa Districts of the Gorkiy Province. Abstract Izv. Glav. upr. geol. fon. no. 2 1947.

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

BLINOV, V.P.; SLAVIKOVSKIY, N.A.; FILIN, L.G., starshiy dorozhnyy master (Stantsiya Moskva-Kurskaya)

Transportation of welded rail units. Put' i put. khoz. no.6:29 Je '59. (MIRA 12:10)

1.Nachal'nik tekhnicheskogo otdela sluzhby puti, stantsiya Moskva-Kurskaya (for Blinov). 2.Zamestitel' nachal'nik distantsii puti, stantsiya Moskva-Kurskaya (for Slavikovskiy).
(Railroads--Rails--Transportation)

BLINOV, V.P.; LEL'CHUK, V.S., nauchnyy sotr.; ROGACHEVSKAYA, L.S., nauch.sotr.; POLYAKOV, Yu.A., otv.red.; KIND, T.B., red.izd-va; GUS'KOVA, O.M., tekhn.red.

[Those who are at the forefront; an account on the movement for communist labor in the Oktyabr'skiy District of Moscow] O tekh, kto idet vperedi; rasskaz o dvizhenii za kommunisticheskii trud v Oktiabr'skom raione Moskvy. Moskva, Izd-vo Akad. nauk SSSR, 1961. 94 p. (MIRA 14:11)

1. Zaveduyushchiy otdelom propagandy i agitatsii Oktyabr'skogo rayonnogo komiteta Kommunisticheskoy partii Sovetskogo Soyuza (for Blinov). 2. Institut istorii AN SSSR (for Lel'chuk, Rogachevskaya).
(Moscow—Efficiency, Industrial)

BLINOV, V.P.

References to standards in the teaching literature. Standartizatsiia 26 no.6:52 Je '62. (MIRA 15:7)
(Standards, Engineering)

BLINOV, V. V.; BOGORODSKIY, A. L.;

"Causes of the Formation of Internal Cracks in Heat-Resistant Steel Ingots and Thermal Effect of the Mold on the Ingot," Proizvodstvo stali (Steel Production) Moscow, Mashgiz, 1958. 154 p.

PURPOSE: This book, published on the 25th anniversary of the Ural mashzavod (Ural Heavy Machine-building Plant imeni S Ordzhonikidze) is intended for engineers, technicians and scientific workers concerned with the production of steel.

BOGORODSKIY, A.L.; BLINOV, V.V.

Cause of the formation of internal cracks in heat-resistant steel ingots and thermal processes in the mold. Sbor.st.UZTM no.3:101-115 '58. (MIRA 11:12)

(Steel ingots--Testing) (Heat--Transmission)

V.V. Blinov

AUTHOR: Gulyayev, B.B. SOV/24-58-4-37/39

TITLE: Conference on Crystallisation of Metals (Soveshchaniye po kristallizatsii metallov)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, 1958, Nr 4, pp 153 - 155 (USSR)

ABSTRACT: This conference was held at the Institut mashinovedeniya AN SSSR (Institute of Mechanical Engineering of the Ac.Sc. USSR) on June 28-31, 1958. About 400 people participated and the participants included specialists in the fields of foundry, metallurgy, crystallography, physics, welding, heat, physical chemistry, mathematical physics and other related subjects. In addition to Soviet participants, foreign visitors included Professor D. Czikl (East Germany) and N.I. Chvorinov (Czechoslovakia). This conference on crystallisation of metals was the fourth conference relating to the general problem of the theory of foundry processes.

Crystallisation of Steel and Alloys with Special Properties. The following papers were read: V.I. Lapitskiy, N.I. Stupar', K.P. Rudachev, V.L. Olekseyenko, A.I. Marinov - "Certain Methods of Reducing Non-uniformities of Large Castings (up to 20 t) made of Rimming Steel"; V.K. Novitskiy, A.B. Kikul'chin and V.V. Blinov - "Influence of Internal Crystallisers on the Structure and Properties of Steel Ingots"; N.I. Chvorinov (Czechoslovakia) - "On the Crystallisation of Steel"; A.P. Pronov - "Crystallisation of Continuously Cast Ingot and Influence on it of the Properties of

Card6/10 Liquid Steel"; L.I. Morozenskiy and O.D. Zigel' - "Influence of Movement of the Metal in the Liquid Core on the Crystallisation of Steel Ingots and Castings"; N.N. Guglin, A.A. Novikova and B.B. Gulyayev - "Crystallisation and Mechanical Properties of Steels at Elevated Temperatures"; V.Ye. Neymark - "Influence of Inoculation on the Deformation of the Crust and the Speed of Solidification of Ingots"; G.P. Ivantsov - "Thermal Stresses and Deformation in the Crust of a Crystallising Ingot"; V.G. Gruzin and P.I. Yanshanov dealt with problems of formation of the primary structure of structural steel and the influence on it of the temperature of pouring.

The features of crystallisation of castings made of alloys with special properties and of austenitic steels were dealt with in the following papers: I.I. Goryunov - "Influence of Inoculation on the Structure and on the Physico-mechanical Properties of High-alloy Steels"; F.F. Khimushin, F.V. Aksenov, K.F. Lashko and M.Ya. Rodina - "Occurrence of Non-uniformities in High-temperature alloys During Crystallisation and Heat Treatment" and "Experimental Investigation of the Process

Card7/10 of Crystallisation of Cast Blades Made of Refractory Alloys"; A.M. Yuferov considered the process of recrystallisation of steel.

BLINOV, V.V.

PHASE I BOOK EXPLOITATION SOV/4343

Soveshchaniye po teorii liteynykh protsessov, 3d

Usadochnyye protsessy v metallakh; trudy soveshchaniya (Shrinkage Processes in Metals; Transactions of the Third Conference on the Theory of Casting Processes) Moscow, AN SSSR, 1960. 281 p. Errata slip inserted. 3,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut mashinovedeniya. Komissiya po tekhnologii mashinostroyeniya.

Resp. Ed.: B.B. Gulyayev, Doctor of Technical Sciences, Professor; Ed. of Publishing House: V.S. Rzhesnikov; Tech. Ed.: T.V. Polyakova.

PURPOSE: This collection of articles is intended for scientific workers, engineers, technicians of scientific research institutes and industrial plants, and for faculty members of schools of higher education.

COVERAGE: The collection contains technical papers presented at the Third Conference on the Theory of Casting Processes, organized by Liteynaya sektsiya Komissii po tekhnologii mashinostroyeniya Instituta mashinovedeniya AN SSSR (Casting Section of the Commission for Machine-Building Technology of the Institute of Science of Machines, Academy of Sciences USSR) and by Institut metallurgii imeni Baykova AN SSSR (Institute of Metallurgy imeni A.A. Baykov, Academy of Sciences USSR). The most serious defects in castings, ingots, and welds as a result of metal shrinkage are reviewed. Factors contributing to the formation of shrinkage cavities, porosity, cracks, fissures, distortion, and internal stresses are analysed along with measures taken to prevent and remedy them. The hydrodynamics of molten metals and the process of solidification of metals are discussed. Also presented are resolutions adopted at the Conference with regard to the problem of shrinkage in metals. No personalities are mentioned. Most papers are accompanied by bibliographic references, the majority of which are Soviet.

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