

KLABAN, J.; SIMONIK, S.; BEDNARIK, M.

Control of solidification of steel castings with chills. Prace p. 9.
(SLEVARENSTVI, Vol. 5, No. 8, Aug 1957, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 12, Dec 1957. Uncl.

S/137/62/000/011/035/045
A006/A101

AUTHORS: Bieber, Boleslav, Klaban, Jiří, Václavínek, Jiří, Večeřa, Zdeněk

TITLE: A method of protecting the surfaces of molten iron alloys against oxidation

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 11, 1962, 120, abstract 111787 P (Czechosl. Patent no. 99138 of March 15, 1961)

TEXT: The method of protecting molten Fe-alloy surfaces against oxidation consists in that low-melting B and (or) P compounds are introduced into the melt, and form on its surface a protective cover in which air-O₂ is dissolved. Chemically neutral, low-melting substances, such as NaCl or CaCl₂, may be added to the compounds to be introduced in amounts assuring a > 4% content of B or P compounds in the mixture. An approximate composition of the mixture is (in %) B₂O₃ 20, NaCl or CaCl 80.

V. Levinson

[Abstracter's note: Complete translation]

Card 1/1

35716

Z/034/62/000/004/002/005
E073/E535

18.8300

AUTHOR:

Klaban, J., Engineer

TITLE:

Corrosion- and abrasion-resistant alloy for casting.
Patent application Class 18d, 2/30, PV 4824-61,
August 5, 1961

PERIODICAL: Hutnické listy, no.4, 1962, 293

TEXT:

Alloys containing 0.3 - 2.5% C, 8 - 20% Si, 0.3 - 2.0% Mn, maximum 0.2% P and maximum 0.10% S and possibly also Mo, W, Co, Cr or Ni up to a maximum of 7%, with Fe forming the remainder, have the disadvantage that their structure is unfavourable from the point of view of resistance to corrosion. The subject matter of the invention is the addition of 0.01 - 0.3% Ce to these alloys, so that graphite is rejected in formations which are mutually isolated by silicoferrite, thereby minimising the unfavourable effect of graphite; if the graphite is present in this form, failure of the alloy along graphite lamellae is prevented.

[Abstractor's note: Complete translation.]

Card 1/1

X

KLABAN, J.

New governmental standard for classification of graphite and carbon in malleable cast iron. Slevarenstvi 10 no.1:38 Ja '62.

SIROKICH, J.; SOCHOR, B.; KLABAN, J.; STRBIK, Jan

Informations on founding. Slevarenstvi 10 no.8:321-323
Ag '62.

SIROKICH, J.; OLIVERIUS, V.; KLABIN, J.; HOLOUS, T.

Information on founding. Slevarenstvi 10 no.12:509-513 D '62.

KLABAN, J.; GLOSROVA, M.; SOCHOR, B.; STRBIK, Jan

Information on founding. Slevarenatvi li no.2:90-94 P '63.

GLOSROVA, M.; KLARAN, J.

Information on founding. Slévarenství 11 no.4:171-179 Ap '63.

L 62725-65 EWP(z)/EWP(h)/EWA(d)/EWP(t) JD

ACCESSION NR: AP5021465

CZ/0034/64/000/011/0834/0834

AUTHOR: Klaban, J. (Engineer)

TITLE: Grey cast iron with perlitic structure

SOURCE: Hutnicke listy, no. 11, 1964, 834

TOPIC TAGS: chemical composition, cast iron

Abstract: The article describes Czechoslovak Patent Application Class 18d, 1/20, PV 1465-63, dated 15 March 1963. The invention covers the chemical composition of the iron which results in a pure perlitic structure of the casting, with only traces of free ferrite, under conditions when ordinary grey iron crystallizes with big amounts of free ferrite. The described iron contains 2.5 to 4.2% C, 0.8 to 3.5% Si, 0.3 to 1.5% Mn, Max. 1.0% P, max 0.2% S. A total of 3.0% of Ni, Cr, V, Mo, Ti and Cu may be present; balance is Fe. The basis of the invention is that 0.015 to 0.1% of Sb is incorporated into the described alloy.

ASSOCIATION: none

SUBMITTED: 15Mar63

NO REF SOV: 000

Card 1/1 AP

ENCL: 00
OTHER: 000

SUB CODE: MM
JPRS

KIARAN, J.

Improvement of gray cast iron workability. Slovarenstvi
12 no.1135 Ja'64.

Pipes from nodular cast iron. Ibid.: 37-38

KLABAN, J.

Laminated core boxes. Slevarenstvi 12 no.6:220 Je '64.

L 31474-66 ENP(j) RM

ACC NR: AP6023166

SOURCE CODE: CZ/0008/65/000/011/1350/1353

AUTHOR: Klaban, Jiri; Haerberle, Kurt

ORG: Research Institute for Synthetic Resins and Lacquers, Pardubice (Vyzkumny ustav syntetickych pryskyric a laku) 41
B

TITLE: Electromagnetic vibrator for milling and homogenizing substances at low temperatures, and its use in infrared spectroscopy

SOURCE: Chemicke listy, no. 11, 1965, 1350-1353

TOPIC TAGS: IR spectroscopy, homogenization

ABSTRACT: The apparatus is designed for milling and homogenization of substances that can be treated only at very low temperatures and cannot be reduced in size at laboratory temperatures. This makes it possible to use infrared spectroscopy to investigate substances whose spectra could otherwise not be measured, or where the results would be imperfect or irreproducible. Orig. art. has: 5 figures. [JPRS]

SUB CODE: 16 / SUBM DATE: 10Nov64 / ORIG REF: 004 / OTH REF: 001

Card 1/1 mc

CZECHOSLOVAKIA/Chemical Technology. Chemical Products and Their Application. Carbohydrates and Refinement. H

Abs Jour Ref Zhur-Khim., No 13, 1958, 44772.

Author : Klaban, Jiri

Inst :

Title : Performance of Defecation-Carbonation Units During the 1955-56 Production Season.

Orig Pub: Listy cukrovarn., 1956, 72, No 11, 253-255.

Abstract: Data are presented concerning juice purification efficiency (PE) and yield of molasses at Czechoslovak sugar refineries, depending upon operation procedures. Average PE is 40.41%. Highest PE (43.73%) was attained on two-stage addition of lime in defecation and fractional carbonation according

Card : 1/2

Klaban, V.

Conference of the Czechoslovak Academy of Sciences on steam turbines
and boilers and their development in the next 10-15 years. p. 190.
ENERGETIKA. (Ministerstvo paliv a energetiky. Hlavní správa
elektráren) Praha. Vol. 6, no. 4, Apr. 1956.

Source: EEAL LC Vol. 5, No. 10 Oct. 1956

KLABAN, V.

Soviet once-through boilers. p. 269.

ENERGETIKA. Praha, Czechoslovakia, Vol. 9, no. 6, June 1959.

Monthly list of East European Accessions (EEAI) LC, Vol. 8, No. 10,
Oct. 1959
Uncl.

KLABANOV, R.B. (Khar'kov)

Subordinated chronaxia in patients with sclerosis of the cerebral vessels. Vrach. delo no.8:133-134 Ag '60. (MIRA 13:9)

1. Tsentral'nyy nauchno-issledovatel'skiy institut ekspertnyy trudosposobnosti i organizatsii truda invalidov. (CHRONAXIA) (BRAIN--BLOOD VESSELS--DISEASES)

KLABAZNA, J., inz.

"Deviations and tolerances in mechanical engineering" by J. Charusa and S.Verner. Reviewed by J. Klabazna. Jerna mech opt 5 no.7: 232 JI '60.

KLABAZNA, J., inz.

"Technical drawing" by J. Drbal. Reviewed by J. Klabazna. Jemna mech
opt 5 no.10:328 0 '60.

KLABAZNA, J., ins.

"Machinery drawing" by V.Cermak. Reviewed by J.Klabazna.
Jenna mech opt 6 no.1:35 Ja '61.

KLABAZNA, J., inz.

Production errors in making optical prisms and calculation of their tolerances. Jemna mech opt 6 no. 6:165-168. Jr '61

1. Ustav pro vyzkum optiky a jemne mechaniky, Prerov.

KLABAZNA, J., ins.

Production errors in making optical prisms and calculation of their tolerances. (Conclusion). *Jezna mech tech* 6 no. 7:204-207. JI '61

1. Ustav pro vyskum optiky a jemne mechaniky, Prerov

KLABAZNA, J., ing.

Tolerance calculation of optical prisms. Jemna mech opt 7 no.1:
4-9 Ja '62.

1. Ustav pro vyskum optiky a jemne mechaniky, Prerov.

KLABAZNA, J., ins.

Tolerance calculation of optical prisms. Jemna mech opt
7 no.2:48-52 F '62.

1. Ustav pro vyskum optiky a jemne mechaniky, Prerov.

KLABAZNA, Jar., ins.

Stereoscopic rangefinder with automatic adjustment. (To be
contd.) Jemna mech opt 8 no.1:16-19 Ja '63.

1. Ustav pro vyakum optiky a presny mechaniky, Prerov.

KLHAZNA, J., ins.

Stereoscopic range-finder with automatic adjustment. (Continuation).
Jenna mech opt 8 no.2:39-42 F '63.

1. Ustav pro vyakum optiky a jemne mechaniky, Prerov.

KLABAZNA, J., ins.

stereoscopic rangefinder with automatic adjustment. Jemna mech opt
8 no.3:83-86 Mr '63.

1. Ustav pro vyakum optiky a jemne mechaniky, Prerov.

KLABAZNA, J. ins.

Stereoscopic range finder with automatic adjustment. Jemna
mech opt 8 no.5:138-140 My '63.

1. Ustav pro vyzkum optiky a jemne mechaniky, Prešov.

KLABAZNA, Jar., ins.

Determination of the light beam diameter for calculation of
optical prism dimensions. Jena mech opt 8 no.7:216-219
Jl '63.

1. Ustav pro vyakum optiky a jenne mechaniky, Prerov.

KLABAZNA, J., ins.

Calculation of dimensions of rotating optical prisms. Jemna
mech opt 8 no. 9 275-276 8'63.

1. Ustav pro výzkum optiky a jemne mechaniky, Prerov.

KLADAZNA, J., inz.

Pentagonal prism for convergent and divergent light beams.
Jesna mech opt 8 no.11:372-374, 1'63.

1. Ustav pro vyzkum optiky a jesne mechaniky, Prerov.

KLABAZHA, J., inz.

Simple ordinary and roof prisms deflecting the optical axis by
the $\varphi \approx 90^\circ$ angle. Jemna mech opt 9 no.6:174-180 Je '64

1. Research Institute of Optics and Precision Mechanics, Prerov.

Klabik, V.

CZECHOSLOVAKIA / Chemical Technology. Chemical Products H
and Their Application. Chemical and
Technological Aspects of the Nuclear
Engineering.

Abs Jour: Ref Zhur-Khimiya, No 9, 1959, 31902.

Author : Pizak, F., Klabik, V.

Inst : Not given.

Title : Extraction of Zirconium by Reduction of Zirconium
Tetrachloride and by Electrolysis.

Orig Pub: Hutnicke listy, 1958, 13, No 1, 26-33.

Abstract: The method of extraction of $ZrCl_4$ by the chlor-
ination of ZrO_2 and the reduction of $ZrCl_4$ to Zr
by an Mg powder, and also the method of extraction
of the Zr powder by the electrolysis of melted
 K_2ZrF_6 , is introduced. Comparative investigations
of those methods of Zr extraction from various
kinds of raw materials were conducted. -- I.
Yalnok.

Card 1/1

109

Z/032/61/011/002/008/013
E073/E335

18.1153

AUTHOR: Klabík, V.

TITLE: Investigation of the Properties of Titanium and
its Alloys

PERIODICAL: Strojirenství, 1961, Vol. 11, No. 2, p. 153

TEXT: Further properties of commercially-pure titanium
were determined and study of the properties of titanium
alloys was started with the α -type alloy Ti-5Al-2.5Sn.
For pure titanium the influence of annealing and of notches
on the mechanical properties was studied primarily. In
addition, some technological properties, particularly for
sheets, were studied. The basic physical and mechanical
properties were determined for titanium alloys.
1960, Prague: SVUMT, V-60-837

(Note: this is a complete translation)

Card 1/1

Z/032/62/012/004/004/007
E073/E335

18.12.81

AUTHOR: Klabík, V.

TITLE: Investigation of the properties of the alloy Ti-5Al-2,
5Sn

PERIODICAL: Strojírnoství, v. 12, no. 4, 1962, 317

TEXT: The report gives the results of research relating to this alloy, particularly as regards its suitability for manufacturing steam-turbine blades. Data are given on the basic mechanical properties of this alloy at high temperatures, values of the fatigue limit in bending during rotation and for alternating tension-pressure stresses, the results of studies on the notch-sensitivity under stress, structural stability and properties at elevated temperatures and stresses. Of the technological problems data are given on the influence of the conditions of heating prior to forming and the degree of forging on the basic mechanical properties, on the method of effective protection from oxidation, on the possibility of increasing surface hardness by nitriding, etc. Results of defectoscopy investigations made

Card 1/2

Investigation of

Z/032/62/012/004/004/007
E073/E335

on blades and results of investigation of the properties and the structure at individual points of the blade are also given. The use of a few tried-out methods for utilising scrap from the machining of titanium and its alloys is proposed in the conclusions.

Research report Z-61-1002, SVUMT, Prague, 1961.

[Abstracter's note: this is a complete translation.]

Card 2/2

KLABOCH, L., ins.; DUPEK, Jaroslav, ins.; HAJEK, E., doc., ins.; REZNICEK, I., ins.; ROD, P., ins.; DRDA, J., ins.; MATOUSEK, B., ins.; KOUSAL, P., ins.; MANDA, V.; CAIS, O., ins.; NOVAK, S.; URBAN, S.; HANKE, M., ins.; VOKURKA, V., ins.; FOGL, J., ins.; HROMIR, M., ins.; SOLIN, J., prof., ins.; SLEZAK, A., ins.; TITLBACH, Z., ins.; DREXLER, J., ins.; HORNA, O., ins.; KUPEC, J., ins.

Discussion on tensiometry. Zpravodaj VZLU no.2:37-46, 69-80 '62.

1. Vyzkumny a skusebni letecky ustav (for Dufek, Reznicek, Manda, Cais, Drexler and Kupec). 2. Statni vyzkumny ustav tepelne techniky (for Klaboch, Rod, Drda, Matousek, Titlbach). 3. Ceske vysoke uceni technicke (for Hajek, Solin). 4. Ustav pro vyzkum motorovych vozidel (for Hanke, Vokurka, Fogl, Hromir). 5. Vyzkumny ustav matematickych stroju (for Horna). 6. Moravan, n.p., Otrokovice (for Kousal). 7. Mikrotechna, Holesovice (for Novak). 8. Zavody V.I.Lenina (for Urban). 9. Svermovy zavody, Vyzkumny ustav (for Slesak).

~~KLABOCH, J.~~

Measuring the axial force of a steam turbine, and determining its change caused by blade fouling.

p. 669 (Strojirenstvi. Vol. 7, no. 9, Sept. 1957, Praha, Czechoslovakia)

Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 2,
February 1958

7/032/61/011/005/003/008
E197/E435

AUTHOR: Klaboch, L., Engineer

TITLE: Elimination of temperature effects on strain gauges

PERIODICAL: Strojřrenstvř, 1961, Vol.11, No.5, pp.370-373

TEXT: The author suggests a method for compensating for the temperature effect on strain gauges. One of the factors which easily disturbs the accuracy and reliability of strain measurement by resistance gauges is temperature, in particular high temperature, the effects being the change in the calibration factor, softening of the adhesive and consequent creep, and reduction of the electrical insulation resistance of the adhesive. To determine the effect, experiments were carried out at SVÜTT with two types of strain gauges, a paper based gauge made by Mikrotechna and a gauge embedded in synthetic material made by Huggenberger. The first was found usable up to 125°C, the second up to 50°C. The author then discusses experiences with field tests on large vessels where temperature differences and variations were troublesome. At SVÜTT, tests were made with temperature compensated gauges using an additional loop, made of copper wire of 0.03 mm and 79 mm long for strain gauge C 120 and Card 1/2

Elimination of temperature ...

Z/032/61/011/005/003/008
E197/E435

59 mm long for strain gauge M 120. The addition of loops had no effect on the calibration factor but eliminated temperature effects between 20 and 100°C. There are 7 figures and 4 Soviet-bloc references.

ASSOCIATION: SVÚTT, Prague

Card 2/2

KLABOCH, I., ins.; NEMEC, J., prof. inz. DrSc.

Experimental research on elasticity and strength of machine parts.
Strojirenstvi 14 no.7:481-482 JI '64.

KLADUKOV A G

USSR/Cultivated Plants - Fruits. Berries.

M

Abs Jour : Ref Zhur Biol., No 18, 1958, 82481

Author : Kladukov, A.G.

Inst : Sverdlovsk Agriculture Institute

Title : Characteristics of Grafting Fruit Plants in Ural

Orig Pub : Tr. Sverdlovsk. s.-kh. in-ta, 1957, 1, 93-101

Abstract : Under the conditions found in the Urals a large percentage of grafted flower buds is destroyed by frost in winter. It is recommended to graft two eyes on a plant. For grafting it is recommended to use the growth buds located on the lower part of the shoot. In taking the cuttings of the stone fruit species it is necessary to determine first the characteristics of the distribution of the flower buds on the shoots and not take them. In apple tree, a small percentage of grafted flower buds perishes

Card 1/2

KLABUKOV, A. G.

USSR / Cultivated Plants. Fruit Trees. Small Fruit M
Plants. Nut Trees. Tea.

Abs Jour : Ref Zhur - Biologiya, No 6, 1959, No. 25017

Author : Klabukov, A. G.
Inst : Sverdlovsk Agricultural Institute
Title : Biology of the Flower Bud Development

Orig Pub : Tr. Sverdl. s.-kh. in-ta, 1957, 1, 103-112

Abstract : The formation of buds on fruit (steppe cherry, black currant) and decorative (pilose lilac) plants was studied by the anatomical method in 1946-1954. The transformation of the vegetative-cone cells in the bud into a flower rudiment represents an irreversible qualitative change, which takes place in the phase of the cells' local division of the growing point's convexity, long before the

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USSR / Cultivated Plants. Fruit Trees. Small Fruit M
APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000722930004-4"

Abs Jour : Ref Zhur - Biologiya, No 6, 1959, No. 25017

appearance of tubercles on the vegetative cone. Three principal periods are singled out in the development of flower buds: the preliminary, critical-reversible and differentiation of the flower. The first and third periods are lengthy. After the critical period has been passed, it is no longer possible to affect the formation of the flower buds. Secondary efflorescence is not a proof of premature spring formation of the flower buds in the year of fruit-bearing. It is necessary to differentiate two kinds of secondary efflorescence. The first kind, caused by retardation in the differentiation of the flower buds is designated as one that

Card 2/4

КЛАБУКОВ А. Г.

USSR/Cultivated Plants - Fruits. Berries.

M

Abs Jour : Ref Zhur - Biol., No 12, 1958, 53812

Author : Klabukov, A.G.

Inst : Sverdlovsk Agricultural Institute

Title : Wild-Growing Steppe Cherry

Orig Pub : Tr. Sverdl. s.-kh. in-ta, 1957, 1, 113-124

Abstract : This article describes the biological peculiarities of the wild growing steppe cherry (*Cerasus fruticosa*). An experiment on the reclamation of the wild growing tracts of cherry trees is reported. Methods of propagation and agricultural technique in starting a plantation is recommended. Periodicity of fruit bearing is absent in the steppe cherry. The yield reaches 30 cwt/ha. --
I.K. Fortunatov

Card 1/1

82886

24,6810

S/120/60/000/02/017/052

AUTHORS: Volkov, A.N., Klabukov, A.M. and Popov, Yu.O. ^{E192/E382}

TITLE: Shutting-off the Photomultipliers by Means of Microsecond Pulses ₂₁

PERIODICAL: Pribory i tekhnika eksperimenta, 1960, No. 2, pp 68 - 71 (USSR)

ABSTRACT: The experiments with the Soviet photomultipliers, types FEU-19M and FEU-29, showed that under static conditions they can be completely cut off by applying a voltage of +50 V with respect to the control diaphragm. However, under pulsed conditions the photomultipliers cannot be fully re-opened for a duration of about 15 μ s. This is due to the poor conductivity of the photo cathode. Consequently, a method of shutting-off the multipliers by applying suitable voltages to their dynodes was investigated. The shutting-off characteristics of various dynodes were first measured under static conditions. For this purpose a photomultiplier with its crystal was illuminated by a γ -source (Co^{60}) and the counting rate of the pulses produced by the γ -rays was observed at a constant amplifier

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S/120/60/000/02/017/052

E192/E182

Shutting-off the Photomultipliers by Means of Microsecond Pulses

threshold. The voltage of the control dynode was varied by a potentiometer divider network in such a way that if the gap above the control dynode received a voltage increase of U , the voltage of the lower gap was reduced by U ; this simulated the application of a pulse to the dynode. It was found that the best results were obtained if the shutting-off is done simultaneously at the second and sixth dynodes of the system. The shutting-off process under pulsed conditions was investigated by means of a 50-channel time analyser having a channel width of $0.476 \mu s$. The diagram of the generator producing the shutting-off pulses is shown in Figure 3; this also illustrates the voltage divider for the photomultiplier. Figure 4a gives the results of the shutting-off effect of a pulse having an amplitude of 35 V. From this it is seen that FEU-19M and FEU-29 photomultipliers can be controlled by means of comparatively short pulses in such a way that the after-effects are eliminated in less than $1 \mu s$. A similar shutting-off system was employed by other authors (Ref 5). As regards the Soviet photomultiplier FEU-S it was found

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82886

S/120/60/000/02/017/052

E192/E382

Shutting-off the Photomultipliers by Means of Microsecond Pulses

that they could not be cut off by means of the dynodes. However, this could be achieved simply by applying a voltage of -3 V to the focusing rings. Again a fast operation was possible. The photomultiplier FEU-12 could be shut off by means of the grid, cathode or one of the dynodes. It appeared, however, that the after-effects could not be rapidly eliminated. The authors are indebted to F.L. Shapiro and I.V. Shtranikh for their interest in this work and for valuable advice and also to A.I. Okorokov and Ye.D. Bulatov for testing the multipliers. There are 4 figures and 4 references, 1 of which is English, 4 Soviet; one of the Soviet references is translated from English.

ASSOCIATION: Fizicheskiy institut AN SSSR (Institute of Physics of the Ac.Sc., USSR)

SUBMITTED: February 9, 1959

✓

Card 3/3

L 13009-65 ENT(d)/ENP(1)/EED-2 Po-1/Pq-1/Pg-1/Pk-1 IJP(c) BB/GG
ACCESSION NR: AR4039895 8/0058/64/000/004/A029/A030 B

AUTHORS: Shtranikh, I. V.; Bochkarev, V. N.; Volkov, A. N.; Klabu-
kov, A. M.

SOURCE: Ref. zh. Fiz., Abs. 4A302

TITLE: Multidimensional TsIRU recording system

CITED SOURCE: Tr. 5-y Nauchno-tekhn. konferentsii po yadern. radio-
elektronike. T. 2. Ch. 2. M., Gosatomizdat, 1963, 135-143

TOPIC TAGS: digital recording system, ¹⁶⁰pulse height analyzer, pulse
time analyzer, magnetic drum memory, binary coding

TRANSLATION: Data are reported on the TsIRU centralized measuring
and recording unit (CMRU) developed jointly by the Lebedev Institute
and by the OIYaI. This system was designed for the registration of
four independent 64 x 64 multidimensional spectra with capacity of

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L 13005-65

ACCESSION NR: AR4039895

10,000 pulses per channel, and simultaneous registration of two 256-channel pulse-height and four time spectra, the capacity of each channel also being 10,000 pulses. The CMRU memory block is a magnetic drum device. This magnetic memory contains more than 80 heads and has a peripheral resolution of $\sim 4 \times 10^3$ writing pulses (2.7 pulses per mm of length). The number of drum revolutions is 25 per second. By employing preliminary memorization of the incoming pulses (in code form) and a system for selecting the next necessary address, it is possible to write in each drum sector up to 25 statistically distributed pulses per second. Methods of reducing the dead time of the system during the registration of spectra are discussed. The average recording time can be reduced to 10 μ sec. The operating speed of the system is ensured by using an "equalization of the statistics" method. One of the features of this system is coding of the incoming parameters in binary form, which is then processed prior to obtaining the final results. Another distinguishing feature is the possibility of preliminary determination of the

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L 13005-65
ACCESSION NR: AR4039895

necessary address in the ferrite type buffer memory system connected ahead of the recording circuits of the drum. A block diagram of the CMRU is presented, and variants of its operation for registration of multidimensional spectra and realization of multichannel measurements are discussed in detail. M. Vishnevskiy.

SUB CODE: DP, NP

ENCL: 00

Card 3/3

KLABUKOV, G.A., elektromekhanik; SIDORIN, N.T., elektromekhanik

Change in the network of the ZhR-5 transceiver. Avtom.,
telem. i sviaz. 9 no.1:40 Ja '65. (MIRA 18:2)

1. Moskovsko-Okruzhnaya distantsiya Moskovskoy dorogi.

KLABUKOV, M. P.

"Organization of Work to Improve Efficiency in Rayon Communications Offices,"
Vest. svyazi, No.7, p. 26, 1953

Manager, Kotel'nichskiy Rayon Communications Office, Kirov Oblast'.

Translation No. 543, 27 Apr 56

KLADUKOV, M. P.

USSR/Miscellaneous

Card 1/1 : Pub. 133 - 15/20
Authors : Kladukov, M. P.
Title : Problems concerning the productivity of labor in the regional communication bureau
Periodical : Vest, svyazi 10, page 27, Oct 54
Abstract : A narrative report is given concerning methods of increasing labor productivity and decreasing the cost of communication in rural regions.
Institution : ... *Nachal'nik Kotel'nicheskoy rayonnoy kontory svyazi*
Submitted : ...

KLAMUKOV, P. G.

"The Effect of Repeated Covering of Sows on their Fertilisability, Fertility, and the Quality of Their Offspring."
Cand Agr Sci, Leningrad Agricultural Inst, Min Higher Education, Leningrad, 1955. (XL, No 10, Mar 55)

SO: Sum No. 670, 29 Sep 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (15)

CHERNYAVSKIY, V.; KLABUKOV, V.

Transistorised contactless counter. Radio no.9:28-29 S '64.
(MIRA 17:12)

YECHISTOV, Yu.A., kand.tekhn.nauk, dots.; KLAMUKOV, V.M., inzh.

Apparatus and methods for investigating unsteady flows in
penstocks at the Mingechar Hydroelectric Power Station. Trudy
NISI no.16:111-118 '56. (MIRA 11:8)
(Penstocks--Fluid dynamics)

KRIVCHENKO, Grigoriy Iur'ilevich; ARSHENEVSKIY, Nikolay Nikolayevich;
KLADUKOV, Vilyoriy Mikhaylovich; MAR'YANSKIY, L.P., red.;
LARIONOV, G. Ts., tsKMA. red.

[Control of adjustable-blade hydraulic turbines] Reshiny
regulirovaniia poverotnolopastnykh gidroturbin. Moskva, Gos.
energ. izd-vo, 1960. 125 p. (MIRA 14:3)
(Hydraulic turbines)

KLABUKOV, V.M., inzh.

Effect of the elasticity of the fluid and the envelope of the water
pipe on the intensity of water hammer. Sbor. trud. MISI no. 35:88-97
'61. (MIRA 1419)

(Water hammer)

ARSHENEVSKIY, N.H., inzh.; KLADUKOV, V.M., inzh.; KRIVCHENKO, G.I.,
dotsent, kand.tekhn.nauk

Results of testing the load dropping potential of turbine units at
the Irkutsk Hydroelectric Power Station. Sbor. trud. NISI no.35:
49-59 '61. (MIRA 1419)
(hydraulic turbines) (Irkutsk Hydroelectric Power Station)

KRIVCHENKO, G.I., kand.tekhn.nauk; KLAVUKOV, V.M., inzh.

Actual testing of the turbine sets of the Pavlovsk Hydroelectric
Power Station. Gidr.stroi. 33 no.10:38-43 0 '62. (MIRA 15:12)
(Pavlovsk Hydroelectric Power Station—Hydraulic turbines—testing)

CHERNYAVSKIY, V.V.; KLABUKOV, V.V.

Contactless transistorized counting device for tires. Kauch. i
rez. 24 no.2:49-51 F '65. (MIRA 18:4)

1. Proyektno-tekhnologicheskij i nauchno-issledovatel'skiy
institut Verkhne-Volzhsckogo Soveta narodnogo khozyaystva,
Yaroslavl'.

KLABUKOV, V.V.; CHERNYAVSKIY, V.V.

Noncontact transistor counter. Priborostroenie no.7:27 J1 165.
(MIRA 18:7)

КЛАБУКОВА, А.В.

КЛАБУКОВА, А.В., канд.техн.наук; ИВАНОВА, Э.М., инж.

Improved arrival schedules for transfer trains. Zhel. dor.
transp. 40 no.1:75-76 Ja '58. (MIRA 11:1)
(Railroads--switching)

16(0);28(2) p.3 PHASE I BOOK EXPLOITATION SOV/3366

Akademiya nauk SSSR. Vychislitel'nyy tsentr

Vychislitel'naya matematika; sbornik 3 (Mathematics of Computation; Collection of Articles, Nr 3) Moscow, Izd-vo AN SSSR, 1958.
189 p. Errata slip inserted. 5,000 copies printed.

Resp. Ed.: A. A. Abramov, Candidate of Physical and Mathematical Sciences; Ed.: M. V. Yakovkin; Tech. Ed.: T. P. Polenova.

PURPOSE: This book is intended for applied mathematicians, scientists, and engineers whose work involves computation.

COVERAGE: This book contains 9 articles on computational techniques. The subjects considered include: numerical solutions of the kinetic equation for a sphere; approximate method of solving the Hilbert and Poincaré problem; solution of the Laplace equation in a region within the interior of an ellipsoid; calculating the flow around an arbitrary profile and solid of revolution in a

Approved for Release: 09/17/2001

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Mathematics of Computation (Cont.)

SOV/3366

subsonic gas flow (symmetric case); calculating annular supersonic nozzles and diffusers; calculating the lowest characteristic number of Peierls' equation by the Monte Carlo method; study of the oscillation of beams of constant cross section by means of balance type integral equations; calculation of the flow around a circular cylinder with detached shock wave; and new routines for computing finite differences on computers. References accompany each article.

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L.S. KLABUFOVA

14(1), 64(3)
 APPENDIX
 TITLE
 1987/43-14-1-77/77
 28-28-28-28-28

RESUME:
 The Publications on Applied Analysis and Mathematical Introduction
 (English language as published in the journal "Soviet Mathematics")

The series "Soviet Mathematics" began in 1975 and contains articles
 on the following subjects: Applied Analysis, Mathematical
 Introduction, and Mathematical Introduction (Soviet Mathematics).
 The series is published by the International Science Series
 and the International Science Series (Soviet Mathematics).
 The series is published by the International Science Series
 and the International Science Series (Soviet Mathematics).
 The series is published by the International Science Series
 and the International Science Series (Soviet Mathematics).

There appeared the following collected volumes "Soviet
 Mathematics" (1977) along with "Soviet Mathematics" (1977) also
 appeared. The series is published by the International Science
 Series and the International Science Series (Soviet Mathematics).
 The series is published by the International Science Series
 and the International Science Series (Soviet Mathematics).
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 The series is published by the International Science Series
 and the International Science Series (Soviet Mathematics).

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1

KEYLIS-BOROK, V. I., KLABUKOVA, L. S., RADCHENKO, V. P.

Spherical waves in an inhomogeneous liquid. Trudy Inst. fis. zem.
no.11:133-142 '60. (MIRA 13:8)

(Elastic waves)

33292
S/208/62/002/001/006/016
D299/D303

16.4200
24.4300

AUTHOR: Klabukova, L.S. (Moscow)

TITLE: On the use of Fourier transforms in solving a diffraction problem

PERIODICAL: Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki, v. 2, no. 1, 1962, 89 - 96

TEXT: The diffraction is considered of elastic waves in the exterior of a simply-connected two-dimensional region. The problem is solved by the method of Fourier transforms of type

$$\bar{U}(r, p) = \frac{1}{\sqrt{2\pi}} \int_0^{\infty} U(r, t) e^{ipt} dt,$$

where $U(r, t)$ is the displacement vector. The original non-stationary problem is reduced (by a well-known method) to a stationary diffraction-problem which consists in finding the solutions of a system of partial differential equations with given boundary conditions. It is shown that the solution to the stationary problem should be sought among the class of functions which can be continued. ✓
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On the use of Fourier transforms ...

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ued analytically into the half-plane $\text{Im } p > \beta$ and vanish for $p \rightarrow \infty$. Expressed by such a function, the solution to the stationary problem is unique, yielding, after use of the inverse Fourier transform the solution to the original problem. In addition, it is shown that the solution to the stationary problem (in the indicated class of functions), is equivalent to solving the problem in a class of functions which satisfy for $r \rightarrow \infty$ Sommerfeld's radiation conditions for the corresponding potentials $\tilde{\varphi}(r, p)$ and $\tilde{\psi}(r, p)$. The solution is sought of the system of equations

$$(\lambda + 2\mu)\Delta\varphi = \rho \frac{\partial^2 \varphi}{\partial t^2} \quad (1.1)$$

with initial conditions

$$\mu\Delta\psi = \rho \frac{\partial^2 \psi}{\partial t^2} \quad (1.2)$$

and given boundary conditions. Let φ and ψ be the solution to the problem, having a Fourier transform of type

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On the use of Fourier transforms ...

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$$\tilde{\varphi}(r, p) = \frac{1}{\sqrt{2\pi}} \int_0^{\infty} \varphi(r, t) e^{ipt} dt; \quad \tilde{\psi}(r, p) = \frac{1}{\sqrt{2\pi}} \int_0^{\infty} \psi(r, t) e^{ipt} dt, \quad (1.4)$$

where $p = \alpha + i\beta$. For $\tilde{\varphi}$ and $\tilde{\psi}$ one obtains the system of equations

$$(\lambda + 2\mu)\Delta\tilde{\varphi} + pp^2\tilde{\varphi} = 0, \quad \mu\Delta\tilde{\psi} + pp^2\tilde{\psi} = 0 \quad (1.6)$$

for $(x, y) \in G$ and the boundary conditions

$$\left[\lambda\Delta\tilde{\varphi} + 2\mu \frac{\partial}{\partial x} \left(\frac{\partial\tilde{\varphi}}{\partial x} + \frac{\partial\tilde{\varphi}}{\partial y} \right) \right] \cos nx + \mu \left[\frac{\partial\tilde{\varphi}}{\partial y} + 2 \frac{\partial\tilde{\varphi}}{\partial xy} - \frac{\partial\tilde{\varphi}}{\partial x^2} \right] \cos ny = \tilde{\delta}(s, p), \quad (1.7)$$

$$\mu \left[\frac{\partial\tilde{\psi}}{\partial y} + 2 \frac{\partial\tilde{\psi}}{\partial xy} - \frac{\partial\tilde{\psi}}{\partial x^2} \right] \cos nx + \left[\lambda\Delta\tilde{\psi} + 2\mu \frac{\partial}{\partial y} \left(\frac{\partial\tilde{\psi}}{\partial y} - \frac{\partial\tilde{\psi}}{\partial x} \right) \right] \cos ny = \tilde{\delta}(s, p) \quad \checkmark$$

for $(x, y) \in \Gamma$. (G is the exterior region with boundary Γ). The desired solutions to Problem (1.6)-(1.7) should be sought among the functions which can be continued analytically in the half-plane $\text{Im} p \geq \beta$ and vanish for $p \rightarrow \infty$. The problem of finding the functions $\tilde{\varphi}$ and $\tilde{\psi}$, satisfying Eqs. (1.6) (1.7) is called the stationary diffraction-problem. Further, asymptotic formulas are derived (for

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On the use of Fourier transforms ... 35292
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large r), which are satisfied by the solutions to problem (1.6) (1.7), analytically continuable as indicated above. The asymptotic formulas are

$$\tilde{\varphi}(r, p) = e^{i\lambda_1 r} O(r^{-1/2}), \quad \tilde{\psi}(r, p) = e^{i\lambda_2 r} O(r^{-1/2}),$$

where

$$\lambda_1 = \sqrt{\frac{p}{1+p}}, \quad \lambda_2 = \sqrt{\frac{p}{1-p}} \quad (2.10)$$

and

$$\frac{\partial \tilde{\varphi}}{\partial r} - i\lambda_1 \tilde{\varphi} = e^{i\lambda_1 r} O(r^{-1/2}), \quad \frac{\partial \tilde{\psi}}{\partial r} - i\lambda_2 \tilde{\psi} = e^{i\lambda_2 r} O(r^{-1/2}). \quad (2.11)$$

Conditions

$$\tilde{\varphi}(r, p) = e^{i\lambda_1 r} O(r^{-1/2}), \quad \tilde{\psi}(r, p) = e^{i\lambda_2 r} O(r^{-1/2})$$

and (2.11) are called Sommerfeld's radiation conditions. Finally, the uniqueness is proved of the solutions to problem (1.6)-(1.7) under conditions (above) and (2.11). These conditions indicate the

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163000

35550

S/558/61/000/007/004/008
D299/D304

AUTHOR: Klabukova, L.S.

TITLE: On an approximate method of solving the Riemann-Hilbert problem in a multiply-connected region

SOURCE: Akademiya nauk SSSR. Vychislitel'nyy tsentr. Vychislitel'naya matematika, no. 7, 1961, 115 - 132

TEXT: A difference method is proposed for solving the Riemann-Hilbert problem. This problem consists in determining the function $F(z) = u + iv$, H_0 -holomorphic in the region G , and which satisfies on the boundary Γ the condition

$$\alpha(s)u + \beta(s)v = \gamma(s). \quad (1)$$

The index n of the problem is defined as the sum $n = n_0 + n_1 + \dots + n_m$, where n_1 is related to the argument of the vector $\alpha + i\beta$. Instead of $F(z)$, one considers $f(z)$, satisfying the boundary conditions

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On an approximate method of ...

$$\operatorname{Re}[z^{-n} e^{-ic_k} f(z)] = c(s) \text{ (on } \Gamma_k) \text{ (} k = 0, 1, \dots, m; c_0 = 0 \text{)}. \quad (9)$$

The cases $n + 1 > m$, and $n + 1 = m$, are considered separately. The case $n + 1 > m$: The function $f(z)$ is expressed by

$$f(z) = (a_0 + ib_0) + (a_1 + ib_1)z + \dots + z^{n-1}(a_{n-1} + ib_{n-1}) + z^n \varphi(z), \quad (10)$$

where $a_k + ib_k$ are constants. The problem reduces to determining the general solution $\varphi(z) = u + iv$, of

$$\operatorname{Re} \varphi(z) = \mathbb{F}(s) \text{ (on } \Gamma). \quad (26)$$

Hence the solution of the Riemann-Hilbert problem involves the solution of the following 2 boundary-value problems: I) Dirichlet's problem:

$$\operatorname{Re} g(z)|_{\Gamma_0} = \omega(s), \operatorname{Re} g(z)|_{\Gamma_k} = \omega(s) + c_k \text{ (} k = 1, 2, \dots, m \text{)} \quad (29a)$$

and II) Von-Neumann's problem: ✓

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On an approximate method of ...

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$$\begin{aligned} \Delta u &= 0 \text{ in } G \\ u(s)|_{r_k} &= \psi(s) \quad (k=0, 1, \dots, p). \\ \frac{\partial u}{\partial n} + \gamma_k \frac{\partial u}{\partial s} \Big|_{r_k} &= -\frac{\partial \psi}{\partial s} \quad (k=p+1, \dots, m) \end{aligned} \quad (29b)$$

$$\begin{aligned} \Delta f &= 0 \text{ in } G \\ \frac{\partial v}{\partial n} \Big|_{r_k} &= -\frac{\partial \psi}{\partial s} \quad (k=0, 1, \dots, p). \\ \gamma_k \frac{\partial v}{\partial n} - \frac{\partial v}{\partial s} \Big|_{r_k} &= -\frac{\partial \psi}{\partial s} \quad (k=p+1, \dots, m). \end{aligned} \quad (29c)$$

These problems are solved by difference methods. In the case of problem I, the region G is covered by a grid with mesh size h; Laplace's equation is replaced by the difference equation

$$\begin{aligned} l_1(u_0) &= \frac{1+B_1}{2\beta_1}(u_0 - u_1) + \frac{1+B_1}{2\beta_2}(u_0 - u_2) + \frac{1+B_1}{2}(u_0 - u_3) + \\ &+ \frac{1+B_1}{2}(u_0 - u_4) = 0. \end{aligned} \quad (33)$$

The functions $u(x, y)$ and $v(x, y)$, satisfying the boundary conditions
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On an approximate method of ...

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tions (in which the integrals have been replaced by sums), are found. Then the difference equations are set up for problem II. The approximation error in the solution of problem I, is of the order of $O(h^2)$; that of problem II is $\approx O(h^{1/2})$. Now the Riemann-Hilbert problem is solved as follows: 1) $g(z)$ is determined (by solving (29a)); $c(s)$ is found by means of formula

$$c(s) = \gamma_0(s)e^{-\text{Im } g(z)}. \quad (51a)$$

The function $\varphi(z) = u + iv$ is determined, $u(x, y)$ and $v(x, y)$ being harmonic functions in G (u and v are the solutions of (29b) and (29c), respectively). 3) The coefficients a and b are determined by the condition that $\varphi(z)$ is a holomorphic function; a system of m algebraic equations with $2n+1$ unknowns, is obtained; hence $2n+1-m$ coefficients, entering the general solution of the Riemann-Hilbert problem, have yet to be determined. In case $n + 1 = m$, one considers instead of $f(z)$, the function

$$f_0(z) = f(z)z^{m-n}. \quad (52)$$

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On an approximate method of ...

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with boundary condition

$$\operatorname{Re}[z^{-m} f_0(z) e^{ic_k}] = c(s) \text{ (on } \Gamma_k) \text{ (} k = 0, 1, \dots, m). \quad (53)$$

This problem can be solved by the same method as above. The fundamental system of solutions of the homogeneous problem is

$$f_{0l}(z) = \sum_{k=0}^{m-1} (a_k^1 + ib_k^1) z^k + z^m \varphi_{0l}(z) \quad (l = 1, 2, \dots, m+1). \quad (55)$$

There are 8 figures and 2 Soviet-bloc references.

Card 5/5

KLAPUKOVA, L.S.

Approximate method of solution of the Riemann-Hilbert problem
in a multiply connected region. Vych.mat. no.7:115-132 '61.
(MIRA 15:4)
(Boundary value problems) (Differential equations)

S/O44/62/000/012/036/049
A060/A000

AUTHOR: Klabukova, L. S.

TITLE: On an approximate method for the solution of the Riemann-Hilbert problem in a multiply-connected domain

PERIODICAL: Referativnyy zhurnal, Matematika, no. 12, 1962, 33, abstract 12V169 (Vychisl. matematika, coll. 7, 1961, 115 - 132)

TEXT: Using the method of grids, the author constructs an approximate solution of the Riemann-Hilbert problem in a multiply-connected domain. On the assumption that the requisite solution is four times continuously differentiable in the specified domain, the author proposes finite difference schemes yielding a mean square error of the requisite solution of the order of $h^{1/2}$, where h is the grid interval. ✓

Ye. A. Volkov

[Abstracter's note: Complete translation]

Card 1/1

KLABUKOVA Z.I.

48-5-14/36

SUBJECT: USSR/Luminescence

AUTHOR: Klabukova Z.I.TITLE: Some Regularities in Cathodoluminescence Spectra of Lumino-
phores (Nekotoryye zakonornosti v spektrakh katodolyumines-
sentsii lyuminoforov)PERIODICAL: Investiya Akademii Nauk SSSR, Seriya Fizicheskaya, 1957, Vol
21, #5, p 670 (USSR)ABSTRACT:

1. The spectra of luminophores (Zn,Cd)S and (Zn,Cd)S-Ag at an intensive excitation by the electronic beam are bands with one peak;
2. When silver is introduced, the position of the peak shifts towards shorter wavelengths. The maximum shift takes place at the silver content of 1×10^{-4} g per 1 g of the basic substance, independently of the CdS content.
3. At a further increase of silver content the spectral peak shifts towards longer wavelengths.
4. The magnitude of the peak shift with silver introduction abruptly changes with the transition from 10 % of CdS content to 20 % and higher.

Card 1/2

48-3-14/56

TITLE:

Some Regularities in Cathodoluminescence Spectra of Lumino-
phores (Nekotoryye Zakonomernosti v spektrakh katodolyuminest-
sentsii lyuminoforov).

5. The phenomenon of shifting the spectral peak into the long wavelength region at the increase of silver concentration beyond 1×10^{-4} g/g is caused on the one side, by a dissociation of the homogeneous luminophore into conjugated mutually-saturated sulfide phases and arising Zn-centers, and on the other side, by the self-absorption of luminescence.

6. Investigation of the spectra of (Zn,Cd)S-Ag luminophores makes it possible to discover both interrelations of activators in a homogeneous medium and the effect of phase transitions in the basic substance.
One Russian reference is cited.

INSTITUTION: Not indicated.

PRESENTED BY:

SUBMITTED: No date indicated

AVAILABLE: At the Library of Congress

Card 2/2

20819

S/048/61/025/003/007/047
B104/B201

9,4150 (1137, 1138, 1395 also)

AUTHORS: Klabukova, Z.I., and Morozova, A.V.

TITLE: Cathodoluminophores with very short afterglow and an emission in the blue, yellow, and red spectral regions

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, v. 25, no. 3, 1961, 330 - 331

TEXT: This is a reproduction of a lecture delivered at the 9th Conference on Luminescence (Crystal Phosphors), which took place in Kiev from June 20 to 25, 1960. During the production of CdS-Ag and ZnSe-Ag₂Si luminophores from various sets of initial products the authors established in a number of cases the absence of reproducibility of luminescence properties. Laboratory samples and initial products of the firm "Krasnyy Khimik" with the classification "for luminophores" were used. All CdS sets were obtained by precipitation with hydrogen sulfide from CdSO₄ solutions, and ZnSe by the reaction ZnS + SeO₂. The mixture was sintered in the gaseous atmosphere of a furnace chamber for one hour at 600°C in the case of CdS-Ag.

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B104/B201

Cathodoluminophores with

and for 1/2 hour at 900°C in the case of ZnSe-Ag, Ni. A shift from $\lambda_{\max} = 7400 - 7200 \text{ \AA}$ to 6900 Å with an increase of brightness at the same time was established for CdS-Ag luminophores. A closer study showed that the structure of CdS (as received) was not uniform (sphalerite, greenockite). As for the ZnSe-Ag-Ni luminophores, there was no reproducibility as regards spectrum, brightness, afterglow time, and thermal stability. Among all of the sets of ZnSe that were received, only two types of self-activated ZnSe(NaCl) luminophores were found with a $\lambda_{\max} = 6400 \text{ \AA}$ and 6100 Å. One ZnSe set only was found to be suited for bringing about a thermal stability of the ZnSe-Ag, Ni cathodoluminophore with a very short afterglow (about $2 \cdot 10^{-6}$ seconds). Two groups of ZnSe-Ag, Ni luminophores are indicated. Group A proved to be considerably more stable than group B to the introduction of Ag, heating in the air, heating in vacuum, and to changes in the excitation conditions with respect to its luminescence properties. The sets of ZnSe used by the authors were found to exhibit equal crystal structure (sphalerite); they differ, however, as to their Se content which still contains a ZnSe impurity. Elementary Se affects the formation

Card 2/3

CA

10

Asymmetric synthesis with the aid of catalysts deposited on right and left quartz. A. P. Terent'ev, E. I. Kabanova, and V. V. Paltireva (Moscow State Univ.). *Doklady Akad. Nauk S.S.S.R.* 74, 917-92 (1930). —The following reactions, characterized by the observed rotation of a 2-cm layer of the product, were carried out on metals deposited by either reduction or evaporation, on either left (l) or right (r) quartz powder. (1) *Saponification*. Dihydration and dehydrogenation of *d*-MeC(OH)Et vapor was carried out in a flow system, with dry N₂ as carrier gas, on (l), with Cu (reduced at 300°), at 300°, rotation (due to unreacted MeC(OH)Et) -0.112°; with Ag (sputtered), 300° -0.100°; with Ni (reduced at 300°), 300° -0.120°; with Pd (sputtered) 200°, 0.100°; on (r), with Cu (reduced at 300°), 200°, 0.100°; Cu (sputtered) 300°, 0.100°; Ag (sputtered) 300°, 0.100°; Pd (from PtCl₄) 300°, 0.100°; Ni (reduced at 300°), 300°, 0.110°. Isomerization of *d*-MeC(OH)Et

vapor to MeCO and Pt(OH) in a flow system, with N₂ as carrier gas, on (l), with Cu (sputtered) at 100°, rotation (due to unreacted substance) 0.005°; Ag (sputtered) 100° -0.002°; Pd (sputtered) 100° -0.011°; on (r), with Cu (sputtered) 200°, 0.001°. (2) *Reduction of acetone with formation of a new center of asymmetry*. Isomerization of 2-methylcyclohexanone (I), according to 3:1 → 2:2-methylcyclohexanone + MeC(OH)Et, in a flow system in N₂, on (l), with Pt (sputtered) 200°, rotation (of the catalyze fraction b. 1.50 g) -0.012°; Pd (sputtered) 200° -0.025°; on (r), with Pt (from H₂PO₄) 200°, 0.020°; Pd (sputtered) 200°, 0.020°. (3) *Absolute asymmetric synthesis*. Hydrogenation of *o*-quinone to decahydroanthralene ald., on (l), with Ni (reduced at 350°) 125°, rotation (of the fully hydrogenated product) 0.040°; on (r), with Ni, 125° -0.020°. Hydrogenation of PhCH=CPhCH₂ to PhCH₂CHPhCH₂ in decahydroanthralene ald., on (l), with Ni (reduced at 350°) 125°, rotation (of the fully hydrogenated product) 0.041°; on (r), with Ni, 125° -0.034°. The latter are instances of syntheses of optically active compds. from compds. without an asym. C atom.

N. Tam

1957

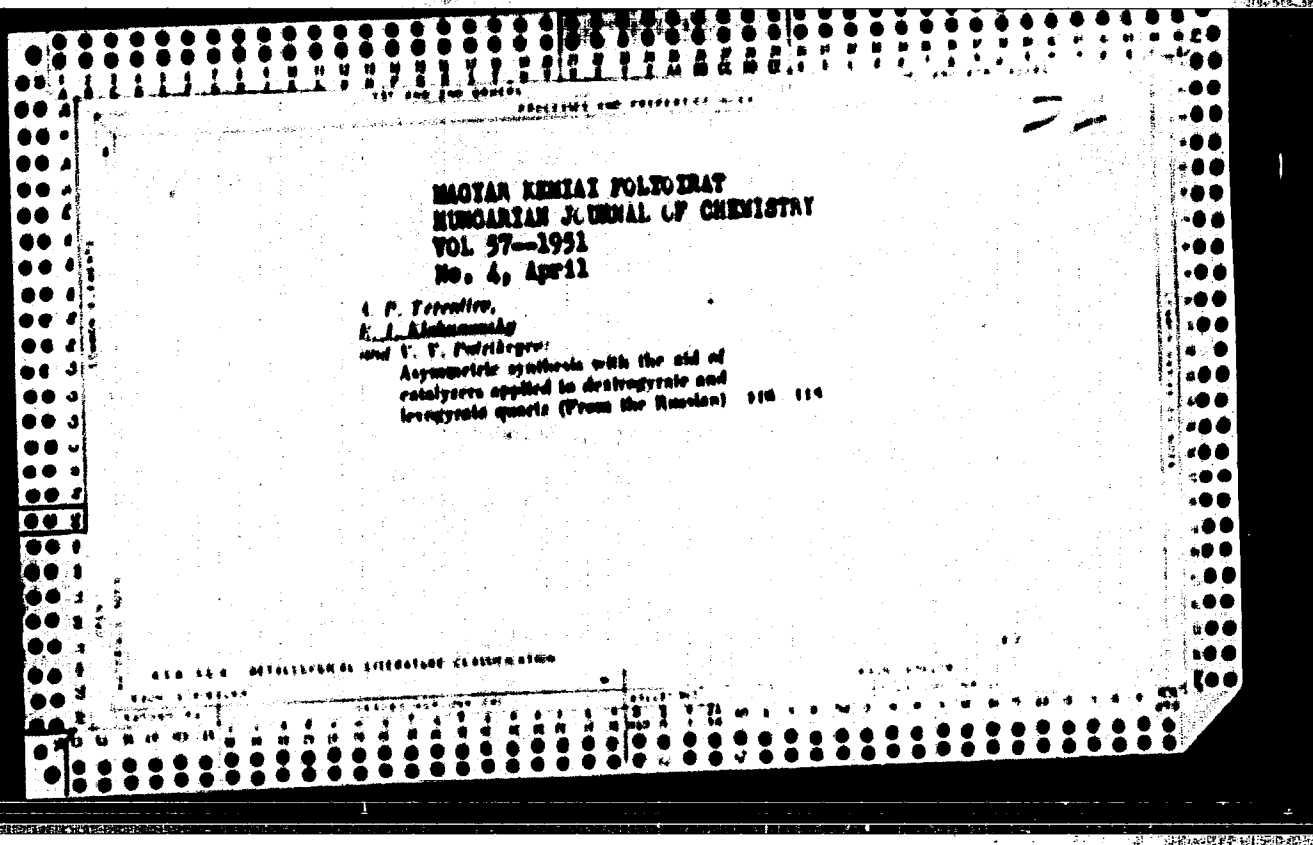
KLADUNOVSKIY, Ye. I

Cond Chem Sci

"Asymmetric Synthesis With the Aid of Catalysts on the Base of Optically Active Quartz." Sub 5 Jan 51, Moscow Order of Lenin State U imeni M. V. Lomonosov.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55



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Mechanism of the asymmetric effect of metal catalysts deposited on right and left quartz. E. J. Khabibov and V. V. Patrino. *Doklady Akad. Nauk S.S.S.R.* 74, 465-7 (1964).--The outstanding facts are (1) the asymmetry of a well-developed metal-quartz, plane boundary, (2) the identity of the sign of the rotation of the catalyzed and of the quartz in the case of destructive asym. synthesis, (3) the opposition of the signs of the rotations of the catalyzed and of the quartz in the case of asym. hydrogenation, and (4) the occurrence of low-temp. catalytic with enantioselective character described on quartz. The latter fact invalidates Schwarz's (*C.A.* 39, 7366) assumption of a contact activation of the reactant, inasmuch as with an amorphous metal the metal-quartz plane boundaries are indifferent to the sign of the asymmetry of the quartz. The observed facts can be explained on the basis of asym. adsorption of the reactants. In reactions of the type of destructive asym. synthesis, such as the reduction of racemic 2-butanol (Tsvetov, et al., *C.A.* 43, 5702) at 200-300° on Cu on lava quartz, the selective stage can be only a selective adsorption of the (+) antipode on metal-free quartz. The proof is that quartz covered with a continuous layer of Cu, even though it does have a catalytic activity, gives no optically active product, but does give asym. resolution when metal-free quartz surface is freed by grinding. Owing to the selective adsorption, the amount of the (+) antipode of the surface is greater than that of the (-) antipode, and the rate of its reaction at the active centers (at the Cu/quartz boundaries) is greater; as a result, the catalyzed shows (-) rotation. In the asym. hydrogenation of racemic compounds on Cu on lava quartz (*loc. cit.*), (d) and (l) products are formed in equal amounts, but, owing to selective adsorption, the (d) antipode accumulates on the quartz surface to a greater extent, and goes over into the vol. in greater amount, the catalyzed shows (+) rotation. Evidence of the existence of asym. adsorption on quartz is available (Tsvetov, et al., *C.A.* 39, 689; Karaguzov and Gomonova, *ibid.* 41, 7411). Chromatographic separ. of the antipodes of 2-butanol through asym. adsorption on left quartz powder of 0.3-0.75 mm. grain size, in a column 120 cm. long, 2.2 cm. in diam., moving downward against a rising stream of vap. in 20 cycles, a rotation of 0.80°, corresponding to 0.25% opt. With a 1.4% min. of active AuOH in dehydrogenationless decarbox. quartz, the decrease of the observed 2.5% more than lava quartz; the decrease of the optical rotation was, resp., 0.025 ± 0.002° and 0.025 ± 0.002°.

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Inst.-Org. Chem., AS USSR

KLABUNOVSKIY, Ye. I.

USSR

Catalytic asymmetric synthesis. I. Asymmetric dehydrogenation of racemic 2-butanol over Cu-quartz catalysts.
 A. S. Yezhov and Ye. I. Klabunovskiy (Moscow State Univ.), *Sbornik State Obshchestv. Nauch. S. 1521-2 (1963); Zh. Fizich. i Matemat. Gendern. Univ. 151, 145 (1961).*
 —Storing as usual flow methods were employed for coating of 2-butanol with optically active quartz coated with Cu layer. The max. rotation of the catalyzed was 0.18° and the sign corresponded to that of the quartz specimen used. At higher temps. both the dehydrogenation and dehydrogenation reactions took place, both of which are optically selective under these conditions. The specificity of action of the catalyst rises exponentially with decrease of the Cu layer. The temp. factor of the racemic dehydrogenation was 15.5 kcal./mole, while that of asymmetric reaction was 8.3 kcal./mole (these are the apparent activation energies calcd. from results at 200-450°). II. Asymmetric dehydrogenation of 2-butanol by quartz catalysts. *Ibid. 1963-1964.* —Cyclization of 2-butanol at 370-500° over a catalyst prepd. by deposition of Ag on optically active quartz specimens gave the following results. Specificity of the reaction in yielding optically active product reaches max. at 380°, the specificity being calcd. by formula: $S_p = \frac{p}{P} \times 100$, where p is excess optically active in the catalysis and P is total percentage of conversion. The activation energy for dehydrogenation was found to be 11.27 kcal./mole; for dehydrogenation 14 kcal./mole. Similar reactions on Ni-coated quartz gave 2 max. of specificity: 223° and 404° (456° for some specimens with high Ni content); activation energies were 4.66 and 18.56 kcal./mole, resp. Pt-coated quartz reaction specificity shows 2 max.: 215° and 258°; activation energies: 4.67 and 11.23 kcal./mole; resp. Pt-coated quartz caused only dehydrogenation without 2 max. in specificity. Al₂O₃-coated quartz also showed optically selective action (shown graphically) with 11: energy of activation of unselective dehydrogenation is 14.1 kcal./mole. The max. rotation achieved was obtained with Ni coating and amounted to +0.18° and -0.13°, resp.

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KLAVUNOVSKIY, YE. I.; TERENT'YEV, A. P.

Catalytic Asymmetrical Synthesis. II. Asymmetrical Decomposition of Butanol-2 by Quartz Catalysts, page 1598, Sbornik statey po obshchey khimii (Collection of Papers on General Chemistry), Vol. II, Moscow-Leningrad, 1953, pages 1680-1686.

Laboratory of Organic Chemistry imeni Acad, N. D. Zelinskiy, Moscow State U

KLABUNOVSKIY, YE. I.; TEREHT'YEV, A. P.

Catalytic Absolute Asymmetrical Synthesis. III. Reactions of Isomerization, Dismutation and Hydrogenation, page 1605, Sbornik statey po obshchey khimii, (Collection of Papers on General Chemistry), Vol. II, Moscow-Leningrad, 1953, pages 1680-1686.

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Catalytic Absolute Asymmetrical Synthesis. IV. Cyanoethylation of Cyclohexanone and 1-Methyl Cyclohexanone-2, page 1612, Sbornik statey po obshchey khimii, (Collection of Papers on General Chemistry), Vol. II, Moscow-Leningrad, 1953, pages 1680-1686.

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KLABUNOVSKIY, Ye.I.; PATRIKHEV, V.V.

Asymmetry in the organic world. Vest.Mosk.un. 8 no.5:53-58 My '53.
(MLBA 6:8)

1. Kafedra nefiti.

(Symmetry (Biology))

KLABUNOVSKIY, Ye. I.

USSR/ Medicine-Ophthalmology

Card : 1/1

Authors : Klabunovskiy, Ye. I., Cand. of Chem. Sciences

Title : About one characteristic of the eye

Periodical : Priroda, 6, page 113, June 1956

Abstract : The ability of the human eye to distinguish between polarised and non-polarised light without the use of a special optical instrument is briefly discussed.

Institution : Acad. of Sc. USSR, Institute of Org. Chemistry

Submitted :

KLADINSKOVSKIY, E. I.

USSR/Biology Organic chemistry

Card : 1/1

Authors : Kladinskoyev, E. I., Candidate of Chemical Sciences, and
 Patrikev, V. V., Candidate of Chemical Sciences

Title : Dissymmetry in the structure of alluminous bodies

Periodical : Priroda, A3/7, 89-93, July 1954

Abstract : Dextrorotatory and levorotatory crystals are explained in relation to the shape of the molecules composing them. The attempts of scientists to connect dissymmetry with cosmic forces and influence asymmetry by mechanical and magnetic means are recounted. The relationship of dissymmetry to organic substances and the origin of life are dealt with as well as the efforts of Soviet scientists to compile the basic knowledge for producing albumen synthetically. Diagrams.

Institution :

Submitted :

KLABUNOVSKIY, F. I.

USSR/Chemistry - Metallurgy

Card 1/1 : Feb. 86 - 32/46

Authors : Klabunovskiy, F. I.

Title : Titanium and Zirconium

Periodical : Priroda, 43/9, page 115, Sep 1954

Abstract : The abundance and characteristics of titanium and zirconium are discussed, along with the chemical composition of their ores. Methods of extraction are described. One English reference (1954).

Institution : Inst. Org. Chem., AS USSR

Submitted :

KLABUNOVSKIY, E. I.

USSR/Chemistry - Dehydrogenation

Card 1/1 Pub. 22 - 23/47

Authors : Balandin, A. A., Academician, and Klabunovskiy, E. I.

Title : Kinetics of butanol-2 dehydrogenation over nickel

Periodical : Dok. AN SSSR 98/5, 783-786, Oct 11, 1954

Abstract : The kinetics of butanol-2 dehydrogenation over nickel was investigated in a vaporous phase of a flowing system. The rate constants were determined from the general kinetic equation of the catalytic mono-molecular reactions occurring in the flow. Equations determining the relative adsorption coefficient, change in free energy and entropy during the adsorption on catalytically active centers are included. The heats of adsorption displacement were found to be very high and exceed the activation energy. The actual hydrogenation activation energy for butanol-2 is presented in a table. Eleven references: 8-USSR; 1-English; 1-French and 1-Belgian (1925-1954). Tables; graphs.

Institution : Acad. of Sc. USSR, The N. D. Zelinskiy Institute of Organic Chemistry

Submitted : July 29, 1954

KLABUNOVSKIY, Ye.I.

Contemporary state of catalysis and theoretical foundations of catalyst research; lecture of Academician A.A. Balandin at the General Session of the Department of Chemical Sciences of the Academy of Sciences of the U.S.S.R., March 30th, 1955. Zhur. fiz.khim. 29 no.7:1349-1352 J1 '55. (MLBA 9:3)
(Catalysis) (Balandin, A.A.)

USSR/Chemistry - Isomers separation

Card 1/1 Pub. 86 - 14/35

Authors : Klabinovskiy, E. I., Cand. Chem. Sci.

Title : The cellulose of paper - an optically active adsorbent

Periodical : Priroda 44/2, 88 - 89, Feb 1955

Abstract : The partial separation of racemic mixtures into optical isomers with the aid of chromatography is discussed. The results of the experiments of chemists in various countries are cited to show that an optically active solvent should not be used to obtain best results. Among these chemists was the Japanese, N. Nakamura, who found that racemic aromatic amino acid can be separated on paper with an inactive solvent (a mixture of butyl alcohol, acetic acid and 1-methyl-2-phenylisopropylamine). Four references: 1 USSR; 1 Japanese; 1 German; and 1 USA (1931 - 1953).

Institution : The Acad. of Sc., USSR, Institute of Org. Chem.

Submitted :

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