RADCHENKO, G.A.

Denoting ventilation conditions by the dust factor in boring in longwall workings. Izv.AN Kazakh.SSR.Ser.gor.dela,met.i stroimat. no.1:61-78 '52. (MLRA 9:8)
(Mine ventilation) (Mine dusts)

RADCHENKO, G.A., kandidat tekhnicheskikh nauk; BELOBORODOV, P.V., gornyy inzhener; TSOY, S., gornyy inzhener

Calculating ventilation of areas in the secondary crushing horizon as applied to stage ore crumbling systems. Bro'ba s sil. 2:159-172 '55. (MLRA 9:5)

1. Institut gornogo dela Akademii nauk Kazakhskoy SSR.
(MINE VENTILATION) (DUST--PREVENTION)

SHEPELEV,S.F., kandidat tekhnicheskikh nauk; RADCHENKO,G.A., kandidat tekhnicheskikh nauk

Ventilation of mines as a radical method of combating mine dust. Vest.AN Kazakh.SSR 11 no.8:55-67 Ag'55. (MLRA 9:1)
(Mine ventilation) (Mine dusts)

RADCHENKO, O.A.

Dust formation during secondary ore breaking by surface explosive charges in sublevel caving systems. Trudy Inst. gor. dela AN Kazakh. SSR 1:93-98 '56. (MIRA 11:1)

(Mining engineering) (Mine dusts)

RADCHENKO, G.A.

Determining the area range of gas and dust scattering during secondary breaking by surface explosive charges. Trudy Inst. gor. dela AN Kazakh. SSR 1:99-103 '56. (MIRA 11:1)
(Blasting) (Mine ventilation)

SHEPELEV, Semen Fedorovich, RADCHENKO, Grigoriy Alekseyevich; KEKIN, A.A., kandidat tekhnicheskikh nauk, otvetstvennyy redaktor; BRAILOVSKAYA, M.Ya., redaktor; ROROKINA, Z.P., tekhnicheskiy redaktor.

[Establishment of standards for the flow of air in the ventilation of mines with a silicosis risk] Ustanovlenie norm raskhoda vozdukha dlia provetrivaniia vyrabotok na silikozo-opasnykh rudnikakh. Alma-Ata, Izd-vo Akad.nauk Kazakhskoi SSR, 1957. 122 p. (MLRA 10:4)
(Mine ventilation)

Radchenko, G.A.

2116. ESTABLISHMENT OF STANDARDS FOR AIR FLOW FOR VENTILATION OF WORKING IN MINES WITH A SILICOSIS HAZARD. (USTANOVLENIE NORM RASKHODA VOZDUKHA DLYA PROVETRIVANIYA VYRABOTAKH NA SILIKOZOOPASNYKH RUDNIKAKH). Shepelev, S.F. and Radchenko, G.A. (Alma Ata: Acad Sci. Kazakh S.S.R., 1957, 12lpp., 5s.) title in Collet's Foreign Bk News, Nov. 1957, (17a), 3).

2

RADCHENKO G.A.

SHARIPOV, V.Sh.; MUSIN, A.Ch.; MUZGIN, S.S.; LYSENKO, I.Z.; RADCHENKO, G.A.; TRET'YAKOV, A.M.

Improvements in the technology of ore mining in Dzhezkazgan. Trudy Inst. gor. dela AN Kazakh. SSR 2:24-43 '57. (MIRA 10:12)
(Dzhezkazgan--Mining engineering)

RADCHENKO, G.A.; BELOBORODOV, P.V.

Distribution in height of dust concentrations, in diagonally connected air ducts. Trudy Inst. gor. dela AN Kazakh. SSR 2:173-188 '57.
(Mine dusts) (MIRA 10:12)

RADCHENKO, G.A.; BELOBORODOV, P.V.

Distribution of dust concentrations in the cross section of skeleton drift mining models. Trudy Inst. gor. dela AN Kazakh. SSR no.3:147-159 '58. (MIRA 11:6)
(Mine dusts) (Engineering models)

RADCHENKO, G.A.; BELOBORODOV, P.V.

Method of calculating the necessary amount of air for the ventilation of drift mines by the concentration of dust. Vest. AN Kazakh. SSR 14 no.1:25-39 Ja '58. (MIRA 11:2)
(Mine ventilation)

22225

S/124/61/000/003/017/028
A005/A105

11.7410

AUTHORS: Radchenko, G. A., and Beloborodov, P. V.

TITLE: The fields of high-dispersed aerosol concentration in air conduits

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 3, 1961, 76, abstract 3B513 (Tr. Soveshchaniya po prikl. gaz. dinamike, 1956. Alma-Ata, AN KazSSR, 1959, 223-229. Diskus., 229-230)

TEXT: The authors present results of an experimental investigation of the dustiness of a stream by means of a model of a mine air conduit consisting of a metallic pipe of quadratic cross section having a width of a = 0.35 m and a length of 20.9 m. Mine dust (γ = 2.5 g/cm^3) with about 1.32 micron in particle diameter was added to the stream. The dust consumption was maintained equal to 10 g/min. The experiments were conducted at 5 speeds within the range from 3.5 to 7.5 m/sec (for values of the Reynolds number from 1 up to 2 x 10^5). The curves of velocity- and dustiness distribution were taken at 7 cross sections of the conduit. The steady concentration field was found at a distance of about 50 a from the first point of dust supply into the stream. As a result of the

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A005/A105

The fields of high-dispersed ...

investigation, an empirical formula of the curve of concentration distribution over the stream cross section is suggested. There are 10 references.

Ye. Minskiy

[Abstractor's note: Complete translation]

Card 2/2

RADCHENKO, G.[illegible] kand.tekhn.nauk; BELOBORODOV, P.V., gornyy inzh.

Distribution of dust concentrations in continuous drift-type workings near the dust source. Bor'ba s sil. 3:109-117 '59. (MIRA 12:9)

(MINE DUSTS)

RADCHENKO, G.A. ; MAYLYBAYEV, E.A. ; KOLOMEYTSEV, Yu.P.

Ventilation intensity and the distribution of dust concentrations in ventilation currents during the various stages of stope panel mining. Izv. AN Kazakh. SSR. Ser. gor dela no.1:108-120 '60. (MIRA 13:10)

(Mine ventilation) (Mining engineering)

RADCHENKO, G.A.; MAYLYBAYEV, E.A.; KOLOMEYTSEV, Yu.P.

Characteristics of free, turbulent flow, spread out in wide chamber-like panels at various stages of mining. Izv. AN Kazakh. SSR. Ser. gor.dela no.2:105-122 '60. (MIRA 13:10)
(Mine ventilation) (Fluid dynamics)

RADCHENKO, G.A.

State of ventilation problems for mines presenting the danger of silicosis because of the dust factor. Trudy Inst. gor. dela AN Kazakh. SSR 5:164-176 '60. (MIRA 13:8)

(MINE VENTILATION) (LUNGS--DUST DISEASES)

RADCHENKO, G.A.; KUSTOV, V.N.; MAYLYBAYEV, E.A.

Aerodynamic characteristics of currents in stope ventilation as applied to new ore mining techniques at the Dzhezkazgan Mine. Trudy Inst. gor. dela AN Kazakh. SSR 6:166-182 '60. (MIRA 13:12)
(Dzhezkagan region--Stoping (Mining))
(Mine ventilation)

RADCHENKO, G.A.; MAYLYBAYEV, E.A.

Distribution of finely dispersed dust concentrations in ventilation currents circulating in limited areas. Trudy Inst. gor. dela AN Kazakh. SSR 6:192-204 '60. (MIRA 13:12)
(Mine ventilation)

RADCHENKO, G.A.; MYLYBAYEV, E.A.; KUSTOV, V.N.

Dust formation during blasting operations in stopes with chamber and pillar mining systems. Trudy Inst. gor. dela AN Kazakh. SSR 7:175-182 '60. (MIRA 14:6)
(Blasting) (Mine dusts)

SHEPELEV, S.F., kand.tekhn.nauk; RADCHENKO, G.A., kand.tekhn.nauk

All-Union Conference on Mine Ventilation and Dust Removal.
Vest.Kazakh.SSR 16 no.9:92-93 S '60. (MIRA 13:9)
(Mine ventilation--Congresses)

RADCHENKO, G.A., kand.tekhn.nauk; BELOBORODOV, P.V., gornyy inzhener

Modified apparatus for the uniform feeding of finely dispersed dust. Gig.i san. 25 no.8:36-38 Ag '60. (MIRA 13:11)

1. Iz Instituta gornogo dela Akademii nauk Kazakhskoy SSR.
(LUNGS--DUST DISEASES)

RADCHENKO, G.A.

Effect of fogging on the settling of fine dust after blasting in driftlike workings. Izv. AN Kazakh. SSR. Ser. gor. dela no.1:101-104 '61. (MIRA 15:2)

(Mine dusts)
(Blasting)

RADCHENKO, G.A.; MAYLYBAYEV, E.A.; KOLOMEYTSEV, Yu.P.

Flat jet covering the face of a longwall. Izv.AN Kazakh.SSR.Ser. gor.dela no.2:91-99 '61. (MIRA 15:2)
(Mine ventilation)

RADCHENKO, G.A.; MAYLYBAYEV, E.A.; KOLOMEYTSEV, Yu.P.

Characteristics of dust dynamics in the ventilating of a stoping panel with a flat limited jet. Izv.AN Kazakh.SSR.Ser.gor.dela no.2:107-113 '61. (MIRA 15:2)

(Mine ventilation)

RADCHENKO, G.A.; MAYLYBAYEV, E.A.; KOLOMEYTSEV, Yu.P.

Effect of the size of cavities on the parameters of free restricted flows acting in a space constrained by supporting pillars. Trudy Inst. gor.dela AN Kazakh.SSR 8:150-163 '61. (MIRA 15:4)
(Mine ventilation)

RADCHENKO, G.A.; MAYLYBAYEV, E.A.; KOLOMEYTSEV, Yu.P.

Relationship between the size of the worked area and the intensity of stope panel ventilation in the chamber and pillar system. Trudy Inst.gor.dela AN Kazakh.SSR 8:173-179 '61. (MIRA 15:4)
(Mine ventilation) (Mining engineering)

KEKIN, A.A., otv. red.; SHEPELEV, S.F., red.; RADCHENKO, G.A., red.; POLZIK, V.A., red.; KUZNETSOV, Yu.N., red.; ROROKINA, Z.P., tekhn. red.

[Transactions of the All-Union Conference on Mine Ventilation and Dust Removal] Trudy Vsesoiuznogo soveshchaniia po provetrivaniiu rudnikov i obespylivaniiu rudnichnogo vozdukha, Dzhezkazgan, 1960. Alma-Ata, Izd-vo AN Kaz.SSR, 1962. 267 p. (MIRA 16:9)

1. Vsesoyuznoye soveshchaniye po provetrivaniyu rudnikov i obespylivaniyu rudnichnogo vozdukha, Dzhezkazgan, 1960. 2. Komitet po koordinatsii nauchno-issledovatel'skikh rabot pri Sovete Ministrov Kaz.SSR (for Polzik). 3. Institut gornogo dela AN Kaz.SSR (for Radchenko, Shepelev, Kekin).
(Mine ventilation)

RADCHENKO, G.A.; MAYLYBAYEV, Z.A.

Effect of a nonisokinetic condition on the results of taking dust samples from air currents. Bor'ba s sil. 5:265-272 '62. (MIRA 16:5)

1. Institut gornogo dela AN KazSSR.
(Dust removal)

RADCHENKO, G.A.; MAYLYBAYEV, E.A.

Efficient length of stoping with regard to the dust factor in the panel-pillar system of working. Vest. AN Kazakh. SSR 19 no.9:93-102 S '63. (MIRA 16:11)

RADCHENKO, G.A.; KOLOMEYTSEV, Yu.P.; PRIKHOD'KO, V.Ye.

Dust and ventilation regime in the operation of self-propelled equipment in pits of the Dzhezkazgan Mine. Trudy Inst. gor. dela AN Kazakh. SSSR 10:181-194 '63. (MIRA 16:8)

(Dzhezkazgan District--Mine ventilation)

RADCHENKO, G.A.; MAYLYBAYEV, E.A.

Ventilation of a stope panel by a circulated jet in feeding it through a mined-out area. Trudy Inst. gor. dela AN Kazakh. SSR 11:143-154 '63. (MIRA 16:8)

(Mine ventilation)

RADCHENKO, G.A.; MAYLYBAYEV, E.A.

Ventilation in panel stoping in the primary mining stage with feeding of air along the worked-out area. Trudy Inst.gor.dela AN Kazakh.SSR 15:39-44 '64. (MIRA 18:2)

RADCHENKO, G.A., kand. tekhn. nauk

Measures for the control of mine air dustiness during the operation of self-propelled equipment. Gor. zhur. no.9: 57-61 S '64. (MIRA 17:12)

1. Institut gornogo dela AN KazSSR.

RA[illegible], G. A., Kand. tekhn. nauk

Effective systems for the ventilation of stoping sections in chamber and pillar workings. Vest. AN Kazakh SSR 22 no.8: 63-68 Ag '65. (MIRA 18:9)

RADCHENKO, G.A.

Experimental investigation of currents flowing around support pillars in a confined space. Fiz.-tekh. probl. razrab. pol. iskop. no.4:93-105 '65. (MIRA 19:1)

1. Institut gornogo dela AN KazSSR, Alma-Ata. Submitted Feb. 6, 1965.

BAICHENKO, G.I.; VINOKUROVA, L.A.

Parameters of dust dynamics in ventilation currents circulating in a stope panel during the extraction of thick deposits by the panel-pillar system of mining. Fiz.-tekh. probl. razrab. pol. iskop. no.5:119-127 '65. (MIRA 19:1)

1. Institut gornogo dela AN Kazakhskoy SSR, Alma-Ata.

L 00790-67 EWP(m)/EWT(1)
ACC NR: AR6014918 SOURCE CODE: UR/0124/65/000/011/B044/B044

47
B

AUTHOR: Radchenko, G. A.

TITLE: Velocity profiles of jets flowing around support pillars in a cleaning space

SOURCE: Ref. zh. Mekhanika, Abs. 11B290

REF SOURCE: Tr. In-ta gorn. dela. AN KazSSR, v. 16, 1965, 68-80

TOPIC TAGS: turbulent jet, cleaning technique, test model, flow profile, function

ABSTRACT: The results of experimental studies devoted to the problem of the propagation of turbulent jets in a space with support pillars with special division of the streams flowing around these obstacles are presented. Tests were performed with an experimental apparatus which was a model of cleaning excavations in 1/50 of natural size (the longitudinal dimension of the model was 3.14 m). As a result of the studies, it was found that the longitudinal velocity profiles in jets which are propagated in a bounded space with support pillars have only an approximate qualitative agreement with the Reichardt curve for submerged jets. In this, only in the area of propagation of semi-bounded jets are the velocity profiles expressed by exponential functions with the argument squared. In the remaining cases, this exponent varies from 1 to 4. On the whole, in the case in question, a slower decrease in the longitudinal velocities near the jet boundary than with a submerged

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ACC NR: AR6014918 O

jet in an unbounded space is observed. It is shown that, under the examined conditions, the intensity of mixing is comparable with the results obtained for a system of bounded jets, and that it considerably exceeds that obtained for free jets even with a special nonuniform velocity profile at the outlet. Bibliography of 19 citations. Yu. A. Lashkov [Translation of abstract]

SUB CODE: 20

Card 2/2

LANDYSHEVA, V.A.; KALININA, N.G.; REDCHENKO, G.G.; KUKIN, G.N.; CHERNOV, Ye.N.

Surface acetylated cotton. Report No.1. V.A.Landysheva and others. Izv.vys.ucheb.zav.; tekh.tekst.prom. no.3:50-56 '63. (MIRA 16:9)

1. Vladimirskiy nauchno-issledovatel'skiy institut sinteticheskikh smol (for Landysheva, Kalinina, Redchenko). 2. Moskovskiy tekstil'nyy institut (for Kukin, Chernov).

(Cotton)
(Acetylation)

KIRILLOVA, G.N.; RALCHENKO, G.O.

Interaction of cellulose with diketone. Zhur. prikl. khim. 37 no. 4:918-920 Ap '64. (MIRA 17:5)

LANDYSHEVA, V.A.; RADCHENKO, G.O.; SPIRINA, L.S.; CHERNOV, Ye.N.

Development of the process of surface acetylation of textile fibers. Zhur.prikl. khim. 37 no. 5:1087-1092 My '64.
(MIRA 17:7)

1. Vladimirskiy nauchno-issledovatel'skiy institut sinteticheskikh smol.

KIRILLOVA, G.N.; IVANNIKOVA, L.B.; RAPCHENKO, G.O.

Synthesis of cellulose acetoacetate. Zhur. prikl. khim. 37 no.12:2701 D '64. (MIRA 18:3)

L 14046-66 EWT(m)/EWP(j)/T RM

ACC NR: AR5020059 SOURCE CODE: UR/0081/65/000/012/S137/S137

AUTHOR: Radchenko, G.O.; Landyshev, V.A.

ORG: none

TITLE: State of work done on partial acetylization of cotton for the purpose of rot prevention

SOURCE: Ref. zh. Khimiya, Abs. 12S880

REF SOURCE: Sb. Khimiya i tekhnol. proizvodn. tsellyulozy. Vladimir, Verkhne-Volzhsk. kh. izd-vo, 1964, 86-92

TOPIC TAGS: textile, textile industry, processed plant product

TRANSLATION: The partial acetylization of cotton (PAC) making it more resistant to rot and to the effect of high temperatures and acids, gives better results when yardage is processed, rather than the finished products, because in acetizing the latter the inner fibers (IF) remain unaffected. It was established that cotton IF of various selected types possess a reaction potential. It is best to use for APC a coarse type of IF of the 108-F selection, which is most commonly used in the USSR. The PAC may be done by using either the liquid- or the vapor-phase methods. When the PAC processing is done in liquid media, the results are more homogeneous. A selection was made for

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ACC NR: AR5020059 O

the best liquid-phase activation of IF in acetic acid. The esterification was achieved by means of acetic anhydride in the presence of acetic acid and benzol, which may be substituted by non-combustible carbon tetrachloride. For a catalizer, $HClO_4$ was used. In order to obtain a PAC with good physical and mechanical properties, it is best to use a mixture which contains $\leq$ 1.2% of the IF weight. The PAC process may be done by using equipment for heterogeneous acetylization of cellulose and either the continuous or the periodic method. The PAC process is worked over on the usual textile equipment at cotton-spinning factories using the alkamon OS-2 antistatic preparation. The physical and mechanical properties of products made from acetylized cotton meet the requirements of the appropriate technical specifications. A study was made of the structure and properties of acetylized cotton. I. Val'kovskaya.

SUB CODE: 11

BVK
Card 2/2

RADCHENKO, Georgiy Pavlovich

"Concerning the Permian Flora of the Taimyr-Halbinsel of the Lower Course of the Piassina River," Dokl. AN SSSR, 26, No.7, 1940.

Geological Inst., Leningrad

AKSARIN,A.V.; ANAN'YEV,A.P.; BENEDIKTOVA,R.N.; GORBUNOV,M.G.; GRATSIANOVA, R.T.; YEGOROVA,L.I.; IVANIYA,V.A.; KRAYEVSKAYA,L.N.; KRASNOPEYEVA, P.S.; LEBEDEV,I.V.; LOMOVITSKAYA,M.P.; POLETAYEVA,O.K.; ROGOZIN,L.A.; RADCHENKO,G.P.; RZHONSNITSKAYA,M.A.; SIVOV,A.G.; FOMICHEV,V.D.; KHALFINA,V.K.; KHALFIN,L.L.; CHERNYSHEVA,S.V.; NIKITINA,V.N., redaktor; GUROVA,O.A., tekhnicheskiy redaktor

[Atlas of leading forms of fossils in the fauna and flora of Western Siberia] Atlas rukovodiashchikh form iskopaemykh fauny i flory zapadnoi sibiri. Pod red. L.L.Khalfina. Moskva, Gos. nauchno-tekhn.izd-vo lit-ry po geologii i okhrane nedr, Vol.1. 1955. 498 p. Vol.2. 1955. 318 p. [Microfilm] (MLRA 9:3)

1. Tomsk. Politekhnicheskiy institut imeni Kirova.
(Siberia, Western--Paleontology)

VOZNESENSKIY, D.V.; AMELANDOV,A.S.; GEYSLER, A.N.; GOLUBYATNIKOV, V.D.; [deceased]; DOMAREV, V.S.; DOMINIKOVSKIY, V.N.; DOVZHIKOV, A.Ye.; ZAYTSEV, I.K.; IVANOV, A.A ; ITSIKSON, M.I.; IZOKH, E.P., KNYAZEV, I.I.; KORZHENEVSKAYA, A.S.; MISHAREV, D.T.; SEMENOV, A.I.; MOROZENKO, N.K.; NEFEDOV, Ye.I.; RADCHENKO, G.P.; SERGIYEVSKIY, V.M.; SOLOV'YEV, A.T.; TALDYKIN, S.I.; UNKSOV, V.A.; KHABAKOV, A.V.; TSEKHOMSKIY, A.M.; CHUPILIN, I.I.; SHATALOV, Ye.T., glavnyy redaktor; KRASNIKOV, V.I., redaktor; MIRLIN, G.A., redaktor; RUSANOV,B.S, redaktor; POTAPOV, V.S., redaktor izdatel'stva; GUROVA, O.A., tekhnicheskiy redaktor.

[Instructions for organization and execution of geological surveys in scales of 1:50,000 and 1:25,000] Instruktsiia po organizatsii i proizvodstvu geologo-s"emochnykh rabot masshtabov 1:50,000 i 1:25,000. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po geol. i okhrane nedr. 1956. 373 p. (MLRA 10:6)

1. Russia (1923- U.S.S.R.) Ministerstvo geologii i okhrany nedr. (Geological surveys)

ANDREYEVA, Ye.M.; MANDEL'SHTAM, M.O.; RADCHENKO, G.P.; ROTAY, A.P.; KHALFIN, L.L.; YAVORSKIY, V.I.; OVCHINNIKOVA, S.V., redaktor izdatel'stva; GUROVA, O.A., tekhnicheskiy redaktor

[Atlas of principal forms of fossil fauna and flora of the Permian deposits in the Kuznetsk Basin] Atlas rukovodiashchikh form iskopaemykh fauny i flory permskikh otlozhenii Kuznetskogo basseina. Pod obshchei red. V.I.IAvorskogo. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po geol. i okhrane nedr, 1956. 409 p. (MLRA 10:2)
(Kuznetsk Basin--Paleontology, Stratigraphic)

RADCHENKO, G.P.

YAVORSKIY, Vasiliy Ivanovich; RADCHENKO, G.P., red.; POPOV, N.D., tekhn. red.

[Conditions of formation of coal-bearing deposits in the Kuznetsk Basin and their tectonics] Usloviia formirovania uglenosnykh otlozhenii Kuznetskogo basseina i ikh tektonika. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po geol. i okhrane nedr. 1957. p. 73 (Leningrad. Vsesoyuznyy geologicheskii institut. Trudy, vol.19). (MIRA 11:1)

(Kuznetsk Basin--Coal geology)

ORLOV, Yu.A., glavnyy red.; RAUZER-CHERNOUSOVA, D.M., otv.red.toma; FURSENKO, A.V., otv.red.toma; MARKOVSKIY, B.P., zam.glavnogo red.; RUZHENTSEV, V.Ye., zam.glavnogo red.; SOKOLOV, B.S., zam.glavnogo red.; VAKHRAMEYEV, V.A., red.; GEKKER, R.F., red.; GROMOVA, V.I., red.; DAVITASHVILI, L.Sh., red.; KRYMGOL'TS, G.Ya., red.; LUPPOV, N.P., red.; OBRUCHEV, D.V., red.; OVECHKIN, N.K., red.; POKROVSKAYA, I.M., red.; PCHELINTSEV, V.F., red.; RADCHENKO, G.P., red.; RODENDORF, B.B., red.; ROZHDESTVENSKIY, A.K., red.; SARYCHEVA, T.G., red.; SUBBOTINA, N.N., red.; TAKHMADZHAN, A.L., red.; FLEROV, K.K., red.; KHABAKOV, A.V., red.; CHERNYSHEVA, N.Ye., red.; EBERZIN, A.G., red.; KOTLYAREVSKAYA, P.S., red.izd-va; MOSKVICHEVA, N.I., tekhn. red.; POLENOVA, T.P., tekhn.red.

[Fundamentals of paleontology; reference book in fifteen volumes for paleontologists and geologists of the U.S.S.R.] Osnovy paleontologii; spravochnik dlia paleontologov i geologov SSSR v piatnadtsati tomakh. Moskva, Izd-vo Akad.nauk SSSR. Vol.1. [General part. Protozoa] Obshchaia chast'. Prosteishie. Otv.red. D.M.Rauzer-Chernousova, A.V.Fursenko. 1959. 481 p. (MIRA 12:7)
(Protozoa, Fossil)

3(0)
AUTHORS: Amantov, V. A., Radchenko, G. P. SOV/20-124-1-45/69

TITLE: Continental Permo-Triassic Sediments of Central Mongolia (Khangay Upland)
(O kontinental'nykh permo-triasovykh otlozheniyakh Tsentral'noy Mongolii (Khangayskoye nagor'ye))

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 1, pp 159-161 (USSR)

ABSTRACT: The floristically characterized sediments mentioned in the title were determined by geological investigations in the previously completely unknown region for sources of new stratigraphic and historical development data (by V. A. Amantov, A. A. Khrapov, V. A. Makarov and others). These Upper Permian and Lower Triassic sediments lie as isolated fields within flysch-like masses of Upper and Middle Paleozoic on the right Tamir bank and left Orkhon bank; further in the southern marginal regions of Khangay: around the mountain Ubun-Khangay, on the upper course of Ongin-Gol and at Bayan-Ulan. Permo-Triassic lies on the mentioned masses with a sharp angular discordance and with basal conglomerates. The folds are sometimes very complicated, even

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Continental Permo-Triassic Sediments of Central Mongolia (Khangay Upland)

fan-shaped, and have a tendency to be overturned. Coarse clastic and sandy-clayey sediments are most important here. There are fine and medium grained conglomerates with subordinate packets and interbeds of shale-aleurolith and shale. The color is a monotonous gray; cross-bedding of the delta type, clay contractions, and plant detritus indicate a continental, shallow water sedimentation. A section, which is 320 m thick, is divided into 3 parts (40, 200 and 80 m). The floristic assemblage found here is rather unusual in the opinion of the second author: on the one hand, typical late Permian Cordaitales plants (Noeggerathiopsis) with slender leaves and thick nervature are represented. They are characteristic of the latest Paleozoic flora of Siberia (second half of the Permian). On the other hand, remains of Tersiella and Paracalamites were identified here, which are known from the Lower Triassic (Maltsevskaya suite of the Kuzbass). Other Mesozoic elements (Yuccites typ. angustifolius), which have hitherto been known only from Triassic deposits, confirm the Mesozoic age. The second author has therefore determined the age as Lower Triassic, and here it can be even somewhat older, namely a transition from the Permian to the Triassic.

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Continental Permo-Triassic Sediments of Central Mongolia (Khangay Upland) SOV/20-124-1-45/69

A spore-pollen assemblage (isolated by I. E. Val'ts and Ye. M. Andreyeva) is most typical of the highest Permian horizon according to Ye. M. Andreyeva. The hitherto prevailing opinion that the fold belt of central and southern Khangay was completely consolidated in the Lower Triassic must be revised. On the contrary, the land was tectonically active and experienced in the late Permian and early Triassic a stage of fragmental tectonics, which caused a differential relief to appear and led to sedimentation of coarse, clastic continental masses in individual, closed, transverse flexures.

PRESENTED: July 24, 1958, by D. I. Shcherbakov, Academician

SUBMITTED: July 4, 1958

Card 3/3

MARKOVSKIY, B.P., otv.red.; ZANINA, I.Ye., red.; KIPARISOVA, L.D., red.; MIKLUKHO-MAKLAY, K.V., red.; POKROVSKAYA, I.M., red.; RADCHENKO, G.P., red.; GOROKHOVA, T.A., red.izd-va; GUROVA, O.A., tekhn.red.

[New species of ancient plants and invertebrates of the U.S.S.R.] Novye vidy drevnikh rastenii i bespozvonochnykh SSSR. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po geol. i okhrane nedr. Pt.2. 1960. 521 p. (MIRA 13:10)

1. Leningrad. Vsesoyuznyy geologicheskiy institut.
(Invertebrates, Fossil)

MARKOVSKIY, B.P., otv.red.; ZANINA, I.Ye., red.; KIPARISOVA, L.D., red.; MIKLUKHO-MAKLAY, K.V., red.; POKROVSKAYA, I.M., red.; RADCHENKO, G.P., red.; ROSSOVA, S.M., red.izd-va; GUROVA, O.A., tekhn.red.

[New species of ancient plants and invertebrates of the U.S.S.R.] Novye vidy drevnikh rastenii i bespozvonochnykh SSSR. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po geol. i okhrane nedr. Pt.1. 1960. 611 p. (MIRA 13:12)

1. Leningrad. Vsesoyuznyy geologicheskiy institut. (Paleontology)

ORLOV, Yu.A., glavnyy red.; MARKOVSKIY, B.P., zam.glavnogo red.; RUZHENTSEV, V.Ye., zam.glavnogo red.; SOKOLOV, B.S., zam.glavnogo red.; SARYCHEVA, T.G., otv.red.toma; VAKHRAMEYEV, V.A., red.; GEKKER, R.F., red.; GROMOVA, V.I., red.; DAVITASHVILI, L.Sh., red.; KRYMGOL'TS, G.Ya., red.; LUPPOV, N.P., red.; OBRUCHEV, D.V., red.; OVECHKIN, N.K., red.; POKROVSKAYA, I.M., red.; PCHELINTSEV, V.F., red.; RADCHENKO, G.P., red.; RAUZER-CHERNOUSOVA, D.M., red.; RODENDORF, B.B., red.; ROZHDESTVENSKIY, A.K., red.; SUBBOTINA, N.N., red.; TAKHTADZHAN, A.L., red.; FLEROV, K.K., red.; FURSENKO, A.V., red.; KHABAKOV, A.V., red.; CHERNYSHEVA, N.Ye., red.; EBERZIN, A.G.; NEVESSKAYA, L.A., red.izd-va; POLENOVA, T.P., tekhn.red.

[Fundamentals of paleontology; manual in fifteen volumes for paleontologists and geologists of the U.S.S.R.] Osnovy paleontologii; spravochnik dlia paleontologov i geologov SSSR v piatnadtsati tomakh. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po geol. i okhrane nedr. Vol.7. [Polyzoa, Brachiopoda. Supplement: Phoronidea] Mshanki, brakhiopody. Prilozhenie: Foronidy. Otvet.red.T.G. Sarycheva. 1960. 342 p. plates. (MIRA 14:4)
(Polyzoa, Fossil) (Brachiopoda, Fossil)
(Phoronidea, Fossil)

ORLOV, Yu.A., glavnyy red.; MARKOVSKIY, B.P., zam.glavnogo red.; RUZHENTSEV, V.Ye., zamestitel' glavnogo red.; SOKOLOV, B.S., zamestitel' glavnogo red.; EBERZIN, A.G., otv.red.toma; KIPARISOVA, L.D., red.; SHIMANSKIY, V.N., red.; VAKHRAMEYEV, V.A., red.; GEKKER, R.F., red.; GROMOVA, V.I., red.; DAVITASHVILI, L.Sh., red.; KRYMGOL'TS, G.Ya., red.; LUPPOV, N.P., red.; OBRUCHEV, D.V., red.; OVECHKIN, N.K., red.; POKROVSKAYA, I.M., red.; PCHELINTSEV, V.F., red.; RADCHENKO, G.P., red.; RAUZER-CHERNOUSOVA, D.M., red.; RODENDORF, B.B., red.; ROZHDESTVENSKIY, A.K., red.; FLEROV, K.K., red.; FURSENKO, A.V., red.; KHABAKOV, A.V., red.; CHERNYSHEVA, N.Ye., red.; KORDE, K.B., red.izd-va; POLENOVA, T.P., tekhn.red.

[Fundamentals of paleontology; reference book in 15 volumes for paleontologists and geologists of the U.S.S.R.] Osnovy paleontologii; spravochnik dlia paleontologov i geologov SSSR v piatnadtsati tomakh. Moskva, Izd-vo Akad.nauk SSSR. Vol.3. [Mollusks: Loricata, Bivalvia, Scaphopoda] Molliuski - pantsirnye, dvustvorchatye, lopatonogie. Otvet.red. A.G.Eberzin, 1960. 299 p.
(Mollusks, Fossil) (MIRA 14:1)

RADCHENKO, G.P.; ROZENKRANTS, A.A.

New data on Permian sediments in the northeastern Balkhash region.
Sov. geol. 3 no.4:111-115 Ap '60. (MIRA 13:11)

1. Vsesoyuznyy aerogeologicheskiy trest i Vsesoyuznyy nauchno-issledovatel'skiy geologicheskiy institut.
(Balkhash region--Sediments (Geology))

RADCHENKO, G.P.

Study of plant remains from Devonian sediments of the Altai-Sayan Mountain region. Trudy VSEGEI 70:5-8 '62. (MIRA 15:11)
(Altai Mountains--Paleobotany, Stratigraphic)
(Sayan Mountains--Paleobotany, Stratigraphic)

PETROSYAN, N.M.; RADCHENKO, G.P.

Stratigraphy of Devonian sediments of the Altai-Sayan Mountain region. Trudy VSEGEI 70:9-22 '62. (MIRA 15:11)
(Altai Mountains--Geology, Stratigraphic)
(Sayan Mountains--Geology, Stratigraphic)

ANDREYEVA, Ye.M.; PETROSYAN, N.M.; RADCHENKO, G.P.

New data on the phytostratigraphy of Devonian sediments in the Altai-Sayan Mountain region. Trudy VSEGEI 70:23-59 '62.
(MIRA 15:11)

(Altai Mountains--Paleobotany, Stratigraphic)
(Sayan Mountains--Paleobotany, Stratigraphic)

LEPEKHINA, V.G.; PETROSYAN, N.M.; RADCHENKO, G.P.

Most important Devonian plants in the Altai-Sayan Mountain region. Trudy VSEGEI 70:61-189 '62. (MIRA 15:11)
(Altai Mountains--Paleobotany)
(Sayan Mountains--Paleobotany)

ORLOV, Yu.A., glav. red.; TAKHTADZHYAN, A.L., otv. red.; VAKHRAMEYEV, V.A., red.; RADCHENKO, G.P., red.; SHVEDOV, N.A., red.; VASILEVSKAYA, N.D., red.; TURUTANOVA-KETOVA, A.I., red.; MURAV'YEVA, O.A., red.; POKROVSKAYA, I.M., red.; YATSENKO-KHMELEVSKIY, A.A., red.; GOROKHOVA, T.A., red. izd-va; GUROVA, O.A., tekhn. red.

[Fundamentals of paleontology; manual for paleontologists and geologists of the U.S.S.R. in 15 volumes] Osnovy paleontologii; spravochnik dlia paleontologov i geologov SSSR v piatnadtsati tomakh. Glav. red. IU.A.Orlov. Moskva, Izd-vo AN SSSR. Vol.15.[Gymnosperms and angiospersm] Golosemennye , pokrytosemennye. 1963. 742 p. (MIRA 16:11)
(Gymnosperms, Fossil) (Angiosperms, Fossil)

ORLOV, Yu.A., glav. red.; MAKROVSKIY, B.P., zam. glav. red.; RUZHENTSEV, V.ye., zam. glav. red.; SOKOLOV, B.S., zam. glav. red.; VAKHRAMEYEV, V.A., otv. red.; RADCHENKO, G.P., red.; TAKHTADZHAN, A.L., red.; KOTLYAREVSKAYA, P.S., red.izd-va; LAUT, V.G., tekhn. red.

[Fundamentals of paleontology; manual for paleontologists and geologists of the U.S.S.R. in 15 volumes] Osnovy paleontologii; spravochnik dlia paleontologov i geologov SSSR v piatnadtsati tomakh. Moskva, Izd-vo AN SSSR. Vol.14. [Algae, bryophytes, psilophytales, lycopsids, arthrophytes, ferns] Vodorosli, mokhoobraznye, psilofitovye, plaunovidnye, chlenistostebel'nye, paporotniki. Pod red. V.A.Vakhrameeva, G.P.Radchenko, A.L.Takhtadzhana. 1963. 697 p. (MIRA 16:10)
(Paleobotany, Stratigraphic)

BYKADOROV, V.S., red. toma; PEKARETS, P.A., red. toma; RADCHENKO, G.P., red. toma; RYABOKON', N.F., red. toma; TKALICH, S.M., red. toma; IZRAILEVA, G.A., ved. red.

[Geology of coal and oil shale deposits in the U.S.S.R.] Geologiia mestorozhdenii uglia i goriuchikh slantsev SSSR. Vol.8. 1964. 790 p. (MIRA 17:12)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy geologicheskiy komitet.

RADCHENKO, I.

Television plug. Radio no.12:19 D '60. (MIRA 14:1)

1. Sovkhoz "Krasnyy partizan," Khersonskaya oblast'.
(Television--Equipment and supplies)

RADCHENKO, I., chempion SSSr po aviamodelizmu.

Engine and the propeller of a racing model. Kryl.rod. 11 no.8: 29-30 Ag '60. (MIRA 13:8)
(Airplanes--Models)

RADCHENKO, I., master sporta

Let us consider the engine-propeller unit. Kryl.rod. 13 no.7:26-27 Jl '62. (MIRA 16:2)

(Airplanes—Models)

FOGEL', N.; RADCHENKO, I.

Simple home-made apparatus for cauterization. Vrach.delo no.5:529 My '59. (MIRA 12:12)

1. Khersonskaya oblastnaya bol'nitsa.
(GAUTERY)

RADCHENKO, I.A.

Designing the detector stage for a radio receiver by graphical and analytical methods. Izv. vys. ucheb. zav.; radiotekh. no.2: 131-140 Mr-Ap '58. (MIRA 11:5)

1. Rekomendovana kadedroy teoreticheskoy radiotekhniki L'vovskogo politekhnicheskogo instituta.
(Radio--Receivers and reception)

AUTHORS: Livshits, S.A. and Radchenko, I.A. SOV/133-59-9-27/31

TITLE: Technico-Economical Comparison of the Production of Low Grade Ferrosilicon by the Blast Furnace and Electro-thermal Processes

PERIODICAL: Stal', 1959, Nr 9, pp 846-849 (USSR)

ABSTRACT: On the initiative of the Gosplan SSSR and Gosplan RSFSR it is planned to replace during 1959-1965 the production of blast furnace ferrosilicon by the production of 18% ferrosilicon by the electrothermal method. It was already decided to design a new ferroalloy plant for the Chelyabinsk Works, utilising a considerable proportion of its capacity for the production of low grade ferrosilicon, excluding the production of blast furnace ferrosilicon from the works. The authors consider that this decision is wrong and to prove their point they made a technico-economical comparison of producing low grade ferrosilicon by the above two methods in application to conditions existing on the Chelyabinsk Works. The basis for the comparison was as follows: The blast furnace process will be carried out with oxygen enriched blast (up to 32%), heated to 950°C, with

Card 1/3

Technico-Economical Comparison of the Production of Low Grade Ferrosilicon by the Blast Furnace and Electrothermal Processes

a high top pressure; one blast furnace producing 500,000 t/year of 12% ferrosilicon will be used. The electrothermal process will be carried out in electric-ferroalloy furnaces of the closed type with transformers of 16,500 kw; the content of silicon in the alloy will be 18% with the equivalent output in respect of silicon of 330,000 t/year. Comparison of the costs of production of ferrosilicon by the above two methods and the corresponding capital expenditure are given in tables 1 and 2 respectively. It is concluded that: the blast furnace method allows for the production of ferrosilicon from low grade silicious ores and scrap (not suitable for the open hearth process) while the electrothermal method requires steel shavings which can be used in steel making furnace. Under the conditions of the Chelyabinsk Works, the blast furnace method of producing ferrosilicon is more advantageous as the production cost of a unit weight of silicon and the capital expenditure are lower by 38 to 39% and by 100 to 110 million

Technico-Economical Comparison of the Production of Low Grade Ferrosilicon by the Blast Furnace and Electrothermal Processes

roubles respectively. In the comparison of the capital costs, the electrothermal method is additionally debited by the cost of production of the additional iron which is produced in the ferrosilicon blast furnace. There are 2 tables.

ASSOCIATION:Giprostal'

RADCHENKO, I.A.

Semigraphical method for calculating detector circuits with two nonlinear elements. Avtom.kont.i izm.tekh. no.6:88-92 '62. (MIRA 16:2)

(Radio detectors) (Radio filters)

RADCHENKO, I. S.

154 Vvedeniye V Molekulyarnuyu Fiziku. (Ucheb. Posobiye Dlya Un-tov I Ped. In-tov Ukr Sssr . Izd. 2-E, Pererabot. - Dop. Kiev. "Rad. Shkola", 1954. 475S. S Ill. 23SK. 3.000 EKZ. 10 R 70K. V Per.-- Na Ukr. Yaz.--(54-54794)
539

SO: Knizhnaya, Letopis, Vol. 1, 1955

A"SENOVA, [illegible]; GRUBOV, V.I.; RADCHENKO, I.F.

Optimal characteristics of the compounding of a settling rectification column. Avtom. i prib. no.1:18-21 Ja-Mr '65. (MIRA 18:8)

RADCHENKO, I. I.

Dissertation: "Heat Exchange and Productivity of Tunnel Kilns for the Burning of Dinas Brick." Cand Tech Sci, Dnepropetrovsk Metallurgical Inst, Dnepropetrovsk, 1954. Referativnyy Zhurnal--Khimiya, Moscow, No 14, Jul 54.

SO: SUM No. 356, 25 Jan 1955

GOL'DFARB, Emil' Mikhaylovich; KRAVTSOV, Aleksandr Feodos'yevich; RADCHENKO, Irina Ivanovna; ROZENGART, Yuriy Iosifovich; SEMIKHIN, Iosif Danilovich; TAYTS, Noy Yur'yevich, prof., doktor tekhn. nauk, red.; CHUMACHENKO, T., vedushchiy red.; BESPYATOV, R., tekhn. red.

[Calculations for heating furnaces] Raschety nagrevatel'nykh pechei. Pod red. N.IU. Taitsa. Kiev, Gos. izd-vo tekhn. lit-ry USSR, 1958. 421 p. (MIRA 11:8)

(Furnaces, Heating)

32777
S/137/61/000/012/002/149
A006/A101

15 2630

AUTHORS: Zegzhda, D.P., Radchenko, I.I.

TITLE: Investigation of heat conductivity and thermal expansion of alumosilicate masses

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 12, 1961, 4, abstract 12B18 ("Tr. Nauchn. tr. Dnepropetrovsk. metallurg. in-t", 1958, no. 36, 95 - 104)

TEXT: The method of non-stationary heat process was employed to determine heat conductivity of roasted specimens, 40 mm in diameter, of four compositions: Al_2O_3, Al_2O_3 $2SiO_2$, Al_2O_3 SiO_2 and Al_2O_3 $4SiO_2$, in pure state and with admixtures of 2% MgO or TiO_2. The nature of changes in the heat conductivity with changing volumetric weight was determined not from the ratio of the main oxide components but from the presence and nature of mineralizers, which accelerate the formation of mullite and thus change the structure of the body and its properties. In pure masses, heat conductivity increases gradually with higher temperatures; in masses with admixtures it increases rapidly up to 500 - 600°C, passing through a maximum, and then decreases. This is explained by the high

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32777
S/137/61/000/012/002/149
A006/A101

Investigation of heat conductivity ...

degree of the crystalline phase development. The highest thermal expansion determined by VNIIO differential dilatometer, was observed in pure masses; mineralizers MgO, TiO_2 and K_2O reduce thermal expansion.

N. Molchanov

[Abstracter's note: Complete translation]

Card 2/2

S/137/62/000/001/001/237
A060/A101

AUTHOR: Radchenko, I.I.

TITLE: Engineering method for calculating the cooling of the material together with the furnace

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 1, 1962, 1, abstract 1B2 ("Nauchn. tr. Dnepropetrovsk. metallurg. in-t", 1959, no. 36, 174 - 179)

TEXT: The differential equation for the cooling of articles together with the furnace after heat-treatment is set up and solved. The method of solution consists in the simultaneous solution of the heat-transfer equation and the thermal equilibrium equation for the cooling articles and the furnace brick work. In setting up and solving the equations a number of simplifying assumptions are made which are not discussed in the article. The solution obtained may be used in thermotechnical calculations for heat-treatment practice.

E. Gol'dfarb

[Abstracter's note: Complete translation]

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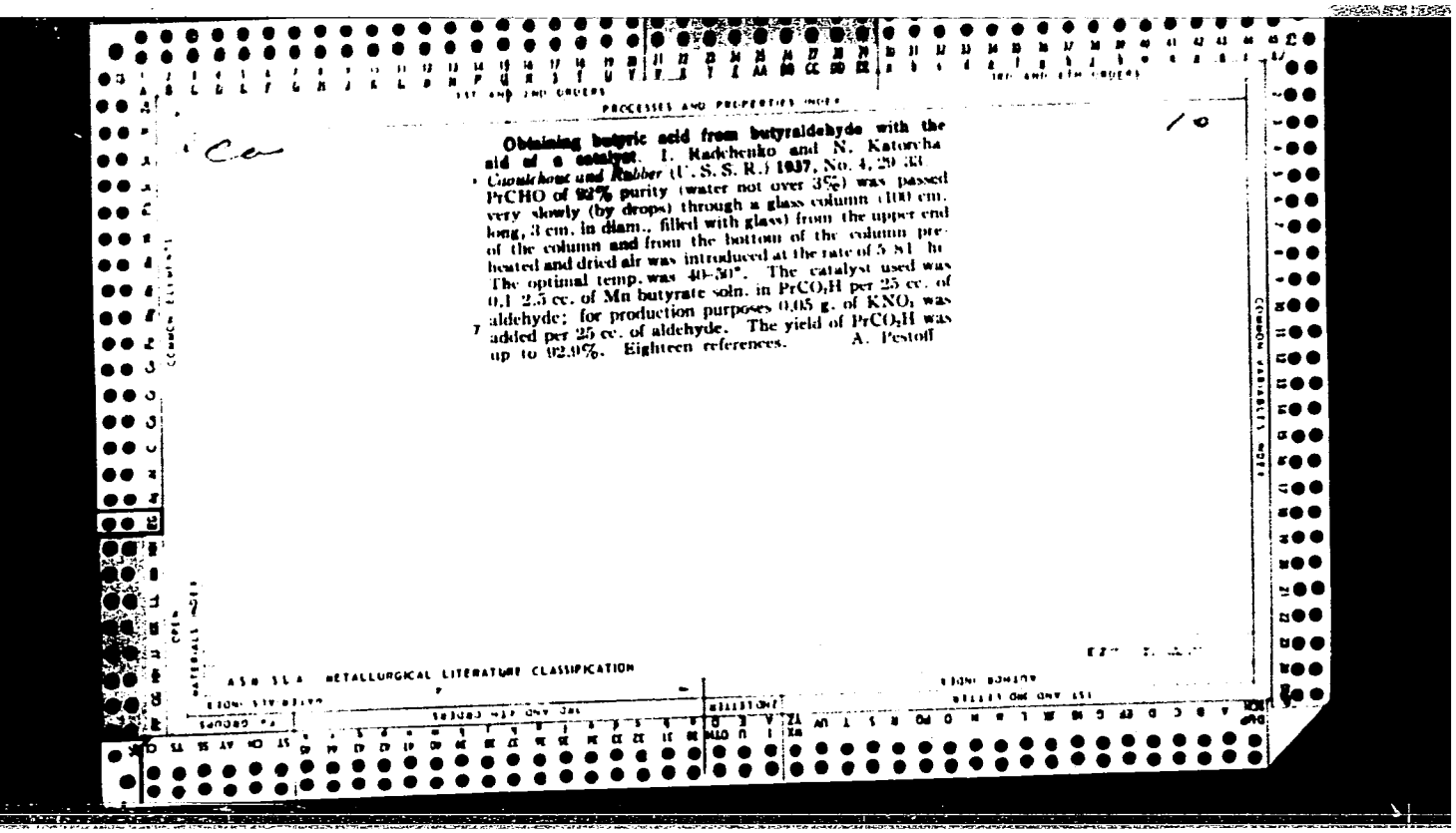
SEMKIN, Iosif Danilovich; AVERIN, Sergey Ivanovich; RADCHENKO, Irina Ivanovna; KOVALEV, A.P., prof., doktor tekhn. nauk retsenzent; TELEGIN, A.S., dots., kand. tekhn. nauk, retsenzent

[Fuel and fuel management in metallurgical plants] Toplivo i toplivnoe khoziaistvo metallurgicheskikh zavodov. Moskva, Metallurgiia, 1965. 391 p. (MIRA 18:11)

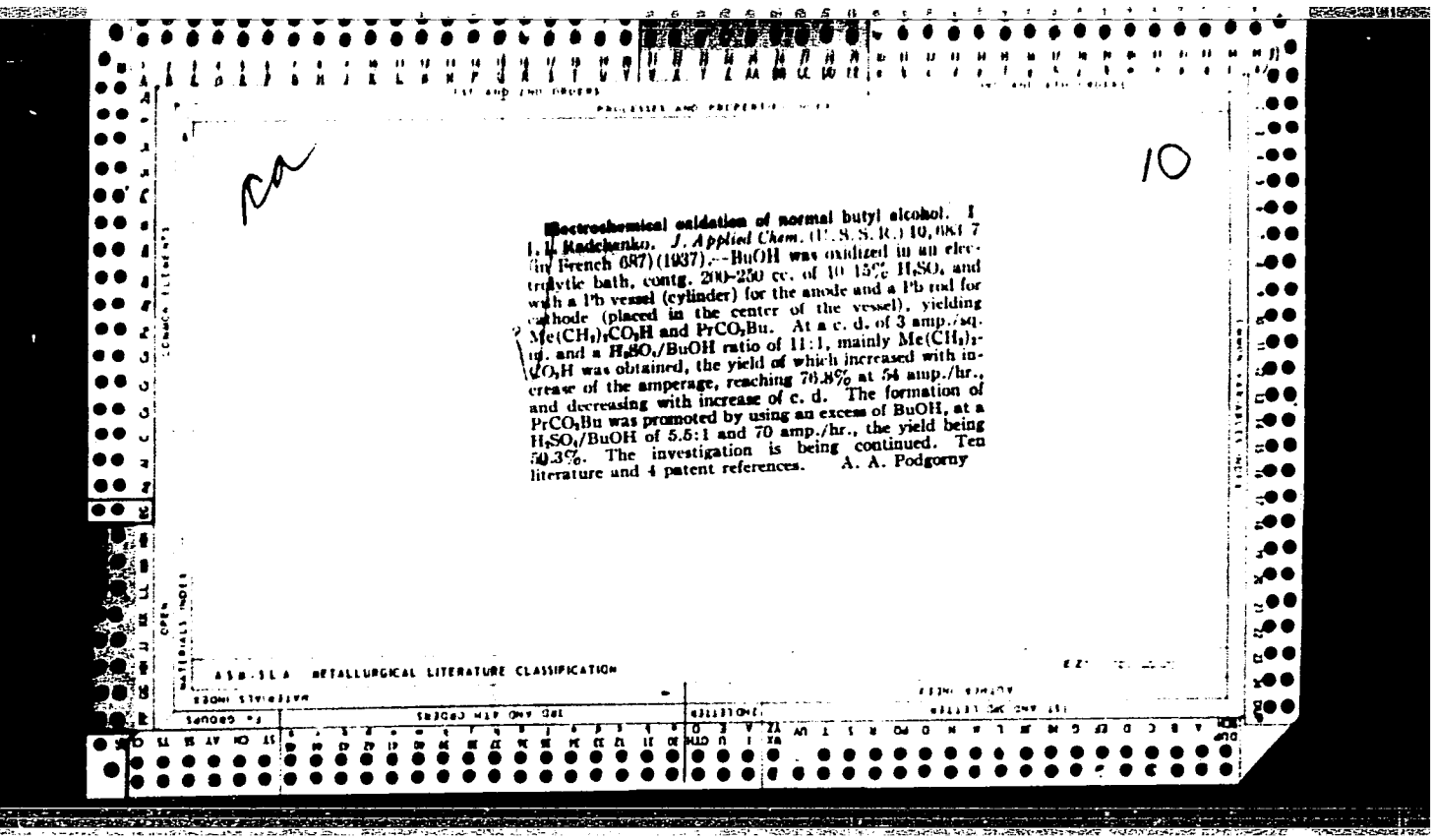
ZHUKOV, M.A.; RADCHENKO, I.I.

Age of ancient sediments in the central part of the Bet-Pak-Dala anticlinorium. Izv. AN Kazakh. SSR. Ser. geol. 21 no.3:88-92 My-Je '64. (MIRA 17:11)

1. Kazakhskiy politekhnicheskiy institut, Alma-Ata.



Obtaining butyric acid from butyraldehyde with the aid of a catalyst. I. Radchenko and N. Katorcha. *Caoutchouc and Rubber* (U. S. S. R.) **1937**, No. 4, 29-33. PrCHO of 98% purity (water not over 3%) was passed very slowly (by drops) through a glass column (100 cm. long, 3 cm. in diam., filled with glass) from the upper end of the column and from the bottom of the column pre-heated and dried air was introduced at the rate of 5-8 l. h. The optimal temp. was 40-50°. The catalyst used was 0.1-2.5 cc. of Mn butyrate soln. in $PrCO_2H$ per 25 cc. of aldehyde; for production purposes 0.05 g. of KNO_3 was added per 25 cc. of aldehyde. The yield of $PrCO_2H$ was up to 92.0%. Eighteen references. A. Pestoff



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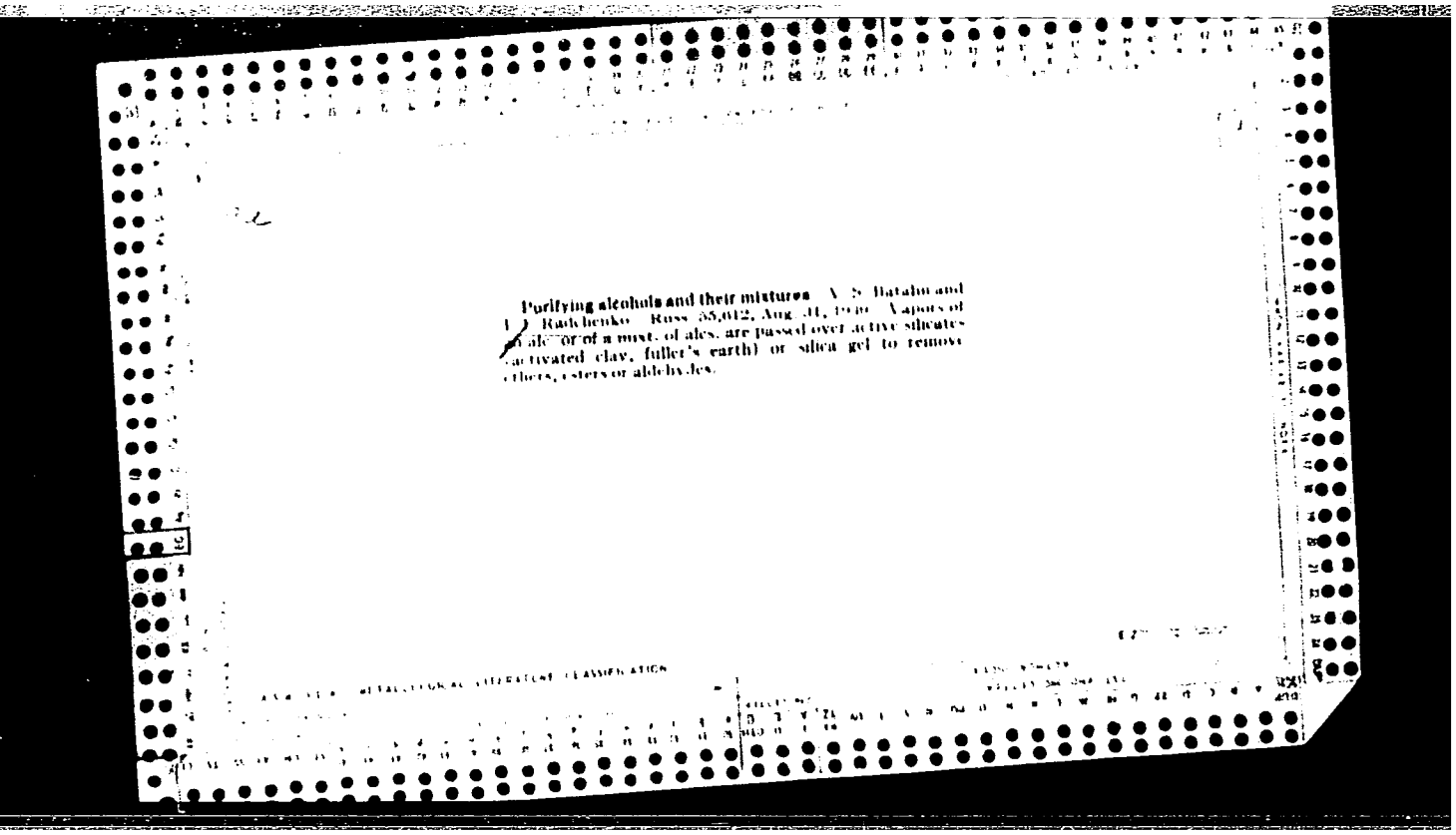
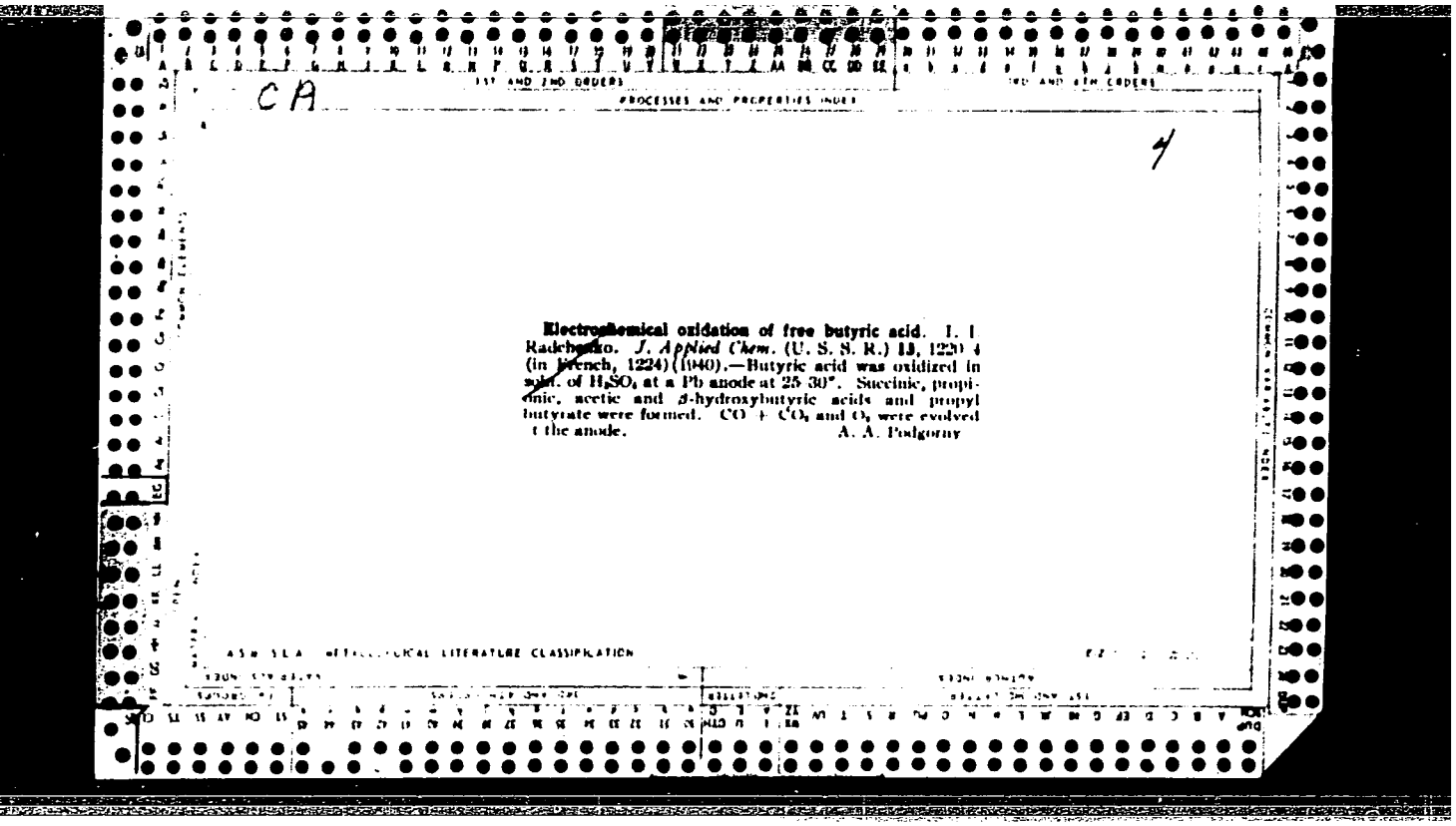
Electrochemical oxidation of normal butyl alcohol. I. I. Kadchenko. *J. Applied Chem.* (U.S.S.R.) 10, 687-7 (in French 687) (1937).—BuOH was oxidized in an electrolytic bath, contg. 200–250 cc. of 10–15% H_2SO_4 and with a Pb vessel (cylinder) for the anode and a Pb rod for cathode (placed in the center of the vessel), yielding $Me(CH_2)_2CO_2H$ and $PrCO_2Bu$. At a c. d. of 3 amp./sq. and a H_2SO_4/BuOH ratio of 11:1, mainly $Me(CH_2)_2CO_2H$ was obtained, the yield of which increased with increase of the amperage, reaching 76.8% at 54 amp./hr., and decreasing with increase of c. d. The formation of $PrCO_2Bu$ was promoted by using an excess of BuOH, at a H_2SO_4/BuOH of 5.5:1 and 70 amp./hr., the yield being 50.3%. The investigation is being continued. Ten literature and 4 patent references. A. A. Podgorny



Purifying alcohols and their mixtures V. S. Batalin and I. P. Radchenko. Russ. 55,012, Aug. 31, 1939. Vapors of alcohol or of a must of ales. are passed over active silicates (activated clay, fuller's earth) or silica gel to remove ethers, esters or aldehydes.



CA

1ST AND 2ND ORDERS

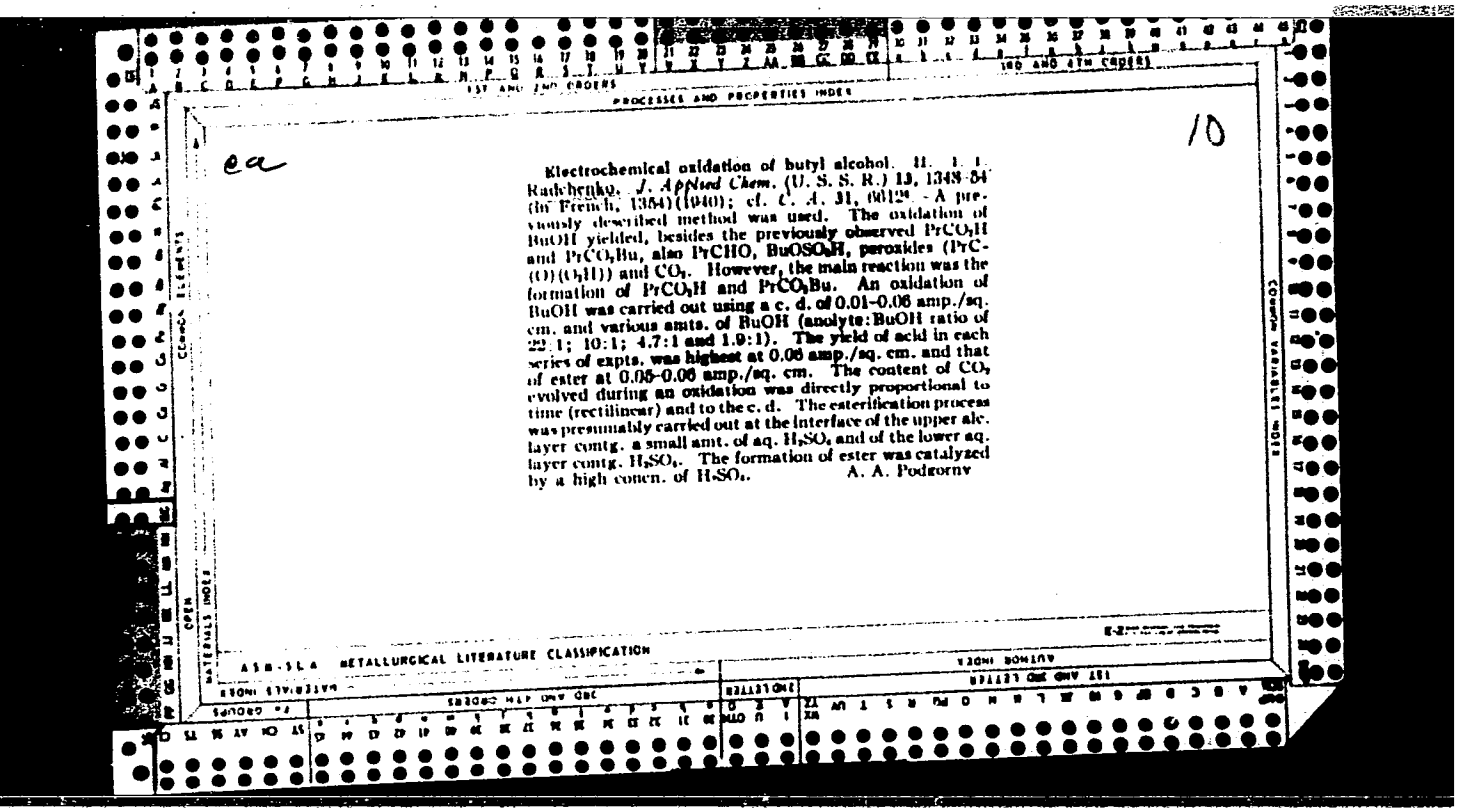
PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

4

Electrochemical oxidation of free butyric acid. I. I. Radchenko. *J. Applied Chem.* (U. S. S. R.) **13**, 1220-4 (in French, 1224)(1940).—Butyric acid was oxidized in soln. of H_2SO_4 at a Pb anode at 25-30°. Succinic, propionic, acetic and β-hydroxybutyric acids and propyl butyrate were formed. CO + CO_2 and O_2 were evolved at the anode. A. A. Podgorny

ASTIA TECHNICAL LITERATURE CLASSIFICATION



PROCESSES AND PROPERTIES INDEX

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Electrochemical oxidation of butyl alcohol. II. I. I. Radchenko. *J. Applied Chem.* (U. S. S. R.) 13, 1348-54 (in French, 1354)(1940); cf. C. A. 31, 8012⁹. - A previously described method was used. The oxidation of BuOH yielded, besides the previously observed $PrCO_2H$ and $PrCO_2Bu$, also PrCHO, $BuOSO_2H$, peroxides (PrC(O)(O$_2$H)) and CO_2. However, the main reaction was the formation of $PrCO_2H$ and $PrCO_2Bu$. An oxidation of BuOH was carried out using a c. d. of 0.01–0.06 amp./sq. cm. and various amts. of BuOH (anolyte:BuOH ratio of 22:1; 10:1; 4.7:1 and 1.9:1). The yield of acid in each series of expts. was highest at 0.06 amp./sq. cm. and that of ester at 0.05–0.06 amp./sq. cm. The content of CO_2 evolved during an oxidation was directly proportional to time (rectilinear) and to the c. d. The esterification process was presumably carried out at the interface of the upper alc. layer contg. a small amt. of aq. H_2SO_4 and of the lower aq. layer contg. H_2SO_4. The formation of ester was catalyzed by a high concn. of H_2SO_4.

A. A. Podgornv

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

RADCHENKO, I. I.

Reactions of free radicals in solutions. VI. Mechanism of decomposition of alkylaryltriazenes in the presence of water and acids. V. Ya. Andakushkin, B. A. Dolgoplosk, and I. I. Radchenko. *Zhur. Obshchei Khim.* 26, 2972–80 (1956); cf. C.A. 49, 12339e; 51, 4043i.—The kinetics of the decompn. of MeN:NNHPh and BuN:NNHPh in aq. MeOH and wet C_6H_6 were studied. Addn. of H_2O to the anhyd. solvents results in a steady increase of the rate of decompn. (kinetic curves at 20° are shown). In dry solvents no decompn. takes place at 20° or even 40°. Addn. of $(sec\text{-}Bu)_2C_6H_3SO_3Na$ emulsifier accelerates the decompn. by 100%. The decompn. is most rapid at pH 1, while in very alk. solns. (pH above 10), the triazenes decompd. only very slowly. During the decompn. of the Me deriv. in H_2O or in neutral emulsions the gaseous product was almost pure N, amounting to ⅔ of the N content of the triazene, with very small amts. of C_2H_6; among the liquid products MeOH and $PhNH_2$ were identified; no PhOH, aliphatic amines, or aromatic hydrocarbons were found. In the decompn. of the Bu deriv. the gases contained N_2, butane, and butene, the latter predominating over the satd. hydrocarbon; BuOH and $PhNH_2$ were found in the liquid products. Decompn. of the Me deriv. in aq. HCl always gave larger vols. of gases than were obtained in neutral medium; in 2–2.5*N* HCl the total gas vol. exceeded the theoretical (calcd. on N expected from the triazene) by some 35–45%, owing to the presence of MeCl, with a decreased yield of MeOH. Org. acids accelerate the decompn. and yield esters; oleic and BzOH caused the Me deriv. to yield Me esters of these acids. In the presence of S there is formed Me_2S_x, reducing the yield of MeOH; in the presence of $PhCH:CH_2$, the latter is polymerized, again with a reduced yield of MeOH. Thus, the mechanism of decompn. of the triazenes is probably the reaction such as that with H_2O, which yields $PhNH_2$ and RN:NOH; the latter cleaves into N and forms a free radical R and OH.

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which may recombine to ROH or may react with other substrates present. G. M. Kosolapoff

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Reactions of free radicals in solutions. VII. Role of activators in the process of decomposition of triazenes and in initiation of polymerization. V. Ya. Andakushkin, B. A. Dolgoplosk, and I. I. Radchenko (S. V. Lebedev Synthetic Rubber All-Union Sci. Research Inst., Moscow). *Zhur. Obshchel Khim.* 26, 3403–9(1956); *cf. C.A.* 51, 8674a. —It was shown that decompn. of PhNHN:NMe and PhNHN:NBu is accelerated by the addn. of glucose, hydroquinone, ascorbic acid, $FeSO_4$, and Na_2SO_3; the kinetic curves of the rates of decompn. are shown. The most effective addends are in order ascorbic acid, $FeSO_4$, Na_2SO_3, hydroquinone, and glucose. In this reaction the addends are unchanged and do not affect the nature of the products of decompn. Precisely analogous results were obtained with these addends in polymerization of $PhCH:CH_2$ in emulsions in the presence of PhNHN:NR. Thus, the latter appear to be catalyzed in their hydration reaction by the above list of addends; the hydration leads apparently to $PhNH_2$ and RN:NOH, which reaction leads to free radical initiation in the decompn. of the diazohydrates.

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RADCHENKO, I. I.

4585. Production of α-methyl styrene and butadiene-methyl styrene rubber. M. S. Nemtsov, I. I. Radchenko and S. L. Fisher. *Khim. Nauka i Prom.*, 1957, 2, 208–22. The first part of this survey article, by M. S. Nemtsov, deals with the production of α-methyl styrene. One process involves direct dehydrogenation of isopropyl benzene. The second process, developed in the U.S.S.R. about 10 years ago, is a three-stage process, based on the oxidation of isopropyl benzene with high yields of the hydroperoxide, alkaline decomposition of the latter with the formation of dimethyl phenyl carbinol, and its catalytic dehydration into α-methyl styrene. The second section, by the co-authors, deals with the production of SKMS-30 butadiene-methyl styrene rubber by the aqueous emulsion polymerisation of α-methyl styrene. The emulsifier is a mixture of sodium dibutyl naphthalene sulphonate and sodium stearate or the sodium salt of a similar fatty acid. The mechanisms of regulation, acceleration, and other aspects are described. There are 55 references.

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RADCHENKO, I.I.

Block and graft polymers. Kauch. i rez. 16 no.7:16-22 Jl '57.

1.Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S.V. Lebedeva.
(Polymers)

AUTHORS: Radchenko, I. I. and Fisher, S. L. 138-1-2/18

TITLE: 1, 3- Butadiene Copolymers with a High Styrene Content. (Sopolimery divinila s vysokim soderzhaniyem stirola).

PERIODICAL: Kauchuk i Rezina, 1958, Nr. 1, pp. 3 - 9. (USSR).

ABSTRACT: Synthetic rubber, produced by polymerisation of 1,3-butadiene in aqueous emulsions, possesses a high degree of elasticity, low physico-mechanical properties, and poor technological properties. The technological properties are improved when the polymerisation is carried out in the presence of a polymerisation regulator, but at the same time the degree of elasticity and physico-mechanical properties are lowered. When a mixture consisting of 70% 1,3-butadiene and 30% styrene is polymerised, the degree of elasticity is slightly lower, but the end product has high physico-mechanical and technological properties (e.g. СКС-30, СКС-30А, буна-эс-3, ДЖИ-ар-эС, which are used for the manufacture of car tyres). The elastic properties deteriorate and the plastic properties improve when the styrene content in the mixture is further increased. Rubber containing 50% 1,3-butadiene and 50% styrene has low elastic properties but sufficiently high physico-

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mechanical properties, and is used in the shoe industry and for the manufacture of various rubber goods. A plastic composition is obtained when the styrene content reaches 80 and 90%; these composition are similar to polystyrene-1,3-butadiene copolymers with a high styrene content, and are often called styrene-containing or polystyrene-containing synthetic resins. The polymer CKC-50 (similar to the German Buna S-S) can be prepared when the Na salt of dibutyl naphthylsulphate with a small quantity of sodium stearate is used as emulsifier. CKC-50 has very good technological as well as physico-mechanical properties. The copolymer Pliolite S-3 (SC-3) consists of a mixture of 15% 1,3-butadiene and 85% styrene. It is a white thermoplastic powder which is resistant to oxidation and other chemical reactions. 1,3-butadiene copolymers containing 12.5 to 87.5%styrene have been prepared by emulsion polymerisation at a temperature of 50°C. The composition of the copolymers was determined by ultra-violet spectrophotometry, and also according to the quantity of unreacted monomers. A detailed investigation of the composition of 1,3-butadiene-styrene copolymers was carried out by S. S. Medvedev et al. Polymerisation was carried out in

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the presence of benzoyl peroxide at 60°C. The styrene in the copolymers was determined by refractometry, and according to the content of unsaturated bonds. The work of I. M. Mitchell (Ref.3) is discussed. The various Marbon resins and Butakon-S are mentioned. In the USSR 1,3-butadiene styrene and 1,3-butadiene-methyl-styrene, containing not more than 26-27% styrene or methyl-styrene, are produced. The preparation of 1,3-butadiene copolymers with a high content of styrene and alpha methyl styrene - СКС-50, СКС-90 and СКС-40Д is discussed. Details of the preparation are tabulated (Fig.1). Figures 1, 2 and 3 give graphs on the depths of polymerisation. The physico-mechanical properties of vulcanised rubber СКС-50 are shown in Table 2 and 4 and the plasticity of СКС-50 in Table 3. Investigations carried out by ВНИИСК and by the Moscow Factory "Kauчук" showed that СКС-50 can be used for hard rubber goods, for frost-resistant conveyor belts, and also as additive for improving the properties of

 mixtures based on the rubber СКС-30. Alpha-methyl-

styrene is also used for the preparation of 1-3 butadiene-alpha-methyl styrene rubber СКМС-50. Alpha-methyl styrene is less active than styrene; it is used for the industrial production of СКМС-30 (1,3-butadiene alpha-methyl styrene). Details of the copolymerisation of alpha-methyl styrene with 1,3-butadiene are given in Table 5. Table 6 gives the physico-mechanical properties of СКМС-50 vulcanisates. The copolymer СКС-90 was prepared at 50°C and a 60% polymerisation was achieved during 10-12 hours. At the completion of the polymerisation reaction 3% anti-oxidant Neozon D (phenyl-beta-naphthyl amine) is added. Surface tension of the latex = 39-40 Din/cm. The latex СКС-30 and СКС-90 were mixed in such proportions that the total styrene content = 40%, this gave the copolymer СКС-40Д СКМС-50 (prepared with the help of D. G. Bril') was made by coagulation, washing and drying of СКС-40Д. The thermo-plastic properties of СКС-40Д and СКМС-50 are given in Table 7, and the physico-mechanical properties of СКС-40Д vulcanisates in Table 8. The synthesized co-

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rubber goods and high quality microporous soles. There are 6 Tables, 4 Figures, 10 References: 7 English, 3 Russian.

ASSOCIATION: All-Union Scientific Research Institute for Synthetic Rubber im S. V. Lebedev. (Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im S. V. Lebedeva)

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AUTHORS: Radchenko, I. I., Fisher, S. L., Korchmarek, V. V., Kuznetsov, V. L., Bryl', D. G., Lyashch, R. S., Valenina, V. F.

TITLE: Polymerization of butadiene with styrene in emulsion using colophony soap at a temperature of 5°C

PERIODICAL: Kauchuk i rezina, no. 5, 1961, 5 - 11

TEXT: Several polymerization formulations have been developed, of which only a few are suitable for industrial use. Hydrogene peroxide hydrocarbons are usually used as the initiators and various compounds with reducing properties as activators, such as ferrous sulfate, sodium sulfite, etc. Coagulation of the latex is caused by large quantities of electrolytes. Daksad serves as disperser. Daksad is a neutralized condensation product of naphthalenesulfoacid with formaldehyde. The higher mercaptanes, e.g., dodecylmercaptane and a mixture of C_{12}-C_6, are used as regulator in the production of butadiene-styrene rubbers. The best-known polymerization formulation is iron-pyrophosphate, where a complex formed from the interaction of potassium pyrophosphate with ferrous sulfate is used as activator. Special attention is drawn to the iron-trilon formulation. An increase in the iron

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