ACC NR: AT6033998 SOURCE CODE: UR/3227/64/003/000/0138/0142

AUTHOR: Mel'nikov, Yu. S.; Sobakin, Ye. L.

ORG: none

TITLE: Semiconductor-type rpm-meter for wound-rotor induction motors

SOURCE: Tomsk. Institut radioelektroniki i elektronnoy tekhniki. Trudy, v. 3, 1964, 138-142

TOPIC TAGS: induction motor, automatic control system, rpm meter

ABSTRACT: To eliminate space-requiring tachometer constructions, and drawbacks associated with parametric tachometric devices, the measurement of rotor-current frequency, which is linearly connected with the motor rpm, is suggested. To this end, a resistor is introduced into the rotor circuit, and the voltage drop across this resistor is used as a source signal applied to a transistorized amplifier. A principal circuit diagram of this amplifier is shown, and its operation is explained. Claimed advantages: no contacts, no mechanical attachments to the motor, no rotating parts. Disadvantage: high amplifier gain needed as the source signal is small. Orig. art. has: 3 figures and 6 formulas.

SUB CODE: 09 / SUBM DATE: none / ORIG REF: 001

Card 1/1

RIKKONEN, V.M., kand. tekhn. nauk; MEL'NIKOV, Yu.S., inzh.

Electrical heating of a moving wire. Elektrotekhnika 36 no.5: 53-55 My '65. (MIRA 18:5)

S/[illegible]35/62/000/[illegible]6/007/01[illegible]
A0[illegible]6/A1[illegible]6

AUTHORS: [illegible]

TITLE: [illegible]

PERIODICAL: Svarochnoye proizvodstvo, no. [illegible], 196[illegible], [illegible]

TEXT: [illegible] conditions were selected for automatic argon-arc welding of thin-sheet [illegible] material, ensuring the production of high-quality weld joints. The use of filler metal is recommended to obtain good fusion of the edges. Poor bead formation on the reverse side of the weld is prevented by using a steel backing plate with a 1 [illegible] deep and [illegible] wide groove. The thermal welding parameters are determined from the fusion heat, heat-resistance and heat conductivity of the alloy. Welds produced under the selected conditions (Table 1) showed a strength that was not below 80 the strength of the base metal. The possibility of deforming the welds was investigated by means of manual drifting and rolling on steel rolls. Positive results were obtained in drifting and rolling of the weld joints with preheating to [illegible] - 350°C. Deformation of the welds with preheating did not impair their quality and can be recommended for the manufacture of parts.

Card 1/2

Automatic argon-arc welding [illegible] alloy

Table 1:

Thickness of material in mm	Welding current amps	Diameter of tungsten electrode	Diameter of filler wire	Welding speed in m/h
1.2 + 1.2	120	3	3	30
1.5 + 1.5	150	4	3	30
1.2 + 1.2	150	4	3	30
1.5 + 1.5	180	4	4	30
2.0 + 2.0	200	5	4	30

Filler wire feed rate: [illegible] m/h; argon consumption - [illegible] liters/min.

ACCESSION NR: AP4040698 S/0135/64/000/006/0016/0019

AUTHOR: Chakalev, A. A. (Engineer); Zaytsev, V. I. (Engineer); Skakun, G. F. (Candidate of technical sciences); Mel'nikov, Yu. V. (Engineer)

TITLE: Vacuum-tight seam welding of MA8 alloy

SOURCE: Svarochnoye proizvodstvo, no. 6 (630), 1964, 16-19

TOPIC TAGS: magnesium manganese cerium system, magnesium manganese alloy, cerium containing alloy, MA8 alloy, alloy welding, seam welding, alloy weld, vacuum tight weld, airtight weld

ABSTRACT: The conditions for obtaining air-tight seam-welded joints in sheets of MA8 magnesium alloy (1.5—2.5% Mn; 0.3% each Al and Zn; 0.15—0.35% Ce; 0.05% each Cu and Fe; 0.02% Be; 0.15% Si; 0.01% Ni) have been determined. Flat specimens, assembled from sheets of the same or different thickness which varied from 1 to 4 mm, and shells 400, 800, and 1500 mm in diameter, made from 1.5-mm sheets and reinforced with outside ribs 1.8-mm thick, were seam welded. To compensate

Card 1/ 3

ACCESSION NR: AP4040698

for poor reproducibility of physical and technological properties of weldments and the unstable characteristics of welders, double seams overlapping one another on 40—50% of their width were used. Both mechanical and chemical methods of surface cleaning were found equally satisfactory. Fusion of the thinner sheet up to 60% of its thickness can be tolerated since it causes no metal overheating, crack formation, decrease of corrosion resistance of the weld, or leaky joints. In welding circumferential seams the nugget thickness, particularly in the inner sheet, decreased with decreasing shell diameter. Hence, the geometry of the joined surfaces should be taken into account in the selection of welding conditions in order to avoid inadequate fusion or overheating. Seam welding of sheets of dissimilar thickness with a thickness ratio of 1:3 or higher produced satisfactory joints only with the use of an MA8 alloy insert, 0.1- or 0.3-mm thick, between the electrode and the thin sheet. Special electrodes with intensive inner water cooling have been designed for seam welding of MA8 and other magnesium alloys. With these electrodes welding speeds as high as 60—70 spots per minute can be attained. The tightness of joints was tested with a helium leak detector. Orig. art. has: 7 figures and 2 tables.

ACCESSION NR: AT4012721 S/2981/63/000/002/0111/0118

AUTHOR: Mel'nikov, Yu. V.; Zyukin, V. V.; Oboturov, V. I.

TITLE: Welding of SAP-1

SOURCE: Alyuminiyevy*ye splavy*. Sbornik statey, no. 2. Spechenny*ye splavy*. Moscow, 1963, 111-118

TOPIC TAGS: powder metallurgy, aluminum, sintered powder, aluminum powder, sintered aluminum powder, welding, resistance welding, flash welding, spot welding, roller welding

ABSTRACT: Welding of SAP-1 by the flash and resistance methods was performed with 1.5 mm sheets made of preliminarily treated brickets. Comparison of the strength and structure of the weld joints showed that manual argon arc welding of SAP-1 using AF-4A flux is possible with high temperature annealing of the brickets. The strength of the weld joints equals 95% of the strength of the base material at room temperature and 70% at a temperature of 500C. Both roller and spot welding of SAP-1 may also be used. The strength of the weld joints is the same as of high-strength aluminum alloys of the type D19A-T, D20A-T and D16A-T. "The work was carried out under the guidance of K. P. Koryagin; O. B. Martishin, M. V. Korotkova and F. T. Leonov also took part in the work." Orig. art. has: 9

Card 1/2

ACCESSION NR: AT4012721

tables and 10 figures.

ASSOCIATION: none

SUBMITTED: 00	DATE ACQ: 13Feb64	ENCL: 00
SUB CODE: MM	NO REF SOV: 000	OTHER: 000

Card 2/2

L 46113-66 EWT(m)/EWP(v)/I/EWP(t)/ETI/EWP(1) IJP(c) JD/HM
ACC NR: AP6031411 SOURCE CODE: UR/0135/66/000/009/0020/0023

AUTHOR: Chirkov, Ye. F. (Engineer); Sokolov, V. L. (Engineer); Mel'nikov, Yu. V. (Engineer)

37
L

ORG: none

TITLE: Automatic argon-shielded welding of M40 alloy

SOURCE: Svarochnoye proizvodstvo, no. 9, 1966, 20-23

TOPIC TAGS: aluminum alloy, alloy welding, MIG welding, automatic welding, mechanical property/M40 alloy

ABSTRACT: Experiments have been made to determine the optimum conditions for automatic MIG welding M40 aluminum alloy. Clad alloy sheets, 3-mm thick, heat-treated, strain-hardened and aged (TN1), or heat-treated and strain-hardened (TN), were automatically MIG welded with M40 or HMg6 alloy filler. All welds were found to be helium tight. The highest weld efficiency (87.7%) and a tensile strength of 38.5—42.2 kg/mm^2 at a bend angle of 38—40 deg were obtained in welds with base and root reinforcements made with M40 filler wire, a specific heat input of 0.408 cal/sec·cm, and a steel backup plate with a 6.0 x (1.2—1.3) mm groove. The same welds without reinforcement had a tensile strength of 34—35 kg/mm^2, a bend angle of 44—48 deg, and a weld efficiency of 76.5%. A 7—12% increase in the heat input lowers the weld strength by 12%. The use of a copper backup plate, the absence

UDC: 621.791.753.93:669.35

Card 1/2

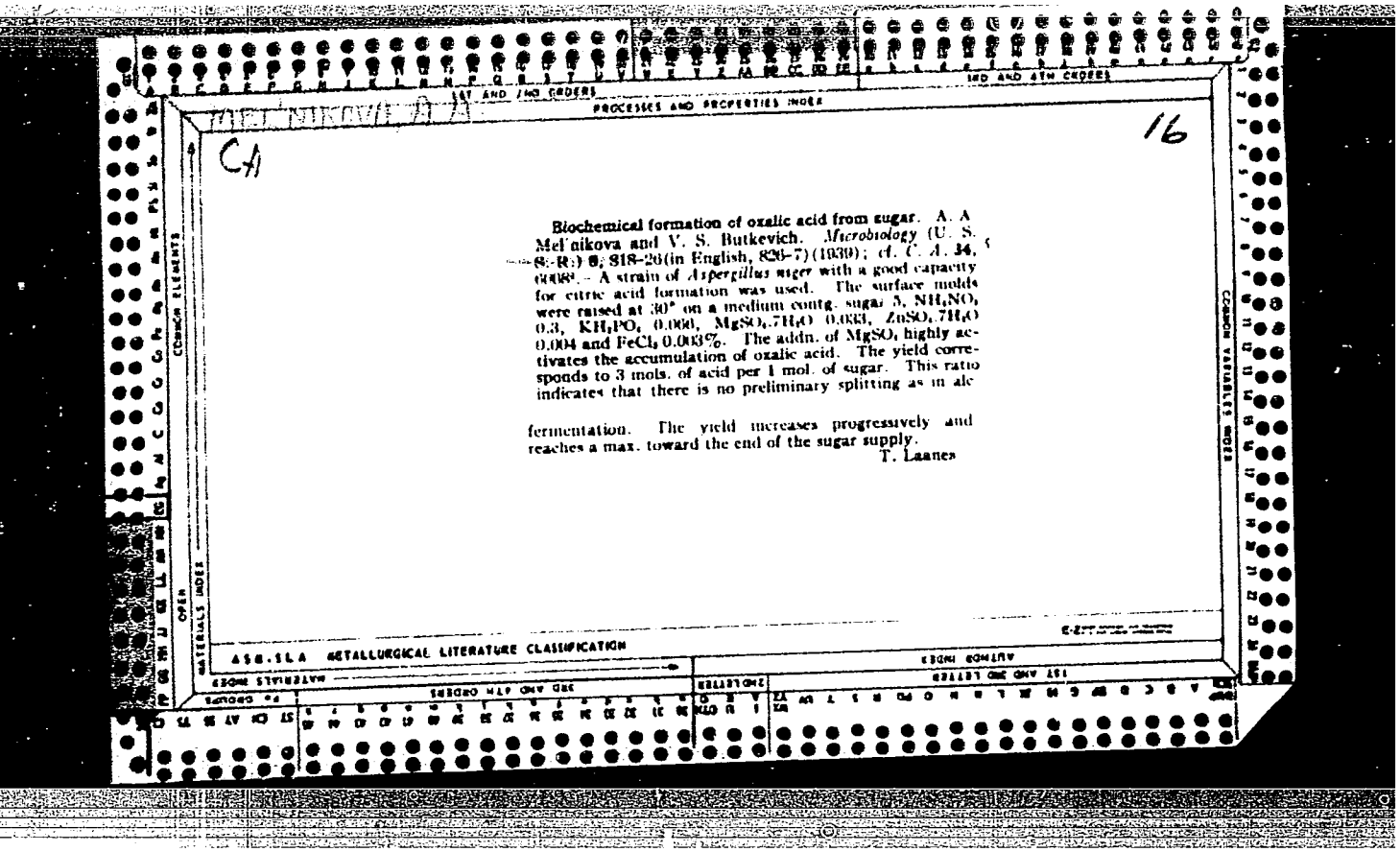
L 46113-66

ACC NR: AP6031411

of a gap between faying edges, or a small groove in the backup bar require a higher heat input, which lowers the weld strength. Aging after welding M40 alloy in the TN condition did not improve the mechanical properties; hence, full heat treatment of parts from M40 alloy should precede welding. Welding with AMg6 filler wire brought about no appreciable difference in the strength of M40 alloy welds, but it increased the bend angle to 50—57 deg and also increased by almost five times the susceptibility of M40 alloy welds to hot cracking. The difference in strength between the weld and base metal decreases with increasing temperature, and at 250C equals zero. [MS]
Orig. art. has: 3 figures and 2 tables.

SUB CODE: 13/ SUBM DATE: none/ ORIG REF: 005/ OTH REF: 001/ ATD PRESS: 5087

Card 2/2 LC

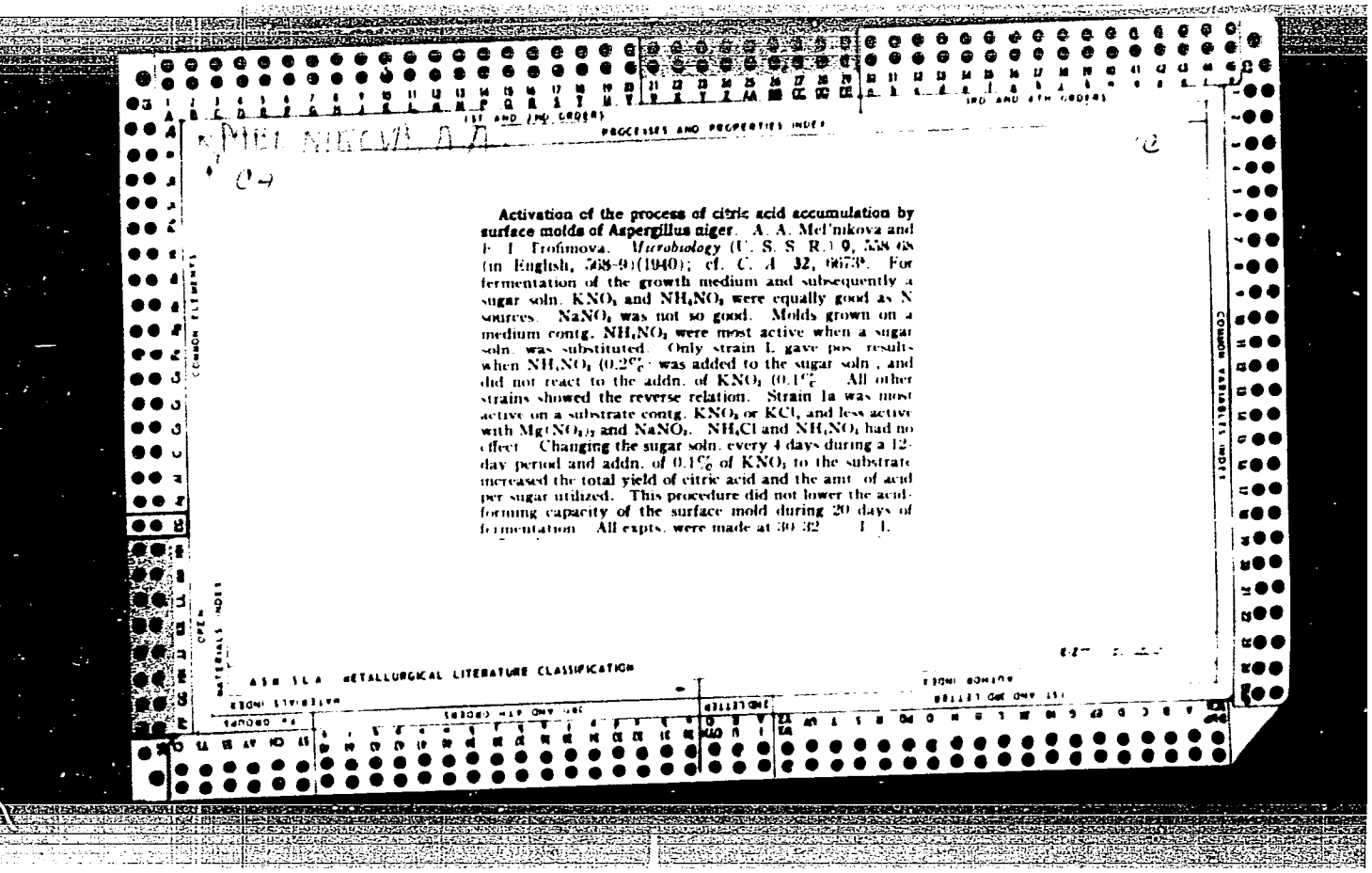


CA

16

Biochemical formation of oxalic acid from sugar. A. A Mel'nikova and V. S. Butkevich. *Microbiology* (U. S. S. R.) 8, 818–26 (in English, 826–7) (1939); *cf. C. A.* 34, 6088. — A strain of *Aspergillus niger* with a good capacity for citric acid formation was used. The surface molds were raised at 30° on a medium contg. sugar 5, NH_4NO_3 0.3, KH_2PO_4 0.066, $MgSO_4 \cdot 7H_2O$ 0.033, $ZnSO_4 \cdot 7H_2O$ 0.004 and $FeCl_3$ 0.003%. The addn. of $MgSO_4$ highly activates the accumulation of oxalic acid. The yield corresponds to 3 mols. of acid per 1 mol. of sugar. This ratio indicates that there is no preliminary splitting as in alc fermentation. The yield increases progressively and reaches a max. toward the end of the sugar supply.

T. Laanes



Activation of the process of citric acid accumulation by surface molds of Aspergillus niger. A. A. Mel'nikova and F. I. Frofimova. *Microbiology* (U. S. S. R.) 9, 558-68 (in English, 568-9)(1940); cf. C. A. 32, 06739. For fermentation of the growth medium and subsequently a sugar soln. KNO_3 and NH_4NO_3 were equally good as N sources. $NaNO_3$ was not so good. Molds grown on a medium contg. NH_4NO_3 were most active when a sugar soln. was substituted. Only strain L gave pos. results when NH_4NO_3 (0.2%) was added to the sugar soln., and did not react to the addn. of KNO_3 (0.1%). All other strains showed the reverse relation. Strain 1a was most active on a substrate contg. KNO_3 or KCl, and less active with $Mg(NO_3)_2$ and $NaNO_3$. NH_4Cl and NH_4NO_3 had no effect. Changing the sugar soln. every 4 days during a 12-day period and addn. of 0.1% of KNO_3 to the substrate increased the total yield of citric acid and the amt. of acid per sugar utilized. This procedure did not lower the acid-forming capacity of the surface mold during 20 days of fermentation. All expts. were made at 30-32°. I. I.

MEL'NIKOVA, A. A.

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

Dibasic acids containing four C atoms as intermediate products in the biological oxidation of hexoses to oxalic acid. V. S. Butkevich and A. A. Mel'nikova. *Doklady Akad. Nauk S. S. S. R.* 39, 155-8(1943); *Compt. rend. acad. sci. U. R. S. S.* 39, 148-50(1943). Previous work (cf. *C. A.* 35, 3025[9]) showed that during oxidation of glucose (I) by *Aspergillus niger* (AN), the yields of oxalic acid (II) approached the max. (3 mols. II per mol. of I consumed) only during oxidation of the latter portions of the I, i. e., after most of the I had been acted on by AN. The intermediate oxidation products were identified as follows. A 1% I soln., contg. 1.2-2.0% $NaHCO_3$, was acted on by AN at 30° until 60-65% of the I had reacted with formation of 1-1.5 mols. of II per mol. of I reacted. The resulting soln. was treated with $CaSO_4$ to ppt. II, filtered, acidified with H_2SO_4 and extd. with ether. The residue obtained on evapn. of the ether ext. was fractionally crystd. from water. The 4 fractions obtained, in order of increasing soly., consisted mostly of: 1st fumaric acid (III), 2nd III mixed with tartaric acid (IV), 3rd IV, 4th malic acid (V). The amts. of I, III, IV and V recovered were such as to suggest the presence of other undetected intermediate oxidation products, one of which was probably gluconic acid. J. W. Perry

16

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

Mel'nikova, A. A.

Nitrogen metabolism of Penicillium chrysogenum. I. Metabolism of nitrogen compounds in Penicillium chrysogenum cultures during fermentation. A. A. Mel'nikova and E. I. Surikova (All-Union Sci. Research Inst. Antibiotics, Moscow). *Mikrobiologiya* 25, 201–7(1956).—Some of the N compds. elaborated by *P. chrysogenum* in culture mediums are amino acids, but not enough to account for all the org. N. Glycine, valine, alanine, and glutamic and aspartic acids were identified; they are also formed by *P. janczewskii*, but later in the fermentation (at the autolysis stage). This relatively early appearance of org. N in the metabolism indicates high mycelial metabolic activity, related to the biosynthesis of penicillin. Julian P. Smith

2

"A Study of the Physiological Properites of Various Strains of penicillin-producing Penicillium chrysogenum", by A.A. Mel'nikova and Ye.I. Surikova, All-Union Scientific-Research Institute of Antibiotics, Antibiotiki, No 3, May-June 1957, pp 5-8.

The authors say that differences in the ability of producing penicillin by various strains of Penicillium chrysogenum leads one to suppose that there are also other physiological differences among them.

In this article, the authors attempt to explain the physiological characteristics of different strains of Penicillium chrysogenum by way of the study of the peculiarities of metabolism that appear in the process of fermentation during the biosynthesis of penicillin.

Three different strains of Penicillium chrysogenum were used in the process of experimentation:

VNIIA-35, VNIIA-A, and a "new variety".

The culture medium was of the following composition:

$(NH_4)_2SO_4$ - 0.5%; KH_2PO_4 - 0.3%; $MgSO_4 \cdot 7H_2O$ - 0.025%; $FeSO_4 \cdot 7H_2O$ - 0.01%; $ZnSO_4 \cdot 7H_2O$ - 0.002%; $CuSO_4 \cdot 5H_2O$ - 0.0005%; $MnSO_4 \cdot H_2O$ - 0.002%; glucose - 0.75%; lactose - 1.75%; acetic acid - 0.24%; lactic acid - 0.5%; pH after sterilization of media - 6.1-6.3. Sugars were sterilized separately and added to the media before seeding.

After describing in detail the technique followed, and the findings, the authors present the following conclusions:

1. Various strains of Penicillium chrysogenum differ from one another both in the ability for biosynthesis of penicillin as well as in other physiological properties.

MEL'NIKOVA, A.A.; SURIKOVA, Ye.I.

Nitrogen metabolism in Penicillium chrysogenum. Part 2: Study of nitrogen fractions in the mycelia and culture medium of Penicillium chrysogenum [with summary in English]. Mikrobiologiia 26 no.1:35-44 Ja-F '57. (MLRA 10:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov, Moskva.

(NITROGEN, metabolism,
Penicillium chrysogenum, determ. in mycelia & culture media (Rus))
(PENICILLIUM, metabolism,
chrysogenum, nitrogen fractions in mycelia & culture media (Rus))

MEL'NIKOVA, A.A.

SURIKOVA, Ye.I.; MEL'NIKOVA, A.A.

Carbohydrate metabolism in Penicillium chrysogenum [with summary in English]. Mikrobiologiia, 26 no.3:285-291 My-Je '57. (MIRA 10:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov, Moskva.
(PENICILLIUM, metabolism,
chrysogenum, carbohydrates (Rus))
(CARBOHYDRATES, metabolism,
Penicillium chrysogenum (Rus))

MEL'NIKOVA, A.A.; VASIL'YEV, G.M.; CHUMAK, M.D.; VESELOV, N.M.; SNEZHNOVA, L.P.

Culture media for detecting antibiotic substances in actinomycetes.
Mikrobiologiia 26 no.6:762-766 N-D '57. (MIRA 11:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov, Moskva.
(ACTINOMYCES, culture,
media for detection of antibiotics (Rus)
(ANTIBIOTICS, determination,
in Actinomyces culture, culture media (Rus)

MEL'NIKOVA, A.A., SEMENOVA, V.A., SOLOV'YEVA, N.K., SNEZHNOVA, L.P.
GINZBURG, G.N.

Formation of actinoxanthin; a new antitumor antibiotic [with summary in English]. Antibiotiki 3 no.1:18-22 Ja-F'58 (MIRA 11:5)

1. Otdel novykh antibiotikov Vsesoyuznogo nauchno-issledovatel'skogo instituta.

(ACTINOMYCES,
globisporus, prod. of anti-tumor antibiotic actinoxanthine (Rus))
(ANTIBIOTICS,
actinoxanthine, anti-tumor activity & prod. by Actinomyces globisporus (Rus))
(CYTOTOXIC DRUGS,
same)

MEL'NIKOVA, A.A.; SURIKOVA, Ye.I.

Oxalic acid formation in Penicillium chrysogenum during penicillin biosynthesis. Izv. AN SSSR. Ser. biol. no.5:579-583 S-O '58. (MIRA 11:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.
(OXALIC ACID) (PENICILLIUM)

MEL'NIKOVA, A.A.; VESELOV, N.M.

Comparative physiological investigation of two strains of Actinomyces violaceus which produce antiviral antibiotics. Antibiotiki 4 no.1:31-36 Ja-F '59. (MIRA 12:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.
(ANTIBIOTICS,
violarin, prod. by Actinomyces violaceus (Rus))
(ACTINOMYCES,
violaceus, prod. of antibiotic violarin (Rus))

MEL'NIKOVA, A.A.; SURIKOVA, Ye.I.

Conditions for the cultivation of Penicillium chrysogenum on synthetic media [with summary in English]. Mikrobiologiia 28 no.1:52-57 Ja-F '59. (MIRA 12:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.
(PENICILLIUM, culture,
chrysogenum, on synthetic media (Rus))

MEL'NIKOVA, A.A.; VESELOV, N.M.

Paper chromatography of antibiotics produced by Actinomyces violaceus strains 452-7 and 1212. Antibiotiki 5 no.2:9-13 Mr-Ap '60. (MIRA 14:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.
(ANTIBIOTICS) (ACTINOMYCES)

SEMENOVA, V.A.; IL'INSKAYA, S.A.; TAYG, M.M.; MEL'NIKOVA, A.A.; SHNEYERSON, A.N.; BUYANOVSKAYA, I.S.; VESELOV, N.M.

Study of some actinomycetes forming closely related antibiotics. Antibiotiki 8 no.1:12-18 Ja'63. (MIRA 16:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.
(ACTINOMYCES) (BACTERIOLOGY—CULTURES AND CULTURE MEDIA)
(ANTIBIOTICS)

GERMANOVA, K.I.; GONCHARSKAYA, T.Ya.; DELOVA, I.D.; IL'INSKAYA, S.A.; MEL'NIKOVA, A.A.; ORESHNIKOVA, T.P.; RESHETOV, P.D.; RUDAYA, S.D.; SINITSYNA, Z.T.; SOLOV'YEVA, N.K.; KHOKHLOV, A.S.

Components and antiviral properties of some streptothricin antibiotics. Antibiotiki 10 no.2:117-122 F '65.

(MIRA 18:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov i Institut khimii prirodnykh soyedineniy AN SSSR, Moskva.

GEL'MAN, N.E.; BRESLER, P.I.; RUZIN, B.N.; GREK, N.V.; SHEVELEVA, N.S.; MEL'NIKOVA, A.A.

New method for the automatic microdetermination of carbon and hydrogen in organic compounds. Dokl. AN SSSR 161 no.1:107-110 Mr '65. (MIRA 18:3)

1. Institut elementoorganicheskikh soyedineniy AN SSSR i Spetsial'noye konstruktorskoye byuro analiticheskogo priborostroyeniya AN SSSR. Submitted July 29, 1964.

MEL'NIKOVA A.A.

5

Determination of the coefficients of crystallization of radium in the case of its distribution between the melt and crystals of barium chloride and of lead chloride. V. P. Klekman, A. A. Mel'nikova, and M. I. Ursynina. *Bull. Acad. Sci. U.S.S.R., Div. Chem. Sci.* 1954, 827-30(Engl. translation).—See *C.A.* 49, 14430h. P.M.R.

MEL'NIKOVA, A.A.

USSR/ Chemistry - Inorganic chemistry

Card 1/1 Pub. 40 - 1/27

Authors : Klokman, V. R.; Mel'nikova, A. A.; and Yryupina, N. I.

Title : The crystallization coefficients of Ra during its distribution between fusion and $BaCl_2$ and $PbCl_2$ crystals

Periodical : Izv. AN SSSR. Otd. khim. nauk 6, 953-957, Nov-Dec 1954

Abstract : The crystallization coefficients of Ra during its distribution between the fusion and $BaCl_2$ and $PbCl_2$ crystals was experimentally determined. A greater proximity between the Ra and Ba properties was observed only at high temperatures. The enrichment of the solid phase by the Ra was not observed in the systems investigated. It was found that $RaCl_2$ crystallizes in the fusion in the form of an anhydrous chloride and demonstrates the very same characteristics as $BaCl_2$. Nine references : 6 USSR and 3 German (1879-1953). Tables.

Institution : Acad. of Sc. USSR, The V. G. Khlopin Radium Institute

Submitted : February 12, 1954

KLOKMAN, V. R., MEL'NIKOVA, A. A. and POLIAKOV, V.A. (Radium Inst. im V. G. Khlopin)

"Investigation of the Various Factors Influencing the Crystallization Coefficient of Radium in Its Distribution Between Fused and Crystalline Lead Chl r. Ie

KLOKMAN, V.R.; MEL'NIKOVA, A.A.

Formation of abnormal mixed BaF_2 - LaF_3 crystals in the crystallazation of lanthanum fluoride melt. Radiokhimiia 1 no.3:241-246 '59. (MIRA 12:10)

(Lanthanum fluoride) (Crystals--Growth)

KLOKMAN, V.R.; LOVTSYUS, G.P.; MEL'NIKOVA, A.A.

Distribution of the radioactive isotope of lead, ThB, between the melt and crystals of alkali metal halides. Radiokhimiia 1 no.3:247-252 '59. (MIRA 12:10)
(Lead--Isotopes) (Alkali metal halide crystals)

KLOKMAN, V.R.; MEL'NIKOVA, A.A.

Effect of the chemical nature of the second component of a binary system on the coprecipitation of radium with barium chloride. Radiokhimiia 1 no.5:514-520 '59. (MIRA 13:2)
(Radium) (Barium chloride)

KLOCKMAN, V.R.; MEL'NIKOVA, A.A.; MYAKISHEV, K.G.; SMIRNOV, V.S.

Effect of complex formation in the melt on the crystallization coefficient of rubidium chloride in the systems KCL - LiCl, KCl - $BaCl_2$, KCl - $CaCl_2$. Radiokhimiia 2 no.4:386-392 '60. (MIRA13:9)

(Rubidium chloride) (Crystallization) (Chlorides)

S/186/60/002/006/025/026
A051/A129

AUTHORS: Klokman, V. R.; Mel'nikova, A. A.

TITLE: The effect of the difference in radii of the cations of micro- and macrocomponents on the crystallization coefficient D value. KCl-NaCl-$BaCl_2$ system.

PERIODICAL: Radiokhimiya, v. 2, no. 6, 1960, 753 - 754

TEXT: The authors point out that in previous works (Ref. 1: V. R. Klokman and S. I. Avilov, Radiokhimiya, 2, 4, 394, 1960. Ref. 2: V. R. Klokman, S. A. Payusov, Radiokhimiya, 2, 5, 624, 1960, Ref. 3: V. R. Klokman, Yu. M. Garmashev, Radiokhimiya ..., ..., 6?, 1959) it was shown that the less the difference in the radii of micro- and macrocomponent cations, the greater the value of the crystallization coefficient D. In this work a different system was studied namely, the crystallization coefficient for NaCl labeled with Na^{24} was determined with its distribution between the melt and the crystals of KCl in the binary system KCl--$BaCl_2$. The data submitted show that the crystallization coefficient of NaCl is less than that of RbCl (Ref. 4: V. R. Klokman, A. A. Mel'nikova, K. G. Myakishev

Card 1/2

The effect of the difference in radii of ....

and V.S. Smirnov, Radiokhimiya, 2 [illegible], 286, 290) at the same temperatures. Thus, it is concluded that the relation noted previously between the crystallization coefficient and the radii difference of the micro- and macro-components was proven to be valid for other systems also. It is pointed out that in this case, similar to that of (Ref. 4) the crystallization coefficient of the micro-component was found not to depend on the composition, nor on the melt temperature, in spite of the presence of a congruently melting compound in this system. There is 1 table and 4 Soviet-bloc references.

SUBMITTED [illegible]

Card 2/2

KATSNEL'SON, F.Ya.; MEL'NIKOVA, A.F.

Results of treating epilepsy in children with trimethine; catamnestic data. Zhur.nevr. i psikh. Supplement:82-83 '57. (MIRA 11:1)

1. Dispansernoye otdeleniye dlya detey i podrostkov pri psikhonevrologicheskoy bol'nitse imeni Solov'yeva (glavnyy vrach V.D. Denisov).
(EPILEPSY) (OXAZOLIDINEDIONE)

MEL'NIKOVA, A.F.

"Enuresis; a clinical and genetic study" [in English] by B. Hallgren. Reviewed by A.F. Mel'nikova. Zhur.nevr. i psikh. 58 no.7:892-893 '58 (MIRA 11:7)

(URINE--INCONTINENCE)

VERENINOVA, N.K.; SMIRNOVA, Ye.I.; KALACHEVA, N.F.; KUZNETSOVA, N.I.; MEL'NIKOVA, A.F.; DOBROTSEVETOVA, T.Ya.

Effectivness of complex vaccination with live vaccines against plague, tularemia, brucellosis, and anthrax. Report No.2: Intensity of immunity in complex vaccination of guinea pigs against intratracheal infection. Zhur.mikrobiol.,epid.i immun. 30 no.11:19-24 N '59. (MIRA 13:3)

1. Iz Gosudarstvennogo nauchno-issledovatel'skogo instituta mikrobiologii i epidemiologii yugo-vostoka SSSR.
(PLAGUE, immunol.)
(TULAREMIA, immunol.)
(BRUCELLOSIS immunol.)
(ANTHRAX immunol.)
(VACCINATION)

VAL'DNER, Oleg Anatol'yevich; SHAL'NOV, Aleksandr Vsevolodovich; MEL'NIKOVA, A.I., red.; VLASOVA, N.A., tekhn. red.

[Electromagnetic fields in septate wave guides of electron accelerators] Elektromagnitnye polia v diafragmirovannykh volnovodakh lineinykh elektronnykh uskoritelei. Moskva, Gosatomizdat, 1963. 65 p. (MIRA 17:1)

TARASENKO, Natal'ya Yuvenal'yevna; MEL'NIKOVA, A.I., red.; POPOVA, S.M., tekhn. red.

[Industrial hygiene in handling thorium] Gigiena truda pri rabote s toriem. Moskva, Gosatomizdat, 1963. 86 p. (MIRA 17:1)

(Thorium--Safety measures)

LEVIN, Vasiliy Yevseyevich; MEL'NIKOVA, A.I., red.; MAZEL', Ye.I., tekhn. red.

[Nuclear reactors] IAdernye raktory. Moskva, Gosatomizdat. 1963. 303 p. (MIRA 16:11)
(Nuclear reactors)

IRODOV, Igor' Yevgen'yevich; MEL'NIKOVA, A.I., red.; MAZEL', Ye.I., tekhn. red.

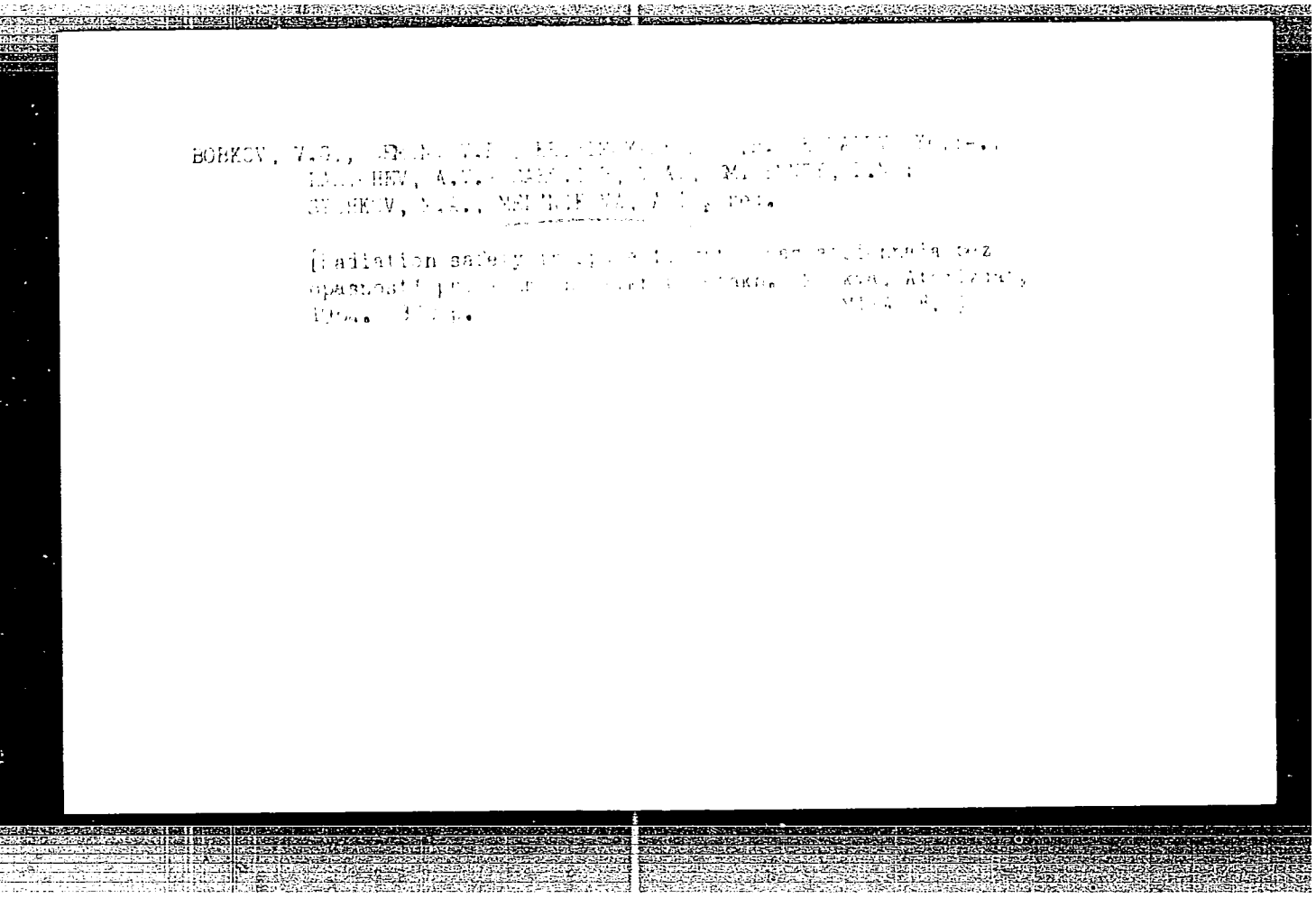
[Problems in atomic and nuclear physics] Sbornik zadach po atomnoi i iadernoi fizike. Izd.3., perer. i dop. Moskva, Gosatomizdat, 1963. 343 p. (MIRA 16:12)
(Nuclear physics--Problems, exercises, etc.)

KRUPCHATNIKOV, Valentin Mikhaylovich; MEL'NIKOVA, A.I., red.

[Ventilation during work involving radioactive substances] Ventiliatsiia pri rabotakh s radioaktivnymi veshchestvami. Moskva, Atomizdat, 1964. 199 p. (MIRA 17:12)

ZHERLOVOY, Aleksandr Ivanovich; LATYSHEV, Georgiy Dmitriyevich; MEL'NIKOVA, A.I., red.

[Nuclear magnetic resonance in a flowing liquid] IAdernyi magnitnyi rezonans v protochnoi zhidkosti. Moskva, Atomizdat, 1964. 252 p. (MIRA 17:6)



BOBKOV, V.G., [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

NIFONTOV, B.I.; PROTOPOPOV, D.D.; SITNIKOV, I.Ye.; KULIKOV, A.V.; MEL'NIKOVA, A.I., red.

[Underground nuclear explosions; problems affecting industrial nuclear explosions] Podzemnye iadernye vzryvy; problemy promyshlennykh iadernykh vzryvov. Moskva, Atomizdat, 1965. 159 p. (MIRA 18:6)

KOMAROVSKIY, Aleksandr Nikolayevich, doktor tekhn. nauk, prof.;
MEL'NIKOVA, A.I., red.

[Construction of nuclear reactors] Stroitel'stvo iadernykh ustanovok. Izd.2., dop. i perer. Moskva, Atomizdat, 1965. 382 p. (MIRA 18:12)

SEMENKOVA, A.V.; BELOVA, Z.N.; MEL'NIKOVA, A.I.

Discussion of M.A.Shvechikov's article "Let us improve economic planning." Vest. sviazi 23 no.10:27-29 O '63. (MIRA 16:12)

1. Nachal'nik planovo-finansovogo otdela Ministerstva svyazi AzerSSR (for Semenkova). 2. Nachal'nik planovogo otdela Saratovskogo pochtamta (for Belova). 3. Starshiy ekonomist Dzhankoyskogo uzla svyazi Krymskoy oblasti (for Mel'nikova).

MEL'NIKOVA, A.M.

Fungi in the city of Rostov-on-Don and Rostov Province. Vest.derm. i ven. 31 no.2:47-48 Mr-Ap '57. (MIRA 12:12)

1. Iz gorodskogo kozhno-venerologicheskogo dispansera.
(ROSTOV PROVINCE--DERMATOPHYTES)

L 12101-66 EWT(1)

ACC NR: AP6000526 SOURCE CODE: UR/0070/65/010/006/0791/0799

AUTHOR: Chernov, A. A.; Mel'nikova, A. M.

ORG: Institute of Crystallography, AN SSSR (Institut kristallografii AN SSSR)

TITLE: Growth of crystals from a solution in the presence of an extraneous spherical particle

SOURCE: Kristallografiya, v. 10, no. 6, 1965, 791-799

TOPIC TAGS: single crystal growing, crystal imperfection

ABSTRACT: One of the ways for introducing impurities into growing crystals is to generate channels under foreign particles located within the solution or melt near the surface of the crystal. The present paper investigates theoretically the growth of the face of the crystal from a solution in the presence of a spherical particle. The concentration distribution in the solution and the crystallization conditions are stationary (the concentration satisfies the Laplace equation). After formulating the general problem concerning the crystal growth under these conditions, the authors determine the concentration field caused by the presence of the sphere at a fixed distance from the plane crystallization front. The possible incorporation of the mother liquor under the sphere due to a lack

Card 1/2 UDC: 548.52

L 12101-66
ACC NR: AP6000526

of sufficient feed is estimated, and the results are found in qualitative agreement with experiments comprising small-size spheres. The reasons for the experimentally observed strong dependence of impurity incorporation on supersaturation are also discussed. Orig. art. has: 30 formulas and 5 figures.

SUB CODE: 20 / SUBM DATE: 29May65 / ORIG REF: 007

HW

Card 2/2

L 12099-66 EWT(l)/EWT(m)/T/EWP(t)/EWP(b)/EWA(c) LJP(c) JD/GG

ACC NR: AP6000527 SOURCE CODE: UR/0070/65/010/006/0800/0804

AUTHOR: Chernov, A. A.; Mel'nikova, A. M.

ORG: Institute of Crystallography, AN SSSR (Institut kristallografii AN SSSR)

TITLE: Growth of crystals from a melt in the presence of an extraneous spherical particle

SOURCE: Kristallografiya, v. 10, no. 6, 1965, 800-804

TOPIC TAGS: single crystal growing, crystal imperfection

ABSTRACT: This paper, which is a continuation of a preceding article (Kristallografiya, 10, 6, 1965), investigates theoretically the growth of crystals from melts in the presence of an extraneous spherical particle located over the crystalline surface. The growth is assumed to occur under stationary conditions, and following the formulation of the problem, the authors determine the temperature field of the growing crystals in the presence of a sphere at a fixed distance from the plane crystallization front. A discussion of the results shows that during the interaction between the particle and the crystal the sphere either accelerates the growth of the crystal or a channel is formed within the crystal under the sphere. Orig. art. has: 23 formulas and 3 figures.

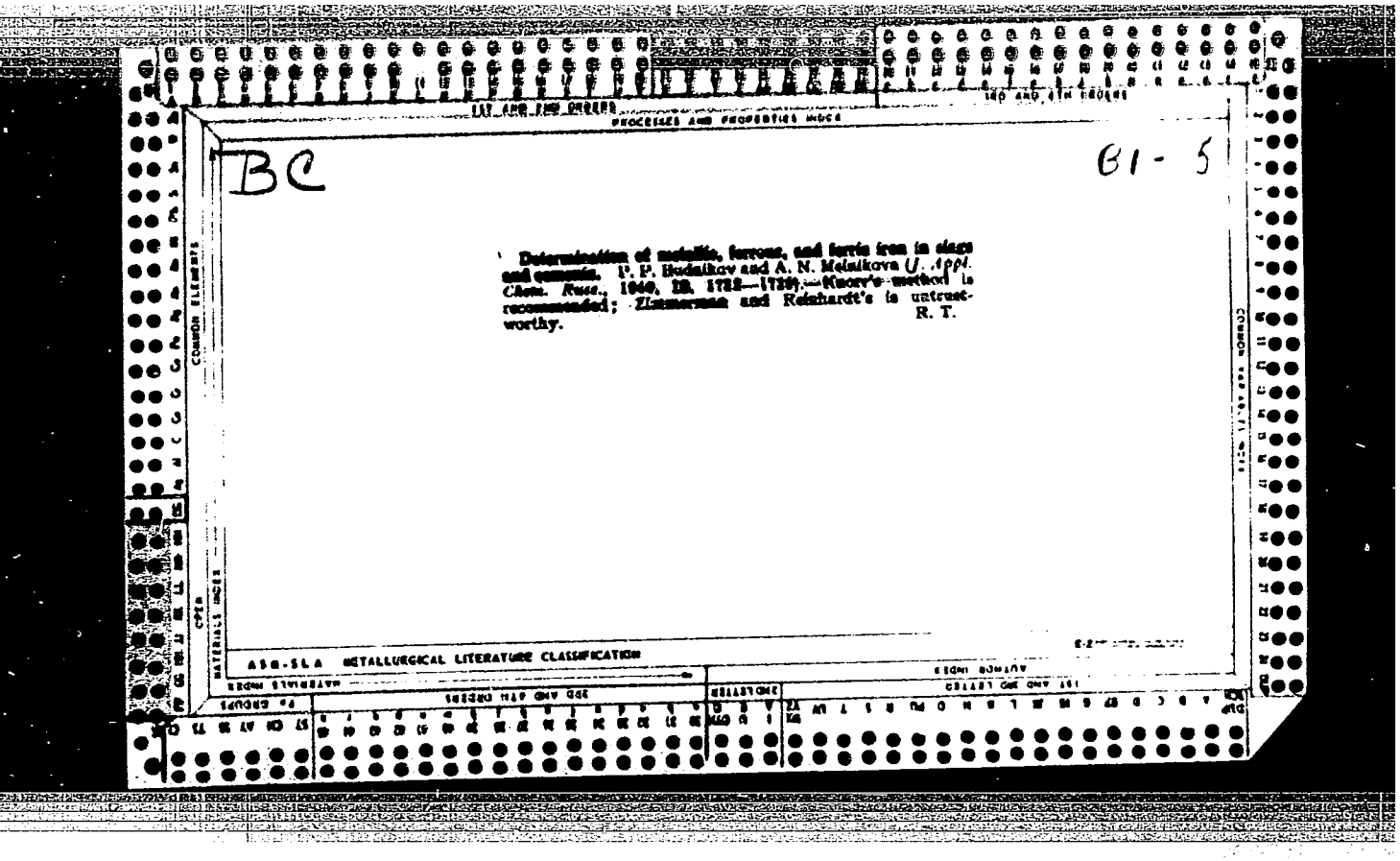
Card 1/2 UDC: 548.52

L 12099-66

ACC NR: AP6000527

SUB CODE: 20 / SUBM DATE: 29May65 / ORIG REF: 002

Card 2/2



MEL'NIKOVA, A. N.

(2) 3

Silica gel from Khar'kov tripoli clay deposit (*zelenki*). S. N. KUZ'MENKO AND A. N. MEL'NIKOVA. *Zhur. Prikład. Khim.*, 26 [12] 1317–20 (1953).—The material contains up to 80% SiO_2 and has high sorption characteristics. Silica gel was extracted by boiling with 5 *N* KOH. The gel met the requirements of Russian standard OST 3956–47.

B.Z.K.

Mel'nikova, N. N.

USSR

Silica gel from the infusorial, clayey soils of the Kharkov region. S. N. Kuz'menko and A. N. Mel'nikova. *J. Appl. Chem. U.S.S.R.* 26, 1257-9(1953)(English translation). —See *C.A.* 49, 538g. H. L. H.

MEL'NIKOVA, A N

24-9-12/33

AUTHORS: Losev, B. I., Mel'nikova, A. N. and El'piner, I. Ye.(Moscow)

TITLE: Halogenation and extraction of germanium from coal inside an ultrasonic wave field. (Galoidirovaniye i izvlecheniye germaniya iz ugley v pole ul'trazvukovykh voln).

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, 1957, No.9, pp. 90-95 (USSR)

ABSTRACT: Coal ash does contain a certain amount of germanium. In earlier work (Refs.1-4), the authors investigated the ash of clarain and vitrain and, particularly, of fusain. Since ultrasonics have dispersion and chemical effects, it was obvious to assume that it is possible to intensify by means of ultrasonics halogenation reactions which represent an important stage in the process of extraction of rare elements from the coal substance. In the experiments the coal was crushed to a fraction passing through a sieve with holes of 0.25 mm. The studied coal contained not over 0.0006% of germanium (relative to the ash content); only in a single specimen did the germanium content amount to 0.00175%. Bromination of the coal was effected in a three-neck flask containing an agitator. A certain quantity of water was added to the coal and the mixture was carefully intermixed. Following that, brome

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Halogenation and extraction of germanium from coal inside an ultrasonic wave field.

was introduced in drops and the bromination was continued for a specified time whilst continuously mixing the reaction mixture. Then, the coal was separated from the liquid phase in a Buchner funnel and washed from the adsorbed brome by distilled water until the washing water showed a negative reaction from the point of view of haloid content. Following that, the coal was dried at 80°C and analysed and the quantity of germanium in the filtrate was determined by means of a method developed by Nazarenko, V. A. and Ravitska, R.V. Chlorination was effected whilst feeding chlorine at a speed of two bubbles per second. For separating the germanium it is extracted from the analysed aqueous solutions in the form of germanium tetrachloride from 9-normal hydrochloric acid with carbon tetrachloride. The extract of germanium tetrachloride in carbon tetrachloride is effected by means of water which is then acidified and gelatine and phenyl fluoride are added. Ultrasonics of 380 and 750 kc/sec were supplied from a piezo-quartz plate of 50 mm dia. with a radiation intensity of 8W/cm^2 of the radiating surface. The distance between the reaction vessel and the piezo-quartz plate

Halogenation and extraction of germanium from coal inside an ultrasonic wave field.

equalled 15 to 16 cm. Halogenation inside an ultrasonic field was effected for coal of 0.25 to 0.10 mm fractions in an aqueous medium and the extraction of germanium by halogenation of coal was investigated inside an ultrasonic field as well as the extraction of germanium from coal under the effect of an ultrasonic field without halogenation. The results are plotted in graphs. An intensification was observed of the process of halogenation during irradiation with ultrasonics and this is primarily attributed to the fact that the presence in the aqueous solution of haloid is partly activated by the ultrasonics, which leads to the appearance of atomary chlorine or brome which is chemically more active than the molecular haloid. It is pointed out that activation of certain gases in the ultrasonics field is possible only in the presence of cavitation; speeding up of the halogenation process is in principle possible at such an intensity of the ultrasonics at which cavitation phenomena will inevitably occur; under certain conditions cavitation will set in approximately for a radiation intensity of 0.3 W/cm^2. In the here described experiments, the irradiation intensity was 8 W/cm^2, however, the irradiation was effected in glass vessels

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which were submerged into an "ultrasonic" fountain, as, according to Bergmann, the surface of glass reflects about 80% of the incident ultrasonic energy. Of particular interest is the fact of separation of germanium from the coal inside an ultrasonics field in absence of a haloid in the reaction mixture. The hypothesis is expressed that separation of germanium from coal is appreciably affected by mechanical forces which are linked with the appearance and collapse of cavitation bubbles which generate shock waves capable of breaking up the coal substance, provided that the cavitation cavity forms at a distance not exceeding a few microns from the coal particle. The results throw a new light on the intensified separation of germanium during simultaneous irradiation and halogenation of coal in presence of slight quantities of carbon tetrachloride. The selection of this compound is not accidental since it is known that traces of carbon tetrachloride intensify oxidation processes inside an ultrasonics field, as a result of which atomary Cl splits off easily. Intensification of the chemical processes in presence of CCl_4 is additionally explained by the fact

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Halogenation and extraction of germanium from coal inside an ultrasonic wave field.

that, being broken up into fine particles and scattered throughout the entire volume of the water, it produces nuclei of easy disruption of the continuity of the irradiated liquid under the influence of ultrasonic waves, i.e. it improves the conditions for the formation of cavitation. On the basis of the obtained results, it is concluded that the halogenation of coal proceeds much more rapidly inside an ultrasonic field than under ordinary conditions; the process of brominations proceeds about 160 times faster inside an ultrasonic field than without such a field. Depending on the reaction conditions, bromination of coal inside an ultrasonic field permits extraction of 50 to 100% of the germanium contained in the coal charge. Carbon tetrachloride has a catalytic effect on the processes of separation of germanium from coal by the method of bromination inside an ultrasonic field. The experiments also showed that under certain conditions it is possible to extract germanium from coal without simultaneous halogenation. There are 4 figures and 4 Slavic references.

Card 5/5

SUBMITTED: June 5, 1957.
AVAILABLE: Library of Congress.

AUTHORS: Losev, B. I. , El'piner, I. Ye. , Mel'nikova, A. N.

TITLE: On the Halogenation of Coals Under Influence of Ultrasonic Waves (O protsesse galoidirovaniya ugley pod deystviyem ul'trazvukovykh voln)

PERIODICAL: Doklady Akademii Nauk SSSR, 1[illegible], Vol. [illegible], [illegible] (USSR)

ABSTRACT: By extraction of rare metals from coals the problems of halogenation of coals have become acute, because this is the main method applied for this purpose. However, exact data as to the mechanism of halogenation are lacking, and the present methods are not characterized by a high yield. The process of halogenation is heterogeneous. It takes place at the boundary of two phases : Solid coal - liquid or gaseous halide. Naturally, for this purpose the solid phase with larger surface and higher dispersion would offer greater advantages. In addition, increase in the chemical activity of the reacting halide should accelerate the speed of the reaction. These requirements are largely satisfied by a new method

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On the Halogenation of Coals Under Influence of Ultrasonic Waves

devised by the authors of the paper under review, namely the use of ultrasonic waves which increase by several times the original amount the reaction yield and the combination reaction of coal with halides. The bromination takes place under relatively mild conditions of acceleration, i.e. under a relatively low intensity of the ultrasonic waves. These waves also accelerate a reaction with chlorine. A piezo-quartz generator was used. The quantity of bromine absorbed by the coal was determined with the aid of a micromethod, devised in the Institute of the authors of the present paper (see under "A" below). It can be seen from the results that without being exposed to ultrasonic waves the coal absorbed 2.68 % of its dry weight of bromine during the interval of seven minutes, whereas in the ultrasonic wave field, with the time interval remaining the same, this amount increased to 47.3 %. These data are contained in Table Nr 1 of the paper under review. The latter value (47.3 % in the ultrasonic wave field) corresponds to twenty hours of bromination at 0° without exposure to ultrasonic waves; in other words: the process of bromination is accelerated to 100 times of its original efficiency. A chlorination (Table Nr 2 of the

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On the Halogenation of Coals Under Influence of Ultrasonic Waves

paper under review) the process of absorption is accelerated almost two- and-a-half times. Rough interpretation of this acceleration: the ultrasonic waves have a dispersing effect, probably as result of mechanic forces that are created at opening and closing of cavitation bubbles. It appears that considerably mechanic forces also are produced when the pulsating frequency of the same gas bubbles coincides with the frequency of the ultrasonic oscillations (resonance phenomenon). Another possibility is the appearance of the activated halide as result of the molecular dissociation in the cavitation cavities, a phenomenon discovered for iodine (with subsequent reduction) as early as 1950. It should also be taken into account that in the cavitation cavities there appear, as result of the splitting of the "activated" water molecules, products with oxidizing effects. There are 2 tables, and 4 references, 3 of which are Soviet

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20-2-3/60

On the Halogenation of Coals Under Influence of Ultrasonic Waves

ASSOCIATION: Institute of Mineral Fuels, AS USSR
(Institut goryuchikn iskopayemykh Akademii nauk SSSR)

PRESENTED: December 4, 1956, by A. N. Frumkin, Member of the Academy

SUBMITTED: October 2, 1957

AVAILABLE: Library of Congress

Card 4/4

SOV/30-58-10-9/[illegible]

AUTHORS: Losev, B. I., Mel'nikova, A. N., Saprykin, F. [illegible]., Troyanskaya, M. [illegible]., Evlyna, F. [illegible].

TITLE: New Methods of Examining the Material Composition of Coal (Novyye metody izucheniya veshchestvennogo sostava ugley)

PERIODICAL: Vestnik Akademii nauk SSSR, 1958, Nr 10, pp 58-60 (USSR)

ABSTRACT: Research with the purpose of obtaining the most effective methods of extracting rare metals from coal was carried out at the Institut goryuchikh iskopayemykh Akademii nauk [illegible] (Institute for Mineral Fuels of the AS USSR). For this purpose, γ-rays, ultrasonics, and electro-hydro effects were used. The influence of the dose of radiation on the yield of germanium may be seen in table 1. The second method consists of ultrasonic treatment of coal during its halogenation. The results of experiments with ultrasonic treatment of coal in water are listed in table 2. A more intensive disruption of the cohesive forces of rare elements in coal is obtained by the use of electro-hydraulic effects. These experiments were carried out in the Laboratoriya elektrogidravlicheskogo effekta Leningradskogo Politekhnicheskogo instituta (Laboratory for Electro-Hydra[illegible]

Card 1/2

SOV/50-58-10-9/

New Methods of Examining the Material Composition of Coal

Effects of the Leningrad Polytechnic Institute under the direction of L. A. Yutkin. There are 2 tables.

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LOSEV, B.I.; AMMOSOV, I.I.; MEL'NIKOVA, A.N.; AMMOSOVA, Ya.M.; CHIBISOVA, K.I.; CHERNYKH, V.I.

Use of ultrasonic waves in coal bromination. Trudy IGI 8:131-141 '59. (MIRA 13:1)

(Ultrasonic waves--Industrial application)
(Coal--Analysis)

LOSEV, B.I.; MEL'NIKOVA, A.N.; SAPRYKIN, F.Ya.; YUTKIN, L.A.

Crushing coal by the electrohydraulic method. Vest. AN SSSR 29 no.6:62-65 Je '59. (MIRA 12:5)
(Coal, Pulverized) (Electric discharges)

LOSEV, B.I.; MEL'NIKOVA, A.N.; PITIN, R.N.; FAR.EROV, I.L.

Volatility of germanium in coals. Trudy IGI 13:164-166 '60.
(MIRA 14:5)

(Germanium) (Coal)

IONTOV, A.S.; MEL'NIKOVA, A.P.

Development of senile plaques. Vop. psikh. i nevr. no.9: 435-445 '62. (MIRA 17:1)

1. Institut fiziologii AN SSSR i 3-ya psikhiatricheskaya bol'nitsa Leningrada.

YARIKOV, G.M.; MEL'NIKOVA, A.S.; NIKITINA, G.P.

Carboniferous sediments in western Stalingrad Province. Trudy VNIGNI no. 19:112-151 '59. (MIRA 13:12)
(Stalingrad Province--Geology, Stratigraphic)

5(2)
AUTHORS: Cherkesov, A. I., Mel'nikova, A. S. SOV/32-25-2-5/78

TITLE: A Trilonometric Method of Determining Bismuth in Multi-component Alloys (Trilonometricheskiy metod opredeleniya vismuta v mnogokomponentnykh splavakh)

PERIODICAL: Zavodskaya Laboratoriya, 1959, Vol 25, Nr 2, pp 140-141 (USSR)

ABSTRACT: The article describes an accelerated trilonometric method in which hematoxylin (Ref 2) and gallein are used as indicators (Ref 3). A titration is carried out at pH ≅ 1 in a nitric solution, and colored compounds of Bi, Sb, and Sn are formed. Up to a 5 % Fe^{3+} content the bismuth titration with trilon is not disturbed, at a content of 15 % Fe^{3+} sodium fluoride has to be added to the solution. The same applies to antimony, while tin is transformed into β-stannic acid at the dissolution of the alloy in nitric acid. The precipitation of stannic acid does not disturb the titration but retards the titration process somewhat before the point of equivalence is reached, which can be seen in the presence of hematoxylin. In comparison with the method described bismuth was determined gravimetrically in the form of BiOBr in artificial metal mixtures and easily meltable alloys (Table 2). When gallein

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is used analogous results are obtained. However, the color change at the point of equivalence is less obvious. The analysis process is described. There are 2 tables and 3 references, 2 of which are Soviet.

ASSOCIATION: Astrakhanskiy tekhnicheskiy institut rybnoy promyshlennosti i khozyaystva (Astrakhan Technical Institute of the Fish Industry and Economy)

MEL'NIKOVA, A.S.; CHERKESOV, A.I.

Trilonometric determination of thorium with hematoxylin as indicator. Zhur.VKHO 6 no.4:469-470 '61. (MIRA 14:7)

1. Astrakhanskiy institut rybnoy promyshlennosti i khozyaystva.
(Thorium—Analysis) (Hematoxylin)

MEL'NIKOVA, A.S.; GOGINA, Ye.A.; NIKITINA, G.P.; MOROZOVA, R.I.

Stratigraphy and lithology of Carboniferous sediments in Volgograd Province. Trudy VNIING no.1:39-90 '62. (MIRA 16:10)

MEL'NIKOVA, A. Ye

BII-6

Use of chloramine in dyeing and finishing. E. I. Lebedeva and A. E. Melnikova (*Tekst. prom.*, 1950, No. 11, 41).—The colour of grey cotton fabrics made from low-grade cotton containing husk is improved by treatment in a liquor containing 10 g. per l. of chloramine T and 20 g. per l. of NaOH at 90–95° before dyeing. Procedure is described.

E. B. Uvarov

1. MEL'NIKOVA, A. YE. - YEZHOVA, A. YE.
2. USSR (600)
4. Cotton Finishing
7. Emulsifying dyed cotton, Tekst.prom. 12 no. 12, 1952

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

MEL'NIKOVA, A. YE.

NOVIKOV, N.V.; GOLUBEV, N.V.; MEL'NIKOVA, A.Ye.

Emulsions for heavy suiting. Tekst.prom. 14 no.10:48 O '54.
(MLRA 7:10)

1. Zaveduyushchiy krasil'no-otdelochnoy fabrikoy Yegor'yevskogo melanzhevogo kombinata (for Novikov). 2. Zamestitel' zaveduyushchego fabrikoy (for Golubev). 3. Zaveduyushchiy khimlaboratoriyey (for Mel'nikova).
(Sizing (Textile))

GAIDAMOVICH, S.Ya.; OBUKHOVA, V.R.; MELNIKOVA, E.E.

Tick-borne and Japanese B encephalitis virus complement-fixing antigens from tissue culture. Acta virol. 6 no.3:231-238 My '62.

1. D.I. Ivanovsky Institute of Virology, U.S.S.R. Academy of Medical Sciences, Moscow.
(ENCEPHALITIS JAPANESE B virol) (TISSUE CULTURE)
(COMPLEMENT)

GERSHMAN, R.B.; MEL'NIKOVA, E.N.

Elasticity modulus of carbon steel. [Sbor. trud.] Nauch.-issl. inst.met. no.4:151-153 '61. (MIRA 15:11)
(Steel--Analysis)
(Elasticity)

OCHERETYANYY, A.; MEL'NIKOVA, F.

Mechanized removal of straw and chaff. Tekh.v sel'khoz. 21 no.8:18-23 Ag '61. (MIRA 14:7)
(Straw) (Grain--Harvesting)

89807

S/110/61/000/002/001/009
E035/E517

9.7000

AUTHORS: Mel'nikova, F.M., Engineer, Poznyak, E.L., Candidate of Technical Sciences, Raykhlina, B.B., Engineer and Rozenknop, V.D., Engineer

TITLE: The Calculation of Critical Speeds of Large Turbo-Alternators with the Aid of Digital Computers

PERIODICAL: Vestnik elektropromyshlennosti, 1961, No.2, pp.1-8

TEXT: Two difficulties arise in the determination of critical speeds of large machines; firstly, that the values of the various constants to be used in the computation are not always accurately known; and, secondly, that for shafts with many rotating masses and bearings, the numerical computations become exceedingly lengthy. The authors have solved the second problem by using a computer. For large machines the analysis should take into account the 'elasticity' of the oil films in the bearings as well as the masses of the bearings and the elastic constants of their anchorages. These elastic constants are usually different in the horizontal and vertical directions. On the other hand, the analysis can assume that the shaft is everywhere truly circular, and may neglect forces along the shaft, and gyroscopic effects. The analysis depends on

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The Calculation of Critical Speeds ....

finding two modes of oscillation of the stationary shaft in two independent directions (corresponding to the horizontal and vertical elastic constants of the bearings); then the critical speeds of the shaft will be equal to the frequencies of these two modes. The partial differential equation for a shaft in oscillation is:

$$\mu(x) \frac{\partial^2 y(x,t)}{\partial t^2} + \frac{\partial^2}{\partial x^2}\left[EI(x) \frac{\partial^2 y(x,t)}{\partial x^2}\right] = 0, \quad (2)$$

where x is the distance along the shaft, $\mu(x)$ is the mass/unit length of the shaft at point x, $EI(x)$ is the stiffness at point x, $y(x,t)$ is the deflection of the shaft at point x and time t. The general solution of Eq.(2) is of the form:

$$y(x,t) = y(x) \cos \Omega t \quad (3)$$

where Ω is a critical frequency of speed. With this general solution we can derive an ordinary differential equation:

$$\frac{d^2}{dx^2}\left[EI(x) \frac{d^2 y(x)}{dx^2}\right] - \mu \Omega^2 y(x) = 0. \quad (4)$$

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and, with the aid of the differential relations

$$\frac{dM}{dx} = V; \qquad \frac{dy}{dx} = \theta, \tag{5}$$

where M is the bending moment; V is the shear force, θ is the slope of the shaft, we can express Eq.(4) as two separate second-order differential equations:

$$\frac{d^2y}{dx^2} = \frac{d\theta}{dx} = \frac{M}{EI} \tag{6}$$

and

$$\frac{d^2M}{dx^2} = \frac{dV}{dx} = \mu\Omega^2 y. \tag{7}$$

The boundary conditions for the solution of these two equations can be expressed by considering the bearings at the end of the shaft; there are initially two unknowns at each end. From many possible methods of solution, the following was chosen: Eqs. (6) and (7) are

approximated by finite difference expressions. A value of frequency ω which is within the range being investigated, but is not, in general, equal to a critical frequency, is selected, and the equations are solved twice. For the first solution, one of the unknown boundary conditions at the left hand end of the shaft is given an arbitrary value of 1 and the other is made equal to 0. For the second solution, these boundary conditions are reversed. A linear combination of these two solutions is examined to see whether it satisfies the boundary conditions at the right hand end of the shaft. This will not, in general, be the case; for the boundary conditions will only be satisfied if $\omega = \Omega$. In general, therefore, a function $\Phi(\omega)$, which has the properties that

$$\Phi(\Omega) = 0, \text{ and } \Phi(\Omega + \delta\Omega) \cdot \Phi(\Omega - \delta\Omega) < 0$$

is calculated. Starting at the low end of the frequencies to be investigated, the equations are solved and Φ calculated for steadily increasing values of ω. The presence of a critical speed in the neighbourhood of the current value of ω is detected by a change in the sign of $\Phi(\omega)$. The exact value of the critical frequency can

then be located by searching between the last two values of ω with successively smaller increments or decrements in ω. A root is found by one of two criteria: a) that $|\Delta\omega| < \varepsilon$, or b) that $|\Phi(\omega)| < \varepsilon_1$. In the actual example solved, the shaft is represented by a finite approximation consisting of a number of masses connected by a flexible but mass-less shaft. Using recurrence relations for variables such as the shear force and bending moment at the position of the i-th mass in terms of these variables at the (i-1)th mass, and the constants associated with the (i-1)th mass, the finite difference equations can be solved: for example, the recurrence relation for the shear force at the i-th mass is:

$$V_i = V_{i-1} + m_{i-1} y_{i-1} \omega^2 \qquad (11)$$

where m_i is the mass of the i-th mass, and y_i is the deflection of the shaft at the i-th mass. The recurrence relationships take a slightly different form at the positions of the bearings. Whenever a value of Ω is determined by this system, a calculation of the actual deflected form of the shaft is made. The critical speeds of a large turbo-generator shaft about 29 m long, comprising

a 3-stage turbine and an alternator rotor, and supported on seven bearings, were computed on a "STRELA" (СТРЕЛА) computer. The shaft was considered to consist of 122 masses, and the finite difference equations were solved in a corresponding number of steps. The flow chart for the calculation is shown in Fig.3. In the range of speeds investigated, 0 to 3800 r.p.m., the shaft was found to have 5 critical speeds for vertical oscillation, and 6 for horizontal oscillation. One of the vertical critical speeds (2850 r.p.m.) was quite close to the running speed of the shaft (3000 r.p.m.). Two of the critical speeds, including this one, were mainly due to oscillation of the rotor, and not the turbines. A separate calculation involving only the rotor showed that its own critical speeds were little affected by the presence of the turbine. The entire calculation took only 10 to 15 minutes. There are 4 figures, 2 tables and 7 references: 5 Soviet and 2 non-Soviet.

SUBMITTED: May 12, 1960

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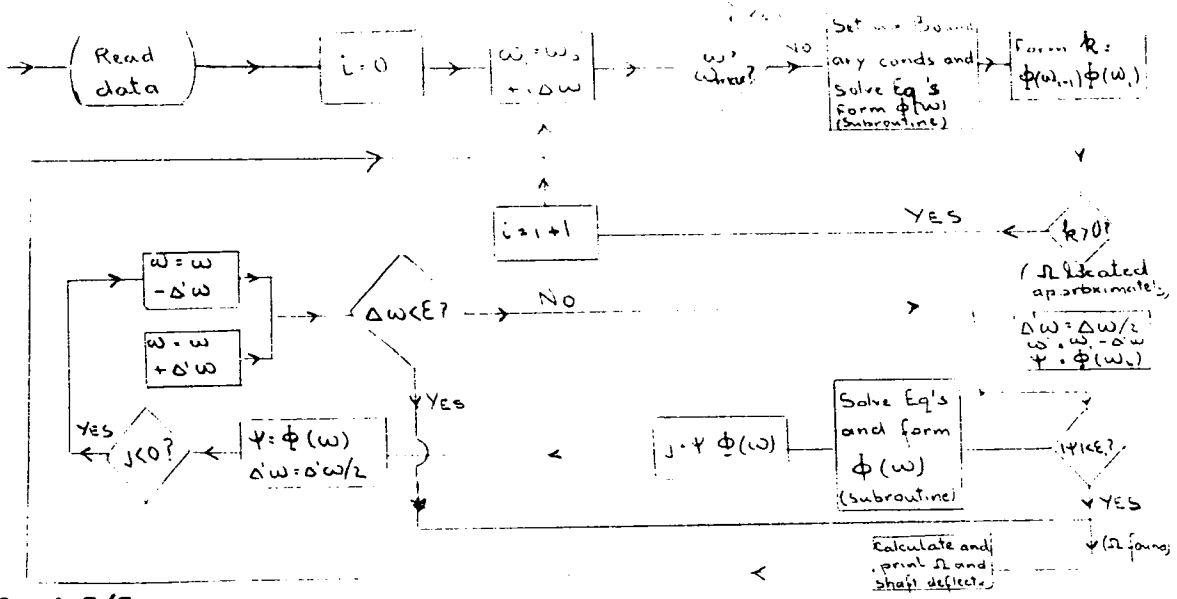
S/110/61/000/002/001/009
E035/E517

The Calculation of Critical Speeds



Card 7/7

MEL'NIKOVA, G. G.

15(0)

SOV/131-59-1-9/12

AUTHORS: Karklit, A. K., Potemkin, P. S.

TITLE: Conference of Young Specialists (Konferentsiya molodykh spetsialistov)

PERIODICAL: Ogneupory, 1959, Nr 1, pp 47-47 (USSR)

ABSTRACT: This conference of young specialists of the Vsesoyuznyy institut ogneuporov (All Union Institute of Refractories) was held in Leningrad on November 13-14, 1958, with the participation of representatives of the youth workers and the Ukrainskiy institut ogneuporov (Ukrainian Institute of Refractories). The conference should represent a show of young engineers and technicians. N. P. ? ?leyev, head of the Institute, outlined in his opening speech the work of young specialists of various special branches, designating it as successful. Further, the following reports are mentioned:
V. G. Yeger spoke about manufacturing methods of superstable pantiles made of boric siliceous rocks (borovichskaya "kremnevka").
N. V. Meshalkina reported on test results of the properties of magnesium solutions on liquid glass.
I. V. Vishnevskiy (UNIIO) reported on the dynamic method of determination of the modulus of elasticity at temperatures up to 1300-1400°.
G. G. Mel'nikova spoke about the examination of the changes of phase composition of worn-out refractory magnesite-chromite products.
N. V. Semkina reported on elaboration results of spectroscopic methods for the alumina content in types of clay.
V. G. Sleushch stated the causes of bar fracture of the press CM-143 by means of tensometration.
G. A. Koba used a tensometric transmitter for the automatic control of mold charging on the press SM-143.
V. M. Lebedev reported on the working out of the design for a new furnace cart.
V. I. Shron reported on sample taking devices of a new system.
A. M. Levin reported on the design of water supply and canalization.
M. I. Perel'son dealt with questions of air dust collection.
M. M. Perel'muter, Ye. A. Grechneva and others submitted a new variant for the foundation of a tunnel kiln.
A. I. Verdel' reported on the beginning of operation and installation of a rotary furnace at the Borovichskiy Kombinat.
As a principal default it was stated that part of the young specialists are still insufficiently familiar with the production. The measures provided for by the Party and Government to reform the universities and to strengthen their relations to works in operation shall improve the training of specialists.

Card 1/3

Card 2/3

ASSOCIATION: Vsesoyuznyy institut ogneuporov (All-Union Institute of Refractories)

Card 3/3

40282

S/131/62/000/003/001/001
B101/B144

15.2230

AUTHORS: Mel'nikova, G. ..., Goncharov, V. V. (Deceased)

TITLE: Phase composition of a worn-out high-alumina refractory material taken out of a furnace vault

PERIODICAL: Ogneupory, no. 3, 1962, 405-412

TEXT: Analyses of two samples of high-alumina refractories are reported. This material was in use for 1 1/2 year in the furnace roof of a tunnel kiln in which chromite products were burned containing a sulfite spirit liquor binder. Sample 5 came from a brick of the Semiluksky ogneupornyy zavod (Semiluki Refractory Plant) and was made up of (a) a worn-out layer of corundum 5 to 15 mm thick and glass phase containing 9.20% SiO_2, [illegible]% Al_2O_3, 3.17% Cr_2O_3, 85.64% insoluble in HF and 7% alkali in the soluble part; refractoriness > 1880°C and (b) a layer of corundum and glass phase 10 to 17 mm thick and little changed, with a refractoriness of [illegible]°C containing 11.20% SiO_2, 85.21% Al_2O_3, 0.38% Cr_2O_3, 79.6% insoluble in

Card 1/3

S/131/6[illegible]
3101/3144

Phase composition of a worn-out ...

in HF and 6% alkali in the soluble part. Sample [illegible] from [illegible] the Chasov-Yarskiy Kombinat Ogneuporov industry (Chasov-Yar Refractory Products). The worn-out layer 5 to 6 mm thick covering 2 mm thick crust, was a mixture of corundum, nepheline and [illegible] containing 21.40% SiO_2, 6[illegible].16% Al_2O_3, [illegible].55% Cr_2O_3, 46.6[illegible]% insol. and 12% alkali in the soluble part; refractoriness 1440°C. A [illegible] layer 20 mm thick was a mixture of corundum, nepheline [illegible] containing 19.1[illegible]% SiO_2, [illegible].7% Al_2O_3, 0.6% Cr_2O_3; refractoriness [illegible]. The layer made up of corundum and glass phase, [illegible] mm thick [illegible] changed, showed a content of [illegible].16% SiO_2, 68.28% Al_2O_3, 0.[illegible]% Cr_2O_3, [illegible].1% insoluble in HF and 1% alkali in the soluble part; refractoriness [illegible] 17[illegible]°C. No mullite was found in any sample, although [illegible] in refractories had contained [illegible] and [illegible] of mullite [illegible] the dry substance of the sulfite spirit liquor shows an [illegible] of 1.[illegible]% the decomposition of the mullite may be due to evaporation [illegible] solid solutions [illegible] formed between corundum, β-Al_2O_3, and [illegible]

Card 2/3

Phase composition of a worn-out ... B101, B144

chromic oxide. Conclusion: Corundum-mullite refractory materials, ... refractory material from the Chasov-Yar clay, containing less than 80-85% Al_2O_3 are not suitable for furnaces in which refractory materials having the characteristics investigated is burned. There are ... and 4 tables.

ASSOCIATION: Vsesoyuznyy institut ogneuporov (All-Union Institute of Refractory Materials)

Card 3/3

RYABENKOV, G.N.; TSYPLAKOV, S.M.; MEL'NIKOVA, G.K.

Screening for screens. Gor.zhur. no.8:72 Ag '62. (MIRA 15:8)

(Screens (Mining))

L 37651-65 EPF(c)/EPA(s)-2/EWA(h)/EWP(j)/EWT(l)/EWT(m)/T Pc-4/Pr-4/Pt-10/Pz-6/
Peb IJP(c) AT/RM

ACCESSION NR: AP5009321 S/0191/65/000/004/0046/0049

AUTHOR: Gul', V. Ye.; Shenfil', L. Z.; Mel'nikova, G. K.

TITLE: Formation of current-conducting structures in a polymeric material in a magnetic field

SOURCE: Plasticheskiye massy, no. 4, 1965, 46-49

TOPIC TAGS: organic semiconductor, semiconducting polymer, current conducting plastic, nickel, epoxy resin

ABSTRACT: A semiconducting plastic has been prepared by using a magnetic field to align nickel powder filler to form current-conducting structures in epoxy resins. The magnetic field technique was used to impart electrical conductivity to the plastic without resorting to high loads of filler which would impair mechanical properties. Finely divided or coarse-grained nickel powder or a mixture of both was dispersed in ED-5 epoxy resin plasticized with liquid thiocol, with or without polyethylenepolyamine or triethanolamine hardener. The dispersion was placed between the poles of an electromagnet and subjected to fields of 0—1200 oersted. It was found that when the magnetic field was applied during curing, it had a great effect on the resistivity of the end product. All conditions being equal, resistivity dropped by two orders of magnitude when the magnetic field was applied.

Card 1/2

L 37651-65

ACCESSION NR: AP5009321

For example, resistivities as low as 5 x 10^{-3} ohm·cm were obtained for a resin loaded with 7.5 vol% finely divided and 22.5% coarse-grained nickel. The formation and breakup of the structure in uncured resin were relaxation processes. The optimum field intensity increased with temperature. To minimize the resistivity, a pulsating magnetic field was required. The magnetic field was most effective when coarse-grained nickel powder having an elongated particle shape was used and at low curing temperatures. Orig. art. has: 5 figures and 1 table. [SM]

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: MT, SS

NO REF SOV: 003 OTHER: 006 ATD PRESS: 3221

Card 2/2

MIKHLIN, E.D.; MEL'NIKOVA, G.K.; ZAYTSEVA, V.D.; NIKITINA, S.A.; GRITSMAN, Yu.Ya.; GORBOVITSKIY, Ye.B.; KRYUCHKOVA, G.S.; KONDRAT'YEVA, N.I.

Effect of rubber on drugs and the body. Report No.1: Present-day views on the subject. Med.prom. 12 no.2:35-41 F '58. (MIRA 11:3)

1. Nauchno-issledovatel'skiy institut reziny i Nauchno-issledovatel'skiy institut eksperimental'noy khirurgicheskoy apparatury i oborudovaniya.
(RUBBER--PHYSIOLOGICAL EFFECT) (DRUG INDUSTRY)

MIKHLIN, B.D., MEL'NIKOVA, G.K., ZAYTSEVA, V.D., NIKITINA, S.A., GRITSMAN, Yu.Ya., GORBOVITSKIY, Ye.B., KRYUCHKOVA, G.S., KONDRAT'YEVA, N.I.

Effect of vulcanized rubber on drugs and the body. Report No.2. Med.prom. 12 no.8:8-12 Ag '58 (MIRA 11:9)

1. Nauchno-issledovatel'skiy institut reziny i Nauchno-issledovatel'skiy institut eksperimental'noy khirurgicheskoy apparatury i instrumentov.
(RUBBER--PHYSIOLOGICAL EFFECT)

MARTYNOVA, V.A., starshiy nauchnyy sotrudnik, kand.farm.nauk; LYUKSHENKOV, A.G., kand.farm.nauk; MEL'NIKOVA, G.K., starshiy nauchnyy sotrudnik, kand.tekhn.nauk

Study of the influence of different rubber varieties on liquid drug preparations. Part 2. Sbor.nauch.trud. TSANII 2:69-75 '61. (MIRA 16:5)

1. Laboratoriya tekhnologii lekarstvennykh form i galenovykh preparatov TSentral'nogo aptechnogo nauchno-issledovatel'skogo instituta i Nauchno-issledovatel'skiy institut rezinovykh i lateksnykh izdeliy.
(RUBBER--TESTING) (DRUGS--PRESERVATION)

MARTYNOVA, V.A., starshiy nauchnyy sotrudnik, kand.farm.nauk; LYUKSHENKOV, A.G., kand.farm.nauk; MEL'NIKOVA, G.K., starshiy nauchnyy sotrudnik, kand.tekhn.nauk

Study of the effect of rubber corks made from specimens I-51, I-54 and 25P on the quality and preservation time of acid and neutral injection solutions. Sbor.nauch.trud. TSANII 2:76-84 '61. (MIRA 16:5)

1. Laboratoriya tekhnologii lekarstvennykh form i galenovykh preparatov TSentral'nogo aptechnogo nauchno-issledovatel'skogo instituta i Nauchno-issledovatel'skiy institut rezinovykh i lateksnykh izdeliy.
(RUBBER--TESTING) (DRUGS--PRESERVATION)