ARNAUTOV, N.V.; DUBNIK, R.L., red.; MAZUROVA, A.F., tekhn.red.

[Spetrographic determination of germanium in raw minerals] Spektrograficheskoe opredelenie germaniia v mineral'nom syr'e. Novosibirsk, Izd-vo Sibirskogo otd-niia AN SSSR, 1959. 60 p. (MIRA 13:6)

(Germanium--Spectra)

YAVORSKIY, I.A., kand.tekhn.nauk, otv.red.; DUDNIK, R.L., red.; MAZUROVA, A.F., tekhn.red.

[Problems in the use of Siberian fuels for power production] Voprosy energotekhnologicheskogo ispol'zovaniia topliv Sibiri. Otv.red. I.A.Iavorskii. Novosibirsk, Izd-vo Sibirskogo otd-niia AN SSSR, 1960. 142 p. (MIRA 13:6)

1. Akademiya nauk SSSR. Zapadno-Sibirskiy filial, Novosibirsk. Transportno-energeticheskiy institut.
(Siberia--Power engineering)

ABRAMOVICH, D.I.; DUDNIK, R.L., red.; NOVAK, V., tekhn. red.

[Waters of the Kulunda Steppe] Vody Kulundinskoi stepi. Novosibirsk, Izd-vo Sibirskogo otd-niia AN SSSR, 1960. 211 p. (MIRA 14:7)

(Kulunda Steppe—Water supply)

KIRENSKIY, L.V., doktor fiz.-mat. nauk, otv. red.; DUDNIK, R.L., red.; MAZUROVA, A.F., tekhn. red.

[Materials of the All-Union Conference on Ferromagnetic Substances] Materialy Vsesoiuznogo soveshchaniia po magnitnoi strukture ferromagnetikov. Krasnoyarsk, 1958. Novosibirsk, Izd-vo Sibirskogo otdeniia AN SSSR, 1960. 249 p. (MIRA 14:7)

1. Vsesoyuznoye soveshchaniye po magnitnoy strukture ferromagnetikov. Krasnoyarsk, 1958.
(Magnetic materials) (Ferromagnetism)

KOTYUK, Andrey Fedorovich; MIZIUK, L.Ya., kand. tekhn. nauk, otv. red.; DUDNIK, R.L., red.; MAZUROVA, A.F., tekhn. red.; VYALYKH, A.M., tekhn. red.

[Analysis of airborne electric prospecting charts by the induction method] Analiz skhem aeroelektrorazvedki metodom induktsii. Otv. red. L.IA.Miziuk. Novosibirsk, Izd-vo Sibirskogo otd-niia AN SSSR, 1961. 113 p. (MIRA 15:3)
(Aeronautics in geology) (Electric prospecting)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R000411430007-1"

system

(elenive AN SSSR,

R)

BAGLAY, R.D.; DUDNIK, R.L.

The frequency band of systems with a double continuous signal conversion. Izv. SO AN SSSR no.6. Ser. tekh. nauk no.2:3-12 '65. (MIRA 18:11)

1. Institut avtomatiki i elektrometrii Sibirskogo otdeleniya AN SSSR, Novosibirsk.

DIDMIK, [redacted], kandidat tekhnicheskikh nauk, dotsent; KUCHEROV, P.S., kandidat tekhnicheskikh nauk, otvetstvennyy redaktor; YAMKOVSKAYA, Z.B., redaktor; ZICKHANOVSKAYA, T.I., tekhnicheskiy redaktor

[Planning in enterprises of the coal mining] Planirovanie na predpriiatiiakh ugol'noi promyshlennosti. [Kiev] Izd-vo Kievskogo gos. univ. im. T.G.Shevchenko, 1957. 208 p. (MLRA 10:10)

1. Chlen-korrespondent Akademii nauk USSR (for Kucherov)
(Coal mines and mining)

DUDNIK, Tina Mitrofanovna, kand.tekhn.nauk; STARIKOV, Lenin Alekseyevich, kand.ekon.nauk; [redacted], Vadim Vasil'yevich, gornyy insh.; SUROVA, V.A., red.izd-va; IL'INSKAYA, G.M., tekhn.red.

[Productive capacity of mines and its utilization] Proizvodstvennye moshchnosti shakht i ikh ispol'zovanie. Moskva, Ugletekhizdat, 1958. 112 p. (MIRA 12:4)

1. Kafedra ekonomiki i organizatsii gornogo proizvodstva Khar'kovskogo inzhenerno-ekonomicheskogo instituta (for Dudnik, Starikov, Nezhentsev).

(Coal mines and mining)

DUDNIK, T.M.; STARIKOV, L.A.; MEZHENTSEV, V.V.; DOPPEL'MAYER, K.K.; STEPUN, A.O., otv.red.; OSVAL'D, E.Ya., red.izd-va; LOMILINA, L.N., tekhn.red.; SHKLYAR, S.Ya., tekhn.red.

[Principles of the analysis of mine economics] Osnovy analiza khozialstvennoi deiatel'nosti shakhty. Moskva, Gos.nauchno-tekhn. izd-vo lit-ry po gornomu delu, 1959. 103 p. (MIRA 12:12)
(Mining industry and finance) (Mine management)

PYATKIN, A.M., kand. tekhn. nauk; POLYAKOV, P.I., inzh.; DUDNIK, T.M., dotsent, kand. tekhn. nauk; KHOKHLOV, N.P., inzh.; ASTAKHOV, A.S.

Readers' response to the article by A.S. Astakhov "Economic efficiency of mining machinery."; "Ugol'", 1962, No.12. Ugol' 39 no.3:65-68 My'64. (MIRA 17:5)

IGNATENKO, N.; DUDNIK, V.

Tables for calculating the ash content of the absolutely dry substances of grain products. Muk.-elev.prom. 26 no.7:16-17 Jl '60. (MIRA 13:8)

1. Nachal'nik TKhK Vasil'kovskoy mel'nitsy No 10 (for Ignatenko)
2. Nachal'nik Kiyevskogo oblastnogo upravleniya Goskhlebinspektsii (for Dudnik).

(Grain--Analysis)

DUDNIK, V., polkovnik, kand.istoricheskikh nauk

Inculcating work habits in the students of military engineering schools. Komm.Voorush.Sil 1 no.4:63-65 F '61. (MIRA 14:8)
(Aeronautics, Military--Study and teaching)
(Russia--Air force--Political activity)

DUDNIK, V.F.

SHAPOSHNIKOVA, O.V.; DUDNIK, V.F.

Processing paraffinic fuel oils in an atmosphoric distillation unit. Neftianik 2 no.5:13-14 My '57. (MLRA 10:5)

1. Nachal'nik ustanovki No. 9 Groznenskogo ordena Trudovogo Krasnogo Znameni neftepererabatyvayushchego zavoda. (for Shaposhnikova) 2. Nachal'nik tsekha No. 2 Groznenskogo ordena Trudovogo Krasnogo Znameni neftepererabatyvayushchego zavoda. (for Dudnik).

(Petroleum--Refining)

DUDNIK, V. M. PA 75T27

USSR/Electricity May 1948
Furnaces, Electric
Smelting

"A New Method of Continuous Smelting of Various Kinds of Alloys in One Melting Furnace," V. M. Dudnik, Kirovsk Plant in the Urals, ½ p

"Prom Energet" No 5

Previous practice required cleaning furnace before changing to different type of aluminum alloy. Shows this practice to be unnecessary, and gives figures showing resultant saving in electricity and increase in output. Suggestion was awarded a fifth prize in All-Union competition.

[redacted] 75T27

GONCHARENKO, V.K.; LUR'YE, D.A.; DUDNIK, V.M.

Problems of the specialized production of molding materials in the Ukraine. Lit. proizv. no.11:7-8 N '64. (MIRA 18:8)

LAZARENKO, A.S.; KHOMENKO, A.D. [Khomenko, O.D.]; PROSKURA, Z.V.; DUDNIK, V.N. [Dudnyk, V.M.]; NECHIPORUK, M.Ye. [Nechyporuk, M.Yu.]

Effect of menilite shales on growth and certain physiological processes in farm crops during their initial stages of development according to the data obtained in plant culture experiments in 1951. Pratsi Inst. agrobiol. AN URSR 2 [pt. 2]:33-53 '53. (MIRA 11:7)
(Shale)
(Field crops)

GREBINSKIY, S.O.; DUDNIK, V.N.; SKOROKHODOVA, I.A.; KHITROVA, T.N.

Biology of kok-saghyz in wide strip plantations. Dop. ta pov. L'viv. un. no.5 pt.2:23-26 '55. (MLRA 9:10)

(Kok-saghyz)

DUDNIK, V.N.

Effect of benzene hexachloride on the growth and development of potatoes and kidney beans. Biul.Glav.bot.sada no.20:115-118 '55. (MIRA 8:9)

1. Botanicheskiy sad L'vovskogo gosudarstvennogo universiteta.
(Potatoes) (Beans) (Benzene hexachloride)

L 31496-66 EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6015025 SOURCE CODE: UR/0051/66/020/004/0678/0684

56
55
B

AUTHOR: Zholkevich, G. A.; Dudnik, V. P.

ORG: none

TITLE: Production and properties of blue-glow ZnS-Cu sublimate electroluminors

SOURCE: Optika i spektroskopiya, v. 20, no. 4, 1966, 678-684

TOPIC TAGS: zinc compound optic material, luminor, vacuum sublimation, light excitation, optic brightness, volt ampere characteristic

ABSTRACT: The authors describe a single-step method of obtaining a blue-glow luminor by sublimation from "ZnS-Cu" powder (brand FK-106). The sublimation was in a quartz tube 55 mm in diameter and 60 cm long (Fig. 1) in a vacuum 10^{-4}-10^{-5} mm Hg. The preparation of the samples for optical investigations is briefly described. The method offers good reproducibility and elimination of undesirable impurities through the use of relatively low temperature. Excitation of the luminor with a dc and ac field 2-5 x 10^4 v/cm yielded a blue glow throughout the luminor with a brightness of 30 nit and a spectral maximum near 475 nm. The brightness increased with the voltage much more steeply than the current. Microscopic observations have shown that the electroluminescence occurs through the entire volume of the sublimate. When excited with ac, the brightness was produced

Card 1/2 UDC: 535.376

L 31496-66
ACC NR: AP6013025

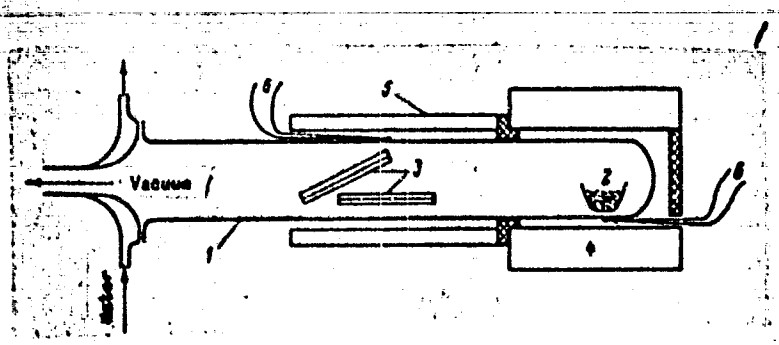

Fig. 1. Diagram of setup to sublimate the luminor. 1 - Quartz tube, 2 - crucible with sublimated luminor, 3 - substrate for the sublimate, 4 - high temperature oven, 5 - low temperature oven, 6 - thermocouples.

in peaks which were in phase with the voltage. In the case of dc, at medium and high brightness the dependence of the brightness on the current was quadratic. The authors thank A. G. Col'dman for suggesting the topic and a discussion of the results. Orig. art. has: 7 figures.

SUB CODE: 20/ SUBM DATE: 08Feb65/ ORIG REF: 003/ OTH REF: 001

Card 2/2 mc

L 26494-66 ENP(k)/EWT(1)/EWG(m)/EIC(f)/EWG(m)/T/EWP(t)/ETI/EWP(m) IJP(c) RDM/

ACC NR: AP6013058 RM/JD SOURCE CODE: [illegible] /004/0593/0598

AUTHOR: Gol'dman, A. G.; Zholkevich, G. A.; Lazar', N. P.; Dudnik, V. P.

ORG: [illegible]

TITLE: Investigation of the electroluminescence of sublimated films /Report. Fourth Conference on Luminescence held in Riga, 18-23 September 1965/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. [illegible] 593-598

TOPIC TAGS: electroluminescence, electric conductivity, phosphor film, zinc sulfide

ABSTRACT: The paper gives the results of further investigation of sublimated [illegible] activated zinc sulfide films described by the [illegible] Doklady AN SSSR [illegible] and used for the preparation [illegible] luminescent [illegible] preparation procedure was developed by [illegible] and V. P. Dudnik. [illegible] was [illegible] powder with about [illegible] g/cm³. Sublimation from the crucible in a quartz tube began at 850-900°C and was continued for 1 to 2 hours, depending [illegible] desired. In the process the [illegible] probable. The operating [illegible]

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ACC NR: AP6013058

[illegible] ity of the films was good. The advantages of the technique are described [illegible] that it can be used not only for slit type [illegible] for cells of [illegible] electroluminescence with a brightness [illegible] be excited by either ac or dc. The emission [illegible] slit type cells with [illegible]

[illegible] for the sandwich type cells and [illegible] the slit type [illegible] than 10^4 V/cm, the variation of brightness with the current is given [illegible] is about 2, in weaker fields the values [illegible] in the range from [illegible] estimated films in the form of slit type [illegible] zinc electrodes [illegible] were investigated at 77° K in fields of [illegible] V/cm. A number of [illegible] facts were observed: upon increase of the voltage [illegible] a critical value the [illegible] negative resistance, after going through [illegible] the [illegible] stimulated conductivity (the value of this may [illegible] times the [illegible] room temperature) is stable (the current-voltage characteristics are [illegible] stimulated state can also be [illegible] [illegible] destroyed by heating and [illegible]

[illegible] in the stimulated state [illegible] proportional to the voltage to the 7-th or 8-th power, the brightness dependence in the stimulated state, as in the ordinary state, is proportional to the current to approximately the second power; owing to the high current values realiz-

Card 2/3

L 26494-66

ACC NR: AP6013058

able in the stimulated state in this state it is feasible to obtain brightnesses an [illegible] magnitude higher than in the ordinary state. The [illegible] also prepared CdS [illegible] microns thick by vacuum sublimation onto cond[illegible] glass substrates heat- [illegible] 450° these were then drifted with gallium to [illegible] type films with a [illegible] cm. The CdS films were [illegible] doped with [illegible] annealed [illegible] induce ordering. These [illegible] exhibited [illegible] the electroluminescence [illegible] with the [illegible] direction attained [illegible] the brightness was [illegible] the voltage appear to be varying pow[illegible] of the voltage. [illegible] has 5 figures.

SUB CODE: 20/ SUBM DATE: 00/ ORIG REF: 002/ OTH REF: 005

Card 3/3

ALEKSANDROV, Grigoriy Petrovich[Aleksandrov, H.P.]; DUDNIK, Vera Nikolayevna[Dudnyk, V.M.]; KITYK, Vasiliy Ivanovich; SURZHOK, Grigoriy Dmitriyevich [Surzhok, H.D.]. Prinimal uchastiye SHEVCHENKO, Yu.V.; PORFIR'YEV, V.B., akademik, otv. red.; MEL'NIK, G.F.[Mel'nyk, H.F.], red. izd-va; DAKHNO, Yu.B., tekhn. red.

[Kalussite, a new potassium fertilizer]Kalushyt - nove kaliine dobryvo. [By]G.P.Aleksandrov ta inshi. Kyiv, Vyd-vo Akad.nauk URSR, 1962. 133 p. (MIRA 16:3)

1. Akademiya nauk Ukr. SSR (for Porfir'yev)
(Ukraine—Kalussite)

DUDNIK, V. P.

34431
S/185/61/006/006/008/030
D299/D304

24.3500 (1137,1138)

AUTHORS: Hol'dman, O.H., Dudnyk, V.P., and Proskura, O.I.
SOL'DMAN, A.G.

TITLE: On frequency characteristics of the brightness of electroluminescent cells with zinc-sulfide phosphors

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 6, no. 6, 1961, 761 - 763

TEXT: The frequency characteristic of an electroluminescent cell with a ZnS phosphor is mainly determined by its capacitance being almost linear (in case of a constant voltage), viz. $i = 2\pi fVC$. The frequency characteristic of the brightness B of a cell is approximately given by the formula $B = af^k$, where a and k are constants $(0 < k < 1)$. If a resistor is connected in series with the cell, a maximum appears on the frequency characteristic at a frequency that is lower, the greater the ballast resistance; the brightness decreases fast with frequencies higher than that corresponding to maximum brightness. Insertion of a capacitance in parallel with the ballast resistor, leads to a certain linearization of the characteristic.

Card 1/2

Thereby it is possible to regulate the capacitance (in a certain interval), so that the brightness becomes practically independent of the frequency. It is expedient to form a resonance circuit, by inserting an inductance. This has the following advantages: a) The voltage at the cell is increased (three- to tenfold) as compared to the source voltage; b) The brightness is greatly increased (a hundredfold); c) The current source is more efficiently used; d) The electroluminescence yield is higher. The frequency characteristics of electroluminescent elements reflect also the peculiarities of the electroluminescence mechanism. Thus, if dissimilar luminescent centers are present (ZnS-Cu, Mn), the frequency characteristics under similar electrical conditions, but in different spectral regions, have different exponents k. The frequency characteristics for the variable luminescence-component and for its constant component are in a different ratio, depending on the luminescence relaxation process. There are 4 figures.

ASSOCIATION: Instytut fizyky AS UkrRSR (Institute of Physics of the AS UkrSSR, Kyyiv) [Abstractor's note: Essentially complete translation]

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SOV/169-59-4-4033

Translation from: Referativnyy zhurnal, Geofizika, 1959, Nr 4, p 123 (USSR)

AUTHORS: Dudnik, V.S., Kashcheyev, B.L., Lagutin, M.F., Lysenko, I.A.

TITLE: The Measurement of the Meteor Velocity by the Diffraction Method

PERIODICAL: Mezhdunar. geofiz. god., Inform. byul., 1958, Nr 1, pp 51 - 62 (Engl. Res.)

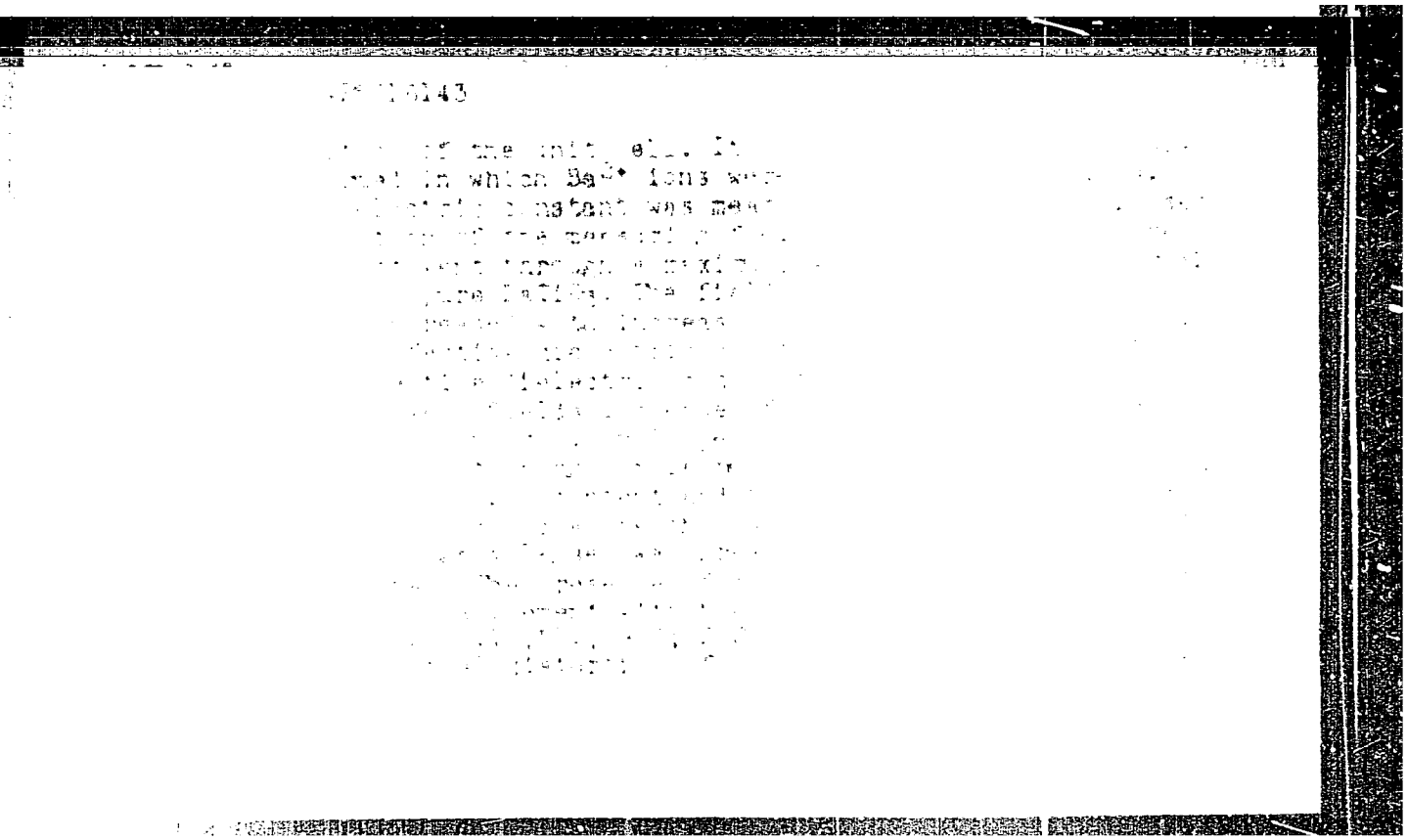
ABSTRACT: The Khar'kovskiy politekhnicheskiy institut (Khar'kov Polytechnic Institute) performed radar measurements of the meteor velocity using the pulse method. The changes of the distance to the meteor cause an interference of the reflected waves and echo amplitude variations. Hence, the meteor velocity can be found after having determined the distance to the meteor. The paper contains a description of the principal circuit diagram of the device used for studying the meteor stream of the Geminids. A velocity of 35 ± 2.5 km/sec was obtained for the meteors of this stream.

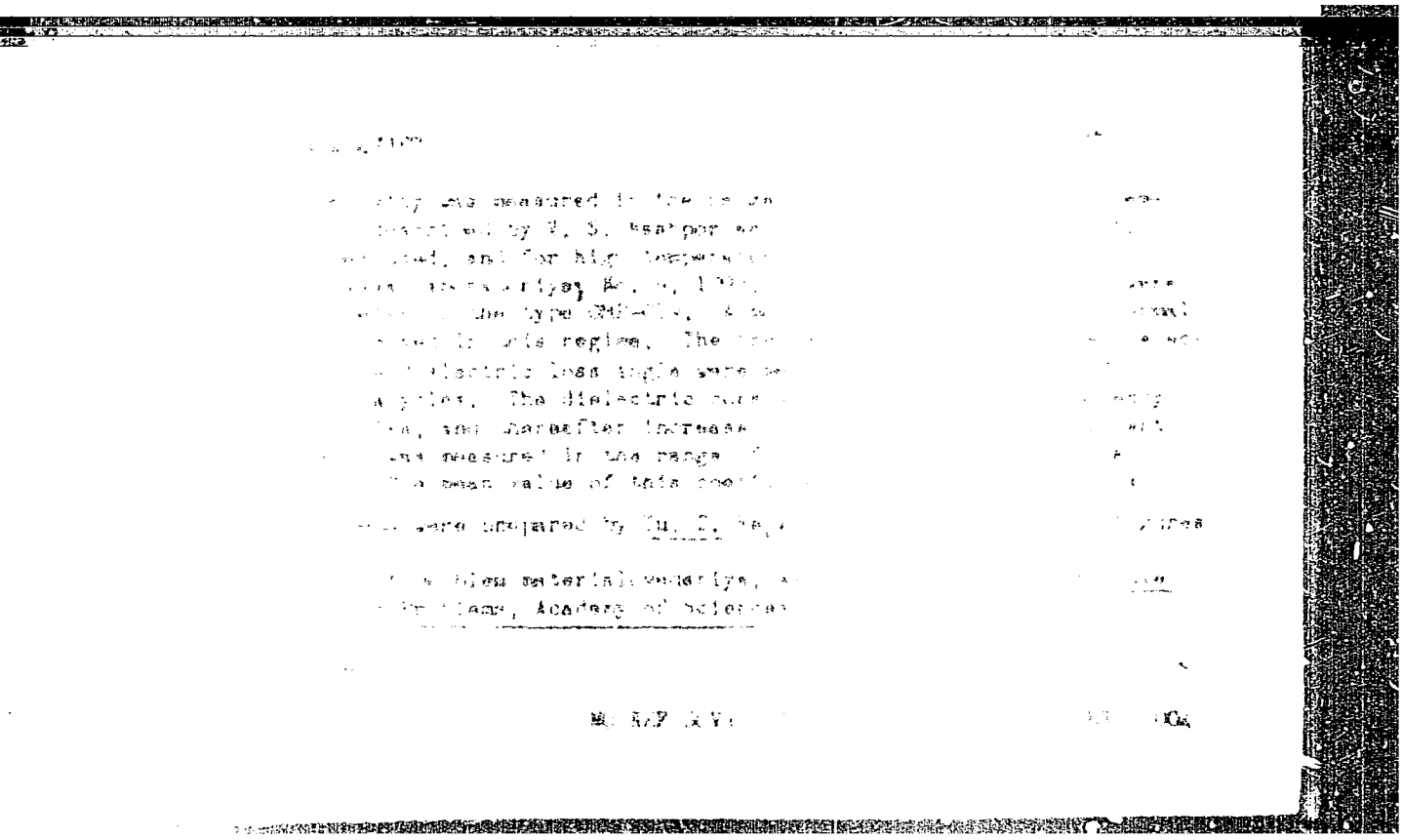
Card 1/1

SINYAKOV, Ye.V.; DUDNIK, Ye.F.

Ferroelectric properties of $SrNb_2O_6$ - 0.5 YbFeO. Fiz.tver. tela 4 no.10:2971-2972 O '62. (MIRA 15:12)

1. Dnepropetrovskiy gosudarstvennyy universitet.
(Systems (Chemistry)) (Dielectric constant)





ACC NR: AP6013567 (A) IJP(c) JD/WW/JG/GD

SOURCE CODE: UR/0000/65/000/000/0293/0296

AUTHOR: Pederno, Yu. B.; Dudnik, Ye. M.; Andreyeva, T. V.; Barantseva, I. G.; Yupko, V. L.

ORG: Institute of Material Science Problems, AN UkrSSR (Institut problem materialovedeniya AN UkrSSR)

TITLE: Measurement of the thermal expansion coefficients of ZrC, HfC, NbC, and TaC at high temperatures

SOURCE: AN UkrSSR. Institut problem materialovedeniya. Vysokotemperaturnyye neorganicheskiye soyedineniya (High temperature inorganic compounds). Kiev, Naukova dumka, 1965, 293-296

TOPIC TAGS: zirconium carbide, hafnium compound, tantalum compound, niobium compound, heat expansion, CARBIDE

ABSTRACT: The thermal expansion of zirconium, hafnium, niobium, and tantalum carbides was studied in the 1370°-3170°K range. The object of the work was to fill a gap in the literature. The thermal expansion was measured in a vacuum chamber (10^{-2} mm Hg) in which carbide samples (8 mm in diameter and 15-18 mm in length) were heated electrically. The carbide samples were prepared by hot-pressing technique and the temperature was measured with an OPM-19 micropyrometer. The individual carbide samples had the

Card 1/2

L 41634-66 EWT(1)/EWT(m)/EWP(w)/T/EWP(t)/ETI IJP(c) JD

ACC NR: AP6007288 SOURCE CODE: UR/0226/66/000/002/0060/0062

AUTHOR: Dudnik, Ye. M.; Oganesyan, V. Kh.

ORG: Institute of Material Science Problems, AN UkrSSR (Institut problem materialovedeniya AN UkrSSR)

TITLE: Thermal expansion of some transition metal sulfides

SOURCE: Poroshkovaya metallurgiya, no. 2, 1966, 60-62

TOPIC TAGS: sulfide, transition metal sulfide, thermal expansion, metal physics, elastic modulus, melting point, elastic property, electron shell, quantum theory

ABSTRACT: Experimental thermal expansion coefficients of the transition metal sulfides Ti_2S_2, ZrS_2, Nb_2S_3, α-TaS_2, Cr_2S_3 and MoS_2 were obtained and related to the characteristic temperature θ, the root-mean-square amplitude of elastic oscillations $(\overline{U^2})^{1/2}$, the fusion temperature T_f and the elastic modulus E. Theoretical equations are given relating E, θ, $\overline{U^2}$ and T_f to α--the coefficient of thermal expansion. Experimental values of α were determined (within 4.5-5% accuracy) on a quartz dilatometer under argon at temperatures ranging from room to 1100°C. The relative longitudinal expansion obeyed a linear law. The value of α decreased with increase in the order number of the transition metal. Sulfides in which the number of d-electrons in the

Card 1/2

L 41634-66

ACC NR: AP6007288

sublattice was closest to 5 and in which the principle quantum number was greatest, [illegible] the lowest values of α; these sulfides tended to form stable electronic d^5 configurations. Thus, Ti_2S_3 had the greatest value, while Nb_2S_3 had the lowest. With lowering of atomic weight θ increased and, correspondingly, $(\overline{U^2})^{1/2}$ decreased in value. The authors express their gratitude to G. V. Samsonov, Corresponding Member of the AN UkrSSR, for guidance in the present work. Orig. art. has: 1 table, [illegible] equations.

SUB CODE: 11,20/ SUBM DATE: 26May65/ ORIG REF: 008

Card 2/2

L 35866-66 EWP(e)/EWT(m)/EWP(w)/T/EWP(t)/ETI IJP(c) JD/JG

ACC NR: AP6020958 (A) SOURCE CODE: UR/0226/66/000/006/0017/0023

AUTHOR: Samsonov, G. V.; Lapshov, Yu. N.; Podchernyayeva, I. A.; Fomenko, V. S.; Yerosov, Yu. I.; Dudnik, Ye. M.

ORG: Institute of the Problems of Material Science, AN UkrSSR (Institut problem materialovedeniya AN UkrSSR)

TITLE: Production and physical properties of alloys of the W-LaB_6 system

SOURCE: Poroshkovaya metallurgiya, no. 6, 1966, 17-23

TOPIC TAGS: tungsten base alloy, lanthanum hexaboride ~~containing alloy~~, tungsten boride ~~containing alloy~~, ~~alloy~~, physical property, alloy phase diagram, x ray diffraction analysis, metal

ABSTRACT: Six tungsten-base alloys containing 1, 3, 5, 10, 30 or 50 mol% lanthanum hexaboride were prepared from alloy powder with a particle size of 50 μ by hot compacting in an argon atmosphere in graphite molds coated with boron nitride. It was found that the reaction of tungsten with lanthanum hexaboride results in decomposition of the latter and in the formation of W_2B and WB borides. Metallographic and x-ray diffraction analysis showed that alloys containing 1, 3, or 5% lanthanum hexaboride had a two-phase structure consisting of tungsten-base solid solution and tungsten boride (W_2B) and a microhardness of 620, 597, and 535 dan/mm², respectively. Alloy with 10%

Card 1/2

L 35866-66

ACC NR: AP6020958

lanthanum hexaboride had a four-phase structure consisting of tungsten-base solid solution, W_2B, WB, and LaB_6-base phase. Alloys with 30 or 50% lanthanum hexaboride contained two W_2B-base and LaB_6-base phases. The alloys containing 1, 3, 5 and 10% lanthanum hexaboride have a resistivity at room temperature of 6.9, 17.75, 23.1, and 41.6 kohm·cm, respectively. Small additions of lanthanum hexaboride (about 1 mol%) sharply reduced the work function of tungsten at 1700C. These alloys appear to be promising materials for cathodes working at medium and high temperatures. Orig. art. has: 7 figures and 1 table. [AZ]

SUB CODE: 11/ SUBM DATE: 27Dec65/ ORIG REF: 017/ OTH REF: 003
ATD PRESS: 5036

Card 2/2

L 06482-67 EWT(m)/EWP(e)/EWP(t)/ETI IJP(c) MH/JD

ACC NR: AP6028294 SOURCE CODE: UR/0363/66/002/006/0980/0983

AUTHOR: Dudnik, Ye. M.; Lashkarev, G. V.; Paderno, Yu. B.; Obolonchik, V. A. 41 37 13

ORG: Institute of Materials Science Problems, Academy of Sciences, UkrSSR (Institut problem materialovedeniya Akademii nauk UkrSSR)

TITLE: Thermal expansion of rare earth chalcogenides 15

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 6, 1966, 980-983

TOPIC TAGS: thermal expansion, selenide, telluride, rare earth compound

ABSTRACT: The temperature dependence of the relative elongation of EuS, EuSe, La_2Se_3, Ce_2Se_3, Pr_2Se_3, Nd_2Se_3, Nd_2Se_3, Sm_2Se_3, Sm_2S_3, Pr_2O_2Te and Sm_2O_2Te was studied in the range from room temperature to 800°K. The measurements were made with a quartz dilatometer. In passing from the rare earth metals to their compounds with an ionic-covalent bond character, the thermal expansion coefficient α increases (with the exception of europium), apparently because of an increased anharmonicity of the thermal vibrations of the crystal lattice. The value of α of the chalcogenides increases in the rare earth series and in passing from sulfides to selenides; this is also due to increased anharmonicity. The α values of oxytellurides are intermediate between those of oxides and sesquisulfides. From the α values, the Debye temperatures θ of the compounds were calculated and found to decrease with increasing atomic number of the rare earth metal (except in the case of samarium). The melting points of the sesquisele-

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L 06182-67

ACC NR: AP6028294

nides were also estimated from the α values. Authors express their appreciation to T. M. Mikhlina and V. G. Dem'yanchuk for assistance in the preparation of the compact samples and for performing chemical analyses of the rare earth chalcogenides, and also to S. V. Radzikovskaya and Ye. D. Leonova for carrying out the chemical analysis of pyrite and for assistance in the preparation of Sm_2S_3 and EuS samples. Orig. art. has: 4 tables and 3 formulas.

SUB CODE: 07,20/ SUBM DATE: 29Jun65/ ORIG REF: 017/ OTH REF: 005

Card 2/2

L 06579-67 EWT(m)/EWP(e)/EWP(w)/EWP(t)/ETI IJP(c) JD/JG

ACC NR: AP6029821 SOURCE CODE: UR/0363/66/002/008/1454/1459

AUTHOR: Samsonov, G. V.; Lapshov, Yu. K.; Podchernyayeva, I. A.; Fomenko, V. S.; Yerosov, Yu. I.; Dudnik, Ye. M.

ORG: Institute of Material Science Problems, Academy of Sciences SSSR (Institut problem materialovedeniya akademii nauk UkrSSR)

TITLE: Some physical properties of the W-LaB_6 alloys

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 8, 1966, 1454-1459

TOPIC TAGS: solid mechanical property, tungsten, boron, lanthanum, x ray, alloy, phase composition, phase diagram

ABSTRACT: The phase composition of several W-LaB_6 alloys (1-50 mole % LaB_6) was studied by x ray technique. Microhardness, specific electrical resistivity in 293°-1273°K range, and thermal emission parameters and emanation coefficients in the 1200-1950°K range were determined for various W-LaB_6 alloys. The alloy samples were prepared by hot pressing of suitable W+LaB_6 mixture in an argon atmosphere. The x ray analyses were made with a URS-50IM apparatus provided with CuKα-emission source. It was found that during the interaction between W and LaB_6 there occurs a simultaneous formation of two borides, W_2B and WB, and a decomposition of LaB_6. These processes were accompanied by an increase in the specific electrical resistivity of the samples. It was also

Card 1/2 UDC: 546.3-19-78-654'271

L 06579-67

ACC NR: AP6029821

found that an addition of as little as 1 mole % LaB_6 to W results in a sharp decline in the samples work function. This effect is explained in terms of the declining statical weight of the stable d^5- configurations in the tungsten atoms leading, in turn, to an easy thermal excitation of the metals' non-localized electrons. Orig. art. has: 5 figures and 3 tables.

SUB CODE: 11,20/ SUBM DATE: 21Jul65/ ORIG REF: 015/ OTH REF: 002

Card 2/2

ACCESSION NR: AP4019484 S/0078/64/009/003/0530/0533

AUTHORS: Vekhov, V. A.; Dudnik, Ye. P.; Marin, K. G.

TITLE: Production of silicon dioxide by hydrolysis of tetraethoxysilane

SOURCE: Zhurnal neorg. khimii, v. 9, no. 3, 1964, 530-533

TOPIC TAGS: tetraethoxysilane, hydrolysis, silicon dioxide, production, hydrolysis catalyst, reaction rate, HCl catalyst, ammonia catalyst

ABSTRACT: The hydrolysis of tetraethoxysilane in aqueous solution in the presence of a catalyst that is easily separable from the product, and the reaction rates and yields of SiO_2 were investigated. On hydrolyzing with a 1% HCl solution, a 1:1 tetraethoxysilane:water ratio is optimum. Increasing HCl concentration from 0.0097 to 3.65% increases the time required to complete hydrolysis. A satisfactory white SiO_2 was obtained with 0.186% HCl in 8 minutes; therefore 0.2% or stronger HCl is suggested. With ammonia, a 1:1 reactant ratio is also optimum. Reaction temperature is 30-40° to prevent excessive volatilization of the ammonia. With 0.94% ammonia, 98% hydrolysis was obtained in 55 minutes. With lesser concentrations the hydrolysis

Card 1/2

ACCESSION NR: AP4019484

is slower and with higher ammonia concentration, the yield of SiO_2 drops rapidly. Time is also an important factor: with 0.826% ammonia, only 25% hydrolysis was achieved in 20 minutes, and 98% in 140 minutes. Ammonia concentration should therefore be no greater than 0.9%. The more rapid hydrolysis with the same concentration of HCl is explained by the fact that it is a stronger electrolyte than ammonia. The presence of hydroxyl ions, and hence the ammonia method, is considered preferable to the presence of hydrogen ions. Orig. art. has: 7 tables.

ASSOCIATION: Dnepropetrovskiy metallurgicheskiy institut (Dnepropetrovsk Metallurgical Institute); Dneprovskiy titano-magnivey*y zavod (Dneprovsk Titanium-Magnesium Plant)

SUBMITTED: 21Feb63 DATE ACQ: 31Mar64 ENCL: 00

SUB CODE: CH, MA NR REF SOV: 006 OTHER: 003

Card 2/2

ACC NR: AP6003640 SOURCE CODE: UR/0078/65/010/010/2359/2362

[illegible], V. A., Dudnik, Ye. P., Rumyantseva [illegible]

TITLE: Hydrolysis of tetraethoxysilane

SOURCE: Zhurnal neorganicheskoy khimii, v. 10, no. 10, 1965, 2359-2362

TOPIC TAGS: hydrolysis, silane, hydrochloric acid, ammonia

ABSTRACT: The hydrolysis of tetraethoxysilane was studied at 24 and [illegible] presence of small amounts of water [illegible] silane [illegible] analyzing the [illegible] products [illegible] reaction is given for the hydrolysis

$$Si(OC_2H_5)_4 + 3H_2O \xrightarrow[NH_3]{HCl} 3C_2H_5OH + SiOH(OC_2H_5)_3$$

[illegible] does not go to completion [illegible] the al-

UDC [illegible]

ACC NR: AP6003640

[illegible] medium, and stops at the formation of ethers [illegible] It is a [illegible] as initiated by the [illegible] water, the rate [illegible] with rising temperature [illegible] energy [illegible]

SUB CODE: 07, 20 SUBM DATE: 30Jul64 ORIG REF: [illegible]

Card 2/2

NUDNIK, Yu.I.; USOL'TSEV, E.A.

Herring in the eastern part of the Bering Sea. Trudy VNIRO 49: 225-229 '64. (MIRA 18:5)

1. Tikhookeanskiy nauchno-issledovatel'skiy institut morskogo rybnogo khozyaystva i okeanografii.

DUDNIK, Yu.V.

Induction of a lysogenic culture of Micrococcus lysodeikticus by antibiotics selectively inhibiting deoxyribonucleic acid synthesis. Antibiotiki 10 no.2:112-117 F '65.

(MIRA 18:5)

1. Laboratoriya izyskaniy i kul'tivirovaniya produtsentov (zav. - prof. G.F.Gause) Instituta po izyskaniyu novykh antibiotikov AMN SSSR, Moskva.

DUBNIK, Ruf'; GAMEZ, G.G.

Study of the mechanism of the action of brunecmycin.
Antibiotiki 10 no. 10:880-885 O '65. (MIRA 18:12)

1. Institut po izyskaniyu novykh antibiotikov i Institut morfologii zhivotnykh imeni A.N. Severtsova, Moskva. Submitted Febr. 9, 1965.

S/135/60/000/010/010/015
A006/A001

AUTHOR: Dudnikov, A. D.

TITLE: Roller Welding of Polyethylene Films

PERIODICAL: Svarochnoye proizvodstvo, 1960, No. 10, pp. 27-29

TEXT: A series of studies were made at VNIIESO on the roller welding of polyethylene films and on developing the proper equipment for this purpose. Roller welding producing 4 - 6 mm wide, straight, hermetic seams on 50 - 80 μ thick polyethylene films may be carried out by heating with one-sided heat supply. The films are welded between an upper and lower roller. The lower roller is heated by electric current and rotated by a motor and the upper roller exerts the necessary pressure on the film to be welded. To prevent sticking of the film to the heated roller, a gasket is placed between them. Welding is performed by heat passed from the lower heated roller through the gasket and the lower film to the upper film. The following conditions were applied: film thickness 60 μ; temperature of the lower roller; 130 - 150°C; force at the upper roller: 2-5 kg; revolution speed of the lower roller: 5 - 10 m/min. An increased number of films may be welded at elevated temperature and reduced

Card 1/3

speed. At 250°C and 2-3 m/min revolution, 8 layers were welded. For large scale production VNIIESO recommends welding on an endless, moving, consecutively heated and cooled metallic strip. In this process gaskets are not needed and power consumption is low. An installation for this purpose is shown in Figure 1. A spring steel, stainless steel or bronze strip, whose ends are soldered together, embraces the lower heated roller and is tightened by a tension roller. The strip moves between the rollers on a water-cooled condenser. Fusion of the film and formation of the seam is performed on the heated section of the strip; cooling and removing of the film welded, on its cooled section. The strip moves at a speed of 1-20m/min. The lower roller is heated from a heater and rotated from a d-c motor. The upper roller rotates freely applying to the film the compulsory force produced by a spring. It has a fluoro-plastic-4 rim to prevent adherence of the film. Smashing of the molten film is prevented by a gap set up between the rollers. The electric circuit of the system is shown in Figure 2. The total power is 500 watt. The motor is fed from a ЛАТР-2 (LATR-2) type АТР1 (ATR1) autotransformer. The temperature is controlled by a chromel-drop thermocouple and a millivoltmeter. The temperature of the lower roller is automatically maintained at the required level by a bimetallic control relay and two accessory relays. Water consumption of the cooler is controlled by a hydraulic relay and a signal lamp. The water consump-

tion required is 0.5 - 1 l/min. Welding may be performed at a speed of 20 m/min and above. A model of the described installation is now operating at a Leningrad plant. Good results have been obtained there in welding articles made of polyethylene and polyamide films. There are 4 figures.

ASSOCIATION: VNIIESO

1/1

USSR

ONUFRIYEV, V. P., SHVETSOV, Yu. F., DUDNIKOV, A. I., PRONIN, I. A., ZAKHAROV, V. M., and Kravets, I. K., All-Union Scientific Research Institute of Foot-and-Mouth Disease, USSR

"Effect of Immune Serum on the Formation of Active Immunity to Foot-and-Mouth Disease"

Sofia, Veterinarna Sbirka, Vol 63, No 11, pp 5-9

Abstract: Immune serum is used to produce passive immunity in cattle in regions in which foot-and-mouth disease occurs. The effect of preceding administration of immune serum on the formation of active immunity upon injection of live virus of type O was tested on mice. The immune serum was derived from cattle that had recovered from foot-and-mouth disease after infection with type O virus. It was established that administration of the immune serum to the mice 5-7 days before immunization with live virus prevented formation of active immunity in them, while administration of the immune serum 10, 15, 20, or 30 days before immunization with the virus had no effect on the development of active immunity. On administration of immune serum to the mice, the passive immunity persisted for 7 days. Tables.

S/181/62/004/010/052/063
B102/B104

AUTHORS: Sinyakov, Ye. V., and Dudnik, Ya. P.

TITLE: Seignettoelectrical properties of $SrNb_2O_6$-0.5 YbFeO

PERIODICAL: Fizika tverdogo tela, v. 4, no. 10, 1962, 2971 - 2972

TEXT: A new compound showing at the same time seignettoelectrical and ferrimagnetic properties was synthesized: $SrNb_2O_6$-0.5$YbFeO_3$. The temperature of preannealing was 1100°C, that of final annealing 1270°C. A proper choice of the final cooling rate is of great importance to ensure the desired properties in the ceramic. The seignettoelectrical state was verified by measurements of $\varepsilon(t)$ between -160 and +160°C and of $\varepsilon(E)$ between 0 and 12 kv/cm, the magnetic properties by determining the initial magnetic permeability at 7.8 Mc/sec. This was equal to 5 at room temperature. There are 2 figures.

ASSOCIATION: Dnepropetrovskiy gosudarstvennyy universitet (Dn
(Dnepropetrovsk State University)

SUBMITTED: May 21, 1962

Card 1/1

YAROSLAVSKIY, V., brigadir [illegible] (Lobnya Moskovskoy obl.); SIPRIKOV, V. (pos.Zavolzh'ye Gor'kovskoy obl.); FAL'BAUM, G. (Odessa); STAREN'KIY, S. (Saratov, Vol'skaya, 91, kv.7); DUDNIKOV, A. (Krasnodar); UGLEV, P. (Perm'); MEDOVAYA, A., inzh. (Leningrad); TRIGUBOVICH, A., frezerovshchik (Dzerzhinsk, Minskoy obl.); FINOV, G., student (Tula); YAKOVLEV, A., slesar' (Moskva); MALININA, N. (Tallin); CHEPAYKIN, G., inzh. (Moskva)

Advertising board. Izobr.i rats. no.5 (201) 38-39 '63. (MIRA 16:7)

(Technological innovations)

S/135/61/000/006/006/008
A006/A106

AUTHOR: Dudnikov, A.D., Engineer

TITLE: Butt welding thermoplastic films by heat pulses

PERIODICAL: Svarochnoye proizvodstvo, no.6, 1961, 30 - 32

TEXT: VNIIESO developed a new method of butt-welding thermoplastic films by heat pulses (Figure 1). This method, where heat is supplied by pulses, is more economical than welding with continuous heat supply by heat carriers of constant temperature. Excessive heating of the film and of the welding equipment is prevented, so that artificial cooling can be eliminated. Butt welding eliminates cutting of the film in the weld-adjacent zone; the joints are stronger, the seam width is less and material consumption is reduced 7 - 10 times as compared to overlap welding. Pulse heating combined with butt type weld formation makes it possible to weld films of different thermoplastic materials in a wide range of thickness independent of their electrical properties. Various combinations as to the number or thickness of films may be performed; the seam length is unlimited. A gap between the film and the heater prevents sticking of the film and eliminates the use of backing plates. A laboratory model of a welding machine

Card 1/3

Butt welding thermoplastic films by heat pulses

S/135/61/000/006/006/008
A006/A106

was designed for this new method (Figure 3). Film to be welded 1 is clamped between upper movable jaw 2 and lower fixed jaw 4 in such a manner that a gap is formed between the film edges and strip-heater 3, parallel-arranged to the jaws. The heater is in a plane, perpendicular to the plane of the film clamping. Clamping is performed with the aid of two pull rods 6 and pedal mechanism 7. Lifting of the upper jaw to release the film after welding, is made with the aid of two returning springs 5. To assure uniform heating, the heater is fixed on insulators 9. Tightening spring 8 prevents sagging of the heater. The electric circuit of the unit is described. The heating current is step-regulated within 15 - 30 amps. Maximum voltage is 24 v. Duration of pulses depends on the thickness and type of the material welded and is regulated within 0.3 - 5 sec. The described machine was used for welding various articles, such as a hood for a growing tree; hydro-insulating covers of cellars; hermetic cheese containers, polychlorvinyl and polyethylene bags, etc. There are 6 figures.

ASSOCIATION: VNIIESO

Card 2/3

Butt welding thermoplastic films by heat pulses

S/135/61/000/005/006/008
A006/A106

Figure 1:

Schematic representation of the formation of a butt weld in the thermal field of a strip heater: 1- film to be welded; 2 - strip heater; 3 - butt joint; 4 - upper and lower clamps; I - isotherm of the thermal field; 0 - temperature gradient of thermal field points.

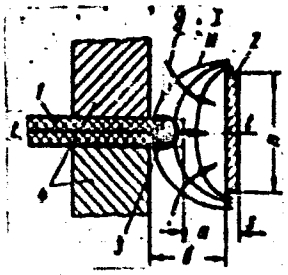
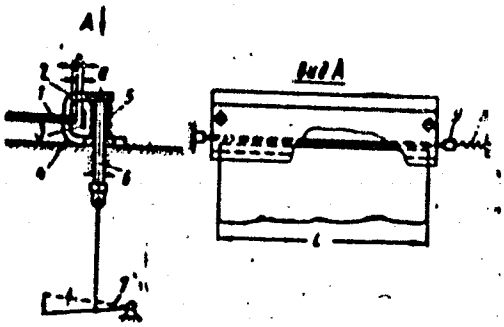


Figure 3:

Kinematic scheme of thermal butt welding with pulse heat supply: 1 - film to be welded; 2 - upper jaw; 3 - heater; 4 - lower jaw; 5 - spring; 6 - pull rods; 7 - pedal mechanism; 8 - tightening spring; 9 - insulator.



Card 3/3

L 31302-66 EWT(1)/T JK

ACC NR: AP6022590 (A,N) SOURCE CODE: UR/0346/66/000/001/0106/0107

24
B

AUTHOR: Omufriyev, V. P.; Dudnikov, A. I.; Shvetsov, Yu. F.; Sobko, A. I.

ORG: All-Union Scientific Research Foot-and-Mouth Disease Institute (Vsesoyuznyy nauchno-issledovatel'skiy yashchurnyy institut)

TITLE: Determination of the type and variant of foot-and-mouth disease virus as the basis for specific prophylaxis

SOURCE: Veterinariya, no. 1, 1966, 106-107

TOPIC TAGS: foot and mouth disease, virus, immunity

ABSTRACT: The authors note the plurality of the foot-and-mouth disease virus and the resulting importance of early and accurate type and variant identification as an essential prerequisite for proper control measures. They support their case with citations of the non-Soviet literature, observing that this question had been insufficiently studied in the Soviet Union. They review the methods for type and variant identification. Since identification with the complement fixation test and cross infection of immune animals requires much work and time, they recommend that this work should be centralized in the USSR in regional centers. [JPRS]

SUB CODE: 06 / SUBM DATE: none

Card 1/1 CC

UDC: 619:616.988.43-097

06.07

DUDNIKOV, A.I., mladshiy nauchnyy sotrudnik

Determining type variants of the foot-and-mouth disease virus. Visnyk sil'hosp.nauky 4 no.8:95-98 Ag '61. (MIRA 14:7)

1. Ukrainskiy nauchno-issledovatel'skiy institut eksperimental'noy veterinarii.

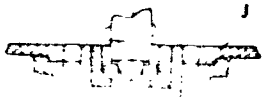
(Foot-and-mouth disease)

KLEMINA, N.V.; POSTYAKOV, A.P.; DUDNIKOV, A.I.

Preparation of foot-and-mouth disease virus antigens for gel precipitin tests. Acta virol. 8 no.5:478 S '64.

1. The Ukrainian Scientific Research Institute of Experimental Veterinary Medicine, Kharkov, Ukrainian S.S.R.

ACC NR: AP6009536



FEDOSHIEV, Grigoriy Anisimovich; DUDNIKOV, D.I., red.; KHLOBORDOV, V.I., tekhn.red.

[In the remote, mysterious taiga; notes of an explorer] Glukhoi, nevedomoi taigoiu; zapiski puteshestvennika. Krasnodar, Krasnodarskoe knizhnoe izd-vo, 1960. 329 p. (MIRA 14:3)

(Siberia--Description and travel)

DUDNIKOV, G.

DUDNIKOV, G.

The tex tbook "Accounting on collective farms" by S.T.Grigor'ev and others; part III. G.Dudnikov. Bukhg.uchet 14 [i.e.16] no.9:60-62 '57. (MIRA 10:10)

(Collective farms--Accounting)

DUDNIKOV, I. (g. Nikolayev)

Disaster has been averted. Posh.delo 7 no.6:27 Je '61. (MIRA 14:6)

(Petroleum industry--Fires and fire prevention)

DUDNIKOV, I.A., inzhener; DUKHEV, N.I., inzhener.

Automatic molding mix loading into measuring hoppers. Lit.proizv. no.9:28-29 S '56. (MLRA 9:11)
(Foundry machinery and supplies)

DUDNIKOV, I.A., inzhener., DURNEV, N.I., inzhener.

[redacted]

Increasing the capacity of soaking furnaces. Lit.proizv. no.4: 28 Ap '57. (MLRA 10:5)

(Foundry machinery and supplies)

SHIFRIN, G.Ye., dotsent; PODKATILOV, K.Ye., inzh.; DUDNIKOV, I.A., inzh.

Using perlite wrought iron in agricultural machines. Trakt. i sel'khozmash. 33 no.5:42-43 My '63. (MIRA 16:10)

1. Rostovskiy institut sel'skokhozyaystvennogo mashinostroyeniya (for Shifrin). 2. Gosudarstvennoye spetsial'noye konstruktorskoye byuro po sel'skokhozyaystvennym i vinogradnikovym mashinam (for Podkotilov). 3. Zavod "Krasnyy Aksay" (for Dudnikov).

DUDNIKOV, I.A.

Characteristics of producing malleable cast iron at the Plant "Krasnyi Aksai". Lit. proizv. no.1:34-35 Ja '65.

(MIRA 18:3)

ANDRIANOV, M.E.

CA

15

The Ostwald apparatus and its application for filtration analysis of soils. M. E. Andrianov. *Uchenye Zapiski Saratov. Gosudarst. Univ.* 15, No. 2 (1940); *Pedology* (U. S. S. R.) 213-28; *Khim. Referat. Zhur.* 4, No. 9, 66(1941).—The Ostwald app. for detg. filtration velocity was equipped with a Mariotte flask which maintained automatically a const. level of the liquid in the funnel. The effect of washing saloneta soils with water on the filtration velocity of $CaCl_2$ soln. and the dependence of the filtration velocity of water and $CaCl_2$ soln. on the salt compn. and bases absorbed by the soil were detd. by this app.

W. R. Henn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

DUDNIKOV, M.V.

Evaluating multilayer high-grade racing skis. Der. prom. 14 no.7:22-23 Jl '65. (MIRA 19:1)

1. Vologodskiy mebel'nyy kombinat.

L 33247-66 EWT(1) TO

ACC NR: AP6005759 SOURCE CODE: UR/0280/65/000/005/0058/0063

AUTHOR: Dudnikov, N. I.

ORG: None

40

B

TITLE: The "viability" of contact circuits in the component-by-component reserving technique

SOURCE: AN SSSR. Izvestiya. Tekhnicheskaya kibernetika, no. 5, 1965, 58-63

TOPIC TAGS: contact circuit, reliability engineering, reliability theory, circuit reliability

ABSTRACT: The author investigates a comparative method for the evaluation of the reliability of contact circuits in the component-by-component reserving technique. The method is based on the employment of the theory of Markov chains with a discrete model of the random process for the onset of failures. The author obtains "viability functions" for a description of reliability circuits at any relationships of the intensities of failures for zero and unity. The functions are presented in Table 1. Orig. art. has: 1 table, 1 figure, and 15 formulas.

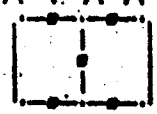
SUB CODE: 14 / 09 / SUBM DATE: 20Apr64 / ORIG REF: 002 / OTH REF: 002

Card 1/2

L 33247-66

ACC NR: AP6006759

Table 1. Table of "viability functions" for optimal reserving circuits

	a) No. of circuits	b) Connecting structure	c) Viability function	Recommended d) $\varphi = \frac{\lambda_0}{\lambda_1}$
2	1	$x \diamond x$	$f = 1.5 - \lambda$	0÷1
	2	$x \diamond x$	$f = 0.5 + \lambda$	1÷∞
3	1	$x \wedge x \wedge x$	$f = 1.833 - 2.5\lambda + \lambda^2$	0÷0.37
	2	$x \diamond (x \vee x)$	$f = 1.167 + 0.5\lambda - \lambda^2$	0.37÷1.0
	3	$x \vee x \diamond x$	$f = 0.667 + 1.5\lambda - \lambda^2$	1.0÷2.71
	4	$x \vee x \diamond x$	$f = 0.333 + 0.5\lambda + \lambda^2$	2.71÷∞
4	1	$x \wedge x \wedge x \wedge x$	$f = 2.083 - 4.333 + 3.5\lambda^2 - \lambda^3$	0÷0.212
	2	$x \wedge x \diamond (x \vee x)$	$f = 1.583 - 0.667\lambda - 1.5\lambda^2 + \lambda^3$	0.212÷0.38
	3	$x \wedge x \vee x \wedge x$	$f = 0.916 + 2.333\lambda - 3.5\lambda^2 + \lambda^3$	0.38÷1.0
	4	$(x \vee x) \wedge (x \vee x)$	$f = 0.75 + 1.667\lambda - 0.5\lambda^2 - \lambda^3$	1.0÷2.64
	5	$x \vee x \diamond x \vee x$	$f = 0.417 + 0.667\lambda + 1.5\lambda^2 - \lambda^3$	2.64÷4.72
	6	$x \vee x \vee x \vee x$	$f = 0.25 + 0.333\lambda + 0.5\lambda^2 - \lambda^3$	4.72÷∞
5	1	$x \wedge x \wedge x \wedge x \wedge x$	$f = 2.284 - 6.42\lambda + 7.83\lambda^2 - 4.5\lambda^3 + \lambda^4$	0÷0.15
	2	$x \wedge x \wedge x \wedge (x \vee x)$	$f = 1.666 - 2.25\lambda - 0.834\lambda^2 + 2.5\lambda^3 - \lambda^4$	0.15÷0.198
	3	$x \wedge (x \wedge x \vee x \wedge x)$	$f = 1.376 + 1.42\lambda - 5.84\lambda^2 + 4.5\lambda^3 - \lambda^4$	0.198÷0.369
	4	$x \wedge x \vee x \wedge x \wedge x$	$f = 1.05 + 2.92\lambda - 6.84\lambda^2 + 6.5\lambda^3 - \lambda^4$	0.369÷0.71
	5		$f = 0.817 + 1.84\lambda + 0.167\lambda^2 - 4\lambda^3 + 2\lambda^4$	0.71÷1.41
	6	$(x \vee x) \wedge (x \vee x \vee x)$	$f = 0.634 + 1.25\lambda + 0.666\lambda^2 - 0.5\lambda^3 - \lambda^4$	1.41÷2.57
	7	$x \vee ((x \vee x) \wedge (x \vee x))$	$f = 0.467 + 0.75\lambda + 1.67\lambda^2 - 0.5\lambda^3 - \lambda^4$	2.57÷5.06
	8	$x \vee x \vee x \vee x \diamond x$	$f = 0.3 + 0.417\lambda + 0.67\lambda^2 + 1.5\lambda^3 - \lambda^4$	5.06÷8.00
	9	$x \vee x \vee x \vee x \diamond x$	$f = 0.2 + 0.25\lambda + 0.333\lambda^2 + 0.5\lambda^3 + \lambda^4$	8.00÷∞

Card 2/2

DUDNIKOV, S.G.

AID P - 5004

Subject : USSR/Engineering

Card 1/2 Pub. 110-a - 6/17

Authors : Davydov, N. I., Kand. Tech. Sci., I. P. Dudnikova, S. G. Dudnikov, B. N. Mel'nikov, Engineers

Title : Methods of determining the frequency characteristics of industrial control objects.

Periodical : Teploenergetika, 9, 35-42, S 1956

Abstract : Frequency characteristics are often considered in the investigations of the industrial installation performance and in the solutions of complicated problems of automatic control. The methods described here for determining the frequency characteristics are based on the excitation of oscillations in a closed system of automatic control. The oscillations start by a harmonic signal at the control input. An example of the use of this method is presented for testing the dynamics of an once-through boiler. 10 diagrams. 8 references.

AID P - 5004

Teploenergetika, 9, 35-42, S 1956

Card 2/2 Pub. 110-a - 6/17

Institution : All-Union Heat Engineering Institute and Moscow Regional Power System Administration.

Submitted : No date

DUDNIKOV, S.G.

DAVYDOV, N.I., kand.tekhn.nauk; DUDNIKOV, S.G., inzh.

Regulation system of a uniflow type boiler for maintaining steam pressure. Teploenergetika 4 no.11:63-67 N '57. (MIRA 10:10)

1.Vsesoyuznyy teplotekhnicheskiy institut.
(Boilers)

DUDNIKOV, V., inzh.

Stand for assembling ZIL motortruck chassis. Avt.transp. 40 no.10:32-33 O '62. (MIRA 15:11)

(Machine-shop practice)

SAL'NIKOV, V., inzh.; DOLGOV, V., inzh.; DUDNIKOV, V.; CHUVANOV, V.; VAL'KOV, K.

Exchange of experience. Avt.transp. 42 no.12:49-51 D '64. (MIRA 18:4)

DUDNIKOV, V.F.; MIKHEYEV, V.P.

Action of the ions of some metals on Dreissena. Trudy Inst. biol. vnutr. vod. no.7:71-75 '64.

(MIRA 18:2)

1. Kuybyshevskaya stantsiya Instituta biologii vnutrennikh vod AN SSSR i Volzhskaya gidroelektricheskaya stantsiya imeni V.I. Lenina.

L 02274-67 EWT(m)/T

ACC NR: AP6025251 SOURCE CODE: UR/0057/66/036/007/1239/1240

55
B

AUTHOR: Dimov, G. I.; Dudnikov, V. G.

ORG: Institute of Nuclear Physics, Novosibirsk (Institut yadernoy fiziki)

TITLE: Charge-changing collision cross sections of approximately 1 MeV negative hydrogen ions in several gases

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 7, 1239-1240

TOPIC TAGS: hydrogen, charge exchange, hydrogen ion, positive ion, negative ion, atom, gas target

ABSTRACT: The authors have measured the cross sections of H_2, He, N_2, CO_2, C_3H_8, CCl_2F_2, and SF_4 for the $H^- \rightarrow H^0$ and $H^- \rightarrow H^+$ reactions of 0.9, 1.1, and 1.3 MeV H^- ions. The measurements were undertaken in connection with charge exchange injection of protons into storage rings. The H^- beam from a Van de Graaf accelerator was magnetically analyzed, focused with a quadrupole lens, passed through a charge exchange chamber of 21 cm equivalent length, and separated into H^-, H^0, and H^+ beams with a magnetic field. The H^- and H^+ beam intensities were measured with Faraday cups, and the H^0 beam intensity was measured with a calorimeter. The charge exchange chamber was separated from the rest of the apparatus by 0.5 cm diameter 5 cm long ion ducts, and gas pressures up to 10^{-4} mm Hg in the charge exchange chamber did not appreciably affect the vacuum in the remainder of the system. Measurements were made at target thicknesses from

Card 1/2

L 02274-67

ACC NR: AP6025251

2×10^{12} to 3.5×10^{14} molecule/cm^2, and the $H^0 \rightarrow H^+$ cross sections were derived from the target thickness giving maximum H^0 yield. The cross sections, maximum H yields, and optimal target thicknesses are tabulated. Accuracies of 18, 23, and 30% are claimed for the $H^- \rightarrow H^0$, $H^- \rightarrow H^+$, and $H^0 \rightarrow H^+$ cross sections, respectively. The $H^- \rightarrow H^+$ cross sections were from 3 to 6% of the corresponding $H^- \rightarrow H^0$ cross sections, and both were inversely proportional to the energy. The cross sections of the complex molecules were less than the sums of the cross sections of their constituent atoms. The maximum H^0 yield was approximately 50% for all the target gases. Orig. art. has: 1 figure and 1 table.

SUB CODE: 20 SUBM DATE: 24Aug65 ORIG. REF: 001 OTH REF: 001

Card 2/2 vmb

ACC NR: AP7002137 SOURCE CODE: UR/0050/66/000/012/0003/0009

AUTHORS: Burtsev, A. I. (Candidate of physico-mathematical sciences); Vetlov, I. P. (Candidate of physico-mathematical sciences); Dudnikov, V. N.; Sonechkin, D.M. (Candidate of physico-mathematical sciences)
ORG: Hydrometeorological Scientific Research Center of the SSSR (Gidrometeorologicheskiy nauchno-issledovatel'skiy tsentr SSSR)

TITLE: "Molniya-I" transmits images of the earth from outer space

SOURCE: Meteorologiya i gidrologiya, no. 12, 1966, 3-9

TOPIC TAGS: meteorologic satellite, tv camera, cloud formation, earth planet, weather map / Molniya-I meteorologic satellite

ABSTRACT: The authors discuss the television images of the earth, transmitted from the Molniya-I satellite. The cameras were mounted on the outside of the housing of the satellite and had interchangeable objectives. These television cameras permitted photographing in the yellow-red region of the spectrum, which increased the quality of the images of clouds and the earth's surface. Photographs taken at 1500 hrs Moscow time on 30 May 1966 at an altitude of 30 000—40 000 km are shown. Analysis of the television photographs shows a number of structural peculiarities of large cloud formations that determine the weather over a large territory. Orig. art. has: 2 photographs and 1 map.

SUB CODE: 0 / SUBM DATE: 19Aug66

Card 1/1 UDC: 629.195.1:551.5

1.1100

25906

S/123/61/000/013/006/025
A052/A101

AUTHOR: Dudnikov, V. T.

TITLE: Investigating the depth of cold hardened layer at machining metals by cutting

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 13, 1961, 28, abstract 13B158 ("Tr. Kuybyshevsk. aviats. in-t", no. 10, 1960, 41-62)

TEXT: An X-ray diffraction study has been carried out of the depth of the cold hardened layer arising at various kinds of machining 12Х2Н4А (12Kh2N4A), 40ХНМА (40KhNMA) steels and 598 alloy. For the X-ray diffraction study an industrial equipment with РУ-285 (RU-285) X-ray unit and a demountable ionic X-ray tube has been used. The intensity of cold hardening has been studied by measuring the microhardness of the surface layer and its changes over the depth. It has been established that the surface layer 10-30 microns deep, making up 10-30% of the hardened layer depth, is subjected to the most intensive cold hardening. At the front and plain milling the depth of the hardened layer is 15-95 microns. The maximum depth of the hardened layer has 40KhNMA steel. At drilling, the depth of the hardened layer is 80-135 microns for 12Kh2N4A steel, 105-135 microns for 40KhNMA steel and 60-180 microns for ЭИ598 (EI598) alloy. At grinding the

Card 1/2

25906

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A052/A101

Investigating the depth of cold hardened ...

depth of the hardened layer is 0.02 - 0.04 mm for 12ХН4А (12KhN4A) steel and 0.01 - 0.02 mm for EI598 alloy. A countersinking, reaming and broaching the depth of the hardened layer is 20-50 microns. The microhardness of the cold hardened layer drops sharply with its depth, the most intensive hardening being observed on the depth up to 20 microns. No connection between the depth of the hardened layer and microhardness of the surface layer has been established. There are 9 figures and 5 references.

I. Brozgol'

[Abstracter's note: Complete translation]

Card 2/2

S/123/62/000/013/011/021
A004/A101

AUTHOR: Dudnikov, V. M.

TITLE: X-ray diffraction studies of the depth of the workhardened layer in metal cutting

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 13, 1962, 54, abstract 13B322 (In collection: "Kachestvo poverkhnosti detaley mashin. v. 5." Moscow, AS USSR, 1961, 260 - 263)

TEXT: The author presents the results of X-ray diffraction studies of the depth of the workhardened layer of the steel grades 12Х2Н4А (12Kh2N4A), 40 ХНМА (40KhNMA), ШХ 15 (ShKh15) and of the heat-resistant ЭИ 598 (EI598) alloy having undergone different kinds of machining. It was found that with ductile materials the depth of the workhardened layer grows with an increase in the depth of cut, which is the case with normalized low-carbon 12Kh2N4A steel and the EI598 alloy. With the normalized steel grades 40KhNMA and ShKh15 the depth of cut does not affect the depth of the workhardened layer. With the hardened 40KhNMA grade steel the depth of the workhardened layer decreases with an increased depth of

Card 1/2

cut. At feeds of s = 0.2 - 0.4 mm/rev the depth of the workhardened layer begins to grow. A sharp increase of the workhardened layer for BK 8 (VK8) tools takes place if s > 0.4 mm/rev. The tool wear affects the depth of the workhardened layer only insignificantly. It is pointed out that, in machining the normalized steel grades 12Kh2N4A, 40KhNMA, ShKh15 and the EI598 alloy, the depth of the workhardened layer is insiginificant if sharp tools are used. If the 40KhNMA grade steel is machined at high feeds, the depth of the workhardened layer attains a value of h = 0.14 mm (at s = 0.8 mm/rev) and h = 0.209 mm (at s = 1 mm/rev). In drilling the 12Kh2N4A grade steel the depth of the workhardened layer h = 0.08 - - 0.135 mm; for 40KhNMA grade steel h = 0.105 - 0.165 mm and for the EI598 alloy h = 0.06 - 0.18 mm. The author presents formulae establishing the dependence of the depth of the workhardened layer on the depth of cut, feed and cutting speed. There are 2 figures.

E. Dymova

[Abstracter's note: Complete translation]

01933-67 EWT(1)/EWT(m) DJ/JD

ACC NR: AR6022147 SOURCE CODE: UR/0276/66/000/002/B121/B122

47 B

AUTHOR: Dudnikov, V. T.

TITLE: Analysis of statistical and dynamic characteristics of hydraulic automatic copying (tracking) systems with a single edge slide rod and a differential cylinder

SOURCE: Ref. zh. Tekhn mashinostr. Abs. 2B897

REF SOURCE: Tr. Kuybyshevsk. aviats. in-t, vyp. 20, ch. 1, 1965, 121-122

TOPIC TAGS: automatic control system, automatic copying, copying system

ABSTRACT: A functional blueprint of an automatic copying system and its construction methods are analyzed. Equations were derived for the motion of hydroamplifier, and structural blueprints of the system are given separately for the controlling action (the cutting forces at the rod being constant) and the disturbing effect (at zero control action). The qualitative characteristics of the system are analyzed. It was noted that for the automatic monitoring systems, the most significant qualitative dynamic characteristics are: 1) the nature and indicators of a transition process determining the corrections of profile reproduction at the surface transition sites, and 2) the stability of the system which determines its performance reliability and cleanness of

Card 1/2 UDC: 621.9-503.53-822

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ACC NR: AR6022147

the surface. Orig. art. has: 5 figures and a bibliography of 4 reference items. [AM]

L. Romancheva. [Translation of abstract]

SUB CODE: 13/

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Card 2/2