zation of urine-fecal and fecal mixtures. Unfortunately, the remaining unidentified organic substances are very toxic for plants and must undergo additional processing. Traces of hydrogen, saturated and unsaturated hydrocarbons, and ammonia are found in the vapor after mineralization. Furthermore, the high pressure (150 atm) and temperature (250—275°C) required make this method technologically difficult. A possible use for this method is high-temperature hydrolysis of urea, producing ammonia and nitric acid. More research is required to determine the place of the "pressure cooking" method in a complex life-support system.

An aerobic method was selected to demonstrate biological mineralization. Biological mineralization can be intensified by (1) increasing the total number of microbes by regenerating the activated sludge, (2) increasing oxygen utilization by prolonging contact of the mixture with air (without increasing the length of aeration), or (3) by using higher temperatures during cultivation of activated sludge. Long-term experiments were conducted with a concentrated (1:30) urine-fecal solution aerated for 4 hr, with the

following results: 85% mineralization of organic substances and 95% conversion of nitrogen-containing substances into nitrates.

Gaseous products of waste mineralization must be converted into solid or liquid form for use as plant nutrients. With the catalytic method of mineralizing gaseous substances, oxides of nitrogen and sulphur, CO_2, and water are obtained. Mineralization of a daily amount of solid and liquid human wastes produces as much as 3.0—4.0 g of free nitrogen, 0.5 g of hydrogen, 3.0 g of carbon monoxide, 7.0 g of ammonia, and as much as 5.0 g of saturated and unsaturated hydrocarbons. During this process, as much as 122 g of CO_2 can be formed and 60 g of oxygen expended. The end product, after mineralization and purification, must contain only nitrogen, oxygen, and CO_2.

Mineralization of human and plant wastes is closely connected with the regeneration, conditioning, and storage of water. Water sources are water-containing products of human metabolism and life-support system operation, a condensate of atmospheric moisture, and water of transpiration. A water-regeneration system weighs 20—

APPROVED FOR RELEASE: 06/05/2000 CIA-RDP86-00513R000100520019-3"

ACC NR: AT7011648

50 kg regardless of flight duration, while a water supply for three men on a 30-day spaceflight can weigh 495 kg. One man requires approximately 4 liters of water per day, of which 1200 ml is drinking water, 1000 ml is needed for food preparation (more for dehydrated food), and 1800 ml for hygienic needs. Sufficient water for these purposes can be supplied by atmospheric moisture, urine, water left from washing, water of transpiration from higher plants, and algal substrate. The most promising methods for regeneration of water from human metabolic wastes are catalytic oxidation, vacuum distillation, and lyophilization. Lyophilization or molecular drying utilizes the vacuum and low temperatures of space. Studies have shown that water can be purified with sorbents (including ion-exchangers) if organic substances are oxidized first and semipermeable membranes are used. A number of other methods can be used for regeneration of water—electrochemical methods, ultrasound, radiation, and ozonation. Hygienic and chemical properties of water regenerated by lyophilization, vacuum distillation and catalytic oxidation are listed. These data show the need for additional purification by sorbents in some cases.
Orig. art. has: 1 table. [ATD PRESS: 5098-F]
SUB CODE: 06 / SUBM DATE: none

Card 6/6

AGRE, N.S.

30(1) SOV/30-59-1-50/57

AUTHORS: Afrikyan, E. K., Kochayeva, A. G., Candidates of Biological Sciences

TITLE: Use of Antibiotics in Plant Cultivation (Primeneniye antibiotikov v rasteniyevodstve)

PERIODICAL: Vestnik Akademii nauk SSSR, 1959, Nr 1, pp 142-143 (USSR)

ABSTRACT: A conference dealing with this subject took place in Yerevan from 8 to 13 October, 1958; it had been called by the Institut mikrobiologii Akademii nauk SSSR (Microbiological Institute of the Academy of Sciences USSR), the Vsesoyuznyy institut sel'skokhozyaystvennoy mikrobiologii VASKhNIL (All-Union Institute for Agricultural Microbiology of the VASKhNIL) and the Sektor mikrobiologii Akademii nauk Armyanskoy SSR (Department for Microbiology of the Academy of Sciences of the Armyanskaya SSR).
[illegible] spoke about microbe metabolites which promote the development of higher plants.
N. M. Pidoplichko reported on investigations of several years' duration carried out by Ukrainian mycologists on soil fungus flora and its utilization in the fight against agricultural plant diseases.
[illegible], S. N. Moskovets dealt with the utilization of the fungus Trichoderma in fighting the diseases of cotton bushes, potatoes and some other agricultural breeds.
R. G. Mirzabekyan's report dealt with the excretions of actinomycetes which produce active antibiotics against the carriers of potato wart disease and diplodia in maize.
S. [illegible], V. N. Kasunina spoke about the utilization of the actinomycetes antagonists in fighting potato ring rot and mucous bacteria in cabbage.
G. K. Kublanovskaya reported on the effect of preparations from cultures of actinomycetes to prevent wilt of the cotton bush.
[illegible] Turanyan, E. K. Afrikyan, R. A. Bobikyan, Ye. [illegible] Nikitina spoke about the successful utilization of several bacteria against diseases of vegetable cultures and potato wilt.
Yu. [illegible], O. G. Shirokov, A. D. Nalbandyan dealt with the utilization of epiphyte microflora in fighting several fungus diseases in plants.
D. [illegible], [illegible] Rodionovskaya, L. P. Starygina, [illegible] mentioned results obtained in investigations of phytobacteriomycene as well as its utilization in fighting diseases occurring in cotton bushes and beans.
R. [illegible], Ye. P. Protasenko, A. G. Kochayeva, [illegible] tried the effect of antibiotic preparations as tomatoseed steeps against bacterial cankers in fighting diseases of decorative plants.
Ye. Ya. [illegible], K. I. Bal'trukova described the investigation of plant antibiotics.
[illegible], A. B. Silayev spoke about the production of the preparations "grizeoful'vin" and "trikhotetsin" and their effect on fungus carriers of diseases in cabbage, wheat and water melons.
A. G. Kochayeva reported on results achieved in the utilization of antibiotics against unpaired silk moths.

Card 2/4

V. P. Israil'skiy, N. D. Buyanova, M. D. Kulikovskaya dealt with the formation of phytopathogen forms of bacteria resistant to antibiotics.
K. A. Vinogradova, N. S. Agre described a method of rapid determination of the effect of antibiotics on plants. The participants in the conference found the work carried out in this field in the USSR insufficient. The organization of an industrial production of antibiotics and microbe preparations for the purpose of their large-scale practical introduction in agriculture was pointed out as necessary. The necessity of an intensification of joint investigation of the growth stimuli and the development of plants of microbial origin was further pointed out. The importance of coordination of work for purposes of research and utilization of antibiotics in plant breeding was emphasized as well as the holding of periodical conferences dealing with this problem.

Card 3/4

KRASIL'NIKOV, N.A.; AGRE, N.S.

Actinomycetes of the cyanoalbus group. Trudy Inst. microbiol. no.8:254-274 '60. (MIRA 14:1)

1. Moskovskiy gosudarstvennyy universitet.
(ACTINOMYCETALES)

SILAYEV, A.B.; AGRE, N.S.; EL'-REGISTAN, G.I.; VEYS, R.A.; SEMENOV, M.N.

Isolation, purification and basic properties of antibiotics from Actinomyces globisporus var.roseus strain No. 2911. Antibiotiki 6 no.10:871-878 O '61. (MIRA 14:12)

1. Laboratoriya antibiotikov biologo-pochvennogo fakul'teta Moskovskogo universiteta imeni Lomonosova.
(ANTIBIOTICS) (ACTINOMYCES)

AGRE, N. S.

Phage of a thermophilic micromonospore — Micromonospora vulgaris.
Mikrobiologiia 39 no.3:414-417 My-Je '61. (MIRA 15:7)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

(BACTERIA, THERMOPHILIC) (BACTERIOPHAGE)

S/220/62/031/001/003/003
I018/I218

Authors: Agre, N. S., and Orleanskii, V. K.

Title: THERMOPHILIC ACTINOMYCETES IN THE SOIL OF PAMIR AND THEIR ANTAGONISTIC PROPERTIES

Periodical: *Mikrobiologiya*, v. 31. no. 1, 1962, 95-102

Text: Thermophilic bacteria and actinomycetes are widely spread in Pamir soils. Their numbers do not depend on the altitude, being more affected by micro-conditions of the soil in question. The numbers of thermophilic bacteria and actinomycetes in any particular soil depend on the kind of the soil and the extent of cultivation. The thermophilic actinomycetes isolated were shown to belong to 8 species, four of which were identified: *Micromonospora vulgaris*, *Micromonospora monospora*, *Act. thermodiastaticus*, and *Thermopolyspora polyspora*. The prevailing organism was *M. vulgaris*. The strains isolated were tested for their antibacterial activity against *Micrococcus aureus*, *Mycobacterium*, *Act. globisporus Sacch. cerevisiae*, *Bact. coli*. Antagonists against *M. aureus* (36% of all strains isolated) and *Actinomyces globisporus*, prevailed.

Association: Moskovskii gosudarstvennyi universitet im. M.V. Lomonosova (Moscow State University im. M. V. Lomonosov)

Submitted: January 30, 1961

Card 1/1

ZVYAGINTSEV, D.G.; VINOGRADOVA, K.A.; AGRE, N.S.; PERTSOVSKAYA, A.F.

Natural (primary) fluorescence of actinomycetes. Mikrobiologiia 33 no.4:631-638 Jl-Ag '64. (MIRA 18:3)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

AGRE, N.S.

Methods of isolating and cultivating thermophilous actinomycetes. Mikrobiologiia 33 no.5:913-917 S-O '64. (MIRA 18:3)

1. Biologo-pochvennyy fakul'tet Moskovskogo gosudarstvennogo universiteta imeni Lomonosova.

KRASIL'NIKOV, N.A.; AGRE, N.S.

New genus of ray fungi Actinobifida n. gen. Yellow group Actinobifida dichotomica n. sp. Mikrobiologiia 33 no.6:935-943 N-D '64.
(MIRA 18:4)

1. Biologo-pochvennyy fakul'tet Moskovskogo gosudarstvennogo universiteta imeni Lomonosova.

KRASIL'NIKOV, N.A.; AGRE, N.S.

Brown group of Actinobifida chromogena n. sp. Mikrobiologiia 34 no.2:284-291 Mr-Ap '65. (MIRA 18:6)

1. Biologo-pochvennyy fakul'tet Moskovskogo gosudarstvennogo universiteta imeni Lomonosova.

YEVREINOVA, T.N.; TSAPLINA, I.A.; AGRE, N.S.; DAVYDOVA, I.M.

Effect of temperature on nucleic acids of the thermophilic and mesophilic variants of Micromonospora vulgaris. Mikrobiologiia 34 no.3:411-417 My-Je '65.

(MIRA 18:11)

1. Biologo-pochvennyy fakul'tet Moskovskogo gosudarstvennogo universiteta imeni M.V.Lomonosova.

AGRE, N.S.; ORLEANSKIY, V.K.

Antagonistic properties of some species of thermophilic actinomyces. Antibiotiki 9 no.9:796-800 S '64.
(MIRA 19:1)

1. Biologo-pochvennyy fakul'tet Moskovskogo universiteta imeni Lomonosova.

SOROCHKIN, I.M.; GRISHIN, L.I.; AGRE, S.I., spetsred.; VASIL'YEVA, G.N., red.; KISINA, Ye.I., tekhn.red.

[Progressive methods of work organization in salvaging departments of meat combines] Peredovye metody organizatsii truda v tsekhakh shirpotreba miasokombinatov. Moskva, Pishchepromizdat, 1956. 27 p. (MIRA 12:5)
(Leningrad--Buttons)

AGRE, Valentin Livovich; VATKIN, Yuriy Yakovlevich; RYMOV, V.A., red.; LANOVSKAYA, M.R., red. izd-va; KLEYNMAN, M.R., tekhn. red.

[Steel pipes; manual for training qualified workers under operating conditions] Stal'nye truby; posobie dlia podgotovki kvalifitsirovannykh rabochikh na proizvodstve. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1961. 189 p. (MIRA 14:8)
(Pipe, Steel)

AGRE, V.L.; AL'DIYEVA, K.N.; ANANYAN, V.V.; BERLIN, R.I. [deceased]; ISTOMIN, A.V.; KAGAN, I.A.; KRONGAUZ, N.D.; KULAKOV, A.M.; MARKOV, V.P.; MATVEYEV, Yu.M.; NESVETAYEV, A.M.; OSIPOV, A.P. [deceased]; POZIN, M.S.; FAYNSHTEYN, V.M.; SHAPIRO, B.S.; SHEVCHENKO, N.A.; SHCHIRIN, V.N.; AL'SHEVSKIY, L.Ye., kand. tekhn.nauk, red.; VLADIMIROV, Yu.V., red.izd-va; MIKHAYLOVA, V.V., tekhn.red.

[Rolling and pipe mills] Prokatnoe i trubnoe proizvodstvo. Pod red. L.E.Al'shevskogo i A.V.Istomina. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1962. 246 p. (MIRA 15:2)

1. Moscow. TSentral'nyy institut informatsii chernoy metallurgii. (Rolling mills) (Pipe mills)

AGRE, Valentin L'vovich; SHEVCHENKO, Nikolay Andreyevich; GOLUBCHIK, R.M., red.

[New gas pipelines in the Soviet Union] Novye gazoprovodnye truby v SSSR. Moskva, Izd-vo Metallurgiia, 1964. 30 p. (MIRA 17:7)

MATVEYEV, Yuriy Mikhaylovich; AGRE, Valentin L'vovich; VATKIN, Yuriy Yakovlevich; KRICHEVSKIY, Yevgeniy Markovich; RYMOV, V.A., red.

[Welded pipe; workers' handbook] Svarnye truby; spravochnoe rukovodstvo dlia rabochikh. Moskva, Izd-vo "Metallurgiia," 1964. 188 p. (MIRA 17:5)

AGRENICH, A.A., inzhener-podpolkovnik; ZHEREBTSOV, A.A., polkovnik, redaktor; KONOVALOVA, Ye.K., tekhnicheskiy redaktor

[From stone to modern projectile] Ot kamnia do sovermennogo snariada. Moskva, Voen. izd-vo Ministerstva oborony SSR, 1954. 161 p. (MLRA 8:7)
(Projectiles)

AGRENICH, A.A.

Standardization during the Second World War. Standartizatsiia 29 no.7:52-53 Jl '65. (MIRA 18:11)

AGRENICH, Aleksandr Andreyevich, inzh.-polkovnik; ZHEREBTSOV, A.A., red.; STREL'NIKOVA, M.A., tekhn.red.

[Antiaircraft artillery] Zenitnaia artilleriia. Moskva, Voen. izd-vo M-va obor.SSSR, 1960. 213 p. (MIRA 13:6)
(Antiaircraft guns)

AGREST, D.M., inzh.; DZEMIT, K.I.; PYATKOVSKIY, A.G.

Constructing a precast reinforced concrete sintering plant. Prom. stroi. 38 no.8:41-44 '60. (MIRA 13:8)

1. Trest Voroshilovskstroy.
(Precast concrete construction)
(Sintering--Equipment and supplies)

AGREST, D.M.

BARCH, I.Z.; BLAGOV, V.L.; ZHEGOLEV, B.A.; DASHEVSKIY, M.Yu.; [illegible] B.A.; AGREST, D.M.

Using combined assembly blocks in constructing blast furnaces. Prom. stroi. 39 no. 2:5-9 '61. (MIRA 14:2)

1. Yuzhnyy nauchno-issledovatel'skiy institut Akademii stroitel'stva i arkhitektury USSR (for Blagov). 2. Donbasstal'konstruktsiya (for Zhegolev). 3. Gosudarstvennyy proyektnyy institut [illegible] konstruktsiya (for Dashevskiy). 4. Donbassprommontazh (for [illegible]). 5. Voroshilovskstroy (for Agrest).
(Blast furnaces) (Precast concrete construction)

USSR/Analytical Chemistry - Analysis of Inorganic Substances, G-2

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 1216

Author: Stolyarov, K. P., and Agrest, F. B.

Institution: None

Title: Colorimetric Determination of Traces of Copper in Metallic Nickel and Its Compounds in the UV Region

Original Periodical: Zh. analit. khimii, 1956, Vol 11, No 3, 286-291 (with a summary in English)

Abstract: The colorimetric determination of Cu traces in Ni compounds is based on the measurement of the optical density of the ammonia complex of Cu(i) at 365-380 mμ. At these wave lengths the Ni complex shows insignificant light absorption. Cu(II) is reduced to Cu(I) with ascorbic acid in the presence of KBr. In the concentration range 5-20 γ/ml the Cu(I) complex follows the Beer-Lambert law. The determination of Cu is carried out at the following ratios: Cu:Ni:Co:Zn = 1:1,500:30:75. Fe(II) interferes.

Card 1/1 Leningradskiy gosudarstvennyy ordena Lenina Universitet im. A. A. Zhdanova.

Category : USSR/Optics - Optical methods of analysis. Instruments K-7

Abs Jour : Ref Zhur - Fizika, No 1, 1957 No 2533

Author : Stolyarov, K.P., Agrest, F.B.
Title : Colorimetric Determination of Traces of Copper in Metallic Nickel and in its Compounds Using the Ultraviolet Region of the Spectrum.

Orig Pub : Zh. analit. khimii. 1956, 11, No 3, 286-291

Abstract : A procedure was developed for the colorimetric determination of traces of Cu in metallic nickel and its compounds, using the UV region of the spectrum, based on the absorption of rays with λ 265 -- 380 mμ in the ammonia complex of single-valent copper. The sensitivity of the method is 0.5 γ/ml Cu with a cuvette thickness of 2.5 cm. The ratio of the ammonium-bromide complex of copper to the absorption of the visible and UV rays was studied in the range of wavelength from 450 to 300 mμ and an absorption curve of this complex was plotted. It was shown that traces of copper can be determined with a ratio of accompanying elements Cu:Ni:Co:Zn 1:500:30:75 without preliminary separation.

Card : 1/1

VARVARICHEVA, Aleksandra Il'inichna, inzh.; DUTKINSKAYA, Yelizaveta Kazimirovna, inzh.; AGREST, Faina Borisovna, inzh.; AKATOVA, N.V., inzh., red.; FREGER, D.P., red.izd-va; BELOGUROVA, I.A., tekhn. red.

[Use of organic reagents in the chemical analysis of electrolytes in electrolytic cells of nonferrous metals and alloys] Primenenie organicheskikh reagentov v khimicheskom analize elektrolitov gal'vanicheskikh vann, tsvetnykh metallov i splavov; opyt zavoda "Elektrik." Leningrad. 1961. 12 p. (Leningradskii dom nauchno-tekhnicheskoi propagandy. Obmen peredovym opytom. Seriia: Zashchitnye pokrytiia, no.10) (MIRA 15:6)
(Nonferrous metals--Analysis) (Electrolytes)

KOSHKIN, N.V.; AGREST, F.B.

Use of thiosemicarbazides in analysis. Part 7: Photometric determination of copper in aluminum and its alloys. Izv.vys. ucheb.zav.; khim.i khim.tekh. 7 no.6:910-913 '64.

(MIRA 18:5)

1. Leningradskiy tekhnologicheskiy institut kholodil'noy promyshlennosti i khimicheskaya laboratoriya zavoda "Elektrik", kafedra obshchey i analiticheskoy khimii.

MAKSIMYUK, Ye.A.; GINSBURG, G.S.; AGREST, F.B; LAZEL'SHTRAYKH, V.Yu.

Polarographic and spectrophotometric studies of the properties of complex compounds as dependent on the conditions of their formation. Zhur. prikl. khim. 37 no.6:1233-1237 Je '64. (MIRA 18:3)

AGREST, G.A., inzhener.

New techniques of installing wiring for electric lights in apartment and public buildings. Svetotekhnika 3 no.3:24-26 Mr '57.
(MLRA 10:3)

1. Trest "Elektromontazh-55".
(Electric lighting--Wiring)

USSR/Nuclear Physics - Nuclear processes

Card 1/1 Pub. 146 - 4/20

Author : Bene, A. A., and Agrest, M. M.

Title : Taking into account the finite thickness of the emulsion layer when investigating nuclear processes by means of the photographic method

Periodical : Zhur. eksp. i teor. fiz., 27, No 5 (11), 557-562, Nov 1954

Abstract : The authors introduce corrections to account for the finite thickness of the emulsion layer in order to determine the complete number of traces of any nuclear particles within a given solid angle. Three references, all Western.

Institution : -

Submitted : January 15, 1954

USSR/Nuclear Physics - Nuclear techniques FD-2882

Card 1/1 Pub. 146 - 19/26

Author : Agrest, M. M.

Title : Taking into account the finite thickness of the emulsion layer in investigating nuclear processes by the photographic method

Periodical : Zhur. eksp. i teor. fiz., 29, August 1955, 249-251

Abstract : In his previous work (co-author A. Bene, ibid., 27, 557, 1954) the author obtained an analytical expression for the ratio of the total number of secondary particles formed during a nuclear reaction within a photoemulsion to the number of secondary particles whose tracks are located wholly in the emulsion layer; here it was assumed that the primary particles are incident parallel to the emulsion layer. In the present note the author derives similar formulas for the more general case where the primary particles are incident at a given angle to the surface of the emulsion layer. He thanks Doctor Vestmayyer for posing the problem and A. Bene for preliminary analysis. Three references.

Institution :

Submitted : March 24, 1955

S/044/60/000/010/021/021
C111/C333

AUTHOR: Agrest, M.M.

TITLE: Systematization of the direct method for the calculation of determinants

PERIODICAL: Referativnyy zhurnal, Matematika, no. 10, 1960, 183, abstract 12152.(Tr.Sukhumsk.gos.ped.in-ta, 1958, 10-11, 475-480)

TEXT: The author gives an algorithm for the direct calculation of letter determinants of high order. The essential feature of the method consists in the ordering of the determinant into groups of terms which contain an equal number of elements of the main diagonal.

[Abstracter's note: Complete translation.]

Card 1/1

57-28-6-30/34

AUTHOR: Agrest, M. M.

TITLE: The Determination of the Portion of Radiation Impinging Upon the Circular Diaphragm From a Surface Emitter Which Emits in Accordance With the Cosine Law (Opredeleniye doli izlucheniya, popadayushchey na krugluyu diafragmu ot poverkhnostnogo omittera, izluchayushchego po zakonu kosinusov)

PERIODICAL: Zhurnal Tekhnicheskoy Fiziki, 1958, Vol. 28, Nr 6, pp. 1340 - 1344 (USSR)

ABSTRACT: If elementary radiation sources are uniformly distributed according to the circle having the radius $r_E = r$, and if they emit according to the law $I = I_o \cos\theta$, the integral radiation σ, which impinges upon the circular platform having the radius $r_d = R > r$ (figure 1) is determined as follows:

$$\sigma = 4\pi I_o \int_0^r \rho \, d\rho \int_0^{\pi} d\psi \int_0^{\theta(\psi)} \sin\theta \cos\theta \, d\theta \qquad (1)$$

The required portion of radiation η, which impinges upon the diaphragm of the radius $r_d = R$

Card 1/4

The Determination of the Portion of Radiation Impinging 57-28-6-30/34
Upon the Circular Diaphragm From a Surface Emitter Which Emits in Accordance With the Cosine Law

$$\eta\left(\frac{h}{r}, \frac{R}{r}\right) = \frac{1}{2}\left\{1 + \left(\frac{R}{r}\right)^2 + \left(\frac{h}{r}\right)^2 - \sqrt{\left[1 + \left(\frac{R}{r}\right)^2 + \left(\frac{h}{r}\right)^2\right]^2 - 4\frac{R^2}{r^2}}\right\} \quad (4)$$

By comparing the tabular values η for $r_E/r_d = X < 1$ and $r_E/r_d = \frac{1}{x} > 1$ at parameter values $z = \frac{h}{r_d}$ satisfying the condition $z_i = xz_v = h$, it is found that they in all cases correspond to the relation (6)

$$\frac{\eta 1}{\eta 2} = \frac{R^2}{r^2}$$

$$\frac{\eta i}{\eta v} = x^2.$$

If the elementary radiation sources on the inner surface of the hollow cylinder having a radius R and a height H are uniformly distributed, the integral radiation σ, which impinges

Card 2/4

The Determination of the Portion of Radiation Impinging Upon the Circular Diaphragm From a Surface Emitter Which Emits in Accordance With the Cosine Law

57-28-6-30/34

on the diaphragm $r_d \leqslant R$ which is located at a distance d from the upper base of the cylinder, is expressed in the following manner in the case of a Cosine radiation:

$$\sigma = 4\pi R I_0 \int_0^H dh \int_0^{\Psi} d\psi \int_{\theta_2(\psi)}^{\theta_1(\psi)} \sin^2\theta \cos\phi \, d\theta.$$

The radiation portion impinging upon the circular diaphragm of the interior surface of the hollow cylinder is determined as follows:

$$\eta = \frac{1}{4\mu}\left\{\sqrt{\left[(1+\delta)^2 + \mu^2 + \nu^2\right]^2 - 4\mu^2\nu^2} - \sqrt{\left[\delta^2 + \mu^2 + \nu^2\right]^2 - 4\mu^2\nu^2} - (1+2\delta)\right\} \qquad (9)$$

Card 3/4

The Determination of the Portion of Radiation Impinging Upon the Circular Diaphragm From a Surface Emitter Which Emits in Accordance With the Cosine Law

57-28-6-30/34

The formula(9) was obtained on the assumption that the radius of the diaphragm is not larger than the radius of the cylinder $r \leqslant R$ ($\nu \leqslant \mu$), and that the center of the diaphragm is located on the axis of the cylinder. In a similar manner it is possible to obtain the final formulae for the radiation portion η if the emitter and the diaphragm are of rectangular shape.

Appendix: Derivation of formula (3)
Derivation of formula (8).

There are 2 figures and 3 references, 1 of which is Soviet.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN Gruzinskoy SSR
(Institute of Physics and Technology, AS Georgian SSR)

SUBMITTED: May 3, 1956

1. Radiation—Mathematical analysis

Card 4/4

57-28-6-31/34

AUTHORS: Agrest, M. M., Maksimov, M. Z., Khmelevskiy, A. K.

TITLE: The Determination of the Solid Angle Formed by a Circular Target With Respect to the Point Source (Opredeleniye telesnogo ugla, obrazovannogo krugloy mishen'yu otnositel'no tochechnogo is tochnika)

PERIODICAL: Zhurnal Tekhnicheskoy Fiziki, 1958, Vol. 28, Nr 6, pp. 1345 - 1348 (USSR)

ABSTRACT: In the present work the authors developed a final and accurate formula for the determination of the solid angle formed in space with respect to any point. In spherical coordinates the required solid angle is expressed in the case $p > R$ by the formula

$$\Omega = \frac{1}{2\pi} \int_0^{\varphi_1} d\varphi \int_{\theta_1}^{\theta_2} \sin\theta \, d\theta.$$

Card 1/3 Calculation of Ω is rendered considerably more simple if the

table for total elliptical integrals of the 3. kind $\Pi(n,k)$, if $k^2 < n < 1$, as developed by Heuman (Reference 7) is used. Ω is determined according to the following formula:

$$\Omega = \frac{1}{4} - \frac{\gamma}{2\pi\sqrt{\gamma^2+(1+\mu)^2}} K(k) + \frac{\mu - 1}{4|\mu - 1|}\left\{\Lambda\ (\gamma, \delta) - 1\right\}$$

The formulae obtained can be used in calculation of the share of radiation of surface emitters on a round detector. Especially the share of radiation of the inner surface of the hollow cylinder with the radius R and the height H, which impinges upon a target of the same radius with the center on the cylinder axis and which is located at a distance d from its upper base, can be determined according to the formula

$$\eta = \frac{1}{2} + \frac{2R}{\pi H}\left\{\frac{1}{k_o} E(k_o) - \frac{1}{k_1} E(k_1)\right\}$$

Card 2/3 There are 1 figure and 7 references, 2 of which are Soviet.

The Determination of the Solid Angle Formed by a Circular Target With Respect to the Point Source

57-28-6-31/34

ASSOCIATION: Fiziko-tekhnicheskiy inst. AN Gruzinskoy SSR (Institute of Physics and Technology, AS Georgian SSR)

SUBMITTED: May 1o, 1956

1. Radiation—Mathematical analysis

Card 3/3

L 3896-66 EPA(s)-2/EWT(m)

AM5023891 BOOK EXPLOITATION UR/
517.5:539.101

Agrest, Matest Mendeleyevich; Maksimov, Mikhail Zakharovich 8
Bri

Theory of incomplete cylindrical functions and their application (Teoriya nepolynkh tsilindricheskikh funktsiy i ikh prilozheniya) Moscow, Atomizdat, 1965. 350 p. illus., biblio. 2800 copies printed.

TOPIC TAGS: cylindrical function, incomplete cylindrical function

PURPOSE AND COVERAGE: This book gives a detailed elucidation of the application of incomplete cylindrical functions to problems connected with investigating the motion of charged particles in electric and magnetic fields, interactions of particles with atomic nuclei, transient processes in electrical circuits, and design of atomic reactors operating on fast neutrons. The authors state that this book is the first, to the best of their knowledge, to be published on this subject and apologize for incomplete and not too systematic selection of practical problems, also for the brevity of the bibliography. This book is intended for engineering physicists,

Card 1/4

electrical engineers, and aircraft designers, also teachers and students in VUZes.

TABLE OF CONTENTS (abridged):

L 3896-66

AM5023891

Card 3/4

L 3896-66
AM5023891

Section 5. Tables of incomplete cylindrical functions -- 319

Bibliography -- 346

SUB CODE: MA, ME, NP SUBMITTED: 25May65 NO REF SOV: 046

OTHER: 036

Card 4/4 hrd

BODRYY, M.; GUSEYNOV, M.; AGRETKIN, S.N., red.; ATADZHANOV, A., red.; BIRA, Ya.I., red.; GEL'DYYEV, A., red.; GOLOVKIN, A.V., red ; MAMEDKULIYEV, A., red.; MATALOV, Ch., red.; KHAIMURADOV, B., red.

Sovet Turkmenistany. Soviet Turkmenistan. Ashkhabad, Turkmenskoe izd-vo, 1964. 103 p. [In Turkmen, Russian, English, and Arabic] (MIRA 18:4)

JITARIU, P.; AGRIGOROAIEI, St.

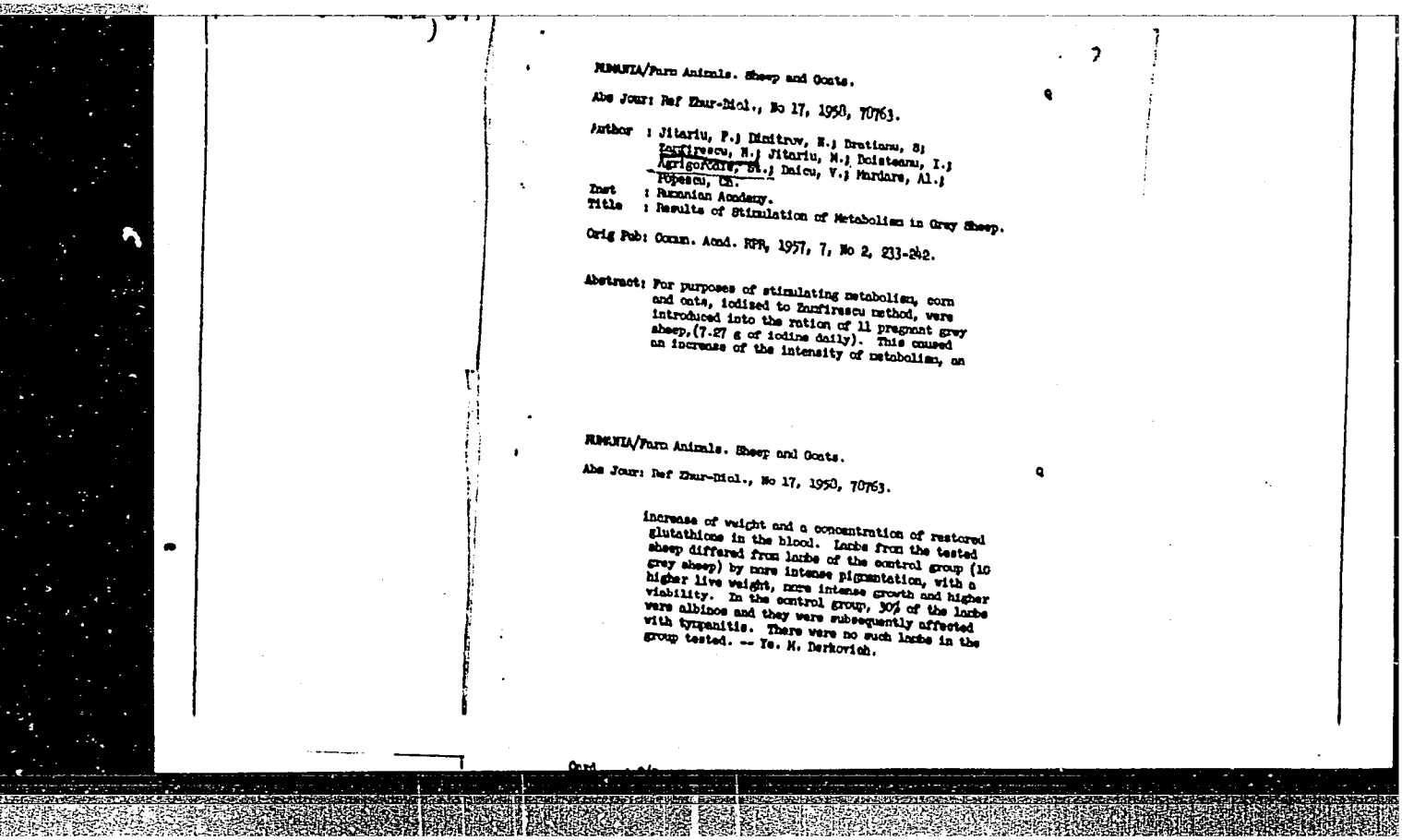
Influence of the magnetic field on tissular clearance.
Anal St Jassy II 10:9-12 '64.

1. Submitted October 26-27, 1963.

AGRIKOLA, Georgiy [Agricola, Georg]; GAL'MINAS, V.A.[translator]; DROBINSKIY, A.I.[translator]; SHUKHARDIN, S.V., red.; PETROVSKIY, I.G., akademik, red.; ANDREYEV, N.N., akademik, red.; KAZANSKIY, B.A., akademik, red.; YUDIN, P.F., akademik, red.; DELONE, B.N., red.; SAMARIN, A.M., red.; ZUBOV, V.P., prof., red.; LEBEDEV, D.M., prof., red.; FIGUROVSKIY, N.A., prof., red.; KUZNETSOV, I.V., doktor filos. nauk, red.; BORODINA, R.M., red. izd-va; YEPIFANOVA, L.V., tekhn. red.; DOROKHINA, I.N., tekhn. red.

[Mining and metallurgy; in twelve books]O gornom dele i metallurgii; v dvenadtsati knigakh. Red. S.V.Shukhardina, perevod i primechaniia V.A.Gal'minasa i A.I.Drobinskogo. Moskva, Izd-vo Akad. nauk SSSR, 1962. 597 p. (MIRA 15:8)

1. Chlen-korrespondent Akademii nauk SSSR (for Delone, Samarin).
(Mines and mineral resources)
(Metalwork)



RUMANIA/Farm Animals. Sheep and Goats.

Abs Jour: Ref Zhur-Biol., No 17, 1950, 70763.

Author : Jitariu, P.; Dimitrov, N.; Bratianu, S; Zanfirescu, N.; Jitariu, M.; Boisteanu, I.; Agrigoroaie, St.; Daicu, V.; Mardare, Al.; Popescu, Ch.

Inst : Rumanian Academy.

Title : Results of Stimulation of Metabolism in Grey Sheep.

Orig Pub: Comun. Acad. RPR, 1957, 7, No 2, 233-242.

Abstract: For purposes of stimulating metabolism, corn and oats, iodised to Zanfirescu method, were introduced into the ration of 11 pregnant grey sheep,(7.27 g of iodine daily). This caused an increase of the intensity of metabolism, an

RUMANIA/Farm Animals. Sheep and Goats.

Abs Jour: Ref Zhur-Biol., No 17, 1950, 70763.

increase of weight and a concentration of restored glutathione in the blood. Lambs from the tested sheep differed from lambs of the control group (10 grey sheep) by more intense pigmentation, with a higher live weight, more intense growth and higher viability. In the control group, 30% of the lambs were albinos and they were subsequently affected with tympanitis. There were no such lambs in the group tested. -- Ye. M. Berkovich.

Card

05902

9(SOV/107-59-7-5/42

AUTHOR: Agrikolyanskiy, G., Engineer

TITLE: The Multi-Channel Relay System "Vesna"

PERIODICAL: Radio, 1959, Nr 7, pp 6-7 and pp 2-3 of the centerfold (USSR)

ABSTRACT: The author describes the multi-channel radio relay system "Vesna", its capacity, station types, ranges, antennas and waveguide units, equipment, reserve units, remote controls and power supply. On pp 2-3 of the centerfold, there are photographs showing types of antenna towers, equipment of repeater stations and block diagrams of terminal and relay stations. The automated, multi-channel radio relay system "Vesna" ("R-600") provides up to five duplex wideband radio channels or trunks. Each trunk may be used for transmitting simultaneously 600 telephone conversations and Telecasts with accompanying sound over several thousands of kilometers. The telephone channels may

Card 1/3

The Multi-Channel Relay System "Vesna"

be used for broadcast relay, phototelegraph and voice-frequency telegraphy. At nine stations within 2500 km, telephone channels may be branched off or new channels added. Relay towers are installed at intervals of 50-55 km. In some cases, the distances between towers may be extended to 70 km. The towers will be of different heights depending upon the local terrain. The width of the operating range is 500 Mc, which is divided into 16 radio channels. Parabolic horn antennas and waveguides are used for receiving and transmitting. There are 11 different types of bays holding the equipment. The modulation and the demodulation of the FM signal are performed only in the socalled terminal bays. The shf signal entering receiver input is converted to a 70 Mc i-f signal and amplified. The receiver output signal has a frequency of 70 Mc. The output signal of the trans-

The Multi-Channel Relay System "Vesna"

mitter also has a frequency of 70 Mc and is converted to an shf signal. In case excessive fading is detected in one channel, the reserve unit is switched on automatically without an interruption of the telecast or telephone conversation. The intermediate stations are operated by a remote-control and signalization system. Up to 85 commands may be transmitted using the frequency code principle. The R-600 equipment works on ac 220±5volts and 50±3cps. The voltage is stabilized by 6kvar stabilizers. At each station there are emergency power plants, battery and converter units which are switched on automatically in case of power failures. There are 8 photographs and 5 block diagrams.

Card 3/3

REYER, M.; AGRIKOVA, K., ekonomist; POLYAKOV, A., ekonomist; CHURIKOV, V.; BOGDANOVA, K.

Improve issuing credit to railroads. Den. i dred. 20 no.10:42-53 O '62. (MIRA 15:12)

1. Nachal'nik otdela kreditovaniya transporta i svyazi Leningradskoy gorodskoy kontory Gosbanda (for Reyer). 2. Saratovskaya oblastnaya kontora Goasbanka (for Agrikova, Polyakov).
(Railroads—Finance)

USSR/Cultivated Plants - Fruits. Berries. M

Abs Jour : Ref Zhur Biol., No 18, 1958, 82551

Author : Agrikyan, B.L.
Inst :
Title : Biochemical Characteristics of Hybrid Seedlings of the Grape Vine.

Orig Pub : Biokhimiya vinodeliya. Sb. 5, 1957, 237-252

Abstract : 36 hybrid seedlings in 11 different combinations and also for a comparison of their 11 parental form of the same age were studied at the Institute of Viticulture and Wine Making of the Academy of Sciences of the Armenian Soviet Socialist Republic. A great diversity and variability in the chemical composition and the trend of the biochemical processes in the leaves and shoots of the hybrid seedlings are noted. The outward resemblance of the latter with the parents frequently coincided with the character in the changes in the trend of the exchange of carbohydrates and

Card 1/2

AGRIKYAN, L. M.

USSR/Nuclear Physics C-3

Abs Jour : Referat Zhur - Fizika, No 5, 1957, 11120

Author : Agrikyan, L.M.

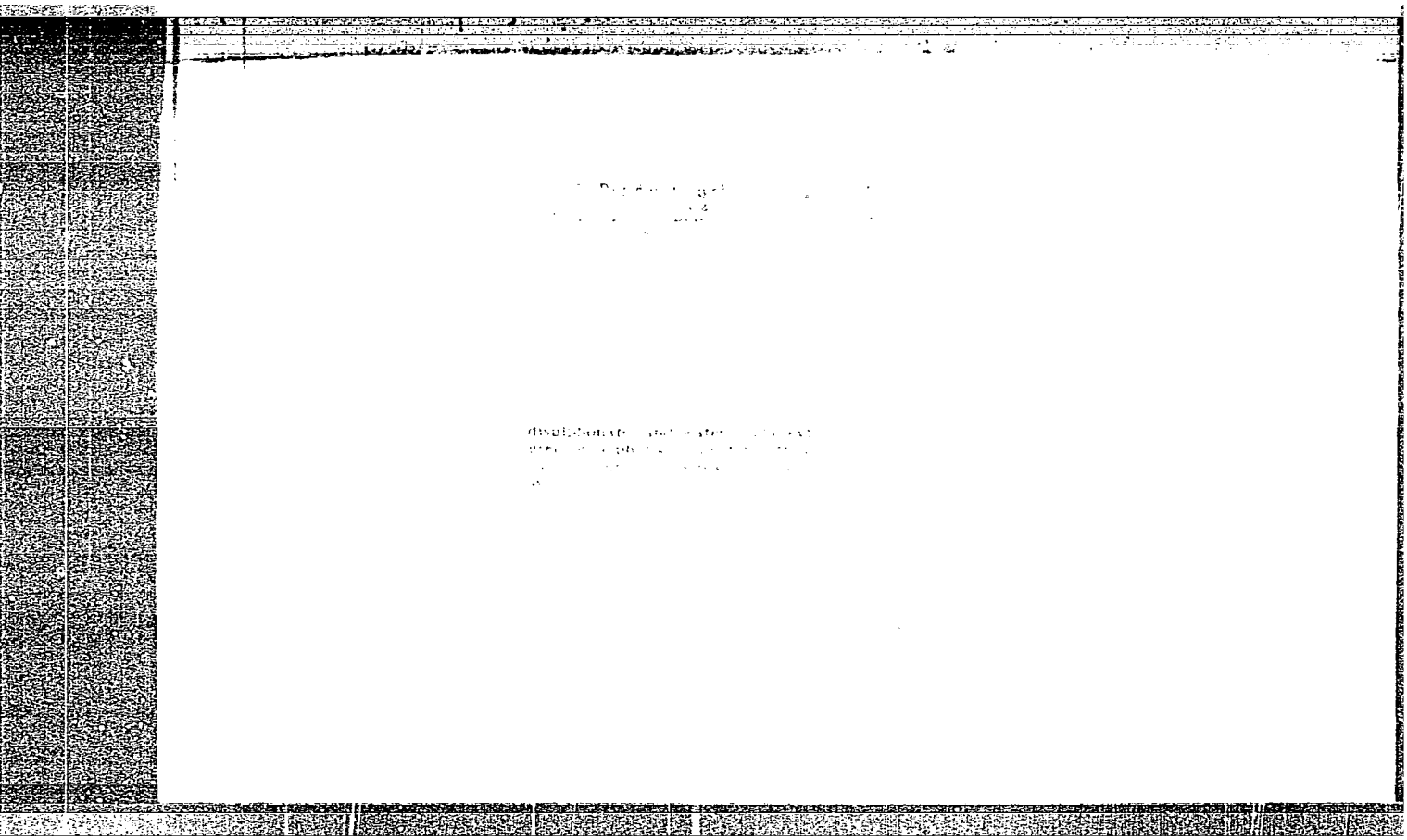
Inst : Physics Institute, Academy of Sciences, USSR; Physics Institute, Academy of Sciences, Armenian SSR.

Title : Selection Rules During Annihilation of Anti-Protons by Pions.

Orig Pub : Zh. eksperim. i teor. fiziki, 1956, 5, No 1, 136-137

Abstract : Discussion of the selection rules for the annihilation of the anti-proton and proton (by two or more pions), connected with the laws of conservation of momentum, parity, and the Pauli principle.

Card 1/1



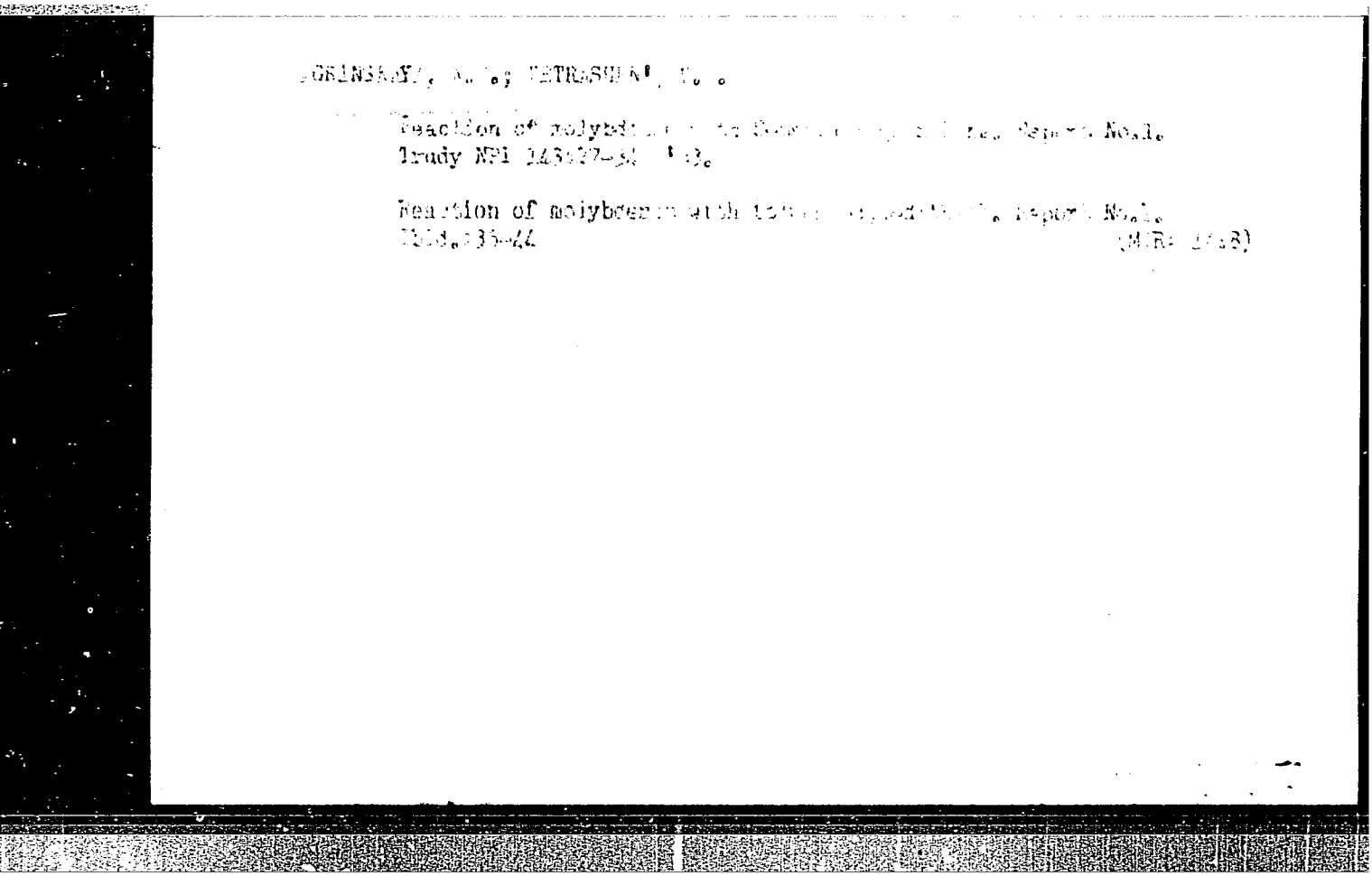
AGRINSKAYA, N. A.; PETRASHEN', V. I.

Reaction of molybdenum with 8-mercaptoquinoline. Zhurnal. khim. 16 no.6:701-705 N-D '61. (MIRA 14:12)

1. Novocherkassk Polytechnical Institute.
(Molybdenum)
(Quinoline)

PETRASHEN', V.I.; ANKUDIMOVA, Ye.V.; AGRINSKAYA, N.A.

"Analytical chemistry of molybdenum" by A.I.Busev. Zhur.anal. khim. 18 no.7:907 Jl '63. (MIRA 16:11)



AGRINSKAYA, N.N., vrach-okulist

Avulsion of the optic nerve and complete luxation of the eyeball. Oft.zhur. 14 no.6:370-371 '59. (MIRA 13:4)

1. Iz oblastnoy bol'nitsy Karachayevo-Cherkesskoy avtonomnoy oblasti.
(EYE--WOUNDS AND INJURIES)

1. AGRINSKIY, K. M.

2. USSR (600)

4. Electric Cables

7. "L..ks" for dry separation of cables. Rab. energ. 3 No. 2, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953. Unclassified.

AGRINSKIY,K.M., inzhener

Drying electric motors. Energetik 3 no.9:27-28 S'55. (MLRA 8:11)
(Electric motors)

AGRINSKIY, K.M., inzh.; BEDAREVA, O.P.; KOSTINA, N.V.

Calculation of high pressure systems with the use of a computer.
Trudy VNIIGidrouglia no.3:50-53 '63 (MIRA 18:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy i proyektno-konstruktorskiy institut dobychi uglya gidravlicheskim sposobom.

1. AGRINSKIY, K. YE.

2. USSR (600)

4. Mathematics - Curiosa and Miscellany

7. Work experienced in trade schools. Mat. v shkole No. 6 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

AGRINSKIY, M.Ye. (Volgograd)

Skin hydrophilic test in hyperergic inflammation in an experiment on rabbits. Pat. fiziol. i eksp. terap. 6 no.1:83-84 Ja-F '62. (MIRA 15:3)

1. Iz kafedry gospital'noy terapii (zav. - dotsent A.B. Zborovskiy, nauchnyy rukovoditel' - prof. I.V. Vorob'yev), kafedry patologicheskoy fiziologii (zav. - prof. G.A. Ionkin) i kafedry patologicheskoy anatomii (zav. - prof. V.I. Vitushinskiy) Volgoradskogo meditsinskogo instituta.
(ALLERGY) (SKIN) (RHEUMATISM)

AGRINSKIY, M. Ye. (Volgograd)

Electrocardiographic changes in rabbits in hyperergic inflammation. Pat. fiziol. i eksp. terap. 6 no.6:40-45 N-D '62 (MIRA 17:3)

1. Iz kafedry gospital'noy terapii (zav. - dotsent A.B. Zborovskiy) kafedry patologicheskoy fiziologii (zav. - prof. G.A. Ionkin) i kafedry patologicheskoy anatomii (zav. - prof. V.I. Vitushinskiy) Volgogradskogo meditsinskogo instituta.

AGRINSKIY, M.Ye., assistent

Hydrophilia skin test in determination of the activity of rheumatic fever. Kaz. med. zhur. no.1:29-31 Ja-F'63. (MIRA 16:8)

1. Kafedra gospital'noy terapii (zav. - dotsent A.B.Zborovskiy, nauchnyy rukovoditel' - prof. I.V.Vorob'yev), kafedra patologicheskoy fiziologii (zav. - prof. G.A.Ionkin) i kafedra patologicheskoy anatomii (zav. - prof. V.I.Vitushinskiy) Volgogradskogo meditsinskogo instituta.
(RHEUMATIC FEVER) (MEDICAL TESTS)

AGRINSKII, N. I.

AGRINSKIY, N. I. and FILATOV, P. V. (Militaro-Veterinary Academy of the Red Army). On biopsy of liver in horses.

So: Veterinariya; 23; 1; January 1946; Uncl.
TABCON

AGRINSKIY, N. I.

N/5
648.63
.07

Chastnyye metodiki laboratornykh i klinicheskikh zanyatiy po veterinarnoy parazitologii (Practical Methods of Laboratory and Clinical Study in Veterinary Parasitology, by) I. V. Orlov, N. I. Agrinskiy i O. V. Rybaltovskiy. Moskva, Selkhozhiz, 1954.

171 p. Diagrs., Tables.

"Literatura": (170)

AGRINSKIY N.I.

ALICHKIN, S.L.; AGRINSKIY, N.I.; ANDREYEV, G.F.; BAKUMENKO, G.D.; VORONTSOV, S.M.; VOYSTRIKOV, I.V.; GRADYUSHKO, G.M.; ZYKOV, A.V. IVANOVTSEV, P.V.; KINBURG, M.Ya.; KOVALEV, P.A.; KOZLOVSKIY, Ye.V. KORNIYENKO, A.P.; KOLYAKOV, Ya.Ye.; LAKTIONOV, A.M.; LEVADNYY, B.A. MEDVEDEV, I.D.; NOVIKOV, N.V.; ORLOV, F.M.; OSTROVSKIY, A.A.; ORTSEV, V.P.; PENIONZHKO, A.M.; POLOZ, D.D.; PRITULIN, P.I.; PETUKHOVSKIY, A.A.; ROGALEV, G.T.; RYBAK, P.Ya.; SUTYAGIN, G.P. TUKOV, R.A.; KHAVCHENKO, D.F.; CHERNETSKIY, T.I.; SHPAYER, N.M. SHUSTOVSKIY, F.A.

Nikolai Vasil'evich Spesivtsev. Veterinariia 35 no.2:96 F '58. (MIRA 11:2)

(Spesivtsev, Nikolai Vasil'evich, 1901-1957)

AGRINSKIY, Nikolay Ivanovich, prof.; USACHEVA, I.G., red.; DEYEVA, V.M., tekhn. red.

[Insects, ticks, and mites, injurious to farm animals] Nasekomye i kleshchi, vrediashchie sel'skokhoziaistvennym zhivotnym. Moskva, Izd-vo sel'khoz. lit-ry, zhurnalov i plakatov, 1962. 287 p. (MIRA 15:3)

(Insects, Injurious and beneficial)
(Parasites—Domestic animals)

ORLOV, I.V., doktor veter. nauk; AGRINSKIY, N.I., doktor veter. nauk, prof.; NIKOL'SKIY, S.N., zasl. deyatel' nauki, doktor veter. nauk, prof.; BESKHLEBNOV, Yu.A., red.; PROKOF'YEVA, L.N., tekhn. red.

[Handbook on veterinary parasitology] Praktikum po veterinarnoi parazitologii. Moskva, Izd-vo sel'khoz.lit-ry zhurnalov i plakatov, 1962. 318 p. (MIRA 15:4)

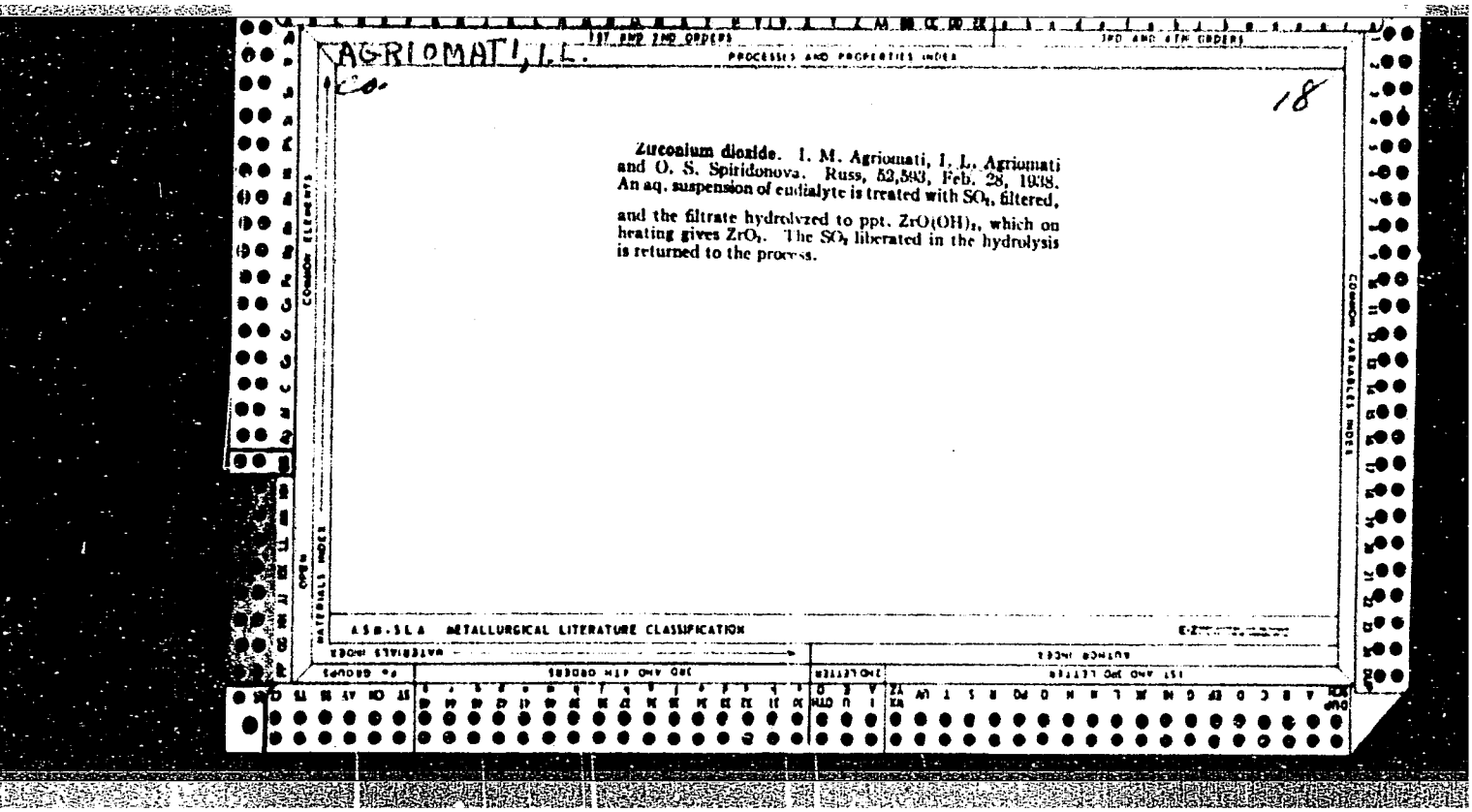
1. Chlen-korrespondent Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk im. V.I.Lenina (for Orlov).
(Veterinary parasitology)

LIKHACHEV, N.V., prof.; AGRINSKIY, N.I., prof.; SYURIN, V.N., prof.; SPESIVTSEVA, N.A., prof.; KOLOBOLOTSKIY, G.V., prof.; ZOLOTAREV, N.A., prof.; KORYAZHNOV, V.P., prof.; KOLESOV, S.G., prof.; BABICH, M.A., prof.; PETROV, A.M., prof.; ZOTOV, A.P., prof.; DOROFEYEV, K.A., prof.; POLYKOVSKIY, M.D., prof.; SOLOMKIN, P.S., prof.; ORLOV, Ye.S., prof.; KOTOV, V.T., prof.; TRILENKO, P.A., prof.; LYUBASHENKO, S.Ya., prof.; USACHEVA, I.G., red.; YARNYKH, A.M., red.; BALLOD, A.I., tekhn. red.

[Veterinary laboratory practice] Veterinarnaia laboratornaia praktika. Moskva, Sel'khozizdat. Vol.[General microbiological methods of investigation] Obshchie mikrobiologicheskie metody issledovaniia. 1963. 566 p. Vol.2. [Biochemical, chemico-toxicological, and veterinary hygienic methods of investigation] Biokhimicheskie, khimiko-toksikologicheskie i zoogigienicheskie metody issledovaniia. 1963. 431 p. (MIRA 16:8)
(Veterinary laboratories)

AGRINSKIY, V.

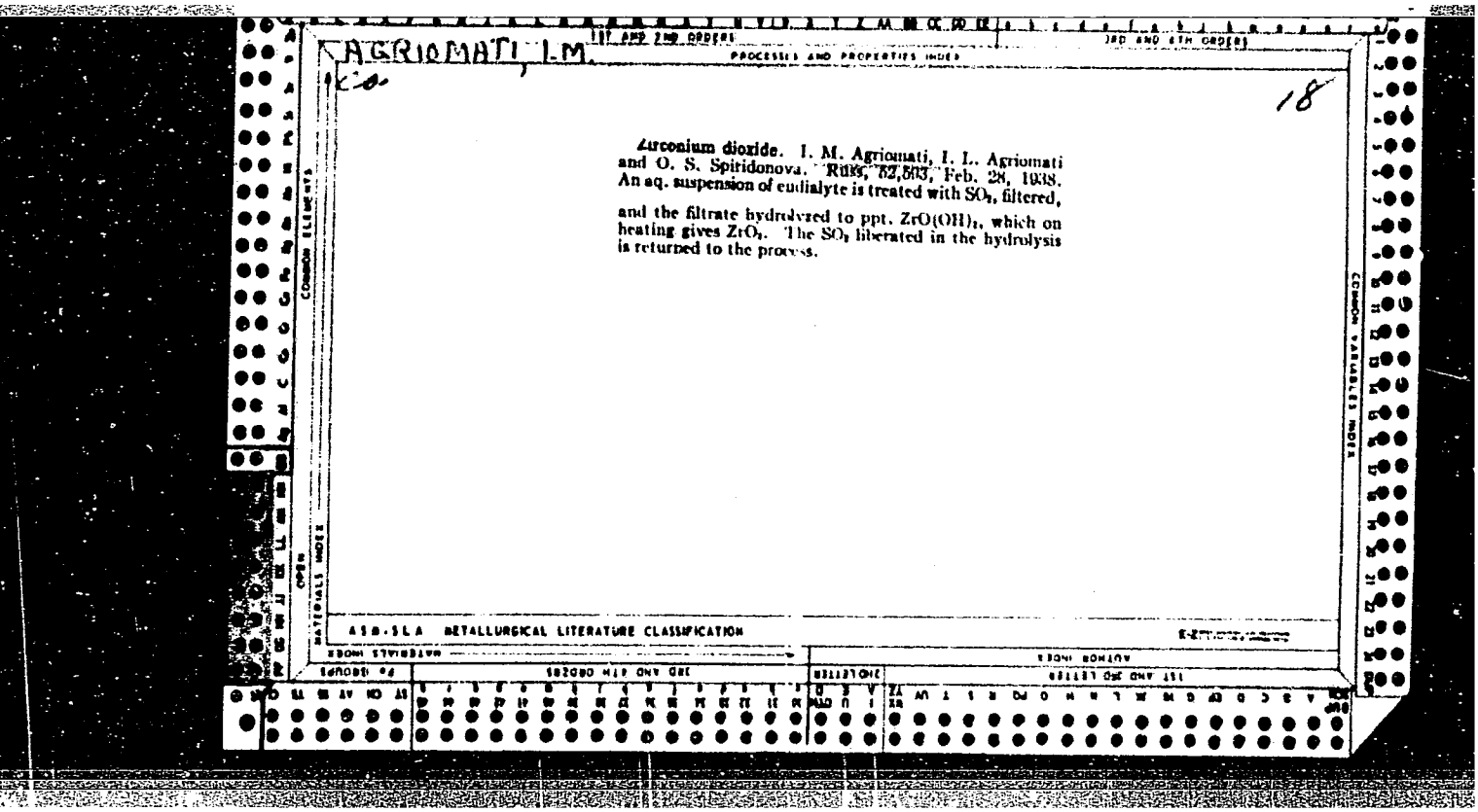
"Giving Courses for Separator Section Supervisors," Mol. prom., 13, No.3, 1952



AGRIOMATI, I. L.

18

Zirconium dioxide. I. M. Agriomati, I. L. Agriomati and O. S. Spiridonova. Russ, 52,593, Feb. 28, 1938. An aq. suspension of eudialyte is treated with SO_3, filtered, and the filtrate hydrolyzed to ppt. $ZrO(OH)_2$, which on heating gives ZrO_2. The SO_3 liberated in the hydrolysis is returned to the process.



AGRIOMATI, I.M.

18

Zirconium dioxide. I. M. Agriomati, I. L. Agriomati and O. S. Spitidonova. Russ. 52,503, Feb. 28, 1938. An aq. suspension of eudialyte is treated with SO_2, filtered, and the filtrate hydrolyzed to ppt. $ZrO(OH)_2$, which on heating gives ZrO_2. The SO_2 liberated in the hydrolysis is returned to the process.

ACC NR: AP6005050 SOURCE CODE: UR/0297/65/010/010/0945/0948

AUTHORS: Eydel'shteyn, S. I.; Agronik, S. Kh.; Zhilinskiy, Ye. S.

ORG: Department for Ear, Throat, and Nose Illness/ headed by N. V. Gospodinov/, Polyclinic im. F. E. Dzerzhinskiy, Moscow (Otdeleniye bolezney ukha, gorla, nosa poliklinik)

TITLE: Erythromycin aerosol

SOURCE: Antibiotiki, v. 10, no. 10, 1965, 945-948

TOPIC TAGS: medical research, erythromycin, aerosol

ABSTRACT: Erythromycin has been put into aerosol form for the treatment of diseases caused by staphylococci, particularly upper respiratory diseases. Five hundred patients were examined for the presence of microflora in the upper respiratory tract, and sensitivity of staphylococci to erythromycin was established in 373 cases. Erythromycin aerosol was prepared by dissolving 0.1--0.2 grams (100 000--200 000 units) of powdered erythromycin in 1 ml of 1% spirit solution of citral; this solution was added to 100 ml of 20% glucose heated to 50°. The solution was inhaled at 38--42° for 10--15 minutes daily. Erythromycin ascorbinate (ascorbic salts of erythromycin, an original water-soluble preparation of erythromycin obtained at VNIIA)

Card 1/2 UDC: 615.779.931-014.071

L 37144-66

ACC NR: AP6005050 O

was adapted for aerosol use. Of the cases treated, cures were observed in 90% of patients with acute catarrh, 81% of patients with chronic pharyngolaryngotracheitis, 90% of patients with chronic hypertrophic rhinitis, and 84% of patients with chronic catarrhal sinusitis. Microbiological data also support the effectiveness of erythromycin aerosols. The following side effects were reported in some cases: bitter taste, feeling of burning in chest, dryness in throat, and dry cough, which can be reduced or forestalled by addition of an antihistamine mixture. Sensitivity of microflora to antiobiotic should determine the use of erythromycin aerosols. Orig. art. has: 2 tables.

SUB CODE: 06/ SUBM DATE: 20Mar64/ ORIG REF: 005/ OTH REF: 009

Card 2/2 af

AGRIPA, Ionescu, Conf. Dr.; and RADULESCU, V., Dr.

"Our Experience in the Problem of Burns"

Bucharest, Revista Sanitara Militara, Vol 16, Special No., 1965; pp 177-183

Abstract: Report based on the treatment of about 3000 patients with burns, treated over 8 years; phase one over the first three days: treatment of shock; phase two the first three weeks: metabolism, hepatorenal monitoring, gastrointestinal blood and circulation problems; preparation for grafting; phase three, day 21 to end of the second month: grafting. Various critical factors in each of these phases are reviewed and discussed.

1/1

AGRIROVIC, Milenko, dipl. inz.

Formal structure of the physics of cybernetics. Telekomunikacije 13 no.3/4:1-3 O-D '64.

1. Submitted December 9, 1964.

SOV/137-58-9-18982

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 119 (USSR)

AUTHOR: Agronik, S.G.

TITLE: Determining the Parameters of an Induction-type Electric Drive With Flywheel for a Nonreversing Rolling Mill (Opredeleniye parametrov asinkhronnogo elektroprivoda s makhovikom dlya nereversivnogo prokatnogo stana)

PERIODICAL: Tr. Khar'kovsk. politekhn. in-ta, 1957, Vol 12, pp 67-81

ABSTRACT: This calculation requires a graph of the loads to which a projected mill is to be subjected. The mechanical performance curve of the induction motor (M) is a straight line within the operating range. The rated torque of the electric drive, reduced to the mill spindle, is set in advance at 1.1 to 1.3 times the mean loading moment or the arithmetic mean of the mean and the root-mean-square moment of the static load. The power of the motor is found from the mill-speed specification. Working from the available M types and various methods of compounding, a number of variants of the installation are listed, for which the graph of the static load is recalculated with consideration of the transmission ratio and the efficiency of the

Card 1/2

Determining the Parameters of an Induction-type Electric Drive (cont.)

reducing gear, and the electromechanical time constant is determined from the absolute peak load according to the permissible M overload. A load diagram for the M is computed, the M is checked for overheating and overload, and the flywheel parameters are determined. Formulas are adduced for the determination of the electromechanical time constant and the root-mean-square torque of the D under various conditions of moderating the M characteristic curve. An engineering and economic comparison of the calculated variants yields the optimum one that will serve for minimal annual operating costs.

D.K.

1. Rolling mills--Equipment 2. Electrical drives--Theory 3. Induction motors --Performance

Card 2/2

EYDEL'SHTEYN, S.I.; AGRONIK, S.Kh.; ZHILINSKIY, Ye.S. [deceased]

Erythromycin aerosol. Antibiotiki 10 no. 10:945-948 O '65.
(MIRA 18:12)

1. Otdeleniye bolezney ukha, gorla, nosa (zav. - N.V. Gospodinova) polikliniki imeni F.E. Dzerzhinskogo, Moskva. Submitted March 20, 1964.

ZHILINSKIY, Ye.S., zasluzhennyy vrach RSFSR; EYDEL'SHTEYN, S.I., kand. med.nauk; Prinimali uchastiye: AGRONIK, S.Ye., vrach; BLINOVA, V.A., vrach; GOSPODINOVA, N.V., vrach; MARAKINA, V.N., vrach; TIMOFEYEVA, K.I., vrach.

Importance of microbiological analysis in the treatment of otorhinolaryngological diseases with antibiotic aerosols. Sbor.nauch.-prak.rab.Poliklin.im.F.E.Dzerzh. no.2:152-162 '61. (MIRA 16:4)

(OTORHINOLARYNGOLOGY) (ANTIBIOTICS) (AEROSOL THERAPY)

AGRONOMOV, A. Ye.

Verbatim: Agronomov, A. Ye. - "Zinc oxide as a catalyst in the dehydrogenation of cyclohexane," Vestnik Mosk. un-ta, 1948, No. 12, p. 67-74, - Bibliog: 16 items

SO: U-4355, 14 August 53, (Letopis 'Zhurnal 'nykh Statey, No. 15, 1949.)

Agronomov, A. Ye. Cand Chem Sci

Dissertation: "Investigation of the Kinetics of the Dehydration of Isopropyl Alcohol on Zinc-Oxide Catalysts Prepared by Various Methods."

2 November 49

Moscow Order of Lenin State U imeni M. V. Lomonosov.

SO Vecheryaya Moskva
Sum 71

CA

Kinetics of the dehydrogenation of isopropyl alcohol on zinc oxide catalysts prepared by different methods. A. E. Agronomov (Moscow State Univ.). *Vestnik Moskov. Univ.* 6, No. 2; *Ser. Fiz.-Mat. i Estestven. Nauk* No. 1, 100-29(1951). Different ZnO catalysts were prepd. as follows: (I) by decompn. of pptd. $ZnCO_3$ at 400°, (II) kneading the preceding with MeOH and drying at 110°, (III) kneading catalyst I with H_2O and drying at 110°, (IV) dehydration at 400° of $Zn(OH)_2$ obtained by pptn. with NH_4OH and drying at 110°, (V) as the foregoing, but from $Zn(OH)_2$ pptd. with KOH, (VI) decompn. of Zn oxalate at 400°, (VII) decompn. of $Zn(NO_3)_2$ at 450°; this prepn. was yellowish. All these catalysts dehydrogenate iso-PrOH smoothly at 320-40°, to the extent of 92-97% dehydrogenation with respect to the amt. reacted, with no carbonization below 390°, and only 2-5% unsatd. products and a very small amt. of CO_2 (but no CO) in the gas, in addn. to H_2. In 30-min. flow runs with 1 ml. catalyst, at a const. feed rate of 0.1 ml. iso-PrOH/min., III was found to be the most active, I somewhat less active and close to IV, VI very slightly less active than I, and VII by far the least active. The rate data are evaluated with the aid of Frost's equation (1) $dm/dt = k(A_1 - m)/[A_1 + (z_2 + z_3 - 1)m]$, where A_1 = moles of reactant introduced per unit time, m = moles of reactant converted, and z_2 and z_3 = relative adsorption coeffs. of the products; the integrated equation is $k = A_1(z_2 + z_3)\ln[A_1/(A_1 - m)] - (z_2 + z_3 - 1)m$. This equation would reduce to zero order for $z_2 = z_3 = 0$ and to 1st order for $z_2 + z_3 - 1 = 0$. To det. the relative z_2 for Me_2CO (one of the products), runs were made with mixts. of iso-PrOH and Me_2CO (25, 50, 75%) and m detd. experimentally. From the general equation $k = [\Sigma z_r A_r + A_1 \Sigma z_r \nu_r]\ln[A_1/(A_1 - m)] - [\Sigma z_r \nu_r]m$, where A_r is the amt. of the addent (subscript r) admitted per unit time; ν the stoichiometric coeff., is obtained by $z_2 = (2B_1H - B_1Y - HY)/(1 - B_1)Y$, where $Y = m/\Sigma A_r$, $B_1 = A_1/\Sigma A_r$, and $H = kSl/2\Sigma A_r$; the const. $H = Y/(2 - Y)$ is detd. from runs with the pure reactant. In this way, z_2 for Me_2CO, on catalyst III, was detd. to be 0.88, 1.19, 1.71, 1.90, at 368, 345, 318, 300°, resp.; the values of z_2 are independent of the prepn. of the catalyst. Similarly, for H_2 (the 2nd product), z_3 was detd. from runs with iso-PrOH + H_2, to be 0.60, 0.78, 0.92, at 342, 318, 304°; these values are also independent of the catalyst. Frost's equation (1) is tantamount to his equation $v_0 \ln[1/(1 - y)] = \alpha + \beta v_0 y$ (2) where v_0 = space velocity, y = degree of conversion, with $A_1 = v_0$; $m/A_1 = y$, $k/(z_2 + z_3) = \alpha$, and $(z_2 + z_3 - 1)/(z_2 + z_3) = \beta$. This equation (2) is verified for the dehydration of iso-PrOH on catalyst III at 341°, at v_0 = 44.0, 88.0, 132.0, 176.0 (feed rates 0.05, 0.10, 0.15, 0.20 ml./min.), y = 0.510, 0.306, 0.217, 0.174. This run gives $\alpha = 24 \pm 0.05$, $z_2 + z_3 = 1.85$, $k = 44.8$. The activation energy E (calcd. from the temp. dependence of k) and the preëxponential factor k_0 vary strongly from one catalyst to another. The values of E (cal./mole) and of $\log k_0$ are: (I) 17,000, 7.80; (II) 15,000, 6.86; (III) 11,400, 5.66; (IV) 12,200, 5.86; (V) 12,500, 5.93; (VI) 19,400, 8.38; (VII) 26,800, 10.50. An anomalous behavior is noted for catalysts IV and V which have very close activities (somewhat lower than I); these catalysts have low E out of keeping with their relatively low activity. N. Thon

CA

Kinetics of dehydrogenation of isopropyl alcohol on zinc oxide catalysts prepared by different methods. II. Causes of the dependence of the catalytic activity on the method of preparation. A. E. Agronomov (Moscow State Univ.). *Vestnik Moskov. Univ. 6*, No. 11, *Ser. Fiz.-Mat. i Estestven. Nauk* No. 7, 41–80(1951); cf. *C.A.* 40, 4341g.—ZnO catalysts were prepd. by: (I) decompn. of $ZnCO_3$, (II) the foregoing with MeOH, (III) catalyst I with H_2O, (IV) decompn. of $Zn(OH)_2$ ppld. with NH_4OH, (V) decompn. of $Zn(OH)_2$ ppld. with KOH, (VI) decompn. of ZnC_2O_4, (VII) decompn. of $Zn(NO_3)_2$. These catalysts differ in their catalytic activity A in dehydrogenation of iso-PrOH, characterized by the percentage conversion at 370°; in the above order, A = 44.5, —, 50.0, 39.0, 38.0, 43.0, 21.0. The activation energies are, in the same order, E = 17.6, 15.0, 11.4, 12.3, 12.5, 19.4, 20.8 kcal./mole. By x-ray detns., the lattice consts. of all these prepns. are identical within the limits of exptl. error, and so are the dimensions of the primary particles. By adsorption of MeOH vapor, the sp. surface areas S of catalysts I, III, VI, VII, were detd. to be 9.22, 14.91, 7.52, 0.28 sq. m./g. There is, consequently, a definite parallelism between A and S, but no simple proportionality. For catalysts I, III, V, VI, and VII, the ratio $k/\log(k_0/S)$, where k_0 is the frequency factor, was found const. and = 2.5×10^4. Consequently, the correct formulation of the Arrhenius relation is $k = k_0' S e^{-E/RT}$, where $k_0' = k_0/S$. The adsorption detns. of S were confirmed by electron microscopy. Catalysts IV and V showed an anomalous behavior, with relatively higher amts. of unsatd. products, a relatively slower decrease of the activity at higher temps., a relatively small E along with only moderate activity, and, in the case of V, a very large S in comparison with the activity. These anomalies were shown to be due to the presence of undecompd. $Zn(OH)_2$ which catalyzes dehydration at the expense of dehydrogenation. Prolonged heating of IV at 400° shifted the product compn. progressively towards increasing dehydrogenation, without, however, suppressing dehydration altogether. Evacuation of V *in vacuo* at 250° resulted in no change of its activity; consequently, the H_2O contained in the catalyst is not loosely bound hydrate H_2O. N. Thon

Adsorption of thiophene on nickel-alumina catalysts containing various proportions of nickel. A. F. Agronomov and Yu. S. Mardashev. *Vestnik Moskov. Gos. Univ. Ser. Fiz.-Mat. i Estestven. Nauk* No. 5, 97–100 (1955). Adsorption-desorption isotherms at 0° of thiophene (I) and C_4H_4 (II) on catalysts contg. 25, 50, 75 mol. % Ni, and pure Al_2O_3 and Ni were detd. Pure Ni adsorbs very little I. On the mixed catalysts, I gave a more irreversible hysteresis than did II. Neither could be completely pumped off at 0° and 10^{-4} mm., but almost twice as much I remained. The 50% catalyst permanently adsorbed the most material. Heating to 250° at 10^{-4} mm. does not displace this chemisorbed I and an irreversible hysteresis is not obtained on repeating the adsorption-desorption process. The adsorption of II on catalysts that have been satd. with I and cleaned at 250° and 10^{-4} mm. is markedly less than on fresh materials. From the relative amts. of I and II adsorbed, it is assumed that both of the polygons are oriented in the same manner, probably parallel to the surface. I. H. Scott

АГРОНОМОВ, А.Е.

SHUYKIN,N.I.; MIKACHEV,Kh.M.; FEOFANOVA,L.M.; TREBHCHOVA,Ye.G.; YUDKINA, T.P.; AGRONOMOV,A.Ye.

Conversions of methylcyclohexane in contact with metals of the palladium group in flow and at increased temperature and increased hydrogen pressure. Izv.AN SSSR. Otd.khim.nauk no.3: 501-511 My-Je '55. (MLFA 8:9)

1. Institut organicheskoy khimii im. N.D.Zelinskogo Akademii nauk SSSR.

(Cyclohexane) (Catalysts, Platinum metals)

USSR/Chemistry - Catalysts FD-2171

Card 1/1 Pub 129-11/20

Author : Agronomov, A. Ye. and Mardashev, Yu. S.

Title : Investigating the relationship between catalytic activity of Ni-Al_2O_3 and its structure and quantity of nickel in the catalyst

Periodical : Vest. Mos. un., Ser. fizikomat. i yest. nauk, 10, No 2, 83-91, Mar 1955

Abstract : Studied the cyclohexane dehydrogenation reaction over a nickel on Al_2O_3 catalyst with varying amounts of nickel. Established that the most active catalyst was one having 36.5% nickel by weight. The apparent activation energy decreases with increasing amounts of nickel. Using the adsorption method of investigation, established that the specific surface of the catalyst remains equal up to 36.5% nickel and then decreases with further additions of nickel. The porosity of the catalyst depends on the amount of nickel present. Graphs; tables. Twenty-one references (eighteen USSR).

Institution : Chair of Organic Catalysis

Submitted : June 24, 1954

Agronomov A.Ye.

USSR/Kinetics - Combustion. Explosions. Topochemistry. Catalysis. B-9

Abs Jour : Referat Zhur - Khimiya, No 6, 1957, 18625

Author : L.Kh. Freydlin, A.A. Balandin, N.V. Borunova, A.Ye. Agronomov.

Inst : ~~Academy~~ of Sciences of USSR.

Title : Mechanism of Deactivation of Nickel Catalysts by Steam Under Pressure.

Orig Pub : Izv. AN SSSR, Otd. khim. n., 1956, No 8, 913-922

Abstract : Unreduced catalysts of the composition 35% of NiO and 65% of Al_2O_3, as well as Ni-catalysts prepared from them after reduction were treated at 350° with amixture of H_2 (700 atm) and steam (100 atm) 5 hours in a special high pressure reactor. It was found that their activity in the reaction $C_6H_6 + 3H_2$ and in the reverse reaction decreased strongly after the treatment, especially if the samples had been treated thus before the reduction. In this case, the magnitude of the specific surface of

Card 1/2 - 258 -

USSR/Kinetics - Combustion. Explosions. Topochemistry. Catalysis. B-9

Abs Jour : Referat Zhur - Khimiya, No 6, 1957, 18625

samples decreases (from 170 and 80 to 10 and 30 sq.m/g respectively), which the authors explain by recrystallization of nickel lower oxide, as well as of the carrier. The authors think that the bibliographically recorded deactivation of reduced Ni-catalysts (and, as it seems, also of Fe-catalysts) by steam during the process of work is explained by the appearance of a surface film or a phase of NiO, which recrystallizes rapidly and the reduction process of which is hampered and results in the formation of little dispersed Ni.

BALANDIN, Aleksey Aleksandrovich, akademik; GERASIMOV, Ya.I., prof., retsenzent; PLATE, A.F., prof., retsenzent; AGRONOMOV, A.Ye., dots., red.

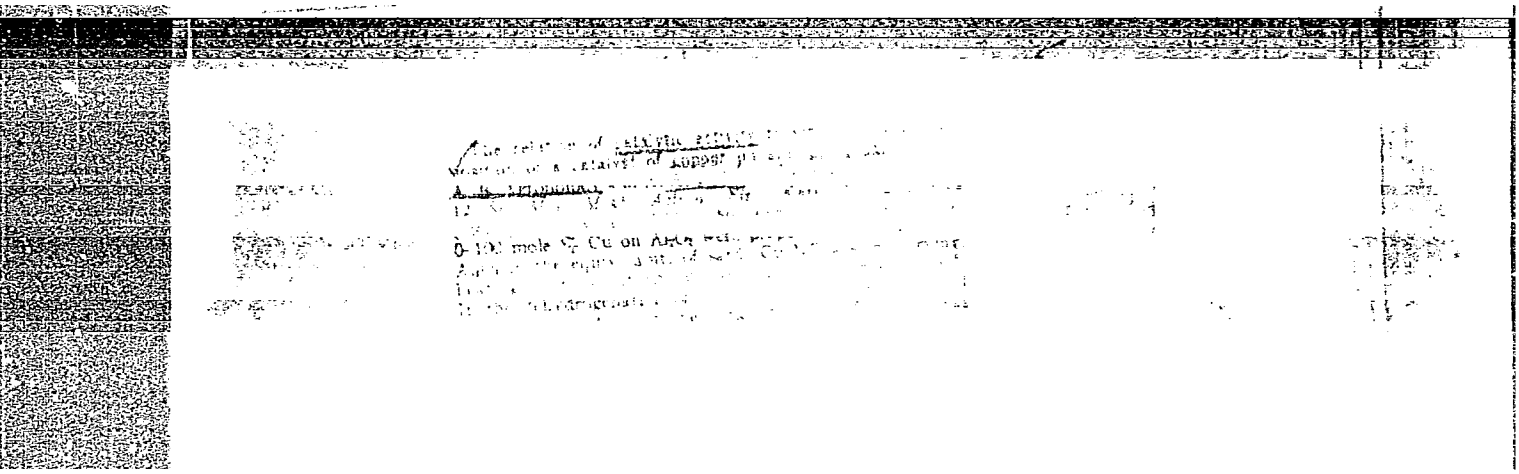
[Multiplet theory of catalysis] Mul'tipletnaia teoriia kataliza. Moskva, Izd-vo Mosk. univ. Pt.2. 1964. 242 p. (MIRA 18:2)

1. Zaveduyushchiy kafedroy fizicheskoy khimii Moskovskogo gosudarstvennogo universiteta chlen korrespondent AN SSSR (for Gerasimov). 2. Zaveduyushchiy kafedroy khimii nefti Moskovskogo gosudarstvennogo universiteta (for Plate).

AGRONOMOV, A.Ye.

Glass vacuum faucets used for even air intake. Prib. i tekh. eksp. no.1:115 Ja-F '57. (MLRA 10:6)

1. Khimicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta im. M.V. Lomonosova.
(Faucets) (Vacuum apparatus)



AUTHORS: Balandin, A. A., Member, Academy of Sciences, 20-114-4-26/63
Turova-Polyak, M. B., Agronomov, A. Ye., Khorlina, I. M.,
Kon'kova, L. S.

TITLE: Catalytic Dehydration of Alcohols Over Anhydrous Magnesium Sulphate (Kataliticheskaya degidratatsiya spirtov nad bezvodnym sul'fatom magniya)

PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol. 114, Nr 4, pp. 773-776 (USSR)

ABSTRACT: It was the intention of the authors to determine the conditions of the application of magnesium sulphate, as a catalyst in the dehydration of alcohols. In the present paper this process was studied in the case of secondary alcohols: propanol-2, pentanol-2, cyclopentanol and cyclohexanol. It was found that these alcohols may be dehydrated completely at 400-410°C over anhydrous magnesium sulphate. The most detailed studies of the catalytic properties of the magnesium sulphate were made with cyclohexanol. The only reaction product on this occasion was cyclohexa[illegible]ed [illegible] dehydrogenation and isomerization products. At this the catalyst does not lose its activity for 500 hours and does not require regeneration. In the case of a long lasting dehydration of cyclohexanol at lower temperatures,

such as 27o-33o°C, its activity gradually declines, and between the 8oth and 1o5th hour of the process a sudden decrease in the yield of cyclohexene was observed. The authors explain this fact by the change in the composition of the catalyst, which is connected with its hydration by water produced in the course of the reaction. According to published works the authors presume that in their tests at temperatures below 36o-37o°C the magnesium sulphate apparently represents a mixture of $MgSO_4 \cdot H_2O$ and $MgSO_4$. It is supposed to possess a lower catalytic activity than the anhydrous sulphate. This was proved by the tests. At the same time the kinetics of the dehydration of the said alcohols was studied. The computed values of the apparent activation energies proved to be fairly similar. This shows that the mechanism of dehydration is the same for all these alcohols, and that the alcohol molecule with its hydroxyl groups is orientated towards the surface of the catalyst. The experimental part gives details of the tests, yields, constants, spectra, etc. Thus the possibility of the application of anhydrous magnesium sulphate as a catalyst for the four abovementioned secondary alcohols was proved by this work. There are 1 figure, 2 tables, and 5 references, 2 of which are Soviet.

SOV/62-58-8-2/22

AUTHORS: Freydlin, L. Kh., Balandin, A. A., Borunova, N. V., Agronomov, A. Ye.

TITLE: On the Relation Between the Activity and Stability of Nickel-Aluminium Catalysts and the Macro-Structure of the Carrier (O svyazi mezhdu aktivnost'yu i stabil'nost'yu nikel'-glinozemnykh katalizatorov i makrostrukturoy nositelya)

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye khimicheskikh nauk, 1958, Nr 8, pp. 923-928 (USSR)

ABSTRACT: In the introduction the authors briefly discuss the influence of the macrostructure of the carrier on the activity of the nickel-aluminium catalyst (Refs 1-3). Then they describe their investigation of the relation between the activity and stability of nickel-aluminium catalysts on the one hand, and the character of the macro-structure of aluminium oxide on the other hand. This investigation showed that the dehydrating activity of the catalyst can mainly be recognized by the type of porosity of the carrier. It was found that catalysts produced by the application of nickel on coarse-porous aluminium oxide have a higher activity and greater stability than those produced by the application

Card 1/2

On the Relation Between the Activity and Stability of Nickel-Aluminium Catalysts and the Macro-Structure of the Carrier

of nickel on fine-porous aluminium oxide. The latter has the effect that the activity of the catalyst is considerably reduced. There are 4 figures, 1 table, and 10 references, 9 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy, AS USSR)

SUBMITTED: March 5, 1957

AGRONOMOV, A.Ye.; PATRIKEYEV, V.V.; RUDENKO, A.P.

Nonhomogeneity of the structure of silica gel. Vest.Mosk.un. Ser.mat.,mekh.,astron.,fiz.khim. 13 no.3:197-206 '58. (MIRA 12:4)

1. Kafedra organicheskogo kataliza Moskovskogo universiteta.
(Silica)

5(4) SOV/20-124-3-37/67

AUTHORS: Rode, T. V., Agronomov, A. Ye.

TITLE: The Influence of Various Factors Upon the Size of the Specific Surface and on the Porosity of Chromium Catalysts (Vliyaniye razlichnykh faktorov na velichinu udel'noy poverkhnosti i na poristost' khromovykh katalizatorov)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 3, pp 625-627 (USSR)

ABSTRACT: The present paper investigates the influence exercised by methods of synthesis upon the size of the specific surface and on the existence and the size of the pores of the investigated contacts. For this purpose the isothermal lines of the adsorption of benzene vapors at 0° were determined on a high-vacuum apparatus according to the weight method. The methods for the synthesis of the catalysts to be investigated and the results of the investigation discussed are given by 2 tables. It is a characteristic feature of chromium hydroxide (from which the chromium catalysts are, for the time being, made) that they are produced in two different forms; one is greyish-blue, and one blackish-green, which give small cylinders with a shiny shell-like fracture

Card 1/4