

USSR

SOBOLEVA, V. I., et al, Patologicheskaya Fiziologiya i Eksperimental'naya Terapiya, Vol 14, No 5, Sep/Oct 70, pp 24-27

hypothermia accompanying the anesthesia. The body temperature of the anesthetized dogs dropped to a mean of 35°C before bloodletting and to 31.9°C before artificial blood circulation was stopped. Hypoxia during the resuscitation period was much less pronounced in these dogs.

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Therapy

USSR

UDC 616-036.882-02:616-005.1]-08-07:616.24-008.4

SIDORA, A. K., and TOLOVA, S. V., Laboratory of Experimental Physiology of Resuscitation, Academy of Medical Sciences USSR, Moscow

"The Effect of Methods of Resuscitation on the Dynamics of Restoration of the Structure of the Respiratory Act in Dogs After Ten Minutes of Clinical Death Caused by Acute Blood Loss"

Moscow, Patologicheskaya Fiziologiya i Eksperimental'naya Terapiya, No 1, 1971, pp 29-32

Abstract: Two methods of resuscitation were compared: (1) intra-arterial injection of blood plus epinephrine and artificial respiration and (2) extracorporeal circulation (using an AIK-RP-64 apparatus) and artificial respiration. Both methods were tested on anesthetized and nonanesthetized animals. Extracorporeal circulation at a relatively low volume rate of perfusion revived the animals significantly sooner than did intra-arterial injection of blood. A high volume rate of perfusion delayed restoration of the activity of the inspiratory and
1/2

USSR

SIDORA, A. K. and TOLOVA, S. V., Patologicheskaya Fiziologiya i Eksperimental'naya Terapiya, No 1, 1971, pp 29-32

expiratory center in the nonanesthetized animals due to hypocapnia. Anesthesia and the resulting moderate hypocapnia caused the activity of the inspiration center and the normal structure of the respiratory act to be restored sooner in anesthetized animals than in nonanesthetized animals, despite the high volume rate of perfusion and hypocapnia.

2/2

USSR

UDC 615.28:547.831

SHINKORENKO, S. V., PILYUGIN, T. G., SIDORCHUK, I. I., and YAVORSKIY, V. M.,
University of Chernovtsy, Chernovtsy Medical Institute

"Synthesis and Some Biological Properties of Quinaldinium Azomethines"

Moscow, Khimiko-Farmatsevticheskiy Zhurnal, Vol 6, No 1, Jan 72, pp 25-29

Abstract: Studying antimicrobial activity of various preparations, a series of azomethine derivatives of quinaldine was synthesized containing alkyl and aryl groups at the nitrogen heteroatom, various substituents at the quinaldine moiety and a free or a substituted amino group at the benzene ring. Reaction of equimolar quantities of quaternary quinaldinium salts with aromatic nitro compounds takes place in ethanol containing catalytic amounts of piperidine. The products are strongly colored crystalline materials soluble in common organic solvent, insoluble in benzene, ether, and water; their physical properties are tabulated. The azomethines synthesized showed a wide spectrum of antimicrobial and antifungal activity, especially towards strains resistant to antibiotics. The disinfecting activity of some of these compounds exceeds the activity of phenol.

1/1

S Pathology

UDC 616.002.77-07:616.281+616.287-008.1

USSR

PONOMAREV, V. S., and SIDORCHUK, T. V., Candidates of Medical Sciences,
Otorhinolaryngology Section, Moscow City Hospital No 70

"The State of Auditory and Vestibular Analysors in Rheumatic Fever
Patients"

Kiev, Zhurnal Ushnykh Nosovykh i Gorlovykh Bolezney, No 1, Jan/Feb
70, pp 36-41

Abstract: A study was made of the types and frequency of auditory and vestibular disorders in 170 14-51 year old rheumatic fever patients. Functional investigation of the auditory and vestibular analysors was conducted by analysis of the complaints and examination of ear, nose and throat. The functional state of the auditory analyzor was investigated by whispering and conversational speech, tuning forks, a tone threshold audiometry method, and by determination of the differential threshold of sound intensity change. The state of the vestibular analyzor was determined from study of spontaneous vestibular symptoms (nystagmus, deviation of hands, static, coordination and gait disorders, determination of optokinetic nystagmus,
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PONOMAREV, V. S., et al., Kiev, Zhurnal Ushnykh Nosovykh i Gorlovykh Bolezney, No 1, Jan/Feb 70, pp 36-41

and experimental investigation of the vestibular analysor by caloric and rotatory tests.

Analysis of the results revealed that auditory disorders in rheumatic fever patients were rather frequent (27.1%). They were detected only by tone threshold audiometry and tuning fork investigation in practically normal speech perception. Vestibular disorders (primarily, decrease of vestibular response to caloric stimulation, less frequently -- increase of response nystagmus asymmetry and others) were detected by experimental investigation of the vestibular analysor in most of the rheumatic fever patients (83.5%). Spontaneous vestibular symptoms (Mainly, spontaneous deviation of the hands) were observed less frequently (21.8%). Auditory and vestibular disorders in rheumatic fever patients were probably associated with the basic process and were observed in any degree of activity and with any form of illness, in different types of vitium cordis and different degrees of blood circulation insufficiency, regardless of the remoteness of the illness, age of the patient or treatment method. These

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USSR

PONOMAREV, V. S., et al., Kiev, Zhurnal Ushnykh Nosovykh i Gorlovykh Bolezney, No 1, Jan/Feb 70, pp 36-41

disorders were determined to be of centralnervous system origin. The conjunction of these disorders with neurological symptoms made possible a tonic diagnosis of rheumatic lesions of the central nervous system in 51 patients (31.8%).

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USSR

ROMANENKO, YU. A., VASIL'YEV, V. P., SIDORCHUK, V. G., and SIDOROV, V. N.,
Siberian Scientific Research Institute of Geology, Geophysics and Mineral
Raw Materials

"Information Reader"

USSR Authors' Certificate No 356663, Cl. G 06k 9/02, filed 7 Apr 70, pub-
lished 23 Oct 72 (from Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy,
Tovarnyye Znaki, No 32, 1972, p 145)

Abstract: The device contains, situated on the principal optical axis, an objective, a cathode-ray tube, reflecting plates, a semitransparent mirror and a mask optically coupled therewith, a converging lens and a receiver, connected through the control unit to the cathode-ray tube output. To increase the operating speed of the device, the reflecting surfaces of a prism are arranged at a 45° angle to the direction of the main beam and perpendicular to the principal optical axis, parallel to which and at a 45° angle to the direction of the line beam trace, at a distance which is a multiple of the length of the picture line, are mounted reflecting plates for the light of

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USSR

ROMANENKO, YU. A., et al., USSR Authors' Certificate No 356663

the beams of each line, perpendicular to the principal optical axis are mounted reflecting surfaces for the displacement of the line beams, and at a distance and at an angle determined by the constancy of the beam trace length for each line are situated reflecting surfaces for flyback.

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USSR

SIDORENKO, A. A., Academician, Minister of Geology, USSR

"The Riches of the Depths at the Service of the Economy; The Distribution of Productive Forces"

Moscow, Pravda, 25 Feb 71, p 3

Translation: The 24th CPSU Congress Draft Directives for the new 5-year plan provide for a really immense growth in the volume of production of electric power, the extraction of oil, gas and coal, the smelting of cast iron and steel and the production of non-ferrous metals, mineral fertilizers, and other kinds of industrial output. The implementation of the program outlined requires the commissioning of enormous natural resources.

The raw materials sectors of industry have been fully supplied with surveyed reserves for the current 5-year plan. This has been achieved through the geologists better use of material and financial resources. During the past 5 years the volume of geological survey work has increased by more than one-third, more than 170 deposits of liquid and gaseous fuel have been discovered,

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USSR

SIDORENKO, A. A., et al., Pravda. 25 Feb 71, p 3

and the surveyed reserves of gas have been increased by several times. New and large oil- and gas-bearing regions have been prepared in Siberia, Central Asia and the European part of the country.

According to the Draft Directives, the largest oil- and gas-extracting region should be created between the Urals and the Yenisey. The potential possibilities of the Western Siberian basin are such that with the necessary organizational work by 1980 it will already be possible to extract as much oil as is now being extracted in the entire European part of the country.

We are confronted with a most important economic and geological problem: finding the large deposits of oil in the north of the Tyumen Oblast, beneath the gas "stores", in order to open the way for the region's cheaper and more comprehensive development. Its proximity to the sea shores creates favorable conditions for transporting oil along the North Sea route.

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SIDORENKO, A. A., et al., Pravda, 25 Feb 71, p 3

It is also necessary to make a careful study of the other mineral resources of the East and North Urals and the western part of Krasnoyarsk Kray. Here there are possible deposits of many metals and much nonmetallic raw materials which it is expedient to use together with the vast reserves of power fuels. This is an important issue of long-term planning upon which the USSR Gosplan's Council for Studying Production Forces and the Siberian and Ural scientific organizations of the USSR Academy of Sciences should be engaged.

Fulfilling the decisions of the 23rd CPSU Congress, geologists have also doubled the surveyed reserves of natural gas in the European part of Russia. The Orenburg deposit of gas and raw materials with reserves of gas exceeding one trillion cubic meters has been prepared for industrial production. However, the rates and scales of its organization are clearly inadequate. The lag in the organization of refining the raw materials is to blame for this and has been holding up the entire work for a number of years. Surveyed reserves are already making it possible

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SIDORENKO, A. A., Academician, et al., Pravda, 25 Feb 71, p3

now to extract at least 50-60 billion cubic meters of gas annually and to obtain several hundred thousand tons of basic raw materials. The organization of the Orenburg deposit as rapidly as possible is one of the new 5-year plan's most important tasks.

In the north of the European part of the USSR a mighty oil- and gas-bearing province has been created, where, in a short time, the largest Vuktyl deposit started to be worked, and is supplying gas.

The deep horizons of the Dnepr-Donetsk Depression, situated near already operational workings and the developed network of the pipelines of the Ukraine are of great interest. This basin has far from exhausted its possibilities. However, prospecting at depths of more than 4,000 meters in complex geological conditions is difficult and requires modern technical means in which we are, as yet, experiencing shortages.

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SIDORENKO, A. A., et al., Pravda, 25 Feb 71, p 3

Udmirtiya and Yaroslavl and Kostroma oblasts and Belorussia should become areas of active survey. The Prikaspiskaya Depression is extremely promising. However, there will be no easy discoveries here: the deposits lie at great depths beneath mighty salt deposits, which makes surveying by geophysical methods and drilling difficult.

To make available the surveyed reserves of oil and gas in the country's main extracting regions -- the Volgo-Urals region oblast, Azerbaydzhan, Caucasus foothills and in the Ukraine -- is a most important problem in whose resolution a lagging behind has been observed. This is causing serious anxiety. The Ministry of Petroleum industry is conducting surveys and prospecting here and a large part of all the means allocated for gas and oil prospecting is being expended here.

In recent years, the geography of the prospected fuel deposits has changed and has revealed a greater selection of them.

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.. 9/4 ..

SIDORENKO, A. A., et al., Pravda, 25 Feb 71, p 3

It is necessary to intensify the role of the economic appraisal of deposits, to substantiate the continuity of their production scientifically, and to coordinate this with the plan for the location of production forces. Now the problem is resolved through the efforts of the departmental planning institutes when it is a matter of the intersectorial prospects for the development of the national economy.

A substantial contribution to prospecting for the ores of nonferrous and ferrous metals and non-ore raw material has been made by the geologists. Deposits of nickel in the Norilsk rayon, gold in Uzbekistan, polymetals in Buryatassic and the Karaganda oblast, copper in the Southern Urals, antimony and tin in Yakulskassic and Central Asia, chromites in West Kazakhstan, apatite in the Khibiny Mountains, and diamonds in Siberia -- this is far from a full list of "the new-born" of the past 5-year plan. The raw material base of metallurgy, chemistry, and the construction materials industry has been extended considerably.

The geologists have adopted as a militant program the thesis of the Draft Directive on the further expansion of work
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SIDORENKO, A. A., et al., Pravda, 25 Feb 71, p 3

"on the geological study of the terrestrial depths and the prospecting of mineral and raw material resources primarily in the regions of existing mining enterprises and, likewise, in regions which are most economically valuable for their industrial assimilation."

Ores are a natural wealth, which does not renew itself. The prolonged exploitation of deposits leads to a reduction in the reserves of useful minerals in the depths. It is necessary to work constantly to make up the deficiency from great depths in areas which adjoin mining enterprises. This task is sometimes more difficult than searches in unstudied regions.

The geologists must work persistently to improve the geography of mineral and raw material bases in order to reduce the long-distance transportation of large-tonnage mineral raw materials, especially of agronomic ores in Siberia and several sorts of nonmetallic raw materials and construction materials. For the development of ferrous metallurgy in the East, it is necessary to activate searches for rich iron ores in Siberia and

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USSR

SIDORENKO, A. A., et al., Pravda, 25 Feb 71, p 3

areas of the Urals.

The rapid growth in the demand for aluminum poses the task of developing the search for high quality bauxites on the Siberian platform, in the Northern Urals and at the Kursk Magnetic Anomaly.

It is once again stressed in the Draft Directives that the role of mineral raw materials in the economy's development is great. The scientifically based and rational use of the riches of the terrestrial depths is of substantial significance for raising the effectiveness of social production. There are many issues here which require deep analysis.

The losses both in extracting and processing mineral raw materials are still great. One of the main causes for such a situation is the poor elaboration of the economic factors. The value of ore in the depths is not appraised -- it is, so to speak, "the gratuitous gift of nature." Therefore, the enterprises bear only an administrative and not an economic responsibility

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USSR

SIDORENKO, A. A., et al., Pravda, 25 Feb 71, p 3

for the losses. It is necessary to intensify economic incentive for the more effective use of mineral raw materials, to establish basic norms for loss in extraction and processing for each enterprise, and to intensify the personal interest of ministries in the full use of all the useful components of ores.

The Draft Directives provide for raising the economic effectiveness of geological survey work. It is necessary to insure more rational use of the means allocated for these needs, especially the expenditure on the detailed prospecting for deposits. Detailed prospecting should be conducted only at deposits available for assimilation by industry within a planned period. It is necessary to raise the ministries' responsibility for orders for carrying out detailed prospecting work.

Serious attention must be paid to scientific forecasting of the regions' searches. In the new 5-year plan, it is time to make a complete transition to geological survey work in accordance with scientifically based general plans embracing an entire

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geological region. The progressive methods of geophysics, geo-chemistry, mathematics and new techniques should be incorporated in these drafts and estimates.

The technical reequipping of geological production plays a great part in raising the effectiveness of the work. Heavy industry and instrument-making plants have, during the past 5 years, reequipped the geologists with powerful devices for drilling deep prospecting wells, high speed drills for core drilling, geophysical apparatus and other geological survey equipment. Unfortunately, metallurgy produces very little high-strength drilling and drive pipes, pipes with threaded grooved couplings, and so forth, and therefore the possibilities for high-speed drilling are not fully used. We hope that geologists will obtain more fast transport, tractors, vehicles, heat resistant cable, computers and good expeditionary equipment and special clothing. It is very important to increase the production of

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SIDORENKO, A. A., 25 Feb 71, Pravda, p 3

easily portable drilling equipment, which is especially necessary to prospect more rapidly the depths in almost inaccessible regions. And the geologists for their part, will use the equipment with maximum effectiveness.

The prospectors of the depth approach the 24th CPSU Congress with a great upsurge and they warmly approve the Directives for the 5-year plan for the development of the national economy. Continuing the Leninist labor watch, the advanced collectives of geological organizations are preparing to greet the party congress worthily.

- END -

11/11

7676

CSO: 1842-W

- 07 -

1/2 016

UNCLASSIFIED

PROCESSING DATE--30OCT70

TITLE--GLAZES CONTAINING LITTLE OR NO BORDN IN THE PRODUCTION OF
EARTHENWARE -U-

AUTHOR--(04)--SIVCHIKOVA, M.G., KOVALENKO, YU.G., BARSHCHEVSKAYA, A.F.,
SIDOBENKU, A.I.

COUNTRY OF INFO--USSR

SOURCE--STEKLO KERAM. 1970, 27(3), 40-2

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--CERAMIC COATING, CHEMICAL COMPOSITION, THERMAL STABILITY,
BORON OXIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1589

STEP NO--UR/0072/70/021/003/0040/0042

CIRC ACCESSION NO--AP0125211

UNCLASSIFIED

2/2 016

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125211

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. TWO GLAZES OF THE COMPN. SIO SUB2 2.251, 2.67; AL SUB2 0 SUB3 0.233, 0.25; CAU 0.304, 0.329; FE SUB2 0 SUB3 0.005, 0.005; B SUB2 0 SUB3 0, 0.185P NA SUB2 0 0.206, 0.248; K SUB2 0 0.044, 0.049; MGO 0.116, 0.100; SRO 0.167, 0.174; AND ZNO 0.163, 0.098 MOLE WERE USED FOR GALZING OF EARTHENWARE WITH 9-12PERCENT OPEN PORSITY. THE FIRING WAS CARRIED OUT IN TUNNEL FURNACES AT 1140-1200DEGREES DURING 16-18 HR. AFTER FIRING, THE LOW B GLAZE SHOWS LEVEL SPREADING AND GOOD POLISH. THE GLAZE IS THERMALLY STABLE. ITS COEFF. OF THERMAL EXPANSION IS LSIGHTLY CHANGED: IT IS 7.0 TIMES 10 PRIME NEGATIVE6 IN THE INTERVAL 20-400DEGREES, AND 7.54 TIMES 10 PRIME NEGATIVE6 AT 20-600DEGREES WHILE THAT OF AN INDUSTRIAL SAMPLE WAS 7.15 TIMES 10 PRIME NEGATIVE6, AND 8.25 TIMES 10 PRIME NEGATIVE6-DEGREE. THE FUSIBILITY OF LOW B GLAZES IS COMPARABLE WITH THAT OF INDUSTRIAL ONES. AT 1140DEGREES IT IS CHARACTERIZED BY THE MIRROR SPREADING AND BY GLOSS. THESE PROPERTIES ARE PRESERVED EVEN AT 1230DEGREES. PETROGRAPHICALLY, THE GLAZE IS PURE GLASSY PHASE WITHOUT REMAINING QUARTZ GRAINS AND GASEOUS BUBBLES. ITS THICKNESS VARIES 100-30 MU. THE POSSIBILITY TO DECREASE THE B SUB2 0 SUB3 CONTENT FROM 9.5 TO 4.7PERCENT IN THE GLAZES WAS VERIFIED BY PRODUCTION GLAZED EARTHENWARE. FACILITY: UKR. NAUCH. ISSLED. INST. STEKLO. FARFORD FAYANS. PROM., USSR.

UNCLASSIFIED

ACCESSION NR: AP4027177

S/0288/64/000/008/0015/0015

AUTHOR: Spiridonov, A. V.; Sidorenko, A. P.; Obratsov, B. M.; Yastrebov, Yu. A.

TITLE: Attachment for hydraulic corrugating of large size objects of bellows type (Class B 21c; 7b, 15₃₀ No. 161030 from 3 November 1962)

SOURCE: Byul. izobret. i tovarn. znakov, no. 6, 1964, 15

TOPIC TAGS: corrugating, hydraulic corrugating, bellows, bellows corrugating, corrugating die

ABSTRACT: Attachment for hydraulic corrugating large size bellows-type objects, made in the form of a die into which working fluid is fed, with shaping semicircles positioned on its side surfaces, the spacing between which is regulated by sliding spacers, has the special feature that, for the purpose of reducing the design's weight and working pressure of the fluid, the die is made from two concentrically positioned face-pressed cylinders among which the working fluid is fed. [Abstractor's note: this is a complete translation of the original article.] Orig. art. has: 1 figure.

ASSOCIATION: none

Card 1/3

ACCESSION NR: AP4027177

SUBMITTED: 03Nov62

SUB CODE: IN, SD

DATE ACQ: 22Apr64

NO REF SOV: 000

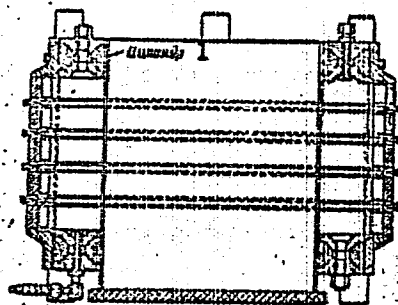
ENCL: 01

OTHER: 000

Card 2/3

ACCESSION NR: AP4027177

ENCLOSURE: 01



Legend: 1 - cylinder.

Card 3/3

USSR

ACCESSION NR: AP3009564

S/0286/63/000/015/0086/0086

AUTHOR: Sidorenko, A. P.; Spiridonov, A. V.; Leonov, V. K.; Lavrov, V. A.;
Yastrebov, Yu. A.

TITLE: Bellows-sealed compensator

SOURCE: Byul. izobret. i tovarn. znakov, no. 15, 1963, 86

TOPIC TAGS: compensator, bellows-sealed compensator

ABSTRACT: 1. Bellows-sealed compensator, containing two bellows concentrically spaced within a third, connecting flow-through branches and floating sleeve positioned inside the smaller-diameter bellows, has the special feature that, in order to augment reliability in operation, the inner and outer bellows are correspondingly equipped with inner and outer flanges and relief rods pairwise coupling the outer flange with the oppositely spaced inner flanges, and having spherical washers on the ends for elimination of bending of the rods during the compensator's deformations.

2. The compensator in paragraph 1 has the special feature that, for the purpose

Card 1/3

ACCESSION NR: AP3009561

of increasing the longitudinal stability at dynamic loads, the relief rods are equipped with positive stops. [Abstractor's note: this is a complete translation of the original article.] Orig. art. has: 1 figure.

ASSOCIATION: none

SUBMITTED: 09Nov62

DATE ACQ: 08Nov63

ENCL: 01

SUB CODE: SD

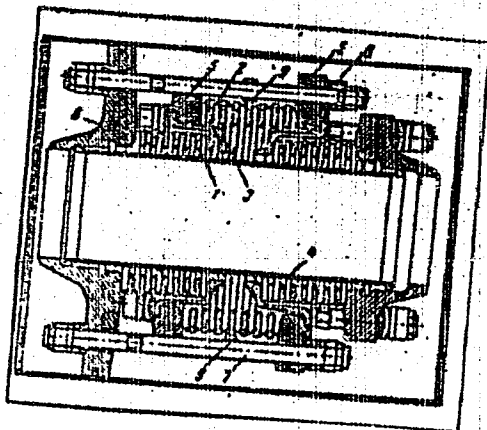
NO REF SOV: 000

OTHER: 000

Card 2/3

ACCESSION NR: AP3009564

ENCL: 01



1. inner bellows; 2. outer bellows; 3. connecting branches; 4. float-
ing sleeve; 5. inner flanges; 6. outer flanges; 7. radial rods; 8. spher-
ical washers; 9. positive stops.

Card 3/3

USSR

UDC 669.295.051

VASYUTINSKIY, N. A., and SIDORENKO, A. P.

"Anosovite Composition"

Sb. tr. Vses. n.-i. i proyekt. in-t titana (Collection of Works of the All-Union Scientific Research and Design Institute of Titanium), 1970, 5, pp 22-32 (from RZh-Metallurgiya, No 11, Nov 70, Abstract No 11 G146)

Translation: A detailed study is made of the chemical-mineralogical composition and some properties of anosovite from high-titanium industrial slags. Structural-chemical formulas of anosovites, which differ according to the degree of reduction, are calculated. A regular presence is anosovite os excess TiO_2 from 4-6 to 60% (mol.) is established, which can be treated as a presence of cation vacant sites in the crystal lattice of anosovite. The electrical and magnetic properties of different anosovites are studied. A classification of anosovites according to their chemical composition is proposed. 4 ill., 2 tables, 20 biblio. entries.

Author's abstract

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USSR

UDC 669.295.053.24

VASYUTINSKIY, N. A., and SIDORENKO, A. P.

"Structure and Phase Composition of Titanium Slag Ingots"

Sb. tr. Vses. n.-i. i projektn. in-t titana, [Collected works of All-Union Scientific-Research and Planning Institute for Titanium], 6, 1970, 22-27, (Translated from Referativnyy Zhurnal-Metallurgiya, No. 1, 1971, Abstract No.1 G187 by the authors).

Translation: The processes of cooling and oxidation of Ti slag ingots form several phase-structure varieties. The outer zone of the ingot consists of rutilized slag, followed by a zone of lamellar oxidized consisting primarily of anatase. Deeper there is a zone of grainy oxidized slag, while the center of the ingot consists of anisovitic slag. The nature of the phase-structural conversions of the slag during cooling of ingots depends on the composition of the slag, size of ingots, and cooling conditions. 1 figure; 1 table.

1/1

USSR

UDC 669.295.046.43

VASYUTINSKIY, N. A., LYSTSOV, A. I., ZAKHAREVICH, A. A., and SIDORENKO, A. P.

"Some Specifics of Chlorination of Chunk Titanium Slag"

Sb. tr. Vses. n.-i. i proyekt. in-t titana, [Collected works of All-Union Scientific-Research and Planning Institute for Titanium], 6, 1970, 41-47, (Translated from Referativnyy Zhurnal-Metallurgiya, No. 1, 1971, Abstract No. 1 G179 by the authors).

Translation: During chlorination of chunk Ti-slag, a dense, gas-impermeable layer of rutile is formed, which retards the chlorination reaction. The kinetic curves for chlorination of chunk titanium slag show an autocatalytic period. It is assumed that the reason for the autocatalysis is an increase in the reaction surface resulting from development of microfissures in the chunks of Ti-slag. 3 figures; 8 biblio. refs.

1/1

USSR

UDC 669.295.053.24

SIDORENKO, A. P., VASYUTINSKIY, N. A., PECHENKIN, V. P., and LUKHMANOV, L. S.
"Change in the Mass of Titanium Slag During Cooling of Ingots"

Sb. tr. Vses. n.-i. i proyekt. in-t titana [Collected works of All-Union
Scientific-Research and Planning Institute for Titanium], 6, 1970, 18-22,
(Translated from Referativnyy Zhurnal-Metallurgiya, No. 1, 1971, Abstract
No. 1 G186 by the authors).

Translation: The change in slag mass in ingots during cooling depends on
the degree of reduction of the slag, the porosity and the quantity of slag,
and, most of all on the cooling conditions. Methods are described for
determining the increase in slag mass during cooling. Numerical data are
presented on the increase in the mass of Ti slag ingots during cooling
under industrial conditions. 1 figure; 1 table.

1/1

USSR

UDC 669.295.05

VASYUTINSKIY, N. A., LYSTSOV, A. I., ZAKHAREVICH, A. A., and SIDORENKO, A. P.

"Certain Features of Chlorinating Lump Titanium Slag"

Moscow, Metallurgiya i Khimiya Titana (Institut Titana), Metallurgiya Publishing House, Vol 6, 1970, pp 41-47

Translation: It is established that during chlorination of lump titanium slag, a solid, gas-proof layer of rutile is formed which slows down the chlorination reaction. The kinetic curves of chlorinating lump titanium slag are characterized by the presence of an autocatalytic period. It is suggested that the cause of the autocatalysis is the increase in the reaction surface through the development of microcracks in the lumps of titanium slag. Three illustrations and eight bibliographic entries.

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USSR

UDC 669.017.11

VASYUTINSKIY, N. A., and SIDORENKO, A. P.

"The Structure and Phase Composition of Titanium Slag Ingots"

Moscow, Metallurgiya i Khimiya Titana (Institut Titana), Metallurgiya Publishing House, Vol 6, 1970, pp 22-27

Translation: It is shown that, as a result of the processes of cooling and oxidizing titanium slag ingots, several structural-phase variations are formed. The external zone of the ingot is composed of rutilized slag, which is followed by the zone of flakey oxidized slag, consisting primarily of anatase. The zone of granular oxidized slag is located deeper, and the anosovitovyy [translation unknown] slag is preserved in the center of the ingot. It is shown that the nature of structural-phase transformations of the slag during the process of cooling ingots depends on the composition of the slag, the size of the ingots, and conditions of their cooling. One illustration, one table, and five bibliographic entries.

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USSR

UDC 669.017.11

SIDORENKO, A. P., VASYUTINSKIY, N. A., PECHENKIN, V. P., and LUKHMANOV, L. M.

"Change in the Mass of Titanium Slags During Ingot Cooling"

Moscow, Metallurgiya i Khimiya Titana (Institut Titana), Metallurgiya Publishing House, Vol 6, 1970, pp 18-22

Translation: It is shown that change in the mass of slag in ingots with cooling depends on the degree of slag restoration, the porosity and size of the ingot, and, most of all, on cooling conditions. Methods of determining the increase in mass of slags when they are cooled are described. Numerical data on increase in the mass of ingots of titanium slags during cooling under industrial conditions are given. One illustration, one table, and five bibliographic entries.

1/1

USSR

MOROZ, YU. A., and SIDORENKO, A. P.

UDC 669.295.054.79

"Two-Stage Titanium Slag Production Procedure"

Moscow, Tsvetnyye Metally, No 2, Feb 70, pp 47-49

Abstract: A description is given of an experiment in obtaining titanium slags from a concentrate with the composition 26.16% Fe₂O₃, 65.20% TiO₂, 1.65% SiO₂, 2.50% Al₂O₃, 0.11% CaO, 0.43% MgO, 1.02% MnO, and 1.51% Cr₂O₃. The advantages and disadvantages of using the two-stage procedure to produce the slags are discussed. It is shown that in order to obtain low-iron titanium slag it is also necessary to reduce the titanium oxides. The idea of a mandatory and regular increase in the FeO content in the charge when melting the concentrate (which is reduced in advance) is stated and experimentally confirmed. The results of microscopic analysis and x-ray micrography of the initial reduced concentrate, after two hours of holding at 1200°C and at 1400°C, are presented and discussed. The characteristics of the reduced concentrate and the electrical conductivity of the solid charge materials at various temperatures are tabulated. The redistribution of oxygen between Fe_{met} and TiO₂ at a temperature above 1200°C indicates the necessity of reexamining the energy consumption during two-stage melting of titanium slag in

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USSR

MOROZ, YU. A., and SIDORENKO, A. P., Tsvetnyye Metally, No 2, Feb 70, pp 47-49

comparison with the existing technological process. From the data presented it is obvious that 17% of all the expended energy goes to the reduction of oxides, of which only 6.5% is expended on the reduction of iron oxides and 10.5% on the reduction of titanium oxides. In the case of preliminary reduction of iron oxides the energy expenditures for the production of slag in the second step of two-stage smelting drop by a large amount (6.5%). When charging the smelting furnace (the second step of the two-stage smelting) with hot reduced concentrate, the energy expenditures on heating it will be the same as in the smelting furnace by the existing process. The heat balance in this furnace is discussed and factors are mentioned which lower the efficiency of making titanium slag from rich titanium concentrates by the two-stage method.

2/2

172 025

UNCLASSIFIED

PROCESSING DATE--18SEP70

TITLE--CHANGE IN A TITANIUM SLAG DURING THE COKING OF BRIQUETS -U-
AUTHOR--(04)-VASYUTINSKIY, N.A., LYSTSOV, A.I., BEREZHKO, A.V., SIDORENKO,
A.P.
COUNTRY OF INFO--USSR
SOURCE--IZV. AKAD. NAUK SSSR, METAL. 1970, (1) 247
DATE PUBLISHED-----70

S

SUBJECT AREAS--MATERIALS

TOPIC TAGS--COKE, PETROLEUM PRODUCT, TITANIUM, METALLURGIC SLAG, PHASE
ANALYSIS, THERMAL EFFECT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1988/0599

STEP NO--UR/0370/70/000/001/0247/0247

CIRC ACCESSION NO--AP0105582

UNCLASSIFIED

2/2 025

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0105582

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THREE TYPES OF TI SLAGS WERE STUDIED: NONOXIDIZED TI SLAG, ANATASE SLAG, AND RUTILE SLAG. THE EFFECT OF TEMP. (800-1200DEGREES) ON THE PHASE COMPN. OF THE BRIQUETS MADE FROM THE SLAGS AND PETROLEUM COKE WAS DETD.

UNCLASSIFIED

USSR

UDC 621.314.14

1

ZHARKOV, S. A., VASIL'YEV, I. N., PEREPECHAYEV, V. V., ~~SILORENKO, A. V.~~, and KHOKHLOVA, M. M., Leningrad Institute of Aircraft Instrument Building

"A Wide-Band Instrument for Converting the Current of Semiconductor Nuclear Emission Detectors to a Pulse Train"

Moscow, Pribory i Tekhnika Eksperimenta, No 4, Jul/Aug 71, pp 101-103

Abstract: The authors describe a wide-band circuit for converting the current of semiconductor detectors of nuclear emission to a pulse train. The circuit is based on the equivalent of a four-layer diode. Stabilization of the bias on the control electrode made it possible to extend the dynamic range of data conversion by a factor of approximately 20, as well as to reduce the number of circuit elements and the required electrical energy. The device is simple, low in cost, has small overall dimensions and low weight (volume of no more than 100 cc, weight less than 50 g), and is highly shock resistant. The small number of elements ensures high circuit reliability, and enables accommodation in a hermetically sealed casing along with the power supply. The power for the entire converter can be supplied by low-voltage batteries (12-16 V). A distinguishing feature of the device is that the electrical energy requirement is proportional to the emission dose rate. In the absence

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USSR

ZHARKOV, S. A., et al., Pribory i Tekhnika Eksperimenta, No 4, Jul/Aug 71, pp 101-103

of radiation, the circuit takes practically no electrical energy. At a dose rate of 10^4 r/hr, the power consumption is 0.08 W, while the corresponding figure for 1 r/hr is 0.005 W -- 1.5-2 orders of magnitude less than the most economic conventional pickups. The prf is a nearly linear function of dose rate in the range from 10 to 10^4 r/hr. The circuit has excellent operational stability. Drift of the frequency emitted by the circuit when the detector was replaced by an equivalent resistor at constant temperature was no more than +0.02% in five days of operation.

2/2

- 36 -

UNCLASSIFIED

PROCESSING DATE--13NOV70

TITLE--HYDROCARBON RESPIRATION OF PRECAMBRIAN GRAPHITE CONTAINING STRATA
-U-
AUTHOR--(02)-SIDORENKO, A.V., SIDORENKO, S.A.
COUNTRY OF INFO--USSR
SOURCE--DOKL. AKAD. NAUK SSSR 1970, 192(1), 184-7
DATE PUBLISHED-----70

S

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY, MATERIALS
TOPIC TAGS--GRAPHITE, GEOGRAPHIC LOCATION, GEOLOGY, METHANE, ETHANE,
PROPANE, BUTANE, ETHYLENE, PROPENE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3004/1876

STEP NO--UR/0020/70/192/001/0184/0187

CIRC ACCESSION NO--AT0132138

UNCLASSIFIED

PROCESSING DATE--13NOV70

UNCLASSIFIED

2/2 023

CIRC ACCESSION NO--AT0132138

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE STUDY OF ARCHEAN GRAPHITE
 CONTG. GNEISSES IN CENTRAL AZOV KRIVOI ROG AREA, LOWER PROTEROZOIC C
 CONTG. KYANITE SCHISTS IN THE KOLA PENINSULA, AND UPPER PROTEROZOIC
 SCHUNGITES OF KAKELIA SHOWED THAT SEDIMENTARY METAMORPHIC C CONTG.
 PRECAMBRIAN ROCKS CONTAIN SMALL AMTS. OF BITUMENS AND HYDROCARBONS.
 ORG. SUBSTANCE WERE NOT ENTIRELY "BURNED OUT" DURING REGIONAL
 METAMORPHISM OF PRIMARY SEDIMENTARY ROCKS CONTG. ORE SUBSTANCES. THE
 PRECAMBRIAN ORG. SUBSTANCES PROVIDED C (GRAPHITE, GRAPHITOID, AND
 SCHUNGITE) AND A CERTAIN AMT. OF HYDROCARBONS, THE TRACES OF WHICH WERE
 DETECTED IN THE FORM OF CH SUB4, C SUB2 H SUB5, C SUB3 H SUB8, C SUB4 H
 SUB10, C SUB2 H SUB4, AND C SUB3 H SUB6. THE SO CALLED HYDROCARBON
 RESPIRATION THUS OCCURRED DURING METAMORPHISM OF INITIALLY SEDIMENTARY C
 CONTG. STRATA OF THE EARTH'S CRUST.

UNCLASSIFIED

USSR

UDC 621.396.677

ALONINA, A. I., ANDRUSENKO, A. M., SIDORENKO, B. G.

"Lattice-Type Arrays on Dielectric Substrates"

Radiotekhnika. Resp. mezhved. temat. nauch.-tekhn. sb. (Radio Engineering, Republic Interdepartmental Thematic Scientific and Technical Collection), 1972, vyp. 20, pp 127-131 (from RZh-Radiotekhnika, No 6, Jun 72, Abstract No 6B35)

Translation: The method of direct summation of multiple reflections was used to obtain values of the reflection and transition coefficients in the form of infinite series for the structure comprising two lattice-type arrays each of which is arranged on a dielectric layer. The solution is correct for the case of the long-wave approximation (the period of each array is less than the wavelength), and the spacing between the dielectrics exceeds the distance at which the harmonics damp by e times. By using the previously developed procedure, the infinite series are contracted. The amplitude and polarization characteristics of the investigated structure were calculated on a computer as a function of the parameters of the structure. The results are presented in the form of graphs. There are 2 illustrations and a 4-entry bibliography.

1/1

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USSR

UDC 546.281 : 537.7

SIDORENKO, F. A., DMITRIYEV, Ye. A., and GEL'D, P. V., Ural Polytechnic
Institute imeni S. M. Kirov

"Electron Energy Band in Chromium, Manganese, and Iron Monosilicides"

Tomsk, Izvestiya Vysshikh Uchebnykh Zavedeniy -- Fizika, No 8, 1972, pp 15-20

Abstract: The article describes results of measuring the dependence of the electric resistance (80-1000°K), thermoelectromotive force (80-700°K), and Hall coefficient (80-400°K) of chromium, manganese, and iron monosilicides on temperature, as well as calculations of characteristic parameters of the electron spectra of the compounds according to conventional formulas and according to narrow-band model formulas. The large effective masses, significant (10^{23} cm^{-3}) concentrations, and low charge carrier mobilities, as well as the small distances for the Fermi level (0.1-0.2 eV) from the band edges indicate a high density of states in the electron energy bands of Cr and Mn monosilicides. Transport phenomena in chromium and manganese monosilicides occur within a narrow band tenths of an electron-volt wide. At low temperatures the band can be considered relatively wide (the electron gas is degenerate), while at high temperatures it must be regarded as narrow (the degree of degeneracy of the gas declines). The only substantial difference between the bands is in the degree of fullness.

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USSR

UDC: 669.11.24.71:538

KOTOV, A. P., ZELENIN, L. P., BRONFIN, B. M., SIDORENKO, F. A., GEL'D, P. V.,
Ural Polytechnic Institute imeni S. M. Kirov

"Structure and Magnetic Properties of Mutual Solid Solutions of Iron and
Nickel Monoaluminides"

Sverdlovsk, Fizika Metallov i Metallovedeniye, Vol 33, No 3, Mar 72, pp
602-606

Abstract: The lattice period, density, and temperature dependence of susceptibility of solid solutions of $Fe_{1-x}Ni_xAl$ ($0 \leq x \leq 1$) are measured, and their energy spectrum is discussed. The curve for the lattice period as a function of composition shows anomalous behavior: the lattice period decreases linearly with increasing x from approximately 291 pm for iron monoaluminide to 288.7 pm for 50 mol.% NiAl, remaining constant above $x = 0.5$. The temperature-dependent part of susceptibility in the intermetallic compounds is attributed to iron atoms. The concentration dependence of the properties of mutual solid solutions of iron and nickel monoaluminides is explained in terms of redistribution of electron densities.

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USSR

UDC 546.821'28:67

RABINOVICH, B. S., RADOVSKIY, I. Z., KOZLOV, F. N., SIDORENKO,
~~F. A.~~, and GEL'D, P. V., Ural Polytechnical Institute imeni
S. M. Kirov

"Electrical and Magnetic Properties of TiSi and TiSi₂"

Moscow, Neorganicheskiye Materialy, Vol 6, No 12, Dec 70, pp 2202-2204

Abstract: The composition and structural characteristics of TiSi and TiSi₂ pre-
parates were studied chemically, metallographically, roentgenographically, and
densitometrically. The data produced confirmed the single-phase and stoichio-
metric nature of the silicides, as well as the great complexity of their lattices.

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USSR

UDC 669.24:538.27

ZELENIN, L. P., BASHKATOV, A. N., SIDORENKO, F. A., and GEL'D, P. V., Ural Polytechnical Institute imeni S. M. Kirov

"Magnetic Susceptibility of the β -Phase of the Ni-Al System"

Sverdlovsk, Fizika Metallov i Metallovedeniye, Vol 30, No 4, Oct 70, pp 740-745

Abstract: Measurements were made of β -phase specimens of the Ni-Al system to determine the magnetic susceptibility at 20-600° K and the electrical resistance at room temperature. X-ray-metallographic investigations and density measurements substantiated the results. A specific point on the composition-property diagrams is attained at 50 at. % Al. The magnetic susceptibility of β -phase specimens is related to the Pauli type. The density estimate of electronic states for the NiAl equiatomic alloy is ~ 0.49 1/ev·molecul.

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USSR

UDC 546.821'28:67

RABINOVICH, B. S., RADOVSKIY, I. Z., KOZLOV, F. N., SIDORENKO, F. A., and GEL'D, P. V., Ural Polytechnical Institute imeni S. M. Kirov

"Electrical and Magnetic Properties of TiSi and TiSi₂"

Moscow, Neorganicheskiye Materialy, Vol 6, No 12, Dec 70, pp 2202-2204

Abstract: The composition and structural characteristics of TiSi and TiSi₂ pre-
parates were studied chemically, metallographically, roentgenographically, and
densitometrically. The data produced confirmed the single-phase and stoichio-
metric nature of the silicides, as well as the great complexity of their lattices.

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Nuclear Science and Technology

USSR

UDC:535.372:549.755.35

GOROBETS, V. S. and SIDORENKO, G. A.

"Luminescent Secondary Minerals of Uranium at Low Temperatures"

Moscow, Atomnaya Energiya, Vol 36, No 1, Jan 74, pp 6-13

Abstract: Mineralogists have long used the luminescent properties of uranyl minerals in ultraviolet light; however, the photoluminescent spectra of these minerals have been defined for only a few examples, which have bright luminescence at room temperature. Unfortunately, most secondary uranium minerals exhibit bright luminescence only at low temperatures. The purpose of this article is to determine the luminescence spectra of as many uranyl minerals as possible at 77 and 298 K and to interpret the spectra physically; to clarify certain peculiarities of the composition of the minerals on the basis of the data produced; and to develop a luminescent method for reliable, rapid diagnosis of uranyl minerals in charges as small as possible. Minerals studied include phosphates and arsenates, silicates, carbonates and sulfates, vanadates, molybdates and hydroxides.

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USSR

UDC: 621.317.763

RODIONOV, G. S., SIDORENKO, G. A., KONSTANTINOV, G. K.

"A Stand for Testing Wave Meters for Durability"

Elektron. tekhnika. Nauchno-tekhn. sb. Kontrol'no-izmerit. apparatura (Electronic Technology. Scientific and Technical Collection. Monitoring and Measuring Equipment), 1970, vyp. 2(20), pp 125-129 (from RZh-Radiotekhnika, No 1, Jan 71, Abstract No 1A335)

Translation: A stand is described which includes a mechanical drive device with automatic readout of the number of cycles in addition to the usual system for graduating wave meters. Incorporation of this device makes it possible to test and adjust mechanisms with rotational and helical motion.
Resumé.

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US 3R

UDC 612.76.001.572:613-07

~~SIDORENKO, G. I.~~, Professor, and SEMENENKO, A. D., Candidate of Medical Sciences, Institute of General and Communal Hygiene imeni A. N. Sysin, Academy of Medical Sciences USSR, Moscow

"A Physiological Model of a Servo-System for Motor Coordination in Man and Its Application in Hygienic Investigations"

Moscow, Gigiyena i Sanitariya, No 9, 1971, pp 55-60

Abstract: In a continued investigation of early changes induced in man's systemic reactions to atmospheric pollutants, a system was designed which records disturbances developing in learned motor skills in the presence of minimum perceptible and subsensory amounts of toxic substances (sulfur dioxide, hydrogen sulfide, benzene, phenol, carbon disulfide, and carbon dioxide) in room air. The experimental subjects (aged 18-55) performed programmed tasks and, during the flashing of a signal light, had to depress plastic sensors with a certain force and at a certain angle. The programmed tasks were varied to present a stimulating, logical challenge, since idleness inbetween the light signals would make the subjects very tense at first and drowsy subsequently. Records of the reduced precision and speed with which the plastic sensors were depressed, changes in EEG and other measured parameters, and mistakes made in the performance of the programmed tasks in the

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USSR

SIDORENKO, G. I., and SEMENENKO, A. D., Gigiyena i Sanitariya, No 9, 1971,
pp 55-60

presence of perceptible and imperceptible amounts of pollutants in the air revealed a statistically significant deterioration in integrated control of man's motor activities. The system is suitable for use in industrial plants.

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- 49 -

1/2 021

UNCLASSIFIED

PROCESSING DATE--23OCT70
QONGS IN MAN -U-

TITLE--BAC. CEREUS AS A CAUSATIVE AGENT OF FOOD POI

AUTHOR--(05)-PIVOVAROV, YU.P., SIDORENKO, G.I., TKACHENKO, A.V., GOLDBERG,
YE.S., AKIMOV, A.M.

COUNTRY OF INFO--USSR

SOURCE--VOPROSY PITANIYA, 1970, NR 3, PP 25-28

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--FOOD CONTAMINATION, BACILLUS, POISON

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--1999/1164

STEP NO--UR/0244/70/000/003/0025/0028

CIRC ACCESSION NO--AP0123141

UNCLASSIFIED

2/2 021

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0123141

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. IN RECENT YEARS FOOD POISONINGS CAUSED BY BAC. CEREUS HAVE BEEN AN OBJECT OF LARGE SCALE STUDIES IN A NUMBER OF COUNTRIES. SINCE 1967 THE QUESTION AS TO THE ETIOLOGICAL ROLE OF BAC. CEREUS IN THE CAUSATION OF POISONINGS IN THIS COUNTRY HAS BEEN STUDIED AT THE CHAIR OF GENERAL HYGIENE OF THE 2D MOSCOW MEDICAL INSTITUTE IN COOPERATION WITH MICROBIOLOGICAL LABORATORIES OF THE SANITARY EPIDEMIC STATIONS OF THE MOSCOW AND LUGANSK REGIONS. TWO MAJOR, 4 FAMILIAL OUTBREAKS AND 29 ISOLATED CASES OF THIS AFFECTION WERE REGISTERED IN THE PAST PERIOD. IN THE CASES UNDER REVIEW A DISTINCT SEASONAL NATURE AND A GREAT VARIETY IN THE CLINICAL COURSE COULD BE DISCERNED AMONG CAUSES (SUPPORTED BY BACTERIOLOGICAL ANALYSES) RESPONSIBLE FOR THE POISONINGS WERE PRODUCTS OF BOTH ANIMAL AND VEGETABLE ORIGIN. BACKGROUNDS OF CRITERIA FOR DIAGNOSING THE AFFECTIONS UNDER DISCUSSION ARE OFFERED.

FACILITY: KAFEDRA OBSHCHEY GIGIYENY II MOSKOVSKOGO MEDITSINSKOGO INSTITUTA IM. N. I. PIROGOVA.

UNCLASSIFIED

USSR

UDC 616.981.513-022.38-039:615.3-003.1

PIVOVAROV, Yu. P., SIDORENKO, G. I., TKACHENKO, A. V., GOLDBERG, Ye. S.,
AKIMOV, A. M., VOLKOVA, R. S., and SHELAKOVA, V. V., Chair of General Hygiene,
Second Moscow Medical Institute imeni N. I. Pirogov

"Bacillus cereus as an Agent of Food Poisoning in Man"

Moscow, Voprosy Pitaniya, No 3, 1970, pp 25-25

Abstract: During an investigation of food poisonings treated in several clinics and hospitals in Moscow, Moscow Oblast, and Roven'kovskiy Rayon, Luganskaya Oblast (Ukraine) since 1967, it was found that two general outbreaks, four familial outbreaks, and 29 isolated cases involving a total of over 150 persons were caused by Bacillus cereus. The microorganism was isolated in large quantities from the intestinal contents, vomited material, and suspected food products (sausage, beet and potato soup, stewed cabbage, boiled meat, sardines, canned duck and beef). Most of the cases were reported in the summer and fall. The course was generally mild and brief. After an incubation period of 10 to 16 hours, sometimes 4 to 6 hours, symptoms appeared - stomach pains, nausea, diarrhea. The symptoms subsided in 11 to 16 hours, less commonly in 24 to 48 hours. About 2% of the cases followed a more severe and longer (3 to 5 days) course.

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Acc. Nr: **AP0044020**

Ref. Code: UR 0240

PRIMARY SOURCE: *Gigiyena i Sanitariya*, 1970, Nr 2, pp 7-10.

URGENT PROBLEMS OF SOIL HYGIENE

G. I. Sidorenko, L. A. Kozhinova, A. A. Dinerman

The paper carries information concerned with sanitary protection of soil. Its historical development in the USSR is expounded and in conclusion main trends of scientific research in this field are outlined.

REEL/FRA
19770457

USSR

UDC 621.73.042:62-412

MAZHAROVA, G. YE., BATENEVA, M. K., SIDORENKO, G. V., GUPALO, V. G., and
LUCHKOVA, L. I.

"Effect of Deformation on the Structure and Properties of R18 Steel"

Moscow, Kuznechno-Shtampovochnoye Proizvodstvo, No 7, Jul 71, pp 13-15

Abstract: The first ingots of R18 steel forged by upsetting have been tested at the Dneprospetsstal' Plant. Ingots from oneheat were forged by existing plant technology and by an experimental method.

Existing technology:

1. Heating an ingot weighing 590 kg in a continuous furnace up to 1250°C for one hour.
2. Drawing the ingot on a 5-ton drop forge along into a blank with a 260-mm square side and cutting into standard length.
3. Heating the standard blank in a continuous furnace up to 1250°C for 30 minutes.
4. Drawing the standard blank into a blank with a 160-mm square side.

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USSR

MAZHAROVA, G. YE., et al., Kuznechno-Shtampovochnoye Proizvodstvo, No 7,
Jul 71, pp 13-15

5. Cooling the blanks in unheated coolers for 36 hours.

Experimental technology:

1. Same as 1 above.
2. Same as 2 above except 220-mm dimension is used.
3. Same as 3 above.
4. Upsetting standard blanks along the ingot axis to a height equal to $1/2-1/3$ the original height, turning 90° and drawing in a direction perpendicular to the ingot axis, down to ingots with a 120-mm square side with an intermediate heating to 1250°C for 15-20 min.
5. Same as 5 above.

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USSR

MAZHAROVA, G. YE., et al., Kuznechno-Shtampovochnoye Proizvodstvo, No 7,
Jul 71, pp 13-15

As a result of increasing the forging reduction ratio and deformation of metal throughout its volume, crushing of the eutectic lattice occurs along with a more uniform distribution of the carbide phase. Mechanical properties of metal forged as described are better than when forged by the conventional technology, as a result of which transverse forging provides a deeper and more uniform working of the metal. A disadvantage of experimental technology is the additional preheating which lowers productivity of the forging machinery by 15-20%. Two figures, one table, three bibliographical references.

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- 46 -

Acc. Nr.

AP0034104

Abstracting Service:
CHEMICAL ABST. 4-70

Ref. Code

NR 0078

S

74179y Synthesis of a titanium-sodium double sulfate.
 Goroshchenko, Ya. G.; Sidorenko, I. M. (Inst. Obshch. Neorg.
 Khim., Kiev, USSR). *Zh. Neorg. Khim.* 1970, 15(1), 69-72
 (Russ). When NaCl or Na₂SO₄ was added to TiOSO₄ soln.,
 2Na₂SO₄·3TiOSO₄·6H₂O (I) sepd. as white needle-like crystals,
 with *n*_D 1.670 and *n*_B 1.549. In the presence of H₂SO₄ the sepd.
 double salt contained H₂SO₄ mols: 2Na₂SO₄·3TiOSO₄·xH₂SO₄·
 yH₂O. I dissolves slowly in H₂O or mineral acids. *HMJR*

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REEL/FRAME

19710747

USSR

UDC 612.215.41:612.24

SIDORENKO, L. A., Institute of Surgery im. A. V. Vishnevskiy, Academy of Medical Sciences USSR, Moscow

"Mixing of Gases in the Dead Space of the Respiratory Tract"

Moscow, Byulleten' Eksperimental'noy Biologii i Meditsiny, No 6, 1972, pp 10-13

Abstract: The diffusion process at the boundary of alveolar gas and dead space affects the size of the dead space. Experiments with three healthy human subjects breathing first air and then pure oxygen showed that upon a change in the rate of inspiration from 1000 to 2000 ml/sec, the dead space increased by 13 to 15 ml. At low rates the time required for diffusion was greater than at high rates. Thus gas from the dead space apparently partakes in gas exchange through diffusion. In another series of experiments involving breath holding, the dead space decreased by 30 to 35 ml when the breath was held for 2 1/2 sec at inspiration, by 40 to 50 ml when held for 5 sec, and by 60 to 80 ml when held for 10 sec. Thus, the longer the breath was held, the smaller the dead space, i.e., the longer the diffusion time.

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USSR

UDC 621.582.002 (083.8)

KOCHKAREV, G.V., KRACHKOVSKIY, O.I., LEYBOVICH, A.SH., CHARNYY, YU.S.,
PETRAKOVSKIY, YA.SH., SIDORENKO, L.D., LEVAKOV, V.P., GLADCHENKO, V.P.,
RATNEK, YU.A.

"Classifier Of Semiconductor Devices"

USSR Author's Certificate No 295180, filed 14 July 1969, published 18 May 1971
(from RZh--Elektronika i yeye primeneniye, No 3, March 1972, Abstract No 3B357)

Translation: The classifier of semiconductor devices (principally transistors) contains a unit [uzel] for connection of a device to the measuring equipment, the measuring equipment, logical equipment, mechanism for marking the polarity, and a unit for allocation of the measured devices into a container; it has a rotating tube connected with an electric motor. With the object of increasing the speed of operation and the efficiency of the classifier, the unit for connection, made in the form of a revolving reversible disk, supporting two blocks [kolodka] for the devices, diametrically located and connected by a flexible braid [zhgut] with the measuring device, and two withdrawing devices, mounted on the axis of the blocks, is partially arranged inside a guiding hopper, connected with the rotating tube of the unit for allocation, and under the disk of the unit for connection, in a groove of the lateral surface of the hopper, the mechanism for marking the polarity is located.

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019
 TITLE--HOMOLYTIC REACTION OF N-VINYLPHENOTHIAZINE WITH VINYL BUTYL ETHER
 UNCLASSIFIED
 PROCESSING DATE--13NOV70
 -U-
 AUTHOR--(05)--SHOSTAKOVSKIY, M.F., SKVORTSOVA, G.G., KUROV, G.N., SIDORENKO,
 L.L., VORONOV, V.K.
 COUNTRY OF INFO--USSR
 SOURCE--DOKL. AKAD. NAUK SSSR, 1970, 192(1), 115-17
 DATE PUBLISHED-----70
 SUBJECT AREAS--CHEMISTRY
 TOPIC TAGS--ORGANIC-AZINE COMPOUND, ETHER, CHEMICAL REACTION MECHANISM,
 ORGANIC AZO COMPOUND, COPOLYMERIZATION, THIOL
 CONTROL MARKING--NO RESTRICTIONS
 DOCUMENT CLASS--UNCLASSIFIED
 PROXY REEL/FRAE--3004/1879
 CIRC ACCESSION NO--AT0132141
 STEP NO--UR/0020/70/192/001/0115/0117
 UNCLASSIFIED

2/2 019

CIRC ACCESSION NO--AT0132141

UNCLASSIFIED

PROCESSING DATE--13NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN THE PRESENCE OF
 AZOBIS-ISOBUTYRONITRILE N VINYLPHENOTHIAZONE (I) (W. REPPE, 1956) FORMS
 POLYMERS. I REACTS WITH BUOCH:CH SUB2 (II) TO GIVE
 N,16,(VINILOXY)HEXYL)PHENOTHIAZINE (III) AND COPOLYMERS. THE STRUCTURE
 OF III WAS PROVEN BY PARTIAL SYNTHESIS: PHENOTHIAZINE PLUS BRCH SUB2
 (CH SUB2) SUB4 CH SUB2 GET YIELDS N,(6,ETHOXYHEXYL) III ANALOG (IV).
 HYDROGENATION OF III GAVE IV. A FREE RADICAL MECHANISM IS PROPOSED FOR
 THE FORMATION OF III. FACILITY: IRKUTSK. INST. ORG. KHIM.,
 IRKUTSK, USSR.

UNCLASSIFIED

USSR

UDC 669.046.5

KUDRIN, V. A., ~~SIDORENKO, M. E.~~, SMIRNOV, N. A., ZUBREV, A. S., MOROZOV, A. S.,
KHASHIN, G. A., CHUVATIN, N. S., and FILATOV, S. K.

"Metal Blowing by Powderlike Materials"

Moscow, V sb. "Sovremennyye problemy kachestva stali" (MISIS) (Collection of
Works. Modern Problems of Steel Quality) (Moscow Institute of Steel and Alloys)
Izd-vo "Metallurgiya," No 61, 1970, pp 183-188

Translation of Abstract: The results of an investigation on dephosphorization
and desulfurization, alloying, and deoxidation of metal by powder-like material
blowing are presented. Data are presented on the effect of basic technological
parameters on the rate and amplitude of the dephosphorization process of steel
by blowing with an oxygen jet containing a powder-like mixture of optimal com-
position, consisting of lime, iron ore, and fluorepar. 4 Figures.

1/1

1/2 022 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--KINETICS OF THE DEPHOSPHORIZING OF STEEL DURING THE INJECTION OF
GAS POWDER MIXTURES -U-
AUTHOR--(03)-SMIRNOV, N.A., SIDDRENKO, M.F., KUDRIN, V.A.
COUNTRY OF INFO--USSR
SOURCE--IZV. AKAD. NAUK SSSR, METAL. 1970, (2), 84-91
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS
TOPIC TAGS--CHEMICAL REACTION KINETICS, IRON OXIDE, GAS, METALLURGIC SLAG,
PHOSPHORUS, STEEL PRODUCTION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3003/1451 STEP NO--UR/0370/70/000/002/0084/0091
CIRC ACCESSION NO--AP0130334
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--27NOV70

2/2 022
CIRC ACCESSION NO--AP0130384
ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. ON THE BASIS OF THE PRESENT STUDY IT IS CONCLUDED THAT CHARACTERISTIC FOR DEPHOSPHORIZATION KINETICS IS A RECTILINEAR CHANGE OF THE P CONTENT IN THE METAL DURING THE INJECTION OF GAS POWDER MIXTS. WITH THE PRESENCE OF AN INCUBATION PERIOD ASSOC. WITH THE GRADUAL PILING UP OF FE OXIDES IN THE SLAG WHILE EMPLOYING NONOXIDIZING COMPNS. OF THE POWDERS. THE DEPHOSPHORIZATION PORCESS OF THE METAL BY THE INJECTION OF GAS POWDER MIXTS. WAS ACHIEVED PRIMARILY AT THE CONTACT SURFACE OF THE METAL WITH THE SLAG PARTICLES. THE LIMITING LINK IN THE ENTIRE DEPHOSPHORIZATION PROCESS IN THE DIFFUSION OF P IN SLAG PARTICLES. THE COMPLETENESS OF THE UTILIZATION OF DEPHOSPHORIZING CAPABILITY OF SLAG PARTICLES, AS CHARACTERIZED BY THE DEGREE OF PERFECTION OF THE DIFFUSION OF P IN THEM, IS, AT THE GIVEN COMPN. OF THE DEPHOSPHORIZING MIXT., DETERM. BY THE POSITION OF THE LIQ. SLAG PARTICLES, DEPENDING ON THE PRESSURE OF THE TRANSPORTING GAS.

UNCLASSIFIED

1/2 028

UNCLASSIFIED
TITLE—LUMINESCENCE AND ABSORPTION SPECTRA OF URANYL CHLORIDE CRYSTALS IN
POLARIZED LIGHT -U- PROCESSING DATE—30OCT70

AUTHOR—(03)—KOMYAK, A.I., SEVCHENKO, A.N., SIDORENKO, M.N.

COUNTRY OF INFO—USSR

SOURCE—IZV. AKAD. NAUK SSSR, SER. FIZ. 1970, 34(3), 567-81

DATE PUBLISHED—70

SUBJECT AREAS—PHYSICS

TOPIC TAGS—CHLORIDE, CRYSTAL, URANIUM COMPOUND, LUMINESCENCE, ABSORPTION
SPECTRUM, LIGHT POLARIZATION

CONTROL MARKING—NO RESTRICTIONS

DOCUMENT CLASS—UNCLASSIFIED

PROXY REEL/FRAME—2000/1533

STEP NO—UR/0048/70/034/033/0576/0581

CIRC ACCESSION NO—AP0125161

UNCLASSIFIED

2/2 028

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSIGN NO--AP0125161

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE LUMINESCENCE AND ABSORPTION SPECTRA OF CS SUB2 UO SUB2 CL SUB4 CRYSTALS WERE DETD. AT 77DEGREE SK AND THE EFFECT OF LIGHT POLARIZATION DISCUSSED. THE ELECTRON VIBRATION LEVELS OF (UO SUB2 CL SUB4) PRIME2 NEGATIVE WERE DETD. AND THE RESULTS OF KHARITONOV AND KNYAZEVA WERE USED FOR THE ASSIGNMENT OF SPECTRAL LINES TO INDIVIDUAL VIBRATIONS. FACILITY: BELORUSS, GOS. UNIV. IM. LENINA, MINSK, USSR.

UNCLASSIFIED

1/2 029

TITLE--ARGON ARC WELDING -U- UNCLASSIFIED

PROCESSING DATE--04DEC70



AUTHOR-(04)-LEBEDEV, V.K., PENTEGOV, I.V., STEMKOVSKIY, YE.P., SIDORENKO, M.N.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 248115

REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI BUL

DATE PUBLISHED--05JAN70

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR., MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--INERT GAS ARC WELDING, WELDING EQUIPMENT, POWER SUPPLY, THYRISTOR, ELECTRIC TRANSFORMER, ELECTRIC CAPACITOR, PATENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--3004/1047

STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0131601

UNCLASSIFIED

2/2 029

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AA0131601

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. MICROFICHE OF ABSTRACT CONTAINS GRAPHIC INFORMATION. ARGON ARC WELDING WITH POWER TRANSFORMER, VARIABLE CHOKE AND A BATTERY OF CAPACITORS ALL IN SERIES WITH THE WELDING ARC, IMPROVES WELDING BY INTRODUCING A CONTROLLED D.C. CURRENT COMPONENT INTO THE WELDING CIRCUIT WITHOUT MAGNETIC BIAS OF THE POWER TRANSFORMER, AN EXTRA SECONDARY WINDING IS APPLIED TO THE TRANSFORMER. THIS WINDING FORMS, IN CONJUNCTION WITH THE SATURATION CHOKE AND THE RECTIFIER, A D.C. SOURCE WITH A SHARPLY DROPPING CHARACTERISTIC AND CONNECTED TO THE ARC GAP VIA AN L SHAPED FILTER. PARALLEL TO THE CAPACITOR BATTERY ARE PLACED A THYRISTOR AND A RESISTOR WHICH PROTECT THE CAPACITORS FROM OVERVOLTAGE WHEN THE ARC IS BROKEN. THE CONTROLLING ELECTRODE OF THE THYRISTOR IS CONNECTED TO ITS ANODE VIA A RESISTOR, A VOLTAGE STABILISER AND UNCONTROLLED DIODE, ALL IN SERIES.

FACILITY: INSTITUT ELEKTROSVARKI IM YE. O. PATONA.

UNCLASSIFIED

AA0040669

UR 0482

S
Soviet Inventions Illustrated, Section I Chemical, Derwent, 3/78

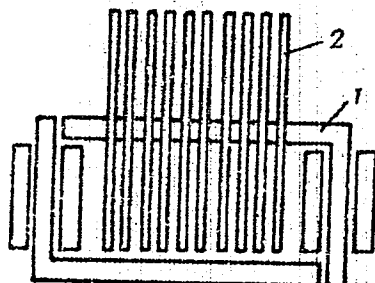
234573 BALLAST RESISTOR for gas-electrical welding, has a particularly good performance for carbon dioxide welding because its inductance remains always constant. It consists of several coils of high-resistance with mounted on a common magnetic circuit assembled from two L-shaped cores of electric steel punchings 0.5-1 mm. thick with nonmagnetic gaps at their joints. 3.11.67. as 1195309/25-27. I.I.ZARUBA et al. E.O.¹/₂PATON Electrowelding Inst. (29.5.69.) Bul.4/10.1.69. Class 21h. Int.Cl. B23k.

18
AUTHORS: Zaruba, I. I.; Sidorenko, M. N.; and Ponomarenko, V. G.

Institut Elektrosvariki imeni Ye. O. Patona

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19750266

AA0040669



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19750267

Molecular Biology

5

45
65

USSR

DESECHEREVSKIY, V.I., ZHABOTINSKIY, A.M., SEL'KOV, YE.YE., SIDORENKO, N.P.,
and SHNOL', S.E., Institute of Biophysics, Academy of Sciences USSR

"Oscillating Biological Processes on the Molecular Level"

Moscow, Biofizika, Vol15, No 2, 1970, pp 225-234

Abstract: One important task of modern biophysics is to investigate conditions under which oscillations may occur on various levels. Some oscillations represent a normal functional state of a system (myocardial fibers), while other oscillations represent an abnormal (pathological) state. Oscillating processes have been investigated in single-enzyme, multi-enzyme, and model catalytic systems, in colloidal systems, and in a system with a strict structural organization: striated muscle. A catalytic reaction is a repetitive cyclic process: each enzyme molecule forms a complex with the substrate, induces a reaction, and returns to its initial state. Solutions of actomyosin display configurational oscillations involving reversible shifts in the ATPase activity in the absence of the ATP, which arrests these oscillations. Multi-enzyme systems in cells involve hundreds of biochemical reactions and various control mechanisms, which regulate the activity of enzymes, the speed of their synthesis and destruction, the permeability of biological membranes, and so on. These mechanisms can also disrupt the equilibrium

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USSR

DESHCHEREVSKIY, V.I., et al, Biofizika, Vol 15, No 2, 1970, pp 225-234

of biochemical systems and cause fluctuations in the concentration of reacting substances. Liquid-phase models of enzymatic reactions yield reproducible results and are used to investigate the spatial synchronization of oscillations. A specific situation arises in mechanical chemistry: the enzymatic breakdown of ATP changes the mechanical state of the muscle, which in turn affects the speed of this reaction. Further studies of oscillating processes may contribute to our understanding of the following phenomena: the mechanism of enzymatic catalysis; the nature of control mechanisms in multi-enzyme systems; the molecular kinetic basis of biological motility; and the cause of morphological organization in initially homogeneous systems.

2/2

AA0040727 SIDORENKO O.A UR 0482

1-78

Soviet Inventions Illustrated, Section I Chemical, Derwent,

242338 HEAT-INSULATION of the top part of a steel ingot is provided by a rapidly hardening composition which is poured between the casting mould and a model. In an example, the composition consists of 95-96% of quartz sand and 4-5% of ferrochrome slag, with addition of 7-10% of a binder comprising water glass and a foaming agent). The insulation does not require any additional drying; it is porous and permeable to gases. This method is simpler and more rapid than the conventional methods.

12.5.68 as 1239974/22-2. V.G. DODOKA et alia.
"ZAPOROZHSTAL" WORKS. (2.9.69) Bul 15/25.4.69.
Class 31b. Int.Cl.B 22d.

1/2

10 18

19750379

AA0040727

AUTHORS: Dodoka, V. G.; Zhil'ko, M. M.; Podgorodetskiy, A. A.;
Gurskiy, G. L.; Tkachenko, A. S.; Shchastnyy, P. M.;
Shevlyakov, N. F.; Petrov, L. G.; Rudichev, R. P.; and
Sidorenko, O. A.

Zavod "Zaporozhstal'"

19750380

2

USSR

UDC 576.858.75.094

SIDORENKO, O. V., KORYUSHENKO, N. P., TAYKOVA, N. V., SINEL'NIK, N. A.,
and YACHNIK, O. S., Kiev State University, Kiev

"Biological Properties and Ultrastructure of the Influenza Virus A₂ (Hong Kong) 68"

Kiev, Mikrobiologicheskii Zhurnal, Vol 33, No 4, Jul/Aug 71, pp 466-472

Abstract: A study conducted on influenza virus of strain A₂ (Hong Kong) 68, received from the Influenza Institute, Academy of Medical Sciences USSR and passaged through chicken embryos, showed that the population of virus particles exhibited differences with respect to morphology, ultrastructure, and biological properties. Chromatography on DEAE-Sephadex-A-50 indicated that the virus strain contained a fraction of particles that were not adsorbed in the column. Particles of this fraction were also not adsorbed on chick embryos. Comparison with other strains showed that only the strain A₂ (Hong Kong) 68 contained a fraction that was not adsorbed in the column. Further passages through chick embryos did not change the relative content of this fraction. Elution with NaCl solutions of increasing concentration yielded three virus fractions with decreasing particle size: 1) 2800-7000 Å (0.1 M NaCl), 2) 1400-2100 Å (0.5 M NaCl), and 3) 600-800 Å (1.0 M NaCl). The

1/2

USSR

UDC 669.24.42:669.25.42

KHARCHUK, M. D., CHERMENSKIY, V. I., SIDORENKO, R. A., Ural Polytechnic Institute, Department of Semiconductor and Electrovacuum Machine Building

"Desulfurization of Cobalt, Nickel, and Their Eutectic Alloys with Carbon During Crucibleless Zone Melting in a Vacuum"

Ordzhonikidze, Izvestiya vysshikh uchebnykh zavedenii SSSR, Tavetnaya Metallurgiya, No 3, 1972, pp 47-50

Abstract: A procedure has been developed to obtain superpure cobalt and nickel with respect to sulfur required to study the processes of embossing of graphite in cast iron. The procedure is analogous to that described previously by Chermenskiy, et al., [Izv. AN SSSR, Metally, No 1, 27, 1971]. NKS-0 nickel, KP-1 cobalt, and MGOSCh graphite were used as the initial materials. The sulfur content was controlled by means of the S-35 isotope, additions of which did not exceed $(1-2) \times 10^{-4}\%$. The metals were melted at a displacement rate of the liquid zone (f) of 2 mm/min, and the alloys with carbon, 1 mm/min. Figures are presented showing the distribution curves of the sulfur after 1 and 3 passes through zone melting. The effective distribution coefficients of the sulfur, the coefficients and specific rates of its evaporation in each of the materials near their melting points were determined. In the iron subgroup, the distribution coefficients and the specific rates of evaporation of sulfur decrease from

USSR

KHARCHUK, M. D., et al., Izvestiya vysshikh uchebnykh zavedenii SSSR, Tsvetnaya Metallurgiya, No 3, 1972, pp 47-50

iron to nickel; the sulfur distribution coefficients in the corresponding eutectic alloys with carbon vary analogously. After three passes through crucibleless zone melting in a vacuum, nickel was obtained with a sulfur content of $2 \cdot 10^{-5}\%$, and after 5 passes, cobalt containing less than $2 \cdot 10^{-6}\%$ S.

2/2

USSR

SIDORENKO, R.R., TSEBIN, L.V.

UDC 621.314.14 (088.8)

"D-C Voltage Converter"

USSR Author's Certificate No 261554, filed 18 June 68, published 14 May 70 (from RZh--Elektronika i yeye primeneniye, No 12, December 1970, Abstract No 12B537P)

Translation: A circuit is proposed for a d-c to a-c voltage converter. The converter contains two or more semibrige circuits, each of which is fulfilled on the basis of two transistors and contains a charging capacitor, a feedback winding, and a resistance series network [tsepochnka]. The semibrige circuits are series-connected in this way in order for the transistor of the foregoing converter, shunted with respect to the section collector-emitter of the resistance network, to be connected by its emitter to the collector of the transistor of the following semibrige, the analogous junction of which is shunted by the same network. A common transformer is used for the two semibriges. Voltage not exceeding half of the power-supply voltage is supplied to each of the transistors. This makes it possible to use the converter for operation at the increased voltage with high reliability. 1 ill. V.Sh.

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UNCLASSIFIED
TITLE--HYDROCARBON RESPIRATION OF PRECAMBRIAN GRAPHITE CONTAINING STRATA
AUTHOR--(02)--SIDORENKO, A.V., SIDORENKO, S.A. PROCESSING DATE--13NOV70

COUNTRY OF INFO--USSR

SOURCE--DOKL. AKAD. NAUK SSSR 1970, 192(1), 184-7
DATE PUBLISHED-----70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY, MATERIALS
TOPIC TAGS--GRAPHITE, GEOGRAPHIC LOCATION, GEOLOGY, METHANE, ETHANE,
PROPANE, BUTANE, ETHYLENE, PROPENE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3004/1876

STEP NO--UR/0020/70/192/001/0184/0187

CIRC ACCESSION NO--AT0132138

UNCLASSIFIED

023
 CIRC ACCESSION NO--AT0132138 UNCLASSIFIED PROCESSING DATE--13NOV79
 ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE STUDY OF ARCHEAN GRAPHITE
 CONTG. GNEISSES IN CENTRAL AZOV KRIVOI ROG AREA, LOWER PROTEROZOIC C
 CONTG. KYANITE SCHISTS IN THE KOLA PENINSULA, AND UPPER PROTEROZOIC
 SCHUNGITES OF KARELIA SHOWED THAT SEDIMENTARY METAMORPHIC C CONTG.
 PRECAMBRIAN ROCKS CONTAIN SMALL AMTS. OF BITUMENS AND HYDROCARBONS.
 ORG. SUBSTANCE WERE NOT ENTIRELY "BURNED OUT" DURING REGIONAL
 METAMORPHISM OF PRIMARY SEDIMENTARY ROCKS CONTG. ORE SUBSTANCES. THE
 PRECAMBRIAN ORG. SUBSTANCES PROVIDED C (GRAPHITE, GRAPHITOID, AND
 SCHUNGITE) AND A CERTAIN AMT. OF HYDROCARBONS, THE TRACES OF WHICH WERE
 DETECTED IN THE FORM OF CH SUB4, C SUB2 H SUB6, C SUB3 H SUB8, C SUB4 H
 SUB10, C SUB2 H SUB4, AND C SUB3 H SUB6. THE SO CALLED HYDROCARBON
 RESPIRATION THUS OCCURRED DURING METAMORPHISM OF INITIALLY SEDIMENTARY C
 CONTG. STRATA OF THE EARTH'S CRUST.

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--23OCT70

TITLE--ENHANCING THE PHYSICOMECHANICAL PROPERTIES OF POLYETHYLENE BY FUSING IT WITH OTHER POLYMERS -U-
AUTHOR--(03)-PEGLOVSKIY, V.L., SIDORENKO, V.I., LIVVY, G.V.

COUNTRY OF INFO--USSR

SOURCE--KHIM. PROM. UKR. 1970, (1), 10-13

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--POLYSTYRENE RESIN, POLYPROPYLENE, POLYETHYLENE, PLASTIC MECHANICAL PROPERTY, COMPRESSIVE STRENGTH, BENDING STRENGTH

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1997/0752

STEP NO--UR/0436/70/000/001/0010/0013

CIRC ACCESSION NO--AP0119659

UNCLASSIFIED

2/2 022

CIRC ACCESSION NO--AP0119659

UNCLASSIFIED

PROCESSING DATE--23OCT70

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE ADDN. OF SIMILAR TO 20PERCENT
POLYSTYRENE OR SIMILAR TO 50PERCENT POLYPROPYLENE TO POLYETHYLENE
DECREASES ITS SHRINKAGE AND INCREASES ITS COMPRESSION AND BENDING
STRENGTH.

UNCLASSIFIED

1/2 013
UNCLASSIFIED
TITLE--MELTS OF POLYPROPYLENE, POLYVINYL CHLORIDE, AND POLYCAPROLACTAM
WITH OTHER POLYMERS IN THE FOOTWEAR INDUSTRY -U-
AUTHOR--(03)--SIDORENKO, V.I., PEGLOVSKIY, V.L., LIVYY, G.V. PROCESSING DATE--04DEC70
COUNTRY OF INFO--USSR
SOURCE--KOZH.--OBUV. PROM. 1970, 12(5), 27-30
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS, MILITARY SCIENCES
TOPIC TAGS--PROPYLENE, POLYVINYL CHLORIDE, CAPROLACTAM, FOOTGEAR,
POLYISOBUTYLENE, NYLON
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY FICHE NO-----FD70/605012/007 STEP NO--UR/0498/70/012/005/0027/0030
CIRC ACCESSION NO--AP0140294
UNCLASSIFIED

2/2 013

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0140294

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. A MELT CONTG. 30PERCENT POLYSTYRENE (I) AND 70PERCENT POLYPROPYLENE (II) HAS LOWER SHRINKAGE THAN II ALONE. THE SP. HEAT CAPACITY OF THE MELT IS LOWER THAN THAT OF II. THESE PROPERTIES SHORTEN THE MOLOYING TIME AND INCREASE THE PRODUCTION RATE OF SHOE COMPONENTS FROM THE MELTS BY 15-17PERCENT. THE ADDN. OF POLYISOBUTYLENE TO II INCREASES ITS ELASTICITY, RESISTANCE TO COLD, AND ADHESION. THE BLENDING OF POLY(VINYL CHLORIDE) WITH I AND HIGH D. POLYETHYLENE (III) IMPROVES ITS STRESS DEFORMATION CHARACTERISTICS, COLD RESISTANCE, AND MECH. STRENGTH. THE CHANGES OF THE TENSILE STRENGTH AT BREAK OF III MELTS WITH NYLON 6 SUGGEST CHEM. INTERACITON BETWEEN THESE 2 POLYMERS. THE APPLICABILITY OF THESE MELTS IN THE MANUF. OF SHOE COMPONENTS IS DISCUSSED.

UNCLASSIFIED

USSR

SIDORENKO, V. P., BLAZHKOV, A. I.

UDC 621.372.832.43(068.6)

"A Ferrite Rectifier"

USSR Author's Certificate No 255383, Filed 7 Jun 68, Published 8 Apr 70 (from RZh-Radiotekhnika, No 10, Oct 70, Abstract No 10B171 P)

Translation: The proposed ferrite rectifier, based on a strip line, contains a central conductor in the form of a rectangular helix, a ferrite element and a magnetic system. The working frequency band is extended and the overall dimensions are reduced by making the ferrite element in the form of a ring in which a permanent magnet is placed. The operating principle of the rectifier is based on the phenomenon of ferromagnetic resonance. One illustration.

1/1

USSR

UDC: 681.327

BURDONSKIY, I. N., GRISHIK, M. P., KURBANOV, Sh. M., MARKELOV, V. P., SER-
GEYEV, V. V., SIDORENKO, V. R., TSEREVITINOV, S. S., SHABUROVA, L. M.,
Moscow

"Computer Processing of Optical Interference Patterns"

Novosibirsk, Avtometriya, No 4, Jul/Aug 71, pp 21-26

Abstract: The paper is a report of initial experiments in using a photo-
metric scanning system in conjunction with a general-purpose computer for
analyzing halftone images (optical interference patterns). Line-scanning
of the pattern was used for computer input through an analog-digital con-
verter with 64 levels of quantization. A flowchart of the processing pro-
gram is given. The results of computer processing on the Minsk-22 com-
puter are compared with manual analysis for plasma interference patterns.
Excellent agreement is observed with a time reduction of more than two
orders of magnitude for machine processing. The authors thank V. S.
Vaynshteyn and M. I. Pergament for taking part in the initial phase of
the work. Three figures, bibliography of five titles.

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UDC 621.373.029.7

USSR

GUSEV, V. A., SILCHENKO, V. S., SEMENOV, A. A.

"A Laser Modulator on a Frequency of 1.5 GHz With Low Control Power"

Moscow, Radiotekhnika i Elektronika, Vol 16, No 10, Oct 71, pp 1994-1995

Abstract: The article is a report on a microwave laser modulator with a toroidal resonator cavity. A modulator with extremely low controlling power can be made by utilizing the extremely high electric field concentration in a capacitive gap in the toroidal resonator cavity. Resonators with X-cut and Z-cut LiNbO₃ crystals were studied. The light source was a helium-neon laser. The parameters of the modulator with the X-cut crystal are much superior to those for the Z-cut. However, the X-cut crystal has a natural birefringence which is strongly dependent on temperature. For normal operation of the modulator, the temperature should be stabilized to within 0.03°C. One figure, bibliography of three titles.

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USSR

UDC 681.327.11.621.391.8:519.27

SIDORENKO, V. V., CHIZHOV, Ya. Kh.

"The Recording of Random Processes by Means of a Digital Printer Based on Highly Durable Elements"

Tr. Metrol. In-tov SSSR (Works of Metrological Institutes of the USSR), No 126(186), 1971, pp 156-163 (from Referativnyy Zhurnal, Metrologiya i Izmeritel'naya Tekhnika, No 12, Dec 71, Abstract No 12.32.108)

Translation: A principle is proposed for constructing a device for the high-speed recording of data, represented in pulse-phase form, on a dynamic-type printer. In a printer of the dynamic type, considerable advantages are inherent in a pulse-phase code, since it is combined with selection of the printed sign with respect to time. 5 figures. 7 references.

1/1

- 91 -

USSR

UDC: 621.317.335.3.023

ZHESTKOV, V. F., SIDORENKO, Ye. N.,

"On Measuring the Dielectric Constants of Ferroelectrics in the Three-Centimeter Wavelength Band"

Elektron. tekhnika. Nauchno-tekhn. sb. Radiodetal'i (Electronic Technology. Scientific and Technical Collection. Radio Components), 1970, vyp. 2(19), pp 135-141 (from RZh-Radiotekhnika, No 1, Jan 71, Abstract No 1A372)

Translation: It is noted that the biggest percentage of the error in measurement of the permittivity and loss tangent of ferroelectrics by the "infinite" specimen method is due to the error of measurements of the phase angle of the dielectric transformer. It is theoretically shown that this method is unsuited for measuring high dielectric constants with the tolerances for transformer parameters which are usual in measurement practice. An analysis is made of the data in the literature on measurements of the dielectric constants of ceramic BaTiO₂ in the 3-cm wavelength band. The observed scatter among the results of different authors is attributed to errors in measurements of fundamental quantities which appear in the computational relations, chiefly to errors in measuring the parameters of dielectric transformers. Resumé.

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1/2 017 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--THE EFFECTIVENESS OF DIFFERENT METHODS OF SPECIFIC DESENSITIZATION
WITH MICROBIAL ALLERGENS -U-
AUTHOR-(02)-DASHTAYANTS, G.A., SIDORENKO, YE.N.

COUNTRY OF INFO--USSR

SOURCE--KLINICHESKAYA MEDITSINA, 1970, VOL 4B, NR 4, PP 90-94

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ALLERGIC DISEASE, RESPIRATORY SYSTEM DISEASE, ANTIGEN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3004/C743

STEP NO--UR/C497/70/048/004/0090/0094

CIRC ACCESSION NO--AP0131338

UNCLASSIFIED

2/2 017

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0131338

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. UPON CONFRONTATION OF THE EFFECTIVENESS OF SEVERAL TYPES OF MICROBIAL ANTIGENS IN THE TREATMENT OF BRONCHIAL ASTHMA THE AUTHORS ESTABLISHED THAT CORPUSCULAR ANTIGENS ARE MORE ADVANTAGEOUS THAN ACCELLULAR ANTIGENS. AN APPROXIMATELY SIMILAR PERCENTAGE OF SUCCESSFUL RESULTS WAS OBTAINED WITH AUTOVACCINES, HETEROVACCINES AND COMBINED VACCINES. THE ADVANTAGE OF INTRADERMAL EMPLOYMENT OF MICROBIAL ANTIGENS CONSISTS IN THE SIGNIFICANTLY LESSER QUANTITY OF MICROBIAL BODIES INTRODUCED INTO THE PATIENT'S ORGANISM.

FACILITY: 3-YA KAFEDRA TERAPII KIEV. INSTITUTA USGVERSHENSTVOVANIYA VRACHEY.

UNCLASSIFIED

SIDDRENKO, Ye. R.

Automatic Control

APPLICATION OF BIOLOGICAL FOR DIAGNOSTIC AND THERAPEUTIC PURPOSES

(Article by G. I. Siddrenko, Ye. R. Siddrenko, Moscow, "Voprosy teoreticheskoy i prakticheskoy fiziologii i biofiziki", Moscow, 1971, pp 279-280)

Automatic Control

SO: SPKS 55352
6 MAR 1972

We have worked on the problem of applying biological feedback to solve medical problems of practical importance for 15 years.

Precisely, the principles of automatic control theory were used to create a system for optimization of the dosing of the therapeutic effect. The practical solution of this problem would permit equipping the doctor and the researcher with means of improving the treatment effectiveness when medications, blood substitutes and other compounds would be introduced when and in the doses needed to improve the condition of the sick organism.

For this purpose, a number of designs of optizators (step type) have been developed which, together with the organism, constitute a closed control circuit. The introduction of small standard doses at therapeutic intervals accompanied by analysis of the "response" of the organism, which determined the magnitude and rate of subsequent injections. We have studied experimental systems with a fixed optimum criterion and also systems with automatic selection of the dose when the most significant and characteristic dynamic during the course of the pathological process in the organism (glucose, oxygen, potassium) provides for homeostasis in the organism operate by this principle.

The preparations developed for homeostatic injection of medications (the results of experiments on animals (more than 100 experiments) with different doses of cardiovascular medications. The injections assured urgent prevention of a condition for both severe disturbances of blood circulation (hypertensive crisis, angina), and acute cardiac insufficiency. The injection of atropine, acetylcholine, etc maintain and other drugs was carried out.

In the case of automatic feeding of the drug, the bioelectric signals stimulating the actions of the doctor, using criteria proven by decades of medical practice. The effectiveness of the treatment is appreciably improved.

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AUTHOR--(02)-SIDORENKO, YE.R., CHEVLYTKO, A.A.
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ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. STUDY OF PHONOCARDIOGRAMS, EKGS, CARDIAC ACTIVITY PHASES AND KUNOS GARAN MECHANOELECTRICAL COEFFICIENT (1956) IN 5 DOGS PRIOR TO AND AFTER EXPOSURE TO SINGLE X RAY DOSES OF 600 R. STATISTICAL DATA ANALYSIS INDICATES AN INCREASE IN THE STRENGTH OF Q TO I TONES AND IN THE DURATION OF I AND II TONES, AND A DECREASE IN THE TONE AMPLITUDES AND IN THE MECHANOELECTRICAL COEFFICIENT DURING THE ENSUING RADIATION DISEASE. THESE CHANGES REACH A MAXIMUM ON THE 10TH TO 17TH DAY AFTER EXPOSURES. FACILITY: MINSKII MEDITSINSKII INSTITUT, MINXK, BELORUSSIAN SSR.

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KORNYUSHENKO, N. P. and SIDORENKO, Ye. V.

"A Study of the Morphology and Ultrastructure of Influenza Virus"

Abstract: The most important stage in the development of viruses is differentiation of the nucleoprotein, a process which obviously continues in the viral particle located outside the cell. Flu virus particles purified in formalinized erythrocytes were investigated with an electron microscope, using the FVK method of negative contrast. It was established that the viruses located outside the cell may be divided into five groups distinguishable in form and dimensions, which are determined chiefly by the organization of the nucleoprotein. The polymorphism of flu virus particles is caused by differentiation of the large particles, both gigantic spherical particles and thread-like particles, into smaller virus particles. The final degree of differentiation is represented by a particle of 600-800 angstrom in diameter, having a nucleoprotein strand 1 to 1.2 microns in length packed into five to six convolutions, and this determines the minimal amount of hereditary material.

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AUTHOR--(02)-SIDORENKOV, I.V., GILMIYAROVA, F.N.

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