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ACCESSION NR: AP5021981 UR/0280/65/000/014/0078/0078 621.313.12.024.013.8.078.3

AUTHOR: Arabov, N. I.; Mikhalevich, G. A.

TITLE: A device for controlling excitation of a dc generator. Class 21, No. 172896

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 14, 1965, 50

TOPIC TAGS: generator, electric equipment, magnetic amplifier

... device for controlling excitation

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ARONOV, Mark Isaakovich, insh.; GUSEVSKIY, Yuriy Il'ich, insh.

Operational characteristics of a transistorized magnetic amplifier in the region of negative control currents. Izv.vys.uchebn.zav.; elektromekh. 8 no.8:874-880 '65. (MIRA 18:10)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9

AUTHOR: Aronov, M. P., Co-worker of the Sevastopol' Biological Station of the USSR Academy of Sciences SOV-4-58-7-8/22

TITLE: Swimming Among Fish..... (Kogda plavayesh' sredi ryb....)

PERIODICAL: Znaniye - sila, 1958, Nr 7, pp 16-18 (USSR)

ABSTRACT: In this article the author gives a detailed description of his skindiving experiences. His observations concerning the behavior and reactions of fish are generally known. He quotes the research work done in this field by the Soviet physiologist A.I. Karamyan. There are 14 sketches.

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ARONOV, M.P.

External taste organs of rockling. Nauch. dokl. vys. shkoly; biol. nauki no.4:38-41 '59. (MIRA 12:12)

1.Rekomendovana Sevastopol'skoy biologicheskoy stantsiyey AN SSSR.
(Codfish) (Sense organs--Fishes)

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ARONOV, M.P.

Role of sense organs of the Black Sea whiting in its search for food. Trudy SBS 11:229-237 '59. (MIRA 13:5)
(Black Sea--Codfish) (Sense organs--Fishes) (Fishes--Food)

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ARONOV, M.P.

Conditioned reflex activity in some fishes of the Black Sea as related to their ecological and physiological characteristics. Trudy SBS 12:345-378 '59. (MIRA 14:10)
(FISHES) (CONDITIONED RESPONSE)

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ARONOV, M. P., Cand Biol Sci -- (diss) "Ecologo-physiological features of the sense organs and the feeding reactions of some Black Sea fish." Moscow, 1960. 20 pp; (Academy of Sciences USSR, Inst of Animal Morphology im A. N. Severtsev); 150 copies; price not given; (KL, 25-60, 129)

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ARONOV, M.P.

Role of sense organs in the feeding of (Sargus annularis L.) and some characteristics of its schooling behavior. Trudy SBS 13:266-274 '60. (MIRA 14:3)

(Sea bream) (Sense organs--Fishes) (Fishes--Behavior)

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ARONOV, M. P.

Taste and smell in fishes. Znan.sila 35 no.8:28-29 Ag '60. (MIRA 13:9)

1. Sotrudnik Sevastopol'skoy biostantsii AN SSSR.
(Sense organs--Fishes)

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ARONOV, M.P.

Role of sense organs in the search for food in gray mullets (Mugil auratus Risso). Biul. MOIP. Otd. biol. 65 no. 4:46-51 Jl-Ag '60. (MIRA 13:10)

(GRAY MULLETS) (SENSE ORGANS--FISHES) (FISHES--FOOD)

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ARONOV, M.P.

Some ecophysiological charcteristics of sense organs and food reactions in fishes. Biul. MOIP. Otd. biol. 65 no. 4:148-149 Jl-Ag '60. (MIRA 13:10)

(SENSE ORGANS--FISHES) (FISHES--FOOD)

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ARONOV, M.P.

Statistical analysis of the differentiation ability of some fishes of the Black Sea. Trudy SBS 14:286-291 '61. (MIRA 15:4)
(Black Sea--Fishes) (Vision) (Conditioned response)

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ARONOV, M.P.

Role of sense organs in the feeding of Corvina umbra L. Vop. ikht. 1 no. 1:194-199 '61. (MIRA 14:5)

1. Sevastopol'skaya biologicheskaya stantsiya Akademii nauk SSSR. (Black Sea—Sciaenidae) (Sense organs—Fishes)

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MANTEYFEL', B.P.; ARONOV, M.P.

"Commercial fishing techniques" by F.I.Baranov. Reviewed by B.P.Manteifel', M.P.Aronov. Vop.ikht. 2 no.4:754-758 '62. (MIRA 16:2)

(Fisheries) (Baranov, F.I.)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9

ARONOV, M.P.

Ecological and physiological characteristics of sense organs in some fishes as related to their reactions to food. Vop. ekol. 5:8-9 '62. (MIRA 16:6)

1. Biologicheskaya stantsiya AN UkrSSR, Sevastopol'.
(Sense organs--Fishes)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9

ARONOV, M.P.

Changes in the frequency spectrum of the human encephalogram under vestibular and optokinetic effects. Fiziol.zhur. 51 no.4:413-419 Ap '65. (MIRA 18:6)

1. Institut vysshey nervnoy deyatel'nosti i neyrofiziologii AN SSSR, Moskva.

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9

ARONOV, M.L., inzh.

Experience in operating remote control devices in the Uzbek Electric Power System. Trudy VNIIE no.7:17-26 '58. (MIRA 16:12)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9

ARONOV, M.S.

IA 246T24

USSR/Medicine - Bacillus prodigiosus Feb 53

"Investigation of the Effectiveness of Treatment With B. prodigiosus in Animal Experiments," M.S. Aronov, K.I. Boriskina, Chair of Microbiol and Operative Surg, Kuybyshev Med Inst

"Zhur Mikrobiol, Epidemiol, i Immunobiol" No 2, p 88

Although B. prodigiosus generates inflammation and sepsis by itself, it prevents suppuration and inflammation when introduced into a wound together with staphylococci. Gradually increasing doses of B. prodigiosus produced immunity against lethal doses of staphylococci in rabbits.

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ARONOV, M. S.

ARONOV, M. S.- "Topographic-anatomic Properties of the Cervical Regions and Access to the Rear Cranial Cavity." Min of Public Health RSFSR, Kuybyshev State Med Inst, Kuybyshev, 1955 (Dissertations for Degree of Doctor of Medical Sciences)

SO: Knizhnaya Letopis' No. 26, June 1955, Moscow

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9

ASKALONOV, I.N., professor; ARONOV, M.S., dotsent

Nerve healing in an amputation stump under aseptic conditions and with suppuration. Ortop., travm. protez. 17 no.5:21-23 S-O '56. (MIRA 10:1)

1. Iz kafedry operativnoy khirurgii (zav. - prof. I.N.Askalonov) Kuybyshevskogo meditsinskogo instituta.

(AMPUTATION STUMPS
healing of nerves in aseptic cond. & in suppuration)
(NERVES, PERIPHERAL, surgery,
healing in amputation stumps in aseptic cond. & in suppuration in dogs)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9

ARONOV, M.S., doktor med.nauk

Influence of the nervous system on the healing of wounds. Med. zhur.Uzb. no.10:45-47 O '58. (MIRA 13:6)

1. Iz kafedry operativnoy khirurgii i topograficheskoy anatomii Andizhanskogo gosudarstvennogo meditsinskogo instituta.
(NERVOUS SYSTEM) (WOUNDS AND INJURIES)

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ASKALONOV, I.N., prof.; ARONOV, M.S., dots.

Comparative evaluation of some methods of bone treatment in amputation under aseptic conditions and in suppurations; experimental data. Ortop.travm. i protez. 20 no.2:30-33 F '59. (MIRA 12:12)

1. Iz kafedry operativnoy khirurgii (zav. - prof. I.N. Askalonov) Kuybyshevskogo meditsinskogo instituta.
(AMPUTATION, exper.
bone treatment in aseptic cond. & in suppurations, comparative methods in dogs (Rus))

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ARONOV, M.S, prof.

Location of the root and branching zones of occipital nerve trunks and their connection with the form of the occiput. Med. zhur. Uzb. no.9:48-50 S '61. (MIRA 15:2)

1. Iz kafedry topograficheskoy anatomii i operativnoy khirurgii Andizhanskogo meditsinskogo instituta.
(NECK--INNERVATION) (OCCIPITAL BONE)

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ARONOV, N.

BARANOV, M., kandidat tekhnicheskikh nauk; KRICHEVSKIY, Z., inzhener; ARONOV, N., tekhnik.

Preheating for welding automobile engine cylinder blocks. Avt.transp.33 no.1:18-21 Ja'55. (MLRA 8:3)
(Automobile--Engines)(Welding)

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Cutting down the amount of formaldehyde at the prepara-
tion of wort N. B. Ar.mov and M. I. Le'chuk (Moscow
Alcohol Trust). *Spirtovoye Prom.* 21, No. 2, 19-20
(1953). The amt. of HCHO used to disinfect 1 kg. of grain
mat is usually 25 cm³ of a 40% soln. diluted in 3 to 4 l. water.
It was found that this amt. can be cut down to 5 cm³ of soln.
extends the time of action from 10 to 50 min.

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Aronov, N.B.

USSR /Chemical Technology. Chemical Products and Their Application

F-31

Fermentation industry

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 32858

Author : Aronov N.B.

Title : The Quality and Consumption Norms of Malt

Orig Pub: Spirt. prom-st', 1956, No 4, 32-34

Abstract: Data are considered which indicate the appropriateness of a considerable reduction in malt expended for starch saccharification in the production of alcohol.

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DOTSENKO, Nikolay Illarionovich, insh.; Prinimali uchastiye: ARONOV, N.V., starshiy mekhanik; KUVYRKIN, N.I., starshiy mekhanik; ORLOVSKIY, V.I., starshiy mekhanik; PETROVICH, A.P., starshiy mekhanik; PETROV, V.V., insh.-konstruktor. YEFREMOV, V.V., prof., doktor tekhn.nauk, red.; YABLOKOV, V.I., red.; ZUYEVA, N.K., tekhn.red.

[Electric pulsation welding for building up metal in the repair of automobile parts] Elektroimpul'snaia naplavka metalla pri remonte avtomobil'nykh detalei. Moskva, Nauchno-tekhn.izd-vo avtotransp. lit-ry, 1958. 57 p. (MIRA 13:5)
(Automobiles--Maintenance and repair) (Electric welding)

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ARONOV, O., elektromekhanik

Mechanization of the reseating of valves on the motorship "Repino." Mor. flot 21 no.12:22-24 D '61. (MIRA 14:12)

1. Teplokhod "Repino" Baltiyskogo parokhodstva.
(Motorships--Maintenance and repair)
(Valves)

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ARONOV, O.B., gvardii podpolkovnik tekhnicheskoy sluzhby

Taking down the operator of the transmitter of a bombsight on a barogram. Vest.Vozd.Fl. no.5:85 My '60. (MIRA 13:7)
(Radar in aeronautics) (Bombsights)

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ARONOV, O. L.

42039: ARONOV, O. L.; TATEVSKIY, V. M.; FROST, A. V. - Issledovanie potatsionnoy izomerii hekotorykh I - Digalogenogtanov metodom kombinatsionnogo rasseyaniya sveta. (Kratkoe soderzhanie doklada.) Izvectiya akad. Nauk SSSR, Seriya Fiz., 1948, No. 5, S. 666

SO: Letopis' Zhurnal'nykh Statey, Vol. 47, 1948.

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9

ARONOV, O. L.

Aronov, O. L. - Research in rotational isomerism by the combination light scattering method. (Report) "Combination scattering spectra of 1, 1, 2, 2-tetrachloroethane at various temperatures," Vestnik Mosk. un-ta, 1948, No. 11, p. 137-40 -- Bibliog: p. 140

So: U-3566, 15 March 53, (Letopis 'Zhurnal Snykh Statey, No. 13, 1949)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9

ARONOV O. L.

C-A

Investigation of the rotation isomerism of 1,2-dihaloethanes by the method of Raman spectra. O. L. Aronov, V. V. Tatevskii, and A. V. Frost (Moscow State Univ.). *Doklady Akad. Nauk S.S.S.R.* 60, 387-90(1948).—The equil. const. between the 2 forms of 1,2-$C_2H_4Cl_2$ was detd. from the ratio of the intensities I of 2 Raman lines, by $K = A(I_2/I_1) = AK'$, the subscripts 1 and 2 referring, resp., to the frequencies 753 and 653 cm.$^{-1}$, the 1st belonging to the isomer persisting on freezing, the 2nd to that disappearing on freezing (gauche according to Mitsujima); between −31 and +95° (the variation of A in that temp. interval being only about 0.2%, and disregarded), K' = const. = 1.12 ± 0.09, i.e., the ratio of the isomers does not vary in this range. Thus, disappearance of the 2nd isomer can occur only in the solid state or else very close to freezing. In the case of 1,2-C_2H_4ClBr, the ratio of the intensities of the 725 and 667 cm.$^{-1}$ lines (the former pertaining to the trans form) remains const., = 1.68 ± 0.09 between −13.5 and +93°, and so does the ratio 725/629 = 2.31 ± 0.14; only the ratio 725/660 increases slowly with the temp., from 1.83 to 2.20 between the temp. limits stated. For 1,2-$C_2H_4Br_2$, the ratios of the intensities 659/551, at 10, 60, 97, and 128°, are 0.61, 4.43, 3.70, and 3.10. Values of the heat Q of transition between the isomers vary in some cases with the Raman lines used: 1,2-$C_2H_4Cl_2$ (from 753/653) 0 ± 140 cal./mole; 1,2-C_2H_4ClBr (725/667) 0 ± 170, (725/629) 0 ± 170, (725/660) 305 ± 160; 1,2-$C_2H_4Br_2$ (659/551) −2160 ± 180 (between 10 and 128°), (659/551) −2220 ± 230 (between 10 and 97°), (659/551) −2390 ± 300 (between 10 and 60°), av. −2420 ± 250.

N. Thon

Voroshilov Sci. Res. Inst. Org. By-Products and Dyes.

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ARONOV, O. L.

Hindered rotation in the 1,2-dihaloethane series. O. L. Aronov, V. M. Tatevskii, and A. Frost (Moscow State Univ.). *Doklady Akad. Nauk S.S.S.R.* 60, 1177-80(1948); cf. preceding abstr.—The ratio of the intensities I of the Raman lines 753/653 cm.$^{-1}$ of 1,2-$C_2H_4Cl_2$ was detd. in various solvents: pure liquid 1.12; in CCl_4 (75.2, 50.3, 24.6 mole % of 1,2-$C_2H_4Cl_2$) 1.37, 1.68, 3.17; in C_6H_{12} (78.7, 61.4, 23.9) 1.17, 1.23, 2.63; in cyclohexane (75.2, 50.2, 25.4) 1.24, 1.03, 2.70; in C_7H_{16} (78.7, 61.4, 23.0) 1.21, 1.47, 2.10; in C_6H_6 (88.7, 63.4, 25.4) 1.14, 1.13, 1.25; in EtOH (88.0, 54.6) 1.04, 1.20; in $PhNO_2$ (43.5, 23.1) 0.93, 0.84. For 1,2-$C_2H_4Br_2$, lines 659/551 (the variations at 100 mole % are due to insufficient constancy of the temp.): in CCl_4 (100, 84.0, 43.3, 19.2) 7.0, 7.2, 6.0, 6.2; in C_6H_{12} (100, 60.4, 22.0) 7.0, 4.5, 2.7; in cyclohexane (100, 82.5, 54.1, 21.8) 9.1, 8.9, 6.3, 5.3; in C_7H_{16} (100, 42.4, 21.4) 7.0, 7.2, 7.8; in C_6H_6 (100, 46.7, 15.2) 7.0, 5.7, 3.9; in EtOH (100, 60.1, 12.7) 9.1, 8.9, 4.6; in $PhNO_2$ (100, 41.7, 15.1) 9.1, 4.1, 2.1. For 1,2-$C_2H_4Cl_2$, the dependence of the equil. const. of the 2 rotation isomers ($K = A\ I_1/I_2$) on the solvent is greatest in the case of nonpolar solvents. Almost no change is found in solvents with a dipole moment close to that of $C_2H_4Cl_2$ itself, e.g. EtOH. Some lowering of K, as compared with the pure liquid, is found in solvents with a dipole moment higher than that of $C_2H_4Cl_2$. The effect of a nonpolar solvent being primarily one of diln., it follows that the 1st form is little polar or nonpolar, while the 2nd form has a higher dipole moment. A solvent with a high dipole moment shifts the equil. in favor of the 2nd form. Strikingly, C_6H_6 behaves more like a solvent of medium polarity, rather than as a nonpolar liquid; this may be due to its polarizability, giving rise to induced dipole moments. The foregoing considerations are not applicable to 1,2-$C_2H_4Br_2$.

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ARONOV, O.L.

CA

Rotation isomerism of 1,2-dichloroethane and of 1,2-dibromoethane in solution at different temperatures. L. Aronov, V. M. Tatevskii, and A. V. Frost (Moscow State Univ.). *Doklady Akad. Nauk S.S.S.R.* 60, No. 8, 1343-5(1948).—If the role of a nonpolar solvent (cf. preceding abstr.) consists, as a 1st approximation, in decreasing the orienting interaction of the solute mols., then dilu. should shift the equil. between the rotation isomers toward its value in the ideal gas state. Detns. of the ratio of the intensities of the Raman lines 753/653 cm.$^{-1}$ of 1,2-$C_2H_4Cl_2$ in various solvents (concn. of $C_2H_4Cl_2$ in mole %) at different temps., gave: in C_6H_{12} (23.2), at 12 and 15°, 2.11 and 1.80; in C_7H_{16} (36.7) at 17, 61, and 86°, 2.73, 2.04, and 1.81; in cyclohexane (23.0), at 13, 48, and 81°, 1.59, 1.47, and 1.33; in C_6H_6 (21.2) at 22, 61, and 91°, 1.30, 1.26, and 1.03. Hence, the heats of transition Q (in cal./mole) between the isomers at the given concns. and in the temp. ranges stated, are: in C_6H_{12} −807 ± 480, in cyclohexane −867 ± 480, in C_7H_{16} −1230 ± 330, in C_6H_6 −80 ± 280, pure liquid 0 ± 140 (between −31 and +95°). Thus, *in soln.* (with the exception of C_6H_6) $Q \neq 0$, in contrast to the pure liquid. The closeness of the Q in C_6H_{12} and in cyclohexane is remarkable. Data for the ratio of the intensities 650/551 cm.$^{-1}$ for 1,2-$C_2H_4Br_2$ are: in C_6H_{12} (23.0) at 15, 52 and 90°, 3.18, 2.56, and 1.20; in C_7H_{16} (34.9) at 17, 58, and 89°, 7.38, 6.96, and 4.42; in CCl_4 (11.5) at 21, 59, and 83°, 5.30, 2.81, and 1.90; in C_6H_6 (15.2) at 18, 59, and 81°, 5.73, 3.02, and 2.81. Hence, Q (cal./mole) are: in C_6H_{12} −2900 ± 270, in C_7H_{16} −1580 ± 290, in CCl_4 −2260 ± 320, in C_6H_6 −2280 ± 300, in pure liquid −2420 ± 250 (between 10 and 125°). All Q are close, except in C_7H_{16}; the cause of the deviation is not clear.

N. Thon

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L 09989-67 EWT(m)/EWP(w)/EWP(v)/EWP(k) IJP(c) EM

ACC NR: AP6029808 (N) SOURCE CODE: UR/0229/66/000/007/0040/0042

AUTHORS: Aronov, O. N.; Maksimov, Yu. I.

ORG: none

55

TITLE: The use of self-excited synchronous generators in electric propeller apparatus

SOURCE: Sudostroyeniye, no. 7, 1966, 40-42

TOPIC TAGS: marine equipment, electric generator unit, volt ampere characteristic, error correction, electric generator, electric motor, semiconductor rectifier/ MSA 72-4A electric generator, VKD-200 semiconductor rectifier, PN-100 electric motor

ABSTRACT: This paper presents an analysis of synchronous generators (with systems of amplitude-phase compounding and voltage correction) used in modern marine electric-power apparatus. Analysis of the external characteristics of the generator for various settings of the stator-current correction shows that a synchronous generator with a system of amplitude-phase compounding and a choke can be used in electric propeller apparatus (see Fig. 1). Ac-dc propeller apparatus can operate with two correctors (voltage and current), controlling the assigned stator current and the maximum voltage of the generator. The most probable emergency condition for the ac-dc propeller apparatus is malfunctioning of the corrector. Ac-dc propeller apparatus permits the use of synchronous generators in the marine power station, ensures smooth control of speed and the necessary anchorage current when the propeller is wedged.

Card 1/2

UDC: 626.12-83

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LUKOMSKIY, Yu.A.; ARONOV, O.N.

Use of a self-adjusting mathematical model for the determination of correcting feedback parameters of automatic control systems. Izv.vys.ucheb.zav.; prib. 7 no.6:26-31 '64. (MIRA 18:2)

1. Leningradskiy elektrotekhnicheskiy institut imeni Ul'yanova (Lenina). Rekomendovana kafedroy elektrooborudovaniya i avtomatizatsii sudov.

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9

ARONOV, O.N., elektromekhanik

Steering gear with an electric drive and magnetic amplifier on motorships of the "Krasnograd" type. Biul.tekh.-ekon. inform. Tekh.upr.Min.mor.flota 7 no.10:71-82 '62. (MIRA 16:9)

1. Teplokhod "Kimovsk".

(Steering gear--Electric driving)
(Magnetic amplifiers)

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L 25747-65

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ARONOV, P. I

SMIRENKIN, Petr Pavlovich, professor; ARONOV, P.I., redaktor; AKATOVA, V.G., redaktor izdatel'stva; ZHOROV, D.M., tekhnicheskiy redaktor.

[Foundations and footings] Osnovaniia i fundamenty. Moskva, Izd-vo M-va kommun.khoziaistva RSFSR, 1956. 189 p. (MLRA 10:4)
(Foundations)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9

CZECHOSLOVAKIA/Theoretical Physics - General

B-1

Abs Jour : Ref Zhur - Fizika, No 3, 1959, No 4826

Author : Aronov R.A.

Inst :

Title : Hypothesis of Continuity of Space and Time

Orig Pub : Pokroky mat., fys. a astron., 1958, 3, No 1, 90-104

Abstract : See Referat Zhur - Fizika, 1958, No 3, 5126

Card : 1/1

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9

ARONOV, R.A. (Kishinev)

Evolution of space and time concepts. Fiz.v shkole 21 no.3:11-16 My-Je '61. (MIRA 14:8)

(Space and time)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9

ARONOV, R.E.

Commission on methods for testing structures. Izv. ASiA no.1:116-117 '60. (MIRA 13:9)

1. Uchenyy sekretar' komissii po metodike issledovaniya sooruzheniy Akademii stroitel'stva i arkhitektury SSSSR.
(Building materials--Testing)

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9

ARONOV, R. I.

ARONOV, R. I. - Kand. tekhn. nauk dots. Nauchno - issledovatel'skiy institut po stroitel'stvu Ministerstva Neftyanoy Promyshlennosti i KAMERSHTEIN, A. G. - Kand. Tekh. Nauk.

Izucheniye prichin vibratsii gazoprovodov i razrabotka meropriyatii po ikh ustraneniyu Page 86

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

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9

ARONOV, R. I.

ARONOV, R. I. Kand. tekhn. nauk. dots. Nauchno-issledovatel'skiy institut po stroitel'stvu Ministerstva neftyancy promyshlennosti i KAMERSHTEIN, A. G. - Kand. Tekh. nauk. i DOLGOV, V. K. - Inzhener i PETROV, I. P. - Inzhener

Izucheniye napryazheniy v krivolineynykh uchastkakh truboprovodov s uchetom zashchemleniya v grunte. Page 86

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

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ARONOV, R.I., kand.tekhn.nauk, dots., laureat Stalinskoy premii; KAMERSHTEYN, A.G., kand.tekhn.nauk, laureat Stalinskoy premii

Choking of pipelines in the soil and characteristics of their operation in mining areas. Trudy VNIIStroinefti no.5:35-53 '53. (MIRA 12:2)

(Pipelines) (Strains and stresses) (Subsidences (Earth movements))

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9

ARONOV, R.I., kand.tekhn.nauk, dots., laureat Stalinskoy premii

Investigating conditions of interaction between pipes and soil during the longitudinal expansion of a pipeline. Trudy VNIIStroinefti no.5:54-71 '53. (MIRA 12:2)
(Pipelines--Testing) (Strains and stresses) (Soil mechanics)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9

ARONOV, R.I., kand.tekhn.nauk, dots., laureat Stalinskoy premii

Determining the state of stress of a structure by means of consecutive markings. Trudy VNIIStroinefti no.5:94-99 '53. (MIRA 12:2)

(Strains and stresses) (Metals--Testing)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9

ARONOV, R.L.

SA

PROCESSES AND PROPERTIES INDEX

621.313.333 – 82 2149

"Edge effect" in induction motors with open magnetic field. SHTIVMAN, G. I., AND ARONOV, R. L. *Elektrichestvo* (No. 2) 54-9 (1947) *In Russian.*—An analytical investigation of asynchronous motors with open arc-shaped and flat stators is presented. Formulae for secondary currents and their time relation to primary currents are derived, and shown to yield, compared with conventional motors, an additional "edge" effect pulsation with twice the primary frequency independent of rotor velocity. A. E.

621.313.333 : 621.316.726 :
621.316.718 – 82 *see Abstr.* 2192

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9

ARONOV, R. L.

PA 69T28

USSR/Electricity
Motors, Electric
Magnetization

Apr 1948

"Approximation of the Magnetization Curve," Prof R. L. Aronov, Dr Tech Sci, Khar'kov Electrotech Inst, 5 pp

"Elektrichestvo" No 4

Analyses of electrical motors and apparatus requires use of formulas which approximate magnetization curve. Formulates requirements for analytic representations of magnetization curves and on basis of requirements recommends new modifications for some of previously suggested formulas.

69T28

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9

PA 171T21

ARONOV, R. L. Prof

USSR/Electricity - Electric Motors Oct 50
Motor Design

"Heating of Electric Motors During Repeated Short-Time Duty," Prof R. L. Aronov, Dr Tech Sci, Khar'kov Elec Eng Inst

"Elektrichestvo" No 10, pp 13-17

Average loss and mean-square value methods of selecting electric motors have often proved unsatisfactory, particularly when using large amounts of active materials and when duty cycle is low. Proposes methods of determining maximum permissible loads and of calculating heating processes in newly designed electric motors.

171T21

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9

ARONOV, Prof R. L.

178T33

USSR/Electricity - Motors, DC Starting

Dec 50

"Calchlating Starting Resistances for DC Motors," Prof R. L. Aronov, Dr Tech Sci, Khar'kov Elec Eng Inst

"Elektrichestvo" No 12, pp 64, 65

Suggests unique method of calcg starting resistances for dc motors with independent, series, or compound excitation. Submitted 19 Jul 49.

178T33

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9

ARONOV, R. L.

USSR/Electricity - Motors, Induction Jul 51

"Starting of Induction Motors," Prof R. L. Aronov, Dr Tech Sci, Khar'kov Elec Eng Inst

"Elektrichestvo" No 7, pp 39-43

The use of induction motors for elec drives imposing severe starting conditions requires the development of max starting torque. Construction of the starting diagram is made more difficult when there are only a few stages in the starting process and the starting time is small. Proposes new variations of the starting diagram which apply to the above cases. Submitted 24 Oct 49.

199T20

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9

ARONOV,S.

Utilize food waste to feed pigs. Zhil. kom. khoz. 5 no2:6-7'55.

1. Tekhnoruk kontory po sboru bytovykh otkhodov Moszhilupravleniya.

(Moscow--Refuse and refuse disposal)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9

ARONOV, S. G.

Ca

21

The regeneration of sulfur in the coking of coal. M. V. Hoffman and S. G. Aronov. *Khim. Tverdogo Topliva* 1, No. 6, 17-28(1930).—S was absorbed from the gas by a liquid composed of 60 cc. of 15% Na_2CO_3 soln., 30 cc. of a 20% $FeCl_3$ soln. and 5 cc. of a 10% $NiSO_4$ soln. Up to 71% of the S was regenerated in accordance with the reaction $4FeS + 3O_2 + 6H_2O = 4Fe(OH)_3 + 4S$.

A. A. Boehtlingk

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

Ca

21

The balance of sulfur in the coking of coals in the Donets plants S. G. Atomov. Khim. Tverdogo Topliva 2, No. 1, 42 [illegible]. S was detd. in products from 14 metallurgical and coke plants, including tar, gasoline, gas, etc. S in the gases was 3.63-23.05 g. per cu. m. The av. distribution of S was: in coke 66.9; in gases, H_2S 19.9, org. S 0.85%; in tar 1.15; in gas water 0.70; total 89.60% and loss 10.40%. A. A. Bochlinek

COMMON ELEMENTS

COMMON VARIABLE CODES

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9

CA

21

Ferro-ammonium method for recovery of sulfur from coke-oven gas. S. O. Argoty. *Coke and Chem.* (U. S. S. R.) 1933, No. 4, 42-6.—A study of data obtained in a series of expts. with H_2S absorption from coke-oven gas with a base contg. suspended $Fe(OH)_3$ as an absorbing liquid. The probable reactions taking place are: (a) $2NH_3 + H_2S = (NH_4)_2S$; (b) $3H_2S + 2Fe(OH)_3 = 2FeS + S + 6H_2O$; (c) $3(NH_4)_2S + 2Fe(OH)_3 = 2FeS + S + 6NH_4OH$, etc. The results of the expts. show: (1) absorption of H_2S renders the gas practically free from S compds.; (2) a considerable amt. of S can be recovered by regeneration of the absorbing liquid; (3) 25% NH_3 can be recovered by regeneration; (4) secondary reactions during regeneration are negligible. James Sorrel

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9

PROCESSES AND PROPERTIES INDEX

CA

21

Desulfurization of industrial gases with recovery of elementary sulfur. I. M. V. Hoffman and S. G. Aronov. *Coke and Chem.* (U. S. S. R.) 1933, No. 1, 41-50.—The iron-soda process for elementary-S recovery from coke-oven gas developed by Kharkov Coal-Chem. Inst. is described. The chemistry of the process is as follows: absorbing liquid (a 0.5-1% soda soln. + 0.3-0.5% $Fe(OH)_3$ in suspension) is circulated counter-current with gas contg. H_2S in an absorption app. The reactions are: $H_2S + Na_2CO_3 = NaHS + NaHCO_3$; $3NaHS + 2Fe(OH)_3 = 2FeS + S + 3NaOH + 3H_2O$. To regenerate the absorbing liquid air is blown through the soln. The reactions are: $4FeS + 3O_2 + 6H_2O = 4Fe(OH)_3 + 4S$; $2NaHCO_3 = Na_2CO_3 + CO_2 + H_2O$; $NaHS + NaHCO_3 = H_2S + Na_2CO_3$. Some other secondary reactions also take place forming $Na_2S_2O_3$, NaCNS, etc., which result in some loss of the absorbing liquid. A semi-plant was constructed and operated to study the technology of the process. This expti. plant consisted of a scrubber, a vertical and a horizontal regenerator, 3 pumps, compressor and a centrifuge. It was found possible to remove practically all H_2S from the gas. The yield of elementary S was 70-75% of the total S absorbed. From 20 to 30% of S remained in combination with non-regenerable parts of absorbing liquid. The elementary S contained 40-50% moisture and 20% entrapped $Fe(OH)_3$. II. **Iron-ammoniacal method.** M. V. Hoffman, S. G. Aronov, S. E. Senichenko and M. B. Khvat. *Ibid.* No. 2, 47-53.—A similar study was made with the iron-ammoniacal method. The chemistry of this method consisted in: scrubbing the coke-oven gas with a weak soln. of NH_4OH with $Fe(OH)_3$ in suspension. The reactions are: $NH_3 + H_2S = NH_4HS$; $2NH_3 + H_2S = (NH_4)_2S$; $3NH_4HS + 2Fe(OH)_3 = 2FeS + S + 3NH_4OH + 3H_2O$; $3(NH_4)_2S + 2Fe(OH)_3 = 2FeS + S + 6NH_4OH$. The absorbing liquid was then regenerated: $4FeS + 3O_2 + 6H_2O = 4Fe(OH)_3 + 4S$; $NH_4OH = H_2O + NH_3\uparrow$; $NH_4HS = H_2S + NH_3\uparrow$; $3H_2S + 2Fe(OH)_3 = 2FeS + S + 6H_2O$. The yields of elementary S were 80% of the total S absorbed contg. 40-45% moisture and 20-25% $Fe(OH)_3$. J. S.

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CA

21

Absorption of hydrogen sulfide from gas and sulfur recovery with arsenic salts solution. S. G. Aronov. *Coke and Chem.* (U. S. S. R.) 1933, No. 3, 47-62; expts. were made to develop a method for recovery of pure S from coke-oven gas. The absorbing liquid was prepd. as follows: a soln. of Na_2CO_3 was heated to boiling, As_2O_3 soln. added and boiling continued for 2-8 hrs. ($6Na_2CO_3 + As_2O_3 + 3H_2O = 2Na_3AsO_3 + 6NaHCO_3$). The soln. was oxidized with air and pure H_2S blown through it to form Na_3AsS_4; air was blown through the soln., forming $Na_3AsOS_3 + S$. The resulting soln. was used to absorb H_2S from the gas in the expts. thus: $Na_3AsOS_3 + H_2S = Na_3AsS_4.H_2O$. The soln. was regenerated by blowing air through it. For best results the absorbing soln. should contain 5 g./l. As_2O_3 and an amt. of Na_2CO_3 just sufficient for the formation of Na_3AsO_3; an excess of Na_2CO_3, although it increases the absorption of H_2S, interferes with the regeneration by promoting secondary reactions. Elementary S yields of 99% of the total S absorbed by the liquid were obtained in a single cycle. The best temps. for absorption and regeneration are 40-60°. Recovered S contained 0.5-2.0% As compds. J. S.

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Freeing industrial gases from hydrogen sulfide with recovery of elemental sulfur. M. V. Hoffman, S. G. Atanov and E. M. Mikhel'son. *Coke and Chem.* (U. S. S. R.) 1933, No. 5-6, 49-55; cf. *C. A.* 28, 2873. A process for S recovery from gases by absorption of H_2S by an alk. soln. of As_2O_3 is described. When H_2S is absorbed in a freshly prepd. alk. soln. of As_2O_3, Na_3AsS_3 and $Na_{2-n}H_nAsS_3$ are formed. After blowing air through the soln. oxidation of As^{III} to As^{V} takes place with formation of $Na_{3-n}H_nAsOS_3$. James Sorrel

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

21

Rapid determination of ash in coal and coke. S. G. Aronov and R. A. Treigerman. *Zavodskaya Lab.* 3, 207-9(1934).—By the method of incineration of samples wetted with HCl, HNO_3, H_2O_2 or HF, the detn. consumes 30 min. and makes possible the use of coal or coke of 0.3 mm. fineness. Wet 1 g. coal (or coke) of 0.25 mm. fineness (or 2.5 g. of 0-3 mm.) in a shallow porcelain boat (or inverted crucible cover without the eye) with 4-5 drops of concd. HCl (or HNO_3) (10-15 drops for 2.5-g. sample) and ignite in a muffle furnace for 30 min. The method is accurate within 0.3-0.35%. Chas. Blanc

3RD AND 4TH ORDERS

COMMON ELEMENTS

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21

Causes of divergency in the ash content of coke at the Donbas coking plant. N. G. Aronov and K. I. Badamova. *Coke and Chem.* (U. S. S. R.) 6, No. 11, 45 (1934).
The difference between the actual and the calcd. ash contents of cokes in relation to the resp. coals is ascribed to such shortcomings of processing as partial combustion of coke in the furnace, the use of hard water in coke quenching, etc., and to the faulty procedure of analysis. Methods of taking, prepg. and analysing samples of coal and coke are described.
Chas. Blanc

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21

The preparation of sulfur from coke gas by a method analogous to the Thylox process on a semifactory scale in Kuakiovo. M. V. Hoffman, S. G. Atanov and E. M. Mikhel'son. *J. Chem. Ind.* (Moscow) 1934, No. 8, 17-21; cf. *C. A.* 27, 588.—Coke gas is passed at the rate of 300 cu. m. per hr. through the app. described by H. and A. (*C. A.* 28, 2875[3]). The liquid which absorbs the H_2S circulates at 25 l. per cu. m. of gas. It contains 5-7 g. per l. of As_2O_3. The ratio of NaOH to As_2O_3 must not exceed 3:1 unless NH_4OH is present, in which case, a slightly higher ratio is permissible. In the regenerator 30 cu. m. of air per hr. is sufficient. The whole process is run at 40°. Removal of H_2S from the gas is 96-7%; recovery of S from the soln. is 98-100%. H. M. Leicester

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9

Apparatus for desulfurizing combustible gases. M
I. Goffman and S. G. Alapin. Russ. 42,210, March 31,
1935. Construction details

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1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

CA

81

Carbonization of Transcaucasian coals. S. G. Aronov and I. A. Kopelliovich. *Coke & Chem.* (U. S. S. R.) 1935, No. 1, 14-23.—Expts. under lab. and industrial conditions show that a good metallurgical coke can be made from a 1:1 mixt. of Tkvarcheli and Tkvibuli coals under optimum conditions (described). High gas and tar yields require especially designed ovens. H. C. A.

COMMON ELEMENTS

MATERIALS INDEX

COEN.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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CA

21

Interaction between hydrogen sulfide and sulfur dioxide for recovery of elementary sulfur. S. O. Aronov and M. B. Khvat. *Coke & Chem.* (U. S. S. R.) 1935, No. 2-3, 92-7.—Coke-oven gas is passed in countercurrent through an aq. soln. of SO_2. High H_2S in the former is essential. Eighty % of the total S may be recovered in a pure state. B. C. A.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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CA

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New method for the rapid determination of sulfur in coal and coke. S. O. Atrunov, M. Moiseeva and R. A. Treigermann. *Coke & Chem.* (U. S. S. R.) 4, No. 12, 51-4(1938); *Chimie & industrie* 39, 555; cf. *C. A.* 28, 5038[8].—Mix 1 g. of coal (or coke) with 3 g. of Eschka's mixt., incinerate as usual in a muffle for 2-2.5 hrs., after cooling take up in 60-75 cc. of boiling water, titrate, wash the ppt. with a min. of hot water, to the filtrate add 5 cc. of 3% H_2O_2, boil for 3-5 min., add 2-3 drops of phenolphthalein indicator, neutralize with concd. HCl and add 2 cc. in excess, boil for 15-20 min. to decomp. completely the H_2O_2 and carbonates and conc. the soln. to 40-50 cc., neutralize with 20% NaOH soln. to slight pink coloration, add 100 cc. of 30% alc., heat to boiling, complete neutralization (if necessary), add a measured quantity (in excess) of 0.2 *N* $BaCl_2$ and titrate the excess with 0.2 *N* Na_2CO_3 to a persistent rose coloration. Percentage of S = $100T_s(A - B)$, in which *A* = cc. $BaCl_2$, *B* = cc. Na_2CO_3, and T_s = S equiv. of the $BaCl_2$ soln.

A. Papineau-Couture

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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ARONOV, S.

CA

21

Commercial coking of Tkvarcheliskii and Tkvibuliskii coals. A. Agrankin, S. Aronov, G. Dmitriev and I. Kopelovich. *Khim. Tverdogo Topliva* 6, 307-17(1935). From a mixt. of Tkvarcheliskii and Tkvibuliskii (1:1) coal was obtained about 65% of coke contg. 14-16% ash and 1.1-1.2% S. The coking temp. should be kept at 1350-00° during 20 hrs. The moisture of the charge should be 7-8%. Up to 5% of mud obtained in the concn. of this coal may be added to the charge. Detailed characteristics of the coals are given. A. A. Berkhlinek

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PROCESSES AND PROPERTIES INDEX

Elimination of hydrogen sulfide from industrial gases, with recovery of elementary sulfur. IV. M. V. Hoffman, S. G. Aronov, S. E. Senichenko and M. B. Khvat. *Coke and Chem.* (U. S. S. R.) 1936, No. 2-3, 91-100; cf. *C. A.* 29, 3140[1]. 98.5-99% of the H_2S in coke-oven gases can be eliminated by scrubbing with aq. $(NH_4)_3AsO_4$, and 90.5% of the absorbed H_2S is recovered as S. H. C. A.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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PROCESSES AND PROPERTIES INDEX

2

The use of solar oil and of solvent naphtha in the removal of phenol from waste waters. S. G. Arnoev and R. A. Mishulovich. *Trudy Khar'kov. Nauch. Issledovatel. Uglekhim. Inst.* 1937, No. 5–6, 74; *Khim. Referat. Zhur.* 1938, No. 6, 80–1.—In lab. expts. solar oil extd. 97–99% of phenol from soln. in distd. water. Optimum conditions for the extn. were temp. 80°, duration of contact of oil and water 3 hrs., ratio of oil to water 4:1 and stepwise extn. The extn. of phenol from waste waters amounted to only 60%, owing mainly to the selective soln. of the higher phenols, which hindered the removal of phenol from the extg. agent itself. Considerably better results were obtained with solar solvent naphtha contg. no fractions boiling above 360°. In this case the optimum conditions for the extn. of the artificial solns. of phenol were temp. 80°, ratio of oil to water 3:1, time of contact 1 hr. and repeated extn. A 90–100% removal was obtained. The higher phenols were extd. from the artificial solns. practically completely. A 3-fold extn. of the waste waters gave a 87% removal. Phenol was removed from the extg. agent without difficulty by a treatment with a 20% soln. of NaOH at 60°. W. R. Henn

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9

Increasing the content of volatile material in the coal charge of coke ovens. S. G. Aronov. *Coke and Chem.* (U. S. S. R.) 7, No. 6, 27-31(1937); *Chem. Zentr.* 1938, II, 2033. – The admixt. of 30% of gas coke (volatile constituents 36.12%) to the ordinary foliated coal (volatile constituents 26.08%) offers a means of increasing the chem. products of coking by 25-30%. The amt. of gas, however, is increased only 10-15 cu. m. per metric ton of coal. Results of the rattler test on the coke produced are changed but little by the addn. of the gas coke to the charge of coal. A high shatter index (94-6% on the 40-mm. screen) is shown. The yield in large pieces of coke amounts to 96-7%. The porosity of this coke differs but little from that obtained from the ordinary coal charge. With the use of 40% gas coal, the appearance of the coke is poorer; it does not fuse well (is brittle) and is amorphous. M. G. M.

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21

Yields of chemical products of coking in relation to the content of volatile substances in coal. S. G. Arutun and R. L. Mishulovich. *Coke and Chemistry U.S.S.R.* 1958, No. 1, 30-3. — The empirical formulas $x = 18.06 + 1.8Ar + 0.026r^2$ and $y = -1.01 + 0.144r - 0.00116r^2$ have been derived, where x, y and r are, resp., the yields of primary tar, crude C_6H_6 and volatile substances.

B. C. P. A.

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Ca

E1

The yield of gas during coking depending on the content of volatile substances in coal and in coal mixtures. S. G. Arronov and B. I. Kustov. *Coke and Chem.* (U. S. S. R.) 1938, No. 2, 17-20; *Khim. Referat. Zhur.* 2, No. 5, 97 (1939).—The compn. of gas obtained from different coals varied widely. The heat content of gases varied directly with the content of volatile substances in coal. The yield of gas from coals contg. 22-4% of volatile substances varied between 300 and 315 cu. m. (with a standard heating value of 4000 cal./cu. m.). An increase of the volatile substances by 1.0-3.8% caused an 8-10% increase of the yield of gas.

V. R. Henn

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1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

Ca

14

Methods for removing phenols from waste waters. S. G. Aronov and B. I. Kustov. *Org. Chem. Ind.* (U. S. S. R.) 3, 93-100(1938). A crit. discussion of European and American practice, with suggestions for improvement. Approx. 35 references. Chas. Blanc

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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PROCESSES AND PROPERTIES INDEX

3

21

A Laboratory Method of Determining the Amount of Residual Sulphur in Coke. S. U. Arpnov and Kh. M. Moiseeva. (Koks i Khimiya, 1939, No. 4-5, pp. 51-54). (In Russian). Different laboratory methods of determining the percentage of sulphur in coke made from coking coal are described. Coking in a crucible is recommended as giving the most satisfactory results. Coking in a quartz tube with absorption of the volatile sulphur compounds did not give very reliable results for the volatile sulphur content. The results of the crucible method agreed very well with those of coking on the production scale. The elimination of sulphur from coal increases with the amount of volatile material in the coal, and also depends on the proportions of the different forms in which sulphur is present in the coal.

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ARONOV, S.

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

Coking of Moscow brown coal. S. Aronov. *Novosti Tekhniki* 1940, No. 11-12, 44.—Data are given on the compsn. of charges and quality and yield of coke and by-products from expts. on coking Moscow brown coal.

B. Z. Kamich

21

COMMON ELEMENTS

MATERIALS INDEX

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9

Coking of Moscow brown coals in mixtures with Donets coals. S. O. Argonov and Ya. S. Bokotin. *Trudy Khar'kov Nauch-Issledovatel. Uglekhim. Inst.* 1940, No. 19, 17-62; *Khim. Referat. Zhur.* 4, No. 9, 116-17(1941).—Moscow brown coals mixed with Donets coals produced a satisfactory coke. Increasing the content of brown coal in the charge to above 25% decreased the strength of coke. W. R. Henn

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APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9"

"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9

Pressure of coal in the low-temperature coking process. S. G. Aronov. *Coke and Chem.* (U. S. S. R.) 11, No. 5, 1-3(1941); *Chem. Zentr.* 1943, I, 1841-2.—A. carries out exptl. coking with various kinds of coal in a steel box placed in an elec. furnace heated to 1000°. During the expt., the temps. in the furnace, in the coal layer and in the upper crown of the furnace are recorded; at the end of the expt., the height of the coke layer, the distance from the wall and the bulging of the side walls of the steel box are measured. Based on the exptl. data, it is assumed that the gases pass the coke layer as follows: in the beginning of the coking, the gases penetrate the coal layer carrying with them liquid products (H_2O and tar); by pptg. the liquid products in the cold region, a natural obstacle is formed which prevents the passing of the gas into the coal layer; since the gases cannot go back to the wall, they rise in the coal; caking coal which forms a plastic layer in the furnace behaves, in the beginning, as stated above, then forms an obstacle for the expansion of the gases to the middle of the furnace. As a result, two gas-currents are formed: from the plastic layer and from the half-coke layer. These currents rise side by side. The viscous plastic mass is permeated with gas bubbles striving to escape from it, and thus exerting a pressure proportional to the amt. of the gas formed and to the thickness and the viscosity of the plastic layer. Most dangerous, with respect to the pressure, are coals with a high content of volatile constituents escaping the plastic layer and having a plastic layer of appreciable thickness; these coals usually show a great uniformity of the plastic layer. The safest are nonbaking or slightly baking coals. Addn. of coals or other mixts. disturbing the uniformity of the plastic layer can reduce considerably the pressure of the coals carbonized at low temp. Sonya G. Machelson

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

Ca

21

New method of determination of the yield and the composition of the products of the coking of coal. S. G. Aronov and A. E. Eldel'man. *Zavodskaya Lab.* 13, 328-32(1947).—The app. permits reproducible detns. on 5-7-kg. batches in 3-3.5 hrs. A furnace with temp. control, dimensions of the chamber 300 × 150 × 400 mm., is connected, in order, with a tar absorber, a Cottrell-type electrofilter (55-60 kv.), water washer, a $CaCl_2$ drying tube, 1 absorber with 10% H_2SO_4 and 2 with 30% NaOH, a $CaCl_2$ tube, an activated-C tube, a flow meter, a pump, and a gas meter. The main features are total absence of losses and exclusion of air. N. Thon

COMMON ELEMENTS

COMMON COMPOUNDS

MATERIALS INDEX

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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ARONOV, S.G.

Fuel Abstracts
Vol. XV, No.2
Feb. 1954
Carbonization

1123. UTILIZATION OF GAS COALS AND LONG FLAME COALS OF DONETS BASIN FOR COKING INDUSTRY (ISPOL'ZOVANIE DONETSKIKH GAZOVYKH I DLINNOPLAMENNYKH UGLEI DLYA KOKSOVANIYA). Aronov, S.G. (Khar'kov: Metallurgizdat, 1949, 24pp.: title in Chem. Abstr., 1953, vol. 47, 9596).

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9

ARONOV, S. G.

"The Determination of the Qualities and Usefulness of Coals for Coking (Opredeleniye kachestva i prigodnosti ugley dlya koksovaniya). Metallurgizdat, 1951.

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9

USSR/Chemistry - Carbonization Process Sep 52

"The Nature of the Coal-Caking and Coking Processes," S. G. Aronov, Ukranian Coal Chem Inst

"Zhur Prik Khim" Vol 25, No 9, pp 927-935

This work considers the carbonization of coal, and the resultant coke and by-products, in the light of the steady growth of the use of coal as a technological raw material in the USSR, particularly in recent years. Recommends:(a) A study of the amt and compn of volatile substances formed at different stages of coking (in regard to coals

232T39

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and their petrographic components), together with a study of coking capacity by the usual methods, with the aim of fixing existing rules (in the USSR) and developing theoretical bases for the prepn of coals for coking.(b) The development of methods of reaction on the chem compn of secondary groups of mols and macromols of coal substances, both prior to their decompn (e.g., by oxidation or hydrogenation) and in the process of their breaking away and conversion (in different stages of coking), with the aim of modifying the coking characteristics of coals in the proper direction.

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ARONOV, S.G., doktor tekhnicheskikh nauk; KULYASOV, V.A., inzhener.

Crushing and grinding of coals. Koks i khim. no.2:5-9 '55. (MLRA 9:3)

1. Ukrainskiy uglekhimicheskiy institut (for Aronov); 2. Giprokoks (for Kulyasov)

(Coal preparation)

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ARONOV, S.G.

VODNEV, G.G.; SHELKOV, A.K.; DIDENKO, V.Ye.; FILIPPOV, B.S.; TSAREV, M.N.; ZASHVARA, V.G.; LITVINENKO, M.S.; MEDVEDEV, K.P.; MOLODTSOV, I.G.; LGALOV, K.I.; RUBIN, P.G.; SAPOZHNIKOV, L.M.; TYUTYUNNIKOV, G.N.; DMITRIYEV, M.M.; LEYTES, V.A.; LERNER, B.Z.; MEDVEDEV, S.M.; REVYAKIN, A.A.; TAYCHER, M.M.; TSOGLIN, M.E.; DVORIN, S.S.; RAK, A.I.; OBUKHOVSKIY, Ya.M.; KOTKIN, A.M.; ARONOV, S.G.; VOLOSHIN, A.I.; VIROZUB, Ye.V.; SHVARTS, S.A.; GINSBURG, Ya.Ye.; KOLYANDR, L.Ya.; BELETSKAYA, A.F.; KUSHNEREVICH, N.R.; BRODOVICH, A.I.; NOSALEVICH, I.M.; SHTROMBERG, B.I.; MIROSHNICHENKO, A.M.; KOPELIOVICH, V.M.; TOPORKOV, V.Ya.; AFONIN, K.B.; GOFTMAN, M.V.; SEMENENKO, D.P.; IVANOV, Ye.B.; PEYSAKHZON, I.B.; KULAKOV, N.K.; IZRAELIT, E.M.; KVASHA, A.S.; KAFTAN, S.I.; CHERMNYKH, M.S.; SHAPIRO, A.I.; KHALABUZAR', G.S.; SEKT, P.Ye.; GABAY, L.I.; SMUL'SON, A.S.

Boris Iosifovich Kustov; obituary. Koks i khim. no.2:64 '55.(MLRA 9:3)
(Kustov, Boris Iosifovich, 1910-1955)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9

Aronov, S. G.

The theory of coke formation and charging coke ovens. S. G. Aronov and L. L. Nesterenko. *Stal'* 15, 678-87 (1955); cf. *C.A.* 48, 7284i.—A detailed study of thermal transformations in coking [illegible] are more labile in the gas than in the coking coal while [illegible] splits off at about the same rate. The max. splitting off of C occurs at 40°-50° and that of H at [illegible] both continuing to [illegible] necessary for coking [illegible] that the condensation of compds. with an increasing [illegible] H rate increases with higher temp. leading to an increased true sp. gr. of the solid residue. Structural transformations of coal constituents are a function of the max. heating temp. [illegible] this difference and also of the increase in strength for both of them slows down, though the final strength of the coking coal coke remains higher. The final strength of coke depends on the sintering strength of coal grains in the semi-coke formation zone. Processes occurring during the thermal decomposition of coal components and on which depend the properties of solid residues are additive in coking mixts., but those taking place at the interface of coal grains and products of its thermal decomposition are not on account of coal components reacting among themselves during coking.

J. D. Gat

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ARONOV, S. G.

702* Heating of Coal by High-frequency Current. Nagrev uglei tokami vysokoi chastoty. (Russian.) S. G. Aronov and In. B. Tiutiunnikov. *Stal*, v. 15, no. 9 Sept 1955, p. 771-776. EL FV

Rapid heating of coal charge with low energy loss up to the stage of transition of semicoke into coke; effect of appearance of electroconductivity in material on dielectric heating, semicoke obtained by this process compared with thermal-process coke. Graphs, diagrams, tables, photograph. 9 ref.

(1)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9

ARONOV, Samuil Grigor'yevich; BAUTIN, Ivan Grigor'yevich; VOLKOVA, Zoya Andreyevna; VOLOSHIN, Arkhip Il'ich; VIROZUB, Yevgeniy Vladimirovich; GABAY, Lev Izrailevich, DIDENKO, Viktor Yefimovich; ZASHKVARA, Vasiliy Grigor'yevich; IVANOV, Pavel Aleksandrovich, KUSTOV, Boris Iosifovich [deceased]; KOTOV, Ivan Konstantinovich; KOTKIN, Aleksandr Matveyevich; KOMANOVSKIY, Maksim Semenovich; LEYTES, Viktor Abramovich, MOROZ, Mikhail Yakovlevich; NIKOLAYEV, Dmitriy Dmitriyevich. OBUKHOVSKIY Yakov Mironovich; RODSHTEYN, Pavel Moiseyevich; SAPOZHNIKOV, Yakov Yudovich, SENICHENKO, Sergey Yefimovich; TOPORKOV, Vasiliy Yakovlevich; CHERMNYKH Mikhail Sergeyevich; CHERKASSKAYA, Esfir' Ionovna, SHVARTS, Semen Aronovich; SHERMAN, Mikhail Yakovlevich; SHVARTS, Grigoriy Aleksandrovich; LIBERMAN, S.S., redaktor izdatel'stva; ANDREYEV, S.P., tekhnicheskiy redaktor

[Producing blast furnace coke of uniform quality; a collection of articles for the disemmination of advanced practices] Poluchenie domennogo koksa postoiannogo kachestva; sbornik statei po obmenu peredovym opytom. Khar'kov, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1956. 300 p. (MLRA 9:8)
(Coke industry)

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9

ARONOV, S.G.

Fundamentals of the theory and practice for rating coals as raw materials for coking. Trudy Lab.geol.ugl. no.6: 131-136 '56. (MLRA 10:2)

1. Ukrainskiy nauchno-issledovatel'skiy uglekhimicheskiy institut.
(Coal--Analysis) (Coke)

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Aronov, S. G.

68-8-1/23

AUTHORS: Aronov, S. G., Doctor of Technical Sciences, and Moiseyeva, Kh.M., Candidate of Chemical Sciences

TITLE: Petrographic Separation and Separate Crushing of the Donets Coals and Coal Blends. (Petrograficheskaya separatsiya i razdel'noye drobleniye Donetskikh ugley i shikht).

PERIODICAL: Koks i Khimiya, 1957, No. 8, pp. 3-7 (USSR)

ABSTRACT: The distribution of macrocomponents in some characteristic types of the Donets coals of different degree of metamorphosis and the technological properties of these components were studied. The following three groups of coals were investigated G6, Zh21 and OS6 (table 1). During the investigation various schemes of coal preparation for coking, including schemes for petrographic separation and crushing of coals individually were tested. (Diagram). Coals were investigated under laboratory conditions and coking experiments were carried out in boxes placed in ovens on the Kharkov Coke Oven Works. The coking period 14 hours, temperature of control flues from coke side 1375-1380°C. Properties of coarse and fine fractions of G6 coals from three different mines, Zh21 coal and the coal blend made from, %: G-30, K-20 and OS-20 are given in table 2. Properties of cokes produced are given in table 3. On the basis of the results obtained , it is concluded that crushing of gas coals separately

Card 1/2

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"APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000102120015-9

AUTHORS: Aronov, S.G., Doctor of Technical Sciences, and Svetlorusova, L.P. 68-1-2/22

TITLE: The Influence of the Degree of Fineness of Coals and Coal Blends During Coking (Vliyaniye stepeni izmel'cheniya ugley i shikhty pri koksovanii)

PERIODICAL: Koks i Khimiya, 1958, No.1, pp. 5 - 11 (USSR)

ABSTRACT: The influence of the degree of fineness of coal blends on the strength of coke produced was investigated. The authors point out that the dependence between the degree of fineness, i.e., summary surface area of coal grains in a blend and the strength of the coke produced cannot be a straight line relationship, but that there should be an optimum grain size, different for different coals. In order to prove this assumption, they investigated the following problems: a) the thickness and strength of binding layers formed by coal, passing into the plastic state, between grains of materials which do not pass into the plastic state; b) the degree of interaction between the products of thermal decomposition of grains of various coals, and c) the depth of penetration of these products during the formation of coke.

a) The experimental technique was based on the principle of caking a granular material which does not pass into the plastic

Card1/6

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The Influence of the Degree of Fineness of Coals and Coal Blends During Coking.

state with a caking coal. Donets G6 and K14 coals were used as caking components and anthracite AK, blast furnace coke, washed river sand of four different specific surface areas as non-caking components. Each caking coal (crushed below 0.2 mm) was mixed with various non-caking components in such a manner that their total weight was kept constant (6 g) while the specific surface area of additions per 1 g of coal varied from 265 to 35 700 cm^2. Mixtures were coked in a crucible (under a load of 10 g/cm^2) in a muffle furnace at 850 ± 25 °C for 15 minutes and then the proportion of uncaked material (%) and the strength of coke (Roga index) were determined. Experimental results for anthracite admixtures shown in Fig.1. The thickness of the binding layer was calculated on the basis that a sharp change in the Roga index for both coals took place when the surface area of anthracite added was about 1 500 cm^2 per g of coal, thus dividing specific volume of coal in the plastic state by the covered surface; the minimum thickness of the binding layer was about 7.5 μ. The amount of uncaked residue sharply changed for G6 coal at a surface area

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of anthracite of about 5 000 cm^2/g of coal and for K14 coal at 10 000 cm^2/g of coal, thus indicating that the amount of plastic phase produced by the above two coals was different. The results obtained indicated the importance of specific surface area of weakly caking and non-caking components, excessively fine crushing of which has a deleterious effect on the strength of the coke produced. Similar experiments repeated with coke and sand indicated that the nature of the non-caking admixture is important. At the same specific surface area of admixtures per g of coal, the strongest coke was obtained with anthracite and the weakest with sand.

b) For this investigation, samples of coke were obtained by coking in a plastometric vessel either two lumps of different coals joined together with polished surfaces or crushed coals separated during charging by a copper foil which was withdrawn before coking. From these samples, polished sections were obtained which were examined under the microscope. Coking was carried out under a pressure of 0.1 kg/cm^2 to a final temperature of 950 °C. The following pairs of coals were examined: OS6-G6, Zh21-OS6, Zh21-G6; (lumps); Zh21-G6,

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(crushed 5-3 mm); Zh21-OS6 (crushed 2-1 mm); Zh21-G6 (crushed below 0.2 mm); Zh21-OS6 (crushed 5-3 mm); Zh21-OS6 (crushed below 0.2 mm); G6-OS6 (crushed 5-3 mm); OS6-G6 (crushed below 0.2 mm); Zh21 (5-3 mm), OS6 (2-1 mm). The respective results are shown in Figs. 2-12. It was found that some coals react only on the boundary without interpenetration, the boundary line remains clearly visible, others penetrate into each other forming a homogeneous structure. The latter coals on fine crushing showed a decrease in the interpenetration, the boundary line remains visible, while the former (OS6-G6) do not react at all, forming two separate cokes.

c) The depth of interpenetration of the products of thermal decomposition of various coals was measured, using radioactive $Ca^{45}Cl_2$ with which coal grains were coated before coking. The experimental technique of coking was the same as for b). The results obtained are shown in Figs.13-17. The depth of penetration was found to depend on the nature of coal and its fineness. An increase in the fineness of either "penetrating" or "receiving" coals sharply decreases the degree of penetration.

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The Influence of the Degree of Fineness of Coals and Coal Blends During Coking. 68-1-2/22

Conclusions: 1) The interaction between grains of different coals on coking blends should be considered as a topo-chemical process; thus, the presence of chemical bonds between the decomposition products can be assumed even in cases when the coal grains retain their shape. 2) The depth of penetration of the plastic mass of coals into grains or into the decomposition products of other coals is determined by the mobility of the plastic mass and by the resistance shown by coal grains to penetrating liquid phase. This phenomenon is responsible for the physical side of interaction during the formation of coke and this necessitates prevention of overcrushing of coals. 3) It can be considered that coals passing into the plastic state (of the type of the Donets fat and coking coals) should be crushed not finer than 2-1 mm and even possibly 5-3 mm. Coals of the type of Donets OS6 and G6 should also not be finely crushed. The permissible degree of fineness should also depend on the proportion of a given coal in the blend. 4) In view of the above, existing schemes of coal preparation should be re-examined in order to prevent overcrushing. It is necessary to establish norms for the limiting content of below

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ZASHKVARA, V.G.; ARONOV, S.G., otv.red.; LIBERMAN, S.S., red.izd-va; ANDREYEV, S.P., tekhn.red.

[Organization of the storage of coking coals] Organizatsiia khraneniia koksuiushchikhsia uglei. Khar'kov, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1959. 253 p.

(Coal--Storage) (Coke industry) (MIRA 12:10)

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TITLE: Resources of Raw Materials and Coking Technology of the Donets Gas Coals on the Coking Gas Works

PERIODICAL: Koks i khimiya, 1959, Nr 10, pp 3-8 (USSR)

ABSTRACT: The distribution of the total output of coal from the Donets basin indicated that gas and long flame, ie low rank coals constitute the largest proportion (35.7% about 29 million tons) of the coal mined. The structure of the consumption of the mined coal (table 1) indicated that gas coals are used mainly for power generation. As, however, a majority of consumers require lump coal, there is a possibility of developing carbonisation of gas coals. Technical and economical aspects of the above possibility were investigated and are discussed in the paper. In 1958 the amount of fine gas coals amounted to 5 million tons (mainly burned in industrial and domestic grates) and will increase in 1965 to 9 million tons. The available

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resources of gas coals will steadily increase due to the sinking of new mines and a gradual withdrawal of gas coals from their use in railway transport. In order to obtain technical data on coking gas coals alone, laboratory and full scale carbonisation tests of two types of Donets gas coals (vol. matter about 35 and 38% respectively) were carried out. Proximate analyses of the coals tested - table 2, coking conditions - table 3, results of tests of the coke produced - table 4. It was established that a well fused coke, but of a lower size distribution and a lower strength can be obtained. The quality of the coke improves with an increasing rate of coking. In the normal size ovens the best results were obtained at a coking period of 14 hours and temperature in the control flues: coke side 1334° and pusher side 1316°C. It is considered that the construction of narrower than usual ovens for coking gas coals would permit higher coking rates at lower flue temperatures. Cokes

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