

30067

S/048/61/025/011/012/031

B104/B102

Experimental study of effects...

together with the specimen it was placed in a square waveguide connected to a klystron generator. The parameters of the circuit with the specimen were periodically changed by a h-f signal (3 cm). The curve describing the ferrite losses under the action of the h-f signal was observable on an oscilloscope screen. Experimental data are compared in Fig. 5. with a theoretical curve. The modulation field causes the ferromagnetic resonance lines to be broadened. The effect investigated may be used for studying resonance effects in ferrites with narrow resonance lines. K. M. Polivanov is thanked for his interest. There are 5 figures and 7 Soviet references.

Fig. 2. Phase relations between changes of the magnetizing field  $H_z$  and the precession angle  $\theta$  of magnetic moments in the material.

Fig. 3. Complex susceptibility of a magnetized ferrite relative to a 1-f modulation field  $h_z$  as a function of the constant magnetizing field.

Fig. 5.  $\chi''$  as a function of amplitude  $h_0$  and of frequency  $f$  of the 1-f field. Legend: (1)  $\chi''(h_0)$ ; (2)  $\chi''(f)$ . The circles are experimental values; the curves were calculated.

Card 3/13

4

24,2200 (1137,1144,1164,1147)  
15.2450

30084  
S/048/61/025/011/030/031  
B117/B102

AUTHORS: Fabrikov, V. A., Gushchina, Z. M., and Kudryavtsev, V. D.

TITLE: Ferrites with high saturation magnetization and narrow shf resonance absorption line

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 25, no. 11, 1961, 1429-1430

TEXT: The authors developed a series of ferrite types with high saturation magnetization and narrow shf resonance absorption line. Some of these ferrites may be of practical importance when used in shf valve devices, for example, ferrites of the types П-28 (P-28), M-55 (M-55), and M-258 (M-258). P-28, is an improved modification of the formerly developed Mg-Mn-Zn ferrite П-1 (P-1) (Ref. 1: Authors, Radiotekhnika i elektronika, 4, no. 11, 1940 (1959)). Its composition in % by weight is: 53.55% of  $Fe_2O_3$ , 6.76% of MgO, 30.35% of  $MnCO_3$ , 9.34% of ZnO. It has the following characteristics: saturation magnetization  $M_s = 3200-3400$  gauss; for a wavelength of 3 cm, the width of the resonance line

X

Card 1/3

Ferrites with high saturation ...

30084  
S/048/61/025/011/030/031  
B117/B102

$\Delta H = 50-70$  oersteds (in some carefully polished samples,  $\Delta H$  may be below 40 oersteds). Curie temperature  $T_c = 170-180^\circ\text{C}$ ; the d-c resistivity  $\rho_v = 10^7$  ohm-cm. The ferrite was produced by sintering in air at  $1370^\circ\text{C}$  for 5 hr and subsequent vacuum cooling, in the furnace. The briquettes were annealed for 6 hr at  $900^\circ\text{C}$ . M-55 is an improved modification of the formerly developed ferrite type M-50. Its composition in % by weight is as follows: 63.79% of  $\text{Fe}_2\text{O}_3$ , 20.95% of NiO, 4.89% of  $\text{MnCO}_3$ , 10.37% of ZnO. The characteristics of M-55 are as follows:  $M_s = 4300-4500$  gauss;  $\Delta H = 230-250$  oersteds;  $T_c = 330-350^\circ\text{C}$ ;  $\rho_v = 10^7$  ohm-cm. Annealing took place in air for 4 hr at  $1300^\circ\text{C}$ . Preliminary annealing of briquettes was conducted for 2 hr at  $1100^\circ\text{C}$ . M-258 was developed on the basis of the U. S. 4-component (Ni-Zn-Mg-Mn) ferrite "Ferramic C" (Ref. 2: see below) by introduction of 20 mole% of CuO. It has the following characteristics:  $M_s = 4600-4800$  gauss;  $\Delta H = 120-140$  oersteds;  $T_c = 300^\circ\text{C}$ ;  $\rho_v = 10^5$  ohm-cm. It was produced by sintering the following mixture at  $1150^\circ\text{C}$  in air for 20 hr: 66.38% of  $\text{Fe}_2\text{O}_3$ , 8.11% of ZnO, 9.93% of NiO,  
Card 2/3

3000h  
S/048/61/025/011/030/081  
B117/5102

Materials with high saturation ...

7.63% of  $MnCO_3$ , 1.34% of  $MgO$ , and 6.61% of  $CuO$ . Briquettes were previously annealed for 2hr at  $900^{\circ}C$ . All ferrite types mentioned were tested at helium temperature. Testing methods and investigation results are described in Ref. 3 (Misezhnikov, G. S., Rozenberg, Ya. I., Shteynshleyger, V. B., Present Periodical no. 11, 1961, 1430). At these temperatures, the line of ferrimagnetic resonance is considerably widened and attains values of 800 oersteds (M-258) and more (P-28, M-55). The saturation magnetization does not increase essentially and reaches a value of 5600 gauss for M-258. [Abstracter's note: Essentially complete translation.] There are 3 references: 2 Soviet and 1 non-Soviet. The reference to the English-language publication reads as follows: Ref. 2: American Institute of Physics Handbook, p. 5, 217, N. Y., 1957. X

Card 3/3

L 07947-67 EWT(1) GD/JXT(GZ)

ACC NR: AT6028974

SOURCE CODE: UR/0000/66/000/000/0012/0017

AUTHORS: Gushchina, Z. M.; Kudryavtsov, V. D.; Tret'yakov, Yu. D.; Fabrikov, V. A.; Khomyakov, K. G.;

ORG: none

39  
B+

TITLE: Application of zero-diffusion method to the technology of preparing ultra-high-frequency ferrites →

SOURCE: Vsesoyuznoye soveshchaniye po ferritam. 4th, Minsk. Fizicheskiye i fizikokhimiicheskiye svoystva ferritov (Physical and physicochemical properties of ferrites); doklady soveshchaniya. Minsk, Nauka i tekhnika, 1966, 42-47

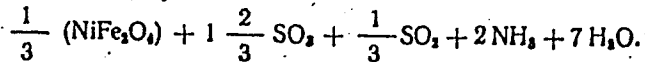
TOPIC TAGS: ultrahigh frequency, ferrite, solid solution, resonance line / P-28 ferrite

ABSTRACT: The ceramic method for preparing UHF ferrites is reviewed and found inadequate. A suggested new method consists of preparing micro-heterogeneous ferrite powders from solid solutions of isomorphous salts. For example, ferrite batches are obtained from solid solutions of schoenite-type double salts which, under heat treatment, yield

Card 1/2

L 07947-67

ACC NR: AT6028974



The ferrites obtained by this zero-diffusion method are found to be dense and sufficiently homogeneous. Resonance absorption line curves plotted against density in the ferrite material show straight lines and, for cases where nondiffusive methods are used, the ferrite density is found to reach 4.86 g/cm<sup>3</sup> with 24- to 30-oersted line widths. A detailed description is given for the preparation of a P-28, Mg-Mn ferrite, using the nondiffusive method. Orig. art. has: 4 figures, 1 formula, and 1 table.

SUB CODE: 11/ SUBM DATE: 22Dec65/ ORIG REF: 005

Card 2/2 LC

**KUDRYAVTSEV, V.G.**

Our methods of radio diffusion. Vest.sviazi 7 no.7:10-11 JI '47.  
(MLRA 9:1)

1. Director Murmanskoy oblastnoy radiotranslyatsionnoy seti.  
(Murmansk Province--Radio relay systems)

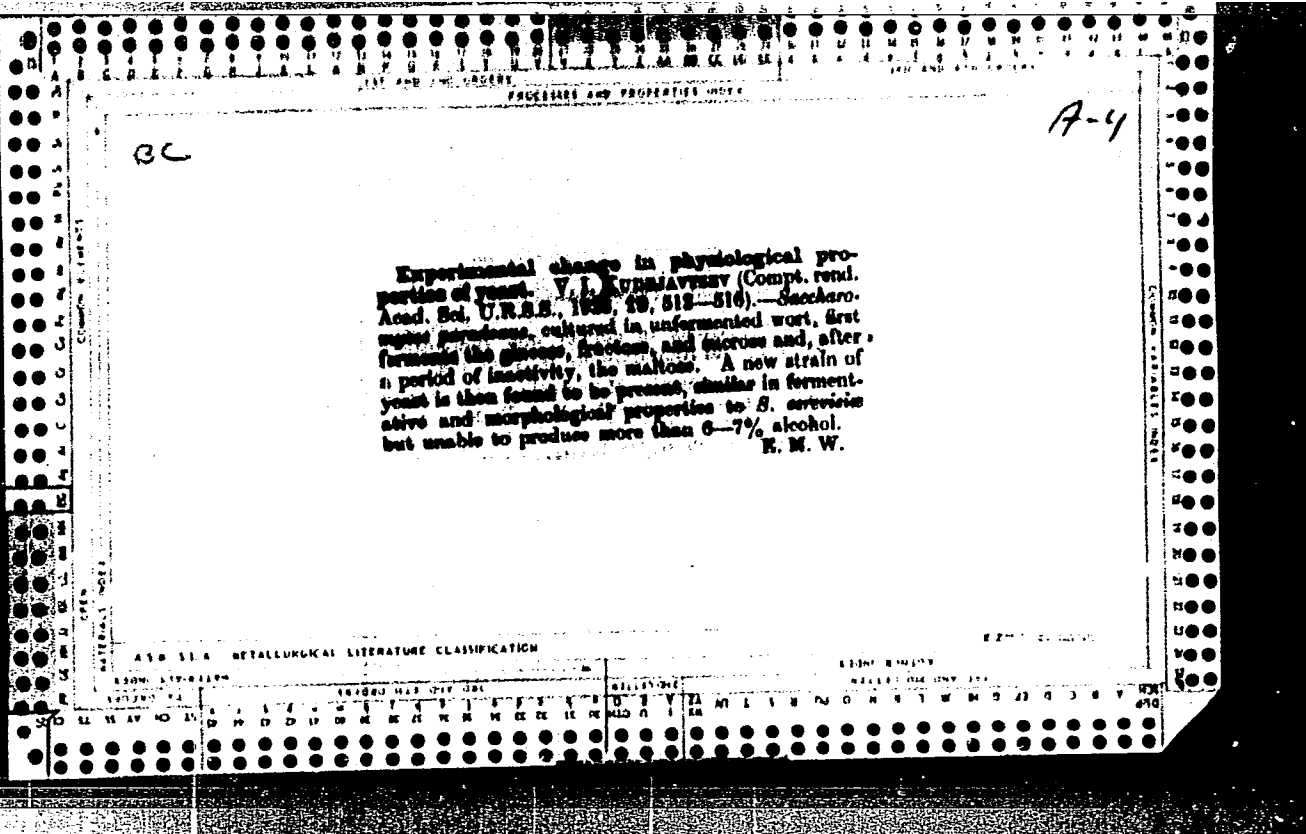
K. D. YAN/TSEW, V.

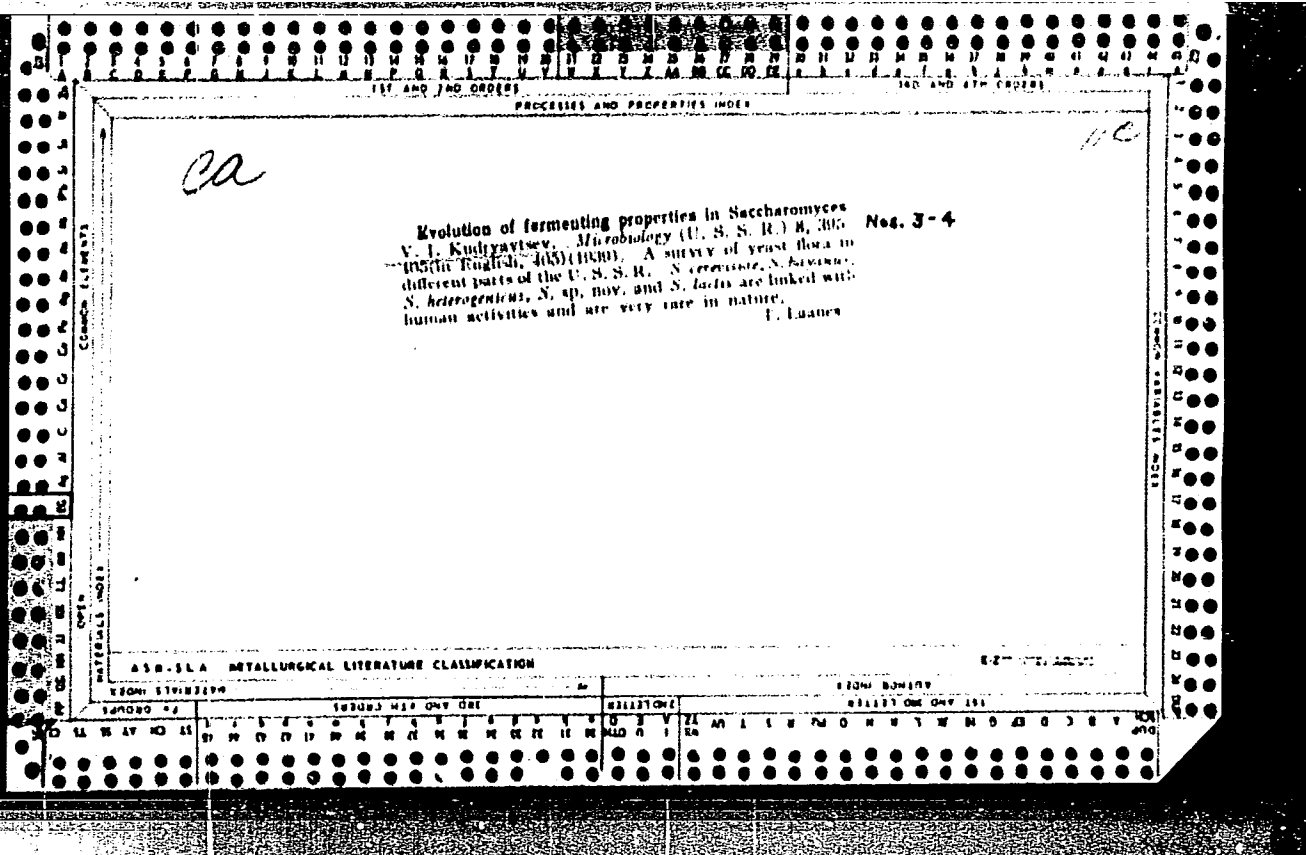
"Ameboid forms of cells in Yeasts Transmitted to offspring," Zhurn. mikrobiologiy,  
5, p 165, 1927.



KUDRYAVTSEV, V.

"The problem of the Polymorphism of bacteria," Izv. AN SSSR, 10, p 1301, 1933.

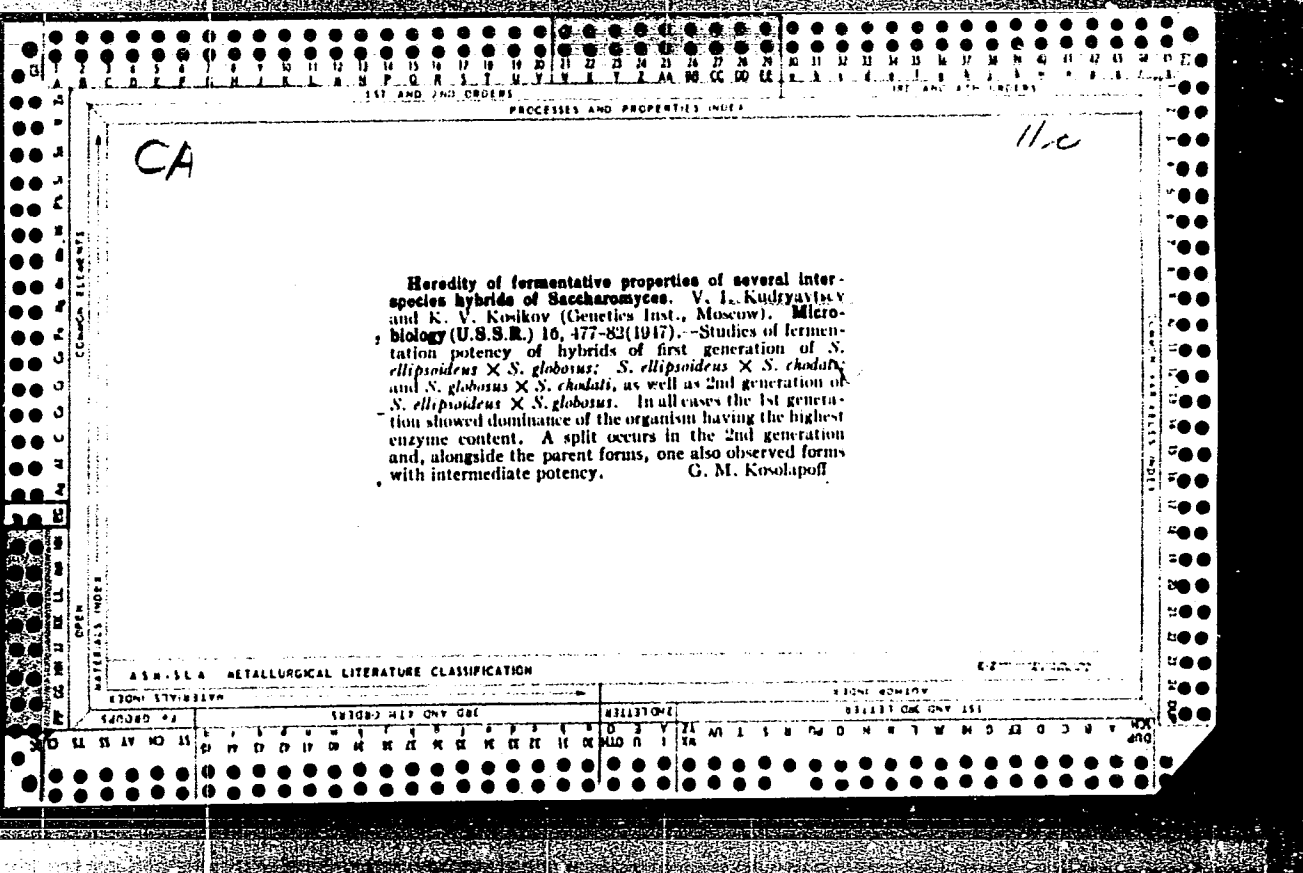




KUDRYAVTSEV, V. I.

"Notes on the Independence of the Species *Saccharomyces Cerevisiae* Mayen-Hansen and *Saccharomyces Ellipsoideus* Reess-Hansen"

SOURCE: Mikrobiol., 15, No 6, 1946



KUDRYAVTSEV, V. I.

USSR/Biology - Microbiology

Oct 51

"The Problem of Species as Applied to Microorganisms," V. I. Kudryavtsev, Inst of Microbiol, Acad Sci USSR.

"Trudy Inst Mikrobiol" No 1, pp 86-107.

Discusses the problem of formation of species in general. Cites extensive material from the microbiology of yeasts in order to prove that formation of new species takes place.

209T4

KUDRYATSEV, V.I.

~~Automatic saccharimeter.~~ Sakh.prom. 27 no.11:14-16 '53. (MLRA 7:1)

1. Tsentral'nyy nauchno-issledovatel'skiy institut cakharnoy promyshlennosti.

(Sugar industry--Equipment and supplies)

KUDRYAVTSEV, V. I.

V. I. Kudryavtsev, Sistematika Drozhzhey [The Systematism of Yeasts], Press of the Academy of Sciences USSR, 23 sheets.

This monograph presents the results of the author's investigations on the problems of the classification of yeast organisms, includes an historical review of the development of the systematism, and describes tasks and problematic questions of natural classification. A special section defines yeast organisms and is arranged in such a way that each systematic group is characterized by signs indicating a common origin and a common form of life of the organisms.

The monograph is intended for microbiologists.

SO: U-6472, 12 Nov 1954



KUDRYAVTSEV, V. I.

Kudryavtsev, V. I. -- "Experiment With Natural Classification of Yeast ~~Organisms~~ and Their Practical Recognition." Dr Biol Sci, Inst of Microbiology, Acad Sci USSR, 30 Jan 54. (Vechernyaya Moskva 20 Jan 54)

SO: SUM 168, 22 July 1954

KUDRYAVTSEV, V.I.

DEBOGLAV, N.I.; GHISTOVICH, T.A.; KUDRYAVTSEV, V.I., retsenzent;  
SAYENKO, N.F., spetsial'nyy redaktor; ~~MASLOVA~~; Ye.F., redaktor;  
GOTLIB, E.M., tekhnicheskiy redaktor.

[Microbiological control of champagne production and the preparation  
of yeast starters] Mikrobiologicheskii kontrol' proizvodstva sham-  
panskogo i prigotovlenie drozhzhevykh razvodok. Moskva, Pishcheprom-  
izdat, 1954. 70 p. (MLRA 7:12)  
(Champagne (Wine)) (Yeast)

KUDRYAVTSEV, V.I.; IMSHENETSKIY, A.A., otvetstvennyy redaktor; BUNDEL', A.A.,  
redaktor; ALEKSEYEVA, T.V., tekhnicheskly redaktor.

[Classification of the yeasts] Sistematika drozhshei. Moskva, Izd-vo  
Akademii nauk SSSR, 1954. 426 p. (MLRA 7:11)  
(Yeast)

KUDRYAVTSEV, V.I. Doctor of Biological Sciences

"Problems of Systematics and Evolution in Microorganisms".

Report given at jubilee held on June 20-21, 1955 in honor of 25th anniversary  
of foundation of Inst. of Microbiology, AS USSR

KUDRYAVTSKV, V.I.

"The yeasts (a taxonomic study)." J.Lodder, H.J.W.Kreger-van Rij.  
Reviewed by V.I.Kudriavtsev. Mikrobiologiya 24 no.2:247-251 Mr-Apr  
'55. (MLRA 8:7)

(YEAST)

(LOSSER, JACOMINA)

(KREGER-VAN RIJ, H.J.W.)

KUDRYAVTSEV, V. I.

✓ 5782. Importance of systematics for selection of micro-organisms.  
V. I. Kudryavtsev *Mikrobiologiya* 1955, 24, No. 6, 663-670.  
Referat *Zh. Biol.* 1956, Abstr. No. 34719. It is pointed out that  
a practical and theoretical approach of a method of uninterrupted  
improving selection of industrial micro-organisms is possible only  
if there are objective periods of selection. It is pointed out  
to be actually improved descendants of the original forms and not  
chance newcomers into the culture. It is pointed out that these periods  
must be given by systematic selection. A method of uninterrupted  
improving selection of industrial micro-organisms is described.  
Using this method of selection the authors have selected strains of  
referred to BB species of *Aspergillus niger*.  
1. *Aspergillus niger* was selected from the culture of the  
2. *Aspergillus niger* was selected from the culture of the  
of the yeast *Saccharomyces cerevisiae*.  
the U.S.S.R. in which the authors have selected strains of  
selected strains of *Aspergillus niger*.  
The authors have selected strains of *Aspergillus niger*  
parameter. The authors have selected strains of *Aspergillus niger*  
in primitive culture conditions. The authors have selected strains of  
wide distribution of strains. The authors have selected strains of  
the most vigorous which are able to grow on the most extensive  
cultivation. The authors have selected strains of *Aspergillus niger*  
strains. The authors have selected strains of *Aspergillus niger*

COUNTRY : USSR  
CATEGORY :

ABS. JOUR. : Ref Zhur-Biologiya, No.4, 1959, No. 14688

AUTHOR : Kudryavtsev, V.I.  
INST. : Inst. of Microbiology AS USSR

TITLE : Problems of Systematics and Evolution of Micro-organisms

REG. PUB. : Tr. In-ta mikrobiol. ANSSSR, 1958, vyp. 5, 40-50

ABSTRACT : A critical review is rendered on the status of the systematics and evolution of micro-organisms. The author believes that the strains within each genus must be determined according to the group of specific adaptations of organisms to specific conditions of existence. Practically, the useful properties by which investigators select cultures are important in classification. Indeterminate criteria can be used by revealing their

CARD: 1/3

COUNTRY  
CATEGORY

Microbiology.

ABS. JOUR.

Ref Zhur-Biologiya, No. 4, 1959, No. 14688

AUTHOR  
INST.

TITLE

ORIG. PUB.

ABSTRACT

: correlative relation to adaptations. Arising from Darwin's theory that every flourishing strain is transformed in the beginning into a primary parental genus, and later the family, order, etc, the opinion of the author is that in a natural classification of organisms the systematic characteristics of a larger group than strains should be the exact properties of their preceding strain to that degree in which adapted properties and biolog-

CARD:

2/3



KUDRYAVTSEV, V.I.; ZUEKOVA, R.Z.

Developing new strains of champagne yeasts in the champagne industry.  
Preliminary communication. Trudy Inst. mikrobiol. i virus. AN Kazakh.  
SSR 3:55-72 '59. (MIRA 13:2)  
(CHAMPAGNE (WINE)) (YEAST)

KUDRYAVTSEV, V.I.

Classification and identification of sporeforming  
Saccharomycetes in Latin. Bot. mat. Otd. spor. rast.  
13:138-151 '60. (MIRA 13:7)  
(Yeast)

KUDRYAVTSEV, V.I.

"The chemistry and biology of yeasts [in English]. Reviewed by  
V.I. Kudriavtsev. Mikrobiologiya 29 no.1:150-153 Ja-F '60.  
(MIRA 13:5)

(YEAST)

KUDRYAVTSEV, V.I.; ZUBKOVA, R.D.

New data on the method for continuous improvement in the selection  
of champagne yeasts from production. Trudy Inst. mikrobiol. 1  
virus. AN Kazakh. SSR 4:89-94 '61. (MIRA 14:4)  
(CHAMPAGNE (WINE)) (YEAST)

KUDRYAVTSEV, V.I.

Results achieved and prospects for industrial application of the method of continuous improvement selection of commercial micro-organisms. Trudy Inst. mikrobiol. no.10:56-67 '61. (MIRA 14:7)

1. Institut mikrobiologii AN SSSR.  
(INDUSTRIAL MICROBIOLOGY)

KUDRYAVTSEV, V.I.; FATEYEVA, M.V.

Differences in the use of glucose by nonsporeforming yeasts  
(Candida robusta, C. pulcherrima, and C. albicans) with  
dissimilar morphology of resting cells. Mikrobiologiya 31  
no.3:459-467 My-Je '62. (MIRA 15:12)

1. Institut mikrobiologii AN SSSR.  
(YEAST) (GLUCOSE)

BEDEYEVNEY, V.I.; PATEYOVA, M.V.; NIKITINA, I.M.

Variations in the composition of nonvolatile aliphatic acids produced by yeasts (*Candida robusta*, *Candida pulcherrima*, and *Candida albicans*) with different forms of resting cells. *Mikrobiologiya* 31 no.4:582-585 JI-Ag '62.

(KINA 18:3)

1. Institut mikrobiologii AN SSSR.

KUDRYAVTSEV, V.I.

Collections of type cultures of micro-organisms in England.  
Microbiologia 32 no.5:902-910 S-0'63 (MIRA 17:2)



KUDRYAVTSEV, V.I., *otv. red.*; BELYAKOVA, L.A., *red.*

[Catalog of cultures of micro-organisms kept in the institutes of the U.S.S.R.] Katalog kul'tur mikroorganizmov, podderzhivaemykh v institutakh SSSR. Moskva, Izd-vo "Nauka," 1964. 123 p. (MIRA 17:5)

1. Akademiya nauk SSSR. Institut mikrobiologii.

KUDRYAVTSEV, V.I.

Organizing All-Union collection of micro-organisms.  
Mikrobiologiya 34 no.3:556-562 My-Je '65.

(MIRA 18:11)

KUDRYAVTSEV, V.I., inzh.; KEYMAKH, R.ĭa., inzh.; KATSENELENOGEN, E.V., inzh.;  
FROLOV, A.K., inzh.

Automatic devices used in the measuring line for determining sugar  
content in beets. Mekh.i avtom.proizv. 18 no.3:35-37 Mr '64.  
(MIRA 17:4)

L 31491-66

ACC NR: AP6023197

SOURCE CODE: UR/0243/66/000/001/0041/0044

AUTHOR: Baulina, E. A.; Keymakh, R. Ya.; Kudryavtsev, V. I.; Portnov, M. A. 43

ORG: All-Union Scientific Research Chemicopharmaceutical Institute im. S. Ordzhonikidze,  
Moscow (Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy intitut);  
All-Union Scientific Research Experimental Design Institute of Food Machine-Building,  
Moscow (Vsesoyuznyy nauchno-issledovatel'skiy eksperimental'no-konstruktorskiy  
institut prodoval'stvennogo mashinostroyeniya)

TITLE: Physicochemical and automatic methods of analysis and control in the production  
of medicinal preparations. Report nine. Method of control of the division of  
racemates into optically active isomers

SOURCE: Meditsinskaya promyshlennost' SSSR, no. 1, 1966, 41-44

TOPIC TAGS: isomer, optic activity, crystallization, amine, filtration, temperature  
control, pharmacology, polarimeter, chemical reaction kinetics, automatic control  
equipment

ABSTRACT: An automatic method for the control of the division of racemic D,  
L-threo-1-(p-nitrophenyl)-2-amino-1,3-propanediol, an intermediate product in  
the production of levomycetin, has been developed. The division of the racemate  
into optically active isomers is carried out by the method of their successive  
crystallization from the reaction mass containing an aqueous solution of the  
racemate. The formation of a solid phase during the crystallization process

Card 1/2

UDC: 615.4-073.55

0915

1408

L 31491-66

ACC NR: AP6023197

made the control of the racemic amino division difficult. The new method makes it possible by means of a series of filtrations and temperature regulation to control the division of racemates into optically active isomers despite the continuously developing solid phase. The solid phase is separated from the mother solution by filtration in a vacuum and the return of the filtrate for refiltration. Crystallization of the obtained filtrate is prevented by heating the filtrate to a temperature of 70° or higher, a temperature 7° higher than crystallization temperature. The automatic control of the division is accomplished by means of an automatic polarimeter of a measuring vessel into which the mother solution filtrate is drawn under the effect of a vacuum. Orig. art. has: 3 figures. [JPRS]

SUB CODE: 07, 06, 13 / SUBM DATE: 29Jul65 / ORIG REF: 002 / OTH REF: 001

Card 2/2 mc

~~TOP SECRET~~ A KUDRYAVTSEV, V.I. 9

238-Q. Dependence Between Ushik's Resistance to Fracture, Yield Strength and True Resistance to Fracture. (In Russian.) V. I. Kudryavtsev. *Izvestia Akademii Nauk SSSR, Section of Technical Sciences*, June 1951, p. 941-944.

A discussion of the work by G. V. Ushik in the field of strength and plasticity. Experiments were made which indicate that Ushik's resistance to breaking is actually resistance to plastic deformation. Data are tabulated and charted. (Q23)

Kudryavtsev, V. I.

62 ✓ Oxides of titanium in the range  $TiO_2$  to  $Ti_2O_3$ . N. B. Plouenko, V. I. Kudryavtsev, and I. V. Lavrov. *Doklady Akad. Nauk S.S.S.R.* 80, 581-4 (1953).—When small cylinders of commercial (98.7%)  $TiO_2$  were heated in an induction furnace to 1600° and then held at 1600°, light-gray and bluish gray substances were formed on the surface with the compn.  $Ti_2O_3 \cdot 3.1-3.6TiO_2$ ; these had a  $H_2SO_4$ -insol. residue of 8-11%. When the  $TiO_2$  was heated to 1650° and held at 1600°, a rose-colored substance with the compn.  $Ti_2O_3 \cdot 1.1-1.2TiO_2$  was formed, which was completely acid-sol. Photomicrographs, analyses, and tables of x-ray interplanar distance (Cu emission) on  $Ti_2O_3 \cdot TiO_2$  ( $Ti_2O_3$ ) and  $Ti_2O_3 \cdot 3-4TiO_2$  are given. This work tends to confirm the previous opinion (C.A. 45, 6452a) that  $Ti_2O_3$  exists in anosite.   
Makrolm Anderson

(2)

KUDRYAVTSEV, V.I.

Titanium sesquioxide in electrofused corundum. N. F. PILONKO AND V. I. KUDRYAVTSEV. Doklady Akad. Nauk S.S.S.R., 88 (6) 691-693 (1953). Based on a specimen of ferroalloy obtained in the production of electrofused corundum proved to be  $Ti_2S_3$ . Its density was 4.68. It was insoluble in dilute and concentrated HCl and  $H_2SO_4$ . Concentrated  $HNO_3$  did not affect the  $Ti_2S_3$  in the cold; boiling  $HNO_3$  formed a film of  $TiO_2$ . The microhardness of the  $Ti_2S_3$  was 820 kg./mm.<sup>2</sup>. In an open muffle furnace, oxidation of  $Ti_2S_3$  starts at 700°C. and is practically complete at 800°. White electrofused corundum containing 1%  $Ti_2S_3$  showed an anomalous expansion at 775° to 900° which was due to oxidation of the  $Ti_2S_3$ .

B.Z.K.



MEDINETS, B.H.; GNIDKO, K.P.; KUDRYAVTSEV, V.I., spetsredaktor; BUDAYEVA,  
V.K., redaktor; KISINA, Ye.I., tekhnicheskiy redaktor

[Opical instruments and their use in the food industry] Opticheskie  
pribory i ikh ispol'ovanie v pishchevoi promyshlennosti. Moskva,  
Pishchepromizdat, 1956. 62 p. (MIRA 10:2)  
(Optical instruments)

KUDRYAVTSEV, Y. I.

*then* ✓ Fluorometer. S. I. Korol'kov and V. I. Kudryavtsev  
U.S.S.R. 101,009, Oct. 27, 1956

SECRET 2

*Kudryavtsev, V. I.*

AUTHORS: Vert, Zh. L., Kamentsev, M. V. (Deceased), Kudryavtsev, V. I. ,  
and Sokhor, M. I. 20-5-32/48

TITLE: Reduction of  $Al_2O_3$  by Carbon (K voprosu o vosstanovlenii  $Al_2O_3$  uglerodom)

PERIODICAL: Doklady AN SSSR, 1957, Vol. 116, Nr 5, pp. 834 - 837 (USSR)

ABSTRACT: It was noticed by the authors that during the reduction of  $TiO_2$  by carbon in presence of  $Al_2O_3$  in a atmosphere of Co at  $1650^{02}$  a loss in substance occurred. Apparently  $Al_2O_3$  entered into the reaction. It is stated that the interaction between  $Al_2O_3$  and C begins under normal pressure at approximately  $2000^0$ . In the vacuum the temperatures amounted to  $1560$  and  $1750^0$ . The pressure of the gases above the reaction mixture reached 1 atmosphere at  $1980^0$ , a fact which agrees well with the above mentioned data. The authors investigated the interaction between  $Al_2O_3$  and C between  $1500$  and  $1900^0$ , furthermore the interaction in the mixture  $Al_2O_3$ -C-TiC, in order to eliminate the influence of the lower oxides and of the oxycarbide of Ti. The molar relation of the components is given in table 1. The experimental method and the characteristic of the components is given. The experimental results given in figure 1 show

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Reduction of  $\text{Al}_2\text{O}_3$  by Carbon

20-5-32/48

that a considerable reduction  $\text{Al}_2\text{O}_3$  begins above  $1600^\circ$ . Titanium compounds do not influence this process. The loss in aluminum (as gas) and the carbide formation are low, compared to the quantity of the liberated oxygen. Thus the reduction process is described neither by the equation  $\text{Al}_2\text{O}_3 + 3\text{C} = 2\text{Al} + 3\text{CO}$  (2), nor by  $2\text{Al}_2\text{O}_3 + 9\text{C} = \text{Al}_4\text{O}_7 + 6\text{CO}$  (3). The comparison between the remaining quantity of the free C, as well as of the quantity of C necessary for the formation of titanium carbide and for the reduction of  $\text{Al}_2\text{O}_3$ , and the chemical properties of the products admit the assumption that during the reaction some lower aluminum oxides are produced in free or bound form. The x-ray analysis showed that beginning with  $1650^\circ$  corundum  $\alpha\text{-Al}_2\text{O}_3$  partly changes into a new spinel-like compound. With rising temperature increases the spinel content at the cost of the corundum which at  $1750^\circ$  vanishes completely. The new product is macroscopically a white powder with a greyish-bluish tinge. Table 2 gives the computation of the radiogram of this spinel phase. According to structure type and value of the constant lattice the spinel phase reminds to a great extent of the low temperature intermediary aluminum modification  $\gamma\text{-Al}_2\text{O}_3$ . In reality, however, it is of different structure. For: 1.)  $\text{Al}_2\text{O}_3$  is here reduced up a lower oxide. 2.) The here described spinel phase

Card 2/4

20-5-32/48

Reduction of  $Al_2O_3$  by Carbon

consists of corundum, whereas,  $\gamma-Al_2O_3$  is a transition form from the hydroxide forms of alumina to corundum. 3.) Clear lines in the spinel radiogram prove a high degree of the crystallization state of the phase in question. It is stable, is neither in water nor in hydrochloric or sulphuric acid decomposed, nor in cold or by long boiling. Above  $1750^{\circ}$  a second phase is found which quantity increases with the temperature rise. At  $1900^{\circ}$  black crystals are formed in the inner which are covered by a light grey crust. It consists to 90 % of a hexagonal phase and is very stable, too. It is analogous to the superoxide  $Al_2O$  (reference 6). The progressive reduction of the aluminum oxides agrees with the temperature curve of the oxygen leakage. The structure of the above mentioned black crystals is not yet deciphered up to now. There are 1 figure, 2 tabs, and 6 references, 2 of which are Slavic.

Card 3/4

Reduction of  $Al_2O_3$  by Carbon

20-5-32/48

ASSOCIATION: **All-Union** Scientific Research Institute for Abrasives and Polishing  
(Vsesoyuznyy nauchno-issledovatel'skiy institut abrazivov i shli-  
fovaniya)

PRESENTED: May 15, 1957, by I. P. Bardin, Academician

SUBMITTED: May 13, 1957

AVAILABLE: Library of Congress

Card 4/4

24 (2), 28 (1)

06291

AUTHORS: Keymakh, R. Ya., Engineer,  
Kudryavtsev, V. I., Engineer

SOV/119-59-11-5/13

TITLE: A Method for the Objective Measurement of the Angle of  
Rotation of the Polarization Plane of Light Waves

PERIODICAL: Priborostroyeniye, 1959, Nr 11, pp 10-14 (USSR)

ABSTRACT: The usual method of determining the polarization plane of polarized light waves in a polarimeter is known to be employed by rotating the analyzer by  $90^\circ$  relative to the polarization plane. This position is visually determined by adjusting the analyzer to complete darkness. In the case of the method described here, the polarizer performs a rotary oscillation round the optical axis with the cyclic frequency  $\omega$ . As long as the analyzer is not in the position which causes complete darkness in the case of the usual method being employed, an oscillation of the light current with the cyclic frequency  $\omega$  may be observed in the analyzer. If, however, the analyzer is in this position, an oscillation of the light current with the cyclic frequency of  $2\omega$  occurs. Modulation of the light current may be attained mechanically or by means of the piezoelectric effect or the Faraday effect. For the latter

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06291

A Method for the Objective Measurement of the Angle of  
Rotation of the Polarization Plane of Light Waves SOV/119-59-11-5/13

method a system is described, and in table 1 the Verdet constants of quartz and flint (-glass) are given for some wavelengths. The fact that the direction of rotation of the polarization plane is independent of the direction of light propagation in quartz is here advantageously utilized. A comparison of the usual method with that described here shows that at small  $\delta$  ( $\delta$  = unbalance angle of the optical system) the latter method is more accurate. In the second part practical applications of the method described are dealt with, and it is found to be suited for the construction of automatic recording polarimeters, automatic saccharimeters, as well as for automatic regulation of the concentration of optically active substances. As an example, a spectropolarimeter (Fig 7) is described. It consists of a quartz monochromator, a polarizer, a container for the liquid to be investigated, a modulator, an analyzer, and a photoelectric cell. The electronically amplified photoelectric feeds one of the coils of a reversing engine, whereas the second coil of the reversing engine is fed by the same current source as the modulator. The axle of the engine is coupled with the polarizer and with the

Card 2/3



A Method for the Objective Measurement of the Angle of Rotation of the Polarization Plane of Light Waves

06291  
SOV/119-59-11-5/13

recording pen of a recording device by way of a reduction gear. The functioning of this device and its advantages, especially of its photoelectric system, are described in detail. Finally, an automatic saccharimeter (Fig 8), an automatic balance (Fig 9) and an automatic recording device for magnetoelectric instruments (Fig 10) are discussed. There are 10 figures, 2 tables, and 1 Soviet reference.

Card 3/3

5.5800

67360

~~9(6), 7(6)~~

SOV/119-59-12-5/18

AUTHORS: Keymakh, R. Ya., Engineer, Kudryavtsev, V. I., EngineerTITLE: An Automatic Polarization ColorimeterPERIODICAL: Priborostroyeniye, 1959, Nr 12, pp 12-13 (USSR)

ABSTRACT: The first part of this paper deals with the physical fundamentals of light polarization in crystals and with the rotation of the polarization plane on the passage of polarized light through optically active media. The second part describes an automatic polarization colorimeter with which a paper published in Priborostroyeniye, 1959, Nr 11 has already dealt. In this instrument the polarization plane of a linearly polarized beam is set into a sinusoidal rotary oscillation of 50 cycles by a magneto-optical modulator. With proper position of the analyzer, an alternating voltage of 100 cycles is induced in the circuit of a photocell. A particular angular position of the analyzer with which a voltage of 100 cycles is induced in the photocell circuit, corresponds to each ratio of the monochromatic components of light. A glass vessel is contained in the path of rays of the instrument, through which the liquid to be measured flows. Because of the absorptive power of this solution it is necessary to readjust the position of the analyzer with which 100 cycles are induced in the photocell

Card 1/2

67360

An Automatic Polarization Colorimeter

SOV/119-59-12-5/18

circuit if the composition of the solution changes. The analyzer is readjusted with the help of a reversible two-phase motor. In the last part the author describes an automatic recording colorimeter based on the afore-mentioned colorimeter. Contrary to orthodox designing, the polarizer of this instrument is automatically adjusted. The positions of the stylus and of the polarizer are simultaneously controlled on a diagram, and thus, the state of the passing liquid is recorded. The instrument is illustrated in figure 4. A circuit diagram is given in figure 5. It was developed by the refinery imeni Mantulin for the determination of sugar in condensates. There are 5 figures and 3 Soviet references.

Card 2/2

24579

8/137/61/000/005/032/060  
A006/A106

15 2240

AUTHORS: Kudryavtsev, V. I., and Sofronov, G. V.

TITLE: Accurate determination of the periods of a boron carbide lattice composed of  $B_{2.75}C$  -  $B_{6.75}C$  from roentgenograms obtained in the range of large dispersion angles ( $\theta \rightarrow 90^\circ$ )

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 5, 1961, 11-12, abstract 5Zh85 ("Tr. Seminara no zharostoykim materialam" [In-t metallo-keramiki i spets. splavov AN USSR, no. 5] Kiyev, 1960, 52-64)

TEXT: A roentgenographical investigation was made of solid solutions on B-carbide base. Acicular designs of collimators are suggested for a Debye camera and a camera with rear exposure on a flat container, so that lines may be obtained through angles  $\theta$  approaching  $90^\circ$ . Exposure conditions are found (on Cu-Co, Ni, and Cr radiation) where the lines are obtained through  $\theta > 85^\circ$ . The accuracy of determining the periods is 0.001% (without any extrapolation precision). In the  $B_{2.75}C$  -  $B_{4.63}C$  range the periods are practically constant (a 5.5883 - 5.5905, c 12.044 - 12.055 kX). It is supposed that in this zone solid solutions with vacancies are formed in the boron or carbon portions of the lattice. Within the

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Accurate determination ...

24579

S/137/61/000/005/032/060  
A006/A106

$B_{4.75}C - B_{6.75}C$  range the periods sharply increase with a higher B content in the solid solution; this is connected with the partial substitution of C atoms in the linear C-C-C chain by B atoms; according to extremal concentration maximum substitution corresponds to the C-B-C chain. In zone 1  $\alpha/a$  is 2.156 and in zone 2 it is 2.166. The information includes a discussion.

R. O.

[Abstracter's note: Complete translation]

Card 2/2

45257

S/226/62/000/006/008/016  
E193/E383

18,1000

AUTHORS: Antonova, N.D., Kalinina, A.A. and Kudryavtsev, V.I.  
TITLE: Preparation and some properties of materials based  
on silicaon carbido with boron and aluminium additions

PERIODICAL: Poroshkovaya metallurgiya, no. 6, 1962, 54 - 60

TEXT: The object of the present investigation was to explore the possibility of producing dense, sintered SiC compacts by using small quantities of boron or aluminium as the bonding agent. The experimental specimens (solid cylinders, 9 mm in diameter, 20 mm long and hollow cylinders with o.d. 20 mm, i.d. 10 mm, 20 mm long), containing 1, 3 and 5% B or 5, 7.5 or 10% Al (alloys B<sub>1</sub>, B<sub>2</sub>, B<sub>5</sub>, A<sub>5</sub>, A<sub>7.5</sub> and A<sub>10</sub>, respectively) were prepared by sintering under pressure. The density of the sintered compacts was the main criterion of their quality. The highest density of alloys B<sub>1</sub>, B<sub>3</sub> and A<sub>5</sub> was attained after sintering at 2 150 °C under a pressure of 450 kg/cm<sup>2</sup>, the best results for the remaining alloys being obtained by sintering at 2 100 °C under the same pressure. The sintering conditions were rather critical, particularly for materials

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Preparation and some properties... E193/E383

with a high boron or aluminium content, since a slight increase in the temperature caused a considerable proportion of the liquid phase to be squeezed out of the compact. The density of the B<sub>3</sub>, B<sub>5</sub>, A<sub>7.5</sub> and A<sub>10</sub> alloys ranged from 90 to 97%, that of the B<sub>1</sub> and A<sub>5</sub> alloys not exceeding 85%.<sup>3</sup> The specific gravity of the compacts varied between 3.148 g/cm<sup>3</sup> for the A<sub>10</sub> alloy and 3.222 g/cm<sup>3</sup> for the B<sub>1</sub> alloy. The microhardness of the SiC-base solid solutions varied between 2 970 and 3 390 kg/mm<sup>2</sup>. The highest and lowest values<sup>2</sup> of other properties are given below: crushing strength - 72 kg/cm<sup>2</sup> (alloy B<sub>5</sub>) and 15 kg/cm<sup>2</sup> (alloy B<sub>1</sub>); electrical resistivity (Ωcm) - 5-38<sup>5</sup> (alloy B<sub>3</sub>) and 0.1 - 0.7<sup>1</sup> (alloy A<sub>10</sub>); resistance to overheating in terms of weight increase, g/cm<sup>2</sup> h x 10<sup>-3</sup> = 0.43 (alloy A<sub>5</sub>) and 0.03 - 0.1 (alloy B<sub>3</sub>); resistance to thermal shock - alloys<sup>5</sup> B<sub>3</sub>, B<sub>5</sub> and A<sub>5</sub> withstood more than 100 tests consisting of oil-quenching from 1 200 °C, whereas alloys B<sub>1</sub>, A<sub>7.5</sub> and A<sub>10</sub> failed after 5 - 18 tests; thermal-expansion coefficient at 100 °C ( $\alpha \times 10^{-6} \text{ } ^\circ\text{C}^{-1}$ ) = 2.76 (alloy A<sub>10</sub>) and 2.21 (alloy B<sub>3</sub>) .

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Preparation and some properties ....

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E193/E383

The results so far obtained indicate that alloys B<sub>3</sub>, B<sub>5</sub> and A<sub>7.5</sub> have the most promising properties and can be recommended as materials worth trying in various development work.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut abrazivov i shlifovaniya, g. Leningrad (All-Union Scientific Research Institute of Abrasives and Abrasion, Leningrad)

SUBMITTED: April 14, 1962

Card 3/3



KEYMAKH, R.Ya., inzh.; KUDRYAVTSEV, V.I., inzh.

Instruments and devices designed by the All-Union Research and  
Experimental Institute of Control and Measuring Instruments for  
the Food Industry. Mekh.i avtom.proizv. 16 no.4:35-38 Ap '62.  
(MIRA 15:4)

(Instruments)

ANTONOVA, N.D.; KALININA, A.A.; ~~CH~~RYAVTSEV, V.I:

Production and certain properties of materials on a basis of  
silicon carbide with additions of boron and aluminum. Porosh. met.  
2 no.6:54-60 N-D '62. (MIRA 15:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut abrazivov i  
shlifovaniya, Leningrad.  
(Ceramic metals)

КУДРЯВЦЕВ, В. И.

AID Nr. 983-6 5 June

HOT COMPACTING OF SiC-BASE MATERIALS (USSR)

Dombrovo, I. V., A. A. Kalinina, and V. I. Kudryavtsev. Poroshkovaya metallurgiya, no. 2, Mar-Apr 1963, 80-87. S/226/63/000/002/011/014

The effect of powder grain size, temperature, and pressure on the microstructure, phase composition, and properties of articles hot-compacted from new SiC-B<sub>2</sub>C-base refractory materials, including the C-8 alloy [unidentified], has been studied at the All-Union Scientific Research Institute of Abrasives and Polishing. The grain size of the main fractions of SiC and B<sub>2</sub>C powders varied from 80 to 7 and from 40 to 0 μ (320 mesh), respectively. Compacting was done at 1540 to 2300°C. The compacts contained 8.10 to 10.00% B, 28.03 to 29.45% C, 0.60 to 1.90 free C, 58.28 to 60.00% Si, and 2.51 to 3.09% impurities, and consisted of two phases: α, an SiC-base solution, and β, a B<sub>2</sub>C-base solid solution. With decreasing size of the powder particles, the boron content of the α-phase was found to be higher, SiC-II transformed more readily to SiC-III, and the structure of compacts was finer and more

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AID Nr. 983-6 5 June

HOT COMPACTING OF SiC-BASE MATERIALS [Cont'd]

S/226/63/000/002/011/014

homogeneous. For example, in compacts made of SiC and B<sub>4</sub>C powders with respective main fractions of 50-40 and 14-10  $\mu$ , only 30% of the SiC is transformed into SiC-III, and the  $\alpha$ -phase contains 2.14% B; while in compacts with respective main fractions of 7 and 5  $\mu$  all SiC is transformed into SiC-III, and the  $\alpha$ -phase contains 3.90% B. The compression strength of compacts increased with increasing difference in the particle size of the powders. Articles compacted from 80  $\mu$  SiC and 0-40  $\mu$  B<sub>4</sub>C powders had the highest compression strength (180 kg/mm<sup>2</sup>). Thus, the properties of hot compacted articles can be regulated by changing the grain-size ratio of the initial powders. In the hot pressing of SiC and B<sub>4</sub>C powders, the shrinkage of compacts (caused by the formation of a liquid phase) starts at 1550°C and is completed at a temperature between 1980 and 2050°C, whereupon the compacts have a porosity of 1 to 3%. An increase in temperature from 1980 to 2300°C during shrinking results in grain growth, a decreased amount of the eutectic between grains, and

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AID Nr. 983-6 5 June

HOT COMPACTING OF SIC-BASE MATERIALS [Cont'd]

S/226/63/000/002/011/014

partial decomposition of the  $\alpha$ -phase, with boron concentration in it dropping from 3.79 to 2.95% and free carbon in the specimen increasing from 1.4 to 18.70%. A specific pressure of 50 and 80 kg/mm<sup>2</sup> was found to be sufficient to produce a uniform density with a volume porosity of 2.3 to 3.6% in compacts with a friction-surface-to-cross-section ratio of less than 5. More than 170 kg/mm<sup>2</sup> is required for compacts having a ratio of 7.5. [MS]

Card 2/2

Ap4038885

Sh, R. Ya.; Kudryavtsev, V. I.  
Spectropolarimeter

S/0119/64/000/005/0003/0005

nyeniye, no. 5, 1964, 3-5

ater, spectropolarimeter, optically active substance,

ent is intended for measuring and recording the  
tically active substances in a wide range of visible and  
based on an automatic polarization servo system with  
g on the plane of polarization; the system permits  
the angle of rotation of the vibration plane. The  
ater are shown in Enclosure 1. Experience with the  
The dispersion of rotation can be measured in the

ACCESSION NR: AP4038885

range of 230-700 millimicrons with an angular error of  $\pm 0.0025^\circ$ ; (2) Weakening the luminous flux by 99.5% does not affect the accuracy of measurement; (3) The selected zero point is stable to the extent that its drift remained within the normal error of the instrument during 8 hrs of work; (4) The servo rate of response is 0.03 degree/sec; (5) Readings within  $2\sigma$  can be recorded; (6) Measurements of the dispersion of rotation of diluted tartaric acid, camphor in hexane, etc., exhibited good agreement with data published elsewhere. Orig. art. has figures and 6 formulas.

ATION: none  
00

DATE ACQ: 05Jun64

NO REF SOV: 004

ENCL: 01

OTHER: 000

KUDRYAVTSEV, Vladimir Leont'yevich; GOL'TSEV, V., red.; YAROV, E.,  
tekh.red.

[Africa on the move] Afrika v dvizhenii. Moskva, Izd-vo  
"Izvestia," 1960. 66 p. (Biblioteka "Izvestii," no.7)  
(Africa—Description and travel) (MIRA 14:7)



KUDRYAVTSEV, V.M. (Leningrad)

Organization and work of children's work corners and technical  
clubs in house administration offices. Politekh.obuch. no.6:  
88-91 Je '57. (MIRA 12:4)

(Leningrad--Children's clubs)

L 16917-63

S/124/63/000/004/054/064

44

AUTHOR: Kudryavtsev, V. N.

TITLE: Computations on the strength of geared transmissions

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 4, 1963, 54, abstract 4V449  
(Sb. tr. Leningr. mekhan. in-ta, no. 23, 1962, 6-38)

TEXT: Derivations of functions for computing wheels with helical teeth as regards contact strength are given. The author takes into account unequal contact strength of the teeth roots of pinions and cog wheels of different harness. He assumes that the load on the roots of the latter is lowered, while in the case of the former it is correspondingly increased, since the feed of pinion teeth may resist to a considerably greater degree the action of contact stresses. In a number of instances, the contact strength of the heads of wheel teeth will be limited, although the leading surfaces on the heads of the teeth possess much more contact strength than the lagging surfaces. All this makes possible a considerable increase in the permissible load for transmissions in which the cog teeth have significantly greater hardness than cogwheel teeth.

The author also arrives at computing functions for adjusted gear wheels. It is advisable to make a negative correction on the pinion. It is assumed that the Computations on the .... load along the contact line varies in proportion to the reduced radius of Card 1/2/ curvature. A.I. Petrusovich.

KUDRYAVTSEV, V.N., kandidat tekhnicheskikh nauk.

Graphic-analytic method for calculating evolvent gearing.

Vest.mash.27 no.12:10-23 D '47. (MLRA 9:4)

(Gearing--Tables, calculations, etc.)

KUDRYAVTSKY, V. N.

Grafoanaliticheskiy sposob rascheta evol'ventnykh zatseplenii. (Vestn. Mash., 1948, no. 5, p. 14-24)

Graphic-analytical method of calculating involute gearing.

DLC: Tih.Vh

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

38071. KUDEFYAVTSEV, V. N.

Planetarnye peredaui s tsevochnym zatsepleniem. trudy seminara po teorii mashin i mekhanizmov (Akad. nauk SSSR, in-t mashinovedeniya), T VIII, vyp. 29, 1949, s. 12-47. - bibliogr: 6 nazv

KUDRYAVTSEV, V. N.

Bach of Sci; Asst. Prof.

Closed Installations for Testing of Transmission Gears

Vest Mash p. 8, Oct 51

KUDRYAVTSEV, V. N.

Gearing - testing

Closed assemblies for testing geared transmissions. Vest. mash. 31, No. 10, 1951.

9. Monthly List of Russian Accessions, Library of Congress, September, 1952~~1953~~. Unclassified.

KUDRYAVTSEV, V. N.

Gearing

Synthesis of gears with a transmission ratio approximating one, and with minimum friction losses. Trudy Sem. teor. mash., 11, No. 44, 1952.

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



KUDRYAVTSEV, I.N.

KUDRYAVTSEV, V.N., professor, doktor tekhnicheskikh nauk; MARKOV, V.G.,  
kandidat tekhnicheskikh nauk, dotsent, redaktor. MIKHAYLOV, N.F.,  
inzhener, retsenzent.

[Simplified calculations for gear transmissions] Uproshchennye  
raschety subchatykh peredach. Leningrad, Gos. nauchno-tekhn. izd-vo  
mashinostroit. i sudostroit. lit-ry [Leningradskoe otd-nie] 1953.  
52 p. (MIRA 7:7)  
(Gearing)

KUDRYAVTSEV, V.N.

Methods for calculating gear transmissions. Izv.AN SSSR Otd.tekh.nauk no.8:  
1175-1195 Ag '53. (MIRA 6:8)  
(Gearing)

Кудрявцев, В. Н.

✓ 1919. Kudryavtsov, V. N., Determination of the efficiency of planetary transmission gears taking into account the loss in the gears and bearings (in Russian), Akad. Nauk SSSR Teori. Prikl. Sci. Teori Mash. Mekh. 13, 52, 5-23, 1953.

Handwritten initials or signature.

USSR .

✓ 1947. Kudryavtsev, V. N., Determination of friction losses in bearings subjected to loads of the rotating vector type (in Russian), Akad. Nauk SSSR Trud. Sem. Teorij Mash. Mekh. 14, 69, 6-10, 1953.

Importance of the effect of "rotating vector" on the coefficient of friction in the supporting bearings is questionable. The author himself recognises this.

The paper is of little research value, contains nothing new. The validity of equations set by the author is impossible to check, because not all notations are explained.

V. N. Borsoff, USA

*[Handwritten signature]*

KUDRYAVTSEV, V.N., doktor tekhnicheskikh nauk.

Planetary gears (sheet no. 1,2, and 3). Vest.mash. 33 no.4:20-25 4p '53.  
(MLBA 6:5)  
(Gearing)

KUDRYAVTSEV, V.N., kandidat tekhnicheskikh nauk.

Planetary gears (list no.4,5 and 6). Vest.mash. 33 no.5:29-34 My '53.  
(MLRA 6:5)  
(Gearing--Tables, Calculations, etc.)

KUDRYAVTSEV, V. N.

PHASE I

TREASURE ISLAND BIBLIOGRAPHICAL REPORT

AID 307 - I

BOOK

Call No.: TJ230.K37

Authors: POLYAKOV, V. S., KUDRYAVTSEV, V. N. ZUBANOV, M. P.,  
ANOSOV, A. S., BARBASH, I. D., MYAGKOV, V. D.

Full Title: MACHINE ELEMENTS

Transliterated Title: Detali Mashin

Publishing Data

Originating Agency: None

Publishing House: State Publishing House for Machine Building and Shipbuilding  
Literature (Mashgiz)

Date: 1954

No. pp.: 720

No. of copies: 50,000

Editorial Staff

Editors: Golovanof, N. F., Kandidat of Technical  
Sciences

Fadeyev, N. K., Dotsent, Kandidat of  
Technical Sciences

Editor-in-Chief: Kolchin, N. I., Professor,  
Doctor of Technical Sciences

Others: None

Tech. Ed.: None  
Appraisers: Spitsyn,  
N. A., Prof., Doc.  
of Tech. Sci.

Members of the chain  
of "Machine Elements"  
of the Moscow Higher  
Tech. School, and of  
the Leningrad Mil.-  
Mechanical Institute

Text Data

Coverage: This book gives basic information on the calculation and design of  
machine elements, mechanical transmissions, and reducers. It consists

Detali Machin

AID 307 - I

of the teaching material used for lectures in the Leningrad Poly-technical Institute im. Kalinin, M. I., and in other Universities in Leningrad. It is divided into four parts. Each of these parts is provided with separate listings of bibliography and sources. Diagrams, graphs, tables, etc.

This is a good textbook; however, nothing new or original could be found in it.

2/2



*KUDRYAVTSEV, V.N.*

USSR/ Engineering - Reductors

Card 1/1 ; Pub. 128 - 5/31

Authors : Kudryavtsev, V. N.

Title : Reductor systems composed of oscillation bearings

Periodical : Vest. mash. 10, 26 - 28, Oct 54

Abstract : A description is presented of methods for producing planetary gear reductors from oscillation bearings, and formulas are given to determine ball bearing friction coefficients and spherical reduction factors. Six USSR references (1937 - 1953). Graph; diagrams; drawing.

Institution : ....

Submitted : ....

KUDRYAVTSEV, V.

Improving the quality of piston rings for internal combustion engines. Mor. i rech.flot 14 no.8:21-24 Ag '54. (MIRA 7:8)  
(Piston rings)

KUDRYAVTSEV, Vladimir Nikolayevich, doktor tekhnicheskikh nauk, professor;  
MARKOV, V.G., kandidat tekhnicheskikh nauk, redaktor; VOLKOVYSSKIY,  
Yu.R., kandidat tekhnicheskikh nauk, retsenzent; ~~NETISOV~~ NETISOV, F.I.,  
inzhener, redaktor; SIMONOVSKIY, L.Z., redaktor; SOKOLOVA, L.V.  
tekhnicheskiiy redaktor.

[Selecting suitable transmission] Vybory tipov peredach. Moskva,  
Gos.nauchno-tekhn.isd-vo mashinostroitel'noi lit-ry, 1955. 54 p.  
(Power transmission) (MLRA 8:10)

KUDRYAVTSEV, V.H., professor, doktor tekhnicheskikh nauk; MARKOV, V.G., dotsent, kandidat tekhnicheskikh nauk, redaktor; POL'SKAYA, R., tekhnicheskiy redaktor.

[Simplified gearing calculations] Uproshchennye raschety zubchatykh peredach. 2-e izd., dop. i perer. Moskva, Gos.nauchno-tekhn. izd-vo mashinostroitel'noi lit-ry, 1955. 67 p. (MIRA 8:4)  
(Gearing—Tables, calculations, etc.)

KUDRYAVTSEV, V. N.

USSR/ Miscellaneous - Book review

Card 1/1 Pub. 128 - 27/31

Authors : Aristov, I. A.; Boginskiy, M. N., Engineers; Zablonskiy, K. I.; and  
Kudryavtsev, V. N., Cand. Tech. Sc.

Title : Critique and Bibliography

Periodical : Vest. mash. 35/5, 84-88, May 1955

Abstract : Critical review is given on the following technical books: "Cost of  
Production in Machine Construction Industry," by V. I. Ganshtak; "Design  
and Planning of Gear and Worm Gear Transmissions and Reducing Gear," by  
Ilyenko, M. S., Grebenyuk, A. I., and Nikol'skiy, D. N. Table.

Institution : .....

Submitted : .....

DIKER, Ya.I., kandidat tekhnicheskikh nauk; KUDRYAVTSEV, V.N., doktor tekhnicheskikh nauk, professor.

On M.B.Groman's article: "Module limitations" in correcting gears cut by worm hobbing machines." Vest.mash.36 no.7:22-23 J1 '56.(MIRA.9:9)  
(Gearing, Worm)

KUDRYAVTSEV, V.N., doktor tekhnicheskikh nauk.

The 3K planetary gears. Vest. mash. 36 no.8:11-17 '56. (MLRA 9:10)

(Gearing)

*KUDRYAVTSEV, VLADIMIR NIKOLAYEVICH*

PHASE I BOOK EXPLOITATION

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Kudryavtsev, Vladimir Nikolayevich, Doctor of Technical Sciences, Professor

Zubchatyye peredachi (Gear Transmissions) Moscow, Mashgiz, 1957.  
262 p. 18,000 copies printed.

Reviewer: Groman, M. B., Engineer; Ed.: Markov, V. G., Candidate of Technical Sciences; Ed. of Publishing House: Simonovskiy, N. Z.; Tech. Ed.: Sokolova, L. V.

PURPOSE: The book is intended for designers and technologists concerned with gearing geometry and strength. It may also be useful to students specializing in machine building.

COVERAGE: The book presents calculations involved in design of gears for strength and also the geometry of gearing. It recommends basic parameters to assure selection of more rational gear designs. The text is furnished with design tables, charts, experimental data, nomographs, etc. Mention is made of a new gear tooth geometry (different from involute) suggested by M. L. Novikov. The bibliography contains 98

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references, 80 of which are Soviet.

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VK/vm  
6-19-58

KUDRYAVTSEV, V.N., doktor tekhn.nauk; BELYANIN, A.I., inzhener.

Increasing the load-carrying ability of spur gears by means of correction with contact pole located in the area of simultaneous contact of two pairs of teeth. Vest.mash. 37 no.10:24-27 0 '57.  
(MIRA 10:11)

(Gearing, Spur)

KUDRYAVTSEV, Y. N.

KUDRYAVTSEV, Y. N., doktor tekhn.nauk.

Once more on antifriction bearing reducers. Vest.mash. 37 no.12:58-59  
D '57. (MIRA 10:12)

(Gearing)

25(2)

PHASE I BOOK EXPLOITATION

SOV/2095

Konferentsiya po voprosam rascheta, konstruirovaniya i issledovaniy zubchatykh peredach i peredach gibkoy svyaz'yu. Odessa, 1957

Raschet, konstruirovaniye i issledovaniye peredach; trudy konferentsii, [t.] 1 (Design, Construction and Analysis of Transmissions; Transactions of the Conference on Problems in Design, Construction and Analysis of Gear and Flexible Transmissions, Vol 1) [Odessa] Odesskiy politekh in-t, 1958. 199 p. 5,000 copies printed.

Sponsoring Agencies: Nauchno-tekhnicheskoye obshchestvo mashinostroitel'noy promyshlennosti, Odesskoye oblastnoye pravleniye, and Odesskiy politekhnicheskii institut.

Ed.: I.P. Nikiforov, Engineer; Tech. Ed.: A. R. Komissarenko; Editorial Board: L.S. Borovich, Candidate of Technical Sciences, M.S. Belyayev, Engineer, M.D. Genkin, Candidate of Technical Sciences, K. I. Zablonskiy, Candidate of Technical Sciences (Resp. Ed.), P. S. Zak, Candidate of Technical Sciences, Ya.G. Kist'yan, Candidate of Technical Sciences, V. N. Kudryavtsev, Doctor of Technical Sciences, V.F. Mal'tsev, Candidate of Technical Sciences, M. S. Polotskiy,

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Design, Construction and Analysis of (Cont.)

SOV/2095

Candidate of Technical Sciences, and L.B. Erlikh, Candidate of Technical Sciences.

COVERAGE: This book is the first of three volumes dealing with the transactions of the conference. This first volume contains articles on the design and construction of gearings and worm gearings. The second volume treats flexible transmissions<sup>and</sup> the third, theoretical and experimental analysis of transmissions. References follow several of the articles.

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Kudryaytsev, V.N., Ways of Decreasing the Outer Dimensions and Weight of Gear Transmissions 5

The author discusses the system of gearing designed by M.L. Novikov. He claims that it is the most efficient way of increasing load capacity while minimizing tooth chipping. Various other methods of increasing the load capacity of a gearing are also discussed.

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- Diker, Ya. I., Design of Internal Straight Involute Gearing With a Small Difference in the Number of Teeth of [Meshing Gears] 15  
A method of design based on use of the rack-type form for the generating cutter gear is presented.
- Pavlov, Z.P., Effect of the Tooth Hardness of Meshing Gears on the Load Capacity of a Gearing 31  
The author presents results of tests on a gearing and underlines the importance of the difference in hardness of pinion and wheel. He states that hardness is not a measure for allowable contact stresses and durability.
- Zak, P.S., Friction in Worm Gearing Trains 45  
The friction in various periods of gearing life (running-in, regular operation) is analyzed, and fluid friction in gearing and coefficients of friction are discussed.
- Yudin, V.A., Some Problems of the Geometry of Planetary Speed Reducers With Out-of-centrode Involute Gearing 57

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Design, Construction and Analysis of (Cont.)

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The geometric basis of design of toothed reducers and the general theory of out-of-centrode involute gearing are presented, and the selection of geometric parameters for gear trains of planetary speed reducers is discussed.

- Pyatnitskiy, A.A., Weight Characteristics of Toothed Gears and Gear Trains 67  
The author derives equations for coefficients which can be used as criteria for "weight quality" of gears and gear trains. He also compares steel gears with nonmetallic ones, and straight-tooth gears with gears with helical teeth.
- Zablonskiy, K.I. Investigation of Load Concentration Along Tooth Bearings of Gears 77  
The essentials of tooth loading, deformation, and design are analyzed. The author concludes that in order to obtain a correct solution for load concentration, the local rigidity of teeth should be considered.
- Beloborodov, V.A. The Problem of Developing Mechanical Marine Transmissions 87  
The use of gear trains in marine drives is discussed, and the construction of a reversible speed reducer is described.

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Design, Construction and Analysis of (Cont.)

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Bolotovskiy, I.A., Rational Selection of Displacement Coefficients and Distribution of Displacements Between Gears at Angular Correction With the Use of Limiting-contour Diagrams 95

The article discusses correction of involute gears by displacing the profile (angular correction) for obtaining the maximum contact strength, bending strength, and wear resistance with the aid of limiting-contour diagrams.

Smirnov, V.E. Limiting-contour Diagrams and Methods of Their Construction. Change in Contour Form Due to a Change in Certain Geometrical Parameters 103  
Components of nonlimiting-contour diagrams, such as interference, overlapping coefficient, radial clearance, and changes of tooth height, and corner radii of the hob tooth are discussed.

Belyanin, A.I. Investigation of the Load Capacity of Helical Gears 111  
Theoretical investigation, and data from experiments show that the load capacity of helical gears can be 50 percent greater than that of straight gears.

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