RAYER, G. A.: Master Tech Sci (diss) -- "Investigation of the stressed state of the wheels of centrifugal compressor machines". Leningrad, 1958. 13 pp (Min Higher Educ USSR, Leningrad Polytech Inst im M. I. Kalinin), 150 copies (KL, No 7, 1959, 125)

RAYER, G.A., inzh.

Calculating the strength of runner discs of centrifugal compressor machines. Energomashinostroenie 4 no.7:10-14 Jl '58.
(Turbines) (MIRA 11:10)

KUZNETSOV, L.A., kand.tekhn.nauk; RAYER, G.A., inzh.

Start voltages in seamless forged rotors of gas turbines.
Energomashinostroenie 4 no.12:1-3 D '58. (MIRA 11:12)
(Gas turbines)

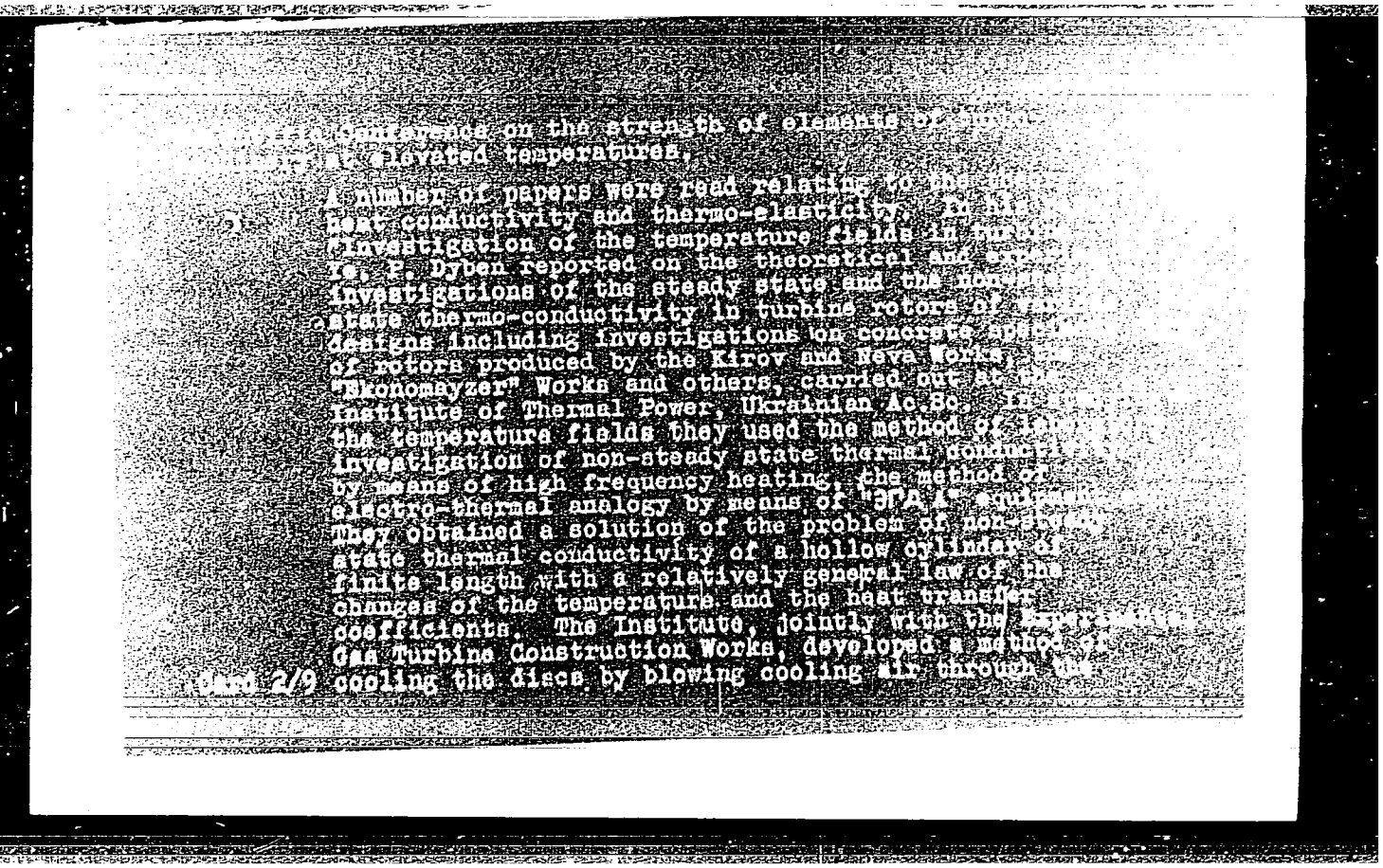
KAYEK, G. A.
p.5

[illegible], Ya. M. and Isakhanov, G.V. 24-2-27/28

[illegible] Conference on the strength of elements of [illegible]
[illegible]machinery at elevated temperatures. (Nauchnoye
[illegible]shcheniye po voprosam prochnosti elementov
[illegible]mashin pri vysokikh temperaturakh).

[illegible] Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh [illegible]
[illegible] 1958, No.2, pp. 165-167 (USSR).

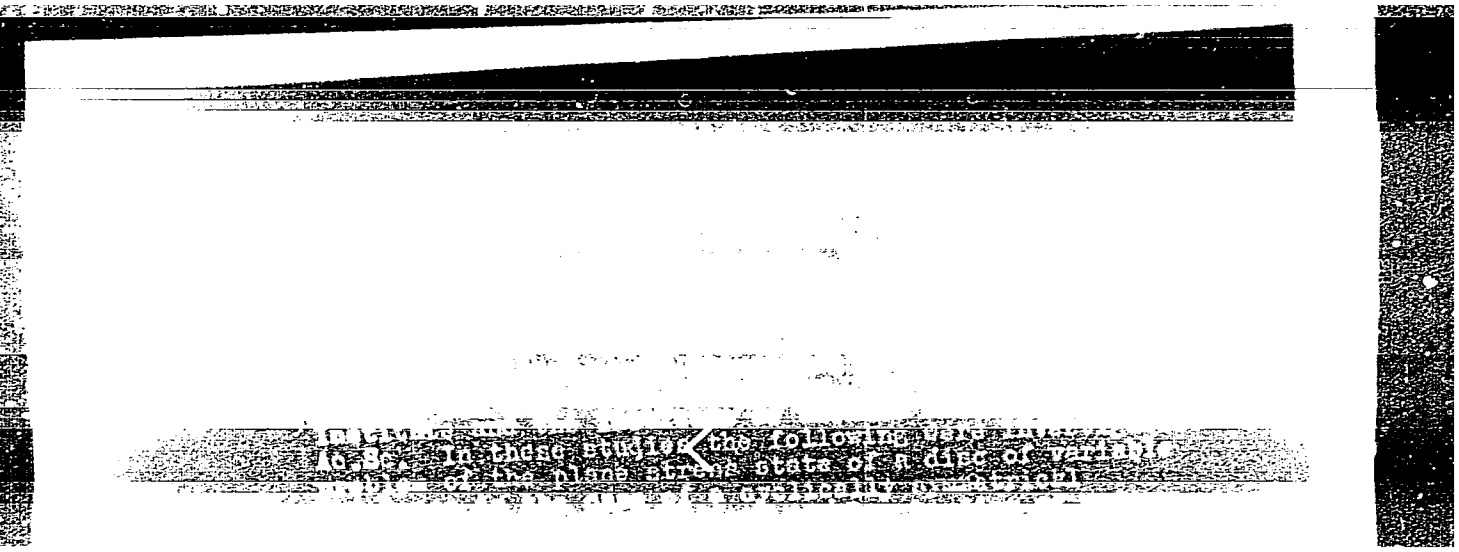
[illegible]: A scientific conference was held in Kiev between
September 28 and October 2, 1957 on problems of [illegible]
of elements of turbo-machinery at elevated temp[illegible]
which was convened by the Institute of Metallo-[illegible]
and Special Alloys (Institut Metallokeramiki i
Spetssplavov), the Institute of Structural Mechanics
(Institut Stroitel'noy Mekhaniki) and the Institute
of Thermal Power (Institut Teploenergetiki [illegible]
Ukrainskoy SSR) of the Ac.Sc., Ukrainian SSR. [illegible]
people participated representing scientific and [illegible]
establishments and works of Moscow, Leningrad, [illegible]
Khar'kov, Minsk, Kuybyshev, etc. In his opening [illegible]
Corresponding Member of the Ac.Sc. Ukraine [illegible]
pointed out the importance of the problem of [illegible]
[illegible] temperature strength of components of turbo-[illegible]



...conference on the strength of elements of ...
... elevated temperatures.

A number of papers were read relating to ...
heat conductivity and thermo-elastic...
investigation of the temperature fields in ...
K. E. Dyben reported on the theoretical and ...
investigations of the steady state and the non-...
steam thermo-conductivity in turbine rotors of ...
designs including investigations on concrete ...
of rotors produced by the Kirov and Neva Works, ...
"Ekonomayzer" Works and others, carried out ...
Institute of Thermal Power, Ukrainian Ac.Sc. ...
the temperature fields they used the method of ...
investigation of non-steady state thermal conduc...
by means of high frequency heating, the method of ...
electro-thermal analogy by means of "EPA". ...
They obtained a solution of the problem of non-...
state thermal conductivity of a hollow cylinder of ...
finite length with a relatively general law of the ...
changes of the temperature and the heat transfer ...
coefficients. The Institute, jointly with the ...
Gas Turbine Construction Works, developed a metho...
cooling the discs by blowing cooling air through ...

Card 2/9



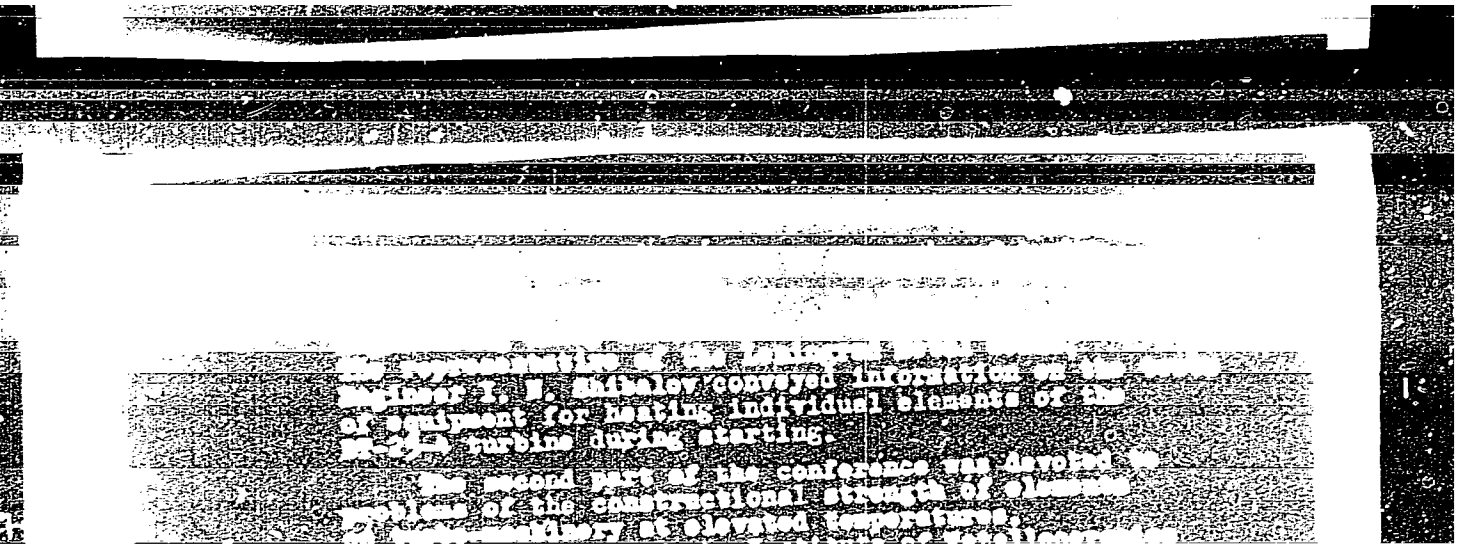
Scientific conference on the strength of elements of [illegible] machinery at elevated temperatures.

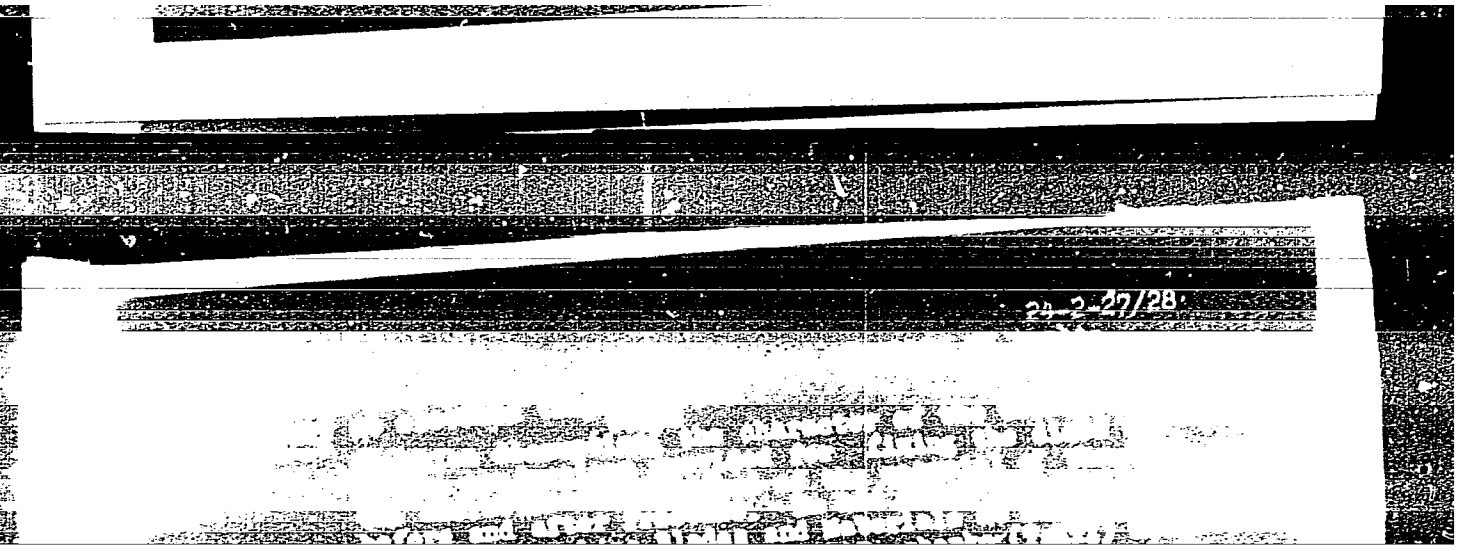
system in which the following elements operate jointly: discs, shells and ring-shaped rods.

In his paper "Certain Methods of Solving the Axis-Symmetrical Problem of the Theory of Elasticity Taking Into Consideration Mass Forces and the Temperature" E. S. Umanskiy elucidated an approximate method of calculation of the stress state.

[redacted] on the [redacted]
[redacted] elevated temperatures.

Regimes" A. G. Kostyuk (MEI) considered the method of approximate solution of the problem of the non-steady





RAYER, G.A., kand.tekhn.nauk

Investigating the dynamic strength of the wheels of centrifugal compressors. Energomashinostroenie 7 no.9:14-17 S '61.
(MIRA 14:9)

(Compressors—Testing)

KOBRIN, Mikhail Moiseyevich; ROZENBERG, A.N., retsenzent; RAYER, G.A., nauchnyy red.; NIKITINA, R.D., red.; SHISHKOVA, L.M., tekhn. red.

[Strength of rotating disks] Prochnost' vrashchaiushchikhsia diskov. Leningrad, Sudpromgiz, 1963. 339 p. (MIRA 16:4)
(Disks, Rotating--Testing)

ACCESSION NR: AP4023733 S/0114/64/000/003/0022/0025

AUTHOR: Rayer, G. A. (Candidate of technical sciences)

TITLE: Investigation of the dynamic strength of the rotor of a cantilever-type supercharger

SOURCE: Energomashinostroyeniye, no. 3, 1964, 22-25

TOPIC TAGS: supercharger, cantilever type supercharger, supercharger rotor, supercharger rotor strength, supercharger rotor dynamic strength, supercharger break

ABSTRACT: It has been known that maximum aerodynamic stresses occur in the impeller stages next to a diffuserless scroll. In the past four years of operating superchargers with such stages, cases of shaft and web breaks, and cracks in the cover disks are on record. Also, rivet-head crumbling has been observed. Metal fatigue has been mainly responsible for those damages. The present article reports the results of tensometric tests of impellers conducted directly at compressor stations. The aerodynamic stresses in the impeller were measured

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ACCESSION NR: AP4023733

in the entire range of the compressor output, at 20, 30, 35, and 44 atm, and 7,950 rpm. An attempt was made to assess the rivet stresses by tensodetectors mounted inside the rivet. These conclusions are reported: (1) The poor quality of shafts and web-fitting surfaces is one of the reasons for shaft breakage; (2) Under max output and minimum output conditions, considerable stresses are set up in the impeller which may result in breakage due to fatigue; (3) The cantilever stiffness of the principal disk (web) has an important bearing on the dynamic strength of the disk, rivets, and cover disk; (4) Cuts in the cover disk result in an essential reduction of the aerodynamic forces acting on the impeller. Orig. art. has: 5 figures and 2 formulas.

ASSOCIATION: none

SUBMITTED: 00	DATE ACQ: 15Apr64	ENCL: 00
SUB CODE: PR, AP	NO REF SOV: 003	OTHER: 000

Card 2/2

KATEK, G.A., kand. tekhn. nauk; BAVEL'SKIY, D.M., inzh.

Applicational limits of calculational methods presented in an article by IA.A. Shustorovich. Energomashinostroenie 10 no.6: 45 Je '64. (MIRA 17:9)

L 10471-67 EWT(m)/EWP(w)/EWP(v)/EWP(t)/ETI/EWP(k) IJP(c) JD/EM

ACC NR: AP6031403 SOURCE CODE: UR/0114/66/000/009/0046/0048

AUTHOR: Bayer, G. A. (Candidate of technical sciences); Vasil'yev, A. V. (Engineer)

ORG: none

TITLE: Method for increasing the design strength of centrifugal compressor wheels

SOURCE: Energomashinostroyeniye, no. 9, 1966, 46-48

TOPIC TAGS: centrifugal compressor, compressor disk, fatigue strength

ABSTRACT: Several centrifugal compressor wheels have been subjected to tests with peripheral speeds of 290—300 m/sec under simultaneous action of an air jet (combined static and dynamic stresses). It was found that the wheels tested failed in the same manner as the wheels in actual operation. The cracks in the cover plates originated on the inside surface at the edge of rivet holes and then propagated through the whole thickness. The cracks formed at relatively low alternating stresses. For instance, on disks manufactured from 34KhN3M steel (yield strength 75—80 kg/mm^2, tensile strength 87—90 kg/mm^2, elongation 12—14%, reduction of area 40%) cracks appeared after 500,000—1,000,000 cycles at a stress of 20 kg/mm^2. It was observed that cover plates with cutouts between the blades had a much higher fatigue strength. The cracks were observed in these disks after 15 million cycles

UDC: 539.4.62-253.621.515.001.5

Card 1/2

L 10471-67

ACC NR: AP6031403

at a peripheral speed of 330 m/sec. Several other measures were recommended for improving disk design strength, such as the use of roundhead rivets instead of countersink rivets, and an increase in cover plate thickness. Orig. art. has: 2 figures. [WW]

SUB CODE: 13/ SUBM DATE: none / ORIG REF: 006

Card 2/2 egk

RAYER, G.M., inzh.; YUZBASHEV, G.M., inzh.

"Arbolit," a new building material. Transp. stroi. 13 no.6:65-66 Je '63. (MIRA 16:9)
(Building materials)

[redacted], O.G. and LITVINOVA, L.V.

Influence of cultivation conditions on the development of fat producing fungus from the Fusarium genus.

Mikrobiologiya. Vol. 21, P. 572, 1952.

C#

11-H

Effect of depressing the central nervous system on the adrenaline and dehydroadrenaline content of rabbit muscle M. L. Butom (Ukraine Inst. Exptl. Endocrinol., Kharkov). *Biokhimiya* 17, 207-71(1952); cf. C.A. 44, 1184h.—The right and left rabbit hind leg muscles of the same animal contain almost the same amt. of adrenaline (I) and dehydroadrenaline (II), although the variation in different animals is considerable (I 0.16-2.1 γ/g. tissue; II 0.0-0.52 γ/g. tissue). When one of the legs is irritated by an elec. current, II in the other (control) leg disappears; but the irritated leg, in most cases, contains II. During the irritation of both legs, II is found in each leg. When the central nervous system is depressed by urethan narcosis, both I and II, in most cases, disappear from the control leg as well as from the irritated leg. Under these conditions, I is either oxidized or becomes attached to tissue proteins. H. Priestley

Acylamides. Paulin Rayet (Service de recherches S.B.A.-P.C.M., Renory-Ougrée, Belg.). *Ind. chim. belge* 17, 478-80(1952)(in French).—A review of the pharmacodynamic effects in dogs and rabbits of acylamides and particularly of the following *salicylamides: N-acetyl-, O-acetyl-*, and *N,O-diacetyl-*. The following compds. were prepd. by conventional methods: *benzamides: N-acetyl-m-hydroxy-*, m. 102.5-4°; *N-acetyl-p-hydroxy-*, m. 125°; *N-acetyl-m-nitro*, m. 198-9°; and *N-acetyl-p-nitro-*, m. 225°; *β-resorcylamide*, m. 214°, *triacetyl deriv.* m. 124-4.5°; *gentisylamide*, m. 218-18.5°, *triacetyl deriv.* m. 142°; *gallylamide*, m. 280-90°, *tetraacetyl deriv.* m. 213°; *N-acetylnicotinamide*, m. 110-11°; *acetyl-1-naphthylacetamide*, m. 150-60°; and *methyl(acetyl)-1-naphthylacetamide*, m. 117.5-19°. 9 references. Rip G. Rice

RAYERSKIY, N.P.

Artobolevskiy, I.I., Konstintsin, V.T., and Rayerskiy, N.P. "On one condition of a shaft rotating on greaseless bearings with free play," Transactions of the seminar on machine and mechanic theory (Akad. nauk. SSSR, In-t mashinovedeniya), Vol. V, No. 19, 1948, p. 5-21

SO: U-2888, Letopis Zhurnal'nykh Statey, No. 1, 1949

RAYETSKAYA G.P.

KOLPAKOV, Ye.V.; RAYETS'KA, H.P.

Erroneous views on the mechanism which regulates blood circulation in the liver. Medych.zhur. 22 no.6:73-82 '52. (MLRA 6:10)

1. Instytut klinichnoyi fiziologiyi im. O.O.Bohomol'tsya Akademiyi nauk URSR.
(Liver) (Blood--Circulation)

RAYETSKAYA, G.P.

"Data on the Question of the Protective Function of the Liver (Comparative Investigation)." Cand Bio Sci, Kiev State U imeni T. G. Shevchenko, Min Higher Education USSR, Kiev, 1954. (KL, No 8, Feb 55)

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

RAETSKAYA, Yu.I.

62
3

Adaptive changes in respiratory function of erythrocytes in asphyxia of newly born. V. V. Koval'skii, Yu. I. Raetskaya, V. I. Tolcheeva, and Z. S. Chulkova (Sci. Research Inst. Obstet. and Gynecol., Ministry of Health U.S.S.R., Moscow). *Fiziol. Zhur. S.S.S.R.* 41, 401–9(1955).—It was shown that K ions, in raising the hydration activity of carbonic anhydrase, lowers the O-binding ability of hemoglobin, while Mg ions have a reverse ability. These results are confirmed by expts. on the action of metallic salts on dialyzed specimens of hemoglobin. At low pressure of O Mg raises the O-fixing ability of hemoglobin by 12–18%. Under conditions of asphyxia of newly born the high activity of Mg may be regarded as an adaptive function tending to improve gas metabolism. G. M. Kosolapoff

COUNTRY : USSR
CATEGORY : Farm Animals.
General Problems.
ABS. JOUR. : RZhBiol., No. 6, 1959, No. 25773

AUTHOR : Rayetskaya, Yu. I.; Zubrilina, Z. I.
INST. : All-Union Scientific Research Institute of*
TITLE : The Content of Vitamin B_{12} in Silage.

ORIG. PUB. : Byul. nauchno-tekhn. inform. Vses. n.-i. in-t zhivotnovodstva, 1958, No 1 (5), 21-24
ABSTRACT : No abstract.

Card: 1/1
*Animal Husbandry.

KOVAL'SKIY, V.V.;RAYETSKAYA, Yu.I.

Investigating the synthesis of vitamin B_{12} with the help of radioactive cobalt Co^{60}. Dokl. Akad. sel'khoz. 24 no.11:31-36 '59
(MIRA 13:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zhivotnovodstva.
2. Chlen-korrespondent Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk imeni Lenina (for Koval'skiy).

(Cyanocabalamine) (Cobalt--Isotopes)

RAYETSKAYA, Yu. I.

USSR/Biology - Biochemistry

Card 1/1 Pub. 22 - 26/47

Authors : Koval'skiy, V. V., and Rayetskaya, Yu. I.

Title : Synthesis of B_{12} vitamin in the organism of sheep under the effect of Co and Ca

Periodical : Dok. AN SSSR 100/6, 1131-1134, Feb 21, 1955

Abstract : The synthesis of B_{12} blood-producing-vitamins in organisms of sheep raised in provinces poor in Co by enriching the food with Co and Ca salts was investigated. The results obtained are tabulated. Three USSR references (1949-1954). Tables.

Institution : Academy of Sciences USSR, The V. I. Vernadskiy Institute of Geochemistry and Analytical Chemistry and the All Union Institute of Animal Breeding

Presented by: Academician A. P. Vinogradov, October 22, 1954

CA RAYETSKAYA Yu. I.

The significance of cations in respirative function of erythrocytes in infant asphyxia. V. V. Koval'skil and Yu. I. Raetskaya. (Ministry Health, Moscow). *Akusherstvo i Ginekol.* 1951, No. 5, 21-6.—In infant asphyxia the cation content of erythrocytes changes; K, Ca, and Mg drop by 40-50%. Expts. with Na^{24} and K^{42} showed that erythrocytes are permeable to these ions. K, Ca, and Mg display daily individual variations in normal pregnant women, changes being pos. or neg. depending on individuals. These ions are somewhat lower in venous blood of rabbit than in the arterial blood. Carbonic anhydrase activity is raised by K generally while Mg lowers its activity; in women Ca usually lowers the activity but may cause a rise of activity in infants. The results are interpretable in terms of cationic permeability of erythrocytes as a regulatory mechanism in respiration, both normal and abnormal (asphyxia).

G. M. Kosolapoff

L 22189-65 EWT(m)/EWG(s)-2/EWP(j) Pc-4/Pw-4 RM

ACCESSION NR: AR4049234 S/0081/64/000/014/S070/S070

SOURCE: Ref. zh. Khimiya, Abs. 14S480

AUTHOR: Verzal, A. I.; Ponomarev, M. A.; Rayetskaya, D. Ya.; Shreder, A. G.

TITLE: Properties and application of polymer-based concretes and mortars

CITED SOURCE: Sb. Proiz-vo stroit. izdeliy iz plastmass. Minsk, Vy*ssh. shkola, 1963, 218-239

TOPIC TAGS: polymer based concrete, plastic concrete, polymer based mortar, plastic mortar, polymer concrete property, polymer concrete application, organic admixture

TRANSLATION: The authors discuss the properties and fields of application of various types of concrete mixed with mineral and synthetic binders as a base. It is indicated that admixtures of low molecular weight organic substances

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L 22189-65

ACCESSION NR: AR4049234

3

(i.e. surfacc active agents and plasticizers) or polymers strongly affect the structurization processes occurring in concrete, as well as its physical and mechanical properties. For instance, changes in plasticity, decreased water absorption, significant improvements in strength and other phenomena are noted when divinyl styrene latex SKS-65GP, polyvinyl acetate emulsions, as well as phenolformaldehyde, melamine formaldehyde or phenolfurfural resins are mixed with semihydrate gypsum. An analysis is given of the mechanism of effects produced by organic admixtures on the properties of plastic concrete. For example, improved strength and lower water absorption of polymer gypsum containing thermosetting phenolformaldehyde resin is explained in terms of the latter filling the pores of the gypsum structure and of the additional reinforcement provided as the resin hardens. The article describes the properties of polymer-silicate light concrete on a base of an agloporite silicate binder with synthetic resins (furylaniline, ureaformaldehyde, phenylformaldehyde) added or on a base of silicon organic binders (i.e. water glass and silicon ethyl ether — silicate KS). The authors also review the literature concerning formulation of polymer-cement concrete and mortar, organo-mineral concrete (i.e.

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L 22189-65
ACCESSION NR: AR4049234

plastic concrete), the study of properties of these materials and the feasibility of their use in construction. Z. Ivanova

SUB CODE: MT ENCL: 00

Card 3/3

KONOPEL'KO, I.A.; TKACHEV, L.I.; RAYETSKAYA, D.Ya.

Spectral analysis of clays. Inzh.-fiz.zhur. no.2:109-112 F '58. (MIRA 13:1)

1. Nauchno-issledovatel'skiy institut stroymaterialov Upravleniya proizvodstva stroitel'nykh materialov Sovnarkhoza BSSR, Minsk.

(Clay--Spectra)

KOVAL'SKIY, V.V.; RAYETSKAYA, Yu.I.

Vitamin B_{12} synthesis in the organs of farm animals in biogeochemical provinces with different cobalt concentrations. Trudy Biogeokhim. lab. no.11:102-108 '60. (MIRA 14:5)

1. Institut geokhimii i analiticheskoy khimii imeni V.I.Vernadskogo AN SSSR.
(CYANCOBALAMINE) (COBALT--PHYSIOLOGICAL EFFECT)
(VETERINARY PHYSIOLOGY)

RAYETSKIY, N.N., kand.tekhn.nauk

Analytical method for the effective distribution of earth during the vertical grading of an area. Sbor.nauch.trudov LISI no.24: 111-135 '56. (MIRA 15:3)

(Earthwork)

RAYETSKIY, N.N., kand.tekhn.nauk

Improving methods of computing earthwork volumes by using triangular prisms. Trudy RISI no.4:126-143 '55.
(MIRA 12:1)

(Earthwork)

S/755/61/000/003/021/027

AUTHORS: Fedorov, G.B., Rayetskiy, V.M., Smirnov, Ye.A.

TITLE: Diffusional and thermodynamic characteristics of nickel.

SOURCE: Moscow. Inzhenerno-fizicheskiy institut. Metallurgiya i metallovedeniye chistykh metallov. no.3. 1961, 203-209.

TEXT: The paper reports on the first part of an investigation concerned with the diffusional and thermodynamic characteristics of Ni and its alloys. Its especial objective are the properties of pure Ni. Artificial radioactive Ni^{63} was utilized in all experiments. The radioactivity was measured by means of an end-window counter with a 1 mg/cm^2 mica window. In addition to the soft β-radiation of the Ni^{63} isotope a harder β-radiation of about 0.5 Mev was detected. The 70-day half-life of the second isotope identified it as Co^{58}. A method was developed to perform the simultaneous but separate determination of the diffusion coefficients (DC) of the metals emanating β-radiation of differing energy. The specimens were measured twice: Once without filter and again with an Al filter, for which the -absorption coefficients had been found to be $\mu_{Ni} = 2{,}300$, $\mu_{Co} = 100$ cm^{-1}. The Al filter selected had a thickness h = 0.01 mm, which is 3x thicker than a 50%-absorption layer, but 0.4x as thick as the layer of total absorption of Ni radiation. This filter reduced the Co radiation by no more than 10%. The two integral-flux equations

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yield the numerical values for the two unknown I_{Ni} and I_{Co} fluxes upon substitution of μ_{Ni}, μ_{Co}, and h therein. The diffusion specimens were made of electrolytical Ni, 99.9% pure, remelted in an induction furnace and forged. The milled and ground specimens were 25x8x8 mm in size. The radioactive Ni^{63} was vacuum-sprayed onto one face. Activity: 5,000 pulses/min. The paired specimens were tied together and placed in Ar-filled quartz ampoules. Anneals in tubular furnaces at 900-1,250°C lasted from 16.5 to 400 hrs. Measurements of the radioactivity were performed by the layerwise-removal integral-radioactivity method of (cf. Gruzin, P. L., et al., Fizika metallov i metallovedeniye, v.IV, no.1, Moscow, 1957). The concentration of the soft β-radiation of the Ni was assumed to be proportional to the integral radioactivity. The specific radioactivity of the Co was determined from the integral radioactivity, its depthwise gradient in the diffusion layer, and the β-radiation absorption coefficient of Co in Ni. The self-DC of Ni is found to be $D_{Ni} = 1.0 \exp(-66,700/RT)$ $cm^2 \cdot sec^{-1}$, the Co-in-Ni DC $D_{Co} =$ $1.4 \exp(-66,200/RT)$ $cm^2 \cdot sec^{-1}$. These findings are compared briefly with those of R. E. Hoffman, et al., J. Metals, v.8, 1956, 5, and J. R. MacEwan, et al., Canad. J. Chem., v.37, 1959, 10. The vapor pressure of Ni was measured by Knudsen's method, using radioactive Ni^{63}. Equipment and methods used have been described by the senior author alone and by the senior and junior author, respectively, in

no.2 of the present sbornik, Atomizdat, 1960. Ni^{63} shavings were remelted in an arc furnace. Radioactivity of the preparation: 1.6 μ-curie; Ni^{63} content in the alloy: 44%. A specified-weight sample was dissolved in diluted HNO_3. The vapor pressures were measured with an effusion orifice having an area of $1.08 \cdot 10^{-2} cm^2$. Least-square analysis yielded the equation $\log p = 9.581 - 2.033 \cdot 10^4 \frac{1}{T}$ within the 1,201-1,444°C range. The heat of sublimation, enthalpy, and entropy of solid Ni were calculated by the method outlined in the above-cited 1960 paper by the senior and the junior author (p.34 of the 1960 sbornik). It is noted that the selfdiffusion-activation energy of Ni divided by its heat of sublimation yields a ratio of 0.7, which is characteristic of metals with a face-centered cubic lattice. There are 2 figures, 4 tables, and 15 references (10 Russian-language Soviet, 5 English-language).

ASSOCIATION: MIFI (Moscow Engineering Physics Institute).

FEDOROV, G.B.; RAYETSKIY, V.M.; SMIRNOV, Ye.A.

Diffusive and thermodynamic characteristics of nickel. Met. i metalloved. chist. met. no.3:203-209 '61. (MIRA 15:6)
(Nickel--Thermal properties) (Diffusion)

S/137/62/000/009/012/033
A006/A101

AUTHORS: Fedorov, G. B., Rayetskiy, V. M., Smirnov, Ye. A.

TITLE: Diffusion and thermal characteristics of nickel

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 9, 1962, 13, abstract 9I78 (In collection: "Metallurgiya i metalloved. chist. metallov", no. 3, Moscow, Gosatomizdat, 1961, 203 - 209)

TEXT: Radioactive Co^{58} and Ni^{63} isotopes were used to investigate diffusion of Co in Ni and self-diffusion of Ni, and Ni vapor pressure was measured. A Ni^{63} layer was vacuum-sprayed on electrolytical Ni-specimens. Diffusion annealing was performed within a range of 900 - 1,250°C for 16.5 - 400 hours. To determine the coefficient of Co diffusion in Ni, D_{Co}, and self-diffusion D_{Ni}, a method was used with the removal of layers and measurement of the integrated activity of the residue. The following temperature dependences were found: $D_{Co} = 1.4 \exp (- 66,200/RT)$ cm^2/sec and $D_{Ni} = 1.0 \exp (- 66,700/RT)$ cm^2/sec. The calculated activation energy of Co in Ni is somewhat below the activation energy of Ni self-diffusion; this is connected with the close arrangement of these ele-

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Diffusion and thermal characteristics of nickel

S/137/62/000/009/012/033
A006/A101

ments in the periodic system. Ni vapor pressure was measured by the Knudsen method in a chamber with an effusion aperture of $1.08 \cdot 10^{-2}$ cm^2 area. From experimental data an equation was derived for vapor pressure $lg\ p = 9.581 - 2.033 \cdot 10^4(1/T)$ at (1,201 - 1,444°C). From data of vapor pressure the following values were calculated: sublimation heat; enthalpy and entropy of solid Ni. The ratio of activation energy of Ni self-diffusion to its sublimation heat is 0.7; this is characteristic of a metal with a face-centered cubic lattice. There are 15 references.

V. Srednogorska

[Abstracter's note: Complete translation]

Card 2/2

RAYEV, A.

Electrical Engineering Abst.
Vol. 57 No. 676
Apr. 1954
Electronics

621.385.16.029.6 : 621.3.018

1698. Steady oscillations in two-slot magnetrons with an aperiodic anode circuit. A. Raev and I. Uzunov. Izv. Bulg. Akad. Nauk, 2, 169-90 (1951) In Bulgarian.

It is assumed that a self-supporting steady concentration of electrons is set up in the magnetron which, rotating, about the cathode, induces an a.c. in the external aperiodic circuit. But such a concentration can only be maintained by an alternating voltage of a suitable amplitude which is exactly that set up by the current in the aperiodic circuit which is considered to consist of capacitance and resistance. This assumption leads to a consistent theory which enables the conditions to be stated which must be satisfied for such oscillations to be set up; the experimental results fully bear out the quantitive accuracy of the theoretical predictions. B.F. Kraus

57

RAYEV, A.I.; STEPANOV, A.A.

Research work of the Department of Psychology of the A.I. Hertzen Pedagogical Institute of Leningrad. Vop. psikhol. 10 no.2:188-189 Mr-Ap '64. (MIRA 17:9)

[redacted], A. I.,

"An attempt at a Psychological Analysis of the Process of Learning the System of Historical Concepts by Fourth through Tenth Grade Pupils." (Dissertation for Degree of Candidate of Pedagogic Sciences) Min Education RSFSR, Leningrad State Pedagogic Inst imeni A. I. Gertsen, Leningrad, 1955

SO: L-1038 28 Mar 56

RAYEV, B.G., inzh.

Investigating the process of cutting stalks without a counter-cutting part. Trakt. i sel'khozmash. 31 no.11:18-21 N '61. (MIRA 14:12)

1. Gosudarstvennoye seriyno-konstruktorskoye byuro po khlopku.
(Harvesting machinery)

KOSHEVNIKOV, Georgiy Antonovich, akademik; KHAMIDOV, Aslam, kand. tekhn. nauk; KOTOV, Vladimir Fedorovich; GERASIMOV, Mikhail Fedorovich; BASEVICH, Lev Yefimovich; BUTYRIN, Aleksandr Vasil'yevich; RAYEV, Boris Grigor'yevich; BONDARENKO, M., red.; SALAKHUTDINOVA, A., tekhn. red.

[Machinery for cultivating cotton] Mashiny dlia vozdelyvaniia khlopchatnika. Tashkent, Gosizdat UzSSR, 1961. 182 p. (MIRA 15:7)

1. Nachal'nik otdela Gosudarstvennogo spetsial'nogo konstruktorskogo byuro (for Kotov). 2. Rukovoditel' gruppy gosudarstvennogo spetsial'nogo konstruktorskogo byuro po khlopku (for Basevich, Rayev).

(Cotton machinery)

AVDEYEVA, N.A.; RAYEV, B.G.; TOPOL'SKIY, Yu.M.

Machine for cotton plant leaf reduction. Sel'khozmashina no.10:7-11 O '53. (MLRA 6:11)

1. GSKB po khlopku. (Cotton machinery)

KAS'YANOV, L.N., inzh.; LIPOVTS[illegible], L.Ya., inzh.; LOSHAK, S.B., inzh.; RAYEV, D.Kh., inzh.; [illegible]A, G.A., inzh.; MUCH[illegible]K, [illegible]., kand.tekhn.nauk

Load drops on the 300 [illegible]. unit with subsequent loading. Teploenergetika 8 no.[illegible]4-49 O '61. (MIRA 14:10)

1. Gosudarstvennyy trest po organizatsii i ratsionalizatsii elektrostantsiy i Zmiyevskaya gosudarstvennaya rayonnaya elektricheskaya stantsiya.
(Steam turbines--Testing)

MESHCHANINOV, I.A., inzh.; MUCHNIK, G.F., inzh.; RAYEV, B.Kh., inzh.

Operation of TP-230 boilers with decreased loads. Elek.sta. 32 no.4:10-14 Ap '61. (MIRA 14:7)

(Boilers)

MESHCHANINOV, I.A., inzh.; MUCHNIK, G.F., inzh.; RAYEV, B.Kh., inzh.

Conditions for the transfer of boilers from operating to stand-by basis. Elek. sta. 30 no.2:11-14 F '59. (MIRA 12:3)
(Boilers)

RAYEV, B.V.; BAKALDINA, N.I.; L'VOVA, N.Ye.; TRET'YAKOV, A.A.

Review of three criteria in Borbov's complex hemotuberculin method and considerations on possible errors in determination of erythrocytes sedimentation time and in formula of leukocytes. Probl. tuberk., Moskva no. 5:51 Sept-Oct 1952. (CLML 23:5)

1. Docent. 2. Of the Department of Faculty Therapy (Head--Prof. A. V. Selezney) of Molotov Medical Institute (Director -- Docent A. N. Kushnev) and of Molotov Municipal Anti-Tuberculosis Dispensary (Head Physician -- M. V. Tarasova).

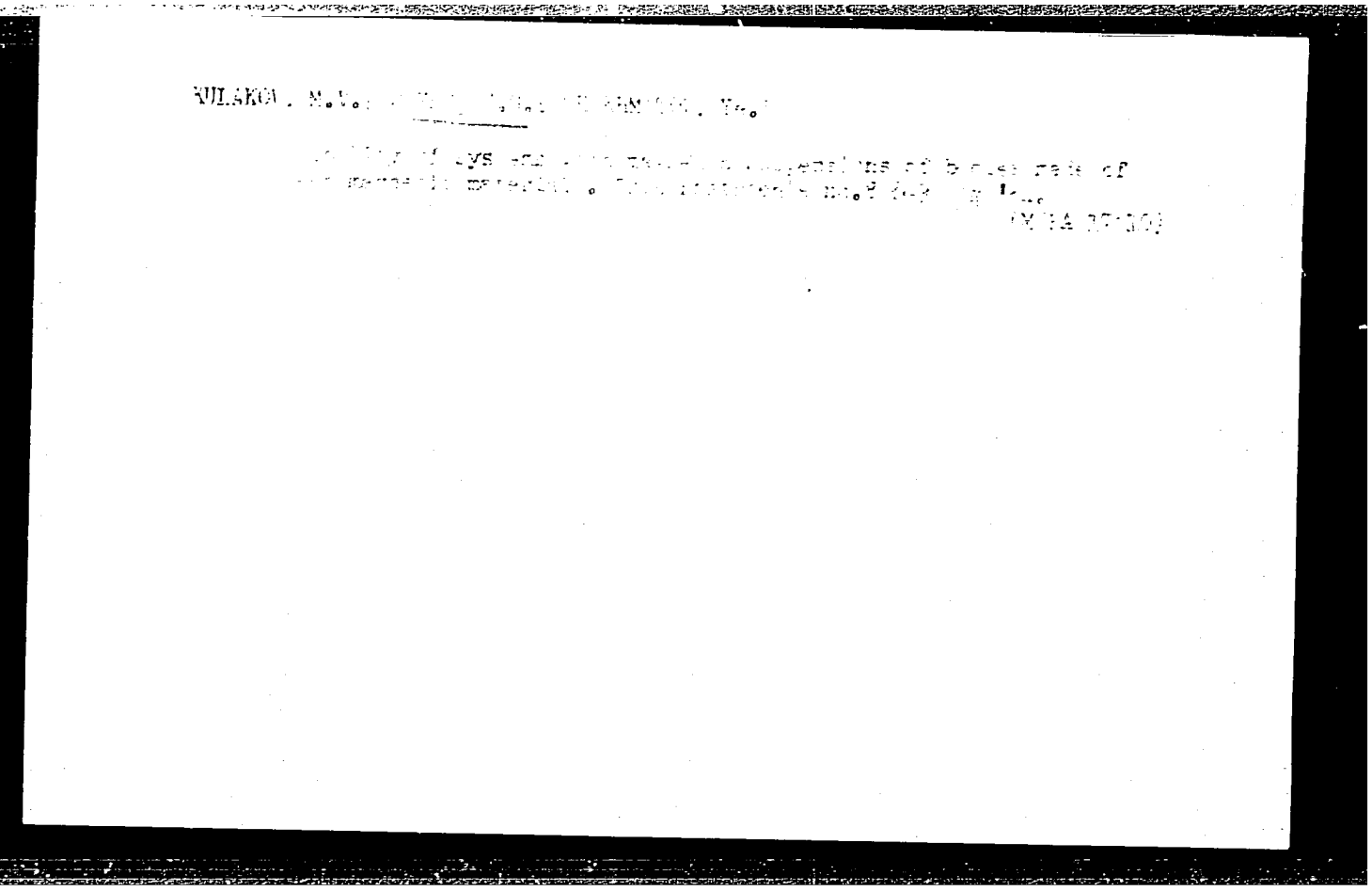
1. RAYEV, B.V., BAKALDINA, N. I., L'VOVA, N.Ye., TRET'YAKOV, A.A.

2. USSR (600)

4. Tuberculosis-Diagnosis

7. Checking three criteria of Bobrov's complex hemotuberculin test and the determination of the probable error of erythrocyte sedimentation rate and of the leukocytal formula. Prob. tub. No.5, 1952

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



S/122/62/000/002/004/007
D262/D301

AUTHORS: Paisov, I.V., Doctor of Technical Sciences, Professor and Rayev, I.I., Engineer

TITLE: Methods of quality control of high manganese steel

PERIODICAL: Vestnik mashinostroyeniya, no. 2, 1962, 49-51

TEXT: Various standard methods of quality control of high manganese steel (13% Mn) (G13L) (C-1.16, Mn-13.60, Si-0.42, Cr-0.16, Ni-0.15), water-hardened (1100°C) are described, test results (shown in form of graphs) are analyzed and the following conclusions reached: High manganese steel castings should not only be tested for micro-structure and hardness, but its mechanical properties should also be checked: 1) The hardness test can be done using the Poldi device, with the corrections obtained experimentally by the authors; 2) standard methods of the tensile test can be applied, but attaining the required accuracy is so difficult that operative control is excluded; 3) high manganese steel is little sensitive to impact testing; 4) bending tests are the simplest; quantitative and partially qualitative characteristics of the metal can be

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obtained. This method of testing is recommended by the authors. There are 2 tables, 5 figures and 2 Soviet-bloc references.

SOROKHTIN, G.N.; TRUSOV, M.S.; RAYEV, M.L.

Effect of anticholinesterase on dark adaptation [with summary in English]. Biul.eksp.biol. i med. 44 no.12:81-85 D '57. (MIRA 11:4)

1. Iz kafedry fiziologii (zav. - prof. G.N.Sorokhtin) Khabarovskogo meditsinskogo instituta. Predstavlena deystvitel'nym chlenom AMN SSSR V.N.Chernigovskim.

(PHYSOSTIGMINE, effects,
on dark adaptation (Rus))
(ADAPTATION, OCULAR,
dark, eff. of physostigmine (Rus))

PICHAKHCHI, M.V.; RAYEV, I.I.

Preparation of chaplets. Lit.proizv. no.2:23 F '56.
(Foundry machinery and supplies) (MLRA 9:6)

RAYEV, M.A.

Protractor head for mechanical drawing sets. Med.prom. 13 no.7:54-57 Jl '59. (MIRA 12:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut meditsinskogo instrumentariya i oborudovaniya.
(PROTRACTORS)

RAYEV, I.I.; KHARAZ, I.B.

Effect of slag composition on the quality of high manganese steel castings. Lit.proizv. no.3:8-10 Mr '62. (MIRA 15:3)
(Slag--Analysis) (Steel castings)

ORLOV, G.M., ., BOVIN, A.I., BRYUKHOV, S.A., IL'IN, B.A., MAYOROV, V.F., PASYUTIN, I.A., RAYEV, O.A., ROOS , L.V., NIKIFOROV, A.S., red.; GORYUNOVA, L.K., red. izd-va, SIDEL'NIKOVA, L.A., red. izd-va, SHAKHOVA, L.A., red. izd-va,; BACHURINA, A.M., tekhn. red.

[Forest industries in Canada] Lesnaia promyshlennost' Kanady. Moskva, Goslesbumizdat, 1957. 246 p. (MIRA 11:11)
(Canada--Lumbering)

RAYEV, O.Ye., inzh.

Engineering developments in the lumbering industry. Mekh. trud. rab. 12 no.8:17-20 Ag '58. (MIRA 11:9)

1.Zamestitel' predsedatelya Sverdlovskogo sovnarkhoza.
(Lumbering--Machinery)

AUTHOR: Rayev, O.Ye., Engineer, Deputy Chairman of the Sverdlovsk Council of the National Economy SOV-118-58-8-7/24

TITLE: Technical Development of the Lumber Industry (O putyakh tekhnicheskogo razvitiya lesozagotovitel'noy promyshlennosti) For Discussion Purposes (V poryadke obsuzhdeniya)

PERIODICAL: Mekhanizatsiya trudoyëmkikh i tyazhëlykh rabot, 1958, Nr 8, pp 17-20 (USSR)

ABSTRACT: This article is an answer to the article published by Professor S.F. Orlov in Nr 4 (1958) of this periodical on further development of mechanization and automation in the lumber industry. The author finds that the best way to achieve this is not in creating new equipment for the industry, which will take a long time, but in improving and perfecting already existing machinery. He compares various types of equipment existing in the Union with those of the US and Canada, and finds that still much must be done to reach the level of foreign countries. He cites various foreign machines used in the lumber industry and shows their superiority over those in the USSR.
There are 2 tables.

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SOV-118-58-8-7/24

Technical Development of the Lumber Industry. For Discussion Purposes.

ASSOCIATION: Sverdlovskiy sovnarkhoz (The Sverdlovsk Sovnarkhoz)

1. Lumber industry--Development 2. Lumber industry--Control systems

Card 2/2

RAYEV, O. Ye.

Use all sources of raw material in Sverdlovsk Province for the development of the woodpulp and paper industry. Bum. prom. 33 no. 6:25-26 Je '58. (MIRA 11:7)

1. Zamestitel' predsedatelya Sverdlovskogo sovnarkhoza.
(Sverdlovsk Province--Paper industry)
(Sverdlovsk Province--Woodpulp industry)

RAYEV, O.Ye.

Use new machinery and technology in lumbering work. Mekh.trud.rab. 9 no.10 O '55. (MLRA 9:1)

1.Zamestitel' ministra lesnoy promyshlennosti SSSR.
(Lumbering--Machinery)

L 21543-66 EWT(1) SCTB DD

ACC NR: AP6007882 SOURCE CODE: UR/0177/66/000/002/0062/0064

AUTHOR: Gol'din, N. A. (Lieutenant colonel in medical service, Candidate of medical sciences); Rayev, S. F. (Major in medical service) 26 B

ORG: NIAG

TITLE: The importance of electrophysiological studies of excess-pressure respiration for medical examinations for airmen 21,55

SOURCE: Voyenno-meditsinskiy zhurnal, no. 2, 1966, 62-64

TOPIC TAGS: medical experiment, flyer test, airman test

ABSTRACT: Latent pathological conditions cannot be detected by physical load, depleted-oxygen respiration, the Master test, and other tests hitherto used. A new test with respiration under excess-oxygen-pressure conditions is suggested for determining the state of the cardiovascular system and discovering latent pathological indicants; it has been used at NIAG since 1960. The subject is kept seated, and an excess pressure of 150—350 mm (water column) is applied to his gas mask. Application of the test to 220 airmen yielded these results:

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L 21543-66

ACC NR: AP6007882 0

Subject Age:	Found Healthy	Neuro-circulatory Dystonia	Hypertonia	Arteriosclerotic Cardiosclerosis	Myocardial Cardiosclerosis	Dystrophy
25–30	15	19	6		11	
31–35	12	16	10		9	2
36–40	10	14	7	3	8	12
Over 40 yrs.	13	5	10	15	4	19
Total:	50	54	33	18	32	33

Details of these findings are discussed. Orig. art. has: 1 table. [03]

SUB CODE: 06 / SUBM DATE: none/ ATD PRESS: 4219

Card 2/2 BLG

RAYEV, V., polkovnik intendantskoy sluzhby

Progressive officer. Tyl i snab. Sov. Voor. Sil 21 no.10:55 O '61. (MIRA 15:1)

(Russia--Army--Officers)

VLASOVETS, A.M., aspirant; RAYEV, V.A., inzh.

Results of testing devices for the control of fluctuations caused by waves in the canal section between the Kuybyshev locks. Trudy LIVT no.64:37-45 '64. (MIRA 18:10)

NERPIN, S.V., doktor tekhn.nauk, prof.; KOTOV, A.I., kand.tekhn.nauk, dotsent; RAYEV, V.A., inzh.

Nature of the compressibility of clayey soils. Trudy LIIVT no.26: 105-111 '59. (MIRA 14:9)

(Clay)

L 17924-65 ENT(1)/EWA(h) Peb ASD(a)-5/AFWL/AFETR/ESD(t) MLK

ACCESSION NR: AT4047756 S/0000/64/000/000/0199/0203

AUTHOR: Rayev, V. K.

B+1

TITLE: Controllable-gain amplifier 25

SOURCE: AN SSSR, Institut avtomatiki i telemekhaniki. Teoriya i primeneniye avtomaticheskikh sistem (Theory and application of automatic systems). Moscow, Izd-vo Nauka, 1964, 199-203

TOPIC TAGS: amplifier, magnetic amplifier, controllable gain amplifier

ABSTRACT: The circuit (see Fig. 1 of Enclosure) is described of a d-c output magnetic amplifier with a transistor-gate negative feedback combined with a pulse-duration modulator which switches transistors fed by a continuous control signal. In a simplified circuit diagram (see Fig. 2 of Enclosure), 1 is the magnetic amplifier, 2 is the transistor gate, and 3 is the PD modulator. The magnetic amplifier includes two nonreversible amplifiers connected as a voltage-doubling circuit; the supply voltage is 50 v; frequency, 400 cps; voltage gain, 4650; linearity of the input-output characteristic is 0.5% of the max voltage of the linear segment between 0 and

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L 17924-65
ACCESSION NR: AT4047756

45 v. The gate is designed with two P106 transistors and offers either 1 Mohm or 10--15 ohms resistance. The PD modulator is based on a 4-winding saturating reactor with suppressed even harmonics in the control circuit; the modulator generates triangular voltage pulses and is highly stable with respect to wide supply-voltage and frequency variations. A fairly accurate linear relation between the output-pulse duration and the control signal is attained. Tests have shown that the magnetic amplifier is stable even in the case when the feedback switching frequency is only twice as high as the supply-voltage frequency. Orig. art. has: 3 figures and 3 formulas.

ASSOCIATION: none

SUBMITTED: 06Jun64 ENCL: 02 SUB CODE: EC

NO REF SOV: 003 OTHER: 000

Card 2/4

L 17924-65
ACCESSION NR: AT4047756

ENCLOSURE: 01

0

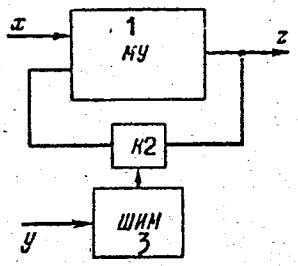

Fig. 1. Block diagram of the controllable-gain amplifier

1 - Magnetic amplifier; 2 - transistor gate; 3 - pulse-duration modulator; x - input control y - modulator control signal; z - output current or voltage signal.

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L 17924-65
ACCESSION NR: AT4047756

ENCLOSURE: 02

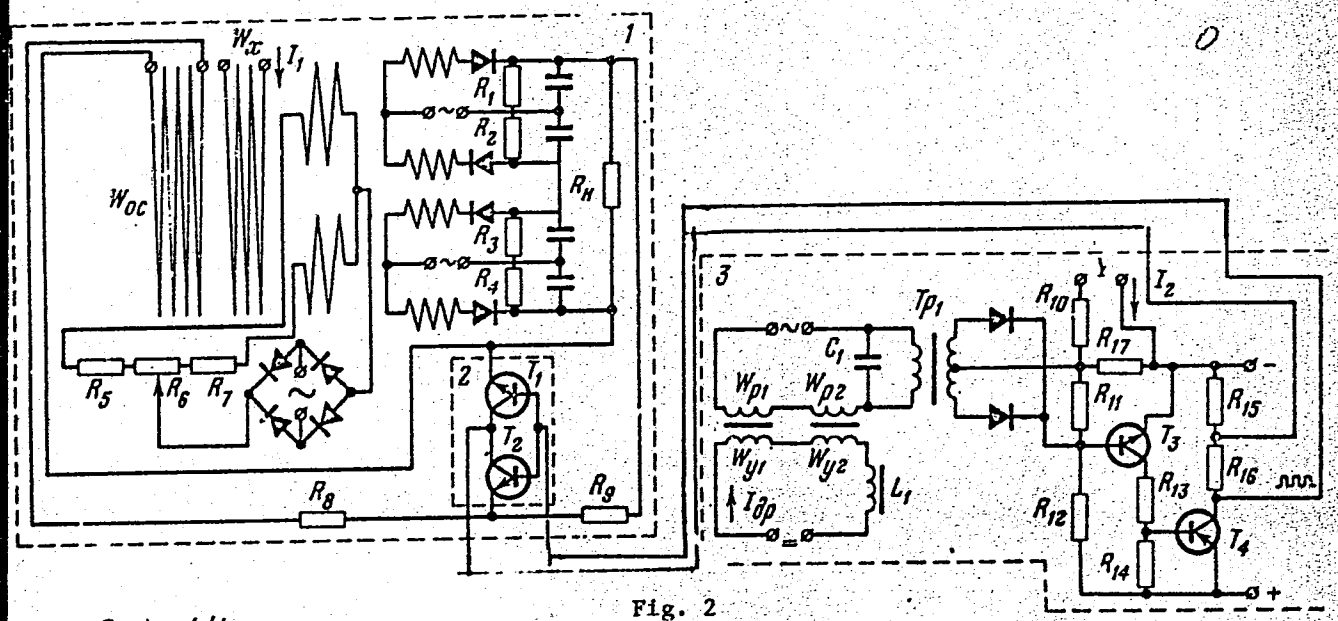

Fig. 2

Card 4/4

ACC NR: AM6032370 Monpgraph UR/

Boyarchenkov, Mikhail Aleksandrovich; Kerbinov, Fedor Ivanovich; Rayev Vyacheslav Konstantinovich; Rozenblat, Moisey Aronovich

Impulse regulators on contactless magnetic elements (Impul'snyye regulyatory na beskontaktnykh magnitny elementakh) Moscow, Izd-vo "Energiya", 1966. 119 p. illus., biblio. 16,000 copies printed.

Series note: Biblioteka po avtomatike, vyp. 186

TOPIC TAGS: summing amplifier, contactless relay regulator, impulse regulator, magnetic amplifier, electric relay

PURPOSE AND COVERAGE: This booklet is intended for engineers, technicians, and advanced students in the field of automation. The booklet discusses the fundamentals of contactless proportional plus-differential, proportional plus-integral, and proportional plus-differential plus-integral relay controllers with magnetic elements. Recommendations are given for the selection of separate regulator elements along with the circuit diagrams and basic technical characteristics of these elements. Results of investigations concerning the contactless proportional plus-integral relay controller with magnetic amplifiers and contactless mag-

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ACC NR: AM6032370

netic relays are described in detail. No personalities are mentioned. There are 16 references: 13 Soviet and 3 non-Soviet.

TABLE OF CONTENTS:

SUB CODE: 09/ SUBM DATE: 22Apr66/ ORIG REF: 013/ OTH REF: 003/

Card 2/2

L 37113-66 EWP(k)/EWT(d)/EWP(h)/EWP(l) EWP(v) IJP(c) GG/BB/BC/GD

ACC NR: AT6006234 (A, N) SOURCE CODE: UR/0000/65/000/000/0410/0420

AUTHOR: Rayev, V. K.

B+1

ORG: None

TITLE: Multipliers combined with operational magnetic amplifiers

SOURCE: AN SSSR. Institut avtomatiki i telemekhaniki. Tekhnicheskaya kibernetika (Technical cybernetics). Moscow, Izd-vo Nauka, 1965, 410-420

TOPIC TAGS: computer component, electron multiplier, magnetic amplifier, computer control system

ABSTRACT: Two circuits are studied with four-quadrant multipliers which realize the function $xy = 1/2\,[(x+y)^2 - x^2 - y^2]$. These circuits are to be used with one magnetic operational amplifier. The possibility of grounding the source of the input signal determines the selection of the circuit. The circuits described are recommended for a single-wire system and for the case where grounding is not possible. The multiplication accuracy of the circuits is not less than 2%. Temperature error during heating of the multiplier model does not exceed 3.5%. The number of squarers needed for alternating amplifiers in the circuits is one less than for similar multipliers based on electronic amplifiers. The com-

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L 37113-66

ACC NR: AT6006234

bining of multipliers with operational magnetic amplifiers results in additional error which is caused by pulsation in the input voltages. An expression is given for calculating additional error which is a function of the pulsation level in the input circuits. Orig. art. has: 6 figures and 11 formulas.

SUB CODE: 09 / SUBM DATE: 05Nov65 / ORIG REF: 006 / OTH REF: 001

Card 2/2

ZHEREBIN, B.N., [illegible] KHROMOV, V.A., kand. tekhn. nauk, MISHIN, F.P., inzh., YEFIMENKO, G.M., inzh., OBSHAROV, V.M., inzh., KATEV, Ye.G., inzh.

Automatic control of the distribution of blast to blast furnace tuyeres at the Kuznetsk Metallurgical Combine. Stal' 23 [illegible. 24] no.4:290-293 Ap '63. (MIRA 17:8)

VOSKOBOYNIKOV, V.G., prof., doktor tekhn. nauk; ZHEREBIN, B.N., prof.; LIKHODIYEVSKIY, V.A., inzh.; MISHIN, P.P., inzh.; RAYEV, Yu.F., inzh.

Dynamics and control of coke burning processes in the tuyere zone of a blast furnace. Stal' 24 no.11:975-980 N '64.

(MIRA 18:1)

RAYEV, V.N.

PUTYATO, V.T., inzhener.; RAYEV, V.N., inzhener; PEREL'SHTEYN, S.L.

Standard plan refrigerating plant built of precast reinforced concrete. Nov.tekh,i pered.op. v stroi. 18 no. 11:5-8 N '56. (MLRA 10:1)
(Refrigeration and refrigerating machinery) (Precast concrete construction)

RAYEV, V.N., inzhener.

Standard plan for a precast reinforced concrete silo. Nov. tek. i pered. op. v stroi. 18 no.5:4-7 My '56. (MLRA 9:12)
(Silos) (Precast concrete construction)

SOV/133-58-12-4/19

AUTHORS: Chernov N.N., (Candidate of Technical Science), Docent, Zhigulev P.G., Baranovskiy P.G., Obsharov, V.M., Rayev, Yu. O., and Kargin A.A., (Engineers).

TITLE: An Automatic Control of the Operation of a Blast Furnace Based on the Drop in Static Pressure (Avtomaticheskoye regulirovaniye khoda domennoy pechi po perepadu staticheskogo davleniya)

PERIODICAL: Stal', 1958, Nr 12, pp 1071-1077 (USSR)

ABSTRACT: The Central Automation Laboratory designed experimental equipment for the automatic control of blast furnace operation based on the pressure drop between the bustle pipe and furnace throat. The signal from the differential manometer acted in turn on the following controls: top pressure, temperature and humidity of blast, blast volume. The equipment was tested on a furnace in the Zaporozhstal' Works in 1954 and on the Kuznetsk Metallurgical Combine in 1956. It was soon found that the system as designed was unworkable. The investigations carried out in the Kuznetsk Combine indicated that changes in top pressure influence mainly the pressure drop between the throat and the middle of the stack, and changes in the blast

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An Automatic Control of the Operation of a Blast Furnace Based on the Drop in Static Pressure

humidity, blast temperature and blast volume affect mainly the pressure drop between the middle of the stack and tuyere level. It was therefore decided to base the automatic control on partial pressure drops between the tuyere level and the middle of the stack and between the middle of the stack and the throat. These partial drops in static pressure were measured with two DPES type differential manometers with a double electronic bridge (two standard electronic bridges operating on to a common recording strip). The reliability of the operation of this equipment depends mainly on the state of the opening in the furnace stack for measuring static pressure. This was successfully solved by arranging the opening through a cooler and cleaning it by a pneumatically operated rod (Figs 1 and 2). The recorded curve of the pressure drop between the above two levels during normal furnace operation is shown in Fig 3; during top hanging of the burden in Fig 4; during bottom hanging in Fig 5, and when the hearth is filled with iron and

An Automatic Control of the Operation of a Blast Furnace Based on the Drop in Static Pressure

slag, Fig 6. After preliminary investigation of the influence of the individual operating factors on the partial pressure drops a scheme for the automatic control was evolved, the electrical circuit diagram of which is given in Fig 7. If the top pressure drop exceeds a certain value then the controls will bring about a certain increase in the top pressure. If after some predetermined time the top pressure drop is not returned to its normal value then the blast volume will decrease by increments with a certain time interval between each increment. When a complete permitted correction of the blast volume is made, the controller of the bottom pressure drop is put into operation and begins to correct the temperature or humidity and volume of the blast. As a result of the above corrections the pressure drop may be restored to the required value. If the bottom pressure drop does not exceed normal value, then the blast volume begins to increase until it is returned to normal value and is then followed by the restoration of the top pressure. If the

An Automatic Control of the Operation of a Blast Furnace Based on the Drop in Static Pressure

bottom pressure drop exceeds the normal value then the controller of the top pressure drop is not permitted to restore normal operating conditions, but instead the controller of the bottom pressure drop begins to introduce corrections at first of blast temperature or moisture (in stages of 20°C and 2g/m^3) and then of the blast volume. Between each correction a time interval of 5 - 7 minutes is maintained. The restoration of the normal operating conditions is done in reverse order. If the pressure drop falls below the predetermined value, then at first either the blast temperature is increased or its humidity decreased and then the blast volume is

An Automatic Control of the Operation of a Blast Furnace Based on the Drop in Static Pressure

increased. The system was tested during a period of two weeks and in the great majority of cases gave the correct solutions.
There are 7 figures.

ASSOCIATION: Sibirskiy metallurgicheskiy institut i Kuznetskiy metallurgicheskiy kombinat (Siberian Metallurgical Institute and Kuznetsk Metallurgical Combine)

BURTSEV, V.V.; RAYEV, Yu.O.

Arrangement for the blast distribution in the furnace tuyeres. Metallurg 7 no.4:9-10 Ap '62. (MIRA 15:3)

1. Nachal'nik tekhnicheskogo byuro tsekha konstrol'no-izmeritel'nykh priborov i avtomatiki (for Burtsev). 2. Nachal'nik uchastka domennogo tsekha Kuznetskogo metallurgicheskogo kombinata (for Rayev).

(Blast furnaces--Equipment and supplies)

RAYEV, Yu. O.

RYABTSEV, L.N.; KARPETA, D.I.; MOREV, I.I.; RAYEV, Yu.O.; KLOKOV, P.V.; ZHEMBUS, M.D.; YEVSEYEV, A.M.; TKACHENKO, V.K.

Young blast furnace operators are exchanging work practices. Metallurg no.12:7-10 D '56. (MIRA 10:1)

1. Master domennoy pechi no.7 Magnitogorskogo metallurgicheskogo kombinata (for Ryabtsev). 2. Master domennoy pechi no.7 Magnitogorskogo metallurgicheskogo kombinata (for Karpeta). 3. Master Magnitogorskogo metallurgicheskogo kombinata (for Morev). 4. Pomoshchnik mastera Kuznetskogo metallurgicheskogo kombinata (for Rayev). 5. Master metallurgicheskogo zavoda imeni Serova (for Klokov). 6. Master metallurgicheskogo zavoda imeni Petrovskogo (for Zhembus). 7. Master Chusovskogo metallurgicheskogo zavoda (for Yevseyev). 8. Master Makeyevskogo metallurgicheskogo zavoda (for Tkachenko).
(Magnitogorsk--Blast furnaces)

ZHEREBIN, B.N.; DEMBOVETSKIY, V.P.; MINKIN, V.M.; NIKULINSKIY, I.D.; Prinimali uchastiye: OBSHAROV, V.M., inzh.; RAYEV, Yu.O., inzh.; ZHIGULEV, P.T., inzh.; SUCHKOV, I.A., inzh.; BEREZKIN, B.S., inzh.; NEKRASOV, V.M., inzh.; ZHUKOVICH, A.I., inzh.

Use of coke-oven gas in blast furnaces. Stal' 21 no.8:673-679 Ag '61. (MIRA 14:9)

1. Kuznetskiy metallurgicheskiy kombinat i Sibirskiy metallurgicheskiy institut.
(Blast furnaces--Equipment and supplies)

RAYEV, Z.A.; DROTYANKO, A.S.; KORDYUKOVA, N.S.; SEMENETS, P.A.; KOVALENKO, A.D.; PARKHOMENKO, M.R.

Treatment of yeast milk with malt wort for the improvement of the quality of compressed yeast. Ferm. i spirt. prom. 31 no.7:18-22 '65. (MIRA 18:11)

1. Ukrainsky nauchno-issledovatel'skiy institut spirtovoy i likero-vodochnoy promyshlennosti (for Rayev, Drotyanko, Kordyukova). 2. Andrushevskiy spirtokombinat (for Semenets, Kovalenko, Parkhomenko).

RAYEV, Z.A.; KORDYUKOVA, N.S.; PINYAYEVA, N.A.; MEL'NIK, A.N.

Improving the maltose activity of distillery baker's yeast.
Ferm. i spirt. prom. 30 no.6:5-7 '64. (MIRA 17:11)

1. Ukrainskiy nauchno-issledovatel'skiy institut spirtovoy i likerno-vodochnoy promyshlennosti.

VOLOKHOVA, N.A.; RAYEV, Z.A.

Norms for the expenditure of chemicals and auxiliary materials in the production of alcohol from molasses. Ferm. i spirt. prom. 31 no.2:29-31 '65. (MIRA 18:6)

1. Ukrainskiy nauchno-issledovatel'skiy institut spirtovoy i likero-vodochnoy promyshlennosti.

RAIEV, Z.A.; BAZILEVICH, K.K.

Methods for determining sugar content and alcohol yield of defective molasses. Trudy UkrNIISP no.5:103-112 '59. (MIRA 16:11)

RAYEV, Z.A.; BAZILEVICH, K.K.

Fermentation method for checking the content of fermentable sugars in molasses. Spirt. prom. 22 no.4:5-7 '56. (MLRA 10:2)

(Fermentation) (Sugars) (Molasses)

~~RAYEV, Z. A.~~

Determination of fermentable sugars in molasses by a fermentation test. Z. A. Raev and K. K. Bazilevich (All-Union Sci. Research Inst. Alc. Ind., Kiev). *Spirtovaya Prom.* 22, No. 4, 5–7(1956); cf. *C.A.* 50, 9883c.—The fermentable sugars in molasses are detd. by a mixed fermentation test which is evaluated according to the formula $C = (P_1a_2100)/(P_2a_1)$, where C is the sum of the fermentable sugars in g.; P_1 = the amt. of pure sucrose (I) + the supplement of fermentable sugar from malt grains, in g.; P_2 = the wt. of the molasses in g.; a_1 = the amt. of EtOH in ml. obtained by the fermentation of the I, and a_2 = the amt. of EtOH, obtained from the fermented wt. of molasses, also in ml.

Werner Jacobsen

RAYEV, Z.A.

The transformation of cane molasses into alcohol. Z. A. Rayev and K. K. Bazilevich (All-Union Sci. Research Inst. Alcohol Ind., Kiev). *Spirtovaya Prom.* 22, No. 1, 13–15 (1956).—Cane molasses was compared with beet molasses as to suitability in alc. production. Detns. were made of sucrose, fructose, raffinose, total N, and P_2O_5 in the starting materials, of the CO_2 developed after 12, 24, 36, and 72 hrs. of fermentation, and of the yields of EtOH and of their purities. It is concluded that the use of cane molasses will not offer any new difficulties in U.S.S.R. alc. plants.

Werner Jacobson

GARBARENKO, V.G.; ORLOVSKIY, Ya.K.; RAYEV, Z.A.

Intensification of alcohol fermentation at the expense of a forced removal of CO_2 excess from the beer. Trudy UkrNIISP no.9:25-38 '64. (MIRA 17:10)

RAYEV, Z.A.; ORLOVSKIY, Ya.K.; BAZILEVICH, K.K.

Fermentation on portions of fermented mash. Spirt.prom. 20 no.3: 5-8 '54. (MLRA 7:10)
(Fermentation)

FERTMAN, Grigoriy Isaakovich; SHUL'MAN, Mark Solomonovich; SMIRNOV, V.A., prof., retsenzent; RAYEV, Z.A., kand.tekhn.nauk, retsenzent; KOVALEVSKAYA, A.I., red.; SOKOLOVA, I.A., tekhn.red.

[Physicochemical principles of the production of alcohol] Fiziko-khimicheskie osnovy proizvodstva spirta. Moskva, Pishcheprom-izdat, 1960. 258 p. (MIRA 13:11)

(Alcohol)