YEGOROV, L.B.; ZHURAVLEV, G.V.; IGNATENKO, A.Ye.; LI SYUAN-MIN; PETRASHKU, M.G.; CHULTEM, D.

Investigating the paramagnetism of μ-mesonic atoms. Zhur. eksp. i teor. fiz. 40 no.2:391-399 F '61. (MIRA 14:7)

1. Ob"yedinennyy institut yadernykh issledovaniy.
(Mesons)

YEGOROV, L.B.; ZHURAVLEV, G.V.; IGNATENKO, A.Ye.; KUPTSOV, A.V.; LI SYUAN-MIN; PETRASHKU, M.G.

Investigating the spin dependence of weak interaction in the process $\mu^- + p \rightarrow n + \gamma$. Zhur.eksp.i teor.fiz. 41 no.3:684-691 S '61. (MIRA 14:10)

1. Ob"yedinennyy institut yadernykh issledovaniy.
(Nuclear reactions) (Protons) (Mesons)

24.2200

S/056/62/043/003/022/063
B102/B104

AUTHORS: Yegorov, L. B., Ignatenko, A. Ye., Kuptsov, A. V., Petrashku, M. G.

TITLE: Search for μ^- decay anomalies in paramagnetic metals

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43, no. 3(9), 1962, 873-876

TEXT: The observation of nontrivial effects in μ^- decays caused in mesic atoms by unpaired electrons would be of great use for investigating the magnetic properties of atoms and of hydrides of transition metals. The authors measured the relative μ^- decay probabilities at different numbers of unpaired electrons in mesic atoms of the systems Pd-H and Ti-H. Under identical experimental conditions the following yield ratios were obtained:

$$Y(TiH_{1.8}) / Y(Ti) = 1{,}00 \pm 0{,}02,$$
$$Y(PdH_{1.0}) / Y(PdH_{0.6}) = 1{,}02 \pm 0{,}02,$$
$$Y(PdH_{0.6}) / Y(Pd) = 0{,}99 \pm 0{,}02,$$
$$Y(PdH_{0.8}) / Y(PdH_{0.8}) = 1{,}01 \pm 0{,}02.$$

Card 1/2

Search for μ^- decay anomalies...

The equality of the results strengthens the supposition that no effects caused by unpaired electrons are responsible for the increase of the μ^- decay probability in mesic atoms of transition metals of the iron group (Phys. Rev. 113, 661, 1959; 119, 365, 1960). It indicates also a shift of the X-ray frequency emitted in the 2p-1s transitions of the mesic atoms of these metals (C. Scott et al. Chicago, Preprint EFJNS-61-59). There is 1 figure.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: April 23, 1962

Figure. Block diagram of apparatus.
Legend: 1-5 Scintillation counters, 6 - target, 7 - magnetizing coil, 8 - copper filter, 9 - aluminum filter, 10 - anticoincidence circuit, 11 - coincidence circuit, 12, 13 - amplifiers, 14, 15 - shaper, 16 - delay line (0.1 μsec), 17-delay ($\geq$ 1.1 μsec) 18 - trigger, 19, 20 - transmission, 21, 22 - discriminators, 23, 24, 25 - counting devices.

Card 2/6 2

YEGOROV, L.B.; IGNATENKO, A.Ye.; KUPTSOV, A.V.; PETRASHKU, M.G.

Anomaly in μ^--meson decay in mesic atoms of transition metals of the iron group. Zhur. eksp. i teor. fiz. 43 no.4:1149-1153 O '62. (MIRA 15:11)

1. Ob"yedinennyy institut yadernykh issledovaniy.
(Mesons—Decay) (Transition metals)
(Iron group)

YEGOROV, L.B.; IGNATENKO, A.Ye.; KUPTSOV, A.V.; PETRASHKU, M.G.

Search for anomalies of μ^--meson decay in paramagnetic metals. Zhur. eksp. i teor. fiz. 43 no.3:873-876 '62. (MIRA 15:10)

1. Ob"yedinennyy institut yadernykh issledovaniy.
(Mesons—Decay) (Paramagnetism)

41122
S/056/62/043/004/005/061
B102/B180

24 6400

AUTHORS: Yegorov, L. B., Ignatenko, A. Ye., Kuptsov, A. V., Petrashku, M. G.

TITLE: The anomaly problem in the μ^- meson decay in mesic atoms of transition metals of the iron group

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43, no. 4(10), 1962, 1149 - 1153

TEXT: Using scintillation counters with a 128-channel pulse-height analyzer, the ratio between the decay probability of μ^- mesons in mesic atoms and of free μ^- mesons was measured for mesic Fe, Zn, Ni and Cu to verify published experimental results and predictions. The Fe and Zn targets were in the form of sandwiches consisting of ten 15·15 cm^2 plates, separated by Al sheets 0.7 mm thick. The Ni and Cu targets were 15·15 cm^2 plates, 5 g/cm^2 thick. From the time distributions of the μ^- decay electrons, $S = \sum t_i n_i / \sum n_i$ was determined, where n_i is the number of pulses in time t_i. For Fe+Al $S = 0.485 \pm 0.009$ μsec and for Zn+Al, $S = 0.463 \pm 0.008$ μsec. Then

Card 1/3

S/056/62/043/004/005/061
B102/B180

The anomaly problem ...

with $S(\mathrm{Fe}+\mathrm{Al}) = n_1 S(\mathrm{Fe}) + n_2 S(\mathrm{Al})$,
$S(\mathrm{Zn}+\mathrm{Al}) = n_1' S(\mathrm{Zn}) + n_2' S(\mathrm{Al})$. (5) and

$S(\mathrm{Fe}) = 0{,}201 \pm 0{,}004$, $S(\mathrm{Zn}) = 0{,}161 \pm 0{,}004$, $S(\mathrm{Al}) = 0{,}707 \pm 0{,}002$,

$$\xi = \frac{\Lambda_p(\mathrm{Fe})}{\Lambda_p(\mathrm{Zn})} = \frac{n_1}{n_1'}\frac{n_2'}{n_2}\frac{\Lambda(\mathrm{Fe})}{\Lambda(\mathrm{Zn})} k_1 k_2, \quad (6)$$

was calculated. ξ is the μ^- decay probability ratio, $k_{1,2}$ are correction factors.

$\xi = \Lambda_p(\mathrm{Fe}) / \Lambda_p(\mathrm{Zn}) = 0{,}94 \pm 0{,}05$.
$\xi = \Lambda_p(\mathrm{Ni}) / \Lambda_p(\mathrm{Cu}) = 0{,}98 \pm 0{,}05$. was obtained: Within the error limits the ξ - values are equal - which indicates the absence of anomalies such as were observed e. g. in Phys. Rev. Lett. 1, 102, 1958; Phys. Rev. 113, 661, 1959; Phys. Rev. 117, 1580, 1960) and that the instrument effect mentioned by Huff (Ann. Physics, 16, 288, 1961) and Chilton (Phys. Rev. Lett. 7, 31, 1961) cannot be the cause of the anomalies observed by those writers.
There are 4 figures.

Card 2/3

The anomaly problem ... S/056/62/043/004/005/061
B102/B180

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: April 23, 1962

Card 3/3

YEGOROV, L.B. IGNATENKO, A.E., KUPTSOV, A.V., PETRASHKU, M.

"Search for Anomalies in Mu⁻ Meson Decay in Mesonic Atoms of the FE Group Transition Metals"

report presented at the Intl. Conference on High Energy Physics, Geneva, 4-11 July 1962

Joint Institute for Nuclear Research
Laboratoryoof Nuclear Problems

APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001962430007-9"

YEGOROV, L. B., IGNATENKO, A. E. and KUPTSOV, A. V.

Investigation of Mu Meson Capture by Protons from the States of Hyperfine Structure in Mesonic Atoms of Phosphorus.

→ report presented at the Intl. Conference on High Energy Physics, Geneva, 4-11 July 1962.

Joint Inst. Nuclear Research, Lab of Nuclear Problems.

YEGOROV, L.B.; IGNATENKO, A.Ye.; KUPTSOV, A.V.; PETRASHKU, M.G.; SARANTSEVA, V.R., tekhn. red.

[Search for anomalies in μ^--meson decay in paramagnetic metals] Poiski anamalii pri raspade μ^--mezonov v paramagnitnykh metallakh. Dubna, Ob"edinennyi in-t iadernykh issl., 1962. 5 p. (MIRA 15:6)
(Mesons--Decay) (Magnetic materials)

YEGOROV, L.B.; IGNATENKO, A.Ye.; KUPTSOV, A.V.; PETRASHKU, M.G.; SARANTSEVA, V.R., tekhn. red.

[Anomaly in μ^--meson decay in mesic atoms of transition metals of the iron group] K voprosu ob anomalii pri raspade μ^--mezonov v mezoatomakh perekhodnykh metallov gruppy zheleza. Dubna, Ob"edinennyi in-t iadernykh issledovanii, 1962. 9 p. (MIRA 15:6)

(Mesons--Decay) (Transition metals) (Iron group)

YEGOROV, L.G., inzh.

Improve the organization of sawmilling. Mech. transp. 17 no. 6:36-37 Je '58. (MIRA 11:7)

(Sawmills)

YEGOROV, L. I.

Organize socialist competition for continued growth of labor productivity and higher quality in highway maintenance work. Avt.dor.17 no.3:4-5 N-D'54. (MLRA 8:10)

1. Predstavitel' TsK profsoyuza rabochikh avtomobil'nogo transporta i shosseynkh dorog.
(Roads--Maintenance and repair)

YEGOROV, Leontiy Ivanovich; SHVETSOV, I.B., redaktor; DMITRIYEVA, P.V., tekhnicheskiy redaktor.

[Drivers who made improvements in the automobile transportation system] Shofery-novatory avtomobil'nogo transporta. Moskva, Izd-vo "Znanie," 1955, 21 p. (Vses. ob-vo po rasprostraneniiu polit. i nauchn. znanii, ser. 4, no. 40). (MLRA 8:3)

1. Predsedatel' TsK profsoyuza rabochikh avtomobil'nogo transporta i shosseynykh dorog (for Yegorov).
(Automobile drivers)(Transportation, Automotive (Road))

YEGOROV, L.I.

Thermal conditions of light Sierozems of the northwestern part of the Golodnaya Steppe. Trudy Pochv. inst. 29:181-194 '48. (MLRA 10:8)
(Golodnaya Steppe--Sierozem soils)
(Soil temperature)

YEGOROV, L.I.

Water permeability of soils and parent materials of the northwestern part of the Golodnaya Steppe. Trudy Pochv. inst. 29: 195-200 '48. (MLRA 10:8)

(Golodnaya Steppe--Soil moisture)

USSR/Soil Science - Physical and Chemical Properties of Soils. J.

Abs Jour : Ref Zhur - Biol., No 15, 1958, 67894

Author : Yegorov, L.I.
Inst : -
Title : Aqueous-Physical Properties of Several Soils and Subsoils of the Part of the Shirvan Steppe Near the Kura River.

Orig Pub : Pochvovedeniye, 1957, No 2, 90-104.

Abstract : The aqueous-physical properties of soils were studied in two regions of the Shirvan steppe (AzerbSSR), the coastal alluvial-delta plain and the Kura alluvial plain. In the former there are meadow, light-grey solonets and solonchak soils as well as solonchaks with ground water at a depth of 2-8 meters. These soils are formed on layered deposits with a heavy mechanical composition and consist from 70% to 90% of particles of physical clay. The meadow soils are fresh to a depth of 12-15 cm., and below that salination reaches 2.03%. On the areas under cultivation the salts

Card 1/3

- 14 -

Soil Inst im Dokuchayev, AS USSR

have been washed out to a depth of 1-1.5 meters. The volumetric weight of these soils was 1.34-1.40 grams/cm^3., and in compressed horizons 1.45-1.48 grams/cm^3. Soil porosity varies from 48-52% and in compressed horizons falls to 44-45%. The outside field moisture capacity (FMC) is 28-29% in the meadow soil. In cultivated soils the compact horizons under the tilled stratum have an FMC as high as 45%. These soils can be washed by using a collector-drainage network set at a minimum depth of 3 meters. To improve the physical properties of these soils it is necessary to plant acclimatizing grass for 2-3 years, to apply mineral and organic fertilizers, as well as gypsum, and plow it deeply at regular intervals. On the Kura Plain the most common soils are: meadow soils on a layered argillaceous base, meadow soils transforming into steppe soils, and dark meadow (chal'nyye) soils in the depressions. The soils are saline; the dark meadow soils

USSR/Soil Science - Physical and Chemical Properties of Soils. J.

Abs Jour : Ref Zhur - Biol., No 15, 1958, 67894

have more humus in their profile, a heavier mechanical composition, and heightened filtering ability. Calculation of optimal irrigation norms for these soils must be based upon the half-reserves of productive moisture in them when moisture corresponds to the FMC. -- S.A. Nikitin

Card 3/3

YEGOROV, L. I., Cand Agr Sci -- (diss) "Water-physical properties of the principal soils and grounds of the Shirvan Steppe of the Kura-Araks lowlands in connection with their irrigation." Mos, 1958. 15 pp (Acad Sci USSR, Soil Inst im V. V. Dokuchayev), 150 copies (KL, 15-58, 117)

YEGOROV, L.I.; PUSTOVOYTOV, N.D.

"Moisture conditions of deep Chernozems in the Central Russian Upland" by A.F.Bol'shakov. Pochvovedenie no.5:134-135 My '62. (MIRA 15:6)

(Central black earth region--Soil moisture)
(Bol'shakov, A.F.)

BOROVSKIKH, Yu.I.; MAYZENBERG, Yu.I.; YEGOROV, L.K.

Investigating voltage drops in the starter circuit of a motor vehicle. Avt.prom. 27 no.12:22-24 D '61. (MIRA 15:1)

1. Nauchno-issledovatel'skiy eksperimental'nyy institut avtotraktornogo elektrooborudovaniya i priborov.
(Motor vehicles--Starting devices)

YEGOROV, L.M., kand.yurid.nauk

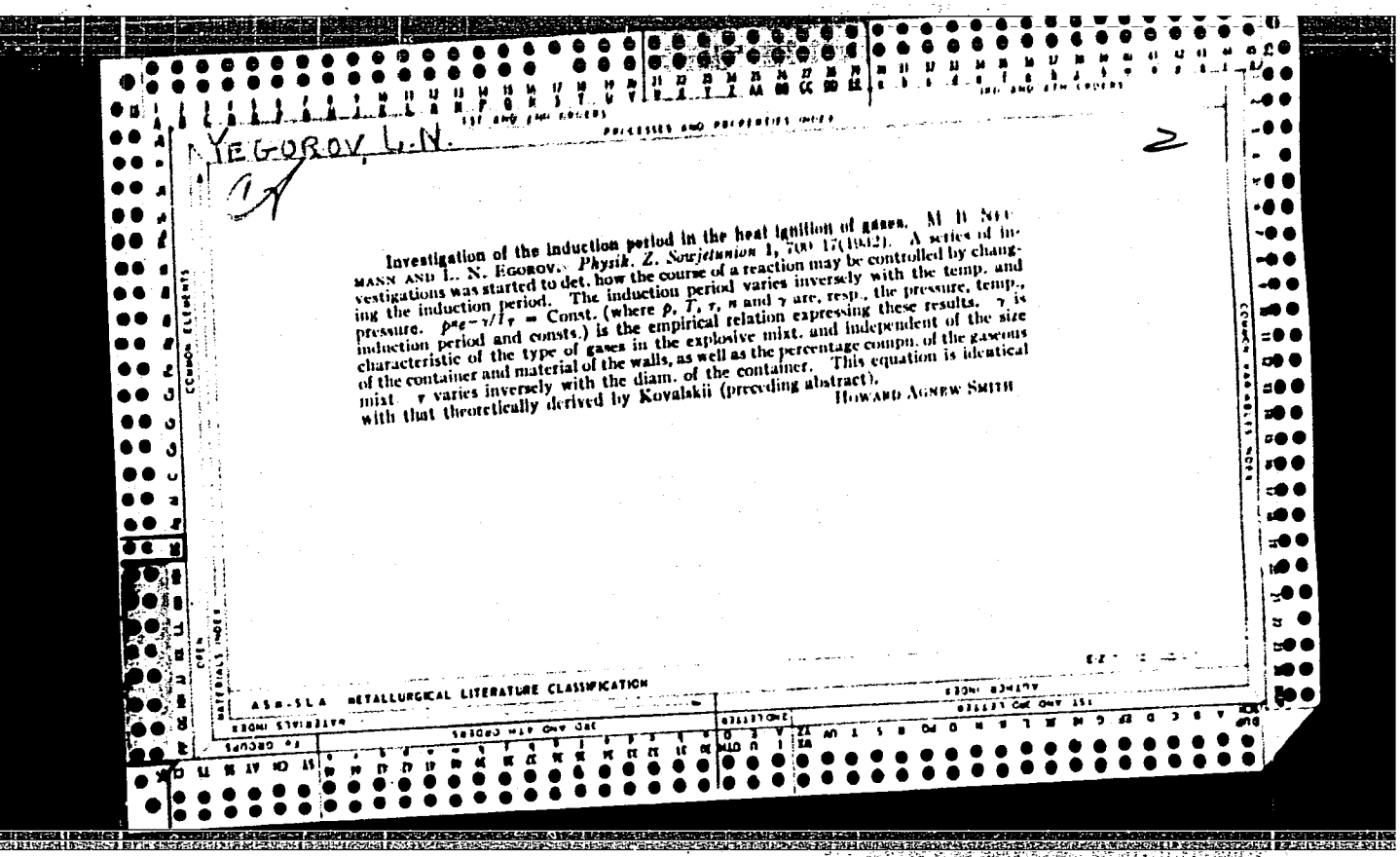
Legal regulation of pilotage in the U.S.S.R. Inform.sbor. TSNIIMF no.34:53-60. '58. (MIRA 14:3)
(Pilots and pilotage)

YEGOROV, L.M., kand. yuridicheskikh nauk

Errors in navigation and management under foreign law.
Inform. sbor. TSNIIMF no.110 Mor. pravo i prak. no.23:17-23 '63.
(MIRA 18:9)

YEGOROV, L.M., kand.yurid.nauk; RYUMINA, L.A.

From the practice of the Maritime Arbitration Commission. Inform. sbor.TSNIIMF no.34:72-158. (MIRA 14:3)
(Arbitration and a ward) (Freight and freightage—Claims)

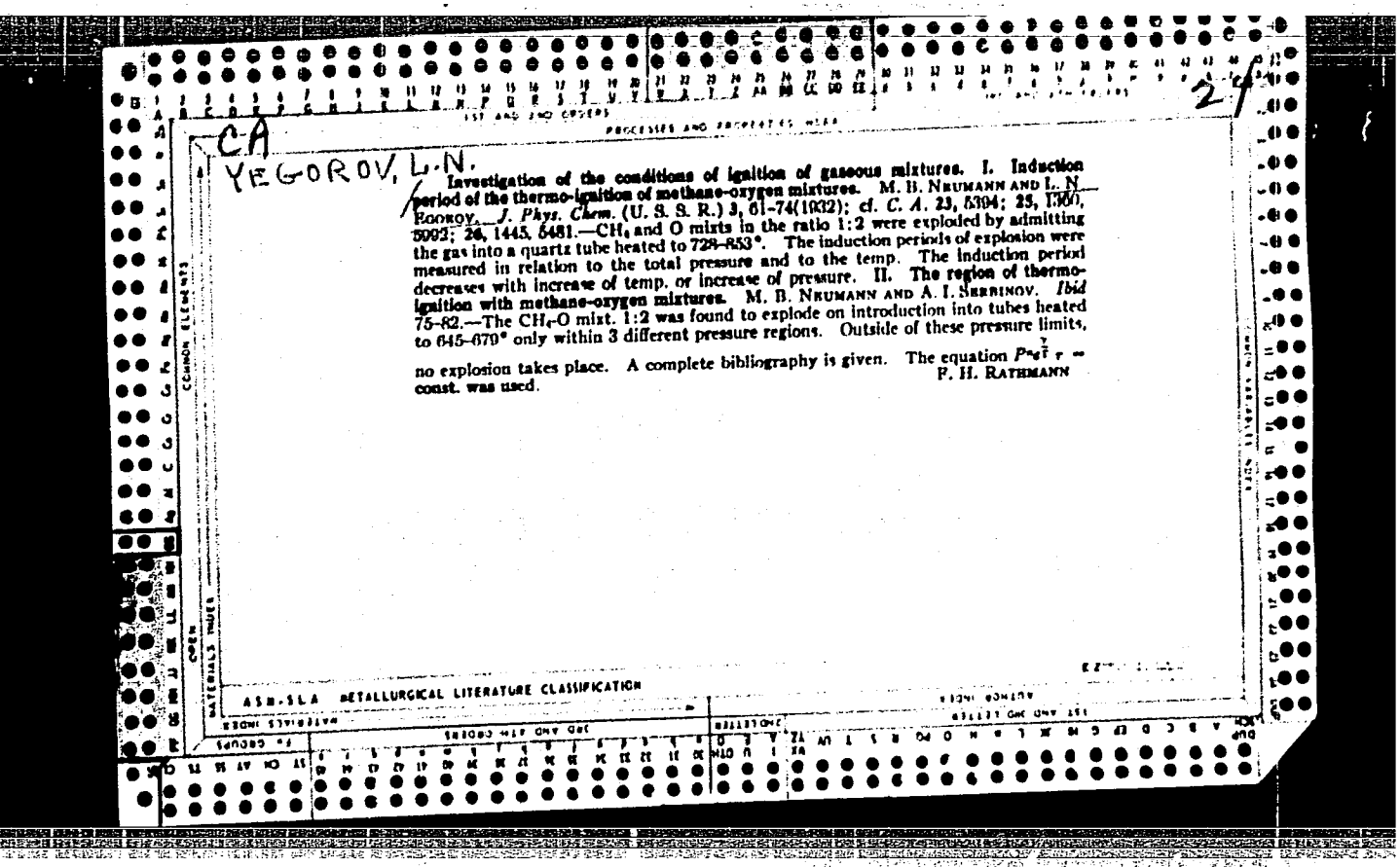


YEGOROV, L.N.

Investigation of the induction period in the heat ignition of gases. M. H. SEMENOV AND L. N. EGOROV. *Physik. Z. Sowjetunion* 1, 700-17(1932). A series of investigations was started to det. how the course of a reaction may be controlled by changing the induction period. The induction period varies inversely with the temp. and pressure. $pne^{-\gamma/T} = \text{Const.}$ (where p, T, τ, n and γ are, resp., the pressure, temp., induction period and consts.) is the empirical relation expressing these results. γ is characteristic of the type of gases in the explosive mixt. and independent of the size of the container and material of the walls, as well as the percentage compn. of the gaseous mixt. τ varies inversely with the diam. of the container. This equation is identical with that theoretically derived by Kovalskii (preceding abstract).

HOWARD AGNEW SMITH

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



CA

YEGOROV, L.N.

Investigation of the conditions of ignition of gaseous mixtures. I. Induction period of the thermo-ignition of methane-oxygen mixtures. M. B. NEUMANN AND L. N. EGOROV. *J. Phys. Chem.* (U. S. S. R.) 3, 61–74(1932); cf. *C. A.* 23, 5394; 25, 1360, 5093; 26, 1445, 5481.—CH_4 and O mixts in the ratio 1:2 were exploded by admitting the gas into a quartz tube heated to 728–853°. The induction periods of explosion were measured in relation to the total pressure and to the temp. The induction period decreases with increase of temp. or increase of pressure. **II. The region of thermo-ignition with methane-oxygen mixtures.** M. B. NEUMANN AND A. I. SERBINOV. *Ibid* 75–82.—The CH_4-O mixt. 1:2 was found to explode on introduction into tubes heated to 645–679° only within 3 different pressure regions. Outside of these pressure limits, no explosion takes place. A complete bibliography is given. The equation $P^{\gamma}T^{1-\gamma}$ = const. was used.

P. H. RATHMANN

YEGOROV, L.N. [redacted]

A-shaped rig with a 200-ton-load capacity. Neft.khoz. 34 no.10: 15-16 O '56. (MLRA 9:11)
(Oil well drilling--Equipment and supplies)

YEGOROV, L.N.; GOLOVKO, V.N.

Hoisting A-shaped derricks. Neft. khoz. 39 no.9:12-18 S '61. (MIRA 15:1)

(Cranes, derricks, etc.)

YEGOROV, L.N.

Device for making the derrick man's work easier in the drilling of deep wells. Mash. i neft. obor. no.2:31-33 '63. (MIRA 17:8)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut neftyanogo mashinostroyeniya.

YEGOROV, L.N.

New derricks for deep drilling. Mash. i neft. obor. no.9:3-6 '63. (MIRA 17:2)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut neftyanogo mashinostroyeniya.

IVANOV, Vitaliy Fedorovich; YEGOROV, L.P., redaktor; KUZ'MIN, G.M., tekhnicheskiy redaktor.

[Accounting and technical record keeping in cartographic and geodetic work] Uchet i tekhnicheskaia otchetnost' kartografo-geodezicheskogo proizvodstva. Moskva, izd-vo geodezicheskoi lit-ry, 1955. 119 p. [Microfilm] (MLRA 8:9)
(Accounting) (Surveying)

YEGOROV, L. P.

6-1-16/16

AUTHOR: None Given

TITLE: Chronicles (Khronika)

PERIODICAL: Geodeziya i Kartografiya, 1958, Nr 1, pp. 79 - 80 (USSR)

ABSTRACT: A conference of the directors of the cartographical printing-offices and of the scientific divisions for map-composition took place in the Central Office for Geodesy and Cartography at the Ministry of the Interior of the USSR from December 16th to December 20th, 1957. This conference was devoted to the problems concerning the state of the cartographical printing-offices GUGK and to the measures required to fulfil the plan for 1958. The representatives of the military-topographical office, the TsNIIGA i K and the MIIGA i K attended this conference. The conference was opened by the director of the GUGK (Central Office for Geodesy and Cartography), A. N. Baranov. Lectures were held by: 1) The head of the division GUGK - G. V. Artamonov on: "On the performance of the plan by the cartographic printing-offices GUGK within 11 months of the

Card 1/2

year 1957. 2) A. B. Kazakov, Engineer-in-chief of the planning-division GUGK "On the project of the plan for 1958". 3) The chief of the division for work and wages GUGK L. P. Yegorov "On standardizing and tariffs for cartographical works". 4) P. N. Novozhilova, Engineer-in-chief of the division GUGK "On Measures for improving the organization of production in the cartographical factories and in the NRK-Chast' GUGK". 5) S. I. Shurov, editor of the division GUGK: "On the editorial- and composition works". The military-historical maps of the third volume of the sea-atlas are already printed in the printing-offic of Minsk. The maps for the great Soviet encyclopedia are already completed. There comprise 2500 maps altogether. The lay-out of the building of the printing-office in Novosibirsk was changed. The printing-offices in Omsk and Tbilissi (Tiflis) worked unrhythmically. The cartographic industry has no scientific research station. The young experts are insufficiently promoted.

AVAILABLE: Library of Congress

Card 2/2

YEGOROV, L.P., red.; SHAMAROVA, T.A., red.izd-va; ROMANOVA, V.V., tekhn.red.

[Job description manual for workers employed in geological prospecting, topographic-geodetic, and research departments] Tarifno-kvalifikatsionnyi spravochnik rabochikh; geologo-razvedochnye, topografo-geodezicheskie i izyskatel'skie raboty. Moskva, Izd-vo geodez.lit-ry, 1959. 49 p. (MIRA 13:4)

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye geodezii i kartografii.
(Prospecting--Job descriptions)

ONUFRIYEV, Timofey Grigor'yevich, dots.; SHATNEV, Boris Nikolayevich, dots.; IVAN'KO, Timofey Yakovlevich, inzh.; GEROL'SKAYA, Lyudmila Sergeyevna, dots.; SARYCHEVA, Nina Petrovna, dots.; KOSTYAYEV, Sergey Petrovich, inzh.[deceased]; YEGOROV,L.P.,dots., retsenzent; ZAYCHENKO,I.R.,dots.,retsenzent; BYALYNITSKIY,V.A.,inzh.,retsenzent; CHERKASHIN,N.A.,inzh.,retsenzent; DYNER,I.I.,inzh.,retsenzent; PAUL', V.P.,inzh.,red.; NEKLEPAYEVA, Z.A.,inzh.,red.; MEDVEDEVA, M.A., tekhn. red.

[Buildings in railroad transportation] Zdaniia na zheleznodorozhnom transporte. Moskva, Transzheldorizdat, 1962. 408 p. (MIRA 15:6)
(Railroads--Buildings and structures)

YEGOROV, L.P.

Shock workers of communist labor in the polygraphic enterprises of the Main Administration for Geodesy and Cartography. Geod. i kart. no.10:3-8 O '64. (MIRA 18:1)

YEGOROV, L.P.

Preliminary results of the transfer of workers of the topographo-geodetic and cartographic service to the shortened workday and new wage conditions. Geod. i kart. no.7:5-9 Jl '61. (MIRA 14:7)

(Surveying) (Cartography) (Wages)

YEGOROV, L.S.; SURINA, N.P.

First find of carbonatite bodies in sedimentary carbonate rocks. Inform. biul. NIIGA no.2:31-34 '58. (MIRA 12:10)
(Maymecha Valley--Carbonates (Geology))

ANIKEYEVA, L.I.; YEGOROV, L.S.; SMIRNOV, L.P.; TSYV'YAN, L.K.

Preliminary results of the field work of the Maymecha Expedition, 1959. Inform.biul.NIIGA no.16:42-45 '59. (MIRA 15:3)
(Maymecha Valley--Geology)

YEGOROV, L.S.;GOL'DBURT, T.L.;SHIKHORINA, K.M.

Form and mechanism of the formation of the Gulya intrusion. (MIRA 13:3)
Trudy NIIGA 107:3-12 '59
(Kotuy Valley--Geology, Structural)
(Maymecha Valley--Geology, Structural)

YEGOROV, L.S.

Type of carbonate deposits and their association with ultrabasic-alkali rocks. Izv.AN SSSR.Ser.geol. 25 no.1:108-111 Ja '60. (MIRA 13:8)

(Rocks; Carbonate)

YEGOROV, L.S.

Nepheliniization and iron-magnesian-calcium metasomatism in intrusions of alkali and ultrabasic rocks. Trudy MIIGA 114:102-118 '60. (MIRA 13:11)

(Siberian Platform--Petrology)

YEGOROV, L.S.; SURINA, N.P.

Carbonatites in the Changit intrusion region of the northern Siberian Platform. Trudy NIIGA no.125:160-178 '61. (MIRA 16:7)
(Maymecha Valley--Carbonatite)
(Kotuy Valley--Carbonatite)

YEGOROV, L. S.

Origin of carbonatites. Izv. AN SSSR. Ser. geol. 29 no. 1: 63-74 Ja '64. (MIRA 17:5)

1. Nauchno-issledovatel'skiy institut geologii Arktiki, Leningrad.

YEGOROV, L.S.

Mechanism of the formation of carbonatites. Trudy Len. ob-va est. 74 no. 1:23-26 '63. (MIRA 17:9)

YEGOROV, L.S.

Origin of phogopite-olivine and rocks related to them in complex alkali-ultrabasic massifs. Geol. rud. mestorozh. 6 no.4:33-44 Jl-Ag '64. (MIRA 17:10)

1. Nauchno-issledovatel'skiy institut geologii Arktiki, Leningrad.

YEGOROV, M., tekhnovoy vrach.

When the figures are disclosed. Okhr. truda i sots. strakh. no.3:48-52 S '58. (MIRA 12:1)

1.Sobinskaya pryadil'no-tkatskaya fabrika "Kommunisticheskiy avangard."
(Sobinka (Vladimir Province--Textile workers--Diseases and hygiene)

Yegorov, M.

YEGOROV, M.

Crane operator Tereshchenko is on duty. Mor.flot 17 no.11:26-27 N '57. (MIRA 10:12)

1.Starshiy tekhnolog Zhdanovskogo porta Chernomorskogo parokhodstva. (Tereshchenko, Vasilii Evseevich) (Longshoremen)

YEGOROV, M.

Transshipping large-diameter pipes in the Zhdanov Harbor. Mor. flot.20 no.1:27-28 Ja '60. (MIRA 13:5)

1. Starshiy tekhnolog Zhdanovskogo porta.
(Zhdanov--Cargo handling)

YEGOROV, M.

DEM'YANKO, M.; YEGOROV, M.

New duplicating method of accounting for goods and materials with the aid of billing machines. Bukhg.uchet 14 no.7:48-53 Jl '57. (MIRA 10:7)

1. Nachal'nik mashinoschetnoy stantsii Gosudarstvennogo universal'nogo magazina, Moskva (for Dem'yanko).
(Retail trade--Accounting) (Machine accounting)

YEGOROV, M.

FA 159T100

USSR/Radio - Recorders, Magnetic May 50

"Magnetic Tape Recorders," M. Yegorov, 2 pp

"Radio" No 5

Describes two semiportable magnetic tape recorders, MEZ-1 and MEZ-2 (in serial production) and stationary recorder, MDS-1, for stenography, developed at experimental plant of Committee for Radio Info, Council of Ministers. MEZ-1 operates on dynamic microphone. MEZ-2 records and reproduces voice or music; tape length 1,000 meters (time 22 min). MDS-1 can be remotely controlled by operator 20 meters from cabinet. Operates on microphone, radio (1.5-5 v output), automatic or central telephone lines. Portable MEZ-3 in design stage.

159T100

USSR/Radio - Recorders, Magnetic (Contd) May 50

159T100

USSR/Radio - Recorders, Magnetic Nov 51

"New Soviet Magnetic Recorders," M. Yegorov

"Radio" No 11, pp 61, 62

Description of the MEZ-6 stationary high-quality magnetic recorder and the MDS-2 magnetic recorder (for recording telephone conversations, reports, dispatchers' orders, etc.), both produced by the Expt1 Plant of the Committee for Radio Information, Council of Ministers USSR. The 1st unit was designed by V. G. Korol'kov, M. V. Tsukasov, Ye. G. Yefimov, and V. I. Pereverzev and the 2d by V. L.

208T76

USSR/Radio - Recorders, Magnetic (Contd) Nov 51

Braginskiy and M. I. Demidova. The 3 electric motors used in the MEZ-6 were developed by the All-Union Sci Res Inst of Sound Recording (D. P. Vasilevskiy and V. R. Rybin).

208T76

L 32976-66 EWT

ACC NR: AP6014736 (N) SOURCE CODE: UR/0229/65/000/011/0003/0006

17
16 B

AUTHOR: Yegorov, M. (Deputy Minister)

ORG: Ministry of shipbuilding industry of SSSR (Ministerstvo sudostroitel'noy promyshlennosty Soyuza SSR) 14

TITLE: Aspirations of Soviet shipbuilding industry

SOURCE: Sudostroyeniye, no. 11, 1965, 3-6

TOPIC TAGS: shipbuilding engineering, marine engineering, AUXILIARY SHIP

ABSTRACT: A general review of progress made by the Soviet shipbuilding industry in the postwar period is presented and plans for the future are discussed. Modern tankers of "Sofiya" series are cited as an example. They can transport five times more oil at a speed of 17 knots than old 10000-ton, 12-knot tankers constructed at the end of the war. The series construction of 16-ton, 18-knot steam turbine ships of "Leninskiy Komsomol" type was completed in 1964. Diesel ships of "Bezhiza" type designed for transportation of dry-goods are also built in series. Large ships were built for fisheries such as trawlers of "Mayakovsky" refrigerator type, fish cannery ships of "Andrey Zakharov series or big whale ships "Sovetskaya Ukraina" and "Sovetskaya Rossiya

Card 1/2

ACC NR: AP6014736

The building of railway ferry-boats for crossing Caspian Sea is also mentioned, as well as the construction of hydrofoil boats "Raketa", "Meteor", Sputnik","Chayka","Belorus'", "Burevestnik" and "Strela". The icebreaker "Lenin" is cited as the first merchant marine craft in the world using nuclear propulsion. At present, many new series of 7000, 12000 and 16000 ton dry-goods cargo ships and of 15000,20000, 50000 ton oil tankers are in the state of research and development as well as special craft designed for the fishing industry. In connection with new developments a systematic research is carried out in order to improve the performance of engines and various equipment. Special attention is given to the development of automatic equipment and to the use of new synthetic and plastic materials. Computing machines are used for calculations and new methods of production are introduced in shipyards. Further studies and application of hydroplanes and hydrofoils is stressed. A more distant goal is the application of nuclear energy to the ship propulsion. It is anticipated that in the future nuclear energy will be widely used for propulsion of large seagoing ships.

SUB CODE: 13/ SUBM DATE: None

Card 2/2

BRODSKIY, M.S.; YEGOROV, M.D., starshiy elektromekhanik

Cable-finder amplifier. Avtom., telem. i sviaz' 3 no.4:44-45 Ap '59. (MIRA 12:5)

1.Zamestitel' nachal'nika Leningrad-Baltiyskoy distantsii signalizatsii i svyazi Oktyabr'skoy dorogi (for Brodskiy). (Transistor amplifiers) (Electric cables)

MARINCHENKO, P., inzhener-polkovnik; VIGANT, V., inzhener-podpolkovnik; YEGOROV, M.G. podpolkovnik tekhnicheskoy sluzyby; KOCHKIN, P., inzhener-mayor

Mechanizing the cleaning of reservoirs and oil tankers. Tyl i snab. Sov. Voor. Sil ?1 no.9:92-94 S '61. (MIRA 14:12)
(Tank vessels—Cleaning)

ROZHKOV, Igor' Vladimirovich; MARINCHENKO, Petr Kharitonovich; YEGOROV, Mikhail Georgiyevich; CHURSHUKOV, Yevgeniy Sergeyevich; KOSOROTOV, B.V., inzh.-polkovnik zapasa, red.; SOKOLOVA, G.F., tekhn. red.

[Protection from corrosion and the cleaning of tanks and containers in fuel storehouses] Zashchita ot korrozii i zachistka rezervuarov i tary na skladakh i bazakh goriuchego. Moskva, Voenizdat, 1963. 117 p. (MIRA 16:6)
(Petroleum products--Storage)
(Corrosion and anticorrosives)

AKSENOV, Ya.V.; YEGOROV, M.G.; KOCHKIN, P.I.

Newly designed steam heaters for tanks. Mash. i neft. obor. no.7:11-12 '63. (MIRA 17:1)

YEGOROV, M.A.

AUTHOR: Yegorov, M.A. 133-1-24/24

TITLE: Conference on the Co-ordination of Scientific-Research Works in the Iron and Steel Industry for 1958 (Soveshchaniye po koordinatsii nauchno-issledovatel'skikh rabot na 1958 g. v chernoy metallurgii)

PERIODICAL: Stal', 1958, No.1, pp. 94 - 95 (USSR).

ABSTRACT: The conference took place in the Central Scientific Research Institute of the Iron and Steel Industry in Moscow on October 21 - 26, 1957. 200 representatives of works, scientific-research organisations, design institutes, universities and other organisations participated in the conference. The most important scientific-research tasks were explained by Academician I.P. Bardin. The conference was divided into 4 sections. The section on ore preparation and pig iron production chose the following problems, work on which should begin in 1958:

Ore beneficiation. Production of ore concentrates containing above 60% of iron and less than 8-10% silica on the operating ore beneficiation factories YuGOK, Olenogorsk and KMA; the development and choice of rational schemes for beneficiation of brown ironstones from Lisakovskoy and ores from Orsko-Khalilovskiy deposits and oxidised iron quartzites from Krivoy

Card1/8

Conference on the Co-ordination of Scientific-Research Works in the Iron and Steel Industry for 1958.

Rog. The design of high output economical aggregates for magnetising roasting of iron ores. The development of the technology of production of rich concentrates for smelting ferro-manganese from ores of III and IV quality and slurries from Chiatura and Nikopol' Works; from carbonate ores from Polunochnoye and Usinskoye deposits and from oxidised ores of the Atasuyskaya group of deposits. Complex automation of beneficiation works.

Agglomeration of Ores. The production of high-quality fluxed sinters of a basicity not lower than 1.2. Intensification of sintering of fluxed fine concentrates on the YuGOK and KMAruda sinter plants. The development of the technology of pelletising of fine iron concentrates and the design and construction of experimental equipment. The development of a rational method of calcining limestone and its feeding to sinter strands.

Blast Furnaces. Smelting of basic and foundry iron using oxygen-enriched blast. Operation of blast furnaces on assorted burden. Blowing into blast furnaces of natural and coke oven gas. Work on automation of the blast furnace process. Design and scientific research work on the development of charging apparatus, suitable for high top pressure operation.

Conference on the Co-ordination of Scientific-Research Works in the Iron and Steel Industry for 1958.

Utilisation of Complex Iron Ores: The development of a rational technology of production of metal on OKhMK. Work connected with a wide utilisation of Kerch' iron ores.
Direct Production of Iron: An industrial test of the production of sponge iron in rotary kilns.
The steel-making and ferro-alloy section.
Open -hearth Production. Intensification of the process by a wider application of oxygen, improvement in methods of utilisation of oxygen and further improvement in the durability of furnaces. Improvement in the charge preparation by preliminary treatment of liquid pig, agglomeration of ore and lime, etc. Increase in the capacity of open-hearth furnaces and improvements in their design.
The use of natural gas for firing open-hearth furnaces and improvements in their thermal efficiency. Complex automation of the open-hearth process.
Converter Smelting. Further improvement on mastering of the oxygen-converter process for treatment of basic pig irons. Development of the technology of converter treatment of phosphorus-containing pig iron with the application of oxygen. The use of bottom blowing with oxygen-steam and oxygen-carbon dioxide

Conference on the Co-ordination of Scientific-research Works in the Iron and Steel Industry for 1958.

mixtures, etc. Automation of the smelting process. Improvement in the durability of lining. Development and improvement of methods of purification of waste gases from dust.
Electro-smelting. Intensification of the smelting process in electric arc furnaces. The use of electro-magnetic stirring of steel. Automation of the smelting process.
Improvement of Ingot Quality and the Use of Vacuo. A decrease in the non-uniformity of ingots. Increase in the proportion of good metal by decreasing head crops. The use of vacuo during smelting and teeming of steel. Increase in the throughput of ingot casting pits by using large ingots and top teeming.
Continuous Casting of Steel. Improvement in the design of equipment and technology of continuous casting and mastering of this technique, on the Novo-Lipetskiy and Stalinskiy Works where the appropriate equipment is at present under construction. Automation of all stages of the process.
Ferro-alloy Production. The production of ferro-chromium with a carbon content below 0.03%. The production of ferro-manganese and manganese from poor ores in order to widen the supply of raw materials and the formation of manganese metallurgical works in the east of the USSR. Development of new

Conference on the Co-ordination of Scientific-research Works in the Iron and Steel Industry for 1958.

methods of production of metallic chromium and rare metals for the production of heat-resistant and precision alloys.
In the Field of Physico-chemical Investigations. Thermodynamic and kinetic studies of reactions pertinent to steelmaking process. Preparation of design data on continuous production of steel.
Rolling and Tube Rolling Section recommended: Theoretical and experimental investigations of rolling including the establishment of general laws of continuous rolling, transverse-screwlike rolling and some problems of the theory of some new processes of rolling tubes. The development of technological processes of rolling economical profiles (wide flange beams, thin-walled profiles, etc., in particular from low alloy steels), as well as pressing processes and mastering of production of cold bent profiles. The development of the technology of production of insoluble emulsions and lubricants for cold-rolling: development of the technology of production of polished sheets from stainless steel; improvement in the accuracy of rolling, etc. Development in the technology of production of tin sheets; continuous hot tinning of strip (up to 1 000 mm wide) with two and one side coating; rapid

electrolytic tinning; rapid processes of lacquer coating, and hot zinc coating. The development of the technology of rolling very thin strip (2 - 5 μ), thin-walled tubes (25 μ) and drawing of thin wire (20-30 μ) from precision alloys. The development and mastering of rolling of some new types of tubes from alloy, high alloy steels and alloys on a non-iron base, thin-walled tubes, large-dimension tubes, soldered tubes, tubes with various coatings, etc. Development of the new production methods for tubes (pressing, centrifugal casting, semi-continuous casting of cast iron tubes, welding of tubes: argon atomic hydrogen, induction, high frequency, etc.). Development of some new types of rolling equipment for tubes - new continuous mills for hot and cold rolling and drawing of tubes. Automation of rolling mills including the complex automation of blooming mills and reversing plate mills, automation of continuous thin sheet and merchant hot rolling mills, automation of cold rolling mills and tube rolling mills. Development of more efficient heating furnaces, mastering of non-oxidising heating preparation of furnaces for heating with natural gas, development of preventive methods against the oxidation of metal and other problems.

Conference on the Co-ordination of Scientific-research Works in the Iron and Steel Industry for 1958.

Metallography and Heat Treatment Section recommended the investigation of the following problems: studies of crystallisation and phase transformation processes. The development of the bases for the theory of strength and heat-resistance of steels and alloys. The development, industrial testing and mastering of the technology of production of new types of low-alloy steels of increased strength, new structural and tool steels and alloys. The development of the technology of production of some new types of electro-technical steels (transformer and dynamo) and precision alloys. The development, industrial testing and mastering of the technology of production of some new types of stainless and acid-resistant steels (with a lower nickel content). The development and introduction into industrial practice of progressive methods of thermal treatment (including thermal treatment of rails, wheels, sheets, profile and quality metal from carbon and low-alloy steels.
In the final plenary session, the deputy chairman of Gosplan SSSR, V.B. Khlebnikov, agreed with the choice of subjects, stressing the particular importance of some of the problems. A committee was chosen to draw a plan of scientific-research work based on the above recommendations.

133-1-24/24

Conference on the Co-ordination of Scientific-research Works in the Iron and Steel Industry for 1958.

ASSOCIATION: TsNIIChM

AVAILABLE: Library of Congress
Card 8/8

YEGOROV, N. A. Prof.

Carotid Canal - Cancer

Surgical therapy of cancer in the region of the carotid canal Khirurgiia no. 2, 1952.

9. Monthly List of Russian Accessions, Library of Congress, August 1952. Unclassified.

YEGOROV, Prof. M. A.

Mbr., Lab. for the Problem of Organizers in the Animal Organism im. N. V. Nasonov -1939-.

"On the Factors of Artificial Osteogenesis," Dok. AN, 24, No. 6, 1939;

USSR/Soil Science - Mineral Fertilizers. J.

Abs Jour : Ref Zhur - Biol., No 15, 1958, 67955

Author : Yegorov, M.A,

Inst : All-Union ordena Lenin Academy of Agricultural Solances imeni V.I. Lenin.

Title : The Effect of Phosphate Fertilizer on Limed Turf-Podzol Soils and on Turf-Podzol Soils which do Not Require Lining

Orig Pub : Dokl. VASKhNIL, 1957, No 9, 37-39.

Abstract : The effectiveness of phosphate fertilizer was tested in Estonia from 1952-1956 in field experiments on acid soil (pH in KCl extract 3.5, content of assimilable P_2O_5 by Kirsanov's method 3.7 mg./100 g. of soil) after liming, and soil which did not require liming (pH 5.6 and P_2O_5 8.4 mg.), on an NK base (in the corn variant 15 tons of manure were added to the NK). The doses were 20

Card 1/2

ESTONIAN SCI'SKHOZ. AKAD.
(PREDSTAVLENA - I. I. SAMOYLOV)

USSR/Soil Science - Mineral Fertilizers. J.

Abs JOur : Ref Zhur - Biol., No 15, 1958, 67955

kg./hectare of N and 60 kg./hectare of K_2O. In the 60 kg./hectare of P_2O_5 dose P_o was added mixed with acid peat or manure in a 1:8 proportion. The liming was done on the basis of 1/3 of hydrolytic acidity. The experiments demonstrated that the effectiveness of P_o on limed soil depends upon what fertilizer accompanies it -- whether acid peat or manure. The yields were almost the same in the P_o and the P_c variants. On weakly acid soil when biologically active, weakly acid, lowland peat was applied together with P_o, it increased the effectiveness of P_o very considerably. The increase in winter rye yield was 6 centners per hectare, and the increase in hay harvest in subsequent grass cutting was over 10 centners/hectare. -- A.M. Shchepetil'nikova

Card 2/2

YEGOROV, M.D.

GALAKTIONOV, I.V.; YEGOROV, M.D.; GRINEVSKIY, I.A., inzhener, redaktor; MATSEYEVSKAYA, Ye.M., tekhnicheskiy redaktor

[Experience erecting contact system poles and maintenance buildings in railroad electrification] Opyt sooruzheniia opor kontaktnoi seti i tekhnicheskikh zdanii pri elektrifikatsii zheleznykh dorog. Moskva, Gos. transp. zhel.-dor. izd-vo, 1953. 112 p. (MLRA 7:10)
(Railroads--Buildings and structures)
(Railroads--Electrification)

YEGOROV [redacted], inzh.

Characteristics of the design of machinery plants abroad.
Opyt zarub. stroi. no.4:3-30 '62. (MIRA 16:7)

(Machinery industry)
(Factories—Design and construction)

YEGOROV, M.D., inzh.

Roofing roofs, walls and floors of industrial buildings.
Opyt zarub. stroi. no.8:3-30 '63. (MIRA 16:9)

YEGOROV, M. F. Cand Ped Sci -- (diss) "~~Out of school~~ Extracurricular practical work ~~in the~~ of technical ~~engineering~~ and technological ~~aspects of the~~ work in cotton ~~industry~~ production and its role in the solution of ~~problems of~~ training problems, polytechnical ~~instruction~~." Mos, 1955. 12 pp 21 cm. (Acad Ped Sci RSFSR. Sci Res Inst of Methods of Teaching) 100 copies. (KL, 22-57, 107).

YEGOROV, M.F.

Industrial training in a cotton mill. Politekh.obuch. no.7:29-36 Jl '57. (MIRA 10:7)

1. Srednyaya shkola No. 1 g.Shui Ivanovskoy oblasti.
(Textile factories) (Technical education)

KOSHELYUK, Ye.G.; MEDUZHKO, N.Ya., dorozhnyy master (stantsiya Zachepilovka, Stalinskoy dorogi); YEGOROV, M.I., dorozhnyy master (stantsiya Kakhovka, Stalinskoy dorogi); GUTYAN, A.M., inzh.; KOREN', P.T., putevoy obkhodchik (Vil'nyus); GRISHANKOV, V.G., putevoy obkhodchik (Vil'nyus); KURSHNEVA, M.N., dezhurnaya po pereyezdu (Vil'nyus); BALAKIN, B.N.; PASECHNIK, A.I.; CHERDANTSEV, A. Ye., dorozhnyy master (stantsiya Verkh-Neyvinsk, Sverdlovskoy dorogi); STROCHKOV, A.A., inzh.

Letters to the editor. Put' i put.khoz. 4 no.2:40-42 F '60. (MIRA 13:5)

1. Mekhanik puteizmeritel'noy telezhki, stantsiya Kovel', L'vovskoy dorogi (for Koshelyuk). 2. Zamestitel' nachal'nika distantsii puti, stantsiya Galich, Severnoy dorogi (for Balakin). 3. Inzhener distantsii, stantsiya Sambor, L'vovskoy dorogi (for Pasechnik).
(Railroads)

YEGOROV, M.L.; NECHAYEV, I.I.

Tool storage. Stan. i instr. 25 no.12:29-30 D '54. (MIRA 8:1)
(Tools)

YEGOROV, M.M.; KRASIL'NIKOV, K.G.; SYSOYEV, Ye.A.

Water wetting heats of various silica gels with reference to their degree of hydration. Dokl.AN SSSR 108 no.1:103-106 My '56. (MLRA 9:8)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova. Predstavleno akademikom M.M. Dubininym.
(Silica) (Heat of wetting)

20-114-3-35/60

AUTHORS: Yegorov, M. M., Yegorova, T. S., Kiselev, V. F., Krasil'nikov, K. G.

TITLE: The Adsorption of Water Vapors on Silica Gels Hydrated to Varied Degrees (Adsorbtsiya parov vody na silikagelyakh razlichnoy stepeni gidratatsii)

PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol. 114, Nr 3, pp. 579-582 (USSR)

ABSTRACT: As is known, the adsorption of water vapors on silica gels is characteristic by some specific properties. Some previously published scientific papers have investigated in detail the irreversible adsorption of water vapors which is connected with an additional hydration of the silica-gel surface in the process of adsorption. Other investigations reached the conclusion that the isotherm of the adsorption of water vapors, depending on the degree of the dehydration of the silica-gel surface and of porous glasses, is transformed from a convex into a concave line, the latter corresponding to a hydrophobic surface. There exist different divergences in computing the specific surfaces of silica gels from the isothermal lines. None of the authors of the above-mentioned scientific papers

Card 1/4

The Adsorption of Water Vapors on Silica Gels Hydrated to Varied Degrees

conducted the chemical analysis of the surfaces of the silica gels and of porous glasses. This task was now performed by the authors of the paper under review. Figure Nr 1 of the paper under review represents the isotherms of the water vapors on the initial silica gels and also the curves of distribution - as computed from the desorption branches - of the pore volume with respect to their effective diameter taking into account the thickness of the adsorbed film. Figure Nr 2 contains the initial segments of the primary vapor adsorption on all samples of silica gels, computed for 1 m^2 of the surface. It can be seen from figure Nr 2A that the isotherms of the three initial samples, worked at 300 degrees centigrade, are placed in such a way that p/p_s being the same, the adsorption decreases with a decrease in the degree of hydration of the surface, and this corresponding to the observed reduction in heat of the water moistening of the same samples. The state attained at the water adsorption at the thermally dehydrated surfaces are not equilibrated, as far as in this case the process of hydration of the surface can take place. However, in the monomolecular range at small p/p_s this process is very slow. Therefore it is possible to consider the isotherms of the figure Nr 2A of the silica gel samples K-2, annealed at high tempera-

Card 2/4

The Adsorption of Water Vapors on Silica Gels Hydrated to Varied Degrees

tures, as equivalent from the point of view of adsorption. For this purpose, however, one has to neglect the slight modification of the surface hydration during the process of establishing the adsorption equilibrium. If these isotherms are compared with the previous ones, it can be seen that, depending on the surface hydration, they change their form and become concave. It is furthermore observed that in this context the capacity of adsorption of the silica gel decreases. Quite a number of assumptions - as found in relevant scientific literature - on the mechanism of adsorption of water vapors on silica gel and on the hydration of its surface, are in contradiction to each other; these assumptions are based on adsorption data and also on the investigation of the infrared spectra of the surface layer. In order to clarify these questions, additional research is necessary, namely study of adsorption linked with spectroscopic investigations. There are 2 figures, 1 table, and 20 references, 14 of which are Slavic.

Card 3/4

20-114-3-35/60

The Adsorption of Water Vapors on Silica Gels Hydrated to Varied Degrees

ASSOCIATION: Moscow State University imeni M. V. Lomonosov
(Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova)

PRESENTED: December 14, 1956, by M. M. Dubinin, Member of the Academy

SUBMITTED: December 10, 1956

Card 4/4

~~24(7)~~ 24,3410

68031

SOV/155-58-6-33/36

AUTHORS: Lyubimov, Yu.A., Yegorov, M.M.

TITLE: Infrared Absorption Spectra of Water Molecules Adsorbed on a Microporous Glass

PERIODICAL: Nauchnyye doklady vysshey shkoly. Fiziko-matematicheskiye nauki, 1958, Nr 6, pp 208-211 (USSR)

ABSTRACT: A comparison of the papers [Ref 1] and [Ref 2] shows that the conceptions concerning the adsorption of water molecules on microporous glass or silica gel are very different. In order to clear this question the authors consider the absorption spectra of water adsorbed on the surface of microporous glass, where simultaneously the adsorption isotherm is measured. These experiments lead among others to the following results : Before the adsorption of water vapor a soaked glass shows a very intensive absorption band ν_1 = 7340 cm^{-1}, under increasing adsorption of water ν_1 becomes slowly smaller (to about 7300 cm^{-1}), simultaneously there arise the bands ν_2 = 7240 cm^{-1} (corresponds to the adsorbed water) and

Card 1/2

Infrared Absorption Spectra of Water Molecules Adsorbed on a Microporous Glass SOV/155-58-6-33/36

ν_3 = 7130 cm^{-1} (corresponds to the capillary-condensed water). From this it is concluded that the character of the surface is particularly heterogeneous. The irreversible character of the adsorption (irreversible hycteresis) is proved.
There are 2 figures, and 5 Soviet references.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova (Moscow State University imeni M.V. Lomonosov)

SUBMITTED: October 21, 1958

4

Card 2/2

AUTHORS: Yegorov,M.M., Yegorova,T.S.,Kiselev,V.F., SOV/55-58-1-27/33
and Krasil'nikov,K.G.

TITLE: Influence of the Nature of the Silica Gel Surface on the Adsorption of the Methyl Alcohol Vapors (Vliyaniye prirody poverkhnosti silikagelya na adsorbtsiyu parov metilovogo spirta)

PERIODICAL: Vestnik Moskovskogo universiteta, Seriya fiziko-matematicheskikh i yestestvennykh nauk, 1958, 13 Nr 1, pp 203-207 (USSR)

ABSTRACT: The paper is written under the leading of Professor B.V.Il'in and contains the results of a detailed measuring of methyl alcohol vapors which in the monomolecular range have been adsorbed at the surface of the silica gel. Before the experiment, the surface of the silica gel was submitted to the influence of saturated water vapor up to 48 hours. The results are collected in a table and two figures.
There are 15 Soviet references.

ASSOCIATION: Kafedra obshchey fiziki dlya khimicheskogo fakul'teta (Chair of General Physics of the Department of Chemistry)

SUBMITTED: May 3, 1957

Card 1/1

5(4)

AUTHORS: Yegorov, M. M., Krasil'nikov, K. G., Kiselev, V. F.

SOV/76-32-10-33/39

TITLE: The Influence of the Nature of Silica Gel and Quartz Surfaces on Adsorption Properties (Vliyaniye prirody poverkhnosti silikagelya i kvartsa na ikh adsorbtsionnyye svoystva) I. Investigations of the Hydration of the Silicon Dioxide Surface (I. Issledovaniya gidratatsii poverkhnosti kremnezema)

PERIODICAL: Zhurnal fizicheskoy khimii, 1958, Vol 32, Nr 10, pp 2448 - 2454 (USSR)

ABSTRACT: Of late the presence of hydroxyl groups on silicon dioxide surfaces was found in investigations (Refs 8-13). The present paper deals in detail with investigations of the degree of hydration in dependence on the annealing in 7 different SiO_2 samples. The silica gel KSK was carefully purified; silica gel K-2 was obtained by a distillation of $SiCl_4$ according to a method mentioned (Ref 3), and after storing under water it was termed silica gel K-3. "White root" and ground quartz (sample BS-1) were used as non-porous samples. The determinations

Card 1/4

of the specific surfaces of the samples were carried out according to the BET method by means of nitrogen vapors. All silica gel samples used belong to the type of coarsely porous adsorbents (Ref 16). Diagrams of the function of the water content versus the annealing temperature of the silica gels KSK-1, KSK-2, K-2 and K-3 are given using data by Shapiro and Weiss(Veys) (Ref 14) as well as by Bastick (Bastik)(Refs 4,17). The standard temperature for treating the samples was chosen to be 300°. The results show that the content of the water of constitution as related to the surface unit is different for various silica gels. In the case where the samples were treated exactly the same but a different specific surface was present no surfaces with the same degree of hydration could be obtained, which proves the incorrectness of the data mentioned in reference 21. On storing the samples in water it was found that the amount of water of constitution on the surface increased sharply. However, those samples treated

at 300° after storing always had smaller amounts than those without any temperature treatment. The process of dehydration and secondary hydration was irreversible under the conditions present. The degree of hydration depends on the crystal chemical properties of the surface structure and is determined by the valence number of the surface atoms that are loosely bound. The surface hydration of all samples investigated treated under the same conditions was different and amounted to a maximum of 4,78μM/m^2. A paper by Eiler (Iler) (Ref 4) is mentioned; the authors thank B.V.Il'in. There are 3 figures, 1 table, and 23 references, 12 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im.M.V.Lomonosova (Moscow State University imeni M.V.Lomonosov)

The Influence of the Nature of Silica Gel and Quartz Surfaces on Adsorption Properties. I. Investigations of the Hydration of the Silicon Dioxide Surface

SOV/76-32-10-33/39

SUBMITTED: June 5, 1957

Card 4/4

5(4) SOV/76-32-11-25/32

AUTHORS: Yegorov, M. M., Yegorova, T. S., Kranil'nikov, K. G., Kiselev, V. F.

TITLE: The Effect of the Nature of the Silica Gel and Quartz Surface on Its Adsorption Properties (Vliyaniye prirody poverkhnosti silikagelya i kvartsa na ikh adsorbtsionnyye svoystva) II. Adsorption of Steam, Methyl Alcohol and Nitrogen on Silica Gel of Different Degrees of Hydration (II. Adsorbtsiya parov vody, metilovogo spirta i azota na silikagelyakh razlichnoy stepeni gidratatsii)

PERIODICAL: Zhurnal fizicheskoy khimii, 1958, Vol 32, Nr 11, pp 2624-2633 (USSR)

ABSTRACT: Silica gel samples and non-porous "white soot" described in the previous paper were used. The measurements of the adsorption were carried out according to the gravimetric method. It was found (Fig 1) that with samples treated at 300°C the adsorption (at constant p/p_s) decreases with a decrease of the degree of hydration of the surface. The different adsorbability of the investigated silica gels is not due to their structure

Card 1/3

The Effect of the Nature of the Silica Gel and Quartz Surface on Its Adsorption Properties. II. Adsorption of Steam, Methyl Alcohol and Nitrogen on Silica Gel of Different Degrees of Hydration

but to the chemical nature of the surface (their degree of hydration). It is assumed that the hydroxyl groups with water molecules can form hydrogen compounds on the surface (Ref 12), and thus act as adsorption centers. Contradicting data given by other authors on the adsorption centers mentioned above (Refs 15,16) are explained by a different technique of investigation. As the hydration of the surface of the investigated samples is different the adsorption properties of the surface with respect to the molecules capable of forming hydrogen compounds with hydroxyl groups are also different. Measurements carried out of the surface of hydrated KSK-1 samples occupied by water molecules showed that within the range of p/p_s from 0.1 to 0.3 the value ω_m changes from 39 to 22.5 $Å^2$ and thus is considerably higher than that given in publications (10.6 and 14.8 $Å^2$) (Refs 20-22). As the adsorption properties are functions of several factors (crystallography of the sample, chemical composition etc.) they cannot be called "absolute" properties ("absolute" isothermal lines). The authors thank M. M. Dubinin and B. V. Il'in.

SOV/76-32-11-25/32

The Effect of the Nature of the Silica Gel and Quartz Surface on Its Adsorption Properties. II. Adsorption of Steam, Methyl Alcohol and Nitrogen on Silica Gel of Different Degrees of Hydration

There are 8 figures and 29 references, 22 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

SUBMITTED: June 5, 1957

Card 3/3

AUTHORS: Yegorov, M. M., Zarif'yants, Yu. A., SOV/20-120-2-28/63
Kiselev, V. F., Krasil'nikov, K. G.

TITLE: The Adsorption Properties of Alumo-Silicate Catalysts and Their Dependence Upon Composition (Adsorbtsionnyye svoystva alyumosilikatnykh katalizatorov i ikh zavisimost' ot sostava)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol. 120, Nr 2, pp. 326 - 329 (USSR)

ABSTRACT: In some previous papers (Refs 1-4) it was shown that the adsorption properties per unit of surface with respect to water and ethyl alcohol molecules are to a considerable extent dependent upon the degree of hydration of the surface. It would be of interest to extend such investigations to a number of alumo-silicates of varying composition. In the first stage of these studies the authors investigated the adsorption of steam and of methyl alcohol vapors and the heat necessary to wet the synthetic alumo-silicate compounds. The catalysts had a content of 15% (Gudri catalyst), of 30% and of 50% of Al_2O_3. The measurements of adsorption were carried out in

Card 1/3 a calorimeter with constant heat exchange. A diagram gives the

function of the heat required for wetting by water versus the content of crystal water for all alumo-silicates under investigation. These curves exhibit maxima which reproduce the thermal pretreatment of the samples at 200-500°. The comparatively high content of crystal water is of interest, in particular in the samples with a high Al_2O_3 content. The heats of wetting differ by about the double between silicagel and alumo-silicate with a low Al_2O_3 content (15%) even with a similar hydration of the surface. The same samples were also used for the determination of the isothermal lines of the adsorption of steam and of methyl alcohol vapors. The desorption isothermal lines of all samples are considerably below the adsorption isothermal lines. Silicagel, however, did not show such a behaviour. The structure of alumosilicates is similar to that of silica, its surface, however, is more inhomogeneous. Investigation of the adsorption mechanism cannot be limited to the local adsorbed molecules with active centers, and their topography and their concentration must be taken into account. In conclusion the authors express their gratitude

The Adsorption Properties of Alumo-Silicate Catalysts and Their Dependence Upon Composition SOV/20-120-2-28/63

to B.V.Il'in for the help rendered by him in this work and to K.V.Topchiyev for his unabated interest and for his furnishing the samples. There are 3 figures, 1 table, and 16 references, 15 of which are Soviet.

ASSOCIATION: Fizicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta im.M.V.Lomonosova (Dept. of Physics of the Moscow State University imeni M.V.Lomonosov)

PRESENTED: January 15, 1958, by M.M.Dubinin, Member, Academy of Sciences, USSR

SUBMITTED: January 6, 1958

1. **Aluminum silicate catalysts--Adsorptive properties**
2. **Aluminum silicate catalysts--Physical properties**

Card 3/3

SOV/153-2-3-9/29

5(4)

AUTHORS: Yegorov, M. M., Kiselev, V. F., Krasil'nikov, K. G., Simanov, Yu. P.

TITLE: The Influence of the Phase Composition of the Adsorbents in the System Al_2O_3 - H_2O on Their Surface Properties

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1959, Vol 2, Nr 3, pp 360-365 (USSR)

ABSTRACT: Cherenkov aluminum oxide from the laboratory of K. V. Topchiyeva khimicheskiy fakul'tet MGU (Chemical Department of Moscow State University) was used for the investigation. The dehydration at different temperatures was investigated (Fig 1). Phase investigations were carried out by X-ray methods with cameras of the type RDK-57 and with X-ray tubes of the type BSV. The samples were tempered at different temperatures and the wetting heat was determined (Table). The results are - referred to 1 g oxide - represented in diagrams (Fig 2). A second representation is given with respect to the surface unit (Fig 3). A dependence between the structural water and the wetting heat per surface unit was found (Fig 4). The phase change and the change of the degree of wetting of the surface causes a sharp change of the

Card 1/2

The Influence of the Phase Composition of the Adsorbents in the System Al_2O_3 - H_2O on Their Surface Properties SOV/153-2-3-9/29

surface properties. The authors thank K. V. Topchiyeva and B. V. Il'in for their assistance in the investigations. There are 4 figures, 1 table, and 10 references, 7 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni M. V. Lomonosova - Kafedra fiziki (Moscow State University imeni M. V. Lomonosov - Chair of Physics)

SUBMITTED: April 24, 1958

Card 2/2