"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

CA

22

Fluorescence spectra of petroleum and its fractions in liquid condition and in a chromatographic column. M. L. Kats and N. K. Solovov (N. G. Chernyshev Saratov Univ.). *Izvest. Akad. Nauk S.S.S.R., Ser. Fiz.*, 19, 777-81(1955).—In crude oil and in the distn. residue above 400°, the fluorescence maxima occur at 472, 511, 539, and 625 mμ with intensities depending on the type of the oil. In fractions 200-400° these maxima are absent and 2 maxima for each fraction, 431-445 and 454-458 mμ, appear; the max. shift slightly to longer waves with increased distn. temp. In the spectra of crude oil adsorbed on Al_2O_3 in a chromatographic column all lines appear, the lines of shorter wavelength appearing progressively towards the bottom. The intensity of fluorescence is much higher in the chromatographic column; exposures required are 15-20 min. Thus this method can be used for identification and qual. analysis of crude oil.

S. Pakswer

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

SIDOROV, N.K

SIDOROV, N. K.

"Investigating Luminescence Spectra in Petroleum and Petroleum Products in the Visible Region." Cand Phy-Math Sci, Saratov State U, Saratov, 1954. (RZhKhim, No 3, Feb 55)

SO: Sum. No. 631, 26 Aug 55-Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (14)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

SIDOROV N.K.

K-5

Category : USSR/Optics - Physical Optics

Abs Jour : Ref Zhur - Fizika, No 2, 1957, No 4981

Author : Kats, M.L., Sidorov, N.K.

Title : Fluorescence Spectra of Petroleums and Their Fractions in the Liquid State and in a Chromatographic Column.

Orig Pub : Uch. zap. Saratovsk. un-ta, vyp. fiz., 1954, 40, 3-59

Abstract : Three specimens of petroleum were investigated. Distillation into fractions were carried out in the Gadaskin apparatus, and the chromatography in Al_2O_3 columns. The luminescence spectrums of the petroleums and their fractions were obtained photographically in the test tubes or directly in the columns, the excitation being with a PRK-4 tube with a FS-4 filter. The energy distribution in the spectra was not determined, and only micro-photograms were considered. It was established that the fluorescence spectra of raw petroleum in the visible region are characterized by the presence of the 472-476, 505-510, 540-545, and 620-625 millimicron bands. The first band is ascribed to oils, the second and third to tars, and the fourth to asphaltenes; analogous maxima were found also in the spectra of the fractions in the columns. The investigated specimens of

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Category : USSR/Optics - Physical Optics

K-5

Abs Jour : Ref Zhur - Fizika, No 2, 1957, No 4981

the petroleums differ from each other by the ratios of the intensities of the bands.

Fractions with a boiling temperature below 200° do not glow; the increase in the intensity of the luminescence of the remaining fraction that is produced by increasing their boiling temperature is connected with a corresponding increase in the contents of the aromatic compounds, responsible for the glow. In the columns, the color of the glow of the zones varies in all cases downward from orange to violet. A connection was established between the relative intensities of the glow of the components and their relative concentration, on the basis of which it is indicated that it is possible to work out a fluorescent procedure for a quantitative component analysis of petroleums. The authors reach the conclusion that the absorption spectra of petroleums in the visible region are not characteristic and cannot serve for their identification.

Card : 2/2

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

SIDOROV, N.K.

1145. FLUORESCENCE SPECTRA OF PETROLEUM FRACTIONS AND TARRY SUBSTANCES. Kats, M.L. and Sidorov, N.K. (Nauch. Zaheged. Saratov. Inst. (Sci. Ann. Saratov Inst.), 1954 (Publ. 1955), 591-594; abstr. in Ref. Zh. Khim (Ref. J. Chem., Moscow), 1956, (23), 75920). Fluorescence spectra of narrow petroleum fractions boiling between 300 and 500°C were examined, and those of tarry substances extracted from the petroleum fractions by adsorption. Luminescence of petroleum fractions is caused by the presence in them of tarry substances. The low molecular weight tarry substances produce intense short wave radiation and the high molecular weight substances long wave radiation.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

Sidorov, N.K.

AID P - 1777

Subject : USSR/Chemistry

Card 1/1 Pub. 78 - 15/26

Author : Sidorov, N. K.

Title : Oil fluoresce

Periodical : Neft. khoz., v.33, no.3, 63-65, Mr 1955

Abstract : The fluorescence of oil and of oil products is attributed to their tar content. Experiments have shown that with the increase of the molecular weight of tars their capacity to fluoresce diminishes.

Institution: None

Submitted : No date

K-5

Sidorov NK

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2"

USSR/Optics - Physical Optics

Abs Jour : Referat Zhur - Fizika, No 5, 1956, 12963

Author : Sidorov, N.K., Kirillov, L.A.

Inst : -

Title : Luminescence Spectra of Petroleum Products in Frozen Solution.

Orig Pub : Nauk. ezhegodnik za 1954 g. Saratovsk. in-t. Saratov, 1955, 596-598

Abstract : An investigation was made at room temperatures and at the temperature of liquid oxygen (-183°) of the spectra of luminescence of petroleum fractions and accompanying tarry substances, when glow is excited by filtered ultraviolet light. The glows of the 230-325° tar-free fraction, obtained at room temperature and at low temperature, have spectra of identical structure. In the latter case the short-wave maximum of 450 millimicrons is resolved into two maxima, at 442 and 458 millimicrons. The glow spectra

Card 1/2

Ca

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

SIDOROV, N. K.

6969. **Transport of calcium and phosphorus in plants.** A. V. Peterburgskii and N. K. Sidorov *Dokl. Akad. Nauk, S.S.S.R.*, 1955, 105, 1049—1052; *Referat. Zh. biol. Khim.*, 1956, Abstr. No. 15609.—On treating leaves of potato and apple with $^{45}CaCl_2$ soln. no movement of ^{45}Ca into the leaves below was observed. In oats, peas and rye-seedlings in water culture there was no marked transfer of ^{45}Ca from one part of the root system to another. In the sunflower with ^{32}P applied externally the basipetal rate of movement of the P was 50—60 cm./hr. Analogous results were obtained with clover and potato. The exchange of ^{32}P between stems arising from the same tuber takes place through the tuber. (Russian)

T. R. PARSONS

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S/051/60/009/004/032/034
E201/E191

AUTHOR: Sidorov, N.K.

TITLE: Raman Scattering Functions

PERIODICAL: Optika i spektroskopiya, 1960, Vol 9, No 4, pp 546-547

TEXT: Plachek's formulae for the Raman scattering functions were derived by Kondilenko et al. (Ref 1). The present note shows that these formulae can be deduced quite simply from the knowledge of the intensity components of the scattered light (Ref 2). The note deals with Plachek's formulae for polarized and unpolarized light. The paper is entirely theoretical.

There are 2 Soviet references.

SUBMITTED: May 27, 1960

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

S/058/62/000/003/040/092
A061/A101

24.3200

AUTHOR: Sidorov, N. K.

TITLE: Theory of molecular and Raman scattering of light by gases in the electrostatic field

PERIODICAL: Referativnyy zhurnal, Fizika, no. 3, 1962, 9, abstract 3V56 ("Rev. phys. Acad. RPR", 1961, v. 6, no. 1, 5 - 12)

TEXT: The intensity of light scattered by molecules in the longitudinal and transverse directions is determined by the tensor components of molecular polarizability, averaged over all equally probable spatial orientations of the molecule. When an electrostatic field is applied to gas, these orientations are not equally probable any longer, and are determined by the distribution function of the values of the molecular potential energy in the field. General formulas are obtained for the polarizability tensor components, averaged over all molecular orientations in the field. From these formulas, equations are derived for the dependence of the scattered light intensity and depolarization on the square of the electric field strength. These formulas are applied to Rayleigh and Raman scattering. In both

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A061/A101

Theory of molecular and Raman scattering...

cases, the relative change of intensity is of the order of 10^{-6} in fields of the order of 10^{5} v/cm.

M. Kovner

[Abstracter's note: Complete translation]

Card 2/2

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

S/081/62/000/020/001/040
B166/B186

AUTHOR: Sidorov, N. K.

TITLE: Theory of molecular and Raman scattering of light by gases placed in an electrostatic field

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 20, 1962, 17, abstract 20B82 (Rev. phys. Acad. RPR, v. 6, no. 1, 1961, 5-12)

TEXT: Expressions are obtained for the intensity components of Rayleight and and Raman scattering in gas subject to an electric field. Field dependence is valid only for molecules having anisotropy of the polarizability tensor (Rayleigh scattering) or anisotropy of its derivative (Raman scattering). The expected effect is positive (intensity in the field is greater) and proportional to the square of the field strength. The polarization of the scattered light in the field increases. The effect is not great, however: with fields of $\sim 10^5$ v/cm the relative change of intensity $\Delta I = (I_F - I_0^0)/I_0$ is, for the gas: $\sim 10^{-7} - 10^{-6}$ (Rayleigh scattering) or $\sim 10^{-6} - 10^{-5}$ (Raman scattering). [Abstracter's note: Complete translation.]

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

S/051/62/013/006/005/027
E039/E120

AUTHORS: Sidorov, N.K., Stal'makhova, L.S., and Bratanova, L.I.

TITLE: Contours and intensities of the Raman lines of xylenes

PERIODICAL: Optika i spektroskopiya, v.13, no.6, 1962, 783-790

TEXT: Contour measurements of the Raman lines of o-, m- and n-xylene are made using a ДФС-4 (DFS-4) diffraction grating spectrometer. The lines are excited by the 4358 Å mercury line. Data are presented graphically and also tabulated, full comparison being made with the work of other authors. Methods of calculating the intensity standard S are discussed. This is characterised by an invariant tensor α' derived from the polarisation of the molecules. As values of S for the xylenes have not been so far calculated, a comparison of experimental and theoretical values of S for toluene is given. It is shown that the formula for S derived by H.J. Bernstein and G. Allen (J. Opt. Soc. Amer., 45, 1955, 237) :

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L 49781-65 EPF(c)/EWT(m)/EWP(j)/EWA(c) Pc-4/Pr-4 RM
ACCESSION NR: AR5012233 UR/0058/65/000/003/D015/D015

26
B

SOURCE: Ref. zh. Fizika, Abs. 3D98

AUTHORS: Kovner, M. A.; Berezin, V. I.; Bratanova, L. I.; Stal'makhova, L. S.; Sidorov, N. K.

TITLE: Vibrational spectra of certain heterocyclic and halide-substituted aromatic compounds

CITED SOURCE: Tr. Komis. po spektroskopii. AN SSSR, vyp. 1, 1964, 106-113

TOPIC TAGS: vibrational spectrum, deuterosubstitute, force constant, influence coefficient, Raman scattering, aromatic compound

TRANSLATION: A calculation is made and an interpretation is presented for the vibrational spectra of diazines, s-triazine, s-tetrazine, and some of their deuterosubstitutes, and also N-oxide of pyridine. Systems of force constants and influence coefficients are obtained, and the role of the position and number of heteroatoms is ascertained. A measurement is made of the true integral intensities and

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widths of Raman-scattering lines of chloro-, bromo- and iodo-benzene and pyridine, and also the degree of depolarization of these lines. Some electro-optical parameters of the pyridine ring are determined.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

L 63380-65 EWT(1)/EWT(m)/EPF(c)/EWP(j)/T IJP(c) RM

ACCESSION NR: AP5019753 UR/0051/65/019/002/0206/0212
535.375.096

AUTHOR: Sidorov, N. K.; Bratanova, L. I.; Stal'makhova, L. S.

TITLE: Main parameters of Raman lines of monohalides of benzenes and their dependence on the temperature and on the solvent

SOURCE: Optika i spektroskopiya, v. 19, no. 2, 1965, 206-212

TOPIC TAGS: Raman scattering, benzene, halide, line width, line intensity, depolarization, thermal effect, solvent action

ABSTRACT: The measurements, claimed to be the first performed on the substances in question, were made by a procedure described in detail earlier (Opt. i spektr. v. 13, 783, 1962). The quantities measured were the absolute intensities and the true values of degree of depolarization and width of Raman line of chlorobenzene, bromobenzene, and iodobenzene. The results are presented in the form of a table, which lists also the trace and the anisotropy of the derivative polarizability tensor. Studies were also made of the effect of the temperature on the absolute intensities of the lines belonging to different vibrations of the chlorobenzene and bromobenzene molecules, and the effect of various solvents (carbon tetrachloride, hexane, ethyl alcohol, acetone) on the absolute intensity and width of Raman lines of ben-

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L 63380-65

ACCESSION NR: AP5019753

15

zene halides. All solvents decrease the scattering ability of the molecule, but no correlation is found between the properties of the solvent and the deviation of the scattering ability from its value in the pure liquid. An attempt is made to reconcile the experimental data on the Raman line width with the existing theories, and it is concluded that none of the theories are satisfactory. "Undergraduate students N. A. Petrushkina[44,33] and L. P. Epina[44,33] participated in the work. The authors thank M. A. Kovner[44,33] for a discussion of the work, and also M. L. Kats[44,33] and A. G. Finkel'[44,33] for interest in the work." Orig. art. has: 1 figure, 1 formula, and 2 tables. [02]

ASSOCIATION: none

SUBMITTED: 04May64 ENCL: 00 SUB CODE: OP

NO REF SOV: 017 OTHER: 008 ATD PRESS: 4079

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APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

L 2719-66 EWT(1)/T IJP(c)

ACCESSION NR: AP5017188 UR/0139/65/000/003/0162/0163

44,55 33

AUTHOR: Sidorov, N. K.; Stal'makhova, L. S. 44,55 32

TITLE: Concerning the choice of an absolute-intensity scale for Raman lines 21, 44

SOURCE: IVUZ. Fizika, no. 3, 1965, 162-163

TOPIC TAGS: Raman scattering, Raman spectroscopy, line intensity

ABSTRACT: The authors state that if the vessel containing the scattering substance is uniformly illuminated in a plane perpendicular to its axis (as in the case when a standard elliptical illuminator is used), then a better scale for the determination of the absolute intensities of Raman lines is not the one proposed by Bernstein and Allen (J. Opt. Soc. Amer. v. 45, 237, 1955), but a scale $R = (5b'^2 + 13g'^2)_{\Delta\nu} / (5b'^2 + 13g'^2)_{SO_2}$ which can be readily obtained without measuring the degree of depolarization (b' and g' are respectively the trace and the anisotropy of the tensor of the derivative of the polarizability with respect to the normal coordinate). A brief justification for this statement is presented. Knowing the experimental value of R, it is possible to determine the absolute intensity of the Raman line by means of the formula $(5b'^2 + 13g'^2)_{\Delta\nu} = R \cdot 26 \times 10^{-8}$ cm^4/g. Orig. art. has: 1 formula.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

L 2719-66

ACCESSION NR: AP5017188

ASSOCIATION: Saratovskiy gosuniversitet imeni N. G. Chernyshevskogo (Saratov State University)

SUBMITTED: 15Apr64 ENCL: 00 SUB CODE: OP

NR REF SOV: 003 OTHER: 002

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

L 31134-66 EWP(1)/EWT(1)/EWT(m)/EWP(e) EM/WW SOURCE CODE: UR/0368/66/004/0351/0353
ACC NR: AP6012859

AUTHOR: Berezin, V. I.; Zubov, V. A.; Kats, M. L.; Kovner, M. A.; Sidorov, N. K.; Stal'makhova, L. S.; Sushchinskiy, M. M.; Turbin, Yu. P.; Shubalov, I. K.

ORG: none

54
52
B

TITLE: Intensities and line thresholds of stimulated Raman scattering

SOURCE: Zhurnal prikladnoy spektroskopii, v. 4, no. 4, 1966, 351-353

TOPIC TAGS: laser, stimulated emission, Raman scattering, stimulated Raman scattering

ABSTRACT: The relative values for the threshold I for the intensity of the exciting light necessary to attain stimulated Raman scattering in toluene, chlorobenzene, and pyridene have been measured. Using a theory of SRS developed by P. A. Apanasevich and B. I. Stepanov (Zhurnal prikladnoy spektroskopii, v. 1, 1964, p. 202), the authors derived the following formula

$$I_B/I = (I_\infty/\delta)/(I_\infty/\delta)_B \quad \nu^3_{\beta B}/\nu^3_\beta \quad n^3_B/n^3, \qquad (1)$$

where I_∞ is the integral intensity of the SRS line, δ is the line width, ν_β is the frequency of the scattered light, n is the index of refraction, and the subscript B identifies these quantities for benzene. The experimental values of

Card 1/2 UDC: 535.22/36

be unity. Since the values of $n(\nu_\beta)$ for a ruby-laser [illegible] values of n for the D-line of sodium (n_D) were used in the calculations. Orig. art. has: 17 formulas and 1 table. [CS]

SUB CODE: 20/ SUBM DATE: 17Mar65/ ORIG REF: 004/ ATD PRESS: 4240

Card 2/2

APPROVED FOR RELEASE: 08/23/2000

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

SIDOROV, N.Kh.; LIVSHITS, S.B.

Technical progress in the Leningrad Association of Optical and Mechanical Enterprises. Biul. tekh.-ekon. inform. Gos. nauch.-issl. inst. nauch. i tekh. inform. 17 no.12:56-58 D '64. (MIRA 18:3)

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2c

L 36981-65 EWG(j)/EWP(e)/EWT(m)/EPF(c)/EWG(m)/EPR/EWP(t)/EWP(b) Pr-4/Ps-4 IJP(c) JD/WH/WH

ACCESSION NR: AP5007756 S/0192/65/006/001/0066/0069

AUTHOR: Fialkov, A.S.; Baver, A.I.; Smirnov, B.N.; Chaykun, M.I.; Sidorov, N.M.; Rabinovich, S.M.; Yurkovskiy, I M.

TITLE: The structure of the various modification of pyrolytic carbon

SOURCE: Zhurnal strukturnoy khimii, v. 6, no. 1, 1965, 66-69

TOPIC TAGS: pyrolytic carbon structure, interboundary region, mosaic structure, carbon anisotropy, carbon azimuthal disorientation, natural graphite structure, hydrocarbon pyrolysis

ABSTRACT: The structure of pyrolytic carbon was studied by microstructural, electron-microscopic, X-ray and microdiffraction analysis to determine the conditions of structure formation, depending on the temperature, method of heating and atmosphere of the reaction space. Various hydrocarbons (propane, butane, etc.) were used as sources. The [illegible] obtained by heating in a high-frequency induction furnace or by an exterior [illegible] thermal treatment was carried out at

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heat source to temperatures above 3000C. The presence of interboundary regions of a specific

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detected which determine the structural anisotropy of the pyrolytic carbon. In specimens obtained under nitrogen, the interboundary regions were parallel, occurring at regular intervals. Occasionally, boundary regions showed specific chain-like outgrowths. Thermal treatment of pyrolytic carbon at temperatures above 3000C caused block formations in the recrystallized pyrolytic carbon of a mosaic-like substructure and regions of shifting dislocation; recrystallization led to a considerable decrease in the azimuthal disorientation. The high anisotropy was also seen in the roentgenogram. The carbon obtained at a temperature above 2000C in a vacuum (electric heat source) corresponded to the structure of amorphized natural graphite) with a high degree of preferred crystal orientation (anisotropic factor about 30); the carbon obtained by pyrolysis in the vacuum induction furnace was more ordered than that obtained in a vacuum resistance furnace. Orig. art. has: 6 figures.

ASSOCIATION: None

SUBMITTED: 16Jan64 ENCL: 00 SUB CODE: OC

NO REF SOV: 003 OTHER: 007

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L 26926-65 EWG(j)/EWT(m)/EPF(c)/EWP(e)/EWG(m)/EPR/EWP(j)/EWP(b) Pc-4/Pr-4/
Ps-4 RPL WW/JFW/RM/WH S/0074/65/034/001/0132/0153
ACCESSION NR: AP5006976 52
38
B

AUTHOR: Fialkov, A. S.; Baver, A. I.; Sidorov, N. M.; Chaykun, M. I.; Rabinovich, S. M.

TITLE: Pyrolytic graphite: preparation, structure, properties

SOURCE: Uspekhi khimii, v. 34, no. 1, 1965, 132-153

TOPIC TAGS: pyrolytic graphite, hydrocarbon decomposition, hydrocarbon pyrolysis, pyrolysis mechanism, graphite structure, graphite property, graphite application

ABSTRACT: An up-to-date comprehensive review of Western and Soviet literature on the preparation, structure, properties, and applications of pyrolytic graphite (PG) has been presented. Soviet sources comprise about 25% of the total of 120 references. In the last few years the unique properties of PG attracted attention of researchers and engineers in various scientific and technological fields. PG is valuable not only as a material with unique properties, but also as a starting material for preparation of other pyrolytic materials, especially pyrolytic carbides and carbonitrides which might become increasingly important in the near future.

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Purely scientific interest in the study of PG is derived from its properties which depend only on changes in structure.

Soviet researchers contributed to the study of PG in the following fields:

1. Mechanism of the pyrolysis of hydrocarbons. P. A. Tesner and co-workers advanced the theory of direct high-temperature decomposition of hydrocarbon molecules into carbon and hydrogen on a heated substrate and introduced the concept of "threshold" concentration of carbon, at which carbon black begins to form in the gas phase. They also explained retardation of pyrolysis by hydrogen. A. P. Rudenko contributed to the hypothesis of multiple dehydrogenation-condensation of aromatic hydrocarbons. V. A. Poltorak and V. V. Voyevodskiy and P. S. Shantarovich and B. V. Pavlov presented experimental evidence of the free-radical mechanism in the pyrolysis of propane and methane. The authors of the review concluded that the free-radical mechanism of the formation of PG

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ACCESSION NR: AP5006976

is the most credible, but that the multiple dehydrogenation-condensation mechanism coupled with radical polymerization ought also to be considered. The authors summarized different points of view into one coherent theory on the mechanism of high- and low-temperature pyrolysis of hydrocarbons. I. L. Mar'yasin, and P. A. Tesner studied the kinetics of deposition of PG films in the low-temperature pyrolysis of methane and concluded that the temperature coefficient of the pyrolysis rate is high. The catalytic effect of the surface (active alumina) on the cracking of hydrocarbons was studied by G. V. Benevolenskaya and V. P. Kel'tsev.

2. Structure of PG. Recent contributions were made by A. S. Fialkov and co-workers on the x-ray study of the crystal structure, V. I. Kasatochkin and A. T. Kaverov on the determination of the degree of graphitization as a function of the c/2 spacing (between layers), and A. S. Fialkov and co-workers (Zh. strukt. khimii, v. 6, no. 1, 1965) on x-ray and electron-microscope study of the microstructure of PG.

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ACCESSION NR: AP5006976

3. Properties of PG. P. A. Tesner and I. M. Timofeyeva determined that the density and properties of deposits were independent of the nature of hydrocarbons and that the hardness of PG depends on temperature of deposition and has a maximum in the 1000—1520C range. Other properties of PG — linear thermal expansion, mechanical characteristics, thermal conductivity, electrical conductivity, magnetic susceptibility, and Hall constant — were described solely on the basis of Western sources.

In conclusion, the use of PG as super-heat-resistant construction material, erosion-resistant coatings for rocket parts, moderator in nuclear fuel, and in high-temperature thermocouples and thermoelements is indicated. The only exclusively Soviet-originated application was given as a patent issued for PG-coated graphite tubes for use as highly efficient resistance heaters in electric furnaces.

Card 4/5

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ACCESSION NR: AP5006976

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ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: MT, GC

NO REF SOV: 027 OTHER: 093 ATD PRESS: 3185-F

Card 5/5

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

FIALKOV, A.S.; BAVER, A.I.; SMIRNOV, B.N.; CHAYKUN, M.I.; SIDOROV, N.M.; RABINOVICH, S.M.; YURKOVSKIY, I.M.

Structure of pyrolytic carbon of various modifications. Zhur.strukt.khim. 6 no.1:66-69 Ja-F '65. (MIRA 18:12)

1. Submitted January 16, 1964.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

SIDOROV, N.N.

Summertime recreation of workers in Kuybyshev District. Gor.khoz. Mosk. 34 no.6:20-22 Je '60. (MIRA 13:7)

1. Predsedatel' ispolkoma Kuybyshevskogo raysoveta.
(Moscow--Recreation areas)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

SIDOROV, N.N.

Party and state control over jobs is in operation. Gor. khoz. Mosk. 37 no.7:4-5 Jl '63. (MIRA 16:11)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

SIDOROV, N. N.

"Determining the Critical Porosity of Sands", Gidrotekh. Stroi, No. 11, 1949.
Cand. Tech. Sci.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

SIDOROV, N.N., kandidat tekhnicheskikh nauk.

Investigation of the critical porosity of sands using a single-shear device. Sbor. LIIZHT no.144:20-28 '52. (MIRA 8:4)
(Soil mechanics) (Sand)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

SIDOROV, N.N., kandidat tekhnicheskikh nauk.

Preparatory turfing in building railroad embankments on marshes. (MLRA 8:4)
Sbor. LIIZHT no.144:29-63 '52.
(Railroads--Construction) (Soil stabilization)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

SIDOROV, Nik.

LEBEDEV, Mikhail Nikolayevich, kandidat tekhnicheskikh nauk; ASHEKO, Sof'ya Mikhailovna, kandidat tekhnicheskikh nauk; ZMIYENKO, Sergey Mitrofanovich, kandidat tekhnicheskikh nauk; KRYUKOV, Georgiy Nikolayevich, kandidat tekhnicheskikh nauk; SIDOROV, Nikolay Nikolayevich, kandidat tekhnicheskikh nauk; PAUL', V.P., inzhener, redaktor; YUDZON, D.M., tekhnicheskiy redaktor

[Building] Stroitel'noe proizvodstvo. Pod red. M.N.Lebedeva. 2-e perer. izd. Moskva, Gos. transportnoe zheleznodor. izd-vo, 1954. 489 p. (MIRA 8:4)

(Building)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

SIDOROV, N.N., kandidat tekhnicheskikh nauk.

Laboratory investigations of the characteristics of resistance of sand to shear. Trudy TSNIIS no.18:53-84 '56. (MLRA 9:10)
(Soil mechanics) (Sand)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

SIDOROV, N.N., kandidat tekhnicheskikh nauk, dotsent.

Effect of sand moisture on its critical porosity. Sbor.LIIZHT no.150:83-85 '56. (MLRA 9:11)
(Sand) (Soil mechanics)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

BEREZANTSEV, V.G., prof.; YAROSHENKO, V.A.; PROKOPOVICH, A.G.; RAZGUNOV, I.F.; SIDOROV, N.N.; SOROKIN, N.N., red.; BOBROVA, Ye.N., tekhn.red.

[Research on the strength of sand foundations] Issledovaniia prochnosti peschanykh osnovanii. Moskva, Gos. transp.zhel-dor. izd-vo, 1958. 139 p. (Babushkin, Vsesoiuznyi nauchno-issledovatel'skii institut transportnogo stroitel'stva. Trudy, no.28) (MIRA 12:2)

(Foundations) (Sand)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

[redacted] ROV, [illegible] .[illegible] n.nauk; [illegible] EOV, P.[illegible]., inzh.

[illegible] testing of the stability of slopes subjected to loads. [illegible], LIIZHT no.157:157-163 '59. (MIRA 1[illegible]:11)
(Foundations) (Soil mechanics)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

BEREZANTSEV, V.G., prof., doktor tekhn.nauk; SIDOROV, N.N., dotsent, kand. tekhn.nauk

Using reinforced concrete shell piles. Sbor.LIIZHT no.164:187-197 '59. (MIRA 13:8)

(Concrete piling)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

BEREZANTSEV, V.G., prof., doktor tekhn.nauk; SIDOROV, N.N., dotsent, kand.tekhn.nauk

Testing the strength of sand foundations of bridge supports. Sbor.LIIZHT no.164:198-208 '59. (MIRA 13:8)
(Bridges--Foundations and piers--Testing)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

SIDOROV, N.N., dotsent, kand.tekhn.nauk

Some characteristics of the displacement resistance of sands.
Sbor.LIIZHT no.164:209-218 '59. (MIRA 13:8)
(Sand—Testing) (Soil mechanics)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

BEREZA[illegible]TSEV, [illegible]; [illegible], [illegible], [illegible].tekhn.
[illegible]

Inv[illegible] of [illegible] particles under [illegible]els of rectangular [illegible] no.15[illegible]:116-12[illegible] '59. (MIRA 12:11)
(F[illegible]) (Soil mechanics)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

BEREZANTSEV, Vsevolod Glebovich, doktor tekhn. nauk, prof.; KSENOFONTOV, Aleksandr Ivanovich, kand. tekhn. nauk, dots.; PLATONOV, Yevgeniy Vladimirovich, prof.; SIDOROV, Nikolay Nikolayevich, kand. tekhn. nauk, dots.; YAROSHENKO, Vsevolod Aleksandrovich, kand. tekhn.nauk, dots.; GOL'DSHTEYN, M.N., doktor tekhn. nauk, prof., retsenzent; TERLETSKIY, V.P., inzh., retsenzent; LAPIDUS, L.S., inzh., retsenzent; ZHEREBTSOV, I.V., inzh., retsenzent; GLOTOV, N.M., inzh., retsenzent; SILIN, K.S., inzh.,retsenzent; SURODEYEV, V.P., inzh., red.; KHITROV, P.A., tekhn. red.

[Soil mechanics and foundation engineering] Mekhanika gruntov, osnovaniia i fundamenty. Moskva, Vses. izdatel'sko-poligr. ob"edinenie M-va putei soobshcheniia, 1961. 339 p. (MIRA 14:8)

(Soil mechanics) (Foundations)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

SIDOROV, N.N., kand.tekhn.nauk, dotsent

Study of the deformation properties of sand in the phase of displacements. Sbor. trud. LIIZHT no.196:64-75 '62. (MIRA 16:9)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2"

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SPIDIN, V.P.; SIDOROV, N.N.; KOSTANDOV, A.I., red.izd-va;
CHERKASSKAYA, F.T., tekhn.red.

[Study of soil subject to triaxial pressure] Issledovanie gruntov v usloviiakh trekhosnogo szhatiia. Leningrad, Gosstroiizdat, 1963. 89 p. (MIRA 16:7)
(Soil mechanics)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

ABELEV, Yu.M., doktor tekhn. nauk, prof.; ABELEV, M.Yu., inzh.; BAKHOLDIN, B.V., kand. tekhn. nauk; BEREZANTSEV, V.G., doktor tekhn. nauk, prof.; VYALOV, S.S., doktor tekhn. nauk; GODES, E.G., inzh.; GORBUNOV-POSADOV, M.I., doktor tekhn. nauk, prof.; DAIMATOV, B.I., doktor tekhn. nauk, prof.; DOKUCHAYEV, V.V., kand. tekhn. nauk; KRUTOV, V.I., kand. tekhn. nauk; KSENOFONTOV, A.I., kand. tekhn. nauk; MARIUPOL'SKIY, G.M., kand. tekhn. nauk; MORARESKUL,N.N., inzh.; PERLEY, Ye.M., inzh.; SAVINOV, O.A., doktor tekhn. nauk; SIDOROV, N.N., kand. tekhn. nauk; SMORODINSKIY, N.[illegible], kand. tekhn. nauk; SOKOLOV, N.M., doktor tekhn.nauk; F[illegible]DKIN, A.Ya., inzh.; SHASHKOV, S.A., kand. tekhn.nauk; [illegible]EYKOV, M.L., inzh.; YAROSHENKO, V.A., kand.tekhn.nauk, [deceased]; KHALIZEV, Ye.P., kand. tekhn. nauk, nauchn.red.

[Manual for the designing of industrial plants, apartment houses, and public buildings and structures; foundations] Spravochnik proektirovshchika promyshlennykh, zhilykh i obshchestvennykh zdanii i sooruzhenii; osnovaniia i fundamenty. Leningrad, Stroiizdat, 1964. 268 p. (MIRA 18:1)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

SHNAYDER, Shika Markovich. Prinimali uchastiye: GAL'PERIN, S.V.; KOMAROV, N.S., dots.; SIDOROV, N.N., nauchnyy red.; RUSAKOVA, L.Ya., ved. red.; SAFRONOVA, I.M., tekhn. red.

[Manual for geological engineers on linear studies]Spravochnik inzhenera-geologa lineinykh izyzkanii. Leningrad, Gostoptekhizdat, 1962. 284 p. (MIRA 16:1)
(Engineering geology)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

SIDOROV, N. N.

PA 66/49T30

USSR/Electricity - Motors, Electric Aug 49

"The Problem of Classifying the Characteristics of Series Traction Motors," N. N. Sidorov, Cand Tech Sci, Leningrad Inst of Railroad Transp Engineers, 5 pp

"Elektrichestvo" No 8

Developed a system for classifying the characteristic curves of series and compound traction motors. Suggested a method for quantitative evaluation of these curves by comparison with the ideal, completely unsaturated, series characteristic. Includes characteristics for 12 types of traction motors produced by the "Simens" plant.

66/49T30

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

ROZENFEL'D, V.Ye.; SIDOROV, N.N.; KUZIN, S.Ye.; RAKOV, V.A., redaktor; VERINA, G.P., tekhnicheskiy redaktor.

[Electric railroads] Elektricheskie zheleznye dorogi. Moskva, Gos. transp. zhel-dor. izd-vo, 1951. 536 p. (MLRA 8:2)
(Electric railroads)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

SIDOROV, N.N., kandidat tekhnicheskikh nauk, dotsent.; SHELESHKOV, K.K., kandidat tekhnicheskikh nauk; ANSHERG, G.A., inzhener; PLAKS, A.V., inzhener

Improving the electric circuits of direct current trunk line electric locomotives. Sbor. LIIZHT no.145:52-73 '53.
(Electric locomotives) (MLRA 8:10)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

Sidorov, N.N.

AID P - 608

Subject : USSR/Electricity

Card 1/1 Pub. 27 - 12/35

Author : Sidorov, N. N., Kand. of Tech. Sci., Dotsent, Leningrad

Title : Calculation of temperature rise curves for rheostat elements with changing heat transmission and thermal capacity

Periodical : Elektrichestvo, 8, 59-61, Ag 1954

Abstract : General formulas for different types of resistance elements are presented. The heat balance conditions are discussed. 1 diagram, 2 tables, 3 Russian references (1907-1951).

Institution : Leningrad Institute of Engineers of Railway Transportation

Submitted : F 6, 1954

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

Sidorov, N.N.

2 May

Math

480. Combined calendering and doubling machine at the Moscow "Kauchuk" works. N. N. Sidorov. Byul. po Obmenu Opytom v Prom. Rezin. Tekhn. Izdelii, 1955, No. 1, 15-20; Ref. Zhur. Khim., 1956, abs. 41167. A description is given of the design and operation of this equipment, intended for the production of conveyor and transmission belting.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

SIDOROV, N.N., kandidat tekhnicheskikh nauk; SUSLOV, B.V., inzhener.

System of cab supports for new types of main line electric locomotives. Vest. TSNII MPS 15 no.1:41-45 Ag '56. (MLRA 9:12)

(Electric locomotives)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

ROSENFEL'D, Vitaliy Yevgen'yevich; CHEBOTAREV, Yevgeniy Viktorovich; SIDOROV, Nikolay Nikolayevich; BOLDOV, Nikolay Andreyevich; TRAKHTMAN, L.M., red.; FRIDKIN, A.M., tekhn.red.

[Principles of electric traction] Osnovy elektricheskoi tiagi. Moskva, Gos.energ.izd-vo. Pt.1. [Theory of train movement, traction and braking characteristics, traction calculations and testing] Teoriia dvizheniia poezda, tiagovye i tormoznye kharakteristiki, tiagovye raschety i ispytaniia. 1957. 311 p. (MIRA 10:12)
(Electric railroads)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

ROZENFEL'D, Vitaliy Yevgen'yevich, d-r tekhn.nauk, prof.; SIDOROV, Nikolay Nikolayevich; KUZIN, Sergey Yefimovich; VLASOV, Ivan Ivanovich; SIDOROV, N.I., inzh., red.; VERINA, G.P., tekhn.red.

[Electric railroads] Elektricheskie zheleznye dorogi. Izd.2-oe, perer. Pod obshchei red.V.E.Rozenfel'da. Moskva, Gos.transp. zhel-dor.izd-vo, 1957. 431 p. (MIRA 11:1)
(Electric railroads)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

SIDOROV, N.N., kand.tekhn.nauk, dotsent.

Braking distance for high-speed trains. Vest.TSNII MPS 16 no.6:27-33 S '57. (MIRA 10:10)

1. Leningradskiy institut inzhenerov zheleznodorozhnogo transporta imeni akad. V.N.Obraztsova.
(Railroads--Brakes)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

ROZENFEL'D, V.Ye., prof., doktor tekhn.nauk; SIDOROV, N.N., kand.tekhn.nauk. (g. Leningrad)

Book about single-phase current electric traction ("Using commercial-frequency single-phase current in railroad electrification" by A.S. Avatkov, Reviewed by V.E. Rozenfel'd, N.N. Sidorov). Zhel. dor.transp. 40 no.10:95-96 D '58. (MIRA 11:12)
(Railroads--Electrification) (Avatkov, A.S.)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

SIDOROV, N.N., kand.tekhn.nauk, dots.; MILYUTIN, S.V., kand.tekhn.nauk

Conversion of d.c. traction motor characteristics for a modified field. Shor.LIIZHT no.159:124-127 '58. (MIRA 12:2)
(Electric railway motors)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

SIDOROV, N.N., dots., kand. tekhn. nauk; SHELESHKO, K.K., dots., kand. tekhn. nauk (Leningrad)

New textbook for railroad technical schools ("Electric traction systems" by E.D. Levashev, G.K. Astaf'ev, G.A. Al'tshuler. Reviewed by N.N. Siderov, K.K. Sheleshko) Zhel. dor. transp. 41 no.5:92-93 My '59. (MIRA 12:7)
(Electric railroads)
(Levashev, E.D.) (Astaf'ev, G.K.) (G.A. Al'tshuler)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

ROZENFEL'D, Vitaliy Yevgen'yevich; ISAYEV, Igor' Petrovich; SIDOROV, Nikolay Nikolayevich; DYAD'KOV, A.M., kand. tekhn. nauk, retsenzent; KALININ, V.K., kand. tekhn. nauk, red.; BOBROVA, Ye.N., tekhn. red.

[Electric traction]Elektricheskaia tiaga. Moskva, Transzheldorizdat, 1962. 346 p. (MIRA 16:1)

(Electric railway motors)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

SIDOROV, N.N.

Truck transportation in Moscow. Gor.khoz.Mosk. 36 no.1:23-26 Ja '62. (MIRA 16:1)

1. Zaveduyushchiy otdelom transporta i svyazi Moskovskogo gorodskogo komiteta Kommunisticheskoy partii Sovetskogo Soyuza. (Moscow—Motortrucks)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

SIDOROV, N.N., prof. (Leningrad); TREYMUND, N.D., dotsent (Leningrad)

"Fundamentals of electric traction" by S.I. Osipov, K.A. Mironov. Reviewed by N.N. Sidorov, N.D. Treimund. Zhel. dor. transp. 45 no.3:95-96 Mr '63. (MIRA 16:6)

(Electric railroads) (Osipov, S.I.) (Mironov, K.A.)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

SIDOROV, N.P., student; TSFAS, B.S., dotsent, nauchnyy rukovoditel'

An elementary error in N.M.Beliaev's textbook"Strength of materials." Sbor.dokl.Stud.nauch.cb-va Fak.mekh.sel'. Kuib. sel'khoz.inst.no.1:71 '62. (MIRA 17:5)

1. Kuybyshevskiy sel'skokhozyaystvennyy institut.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

SIDOROV, N. T., Cand Tech Sci -- "Theoretical and experimental studies of certain diagrams of telegraph ~~installations~~ devices on semiconductor triodes." Len, 1961. (Len Order of Lenin Inst of Engineers of Railroad Transport im V. N. Obraztsov) (KL, 8-61, 249)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

VOYTENKO, I.P.; GORODNICHIN, N.T.; DEREVYANKO, L.V.; ZAKRASNYANYY, F.D.; PARSHIN, V.F.; PURTOV, L.P.; SIDOROV, N.T.; SHAPOVALOV, I.F.; KOMAROVA, Ye.V., red.; ROMANOVA, S.F., tekhn.red.

[Telegraph devices using noncontact switches] Telegrafnye ustroistva na beskontaktnykh perekliuchateliakh. Moskva, Izd-vo "Sviaz'," 1964. 295 p. (MIRA 17:3)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

38520

S/186/62/004/003/013/022
E075/E436

24.6210

AUTHORS: Belov, S.V., Zhelezkov, R.V., Polyakov, N.T., Sidorov, N.V.

TITLE: Radiometric method for the determination of isotopic composition of cerium separated from the fission products of heavy nuclei

PERIODICAL: Radiokhimiya, v.4, no.3, 1962, 334-340

TEXT: A method is described for the quantitative determination of the isotopes of radioactive Ce, isolated radiochemically from Ce^{141}, Ce^{143}, Ce^{144} and their filial isotopes Pr^{143} and Pr^{144}. To determine the activity of Ce^{144} and Pr^{144} from the β-ray spectra, a β-spectrometer was used with an anthracene crystal and photomultiplier. Determinations of Ce^{141} and Ce^{143} were carried out using a scintillation γ-spectrometer. Analysis of impulse amplitudes was realized with a multichannel analyser АИ-100 (AI-100). The total activity of the products was measured with the 4-π-counters. The formula for the calculation of the activity of Ce^{144} is $A = K_{144} \times N_{144}$, where N_{144} is the total number of impulses/min registered in 53 to 100-m channels. The

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E075/E436

Radiometric method ...

value of K_{144} was found to be 18.9 ± 1.2. The activity of Ce^{143} was calculated by formula $A = K_{143} \times N_{143}$, in which K_{143} was found to be $(1.05 \pm 0.05) \times 10^2$. A similar formula was used for Ce^{141}, where K_{141} was $(1.40 \pm 0.08) \times 10^2$. Activity of Pr^{143} was found either from that of Ce^{143}, taking into account the accumulation, or by calculation from the total activity, measured by the 4-π-counter, of the combined activities of Ce^{141}, Ce^{143} and $Ce^{144} \rightarrow Pr^{144}$. Errors in the determinations of the activities did not exceed ± 10%. There are 4 figures and 2 tables.

SUBMITTED: May 6, 1961

Card 2/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

SIDOROV, N.V., kand. med. nauk

Nicotinic acid metabolism during therapy of patients with eye diseases. Vop. pit. 22 no.3:83-84 My-Je '63. (MIRA 17:8)

1. Iz L'vovskoy dorozhnoy bol'nitsy.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

TROYANOVSKIY, Vasiliy Vasil'yevich; SOLNTSEV, A.M., inzhener, retsenzent; SIDOROV, N.V., inzhener, redaktor; POPOVA, S.M., tekhnicheskiy redaktor

[Electric clocks] Elektricheskie chasy. Izd. 3-e, perer. i dop. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1956. 226 p. (MIRA 9:8)

(Clocks, Electric)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

SIDOROV, N.V., inzhener.

Electric light clocks. Avtom.telem.i sviaz' no.8:19-21 Ag '57. (MIRA 10:8)

(Clocks, Electric)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

SIDOROV, Nikolay Vasil'yevich; SUKREYEV, Ye.M., kand.tekhn.nauk, red.; SHNEYEROV, S.A., red.izd-va; GUROVA, O.A., tekhn.red.

[Operation of electric clocks] Ekspluatatsiia elektrochasovykh ustroistv. Moskva, Izd-vo M-va kommun. khoz. RSFSR, 1958. 141 p. (Clocks, Electric) (MIRA 11:5)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

133-1-12/24

AUTHORS: Antropov, O.F., and Sidorov, N.V., Engineers

TITLE: An Increase in the Durability of Banks of Electric Furnaces (Uvelicheniye stoykosti otkosov elektropechey)

PERIODICAL: Stal', 1958, No.1, pp. 48 - 49 (USSR).

ABSTRACT: With the use of oxygen, the durability of the banks made from the usual magnesite bricks of electric furnaces deteriorated. For this reason, the durability of banks from dense magnesite bricks was tested on a 10-ton electric furnace. The design of the lining is shown in Fig.1. The results of the preliminary tests indicated that the durability of furnace banks, when using oxygen, can be improved by applying dense magnesite or chrome-magnesite bricks and lifting the banks by 130 mm above the usual level. Efforts to increase the durability of the wall blocks by changing the composition of materials (additions of chromite ore, scale) were unsuccessful. There is 1 figure.

ASSOCIATION: Zlatoust Metallurgical Works (Zlatoustovskiy metallurgicheskiy zavod)

AVAILABLE: Library of Congress

Card 1/1

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

SIDOROV, Nikolay Vasil'yevich; NIKOLAYEV, M.I., red.; ALMAZOV, V.Z., red. izd-va; SALAZKOV, N.P., tekhn. red.

[Maintenance of electric clocks]Ekspluatatsiia elektrochasovykh ustroistv. Izd.2., perer. i dop. Moskva, Izd-vo M-va kommun.khoz.RSFSR, 1962. 241 p. (MIRA 16:2)
(Clocks, Electric--Maintenance and repair)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

L 16363-65 EWT(m) DIAAP
ACCESSION NR: AF4045845 S/0075/64/019/009/1049/1052

B

AUTHOR: Belov, S. V.; Sidorov, N. V.

19

TITLE: Radiometric method for isotope analysis of Ce^{141}-Ce^{144} and Sr^{89}-Sr^{90} mixtures in samples of low total activity

SOURCE: Zhurnal analiticheskoy khimii, v. 19, no 9, 1964, 1049-1052

TOPIC TAGS: beta spectrometry, radiochemical analysis, isotope analysis, cerium, strontium, praseodymium, yttrium

ABSTRACT: The purpose of this work was to develop a method for analyzing mixtures of radioactive isotopes with low radioactivity using scintillation -spectrometry. The β-spectrometer consists of an anthracene crystal scintillator (20 x 6 mm) and a 100 channel analyzer AI-100. The specimen is placed 3 mm from the crystal. The background of this spectrometer is very low; throughout the whole energy range (0.196-2.18 Mev) it does not exceed 1.3 cpm. Beta spectra of radioactive isotopes of cerium, praseodymium, strontium and yttrium

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L 16363-65
ACCESSION NR: AF4045845

are shown. The observed amplitude distribution beginning from the 20th and 50th channels results only from the -emission of praseodymium-144 and yttrium-90 respectively. The magnitude of the activity of Ce^{144} and Sr^{89} is found from the difference between the total activity of the sample, measured with 4 counter and the activity of $Ce^{144} \rightarrow Pr^{144}$ and $Sr^{90} \rightarrow Y^{90}$ respectively. The method has great advantages for analysis of low activity samples due to its high β-counting efficiency as well as due to the high accuracy of its results as compared with analysis by absorption curves using aluminum filters. The error of measurement of the activity of thick specimens does not exceed 10-15% while for thin film the error does not exceed 5%. Orig. art. has: 4 figures

ASSOCIATION: None

SUBMITTED: 12Aug63 ENCL: 00

SUB CODE: GP, NP NO REF SOV: 000 OTHER: 000

Card 2/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

18

Electric fusion of the ammonia-synthesis catalyst. V. G. Telegin and N. V. Sidorov. *J. Applied Chem.* (U. S. S. R.) 11, 588-96(in French 596)(1938).—The Larson and Richardson method (cf. *C. A.* 19, 3003, and U. S. 1,554,188, *C. A.* 19, 3571) was used. Natural magnetite (Fe 70.6, FeO 27.3, Al_2O_3 1.4 and SiO_2 0.9%) and pure Al_2O_3 (4.5%) and KNO_3 (5.3%) were used as initial materials. The reduction and test for activity of the catalyst was carried out in the previously described app. under the following conditions: (*a*) the reduction: 5 ml. of the catalyst (1-2 mm. mesh) was reduced at atm. pressure with N_2-H_2 mixt. passing with the vol. velocity of 20,000 l. of catalyst for 24 hrs. at 500°; (*b*) the activity was det. by the NH_3 content in the gas passing from the reaction chamber at 200 and 100 atm., with the vol. velocity of 15,000 at 400°, 450°, 475°, 500 and 525°. Three catalysts prepd. by electro-fusion for 20, 40 and 60 min. had approx. the same activity, because the 1st stage of the homogenation of the catalyst, i. e., soln. of the promoting oxides in the mass of the Fe oxides, proceeded with a considerable velocity. However, the formation of more complex combination between Fe oxides and promoters guaranteeing its activity at high temp. and prolonging its work depended on the time of existence of the alloy in the liquid state, as was shown by the increase of activity of the catalyst at 525° and 300 atm. The duration of cooling of similar catalysts for 10, 2 hrs. and 6 min., resp., had practically no effect on its activity, although tempering of the catalyst somewhat decreases its activity. The conditions of crushing had no effect on the activity of the catalyst. The catalyst obtained consisted of 2 layers: (I) inner, homogeneous mass of fused magnetite and the promoters with inclusions of the gas bubbles, and (II) outer, where the transition from completely fused layer to caked material was observed. The analysis for the degree of Fe oxidation in both layers disclosed that II was oxidized more than I. Addn. of KNO_3 oxidized the catalyst, while introducing the K_2O into the alloy. Seventeen references.

A. A. Podgornov

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

18

Utilization of artificial magnetite as a raw material for the preparation of the catalyst for ammonia synthesis. V. G. Telegin and N. V. Sidorov. *J. Applied Chem.* (U. S. S. R.) 11, 1064-70 (in French, 1070) (1938).—The magnetite was prepd. from com. Fe (contg. C 0.12, Si 0.09 and Mn 0.05%) by oxidation with O at 1470-1500°. The magnetite obtained was mixed with Al_2O_3 and KNO_3 and the mixt. was used for the prepn. of catalyst by elec. fusion. The activity of the catalyst obtained was higher than that prepd. from the concentrates of natural magnetite; this is explained by the small amt. of SiO_2 in the artificial magnetite. The activity of catalyst prepd. from an artificial magnetite, after heating at 625° for 8 hrs. in the N_2-H_2 atm., was changed as follows: the activity

corresponding to 400, 450 and 475° decreased, but that corresponding to 500 and 525° increased. Nine references.

A. A. Podgorny

The influence ... of Aglo-

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

PROCESSES AND PROPERTIES INDEX

Siderite as a catalyst for ammonia synthesis. V. G. Telegin and N. V. [illegible]. *J. Applied Chem.* (U. S. S. R.) 12, 1769-74(in French, 1774)(1939).—The Bakal (Ural) siderite contained FeO 38.50, Fe_2O_3 1.60, Al_2O_3 2.20, SiO_2 2.80, MgO 13.25, CaO 0.92, CO_2 38.70, As none, P 0.001, S 0.12 (as sulfate) and H_2O 1.15%. The synthesis of NH_3 was attempted at normal pressure and under 300 atm. The sample of siderite contg. ferrous oxide was inactive at atm. pressure and only slightly active at 300 atm., while the activity of samples contg. the catalyst in the form of ferric oxide was more active. The highest activity was reached with a catalyst contg. the Fe in the form of Fe_3O_4. Fifteen references. A. A. Boehtlingk

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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CA

18

Ultrasonic treatment of the catalyst for ammonia synthesis. N. N. Pshenitsyn, N. V. Sidorov and D. G. Sternina. *J. Applied Chem.* (U. S. S. R.) 13, 76-80(in German, 78)(1940).—Treatment of the Fe_3O_4 + 3% Al_2O_3 + 1.5% K_2O catalyst with a sound of frequency 555 kilohertz did not increase its activity in ammonia synthesis under a pressure of 300 atm. The app. used for the treatment is described. A. A. Podgorny

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

ta

18

The effect of the content of aluminum oxide in the iron catalyst for synthesis of ammonia upon its activity at atmospheric pressure. V. G. Telegin, N. V. Sidorov and K. B. Shpakenko. *J. Applied Chem.* (U. S. S. R.) 13, 823-30 (in French, 830) (1940).—The chem. compns. of NH_3 catalysts were FeO, Fe_2O_3, Al_2O_3 and K_2O, resp.: (1) 32.08, 64.40, 3.56 and 0; (2) 27.75, 63.00, 9.25 and 0; (3) 26.15, 46.60, 26.25 and 0; (4) 13.40, 25.50, 61.10 and 0; (5) [illegible], 71.10, 5.20 and 2.94; (6) 20.30, 52.70, 25.00 and 2.20; and (7) 14.20, 43.60, 39.60, 2.10%. The catalysts were prepd. by fusion of magnetite with Al_2O_3 and with Al_2O_3 and KNO_3 in the elec. furnace. The activity of catalysts was detd. at a vol. velocity of N-H gas mixt. of 10,000 l./hr./l. of catalyst at 310-500°; for the last 3 catalysts also at a vol. velocity of gas mixt. of 2000, 5000 and 10,000. In all cases activity decreased with an increase of Al_2O_3 content. A min. amt. of Al_2O_3 necessary for the stabilization of microstructure and activity of reduced Fe in the NH_3 catalyst should be detd. by the working conditions. Thus, if a catalyst contg. 0.1% Al_2O is sufficiently stable at a temp. below 450° at atm. pressure, then for stable activity at 500° and 300 atms. the catalyst should have up to 5% Al_2O_3. The binary catalysts (Fe-Al oxides) were more active than ternary catalysts (Fe-Al-K oxides), probably because of the poisonous effect of K_2O.

A. A. Podgorny

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

SIDOROV, N. V.

Kinetics of the syntnesis of ammonia under high presure. I. The temperature conditions in the reaction zone. A. A. Vvedenskii and N. V. Sidorov (Leningrad High Pressure Inst.). J. Applied Chem. (U.S.S.R.) 19 1157-68(1946) (in Russian). --In conventional lab. columns, operating on the countercurrent heat-exchange principle, under pressures p up to 800 kg./sq. cm., the temp. distribution along the reaction zone is nonuniform; with a 5-ml. catalyst column, 13 mm. in diam., 40-45 mm. high, grain size 1.5-2 mm., the temp. rose sharply from 500 to 600-650° over an initial segment of the catalyst zone equal approx. to 10% of its length and then fell to 520-500°. Because of this temp. gradicut, the usual app. is unsuitable for kinetic studies of the process. Calcus. by the equation $\Delta Q - K(T - T_0)\pi D\Delta l - Gc\Delta T = 0$ (where ΔQ = heat of reaction evolved along the length Δl of the reaction zone; T and T_0 = temp. of the gas (510°) and of the wall (500°), resp.; K = total coeff. of heat transfer from the gas to the wall = 174,000 cal./sq.m./°C./hr; D = diam. of the catalyst column = 0.002 m.; G = wt. of gas; c = sp. heat of the gas), dividing the catalyst column into 10 vol. elements of 0.5 ml. each, and computing for each element of length Δl, the amt. ΔG of NH_3 formed, by Vvedenskiis (unpublished) formula $\Delta G = W\gamma A/(100 + A)$ where W = vol. rate of gas entering the zone element; γ = d, of NH_3; A = percentage of NH_3 in the gas along Δl), for p = 100, 300, 500, 859 kg./sq. cm., yield data showing that in order to insure uniformity of temp. over the reaction zone, it is necessary and sufficient to distribute the catalyst nonuniformly. In particular, the catalyst must be dild. inthe first segments of the reaction column. Practically, it was shown that it is enought to dil. the catalyst uniformly through admixt. of grains of an inert material; the

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SIDOROV, N.Ye.

Saving time. Mashinostroitel' no.1:43 Ja '65.

(MIRA 18:3)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

L 42174-65 EPF(c)/EPF(n)-2/EPR/EWG(a)-2/EWG(c)/EWG(j)/EWG(r)/EWG(v)/EWT(m)/FS(v)-3/EWP(b)/EWP(t) Pb-4/Pe-5/Pr-4/Ps-4/Pu-4 AFFTC/AFMDC/ESD/AMD/SSD/IJP(c)/APGC DD/JD UR/3147/64/003/000/0016/0024

ACCESSION NR: AT5010593

61
B+1

AUTHOR: Brestkin, A. P.; Gramenitskiy, P. M.; Sidorov, N. Ya.

27

TITLE: Investigation of the safe supersaturation of the organism by inert gasses under different pressures

SOURCE: AN SSSR. Institut evolyutsionnoy fiziologii. Funktsii organizma v usloviyakh izmenennoy gazovoy sredy, v. 3, 1964, 16-24

TOPIC TAGS: respiration, decompression, respiration supersaturation, inert gas, nitrogen

ABSTRACT: In studying the mechanism of development, and particularly the prophylaxis of decompression disruptions, it is important to determine that supersaturation point by inert gasses which leads to the first symptoms of this type of disruption. In experimentally determining the level of a given supersaturation point and assaying its quantitative characteristics, it is necessary to consider the specific nature of supersaturated gas-fluid solutions as well as the formation of gas bubbles in the tissues and especially in the blood of the organism.

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L 42174-65

ACCESSION NR: AT5010593

The authors studied 5 dogs and 6 cats. Each animal was initially examined to determine the maximum pressure of dissolved nitrogen which at normal pressure did not evoke symptoms of decompression. This was done by exposing animals to pressures of 2.2 atm and higher for 4—6 hr, with subsequent rapid decompression to normal pressure. The pressure in each subsequent test was increased by 0.2 atm. That pressure of nitrogen which did not produce decompression symptoms was used as a measure of the resistance of the animal to this factor. Animals were carefully observed for symptoms of decompresssion in all phases of the experiment. Indices of decompression sickness were extremity bends, panting, or general discoordination.

Results of the experiment indicate that the coefficient of safe supersaturation should not be considered as constant for different situations. When the absolute pressure under which the organism is saturated by an inert gas is increased, the coefficient decreases. Whether the mechanism of the coefficient change is due to physical and chemical factors or to changes in the function of the organism is not known. It was concluded that the maximum supersaturation of tissues by an inert gas can be more ac-

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L 42174-65

ACCESSION NR: AT5010593

curately determined as a function of the relationship between the pressure of the inert gas and the surrounding pressure following decompression rather than as a function of the difference between these two values. The conception that the limit is constant is incorrect, since when the pressure of a dissolved inert gas is increased, the value for the limit is also sharply increased. Conversely, when the pressure of a dissolved inert gas is increased, the coefficient of safe supersaturation decreases, a relationship which is in agreement with the results of other investigations. Orig. art. has 2 formulas and 2 tables.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: PH, LS

NO REF SOV: 009 OTHER: 004 ATD PRESS: 3240-F

BSB

Card 3/3

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

L 42286-65 EWG(a)-2/EWG(c)/EWG(j)/EWG(r)/EWG(v)/EWT(1)/FS(v)-3 Pb-4/Pe-5
AFFTC/AFMDC/AMD/APGC DD

ACCESSION NR: AT5010610 UR/3147/64/003/000/0145/0150 39 B+1

AUTHOR: Sidorov, N. Ya.

TITLE: Method of determination of hemodynamic indices in chronic experiments with dogs during a high partial oxygen pressure (in a pressure chamber)

SOURCE: AN SSSR. Institut evolyutsionnoy fiziologii. Funktsii organizma usloviyakh izmenennoy gazovoy sredy, v. 3, 1964, 145-150

TOPIC TAGS: pressure chamber, excess pressure, experimental method, instrumentation, cardiovascular system measurement, blood pressure, pulse frequency, respiration rate, methodology, dog, high partial oxygen pressure

ABSTRACT: Experiments were performed to determine the best method for obtaining the blood pressure (diastolic, lateral systolic), the rate of travel of the pulse wave as an indicator of the tonus of the large arteries, the pulse frequency (by means of EKG), and the respiration rate of dogs subjected to high partial pressure of oxygen in pressure chambers. The tacho-oscillographic method of N. N. Savitskiy, the Frank-Vexler method for measurement of blood pressure, and the method of V. V. Parvdich-Neminskiy for determination of the rate of travel of the pulse wave in major

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L 42188-65

ACCESSION NR: AT5010610

arteries were modified for purposes of the experiment. The Savitskiy method required the greatest amount of modification: the differential manometer was replaced by a piezocrystal, which simplified the procedure and increased the accuracy of registration of the differential curve, and the optical system of the mechanocardiograph was replaced by a UBP-01 amplifier and an MPO-2 oscillograph. In order to register diastolic pressure by the Frank-Vexler method under conditions of increased barometric pressure, the highly sensitive air capsule with optical registration was replaced by an angular sensor mounted in plastic. The same angular sensor was used for registration of the rate of travel of the pulse wave.

The methodology developed makes it possible to directly determine the dynamics of the following hemodynamic indices: diastolic and lateral systolic pressure; rate of travel of the pulse wave as an indicator of the tonus of major arteries; and rhythm of cardiac contractions. On the basis of data obtained with the above methods, it is possible to calculate the following hemodynamic parameters: the stroke volume, the minute volume, and peripheral resistance.

Card 2/3

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L 42166-65

ACCESSION NR: AT5010610

Orig. art. has 5 figures.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: PH, LS

NO REF SOV: 018 OTHER: 010 ATD PRESS: 3240-Y

Card 3/3

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

SIDOROV, N. Ye., (Engr)

Dissertation: "The Effect of Various Factors on the Expansion of an Oxidizing Zone in a Blast Furnace During Operation Under High Gas Pressure." Cand Tech Sci, Moscow Order of the Labor Red Banner Inst of Steel imeni I. V. Stalin , 10 Jun 54. (Vechernyaya Moskva, Moscow, 1 Jun 54)

SO: SUM 318, 23 Dec 1954

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

Sidorov, N.E.

Converter iron with reduced manganese content. N. E. Sidorov, G. P. Totskii, and P. G. Padalka. *Metallurg* 1936, No. 12, 6-7.—Converter iron with an av. Mn 1.26% content was obtained from agglomerate contg. Fe 51, CaO 11.8, SiO_2 14.6%, CaO/SiO_2 = 0.81 with a 5.2% increase

4

3

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

Ukr. Sci-Res. Inst. Metals. + Yenakiyev Metallurgical Plant

SIDOROV, N. Ye.

137-58-5-8984

Translation from. Referativnyy zhurnal, Metallurgiya, 1958, Nr 5 p 34 (USSR)

AUTHORS. Onopriyenko, V.P., Sidorov, N.Ye.

TITLE: Some Concepts on the Problem of the Utilization of Fluxed Sinter at Plants of the Ukraine (Nekotoryye soobrazheniya k voprosu vnedreniya oflyusovannogo aglomerata v usloviyakh zavodov Ukrainy)

PERIODICAL: Byul. nauchno-tekhn. inform. Ukr. n.-i. in-t metallov. 1957, Nr 3, pp 3-10

ABSTRACT: The need for fluxed sinter (FS) for blast furnaces has increased after this material was first introduced and adapted; its increased consumption is attributable to its lower Fe content and to the increased intensity of the smelting processes. A deficit of FS may be supplanted by means of introducing standard or lump ore. Both methods are uneconomical; in the first instance the proportion of fines in the charge is increased (which makes it necessary to reduce the intensity of forced smelting as well as the amount of ore being charged into the furnace); in the second case, owing to the lower Fe content of the ore, the production figures for smelting operations decrease while the pro-

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

137-58-5-8934

Some Concepts on the Problem (cont.)

duction costs of pig iron become greater. In order to obtain additional amounts of FS the output of continuous sintering furnaces may be increased, but only up to a limited extent. The most effective method, therefore, is the introduction of additional continuous sintering furnaces. In order to improve the quality of FS it is advisable to build sintering shops on the same premises as the metallurgical plants, to install sifters for screening fines, and design new systems for cooling of the FS in order to prevent it from breaking up.

M. O.

1. Blast furnaces--Operation 2. Sintering--Applications

Card 2/2

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001550510011-2

Sidorov, N Ye.

18(5); 25(5) PHASE I BOOK EXPLOITATION SOV/1574

Kyyiv. Ukrayins'kyy naukovo-doslidnyy instytut metaliv

Vprovadzhennya novoyi tekhniky i tekhnologiyi na metalurhiynykh zavodakh Ukrayiny; zbirnyk, t. 3 (Introduction of New Techniques and Technology in Ukrainian Metallurgical Plants; Collection of Articles, Vol. 3) Kyyiv, Derzhtekhvydav URSR, 1958. 192 p. 1,000 copies printed.

Exec. Ed.: H. Afonina; Tech. Ed.: P. Patsalyuk.

PURPOSE: The book is intended for metallurgists employed in rolling and slabbing operations.

COVERAGE: This is a collection of 11 Ukrainian articles, compiled by 22 authors, some of whom are referred to as eminent specialists. The subjects dealt with in the articles are: use of limestone-fluxed slag in making pig iron, use of blast-furnace gas under increased pressure, use of oxygen in making steel in open-hearth and Bessemer furnaces, description of a new method of "intensified" squeezing of slabs in blooming mills. Some design details, with direct references to actual plants and certain operational

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practices are also featured. Introduction of full mechanization of rolling processes at steel-works is taking place. Numerous diagrams accompany the text. Some articles have bibliographic entries, mainly Soviet.

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ONOPRIYENKO, V.P., kand. tekhn. nauk; SIDOROV, N.Ye., kand. tekhn. nauk; LEVCHENKO, V.I., inzh.

Adding limestone to the burden to increase the speed of the ore sintering process. Trudy Ukr.nauch.-issl. inst. met. no.4:5-13 '58. (MIRA 12:3)

(Sintering) (Limestone)

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KARDASEVICH, I.N., inzh.; KUMANI, B.G., inzh.; SIDOROV, N.Ye., kand. tekhn. nauk; CHERNOV, G.I., inzh.

Production and use of high-basic Krivoi Rog ore sinters the Makeevka Metallurgical Plant. Biul. TSNIICHM no.6:4-7 '58. (MIRA 11:5)
(Makeevka--Sintering)

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SIDOROV, N.Ye., kand.tekhn.nauk

Effect of certain factors on the dimensions of the oxidizing zone in blast furnace hearths. Trudy Ukr.nauch.-issl.inst. met. no.5:74-82 '59. (MIRA 13:1)
(Blast furnaces)

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A006/A101

AUTHORS: Sidorov, N. Ye.; Lysenko, I. S., Antonov, V. K., Zaporozhets, N. P.

TITLE: On the use of heated and oxygen-enriched air during the sintering of iron ores

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 10, 1961, 12, abstract 10V85. ("Sb. tr. Ukr. n.-i. in-t metallov", 1960, no. 6, 34 - 44)

TEXT: Laboratory sintering was performed with a 225 mm high charge layer, 2.5 - 4.5% C and 1.0 basicity. When sintering Krivoy Rog ores, an increase of the air temperature up to 100 and 300°C, entailed a reduction of specific fuel consumption by 12.5 and 25.0% and raised the output from 73.4 to 85.5% (+ 10 mm fraction). When sintering Kerch ores air heating up to 200 - 250°C raised the degree of As volatility from 20 and 13% to 30.7 and 26.9%. The use of air, heated to 160 - 175°C by gas combustion over a charge layer during 25% of the whole sintering time, raised the efficiency by 3.5%, the output from 76.3 to 80.4%, although O_2 was reduced from 20 to 18.3% in the infiltrated air. Air heating over vacuum-chambers 3 - 8 should proceed as follows: a) by gas combustion (Q 1,400 kcal/m^3) at the consumption of 13 m^3/t of sinter and about 200°C air temperature, making it

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