

137-1958-2-2492

An Investigation of the Liquation Phenomena in a Steel Ingot

surface; also toward the center the dendritic orientation was more sharply defined. At the bottom of the ingot a dark band, rich in S and poor in P, was noted at the surface. The appearance of this band was attributed to a break in the contact between ingot and mold. Bibliography: 15 references.

V. N.

1. Steel castings--Phenomena--Analysis 2. Liquids--Applications

Card 3/3

AUTHOR: Bolotov, I.Ye., Syreyschenikova, V.I. and Vukobratov, D.G.
TITLE: On the mechanism of formation of spheroidal graphite in ¹²⁵ cast iron. (O mekhanisme obrazovaniya sharovidnogo grafita v chugunakh.)
PERIODICAL: "Fizika Metallov i Metallovedenie" (Physics of Metals and Metallurgy), 1957, Vol.IV, No.1 (10), pp.177-180 (U.S.S.R.)
ABSTRACT: The aim of the experimental work was to elucidate whether the formation of spheroidal graphite in the case of treatment of the cast iron with an inoculation agent is due to the elimination of sulphur and oxygen from the melt. If this is the case, iron obtained from pure starting materials should develop spheroidal graphite without any inoculation. For this purpose, the shape of the graphite was investigated in iron produced in vacuum from pure raw materials. For elucidating the mechanism of the effect of sulphur radio-active ³²S has been included. The silicon which was added to the melt to an extent of 3% contained 0.17% Al, 0.41% Fe, 0.15% Ca whilst the graphitised carbon contained 0.015% S, the iron was molten at 1400 °C in a graphite crucible at a pressure of 2×10^{-3} mm Hg and cooled in vacuum. It was found that formation of lamellar graphite is due to the presence of sulphur, and apparently also due to the presence of oxygen in the iron, and it is concluded therefrom that the formation of spheroidal graphite as a result of inoculation (with

On the mechanism of formation of spheroidal graphite in¹²⁵
cast iron. (Cont.)

magnesium for instance) is due to the purification of the melt from these admixtures and combining with them into insoluble chemical compounds (MgS, MgO); the purification may also be due to the flotation process which accompanied the passage of bubbles of vapours of the inoculation agent through the melt. It is also possible that the inoculation agent brings about a super-cooling of the iron and by absorbing on the graphite makes the movement of carbon atoms to the growing graphite crystal difficult. 4 micro-photographs, 14 references, 6 of which are Russian.

Ural Research Institute of Ferrous
Metals.

Recd. May 21, 1956

Bolotov, I. Ye.

137-1958-1-283

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 1, p43 (USSR)

AUTHORS: Bolotov, I. Ye., Fofanov, A. A.

TITLE: Movement of Materials in a Blast Furnace Studied by Radioactive Isotopes (Primeneniye radioaktivnykh izotopov dlya izucheniya dvizheniya materialov v domennoy pechi)

PERIODICAL: V sb.: Primeneniye radioaktivn. izotopov v chernoy metallurgii. Chelyabinsk, Knigoizdat. 1957, pp 67-74

ABSTRACT: Ampoules containing the radioactive isotopes Co^{60} and Fe^{59} were used to measure the rate at which materials descended in a blast furnace of 240 m^3 net volume at the Alapayevsk Works. The descent of the ampoules was recorded by counters mounted at various levels. The rates of motion of the charges and the ampoules, charged at distances of 300 and 570 mm from the walls of the throat, were 4.25 and 3.24 m/hr, respectively. The more rapid motion of the materials at the periphery is explained by the fact that the furnace was built without boshes.

M.O.

Card 1/1 **1. Blast furnaces--Performance 2. Iron isotopes (Radioactive)
--Applications 3. Cobalt isotopes (Radioactive)--Applications**

137-58-1-1689

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 1, p 230 (USSR)

AUTHORS: Bolotov, I. Ye., Syreyshchikova, V.I., Guterman, S.G.

TITLE: The Mechanism of Formation of Spheroidal Graphite Crystals
in Iron (O mekhanizme obrazovaniya sharovidnykh kristallov
grafita v chugune)

PERIODICAL: V sb.: Rost kristallov. Moscow, AN SSSR, 1957, pp 205-211

ABSTRACT: Bibliographic entry

1. Iron 2. Graphite crystals--Formation

Card 1/1

BOLOTOV, I.Ye.; SEREBRYAKOVA, I.B.; SMIRNOV, N.S.

Effect of ponderomotive forces on the formation of coating
obtained by hot zinc plating [with summary in English]. Inzh.-fiz.
zhur. no. 9:113-115 S '58. (MIRA 11:10)

1. Ural'skiy institut chernykh metallov, g. Sverdlovsk.
(Zinc plating)

24(8) PHASE I BOOK EXPLOITATION SOV/2117

Sovesheniya po eksperimental'noy tekhnike i metodam vysokotemperaturnykh issledovaniy, 1956

Ekspiremental'naya tekhnika i metody issledovaniy pri vysokikh temperaturakh; Trudy sovetskoy nauki (Experimental Techniques and Methods of Investigation at High Temperatures; Transactions of the Conference on Experimental Techniques and Methods of Investigation at High Temperatures) Moscow, AN SSSR, 1959. 789 p. (Series: Akademiya nauk SSSR. Institut metallurgii. Komissiya po fiziko-khimicheskim osnovam proizvodstva stali) 2,200 copies printed.

Resp. Ed. J. A. M. Sasarin, Corresponding Member, USSR Academy of Sciences; Ed. of Publishing House: A.L. Bunkovskiy.

PURPOSE: This book is intended for metallurgists and metallurgical engineers.

COVERAGE: This collection of scientific papers is divided into six parts: 1) thermodynamic activity and kinetics of high-temperature processes 2) constitution diagram studies 3) physical properties of liquid metals and slags 4) new analytical methods and production of pure metals 5) pyrometry, and 6) general questions. For more specific coverage, see Table of Contents.

Experimental Techniques and Methods (Cont.) SOV/2117

Gol'vantsyn, M.I., ~~Ma~~ Rolotov, and P.V. Sklyuyev. Investigation of Dendritic Liquefaction in Steel Ingots by Means of Radioactive Isotopes 724

Application of this method (autoradiography) permits both qualitative and quantitative determination of the dendritic liquefaction of elements in steel. A study of the dendritic liquefaction of phosphorus and sulfur by this method indicated that the content of these elements is impoverished in the dendrite axes, but high in the interaxial spaces. The concentration of carbon and phosphorus in the interaxial spaces is approximately twice that in the axes. Nearly all of the sulfur is contained in the interaxial spaces.

Karshentseva, L.M. Determination of the Sources of Contamination of Ball Bearing Steel by Means of Radioactive Isotopes 737

The radioisotope method (radiometry and radiography), in combination with the radioisotope method, may be successfully used for the study of non-metallic inclusions in steel. The method is based on the introduction of radioactive isotopes into the steel as a result of the disintegration of introduced isotopes in the furnace, pouring spout, ladle, and runner head. The amount of such inclusions formed by the disintegration of radioisotopes during the tapping and teeming of ball bearing steel is insignificant (of the order of 10⁻⁵-10⁻⁷% by weight). The distribution of such foreign particles throughout the ingot is random. As a rule the inclusions are rather coarse and range in shape from globular to oblong.

18.7500

76005
307/70---5-23/35

AUTHOR: Bolotov, I. Ye.

TITLE: The Crystal Forms of Graphite in a Platinum-Carbon Alloy

PERIODICAL: Kristallografiya, 1959, Vol 4, Nr 5, pp 784-785 (USSR)

ABSTRACT: In the absence of S and O, carbon crystallizes in the form of spherulites in pig iron and nickel-carbon alloys, but forms platy crystals in the presence of S or O. Carbon also dissolves in the molten metals of the platinum group and segregates again during their crystallization. The platinum-carbon alloys were studied in order to get some additional data helpful in understanding the mechanism due to which S atoms affect the form of graphite crystals. Platinum specimens, each weighing 3 g, and containing 3% Rh, were molten at 1,800° C in graphite crucibles some of which contained 0.03 g powdered FeS at the bottom. The molten alloys were held in the furnace for 2 minutes and cooled in air. In both cases, with or without FeS, graphite formed

Card 1/2

The Crystal Forms of Graphite in a Platinum-Carbon Alloy

75006
SOV/70-4-5-28/36

perfect spherulites with radial distribution of the individual crystals. A part of C formed complex carbides of Pt and Rh which in some S-containing specimens were associated with dark inclusions most likely composed of Pt sulfide. Thus, the presence of S did not hinder the formation of graphite spherulites in the platinum-carbon alloys. There are 2 figures; and 4 references, 1 U.S., 1 U.K., 1 German, 1 Soviet. The U.S. reference is: J. Kefferian, et al., Amer. Foundryman, 6, 85-91, 1953; The U.K. reference is: H. Morrogh, W. J. Williams, J. Iron and Steel Inst., 155, 321-371, 1947.

ASSOCIATION: Ural Institute of Ferrous Metals (Ural'skiy institut chernykh metallov)

SUBMITTED: May 25, 1959

Card 2/2

18 (7)

AUTHORS:

Bolotov, I. Ye., Susloparov, G. D.

05731

SOV/32-25-10-20/63

TITLE:

Methods of Local Electronographic Analysis of Microparticles in Metal Alloys

PERIODICAL:

Zavodskaya laboratoriya, 1959, Vol 25, Nr 10, pp 1206 - 1209 (USSR)

ABSTRACT:

Metallographic, X-ray structure-, and electronographic methods are used for determining the nature of individual nonmetallic inclusions in metals. An electronographic method of investigating individual microparticles in alloys by means of the electronograph of type EM-4 is described. The preparation of replicas with the microparticles to be investigated is carried out as in the electron-microscopic investigations; better results are obtained with varnish replicas. To obtain an electron diffraction of the single microparticle, the cross section of the electron beam must be about the same size as the particle. Such microelectron beams are obtained by means of a diaphragm, i.e. an annealed gold foil (method according to B. M. Rovinskiy and V. G. Lyutsau (Ref 3)). Centering the diaphragm on the optical axis of the device is described (Fig 1).

Card 1/2

Methods of Local Electronographic Analysis of Micro-
particles in Metal Alloys

05731
SC7/32-25-10-20/63

Individual graphite spherulites in highly resistant magnesium cast iron were investigated by means of quartz replicas. The microphotographs and the electronogram of an individual graphite spherulite (Fig 2, a,b,c) confirm the polycrystalline structure of the graphite spherulite. Investigations of the phase along the grain boundary of thermally treated stainless steels showed (Table, Fig 3) that the particles separated on the grain boundaries are chromium carbide ($Cr_{23}C_6$) while the coarser nonmetallic inclusions deposited in the form of little strokes along the grain boundary represent alumina particles ($\alpha-Al_2O_3$). There are 3 figures, 1 table, and 3 references, 2 of which are Soviet.

ASSOCIATION: Ural'skiy nauchno-issledovatel'skiy institut Chernykh metallov
(Ural Scientific Research Institute of Ferrous Metals)

Card 2/2

BOLOTOV, I.Ye., SOLDATOV, B.A.

Sensitivity of the electric method of exposing lamination in sheet steel. Zav.lab. 26 no.7:847-849 '60. (MIRA 13:7)

1. Ural'skiy nauchno-issledovatel'skiy institut chernykh metallov.

(Steel--Defects)

BOLOTOV, I. Ye.

Crystallization of Ni-C alloys. Part 1: Effect of the rate of cooling on the formation of zones with spheroidal and lamellar graphite. Fiz. met. i metalloved 11 no.3:420-426 Mr '61.

(MIRA 14:3)

1. Ural'skiy nauchno-issledovatel'skiy institut chernykh metallov.
(Nickel alloys—Metallography)

BOLOTOV, I. Ye.

Crystallization of Ni-C alloys. Part 2. Effect of sulfur on the formation of zones with spheroidal and lamellar graphite. Fiz. met. i metalloved 11 no.3:427-434, Mr '61. (MIRA 14:3)

1. Ural'skiy nauchno-issledovatel'skiy institut chernykh metallov.
(Nickel alloys—Metallography)
(Sulfur)

DOROSHEK, S.I., inzh.; LAPKIN, N.I., inzh.; BOLOTOV, I.Ye.

In the Ural Mountain Scientific Research Institute for Ferrous
Metallurgy. Stal' 23 no.3:252-253, 282 Mr '63. (MIRA 16:5)
(Iron-nickel alloys) (Cast iron--Metallurgy)

BOLOTOV, I.Ye.

Method of determining the mutual deflection angle of diffraction and
micro patterns in an electron microscope. Zav.lab. 30 no.1211488-1489
'64. (MIRA 18:1)

1. Ural'skiy nauchno-issledovatel'skiy institut chernykh metallov.

BOLOTOV, T.Ye.

Electron microscopy of the various stages of crystallization of spherulite and floccular graphite in the Ni-C hard alloy. Fiz. metal. i metalloved. 20 no. 3:258-264, Ag '65. (METRA 18:9)

1. Ural'skiy nauchno-issledovatel'skiy institut chernykh metallov.

BOLOTOV, I.Ye.; FISHELEVA, S.B.

Structure of antimony spherulites crystallizing out of an
amorphous film. Fiz. met. i metalloved. 20 no.3:462-465 S
'65. (MIRA 18:11)

1. Ural'skiy nauchno-issledovatel'skiy institut chernykh
metallov.

ACC NR: AP6015486 SOURCE CODE: UR/0181/66/008/005/1585/1591

AUTHOR: Bolotov, I. Ye.; Murav'yev, Ye. A.

24
B

ORG: Ural Scientific Research Institute of Ferrous Metals, Sverdlovsk (Ural'skiy nauchno-issledovatel'skiy institut chernykh metallov)

TITLE: Initial crystallization stages of selenium spherulites and the mechanism by which they form

SOURCE: Fizika tverdogo tela, v. 8, no. 5, 1966, 1585-1591

TOPIC TAGS: spherulite, selenium, single crystal growing, etched crystal

ABSTRACT: Selenium (99.7% pure) films were obtained by vacuum deposition upon freshly-split mica. Amorphous Se was crystallized at 100°C. The growth of Se spherulites was recorded by a movie camera mounted on an optical microscope. For the purposes of electron microscope analysis, the Se film was reinforced by a vacuum-deposited C film. The initial single crystals of Se show the anticipated lattice bend, accompanied by a reduction of the lateral facet area; in the formed spherulites, the C-axis (axis of the spiral "molecules" of Se) is positioned concentrically. While the formation of spherulites is usually explained by crystallographic or uncrystallographic branching the physical nature of this process has never been properly explained. It appears that surface tension forces may play the predominant role in it. Orig. art. has: 7 figures.

SUB CODE: 20/ SUBM DATE: 24Jun65/ ORIG REF: 006/ OTH REF: 005

Card 1/1

32602. FOLOTOV, I.N. O mekhanizirovannoy obraboke pochvy doli polezashchitinye
lesnyye nasuzhdeniya. Les i step', 1949, No 3, S. 49-55

SO: Letopis' Zhurnal' nykh Statey, Vol. 44

1. BOLOTCV, I. N.
2. USSR (600)
4. Sowing
7. How to estimate an even distribution of seeds over the field surface during seeding. Mekh. i elek. sel'khoz. No. 3, 1953.

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

SOV/137-58-9-18677

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 75 (USSR)

AUTHORS: Bolotov, I.Ye., Kurganov, V.V., Popov, A.A., Fedorov, A.B., Chernikova, N.V.

TITLE: A Study by Autoradiography of the Structure and Kinetics of Ingot Crystallization in Transformer Steel (Izucheniye stroyeniya i kinetiki kristallizatsii slitka transformatornoy stali s pomoshch'yu avtoradiografii)

PERIODICAL: V sb.: Staleplavil'n. proiz-vo, Moscow, Metallurgizdat, 1958, pp 172-183

ABSTRACT: S^{35} in an Al ampoule was introduced while molds were filled. Autoradiographs were taken of the surface of a large section of the test ingots. Three zones of dendrites, each with a different structure, were found: A zone of columnar dendrites at the surface of the ingot; a zone of very fine and poorly developed dendrites in the middle of the ingot, narrowing toward the top; and, between the central zone and the zone of columnar crystallization, a zone of large and highly-developed dendrites. When the isotope was introduced in batches at different times during pouring, evidence of sequence crystallization of the layer

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SOV/137-58-9-18677

A Study by Autoradiography of the Structure and Kinetics (cont.)

appeared. The thickness thereof at the mold wall in the upper portion of the ingot, determined by the autoradiograph, is in agreement with the results of the determination of the thickness of the "skin" of solidified metal by the overturning of analogous ingots. No such agreement exists in the lower portion of the ingot, because in this region the boundaries of distribution of the batches of isotope are ill defined. Thus, the S from the later additions of isotope is unable to penetrate into the lower portions of the ingot, which are still in a liquid or semiliquid state. The authors believe that the semifluid masses of metal concentrate in this region and that, although they are removed from the ingots when the latter are overturned, nevertheless they served as obstacles to the distribution of radioactive S atoms displaced by means of convection currents of liquid metal. This concept is confirmed by experiment.

L.K.

1. Steel--Structural analysis
2. Steel--Crystallization
3. Steel--Radiographic analysis

Card 2/2

BOLOTOV, A.D., SAVINSKAYA, V.F., I LEVIN, YA. S.

25073 LEVIN, YA. S., SAVINSKAYA, V.F., I BOLOTOV, D.D. Kormovyye Formy Lyupinov.
V Sb: Voprosy Kormodobyvaniya. Vyp. 2. M., 1949, S. 166-78

SO: Letopis', No. 33, 1949

1. YESUKOV, M. P., TYUTYUNNIKOV, A. I., BOLOTOV, K. D.

2. USSR (600)

4. Rye

7. Growing winter rye for green fodder, hay and silage. Sov. zootekh., 7, No. 3, 1952. Vsesoyuznyy Nauchno-Issledovatel'skiy Institut Kormov imeni V. R. Vil'yamsa.

9. Monthly List of Russian Accessions, Library of Congress, June 1952. UNCLASSIFIED.

BOLOTOV, K.D.

Zhurukhin, F. A., Bolotov, K.D.

Model of a portable thresher
Sel. i sem. 19, no. 8, 1952

ISLAFIUV, R. E.

Sowing annual rye grass in utilization of virgin land
Korm. baza 3 no. 3, 1952

Med ✓
Narrow-leaved lupine as feeding material. K. D. Bolotov and L. I. Nikolaeva. *Zhivotnovodstvo* 1956, No. 3, 70-2. The protein contents in air-dried leaves, flowers, and stems are 21.25, 22.13, and 18.03%, resp. During budding, flowering, and seed formation the protein contents are 21, 18.65, and 14.62%, resp. During the stage of seed formation, 13.8% of the dry matter is sugar. One

kg. of the green mass mowed in the flowering stage contains 35.8 mg. of carotene. The protein contents in the flowering stage are higher, and this stage is considered as the best mowing time. The air-dried silage contains protein 18.92, cellulose 29.75, N-free extractive substances 34.06, fat 4, and albumins 8.52%. Av. coeff. of digestion of the silage from the lupine is higher than that of the silage from annual grasses. Dried lupine seed contains 0.005-0.006% alkaloids.
M. Charmandarian

BOLOTOV, K.D., kandidat sel'skokhozyaystvennykh nauk.

Hungarian vetch. Nauka i pered.op. v sel'khoz. no.9:10 S '56.
(Vetch) (MIRA 9:10)

~~BOLOTOV~~ Konstantin Dmitriyevich; BARANOVA, P.G., redaktor; PAVLOVA, M.M.,
tekhnicheskij redaktor

[Serradella] Serradella. Moskva, Gos.izd-vo sel'khoz. lit-ry,
1957. 31 p. (MLRA 10:10)
(Serradella)

Bolotov, K.D.

USSR/Cultivated Plants - Fodder.

M.

Abs Jour : Ref Zhur - Biol., No 4, 1958, 15685

Author : K.D. Bolotov

Inst : The All-Union Foodstuff Institute

Title : The Yellow Fodder Lupine, an Albumin Crop.
(Zheltyy kormovoy lyupin-belkovaya kul'tura).

Orig Pub : Zhivotnovodstvo, 1957, No 5, 37-42.

Abstract : In experiments made at the All-Union Foodstuff Institute on heavy loams lupine yielded in the full flowering stage twice the amount of dry matter and albumin than vetch and oats and a field pea-oat mixture. Agrotechnical recommendations are given.

Card 1/1

BOLOTOV, Konstantin Dmitriyevich.

[Forage lupine] Kormovoi liupin. Moskva, Gos. izd-vo sel'khoz.
lit-ry, 1958. 39 p. (MIRA 11:9)

(Lupine)

BOLOTOV, K.F.; LUBENSEIY, Yu.M., kandidat meditsinskikh nauk.

Agricultural injuries. Sov.med. 19 no.4:63-66 Ap '55. (MLRA 8:6)

1. Iz gospital'noy khirurgicheskoy kliniki (zav. -prof. A.M.Dykhno)
Krasnoyarskogo meditsinskogo iustituta.
(WOUNDS AND INJURIES, prev. and control,
in agriculture, in Russia)
(AGRICULTURE,
inj., prev. in Russia)

MINASYAN, T.S.; PAL'CHIKOV, G.F.; SEROV, V.V.; BOLOTOV, L.T.;
OVSYANNIKOV, P.V.; RUSAKOV, A.P.

Means for increasing raw material resources for the production of
diesel fuels. Azerb. nefkhoz. 36 no.9:33-36 S '57.

(MIRA 11:2)

(Diesel fuels)

SOV/65-59-4-8/14

AUTHORS: Minasyan, T.S., Pal'chikov, G.F., Bolotov, L.T.,
Ovsyannikov, P.V., Shumovskiy, V.G., Afanasenko, M.M.,
Rusakov, A.P. and Karpenko, T.G.

TITLE: Investigations in the Grozny Plants on the Catalytic
Purification of Middle Distillates Obtained During
Thermo-Cracking Processes (Iz opyta raboty groznenskikh
zavodov po kataliticheskoy ochistke srednikh distillyatov
termicheskogo krekinga)

PERIODICAL: Khimiya i tekhnologiya topliv i masel, 1959, Nr 4,
pp 44-48 (USSR)

ABSTRACT: The octane numbers of gasolines can be improved by
catalytic cracking of the kerosine-gas-oil fractions,
obtained during fractional distillation. This,
however, seems unsatisfactory because these fractions are
high quality starting materials for jet and diesel fuels
etc. The middle fractions, obtained during thermal
cracking, used as diesel fuels, contain a high quantity
of unsaturated hydrocarbons and have a low cetane number.
The quality of diesel fuels can be improved by using
aluminium silicate catalysts and enriched secondary
distillates. In this way, the consumption of unsaturated

Card 1/3

SOV/65-59-4-8/14

Investigations in the Grozny Plants on the Catalytic Purification of Middle Distillates Obtained During Thermo-Cracking Processes

compounds is decreased and the cetane number of the diesel fuels increased, whilst maintaining the standards required by GOST for diesel fuels. Tests were carried out on substances obtained after second distillation of the broad fraction and also by using mixtures of these substances and the kerosine fraction obtained during thermal cracking. The properties of the tested materials are given in table 1 and the process conditions in table 2. Some high octane gasoline was obtained during this process. This was purified, washed and reacted with an 18 to 20% NaOH solution. After stabilisation it was purified again, treated with a 15 to 18% NaOH solution and washed. The stabilised pure gasoline had an octane number of 76. A catalyst of decreased activity (29 to 30) was used during the enriching process. The properties of the aluminium silicate catalysts are given (table 3). Table 4 gives the hydrocarbon composition of the gas. The catalytic cracking of middle fractions can

Card 2/3

SOV/65-59-4-8/14

Investigations in the Grozny. Plants on the Catalytic Purification
of Middle Distillates Obtained During Thermo-Cracking Processes

be carried out on existing cracking plants and it is
pointed out that the deposition of coke does not exceed
the allowed limits. There are 4 tables.

Card 3/3

S/081/61/000/021/070/094
B138/B101

AUTHORS: Bolotov, L. T., Shumovskiy, V. G., Ovsyannikov, P. V.,
Pai'chikov, G. F., Minasyan, T. S., Afanasenko, M. M., Rusakov,
A. P., Burlakov, A. G., Karpenko, T. G.

TITLE: Pilot run for the commercial processing of a secondary raw
material on a catalytic cracking unit

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 21, 1961, 401 - 402,
abstract 21M82 ([Tr.] Groznensk. neft. in-t. sb. 23, 1960,
97 - 105)

TEXT: With the aim of increasing supplies of quality high-speed diesel
fuels, experiments have been conducted, in commercial conditions, for the
refining of the medium fractions of the thermal cracking process by re-
distribution of the hydrogen on the aluminosilicate catalyst. The
characteristics of the starting material and of the end product are
enumerated. It is said that it would be possible to use this method for
the production of the components of high-octane automobile gasolines and
low pour-point high-speed diesel fuels. Data are given for the production

Card 1/2

Pilot run for the commercial processing... S/081/61/000/021/070/094
B138/B101

cycle of the plant, and a comprehensive material balance is shown.
[Abstracter's note: Complete translation.]

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Card 2/2

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PHASE I BOOK EXPLOITATION

SOV/6246

Soveshchaniye po tseolitam. 1st, Leningrad, 1961.

Sinteticheskiye tseolity; polucheniye, issledovaniye i primeneniye
(Synthetic Zeolites: Production, Investigation, and Use). Mos-
cow, Izd-vo AN SSSR, 1962. 286 p. (Series: Its: Doklady)
Errata slip inserted. 2500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye khimicheskikh
nauk. Komisiya po tseolitam.

Resp. Eds.: M. M./Dubinin, Academician and V. V. Serpinskiy, Doctor
of Chemical-Sciences; Ed.: Ye. G. Zhukovskaya; Tech. Ed.: S. P.
Golub'.

PURPOSE: This book is intended for scientists and engineers engaged
in the production of synthetic zeolites (molecular sieves), and
for chemists in general.

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Synthetic Zeolites: (Cont.)

SOV/6246

COVERAGE: The book is a collection of reports presented at the First Conference on Zeolites, held in Leningrad 16 through 19 March 1961 at the Leningrad Technological Institute imeni Lensovet, and is purportedly the first monograph on this subject. The reports are grouped into 3 subject areas: 1) theoretical problems of adsorption on various types of zeolites and methods for their investigation, 2) the production of zeolites, and 3) application of zeolites. No personalities are mentioned. References follow individual articles.

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EXCAUTION

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Synthetic Zeolites: (Cont.)

SOV/6246

Misin, M. S., L. M. Maksimova, V. A. Litvinova, and L. B. Khandros. Production and Adsorption Properties of NaA, NaP, CaA and CaP Zeolites

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Misin, M. S., L. M. Maksimova, V. A. Litvinova, L. B. Khandros, G. A. Polyakova, and L. S. Urin. Production and Adsorption Properties of NaX, CaX, and AgX Zeolites

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Figuzova, L. I., A. V. Agafonov, A. S. Vitukhina, V. F. Dmitriyeva, A. T. Slepneva, V. A. Burylov, and N. A. Chepurov. Synthesis Conditions and Thermal Stability of Type X Zeolites

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Mirskiy, Ya. V., M. G. Mitrofanov, and T. N. Bredikhina. Ion Exchange of Na for Ca in Type A Synthetic Zeolite

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Mirskiy, Ya. V., M. G. Mitrofanov, B. M. Popkov, L. T. Bolotov, and A. I. Mezhlumova. Production of Synthetic Zeolites Under Industrial Conditions

169

Card ~~169~~ 5/3

8/081/62/000/021/031/069
B149/B101

AUTHORS: Mirskiy, Ya. V., Mitrofanov, M. G., ~~Bolotov, L. T.~~,
Mezhlumova, A. I., Bunin, K. F., Dul'skaya, V. N.,
Mel'nik, A. N.

TITLE: Preparation of experimental samples of molecular sieves under industrial conditions

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 21, 1962, 319, abstract 21K106 (Novosti neft. i gaz. tekhn. Neftepererabotka i neftekhimiya, no. 2, 1962, 13 - 15)

TEXT: Molecular sieves are prepared in the following way: a crushed silicate chunk is cooked in an autoclave with live steam, transferred to a collector, diluted with steam condensate, cooled and transferred to a container; whereupon sufficient condensate is added to make a working solution, which is left to settle. The clean solution is pumped into another container. A strong alkali solution is transferred from the 'montejus into a mixer which has a paddle and heater, followed by the condensate and $Al(OH)_3$; the mixture is heated for 3 hours with stirring.

After this the Na-aluminate solution is transferred to a collector from

Card 1/2

Preparation of experimental samples...

S/081/62/000/021/031/069
B149/B101

which the strong solution can be taken to a vessel where it can be diluted with condensate to a working concentration. The latter solution is pumped through a rotameter and fed into a jet mixer together with the Na-silicate solution. The mixture then passes into a continuously working paddle mixer where the gel is formed as a thin pulp. This pulp is transferred to the mixer in which the aluminate solution was previously prepared. The pulp is heated in the mixer until the gel crystallizes. The mass is then transferred into the collectors which previously contained the aluminate and the zeolite is washed by 2 - 3 decantations, then filtered and washed in a filter-press. The cake is divided into two parts, one of which undergoes preliminary drying in a chamber dryer and is transferred on to crusher-roll mill while the other is transferred directly to the mill. There the zeolite is mixed with clay into a mass which is made into tablets, and the latter are dried, calcined and sieved from crumbs in a drum sieve. Part of the zeolite is treated with CaCl_2 to prepare a selective adsorbent for separating gasoline fractions. The weight of 1 m^3 of sodium zeolite is 0.73, and its sorption capacity for water is $0.25 \text{ cm}^3/\text{g}$. 5 references. [Abstracter's note: Complete translation.]

Card 2/2

ACCESSION NR: AT 4016001

S/2625/63/000/015/0165/0175

AUTHOR: Mirskiy, Ya. V.; Mitrofanov, M. G.; Popkov, B. M.; Ruchko, L. F.; Bolotov, L. T.; Mezhlumova, A. I.

TITLE: Development of the technology for the industrial preparation of molecular sieves

SOURCE: Grozny*y. Neftyanoy nauchno-issledovatel'skiy institut. Trudy*, no. 15, 1963. Tekhnologiya pererabotki nefti i gaza. Neftekhimiya (Technology of processing petroleum and gas. Petroleum chemistry), 165-175

TOPIC TAGS: adsorbent, zeolite, molecular sieve, hydrogel, aluminosilicate

ABSTRACT: The characteristics and industrial production of adsorbent synthetic zeolites having good molecular-sieve properties have been investigated, using microgranular sodium zeolite with cubic crystals of 0.1 to several microns on a side. The results show that the properties of zeolites are affected by the following factors: method of preparation and composition of the hydrogel, temperature and duration of crystallization, concentration of the gel-forming solutions, stirring of the hydrogel, ion-exchange conditions, washing of the crystals, and granulation and hardening of the zeolites. Zeolites of the structural type designated as Type I (Type A in the West) are of great interest. A

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ACCESSION NR: AT 4016001

study of the adsorptive properties of sodium and calcium zeolites showed that the adsorptive properties of zeolites crystallized from hydrogels of the same composition, but by different methods, are very similar. The best method of preparation is to mix solutions of sodium aluminate and sodium silicate. A stable Type I zeolite can be made from hydrogels for which the molar ratio $\text{SiO}_2:\text{Al}_2\text{O}_3$ is < 2 . When this ratio approaches 3, a zeolite of Type II results. Hydrogels crystallize at a satisfactory rate at 75-100C. The effect on the crystal size of the concentration of gel-forming solution and the stirring rate (2 hours at 90C) and the effect of the crystallization time on the adsorptive properties and crystal size of zeolites (crystallization without stirring at 90C) were also investigated and the data tabulated. A new apparatus for preparing zeolites is described in detail and illustrated. In the preparation of the test samples, the yield was 68-74% of the theoretical. These zeolites with their pronounced molecular sieve properties, obtained under industrial conditions, made it possible to crystallize large amounts of aluminosilica hydrogels in large-sized apparatus. Orig. art. has: 1 figure and 6 tables.

ASSOCIATION: Neftyanoy nauchno-issledovatel'skiy institut, Grozny*y (Petroleum Scientific Research Institute)

Card 2/3

MALIN, A.G.; NIKOLAYEVA, V.G.; BAYBURSKIY, L.A.; KRECHETOVA, P.I.;
RUDAYEV, V.Ye.; BOLOTOV, L.T.; OVSYANNIKOV, P.V.; VLASOV, F.F.

Obtaining gas turbine fuel on a base of thermal cracking products.
Nefteper. i neftekhim. no.12:24-26 '64. (MIRA 18:2)

1. Groznenskiy neftyenoy nauchno-issledovatel'skiy institut.

BOLOTOV, M.; IMBERGIN, A.

Every third one is an innovator. Sov. profsoiuzu 7 no.17:25-26
S '59. (MIRA 12:11)

1. Predsedatel' tsekhkoma Ural'skogo alyuminiyevogo zavoda (for Bolotov). 2. Predsedatel' postoyanno deystvuyushchego proizvodstvennogo soveshchaniya Ural'skogo alyuminiyevogo zavoda (for Imbergin).
(Aluminum industry--Technological innovations)

L 54556-65 EWT(m)/T

ACCESSION NR: AP5016715

UR/0286/65/000/010/0017/0017

AUTHORS: Mirskiy, Ya. V.; Mitrofanov, M. G.; Papkov, B. M.; Bolotov, L. T.; Ruchko, E. F. 19/8

TITLE: A method for obtaining synthetic zeolites of type X. Class 12, No. 170912 15

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 10, 1965, 17

TOPIC TAGS: zeolite, synthetic zeolite, aluminum, silicon, crystallization

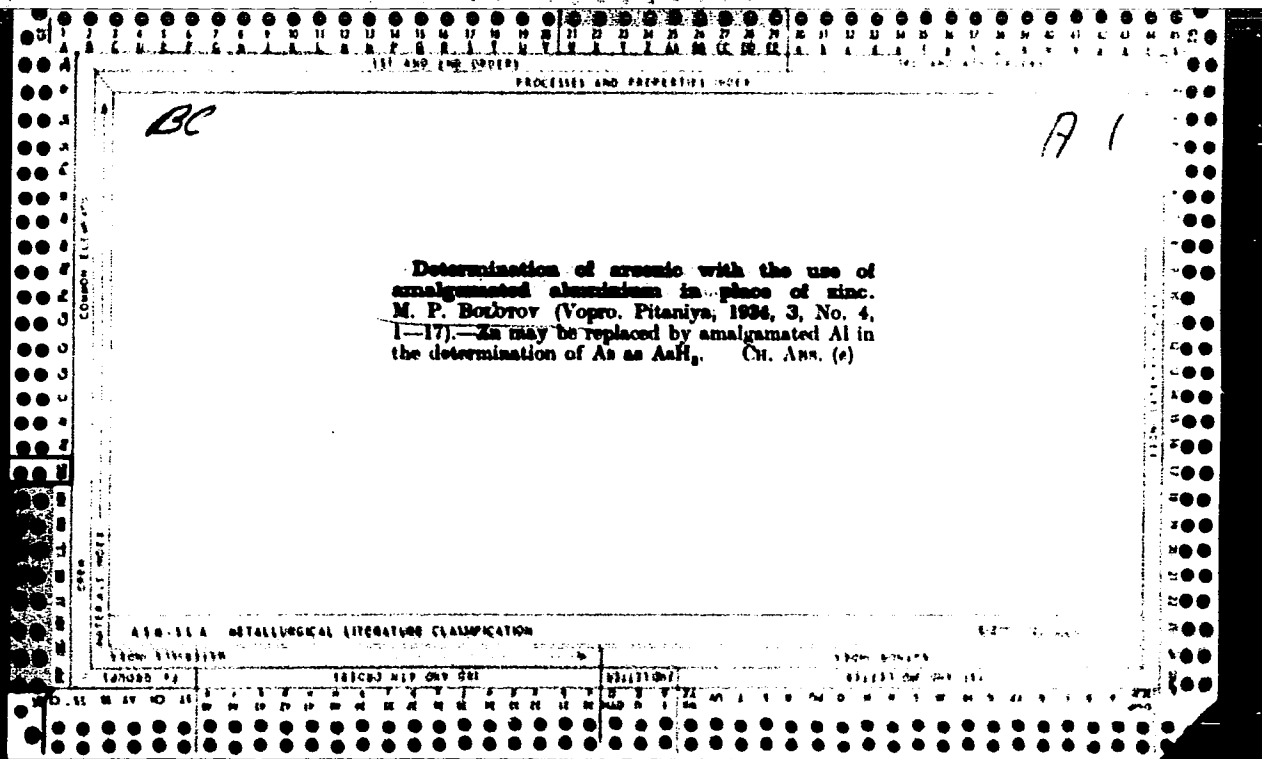
ABSTRACT: This Author Certificate presents a method for obtaining synthetic zeolites of type X by hydrothermal crystallization of aluminum-silicon gel in an alkaline medium at a temperature of 95-100C. To improve the adsorption properties of the obtained zeolites, an excessive amount of alkali is introduced into the aluminum-silicon gel, while heating up to 95-100C is accomplished with live steam and is accompanied by mechanical mixing. Next, water heated to the same temperature is added in such an amount that the molar ratio $H_2O : Na_2O$ in the hydrogel is equal to 38 : 45.

ASSOCIATION: Groznenskiy neftyanoy nauchno-issledovatel'skiy institut (Groznyy Scientific Research Institute of Petroleum)

Card 1/2

L 54556-65
ACCESSION NR: AP5016715
SUBMITTED: 27Apr64
NO REF SOV: 000
ENCL: 00
OTHER: 000
SUB CODE: GC

Card 2/2



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

LIST AND INDEX

PROCESSES AND PROPERTIES INDEX

LIST AND INDEX

2

Electrochemical determination of copper, lead and zinc in food products. M. P. Bolotov. *Voprosy Fizicheskoy Khimii*, No. 4, 181-20(1936).—Pb and Cu in liquids are detd. by direct electrolysis on Pt or C electrodes, as is Zn in flour and sugar. The cathode or anode (PbO₂) deposit is then dissolved by HNO₃ and detd. by repeated electrolysis or by other methods. About 80% of the Pb and 90% of the Cu present are found. I. H. Katherman

ASME-ISA METALLURGICAL LITERATURE CLASSIFICATION

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

TEST AND PROPERTIES INDEX

PROCESSES AND PROPERTIES INDEX

The determination of small amounts of lead by electrolysis and the use of *o*-toluidine. M. P. Bolotov, *Voprosy Pitaniya* 6, No. 5, 117-19 (1967); cf. C. A. 31, 1105. To det. Pb, electrolyze 50 ml. of the test soln in the presence of HNO₃ and 2 drops of 25% H₂SO₄ with a Cu cathode and Pt anode. Wash the PbO₂ deposit on the anode, into 1 ml. of a soln. of 0.1 g. *o*-toluidine in 10 ml. of concd. HCl and 90 ml. of H₂O. Dil the soln with H₂O and compare the color with a standard prepd by treating 1 ml. of 0.0001 N KMnO₄ with the *o*-toluidine soln. This standard gives a color comparable to that produced by 0.014 mg. Pb. Between 5 and 20 γ of Pb the max. color was 65% (av. 41%). For 2 γ and 50 γ of Pb the results were 8 to 10% and 1%, in turn.

B. A. Kartala

ASS. SLA - METALLURGICAL LITERATURE CLASSIFICATION

SECTION: MINING

SUBSECTION: ANALYTICAL CHEMISTRY

SUBSECTION: ANALYTICAL CHEMISTRY

SUBSECTION: ANALYTICAL CHEMISTRY

1ST AND 2ND ORDERS PROCESSES AND PROPERTIES INDEX 3RD AND 4TH ORDERS

16

CIA

The content and sources of lead and copper in wines.
M. P. Holroyd, *Poprosy Pivovaru* 8, No. 2, 100-8 (1959).
Of 48 samples of wine tested 92% contained 0.24-0.80
mg./l. of Pb and 14% contained over 1 mg./l. of Cu.
Samples of grape juice prepd. in the lab. contained 0.01
0.10 mg./l. of Pb and 0.43-0.72 mg./l. of Cu. The main
source of Pb and Cu introduction into wine is the wine
press. S. A. Karjala.

A 58-51 A METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS 3RD AND 4TH ORDERS

1ST AND 2ND ORDERS 3RD AND 4TH ORDERS

1ST AND 2ND ORDERS PROCESSES AND PROPERTIES INDEX 1ST AND 2ND ORDERS

12

Determining heavy metals in food products by internal electrolysis. M. P. Bolotov. *Voprosy Pitaniya* 9, No. 1/2, 22-7(1940).—A method is described for electrolytic detn. of heavy metals, and a detailed procedure is described for detg. Sn. The app. included 1 Pt-foil electrode (60 × 22 mm.) and 2 Pt-coil electrodes (13 turns of 0.9-mm. wire and 8 turns of 0.6-mm. wire); the method was as accurate with the fine Pt wire electrode as with the heavier wire or the foil. The method is rapid, convenient and accurate enough for control and routine analyses in food labs.
Julian F. Smith

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

OPEN ELEMENTS
MATERIALS INDEX

SOURCES AND PROPERTIES OF LEAD

Some sources of lead in the soil and in the street dust of cities - M. P. Bolotov. *Tr. Vsesoyuzn. Nauch. Ts. S. S. S. R.* 1940, No. 1, 10-20. The high content of lead in certain cities of the United States is caused by the use of gasoline engines. Pbht. The presence of lead in the soil of New Castle is caused by combustion of coal. Investigations in Krasnodar, Moscow and Leningrad showed that many household and industrial articles are sources of lead. The greatest amount of lead was found in rubber footwear, paints and scrap of galvanized roofing. The scuffing of shoes, and the crumbling of large painted surfaces (such as roofs and doors) release a const. flow of lead compds. into the air, in the form of dust. The corrosion and abrasion of babbitt bearings, some alloys of nonferrous metals, etc., are also sources of lead content in the city air. S. M.

CA

COMMON ELEMENTS

MATERIALS INDEX

ASB-31A METALLURGICAL LITERATURE CLASSIFICATION

FROM SYNOBISH

1930-1940

1940-1950

1950-1960

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1980-1990

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2100-2110

2110-2120

2120-2130

2130-2140

2140-2150

2150-2160

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2180-2190

2190-2200

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3000-3010

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4970-4980

4980-4990

4990-5000

BOLOTOV, M.P.

Universal fixation fluid. Lab.delo no.2:30-31 Mr-Apr '55.
(MLRA 8:8)

1. Iz 1-y Ugleural'skoy gorodskoy bol'nitsy (glavnyy vrach
N.A. Lobanova)
(BLOOD,
fixative)
(STAINS AND STAINING,
fixative, universal)

BOLOTOV, M. P.

✓ A salt reagent and nepheloscope for protein estimation.
M. P. Bolotov (Municipal Tuberculosis Dispensary,
~~Original Source: Laboratornoe Delo 1, No. 3, 17-18 (1933)~~)
The reagent is made as follows: 10g. KI, 20g. NaCl, 100cc.
water. The soln. is filtered and preserved in a dark bottle.
On the day when the test is performed 10 cc. of the reagent is
acidified with 0.6 cc. of 25% HCl. The reagent (0.6-0.7 cc.
or 12-14 drops) is added to 2 cc. of urine and other fluid.
A turbidity appears at once if the albumin content is more
than 0.1%. With smaller amts. an opalescence or slight
turbidity appears after 1-5 min. The quant. estn. requires
the use of a specially constructed nepheloscope the descrip-
tion of which is given. Depending upon the anticipated
albumin content the urine is dild. 5-100 times with water
and other fluids with saline. Eight to ten cc. of the acid
reagent is introduced carefully into a centrifuge tube which
is placed in the nepheloscope and the light turned on.
A pipet with a finely drawn out capillary end is introduced
into the tube until the tip touches the meniscus. The fluid
is carefully forced out by slight pressure on the rubber bulb
while the pipet is being gradually lifted out of contact with
the reagent. The time that the fluid contacted the reagent
is noted, also the speed of ring formation. The speed is
proportional to the percentage of albumin. A table is used
to give the av. correlations between the speed of ring for-
mation and the percentage of protein in the soln.
A. S. Mirkin

MA-Jer

BOLOTOV, M.P.

Determination of protein in blood serum by specific gravity. Terap.
arkh. 27 no.1:83 '55. (MIRA 8:7)
(BLOOD PROTEINS)

BOLOTOW, M.P.

Use of acid sodium citrate for determining the rate of sedimentation of erythrocytes (annotation). Lab.delo 2 no.2:30-31 Mr-Ap '56.

(MLRA 9:10)

1. Iz 1-y Ugleural'skoy bol'nitsey.
(SODIUM CITRATE) (ERYTHROCYTES)

BOLOTOV, M.P.

Determination of urobilin and stercobilin by fluorescence microscopy.
Lab.delo 2 no.5:18-19 S-0 '56. (MLRA 9:11)

1. Iz Ugleural'skogo protivotuberkuleznogo dispansera (glavnyy vrach
N.K.Oleynik)

(STERCIBILIN)

(UROBILIN)

(FLUORESCENCE MICROSCOPY)

201
✓ Determination of urobilin and stercobilin with the aid of a microscope on the basis of fluorescence. M. P. Bolotov. *Laboratoras Delis 2*, No. 3, 18-19(1959). The method is based on Galezinger's well-known reaction. Three cc. of acidified urine is mixed with an equal vol. of 90% EtOH, 3 g. of powd. ZnSO₄, and 1 drop of an alc. I₂ soln. Following the dissolving of ZnSO₄, the soln. is filtered into a flat-bottomed test tube 15-17 X 50 mm. The tube is placed on top of the microscope condenser and partly screened from the light source by a cardboard. The condenser is fully illuminated with the aid of the concave side of the mirror and the cone of light observed through the test tube. Its width can be regulated by manipulating the diaphragm. In the presence of urobilin it is colored green. Limit of sensitivity is 0.035 mg. % of urobilin. For approx. detn. 3 cc. of a 10% Zn-acetate soln. in 50% EtOH is introduced into a flat-bottomed test tube and the fluorescing filtrate added slowly from a 1-cc. pipet graduated into 0.01 divisions until a faint fluorescence appears. The amt. of urobilin (X) is calcd. according to the following formula: $X = [(132) \times 2 \times 0.085] / a$, where a = c.c. of added fluorescent filtrate, 2 = original diln. of the urine specimen, and 0.085 = limit of sensitivity. Urobilin and stercobilin are either within normal limits or slightly elevated in pulmonary tuberculosis, silicosis, and silicotuberculosis. However, high values are found when these diseases are assocd. with hepatic involvement (hepatitis, chrrhosis or tuberculosis of the liver, congestion) and sometimes in grave tuberculosis and progressive anemia.
A. S. Mirkin

✓ Urochrome reaction of urine during food poisoning. M. P. Bolotov (City Hosp., Ugleural'ek). *Voprosy Pitaniya* 13, No. 1, 44-8 (1956).—Chloramine (I) (5% soln.) gives in a slightly acidic medium (addn. of 10% AcOH soln.) with the pigments of the urine of the patients suffering from different food poisonings an intense yellow color. The urine pigments, bilirubin (II), urochrome (III), and urobilinogen (IV) are increased during the food poisoning. The I reagent gives with II a slight green color (formation of biliverdin) and with III a very deep yellow color. Another reagent, 2% ammonium persulfate, gives a brown color with IV, no reaction with III, while II is decolorized by the reagent. A pigment formula has been evaluated by combining both reactions, which may be used for the diagnosis of food poisoning. B. Wiernicki.

BOLOTOV, M.P.

BOLOTOV, M.P.

Use of sugar-salt solutions for detecting helminth eggs. Med.paraz.
i paraz.bol.supplement to no.1:65 '57. (MIRA 11:1)

1. Iz pervoy Ugleural'skoy gorodskoy bol'nitsy
(WORMS, INTESTINAL AND PARASITIC)

EXCERPTA MEDICA Sec 2 Vol 12/7 Physiology July 59

2719. DETERMINATION OF VERY SMALL QUANTITIES OF BILIRUBIN IN URINE - Bolotov M. P. - LAB. DELO 1958, 4/1 (21-24)

Urinary bilirubin is precipitated with lead acetate. Fouchet's reagent is applied to the precipitate to develop colour. By this method 0.005 to 0.05 mg. of bilirubin per 100 ml. is found in normal urine. The use of talc-gypsum tablets is also recommended for rapid microdeterminations. Edward - Montreal

NIKITIN, A.I., prof., otv.red.; DOBYCHIN, B.D., prof., zam.otv.red.;
ABRAMOV, K.T., kand.med.nauk, red.; KAZANTSEV, A.I., prof.,
red.; TIMOFEYEV, S.I., prof., red.; KHODOS, Kh.B., prof., red.;
BOLOTOV, M.P., prof., red.; SHERSHNEV, P.A., prof., red.;
VAIS, S.I., prof., red.; KLIMOV, K.A., dotsent, red.; SEMENOV,
V.V., dotsent, red.; DONSKOV, V.V., dotsent, red.; KARNAKOV,
B.I., dotsent, red.; KRAKAU, S.I., red.

[Collection of works of the Irkutsk State Medical Institute
devoted to its 40th anniversary] Sbornik trudov Irkutskogo
gosudarstvennogo meditsinskogo instituta, posviashchennyi
40-letiu so dnia ego osnovaniia. Irkutsk, 1959. 442 p.

(MIRA 14:1)

1. Russia (1917- R.S.F.S.R.) Ministerstvo zdarvoookhraneniya.
2. Zaveduyushchiy kafedroy normal'noy fiziologii Irkutskogo
meditsinskogo instituta (for Nikitin).
3. Zaveduyushchiy fakul'-
tetskoy khirurgicheskoy kliniko Irkutskogo gosudarstvennogo medi-
tsinskogo instituta (for Dobychin).
4. Zaveduyushchiy kafedroy bio-
khimii Irkutskogo meditsinskogo instituta (for Shershnev).
5. Za-
veduyushchiy kafedroy propedevtiki vnutrennikh bolezney Irkutskogo
meditsinskogo instituta (for Karnakov).

(MEDICINE)

BOLOTOV, M.P.

Drip method in the determination of dry fat-free milk residue.
Vop. pit. 19 no. 6:86-87 N-D '60. (MIRA 13:10)

1. Iz kafedry gigiyeny pitaniya (zav. - prof. M.P. Bolotov)
Irkutskogo gosudarstvennogo meditsinskogo instituta.
(MILK—ANALYSIS AND EXAMINATION)

BOLOTOV, M.P.

Determination of fat in milk centrifugated without any reagents.
Vop. pit. 19 no.3:77-79 My-Je '60. (MIRA 14:3)

1. Iz kafedry gigiyeny pitaniya (zav. - doktor meditsinskikh nauk
M.P.Bolotov) Irkutskogo gosudarstvennogo meditsinskogo instituta.
(MILK—ANALYSIS AND EXAMINATION) (BUTTERFAT)

NIKITIN, A.I., prof., otv. red.; DOBYCHIN, B.D., prof., zam. otv. red.;
ABRAMOV, K.T., dots., red.; KAZANTSEV, A.I., prof., red.;
TIMOFEYEV, S.I., prof., red.; KHODOS, Kh.B., prof., red.;
BOLOTOV, M.P., prof., red.; SHERSHNEV, P.A., prof., red.; VAYS,
S.I., prof., red.; KLIMOV, K.A., dots., red.; SEMENOV, V.V., dots.,
red.; KARNAKOV, B.I., dots., red.;

[Materials on the influence of physical, chemical and biological factors on the animal and human organism]Materialy o vliianii fizicheskikh, khimicheskikh i biologicheskikh faktorov na organizm zhivotnykh i cheloveka. Irkutsk, 1961. 317 p. (MIRA 15:12)

1. Irkutsk. Gosudarstvennyy meditsinskiy institut. 2. Zaveduyushchiy kafedroy terapevticheskoy stomatologii Irkutskogo meditsinskogo instituta (for Vays). 3. Zaveduyushchiy kafedroy fakul'tetskoy khirurgii Irkutskogo meditsinskogo instituta (for Dobychin). 4. Zaveduyushchiy kafedroy infektsionnykh bolezney Irkutskogo meditsinskogo instituta (for Karnakov). 5. Zaveduyushchiy kafedroy normal'noy fiziologii Irkutskogo meditsinskogo instituta (for Nikitin).

(PHYSIOLOGY, PATHOLOGICAL)

BOLOTOV, M.P.

Method for determining fats in cooked dishes. Vop. pit. 20
no. 1:85-87 Ja-F '61. (MIRA 14:2)

1. Iz kafedry gigiyeny pitaniya (zav. -- prof. M.P. Bolotov)
Irkutskogo meditsinskogo instituta.
(FOOD--ANALYSIS) (FATS)

BOLOTOV, M.P.

Determination of admixtures of water in milk by the density of
whey. Vop. pit. 20 no.5:67-69 S-0 '61. (MIRA 14:10)

1. Iz kafedry gigiyeny pitaniya (zav. - doktor meditsinskikh nauk
M.P.Bolotov) Irkutskogo meditsinskogo instituta.
(MILK--ANALYSIS AND EXAMINATION)

BOLOTOV, M.P.

New method for examining human milk. Lab.delo 8 no.5:38-40 My
'62. (MIRA 15:12)

1. Kafedra gigiyeny pitaniya (zav. - prof. M.P.Bolotov)
Irkutskogo meditsinskogo instituta.
(MILK, HUMAN)

BOLOTOV, M.P.

Determination of protein in food products by the Kjeldahl method
without distillation. Vop.pit. 21 no.3:14-17 My-Je '62.

(MIRA 15:10)

1. Iz kafedry gigiyeny pitaniya (zav. -- prof. M.P.Bolotov)
Irkutskogo gosudarstvennogo meditsinskogo instituta.
(PROTEINS) (FOOD--ANALYSIS)

BOLOTOV, M.P.; KARETNIKOV, P.V.

Photocolorimetric determination of mineral phosphorus. Lab. delo.
no.1:30-33 '65. (MIRA 18:1)

1. Kafedra gigiyeny pitaniya (zaveduyushchiy - prof. M.P. Bolotov)
Irkutskogo meditsinskogo instituta.

13

L 10529-66 EPA/EWT(m)/EWP(f)/EPF(n)-2/T/ETC(m) WW/WE

ACC NR: AP6003168

SOURCE CODE: UR/0318/64/000/012/0024/0026

AUTHOR: Marlin, A. G.; Nikolayeva, V. G.; Bayburskiy, L. A.; Krechetova, P. I.;
Rudayev, V. Ye.; Bolotov, L. T.; Ovsyannikov, P. V.; Vlasov, F. F.

ORG: GrozNII

61
B

TITLE: Production of gas turbine fuel on the basis of products of thermal cracking

SOURCE: Neftepererabotka i neftekhimiya, no. 12, 1964, 24-26

TOPIC TAGS: gas turbine fuel, petroleum refining

ABSTRACT: A fraction with a boiling range of 200-350° obtained by thermal cracking of a mixture of mazut with a low sulfur content (0.31% S) and solar oil (with 0.15% S) was found to be a satisfactory fuel for gas turbine locomotives. The fuel had a low ash content (0.0007%), a sulfur content of 0.2%, a low vanadium content (traces), and a pour point of minus 17° against minus 12° required by standard specifications. Orig. art. has: 2 tables. [JPRS]

SUB CODE: 21 / SUEM DATE: none / ORIG REF: 002

Lab

UDC: 662.7

BOLOTOV, M. Ya. kandidat tekhnicheskikh nauk, dotsent.

The problem of increasing the handling capacity of hump yards.
Trudy MIIT no. 87/88:65-104 '56. (MLRA 10:8)
(Railroads--Hump yards)

SHCHEPELEV, V.; SEMENOV, M. (Kiyev); BOLOTOV, N.; PAZIKOV, A. (Leningrad)

Facts, events, people. Kryl. rod. 16 no.1:18-19 Ja '65.

(MIRA 18:3)

1. Starshiy inspektor upravleniya kadrov Ministerstva grazhdanskoy aviatsii (for Shchepelev).

PROCESSES AND PROPERTIES

ca

Optimum sulfiting conditions. I. B. Mints, N. P. Bolotny and I. E. Glukhovskii. *Sovet. Sakkar* 14, No. 28

11, 24-6(1936); *Chimia & industrie* 38, 907-8.—The effect of SO₂ gases on sugar juices and sirups is optimum at about pH 8. The latter can be controlled during the sulfiting operation by means of spot tests with cresol red (0.4% in 70% alc.), which gives a brick red at pH 8, a raspberry red above and yellow below. Thymol blue or bromothymol blue also can be used as indicators. Sulfiting to pH 8 produces on the av. a 25% decolorization. Concn. of sulfited juices to 60-65° Brix gives rise, in certain cases, to about 5% deepening in color, while under the same conditions the increase in color of unsulfited juices averages 30%. A. Patineau-Couture

ASIM-SLA METALLURGICAL LITERATURE CLASSIFICATION

VARNAVSKIY, I.N.; KAMYSHEV, G.N.; IZOTOV, N.P.; BOLOTOV, O.P.

Increasing the output and improving the durability of converter linings. Metallurg 8 no.9:26-27 S '63. (MIRA 16:10)

1. Orsko-Khalilovskiy metallurgicheskiy kombinat.
(bessemer process)
(Converters—Design and construction)

VARNAVSKIY, I.N., inzh.; IZOTOV, N.P., inzh.; MUSIKHINA, M.K., inzh.;
AVER'YANOV, V.A., inzh.; BOLOTOV, O.P., inzh.

Duplex process of steelmaking from naturally alloyed chromium-nickel
iron. Stal' 20 no.6:496-500 Je '60. (MIRA 14:2)

1. Orsko-Khalilovskiy metallurgicheskiy kombinat.
(Steel--Metallurgy)

KAMYSHEV, G. N.; BOLOTOV, O. P.

Converter with removable nose. Metallurg 7 no.11:32 N '62.
(MIRA 15:10)

1. Orsko-Khalilovskiy metallurgicheskiy kombinat. 2. Zamestitel'
nachal'nika dupleks-tsekha Orsko-Khalilovskogo metallurgicheskogo
kombinata (for Kamyshev).

(Converters)

BOLOTOV, P. A. Inzhener i OSTANKOVICH, M. A. Inzh., VOROBYEV, A. A. Inzh.,
SHIGILDEYEV, G. N. Inzh.

Leninradskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta stroitel'nogo
i dorozhnogo mashinostroyeniya

RASTVORONASOS PROIZVODITEL'NOST'YU 1-2 m³/chas DLYA ZHESTKIKH RASTVOROV Page 143

SO: Collections of Annotations of Scientific Research Work on Construction, completed
in 1950. Moscow 1951

BOLOTOV, N.N.

Manufacture of drain pipes for rural construction. Stroi. mat. 7
no.7:21-24 J1 '61. (MIRA 14:7)

1. Glavnyy inzhener Upravleniya promyshlennosti stroitel'nykh
materialov sovnarkhoza Latvinskoy SSR.
(Latvia--Drain--Tiles)

KLYUCHEROV, A.P.; KONDRAT'YEV, S.N.; Primalni uchastiye: GUSAROV, F.V.;
UDOVENKO, V.G.; PETROV, G.A.; BURKSER, V.Ye.; SEMONIN, I.A.;
KUDRIN, Ye.A.; GALAKHMATOV, S.N.; ZIMINA, L.P.; SHISHARIN, B.N.;
KONDYURINA, R.V.; BURMISTROV, K.A.; SHIRNIN, I.A.; SIMONENKO, F.N.;
GORSHILOV, Yu.V.; KOLPAKOV, B.V.; GUSAROV, A.K.; BOLOTOV, P.G.

Heat insulation of open-hearth furnace crowns. Metallurg 5 no.11:
14-17 N '60. (MIRA 13:10)

1. Nizhe-Tagil'skiy metallurgicheskiy kombinat.
(Open-hearth furnaces--Design and construction)
(Insulation (Heat))

ZAKHVATKIN, L.N., inzh.; BOLOTOV, R.P.

Wearing out of the pulp duct in hydraulic filling with rock from a waste pile. Ugol' 40 no.2:33-35 F '65. (MIRA 18:4)

1. Kuznetskiy nauchno-issledovatel'skiy ugol'nyy institut (for Zakhvatkin). 2. Shakhta "Krasnogorskaya" tresta Prokop'yevskugol' (for Bolotov).

Bo lotov T. E

62 The adsorption of impurities on aluminum crystal boundaries. T. E. Bolotov and Yu. D. Kozmanov (A. M. Gor'kiy Univ. State Univ., Sverdlevsk). *Doklady Akad. Nauk S.S.S.R.* 95, 293-5 (1954).—Single crystals of technically pure Al (99.7% purity) and pure Al (99.99%) were obtained by recrystn. after crit. deformation: The crystals were bent over a cylindrical surface ($r = 7$ mm.), annealed for 5 hrs. at 640°, cooled in the air, additionally annealed for 1 hr. at 400°, and electrolytically polished; the treatment revealed a macromol. mosaic structure in the technically pure crystals, whereas the same treatment of the pure Al crystals failed to reveal such structure. The development of this structure only after addl. annealing is attributed to the higher soly. of impurities at 600-650°, and their deposition at the lower temp. W. M. Sternberg.

BOLOTOV, V. N.; DAYON, M. I.; DEVISHEV, M. I.; DOLOGOSHEYN, B.A.; KLIMANOVA, L. F.;
LUCHKOV, B. I.; SHMELEVA, A. P.

New Discharge Track-Detector Chamber Investigation of Characteristics of some Spark Chambers.

Report submitted for the Intl. Conf. on Cosmic Rays (IUPAP), Jaipur India, 2-14 Dec 1963.

37792

21.6000

S/120/62/000/002/016/047
E140/E163

AUTHORS: Bolotov, V.N., Devishev, M.I., Filatov, V.V., and Shmeleva, A.P.

TITLE: Multichannel pulse amplitude analyser for ionisation calorimeter

PERIODICAL: Pribory i tekhnika eksperimenta, no.2, 1962, 66-70

TEXT: The ionisation calorimeter is the basic instrument for determining energy of hyper-rapid particles ($E \geq 10^{11}$ eV) present in cosmic rays. The authors' calorimeter consists of 130 ionisation chambers with capacitive memories and output by means of a mechanical commutator. An electromagnetic oscillograph is used for registering the results on a photographic strip 120 mm in width. The dynamic range required for the record for a given chamber is of the order of 200:1, with a precision of 15% near the lower limit (20 relativistic particles). The amplifier (vacuum tube) and control circuits of the instrument are described in some detail. Two traces are photographed, apparently in the ratio of 11:1
Card 1/2

Multichannel pulse amplitude ...

S/120/62/000/002/016/047
E140/E163

(voltage divider 430 k - 43 k for the attenuated signal).
It is considered that the error due to system instabilities
will be less than 10% with calibration once a day.
There are 6 figures.

ASSOCIATION: Fizicheskiy institut AN SSSR
(Physics Institute, AS USSR)

SUBMITTED: July 11, 1961

Card 2/2

BOLOTOV, V.N.; DEVISHEV, M.I.

Efficiency of spark chambers in recording showers of charged particles. Zhur. eksp. i teor. fiz. 45 no.5:1680-1682 N '63.
(MIRA 17:1)

1. Fizicheskiy institut imeni Lebedeva AN SSSR.

ACCESSION NR: AP4033107

S/0120/64/000/002/0057/0061

AUTHOR: Bolotov, V. N.; Dayon, M. I.; Devishev, M. I.; Klimanova, L. F.;
Luchkov, B. I.; Shmeleva, A. P.

TITLE: Accuracy of tracing the particle trajectory by a spark in a spark
chamber

SOURCE: Pribory* i tekhnika eksperimenta, no. 2, 1964, 57-61

TOPIC TAGS: spark chamber, large gap spark chamber, cosmic ray study,
particle trajectory

ABSTRACT: A qualitative investigation of the shift (translation) and angle
between the spark and particle paths in a 20-cm gap spark chamber is reported.
Two Ne-filled at 650 torr test chambers had a common electrode with a
50-micron-thick aluminum foil in the center. Min delay was 0.6 microsec.
Tracks of mu-mesons of cosmic rays were photographed. Measurements were

Card 1/2

ACCESSION NR: AP4033107

performed with a parallel (130 kv) and series (65 kv) connection of the chambers with the supply surge generator. The spark thickness was 1-2 mm. It was proved that high-energy (500-600 Gev/s) particles can be measured by the "spark chamber, magnetic field" method at existing cosmic-ray stations. "The authors consider it their duty to express their gratitude to B. A. Dolgoshein for his useful comments, to P. N. Komolov, L. L. Sabsovich, and E. Chaykovskaya for their help in computer data processing, to V. A. Nikolayev, I. N. Solodnikov, and V. Lukin for their help in aligning and operating the spark chambers, and to N. V. Fedulova for her help in processing the results." Orig. art. has: 5 figures and 9 formulas.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva AN SSSR (Institute of Physics, AN SSSR)

SUBMITTED: 24Apr63

DATE ACQ: 11May64

ENCL: 00

SUB CODE: PH

NO REF SOV: 004

OTHER: 004

Card 2/2

ACCESSION NR: AP4042557

S/0056/64/046/006/1990/1995

AUTHORS: Bolotov, V. N.; Devishev, M. I.

TITLE: Shower efficiency of a spark chamber

SOURCE: Zh. eksper. i teor. fiz., v. 46, no. 6, 1964, 1990-1995

TOPIC TAGS: particle counter, particle detector, spark discharge chamber, cosmic ray measurement, charged particle trajectory

ABSTRACT: In view of the advantages of spark chambers with metallic electrodes over other charged-particle detectors, and with an aim at possible applications in cosmic-ray research, the authors determined the probability of registering an individual particle of a shower passing through the fiducial volume of such a spark chamber, and also the efficiency of shower registration and the influence of the angle of entrance into the chamber and the dependence of the efficiency on the number of particles in the shower, on the angle of

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ACCESSION NR: AP4042557

entrance into the chamber, and on the conditions of energizing the chamber. The test setup employed was described in detail earlier (preprint FIAN, 1963; PTE, no. 6, 1964). The test results have disclosed that if several chambers are connected in series, a broad region of high-efficiency shower registration exists. The efficiency dependence on the resistance connected in series with the chamber, and is higher for series-connected than for parallel-connected spark chambers. When a large number of particles pass simultaneously through the chamber and cross its fiducial volume at different angles, the spark channel along the track develops more rapidly than the spark channels along the electric field, and the rate of the development of the former increases with decreasing particle-motion angle. It is concluded that spark chambers with metallic electrodes and with large interelectrode gaps (on the order of 100 mm) have high efficiency for the registration of showers and individual particles in showers, up to angles on the order of 40°, for simultaneous passage of several dozen particles through the chamber. "In conclusion the

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ACCESSION NR: AP4042557

authors express deep gratitude to Professor A. I. Alikhanyan for continuous interest in the work and to A. P. Shmeleva for help with the reduction of the experimental data and for valuable remarks." Orig. art. has: 4 figures, 2 formulas, and 1 table.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Physics Institute, Academy of Sciences SSSR)

SUBMITTED: 10Jan64

DATE ACQ:

ENCL: 02

SUB CODE: NP, AA

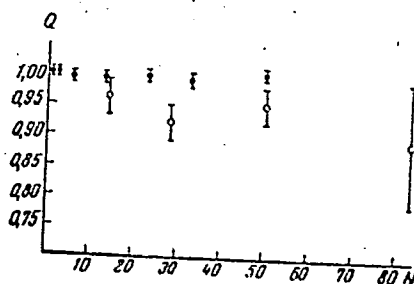
NR REF SOV: 005

OTHER: 001

Card 3/5

ACCESSION NR: AP4042557

ENCLOSURE: 01



Dependence of the shower efficiency on the number of particles Q passing through the fiducial volume of the spark chamber.
Dots - chambers connected in series; circles - in parallel

Card 4/5

ACCESSION NR: AP4042557

ENCLOSURE: 02

Shower efficiency for different spark-chamber supply modes

E, kV/cm	R, kΩ						
	∞	15	5	3	1	0,1	10 ⁻³
Последовательное включение камер Series							
2,6	0,53	0,98	0	0			
2,8	0,99	1	1	1	0		
3,3	0,99		1	1	0,65		
6,5						1	0
Параллельное включение камер Parallel							
7,8	0,87			0,04	0,99	0,84	0
8,4					0,07	0,02	0,59

Card 5/5

AKOPYAN, G.S.; BOLOTOV, V.N.; DAYON, M.I.; DEVISTEV, M.I.; KNYAZEV, V.M.;
MARIKYAN, G.A.; MATEVOSYAN, K.A.; SHMELEVA, A.P.

Ionizing particles accompanying nucleons with energies of
 $E_0 \approx 170$ Bev. at an altitude of 2000 meters. Izv. AN SSSR.
Ser.fiz. 29 no.10:1953-1955 0 '65.

(MIRA 18:10)

L 25380-65 EWT(m) IJP(c)

ACCESSION NR: AP5002147

S/0120/64/000/006/0053/0055

AUTHOR: Bolotov, V. N.; Devishev, M. I.

TITLE: Control and supply of spark-discharge chambers used for recording charged-particle showers 19 6

SOURCE: Pribory i tekhnika eksperimenta, no. 6, 1964, 53-55

TOPIC TAGS: spark discharge chamber, cosmic ray, electron shower

ABSTRACT: An outfit for recording electron showers and testing spark-discharge chambers comprises a stack of spark chambers, above which a Pb, Al, or Cu target is placed; it is intended for generating electron showers from cosmic rays. Below the chambers, a plastic scintillator with a photomultiplier (FEU-33) is placed whose output signal, via an amplifier, is fed to a pulse shaper; the latter provides a pulse for firing a TG11-90/8 thyratron, and the thyratron, in turn, fires a Marx impulse generator whose output is in the

Card 1/2