BORODKIN, V.F.; SMIRNOV, R.P.

Phthalocyanine and its derivatives from diiminoisoindolines. Izv. vys. ucheb. zav.; khim. i khim. tekh. 4 no. 2:287-290 '61. (MIRA 14:5)

1. Ivanovskiy khimiko-tekhnologicheskiy institut. Kafedra tekhnologii krasiteley i poluproduktov.
(Phthalocyanine) (Isoindoline)

L 16160-63 EPR/EWP(j)/EPF(c)/EWT(m)/BDS ASD Ps-4/Pc-4/Pr-4 RM/WW

ACCESSION NR: AR3005156 S/0058/63/000/006/D026/D026

SOURCE: RZh. Fizika, Abs. 6 D168

AUTHORS: Borodkin, V. F.; Smirnov, R. P.

TITLE: Absorption spectra of substituted analogs of phtalocyanin and analogs of naphtalocyanine

CITED SOURCE: Tr. Vses. mezhbuz. nauchnotekh. konferentsii po vopr. sinteza i primeneniya organ. krasiteley, 1961. Ivanovo, 1962, 30-33

TOPIC TAGS: ultraviolet spectrum, visible spectrum, substituted phtalocyanine analog , naphtalocyanine analog

TRANSLATION: The absorption spectra of symmetrical and asymetrical substituted analogs of phtalocyanine (substitutes -- nitro- or amino-groups) and analogs of naphtalocyanine. are investigated in the ultraviolet and visible regions. It is found that in the case of accumulation of amino-groups in the iso-indole residues, the maximum of the absorption is displaced bathochromally to the long-wave region, while in the case of accumulation of the nitro-groups it is shifted to the short-wave region. Substitution of the benzoisoindole residues in naphtalocyanine by

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L 16160-63

ACCESSION NR: AR3005156

phenyl and iso-indole residues leads to a shift of the maximum of absorption to the shorter wavelengths.

DATE ACQ: 15Jul63 SUB CODE: PH ENCL: 00

Card 2/2

ACCESSION NR: AP4025264 S/0153/63/006/006/1022/1024

AUTHOR: Smirnov, R. P.; Gnedina, V. A.; Borodkin, V. F.

TITLE: Synthesis and investigation of properties of macrocyclic compounds. I. Reaction of diamino-beta-isoindigo with hydrazine salts.

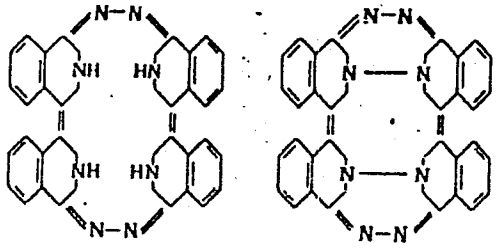
SOURCE: Ivuz. Khimiya i khimicheskaya tekhnologiya, v. 6, no. 6, 1963, 1022-1024

TOPIC TAGS: macrocyclic compound, diaminoisoindigo hydrazine reaction product, copper macrocyclic compound complex, nickel macrocyclic compound complex, IR spectra, stability, structure, imino group

ABSTRACT: The properties and stability of the macrocyclic compound formed by the reaction of diamino-beta-isoindigo with hydrazine hydrochloride in nitrobenzene were investigated. From the literature the product would be assigned the formula I. The authors however maintain the product has imidic hydrogen atoms as in the formula II:

Card 1/3

ACCESSION NR: AP4025264



I II

The latter structure is supported by IR spectra (maximum at 3230 cm^{-1}, characteristic for imino group, which disappears on complexing with metal). Copper and nickel complexes of the macrocyclic compound were prepared -- these are new in the literature. The complexes are very stable. Their absorption bands were shifted toward the long wave region of the spectra in comparison to the spectrum of the uncomplexed macrocyclic compound. Orig. art. has: 1 table and 2 formulas.

ASSOCIATION: Ivanovskiy khimiko-tekhnologicheskiy institut Kafedra tekhnologii organicheskikh kraciteley i poluproduktov (Ivanov Chemical Technological Institute)

ACCESSION NR: AP4037233 S/0153/64/007/001/0118/0121

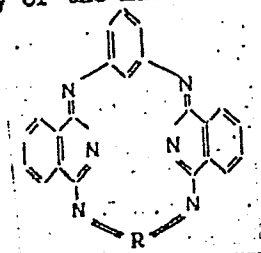
AUTHOR: Smirnov, R. P.; Borodkin, V. F.; Luk'yanova, G. I.

TITLE: Synthesis of metallic complexes of unsymmetrical macrocyclic compounds

SOURCE: Ivuz. Khimiya i khimicheskaya tekhnologiya, v. 7, no. 1, 1964, 118-121

TOPIC TAGS: unsymmetrical macrocyclic compound, metal complex, cobalt complex, nickel complex, copper complex, synthesis, absorption spectra, thermal stability, chemical stability, naphthoisoindoline containing macrocycle

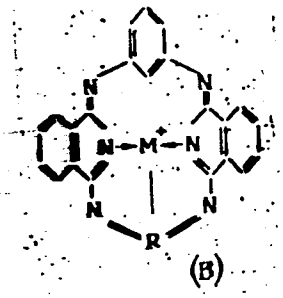
ABSTRACT: New metallic complexes of unsymmetrical macrocyclic compounds were synthesized and the effect of complex formation on the absorption spectra, and the thermal and chemical stability of the macrocyclic compounds were studied. Compounds of the formula A



(A))

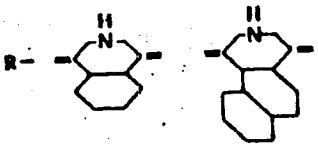
Card 1/3

AP4037233



(B)

M = divalent metal



were prepared by reacting 1,3-di-(1-imino-3-isoindolinylidenamino)-benzene with 1-amino-3-iminoisoindoline or 1-amino-3-naphthoisoindolenine. Copper, nickel and cobalt complexes (formula B) were prepared by dissolving the previously prepared compounds in pyridine, dimethylformamide or butanol with equimolecular amounts of the metal acetate or chloride, boiling for ½-3½ hours, filtering the precipitate

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ACCESSION NR: AP4037233

and washing. The metal complex compounds have higher thermal stability and lower solubility in organic solvents and acids than the nonmetallic compounds. The 3380 cm^{-1} maximum is absent in the IR spectra of the metal complexes, indicating the metals are in the "window" of the macrocyclic compounds. The absorpt[illegible] spectra are shifted toward the longer wave region of the spectrum, the amount of shift depending on the metal (greatest with Cu and least with Ni). Orig. art. has: 1 table and 2 formulas.

ASSOCIATION: Ivanovskiy khimiko-tekhnologicheskiy institut (Ivanov Chemical Engineering Institute) Kafedra tekhnologii organicheskikh krasiteley i poluproduktov (Department of the Technology of Organic Dyes and Intermediate Products)

SUBMITTED: 08Feb63 ENCL: 00

SUB CODE: OC NO REF SOV: 004 OTHER: 002

Card 3/3

SOURCE CODE: UR/3133/66/000/009/0162/0164

AUTHOR: Smirnov, R. V.

ORG: Black Sea Division of the Marine Hydrophysical Institute (Chernomorskoye otdeleniye Morskogo gidrofizicheskogo instituta)

TITLE: On the effect of the twenty-seven-day solar cycle on the temperature field of the troposphere

SOURCE: AN UkrSSR. Mezhduvedomstvennyy geofizicheskiy komitet. Informatsionnyy byulleten', no. 9, 1966. Geofizika i astronomiya, 162-164

TOPIC TAGS: solar cycle, solar corpuscular radiation, troposphere, atmospheric temperature

ABSTRACT: Work with helio-tropospheric relations was done on the shore of the Black Sea, at Kikinez Point. Measurements of T, the temperature of terrestrial layers of the troposphere, and K_p, planetary indices of magnetic activity, were made and plotted, in accordance with the twenty-seven-day solar calendar for five arbitrarily selected periods in one half of the eleven-year cycle, from 1957 to 1963. The correlation coefficient Q was calculated, and a Student's t distribution shows a close correlation between T and K_p; this correlation is strongest on the zero day relative to

Card 1/2

Card

L 10826-63 EWT(m)/BDS/ES(b)--AFFTC/ASD--K
ACCESSION NR: AP3000759 S/0020/63/150/003/0675/0676

53
52

AUTHOR: Smirnov, R. V.

TITLE: Frequency of development of thin adenomas in mice in relation to dose of exterior Gamma-irradiation

SOURCE: AN SSSR. Doklady, v. 150, no. 3, 1963, 675-676

TOPIC TAGS: thin adenomas, Gamma-irradiation, GUT - Co sup 60 - 400 apparatus

ABSTRACT: Present work is one of a series of investigation devoted to studying the frequency of origination of various tumors in mice in relation to the exterior dosage of Gamma-irradiation. The mice were irradiated by a GUT-Co sup 60 - 400 apparatus. The dose strength was 15 r per minute. The radiation doses consisted of 100, 200, 400, 600, or 800 r. The observations were carried on until the mice died after which dissection, examination and recording of the material was carried out. Authors conclude that under conditions of a sharp radiation effect, the total irradiation of the mice does not lead to a change in the frequency of thin adenoma formation. Orig. art. has: 1 table.

ASSOCIATION: Tsentral'ny*y nauchno-issledovatel'skiy institut meditsinskoy
Central Scientific-Research Inst. of Med. Rad.

Card 1/2

L 38269-66 EWT(1)/FCC SCTB DD/GD/AS

ACC NR: AT6022297 SOURCE CODE: UR/0000/66/000/000/0091/0097

AUTHOR: Podshibyakin, A. K.; Smirnov, R. V.; Uzhva, R. G.; Adamenko, N. P.; Shakhova, V. I.

ORG: none

TITLE: Time-advanced bioelectric effect of geomagnetic disturbances

SOURCE: Vsesoyuznaya nauchnaya sessiya, posvyashchennaya Dnyu radio. 22d, 1966. Sektsiya bioniki. Doklady. Moscow, 1966. 91-97 and page 133

TOPIC TAGS: bioelectric phenomenon, geomagnetic disturbance

ABSTRACT: Desultory observations, remarks, and ideas are presented regarding the effects of geomagnetic disturbances on living organisms. Some Soviet and Western published data is briefly reviewed. This information is added: Resuscitation of electrocuted test dogs was far less successful during the periods of magnetic storms than under normal no-magnetic-disturbance conditions. Voluntary appearance of human test subjects for electrostatic measurements (in a Moscow laboratory) was lower during magnetic disturbance periods. The majority of 150 tested persons had a lower electrostatic skin potential during magnetic storms: roughly, 20% of the subjects responded weakly; 60% responded distinctly; and 20% were highly responsive to magnetic disturbances. The above bioelectric phenomena were observed before (one or more days) the actual occurrence of the magnetic disturbance. Two explanations are offered:

Card 1/2

SMIRNOV, R.V. (Leningrad, ul. Sedova, d. 100, kv. 90, korp.13)

Frequency of the development of myeloid leukemia in mice in relation to the doses of external gamma irradiation. Vop onk. 8 no. 10:59-64 '62. (MIRA 17:7)

1. Iz otdela otdalennoy lychevoy patologii (zav. - d-r. biol. nauk. S.N.Aleksandrov) TSentral'nogo nauchno-issledovatel'skogo instituta meditsinskoy radiologii Ministerstva Fdravookhraneniya SSSSR (ispolnyayushchiy obyazannosti direktora - prof. B.P. Kalashnikov).

36918
S/020/62/143/005/018/018
B144/B138

97,1220

AUTHOR: Smirnov, R. V.

TITLE: Effect of a single gamma irradiation on the rate of development of ovarian tumors in mice

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 143, no. 5, 1962, 1211-1214

TEXT: Virginal mice were irradiated with doses of 100, 200, 400, 600 and 800 r in a ГУТ-Co^{60}-400 (GUT-Co^{60}-400) apparatus to study the frequency of radiation-induced ovarian tumors (OT). Macroscopic inspection and histological examination revealed the formation of the following types: tubular adenoma (1), granulosa cell tumor (2), cystadenoma ciliatum (3); lutein cell (4), theca cell (5), and complex (6) tumors. The percentage of tumor development was 96.7 in irradiated and 3.3 in control animals. The maximum total rate was found after doses of 200 r. The maxima differ for the individual tumor types (Fig. 1): 2 and 4 have a maximum at 100 r, 3 at 400 r, and 1 at 200 r with the highest percentage (48.1%). 2, 3, 4, 5, 6 show partly increased hormonal activity as a characteristic effect of

Card 1/3

SMIRNOV, R. V.

Smirnov, R. V. Laplace transforms of p-conjugate systems. Doklady Akad. Nauk SSSR (N.S.) 71, 437–439 (1950). (Russian)

A p-dimensional surface in n-dimensional projective space is called a p-conjugate system if it is possible to take on it p families of lines, satisfying the following conditions. (1) Through every point A_0 of the surface pass p lines of the net in p linearly independent directions; (2) the tangents to any line of any family taken along any line of any second family form a two-dimensional developable surface. Such a system is determined by the equation

$$(1)\qquad \omega^\alpha = 0,\quad \omega_i{}^j = a_i{}^j\omega^1 + b_i{}^j\omega^i,\quad \omega_i{}^\alpha = a_i{}^\alpha\omega^i,$$
$$i \neq j;\ i,j = 1,\dots,p;\quad \alpha = p+1,\dots,n \text{ (do not sum)}$$

with respect to a frame of reference consisting of A_0, points $A_1,\dots,A_p$ on the tangents to the p lines passing through A_0 and belonging to different families and any general points $A_{p+1},\dots,A_n$ outside the tangent plane. The system (1) is in involution and determines the X_p with $p(p-1)$ arbitrary functions of two variables. The point $A_i{}^j = b_i{}^jA_0 + A_i$ describes the edge of regression of the two-dimensional developable surface formed by the motion of the tangent to one of the lines of the family ω^j (that is, $\omega^1 = \dots = \omega^{j-1} = \omega^{j+1} = \dots = \omega^n = 0$) along a line of the family ω^j. The point $A_i{}^j$ is called a focus; there are $p(p-1)$ foci. When A_0 moves in the p-conjugate system every point $A_i{}^j$ describes a surface which in general is a p-conjugate system. This surface $A_i{}^j$ is the Laplace transform of the surface A_0.

The author enumerates a number of properties of these systems. By repeating the process s times we obtain for the number of new p-conjugate systems:

$$N(s,p) = \sum_{i=0}^{s-1}\binom{s-1}{i}\binom{p}{i+1}\sum_{k=0}^{s-1}\binom{s-1}{k}\binom{p-i-1}{s-k},$$
$$\binom{k}{0} = \binom{k}{k} = 1.$$

If we take on every ray A_0A_i $(i = 1,\dots,p)$ a point $B_i = \nu_iA_0 + A_i$ such that

$$[aB_1B_2B_3] = 0 \pmod{(\omega^1,\dots,\omega^{j-1},\omega^{j+1},\dots,\omega^n)},$$

then this point describes a p-conjugate system, and some

Source: Mathematical Reviews, 1950 Vol 11 No. 8

Smirnov and Yu. G. Staritskii (Mineral Ore Inst., Krivoi Rog, Ukraine). *Zapiski Vsesoyuz. Mineralog. Obshchestva* (Mém. soc. russe minéral.) 83, 158(1954).—In ore slicks from a Central-Asia placer occurrence, small droplets of native Hg were observed. The metal has been evidently reduced from cinnabar which is interspersed in the ores, and occurs in the typical oxidation zones of the deposit. Such [illegible] Hg [illegible] The metal was freed through the intense electromagnetic fields of the ore separators of the Krivoi Rog metallurgical plants, without any change.

W. Bitel

MIKHEYEVA, T.G.; SMIRNOV, R.V.

Operational indices for rural electric power plants. Izv.mar. sta.po elek.sel.i les.khoz.no.2:5-21 '53. (MIRA 10:12)
(Electric power station)

SKOBEL'TSYN, Yu.V.; SMIENOV, R.V.

Very simple automatic processes for rural hydroelectric power plants. Izv.mar.sta.po elek.sel.i les.khoz.no.2:23-30 '53. (MIRA 23-30)

(Hydroelectric power stations) (Automatic control)

L 10899-67 EWT(d)/EWP(l) IJP(c) BB/GG

ACC NR: AP6032517 SOURCE CODE: UR/0413/66/000/017/0092/0092 21

INVENTOR: Gonchukov, V. V.; Smirnov, R. V.

ORG: none

TITLE: Matrix for ferrite storage devices. Class 42, No. 185558

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 17, 1966, 92

TOPIC TAGS: storage device, data readout, matrix, modula

ABSTRACT: The proposed matrix for ferrite storage devices contains ferrite cores pierced with coordinated windings and an information winding (Fig. 1). The latter is used as a readout winding and an inhibitor winding with a grounded center point. To [illegible] the information winding is broken up into four identical sections placed in the first, third, fourth and second quadrants are series connected. The beginning of the information winding of the module lying in the second quadrant and the end of information winding of the module lying in the first quadrant are connected to the inputs of the readout amplifier. The end of the information winding of the module

Card 1/2 UDC: 681.327.66

-- 16Jun65/

KURBAKOV, K.I., inzh.; SMIRNOV, R.V., inzh.

Determination of letter combinations in statistical analysis of texts. Mekh.i avtom.proizv. 16 no.8:45-46 Ag '62. (MIRA 15:9)

(Programming languages (Electronic computers))

KURBAKOV, K.I.; SMIRNOV, R.V.

Retrieval of information in a dictionary made by the compressed code method. NTI no.2:46-49 '63. (MIRA 16:11)

S/139/60/000/005/006/031
E031/E113

AUTHOR: Smirnov, R.V.

TITLE: The Theory of Relativity and the Electromagnetic Field

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, 1960, No. 5, pp 35-42

TEXT: The first section deals principally with Lorentz matrices. These are matrices such that if G represents a linear homogeneous transformation leaving the interval invariant of covariant vectors, and $\tilde{G}$ does the same for contravariant vectors, then $G\tilde{G}$ is the unit matrix. This notation is used if the space is regarded as being transformed into itself, but if the transformation is regarded as giving the change in the components of a given vector following the introduction of another frame of reference, the letter L is used for the Lorentz matrix. Using the fact that $G\tilde{G}$ is the unit matrix it is not difficult to show that six parameters φ_i can be found such that any Lorentz matrix can be put in the form

$$G = \prod_{i=1}^{6} G(\varphi_i). \qquad (10)$$

Card 1/3

S/020/62/145/006/010/015
B142/B104

AUTHOR: Smirnov, R. V.

TITLE: The short periodic wave trains in the natural electric field of the sea

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 145, no. 6, 1962, 1271-1274

TEXT: Variations of the electric fields recorded in the Black Sea, Baltic Sea and Sea of Japan between May 1959 and May 1961 were used for investigations of the short period electric wave trains. The intensity of these wave trains is 1 1/2 times greater at sea than on land and the current density several 100 times greater. The intensities amount to 5-15 mv/km, their maximum is 35 mv/km, and the period is 50-90 secs. Within each 24 hr the frequency maximum of the wave trains occurs between 2200-0100 hrs local time. Wave trains occur notably more often in the equinoctial seasons when the earth is travelling through heliographic latitudes of particularly great solar activity. In years close to the maximum of solar activity the wave trains occur more often in summer too. As such wave train behavior is similar to that of M-type disturbances, causal relationships can be assumed between the wave trains, the geomagnetic

Card 1/3

SMIRNOV, R.V. (Leningrad, S-174, ul. Sedova, d.100, korpus 13, kv.90)

Blastomogenic effect of ionizing rad'ations on the ovary under experimental conditions. Vop. onk. 10 no.1:105-115 '64. (MIRA 17:11)

1. Iz otdela otdalennoy luchevoy patologii (zav. - doktor biolog. nauk S.N. Aleksandrov) TSentral'nogo nauchno-issledovatel'skogo instituta meditsinskoy radiologii Ministerstva zdravookhraneniya SSSR (dir. - Ye.I. Vorob'yev).

L 55928-65 EWT(d)/T IJP(c)

ACCESSION NR: AP5018366 UR/0139/64/000/006/0029/0032

AUTHOR: Smirnov, R. V.

TITLE: Hyperbolic regularity of quaternary functions and a field of zero mass

SOURCE: IVUZ. Fizika, no. 6, 1964, 29-32

TOPIC TAGS: hyperbolic geometry, mathematical physics

ABSTRACT: It is shown that a hyperbolic condition of regularity of quarternary functions of a quaternary variable, related to a space of events, leads to relativistically invariant equations of fields with zero mass and with spins of 0, 1, 1/2 and 1/2. Orig. art. has 22 formulas.

ASSOCIATION: Leningradskiy pedinstitut (Leningrad Pedagogical Institute)

SUBMITTED: 04May63 ENCL: 00 SUB CODE: MA, GP

NO REF SOV: 003 OTHER: 003 JPRS

Card 1/1

L 13489-65 EWT(1) IJP(c)/ASD(dp)-3/ASD(a)-5/RAEM(a)/ESD(t)
ACCESSION NR: AP4047906 S/0056/64/047/004/1386/1388

AUTHOR: Smirnov, R. V.

TITLE: States of zero-mass fields with nonscalar phase

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 47, no. 4, 1964, 1386-1388

TOPIC TAGS: quantum field theory, vector function, spinor, field equation, phase shift

ABSTRACT: The author introduces three- and four-component phases which transform like three-dimensional vectors and like four-component spinors, respectively. It is shown that the field equations introduced by the author (ZhETF v. 47, 1637, 1964) of a quadruplet of zero-mass particles is the analog of the Cauchy theorem for the theory of quaternion functions of quarternion variables. It is shown that the solutions of the field equations for zero-mass par-

Card 1/2

L 13489-65
ACCESSION NR: AP4047906

ticles can be constructed on the basis of the introduced phases, and that these solutions, similar to solutions with a scalar phase, do not depend on the choice of the reference frame. The identity observed in the invariance properties of the solutions with scalar, vector, and spinor phases gives grounds for assuming that the invariant solutions with nonscalar phases, like those with scalar phases, describe possible states of zero-mass fields. "The author is grateful to V. A. Yakubovich for interesting discussions." Orig. art. has: 13 formulas.

ASSOCIATION: None

SUBMITTED: 14Mar64 ENCL: 00

SUB CODE: GP NR REF SOV: 002 OTHER: 001

Card 2/2

SMIRNOV, R.V.

Correlation of some effects (tumor accelerating, carcinogenic and life-span shortening) under the influence of ionizing irradiation. Med. rad. 9 no.7:32-37 Jl '64. (MIRA 18:5)

1. Otdel otdalennoy luchevoy patologii (zav. - doktor biologicheskikh nauk S.N.Aleksandrov) TSentral'nogo nauchno-issledovatel'skogo instituta meditsinskoy radiologii Ministerstva zdravookhraneniya SSSR.

ACCESSION NR: AP4037576 S/0056/64/046/005/1637/1640

AUTHOR: Smirnov, R. V.

TITLE: Quadruplet variant of particle classification

SOURCE: Zh. eksper. i teor. fiz., v. 46, no. 5, 1964, 1637-1640

TOPIC TAGS: elementary particle classification, meson, baryon, resonance, zero mass particle, nonzero mass particle, quantum number, isospin space

ABSTRACT: A particle classification is constructed on the basis of the solution of the system of equations combining Maxwell's equations and the equations for the two-component neutrino. This classification includes zero-mass particles, mesons, baryons, and resonances, and can also include formally the electron and the muon. To include particles and resonances with nonzero mass into the classification, an isospin space is introduced, the structure of which is assumed to

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ACCESSION NR: AP4037576

be completely analogous to the structure of spin space. By postulating the law for the composition of quantum-number systems in such a way that the spin and isospin quantum numbers obey the usual rules for spin addition, while the fermion and isofermion numbers are added algebraically (corresponding to multiplication of the representations), the sets of quantum numbers for states with higher values of spins and isospins can also be obtained. Formal inclusion of the electron and muon into the scheme can be realized without difficulty, but the isotopic variables for these two particles have a physical meaning which is not yet clear. A method for obtaining the systems of quantum numbers corresponding to all possible states of the particles is indicated. "In conclusion the author is deeply grateful to S. V. Ismailov for interest in the work and for a discussion. Orig. art. has: 5 formulas and 2 tables.

ASSOCIATION: Leningradskiy gosudarstvenny*y pedagogicheskiy institut (Leningrad State Pedagogical Institute)

Card 2/3

L 34809-66

ACC NR: AP6021803 SOURCE CODE: UR/0413/66/000/012/0072/0072

INVENTOR: Bol'shov, V. M.; Pomel'tsov, A. N.; Smirnov, V. I.

ORG: none

TITLE: Device for the contactless investigation of the pooling of blood in organs and vessels. Class 30, No. 182847

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 12, 1966, 72

TOPIC TAGS: blood sensor, human physiology, animal physiology, blood circulation, hemodynamics, hemodynamic sensor, PLETHYSMOGRAPHY

ABSTRACT: An Author Certificate has been issued for a device used to study the pooling of blood in organs and tissues. It consists of a housing, high-frequency

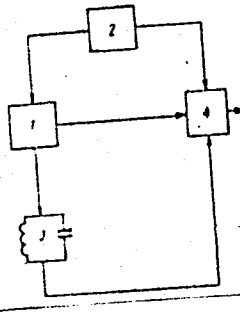

Fig. 1. Block diagram of device

1 - High-frequency generator; 2 - power source; 3 - sensor; 4 - Q-measuring circuit.

UDC: 615.471.621.38:612.14

Card 1/2

EWT(d)/EWP(1) IJP(c) BB/GG

ACC NR: AP6015846 SOURCE CODE: UR/0413/66/000/020/0056/0057

56

AUTHOR: Goncharov, V. V.; Smirnov, R. V.

ORG: none

TITLE: Memory unit. Class 21, No. 187086

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 20, 1966, 56-57

TOPIC TAGS: computer memory, computer storage device, memory core, ferrite core memory

ABSTRACT: An Author Certificate has been issued for a memory unit consisting of ferrite cores, read amplifiers, write current generators, coordinate selection lines, and an information line (for each bit position) which acts as a digit write wire. The information line consists of two series-connected parts each of which has an equal number of half-selected cores. Two resistors are connected to the information winding to reduce the write current applied to the information line. These resistors, together with the parts of the information winding shown in Fig. 1, form

UDC: 681.142.07

Card 1/2

L 09945-67
ACC NR: AP6035846

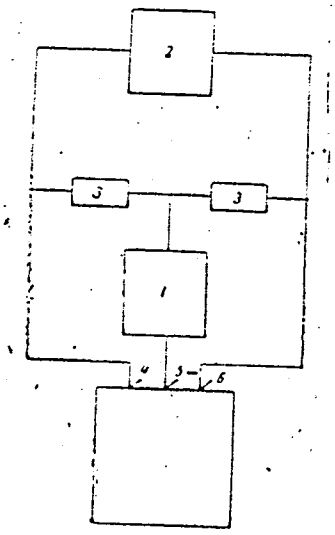

Fig. 1. Memory unit

1 - Read amplifier; 2 - write current generator; 3 - resistors; 4, 5 - outputs of one part of the information winding; 6 - outputs of the other part of the information winding.

a bridge circuit. A write current generator and a read amplifier are connected as the two diagonals of the bridge circuit. Orig. art. has: 1 figure.

SUB CODE: 09/ SUBM DATE: 08Jul65/ ATD PRESS: 5105

Card 2/2

ACC NR: AN6032080 (N) SOURCE CODE: UR/9034/66/000/079/0003/0003

AUTHOR: Karakulov, I. (Corresponding member AN KazSSR; Professor; Corresponding member AMN SSSR); Smirnov, S. (Doctor of epidemiology; Alma-Ata)

ORG: (Karakulov) AMN SSSR; AN Kazakhskaya SSR (AN Kazakhskoy SSR)

TITLE: Multifaceted drive against brucellosis

SOURCE: Meditsinskaya gazeta, no. 79, 30 Sep 66, p. 3, cols. 6-7

TOPIC TAGS: human ailment, brucellosis, bacteriology, medical research, epidemiology, infective disease, bacterial disease, disease therapeutics, animal disease, DISEASE INCIDENCE

ABSTRACT: Although its incidence has been reduced almost six times between 1952 and 1965, brucellosis remains one of the most widely distributed infective diseases in the Soviet Union. It is one of the most serious threats to the health of livestock and humans because of the chronic septicemia, allergic reactions, organ and tissue damage, and long recovery period resulting from the disease. A concentrated drive against brucellosis has been undertaken. Its primary task is to improve the health of farm animals and to eliminate epizootics. The latter is difficult because an epizootic begins with an infected animal's abortion. The microbes enter the soil,

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ACC NR: AN6032080

where they may be transferred to other domestic animals, humans, or intermediate hosts. The milk of infected animals also harbors the bacteria. Increased pasteurization of milk has played a great role in reducing the incidence of this disease in some areas. In the future, production of pasteurizing equipment will be increased. Mass vaccination of farm animals is now in progress and on the basis of past experience, is the single most effective measure for control of the disease.

[WA-50; CBE No. 12]

SUB CODE: 06/ SUBM DATE: none/

Card 2/2

SMITH, C. [illegible]

Two-channel electronic switch using transistors. Radio no.9: 54-55 S '65. (MIRA 19:1)

SMIRNOV, S.; BOGOMAZ, N. (Chelyabinsk); PISKAREV, A.; VASIL'YEV, I. (Leningrad); KHARIN, V. (Saratov); VOLKOV, A. (Ivanovo)

Exchange of experience. Radio no.1:38 Ja '63. (MIRA 16:1)
(Radio--Equipment and supplies)

[redacted]

...ference on the protection of international services of the ...evchant marine. Mor. flot 25 no.9:43-44 S '65. (MIRA 18:9)

1. Pervyy sekretar' Dogovorno-pravovogo otdela Ministerstva ...nostrannykh del SSSR.

SMIRNOV, S.A.

Lobectomy at a district hospital. Khirurgiia no.3:86-87 Mr '54.
(MLRA 7:5)

1. Iz khirurgicheskogo otdeleniya (zav. glavnyy vrach S.A.Smirnov) Konakovskoy rayonnoy bol'nitsy Kalininskoy oblasti.
(LUNGS, abscess, *surg., lobectomy, technic) (ABSCESS, *lungs, surg., lobectomy)

SMIRNOV, S.A.,

Resection of the stomach in perforating gastric and duodenal ulcer performed in a district hospital. Khirurgiia no.7:49 Jl '55. (MLRA 8:12)

1. Iz khirurgicheskogo otdeleniya Konakovskoy rayonnoy bol'nitsy Kalininskoy oblasti (zav.otdeleniyem i glavnyy vrach S.S.Smirnov)
(PEPTIC ULCER) (STOMACH--SURGERY)

SMIRNOV, S.A.

Surgery of the heart and pericardium. Khirurgiia no.8:72-73 Ag. '55.
(MLRA 9:2)

1. Iz Konakovskoy rayonnoy bol'nitsy Kalininskoy oblasti.
(HEART--SURGERY) (PERICARDIUM--SURGERY)

SMIRNOV,S.A.; SKORNYAKOV,A.I.; TITSKAYA,B.F., redaktor; POLOSINA,A.S., tekhnicheskiy redaktor

[Gas pipe fitter in the petroleum and gas industry] Slesar' po gazovomu delu na neftianykh i gazovykh promyslakh. Moskva, Gos. nauchno-tekhn. izd-vo neftianoi i gorno-toplivnoi lit-ry, 1952. 115 p. [Microfilm] (MLRA 9:3)

(Gas, Natural--Equipment and supplies)

SMIRNOV, S.A.

Stavropol-Moscow gas pipeline. Gaz.prom no.2:19-22 F '56.
(MLRA 10:1)

(Gas, Natural--Pipelines)

CHUKANOV, Vyacheslav Il'ich; SMIRNOV, Sergey Alekseyevich; FAYBISOVICH, I.L., otvetstvennyy redaktor; NADEINSKAYA, A.A., tekhnicheskiy redaktor

[Model KRU-350 heavy belt conveyer] Moshchnyi lentochnyi konveier KRU-350 Moskva, Ugletekhizdat, 1956. 27 p. (MLRA 9:8)
(Conveying machinery)

SMIRNOV, S.A., kand.tekhn.nauk, dotsent

Using massive rock fills in the construction of shore protection installations. Nauch.trudy OIIMF no.13:111-120 '57. (MIRA 11:11)

(Shore protection)

SMIRNOV, S.A., brigadir prokhodchikov

Speed of cutting a tunnel is increasing. Transp. stroi. 11 no.8: 10-11 Ag '61. (MIRA 14:9)

1. Stroitel'stvo No.17 Lenmetrostroya.
(Leningrad--Subways) (Tunnelling)

BARON, Lazar Izrailevich; VLASOV, Orest Yevgen'yevich; SMIRNOV, Sergey Anatol'yevich; TERMETCHIKOV, Marat Karimovich; LEDOVSKAYA, V.V., otv. red.; IVLEVA, N.P., red.; BERESLAVSKAYA, L.Sh., tekhn. red.; GALANOVA, V.V., tekhn. red.

[Effect of the shape of the blasting charge on the results of the explosion] Vliianie formy zariada vybrosa na rezul'tat vzryva. Moskva, TSentr.in-t tekhn.informatsii ugol'noi promyshl., 1959. 15 p. (MIRA 15:1)
(Blasting)

VLASOV, O.Ye.; SMIRNOV, S.A.; NIKOLAYEVA, I.N., red. izd-va; VOLKOVA, V.G., tekhn. red.

[Principles of calculating the breaking of rocks by blasting] Osnovy rascheta drobleniia gornykh porod vzryvom. Moskva, Izd-vo Akad. nauk SSSR, 1962. 101 p. (MIRA 15:6)
(Blasting)

DEMIDYUK, G.P., kand.tekhn.nauk; SMIRNOV, S.A., inzh.

Methodology of laboratory modeling of blasting. Vzryv. delo no.50/7:58-62 '62. (MIRA 15:9)

1. Institut gornogo dela imeni A.A. Skochinskogo.
(Blasting--Models)

SMIRNOV, S.A., inzh.; VORONOV, V.G., inzh.; ZHONDETSKAYA, O.D., inzh.

Suppression of interference caused by the modulators of linear electron accelerators. Vest. elektroprom. 32 no.12:65-66 D '61. (MIRA 14:12)

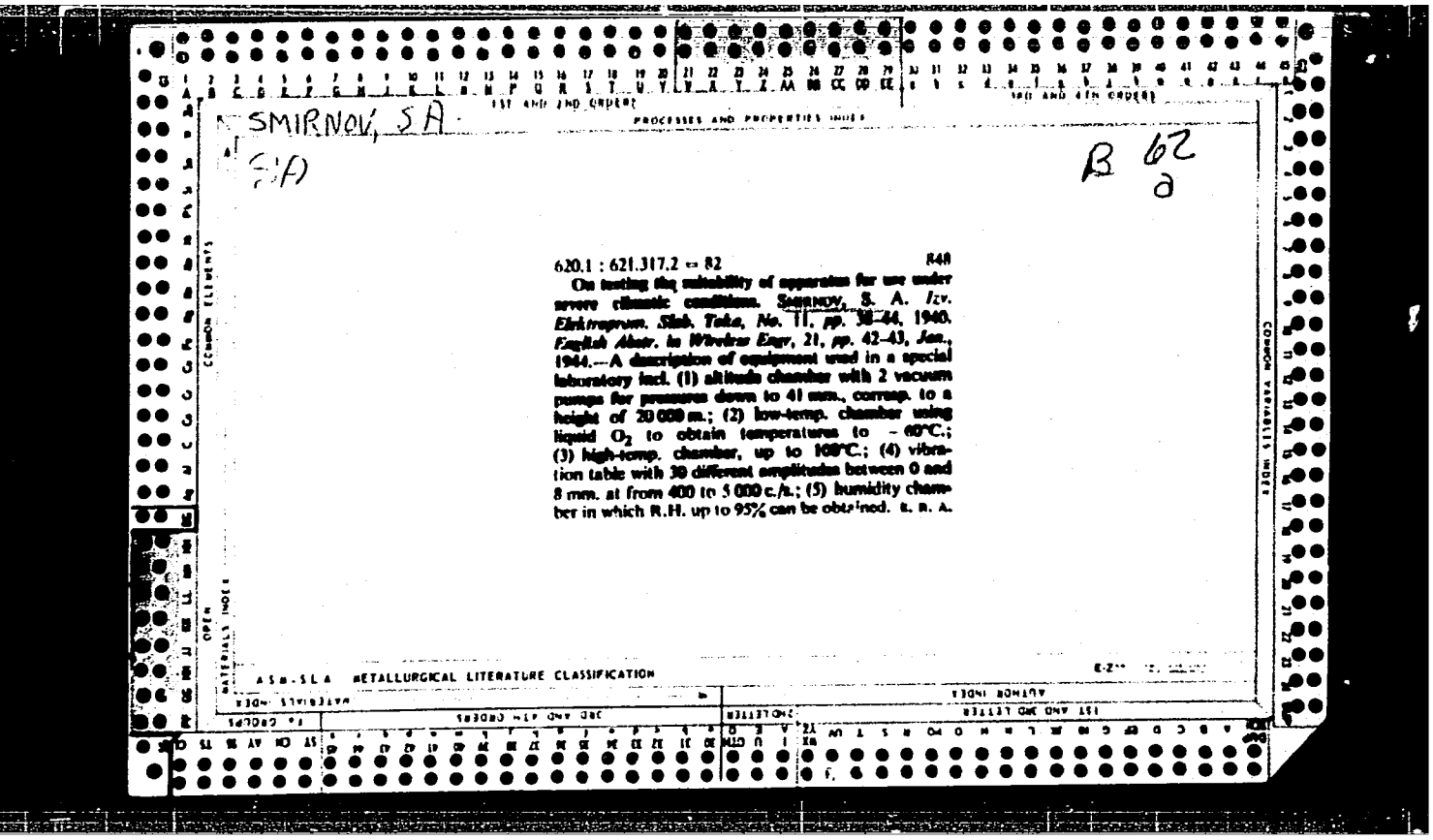
(Electron tubes)

DMITRIYEV, Valentin Aleksandrovich, doktor tekhn.nauk, prof.;
DOLGOLENKO, Anatoliy Aleksandrovich, doktor tekhn.nauk, prof.; MARKOV, Vladimir Georgiyevich, kand.tekhn.nauk, dotsent; SMIRNOV, Sergey Aleksandrovich, kand.tekhn.nauk, dotsent; SIROTSKIY, V.F., doktor tekhn.nauk, prof., retsenzent; MAL'TSEV, V.N., kand.tekhn.nauk, dotsent, retsenzent; VORONKOVSKAYA, A.P., red.; VOLCHOK, K.M., tekhn. red.

[Theory of mechanisms and machines, machine parts and hoisting-conveying machinery] Teoriia mekhanizmov i mashin, detali mashin i pod"emno-transportnye mashiny. Leningrad, Izd-vo "Rechnoi transport," 1963. 580 p. (MIRA 16:6)
(Mechanical engineering) (Hoisting machinery) (Conveying machinery)

SMIRNOV, Stanislav Aleksandrovich; STRUKOVA, L.G., red.; KHLOPOVA, L.K., tekhn. red.

[In what cases government pensions are awarded to collective farm members] V kakikh sluchaiakh gosudarstvennye pensii naznachaiutsia chlenam kolkhozov. Moskva, Gosiurizdat, 1963. 75 p. (MIRA 16:10)
(Collective farms--Pensions)



SMIRNOV, S A.

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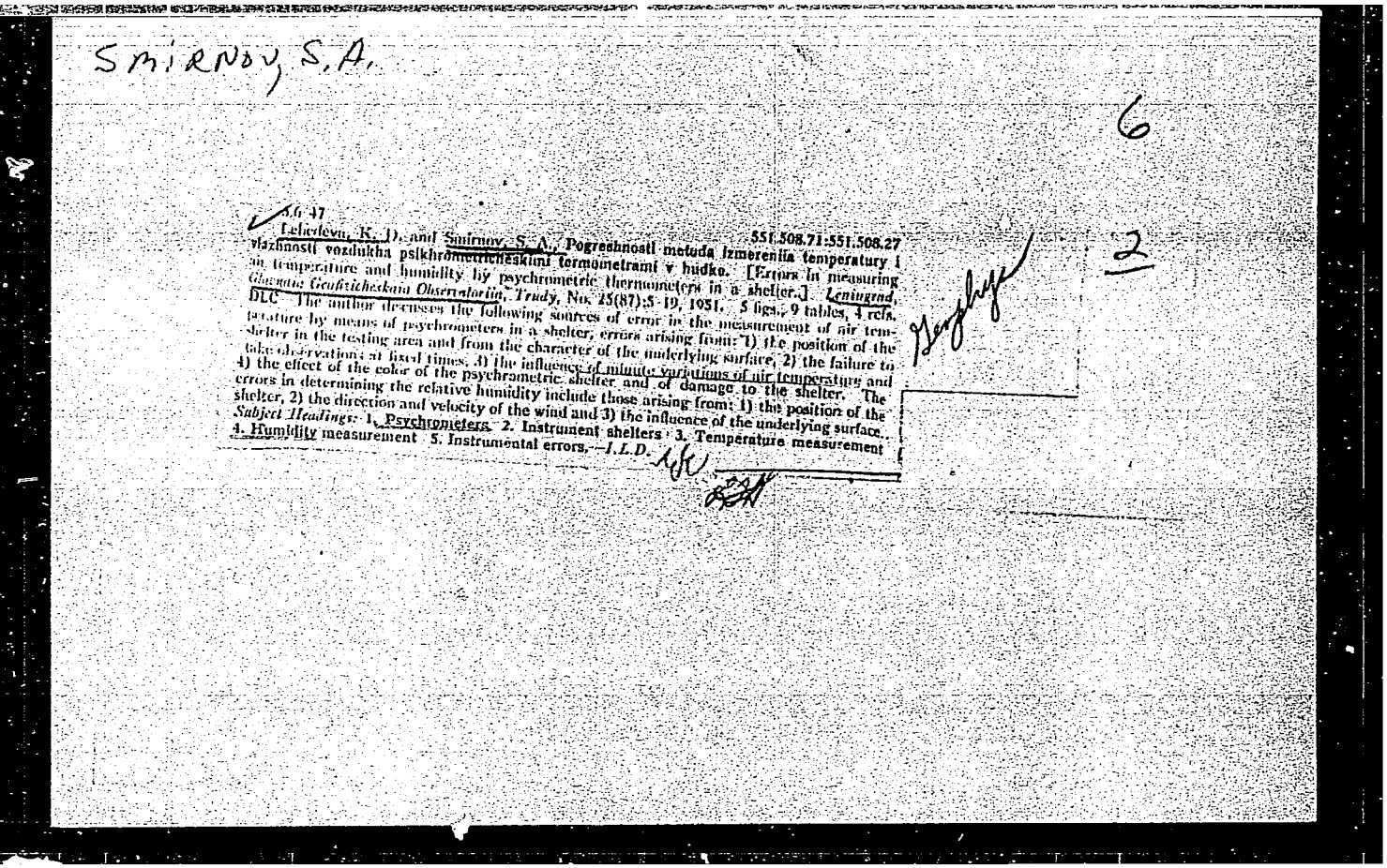
620.1 : 621.317.2 ⇔ 82 848

On testing the suitability of apparatus for use under severe climatic conditions. SMIRNOV, S. A. *Izv. Elektroprom. Slab. Toka, No.* 11, *pp.* 38–44, 1940. *English Abstr. in Wireless Engr,* 21, *pp.* 42–43, *Jan.,* 1944.—A description of equipment used in a special laboratory incl. (1) altitude chamber with 2 vacuum pumps for pressures down to 41 mm., corresp. to a height of 20 000 m.; (2) low-temp. chamber using liquid O_2 to obtain temperatures to −60°C.; (3) high-temp. chamber, up to 100°C.; (4) vibration table with 30 different amplitudes between 0 and 8 mm. at from 400 to 5 000 c./s.; (5) humidity chamber in which R.H. up to 95% can be obtained. S. R. A.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Smirnov, S.A.

6

2

6.6.47

Lebedeva, K. I., and Smirnov, S. A., Pogreshnosti metoda izmerenia temperatury i vlazhnosti vozdukha psikhrometricheskimi termometrami v budke. [Errors in measuring air temperature and humidity by psychrometric thermometers in a shelter.] *Leningrad, Glavnaia Geofizicheskaia Observatoriia, Trudy*, No. 25(87):5-19, 1951. 5 figs., 9 tables, 4 refs.

551.508.71:551.508.27

DLC The author discusses the following sources of error in the measurement of air temperature by means of psychrometers in a shelter, errors arising from: 1) the position of the shelter in the testing area and from the character of the underlying surface, 2) the failure to take observations at fixed times, 3) the influence of minute variations of air temperature and 4) the effect of the color of the psychrometric shelter and of damage to the shelter. The errors in determining the relative humidity include those arising from: 1) the position of the shelter, 2) the direction and velocity of the wind and 3) the influence of the underlying surface. *Subject Headings:* 1. Psychrometers 2. Instrument shelters 3. Temperature measurement 4. Humidity measurement 5. Instrumental errors.—*I.L.D.*

NIKANDROVA, G.T.; SMIRNOV, S.A.

Interdepartmental conference on study of clouds, precipitation, and thunderstorm electricity. Meteor.i gidrol. no.5:64-66 My '56.
(MLRA 9:8)

(Meteorology)

PHASE I BOOK EXPLOITATION

SOV/3603
SOV/2-M-96

Leningrad. Glavnaya geofizicheskaya observatoriya

Voprosy metodiki meteorologicheskikh nablyudeniy i nablyudeniya v Antarktide. (Problems of Meteorological Observation Methods and of Observations in Antarctica) Leningrad, Gidrometeoizdat, 1959. 105 p. (Series: Its: Trudy, vyp. 96) Errata slip inserted. 1,200 copies printed.

Sponsoring Agency: U.S.S.R. Glavnoye upravleniye gidrometeorologicheskoy sluzhby pri Sovete Ministrov.

Ed. (Title page): Z.I. Pivovarova, Candidate of Geographical Sciences; Ed. (Inside book): T.V. Ushakova; Tech. Ed.: N.V. Volkov.

PURPOSE: The publication is intended for meteorologists working in offices of the Hydrometeorological Service and in hydrometeorological stations.

COVERAGE: This is a symposium of 11 articles, published as No. 96 of the Transactions of the Main Geophysical Observatory imeni A.I. Voyeykov. Several articles are devoted to special features in the distribution of meteorological

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Problems of Meteorological (Cont.) SOV/3603

elements and the radiation condition in the USSR and in Antarctica. Other articles analyze methods of meteorological and actinometric observations and the processing of their results. References are given at the end of each article.

TABLE OF CONTENTS:

SMIRNOV, S.A.

Determining air moisture at low temperatures; based on observational data in the Antarctic. Trudy GGO no.129:122-133 '62.
(MIRA 16:2)

(Arctic regions--Humidity)

SMIRNOV, S.A.

Use of a calorimeter in measuring heat flows at Oazis Station. Trudy GGO no. 112:199-202 '63. (MIRA 17:5)

SMIRNOV, S.A.

Gustiness of winds at high velocities as observed in Antarctica by means of an M-37 instrument. Trudy GGO no.160:144-147 '64. (MIRA 17:9)

L 13644-66 EWT(1)/FCC GW

ACC NR: AT6004195 SOURCE CODE: UR/2531/65/000/174/0135/0148

AUTHOR: Smirnov, S. A.

17
B+1

ORG: Main Geophysical Observatory, Leningrad (Glavnaya geofizicheskaya observatoriya)

TITLE: Comparative characteristics of wind velocity 12,44,55 and direction determined with instruments having different averaging intervals

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy, no. 174, 1965. Metodika meteorologicheskikh nablyudeniy i obrabotki (Methods of meteorological observation and processing observation data), 135-148

TOPIC TAGS: meteorological instrument, anemovane, wind vane, wind gust, meteorological station

ABSTRACT: Confronted with the recommendation of the World Meteorological Organization that a 10-min interval be used for averaging wind velocity, the author made a study of the methods and instruments used in the USSR to measure wind velocity and direction. Wind vanes designed for 2-min averaging intervals were compared with M-12, M-63, M-64 anemovane-type instruments having 10-min averaging intervals at stations located in various types of regions with various degrees of shelter. Comparisons were made of the following data observed with the two types of instruments: the mean monthly values of wind velocity and direction, the diurnal changes in wind velocity, the number of calm periods, the number of cases with different gradations of wind velocity

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(0—1, 2—5, 6—10, 11—15, 16—28 and 29 m/sec) (see Table 1) and the correlation

Table 1. Recurrence (no. of cases) of wind velocities, by various gradations

STATION	Instr.	Wind Velocity (m/sec) 0—1	2—5	6—10	11—15	16—20	21—24
Poti	A	214	613	123	5		
	Φ	195	577	164	16		
Chiganak	A	56	210	90	1		
	Φ	68	207	81	1		
Vilsandi	A	25	550	642	213	30	
	Φ	29	452	749	184	46	
Boz-Su	A	179	261	5			
	Φ	249	190	6			
Ristna	A	163	803	406	58	0	
	Φ	126	686	539	65	14	
Dzharkent	A	80	374	33	4	1	
	Φ	131	327	28	4	2	
Alma-Ata	A	284	187	2			
	Φ	255	215	3			
Arkhangelsk	A	149	398	96			
	Φ	142	613	88			

coefficient. Meteorological stations supplying data for the study were divided into 3 groups by degrees of shelter: exposed stations-- Poti (Georgia), Chiganak (Kazakh-

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stan), and Vilsandi (Estonia); partly exposed stations-- Dzharkent (Kazakhstan), Boz-Su (Uzbekistan), Ristna (Estonia), Gor'kiy, Myza (Upper Volga), and Vysokaya Dubrova (Urals); sheltered stations-- Alma-Ata (Kazakhstan) and Arkhangelsk (Arctic). For individual cases the structural function was investigated as a wind-gustiness characteristic. The well-defined relationship found to exist between instrument readings and different averaging intervals became less distinct with lighter winds and lessening variability. However, poor-quality observations and local instrumental installations worsened the relationships and were not adequate for combining stations by any criteria to derive unified transfer coefficients for station groups. The wind vanes were found to give results of wind-velocity and direction measurement, adequate for solving a number of practical meteorological problems. No seasonal differences in wind characteristics were found to exist, and the effects of glaze and similar phenomena were negligible. Orig. art. has: 3 figures, 17 tables, and 2 formulas. [ER]

SUB CODE: 04/ SUBM DATE: none/ ORIG REF: 004/ ATD PRESS: 4186

Card 3/3

DEMIDYUK, G.P., SMIRNOV, S.A.

Mechanism of rock crushing by blasting. Vzryv. delo no.52/9; 285-288 '63. (MIRA 17:12)

1. Institut gornogo dela im. A.A. Skochinskogo.

SMIRNOV, S.A. [Smyrnov, S.O.]; SHENDEROVICH, A.M. [Shenderovych, O.M.]

Spontaneous breakdowns in aerial dischargers. Ukr. fiz. zhur. 5 no. 4:540-548 Jl-Ag '60. (MIRA 13:11)

1. Fiziko-tekhnicheskiy institut AN USSR.
(Electric spark)

20706

S/120/61/000/001/044/062
E194/E184

9,4200

AUTHORS: Smirnov, S.A., and Ivanov, G.M.

TITLE: A Water Load for High Power, High Voltage Impulse Modulators

PERIODICAL: Pribory i tekhnika eksperimenta, 1961,No.1,pp.145-147

TEXT: When testing large klystrons and magnetrons an active resistance load is often required. This resistance should have low stray inductance and capacitance; wire resistors are not very satisfactory and the best results can be obtained by using a column of flowing water. In designing a water loading resistance it is necessary to have information about the electric strength of water under impulse conditions, and the variation of resistance with temperature. Not enough information has been published about this. Accordingly, measurements were made of the conductivity and electric strength of a column of flowing water contained in a smooth cylindrical tube of porcelain, vinylplast or glass and flat smooth cylindrical electrodes. The measurements were made over the voltage range of 30 to 350 kV with an impulse length of 3.0 microseconds to half value. The source of voltage was the

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S/120/61/000/001/044/062
E194/E184

A Water Load for High Power, High Voltage Impulse Modulators

modulator for an impulse klystron amplifier. The impulse wave shape was measured on oscillographs with capacitative voltage dividers with an error of ± 10%. Under these conditions water is found to break down over the inner surfaces of the solid dielectrics. Fig.1 shows the relationship between the breakdown voltage of water and the length of the surface of the dielectrics using a variety of electrode metals and solid dielectrics. For surface lengths up to 10 cm the breakdown voltage gradient is about 30 kg/cm. The breakdown gradient is practically independent of the material from which the electrodes or insulating cylinders are made. The relationship between specific resistance of water and temperature is shown in Fig.2. From the data given in Figs.1 and 2 it is possible to design a load resistance. For the majority of practical cases the value of load resistance may be calculated by determining the resistances corresponding to the inlet and outlet temperatures and taking the mean. Fig.3 shows the construction of a loading resistance designed for a voltage of 350 kV and a current of 200 A with a pulse duration of

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E194/E184

A Water Load for High Power, High Voltage Impulse Modulators

3 microseconds and repetition frequency of 50 c/s. The upper flange is earthed and the high voltage is applied to the lower flange. Prolonged operation of the loading resistances under rated conditions has shown that the design is reliable and gives good service life of 500 hours without major overhaul. The main advantages of a water loading resistance are obtained only if the water used has a specific resistance of the order of several thousands of ohms per cm. The characteristics given above were obtained with such water.

Acknowledgements are expressed to P.G. Gurtovenko for making the drawings.

There are 3 figures and 4 references: 2 Soviet and 2 non-Soviet.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN USSR
(Physico-technical Institute, AS Ukr.SSR)

SUBMITTED: February 12, 1960

Card 3/5

SMIRNOV, S.A.; PAVLOV, Yu.S.; KHOLODKOVA, T.V., red.; POPOVA, S.M., tekhn. red.

[Production and use of high pulsed magnetic fields; collection of abstracts, 1923-1961]Poluchenie i ispol'zovanie bol'shikh impul'snykh magnitnykh polei; sbornik referatov, 1923-1961 gg. Moskva, Gosatomizdat, 1962. 55 p. (MIRA 15:8)
(Magnetic fields--Abstracts)

SMIRNOV, S.A.; TERESHCHENKO, F.F.; KALYUZHNAYA, T.P., red.; VLASOVA, N.A., tekhn. red.

[Regulated dischargers for switching large impulse currents in high-voltage systems]Upravliaemye razriadniki dlia kommutatsii bol'shikh impul'snykh tokov v vysokovol'tnykh ustanovkakh; sbornik referatov, 1945-1961 gg. Moskva, Gosatomizdat, 1962. 85 p. (MIRA 16:1)

(Electric discharges)

1.1210 only 3108, 3028

26.2310

32647

S/105/62/000/001/004/006
E194/E455

AUTHORS: Smirnov, S.A., Shenderovich, A.M., (Khar'kov)

TITLE: Controlled spark gaps

PERIODICAL: Elektrichestvo, no.1, 1962, 52-54

TEXT: This article describes controlled spark gaps which are specially suitable for controlling high-power high-voltage impulses, because they are not subject to uncontrolled operation resulting from high electrical stress in the gap during intervals betwesn operations. A two-electrode gap is triggered by applying to the normally grounded electrode a voltage of appropriate polarity from a saturating impulse transformer. The impulse transformer is supplied by a trigatron circuit. The duration of impulse given by the equipment depends on the inductance of the transformer and to reduce this the transformer core is saturated when the triggering current passes. Then, if the core material has a square-shaped hysteresis loop, the gap can be used to form impulses with a duration of about 10 microseconds. Multiple-gap arrangements are required for shorter impulses. One circuit has a number of gaps with all electrodes earthed except one: each of the other electrodes has its own impulse

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Controlled spark gaps

transformer supplied through capacitors from a single trigatron. The voltage applied to each electrode is of the same polarity, so initially only the first gap breaks down. This reverses the polarity of the second electrode so that the second gap breaks down and then all the auxiliary gaps break down in turn, including the last which is short. The correct sequence of breakdown is assisted by making the inter-electrode capacitances smaller than the capacitances to earth. The device can be used for a wide range of impulse voltages by altering the gap lengths, without affecting the triggering voltages or other characteristics. Fig.3 shows the circuit of an experimental triggered gap for impulse voltages of 15 to 50 kV and currents up to 2500 A with a duration of 3 microseconds at a recurrence frequency of 50 c/s. A multi-gap arrangement is described in which the triggering impulse is applied directly only to the second electrode. The auxiliary gap lengths are all the same and a capacitance voltage divider arrangement is used to distribute the trigger voltage between the auxiliary gaps. The electrodes are earthed through inductances of such a value that the auxiliary gaps do not break

Controlled spark gaps

down before the main gap. After the main gap has broken down, the auxiliary gaps break down in turn. The circuit of an experimental device based on this principle is shown in Fig.5. The capacitor connected to the primary winding of the impulse transformer is of 2000 pf, $C_2 = 1.4C_1$ and $d_1 = 1.4d_2$. With recurrence frequencies up to 50 c/s the lower limit of main gap breakdown voltage was 18 to 20 kV; this value remained the same with C_2 in the range 10 pf to 140 pf, and with L in the range 3 to 15 microHenries. Formulae are given for calculating the gap lengths and other parameters. The spark gaps described can operate over a wide voltage range without adjustment of gap length. Uncontrolled breakdowns do not occur because when the device is not operating, voltage is applied only to the main gap, which is made big enough to withstand it. Gaps working on this principle can be developed for still higher currents. There are 5 figures and 11 references: 6 Soviet-bloc and 5 non-Soviet-bloc. The four references to English language publications read as follows:
Ref.1: Smart D.L., Proc. IEE, 1959, Suppl. no.2;
Ref.2: Ginzton E.L., Hansen W.W., Kyhl R.L., Neal R.B., Panofsky W.F. Rev. Scient. Instrum. 1955, no.2;
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E194/E455

Controlled spark gaps

Ref.4: Plasma engine verifies theory. Electronic, no.31, 1959;
Ref.7: Craggs, J.D., Haine M.E., Meek J.M. J. Instn. Electr. Eng. pt.IIIA, no.93, 1946.

SUBMITTED: November 25, 1960

4

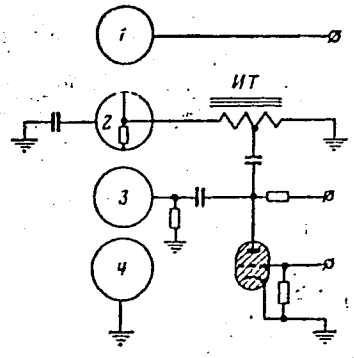

Рис. 3.

Fig.3.

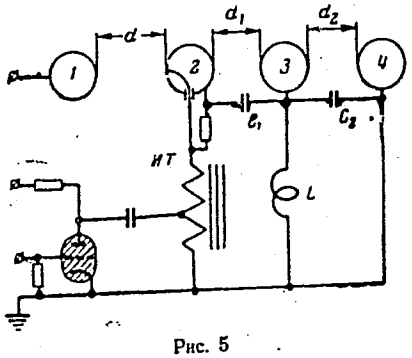

Рис. 5

Fig.5.

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SMIRNOV, S.A.

"Projective Methods for Solution of Practical Problems in Perspective Projections." Thesis for degree of Cand. Technical Sci. Sub 16 May 49, Moscow Order of the Labor Red Banner Engineering Construction Inst imeni V.V. Kuybyshev.

Summary 82, 18 Dec 52, Dissertations Persented for Degrees in Science and Engineering in Moscow in 1949. From Vechernyaya Moskva, Jan-Dec. 1949.

SMIRNOV, S. A.

"Graphic Solution of a Plane Problem of the Theory of Elasticity." Dr Phys-Math Sci, Moscow State U, Moscow, 1954. (KZhMekh, Apr 55)

SO: Sum. No 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (16).

308.12
S/537/60/000/041/004/005
D034/D113

16.4100

AUTHOR: Smirnov, S.A., Candidate of Technical Sciences, Docent

TITLE: An iteration process

SOURCE: Moscow. Institut inzhenerov geodezii, aerofotos"yemki i kartografii. Trudy, no. 41, 1960, 75-80

TEXT: The author states that, in certain engineering problems, equations with a symmetric matrix and positive diagonal coefficients may be applied. Normal equations of the theory of errors, and conical equations of the method of forces in structural mechanics are related to these equations. The article deals with an iteration process, which is used for proving that the method of successive approximations can always be applied for such equations. Beside this, it is able to mark the speed of convergence. In a system of n equations with n unknowns,

$$\sum_{k=1}^{n} a_{ik}x_k + b_i = 0 \; , \qquad (1)$$

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An iteration process

where $i = 1, 2, \ldots n$, the solution of such a system will geometrically denote a point common to hypersurfaces in an n-dimensional space. In an iteration process a perpendicular is drawn from the origin of the coordinates to the first hypersurface. From the base thus obtained, a perpendicular is drawn to meet the second hypersurface, and so forth. It is evident from this construction that the nearer the hypersurfaces are to the orthogonal, the faster is the convergence of the process. If the matrix of the system of equations (1) is orthogonal, the process may be terminated at the first cycle. The convergence is poor, if the angles between the hypersurfaces are small. To derive the formula and to prove convergence, it is necessary to calculate the coordinates of the base of the perpendicular drawn from the origin of the coordinates to the first hypersurface. For the remaining coordinates the calculation is identical. The distance to the first hypersurface is a minimum of the function

$$\varphi = -\frac{1}{2}\sum_{k=1}^{n} x_k^2 + L_i X_i \; ;$$

X

Card 2/4

An iteration process

where L_1 is the Lagrange multiplier, X_1 is the left part of the first equation of the above system (1). The multiplier $-\frac{1}{2}$ is taken to simplify the calculation. The computation procedure leads to an equation with a symmetric matrix, because $A_{si} = \sum_{k=1}^{n} a_{sk}a_{ik}$ is a scalar product of normal vectors to the hypersurfaces s and i. Canonical equations in structural mechanics and normal equations in the least squares method have a similar aspect. The diagonal coefficients are squares of the moduli of normal vectors. Each nondiagonal coefficient A_{si} in its absolute value is smaller than the square root from the product of the diagonal coefficients A_{ss} and A_{ii} of the corresponding line and column, since the scalar product cannot be greater than the product of the vector's moduli. This is the mark of convergence. The better the convergence is, the bigger is this difference. The results obtained are similar to those shown in a book written by Professor A. S. Chebotarev (Ref. 1: Sposob naimen'shikh kvadratov s osnovami teorii veroyatnostey [The Method of Least Squares Together with the Principles of the Theory of Probabilities], M., Geodezizdat,

Card 3/4

SMIRNOV, S.A., kand.tekhn.nauk, dotsent

Methods of superposing radial distributions of stresses. Trudy MIIGAIK no.42:83-101 '60. (MIRA 14:9)

1. Kafedra vysshey matematiki Moskovskogo instituta inzhenerov geodezii, aerofotos"yemki i kartografii.
(Strains and stresses)

SMIRNOV, S.A., dotsent

Investigating the convergence of successive approximations. Trudy MIIGAIK no.42:137-144 '60. (MIRA 14:9)

1. Kafedra vysshey matematiki Moskovskogo instituta inzhenerov geodezii, aerofotos"yemki i kartografii.
(Approximate computation)

SMIRNOV, S.A., dotsent, kand.tekhn.nauk

Compact scheme for the solution of equations by the method of orthogonalization. Trudy MIIGAIK no.44:35-38 '61.
(MIRA 14:7)

1. Moskovskiy institut inzhenerov geodezii, aerofotos"yemki i kartografii, kafedra matematiki.
(Matrices)
(Linear equations)

SMIRNOV, S.A., dotsent, kand.tekhn.nauk

Calculation of statically indeterminable girders. Trudy MIIGAIK no.44:39-49 '61. (MIRA 14:7)

1. Moskovskiy institut inzhenerov geodezii, aerofotos"yemki i kartografii, kafedra matematiki.
(Girders)

SMIRNOV, S.A., kand.tekhn.nauk, dotsent

Group relaxation method. Trudy MIIGAIK no.45:25-30 '61.
(MIRA 14:7)

1. Moskovskiy institut inzhenerov geodezii, aerofotos"yemki i kartografii, kafedra vysshey matematiki.

(Relaxation methods (Mathematics))
(Linear equations)

S/044/62/000/006/088/127
B166/B112

16.6500

AUTHOR: Smirnov, S. A. Cand. Tech. Sci., Docent.

TITLE: The solution of poorly conditioned systems

PERIODICAL: Referativnyy zhurnal. Matematika, no. 6, 1962, 35-36, abstract 6V167 (Tr. Mosk. in-ta inzh. geod., aerofotos"yemki i kartogr., no. 45, 1961, 31-34)

TEXT: An iterative method of solving poorly conditioned systems $Ax = b$ (1) of linear algebraic equations is described. It is shown that deterioration of the conditionality of the system leads to more rapid convergence of the iterative process of determining the eigenvectors of system (1). A comparison is made between various iterative methods and a descent method according to an eigenvector scheme suggested by the author which is based on an example of solving a poorly conditioned fourth-order system given in Boot's book "Numerical Methods". In essence, the method is as follows. First of all, the sense of the first eigenvector corresponding to the greatest eigenvalue is found. For this, vector $\vec{b}$ in system (1) is substituted for $\vec{x}$. Then $\vec{x}$ in (1) is replaced by the vector obtained:

Card 1/3

Moscow Inst. Eng. Geodesy, Aerophotography & Cartography
Chair of Higher Mathematics

[illegible], S. P.

Technology

Preparation and verification of working drawings of parts in ship repair. Moskva, Rechizdat, 1950.

Monthly List of Russian Accessions. Library of Congress. October 1952. UNCLASSIFIED.

1. SMIRNOV, [illegible].

2. USSR (600)

4. Valves

7. New type of reduction valve. Mor.flot 12 no 10, 1952.

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

SMIRNOV, S.A.

[Wear in marine engines] Iznosy sudovykh mekhanizmov. Leningrad, Ministerstvo rechnogo flota, 1953. 151 p. (MLRA 7:11)
(Ships--Maintenance and repair) (Marine engines)

SMIRNOV, S.A., dotsent, kandidat tekhnicheskikh nauk [reviewer]; GOLYNSKIY, A.V., [author].

A.V.Golynskii's book "Theory and thermal calculations of marine steam engines." Reviewed by S.A.Smirnov. Rech.transp. 13 no.1:48-3 of cover. Ja-F '53. (MLRA 6:11)

(Marine engines) (Golynskii, A.V.)

SMIRNOV, S., kandidat tekhnicheskikh nauk.

Operation of new design steam reduction valves. Mor.flot 17 no.2:17-18 F '57. (MLRA 10:3)

1. TSentral'nyy nauchno-issledovatel'skiy institut morskogo flota. (Valves)

MAL'TSEV, Semen Vasil'yevich; SMIRNOV, S.A., red.; VOLCHOK, K.M., tekhn. red.

[Running-in of internal combustion engines using sulfurated oil] Obkatka dvigatelei vnutrennego sgoraniia na osernennom masle. Leningrad, Izd-vo "Rechnoi transport," 1962. 141 p. (MIRA 16:6)

(Internal combustion engines--Lubrication)

KUPRIYANOV, Dmitriy Fedorovich; METAL'NIKOV, Georgiy Fedorovich; SOKOLOV, Yu.P., inzh., retsenzent; KHOKHRYAKOV, G.B., retsenzent; SMIRNOV, S.A., kand. tekhn. nauk, dots., nauchn. red.; ALEKSANDROVA, N.B., red. izd-va; VOLCHOK, K.M., tekhn. red.

[Fundamentals of technical mechanics] Osnovy tekhnicheskoi mekhaniki. Leningrad, Izd-vo "Rechnoi transport," 1962. 387 p. (MIRA 15:9)

(Mechanics, Analytic) (Mechanical engineering) (Strength of materials)

ARNOL'D, Leonid Vladimirovich; IOSIFOV, Mikhail Nikanorovich; AKIMOV, P.P., prof., retsenzent; SMIRNOV, S.A., red.; VOLCHOK, K.M., tekhn. red.

[Thermodynamics, heat transfer, and power equipment of hoisting and conveying machinery]Termodinamika, teploperedacha i teplosilovoe oborudovanie pod"emno-transportnykh mashin. Pod red. L.V.Arnol'da. Leningrad, Izd-vo "Rechnoi transport," 1962. 440 p. (MIRA 15:11)
(Gas and oil engines) (Hoisting machinery)
(Thermodynamics)

L 10464-67

ACC NR: AP6[illegible]1040 (N) SOURCE CODE: UR/0146/66/009/004/0061/0066

18

AUTHOR: Krol', K. G.; Smirnov, A. A.; Smirnov, S. A.

ORG: Leningrad Institute of Fine Mechanics and Optics (Leningradskiy institut tochnoy mekhaniki i optiki)

TITLE: Automation of processing of oscillograms produced during ship tests

14

SOURCE: IVUZ. Priborostroyeniye, v. 9, no. 4, 1966, 61-66

TOPIC TAGS: automation, oscillogram processing, ship test

ABSTRACT: A semiautomatic apparatus for processing the oscillograms produced as a result of an actual ship test is described. The apparatus comprises a tape-transport mechanism, a scale-multiplying mechanism, two switches, and a counter-registering device. A principal scheme of the apparatus is explained. The apparatus, claimed to be simple, reliable, and inexpensive, aids in

Card 1/2 UDC: 681.142.5

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ACC NR: AP6031040

constructing the integral curves of probability of exceeding a selected value of the parameter in question (list, trim, yawing, and their angular velocities); as a rule, these parameters are stationary random processes. As the oscillogram tape travels, the repetition frequency of each combination of half-periods and amplitudes is recorded by counters whose readings provide a basis for plotting the above probability curves. Orig. art. has: 4 figures, 1 formula, and 1 table.

SUB CODE: 09 / SUBM DATE: 10May65 / ORIG REF: 002

Card 2/2 egk

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C111/C222

16.6500

AUTHOR: Smirnov, S. B.

TITLE: On the nomographing of the general integral of ordinary differential equations of the first order

PERIODICAL: Referativnyy zhurnal, Matematika, no. 12, 1961, 55, abstract 12V328. ("Uch. zap. MGU", 1959, vyp. 186, 245-248)

TEXT: Considered is the nomographable differential equation

$$y' = f(x,y) \qquad (1)$$

the right hand side of which is not equal to zero in a certain domain, and has all partial derivatives of a sufficiently high order. It is shown that there exists an algorithm to set-up the nomogram for (1). The following theorems are proven:

1) Whether or not (1) is nomographable can always be determined by differentiation and elimination. If the variables in (1) are not immediately separable, then the Gronwall-function is determined as the joint root of a system of polynomials, the coefficients of which

Card 1/2

On the nomographing of the general . . . .

depend on f(x,y) and the partial derivatives of f(x,y).

2) A nomographable differential equation is soluble by integration.

3) The general integral of a nomographable differential equation (1) can be represented in the form

$$h(C) = Cu(x,y) + v(x,y),$$

where u(x,y) and v(x,y) satisfy the system of Goursat-Painlevé

[Abstracter's note: Complete translation.]

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Card 2/2

SMIRNOV, S.D. (Leningrad)

Action of forces in pumping installations. Vod. i san. tekh. no.10: 3-7 '59. (MIRA 13:1)
(Centrifugal pumps)

ROZENGAUZ, Nison Aronovich; SMIRNOV, Sergey Diodorovich; TISHCHENKO, S.Ya., retsenzent; SEVER'YANOV, N.N., kand.tekhn.nauk, retsenzent; LEBEDEV, V.V., nauchnyy red.; RUSAKOVA, L.Ya., vedushchiy red.; YASHCHURZHINSKAYA, A.B., tekhn.red.

[Pipeline research] Izyskaniia magistral'nykh truboprovodov. Leningrad, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, Leningr.otd-nie, 1960. 254 p. (MIRA 14:2)

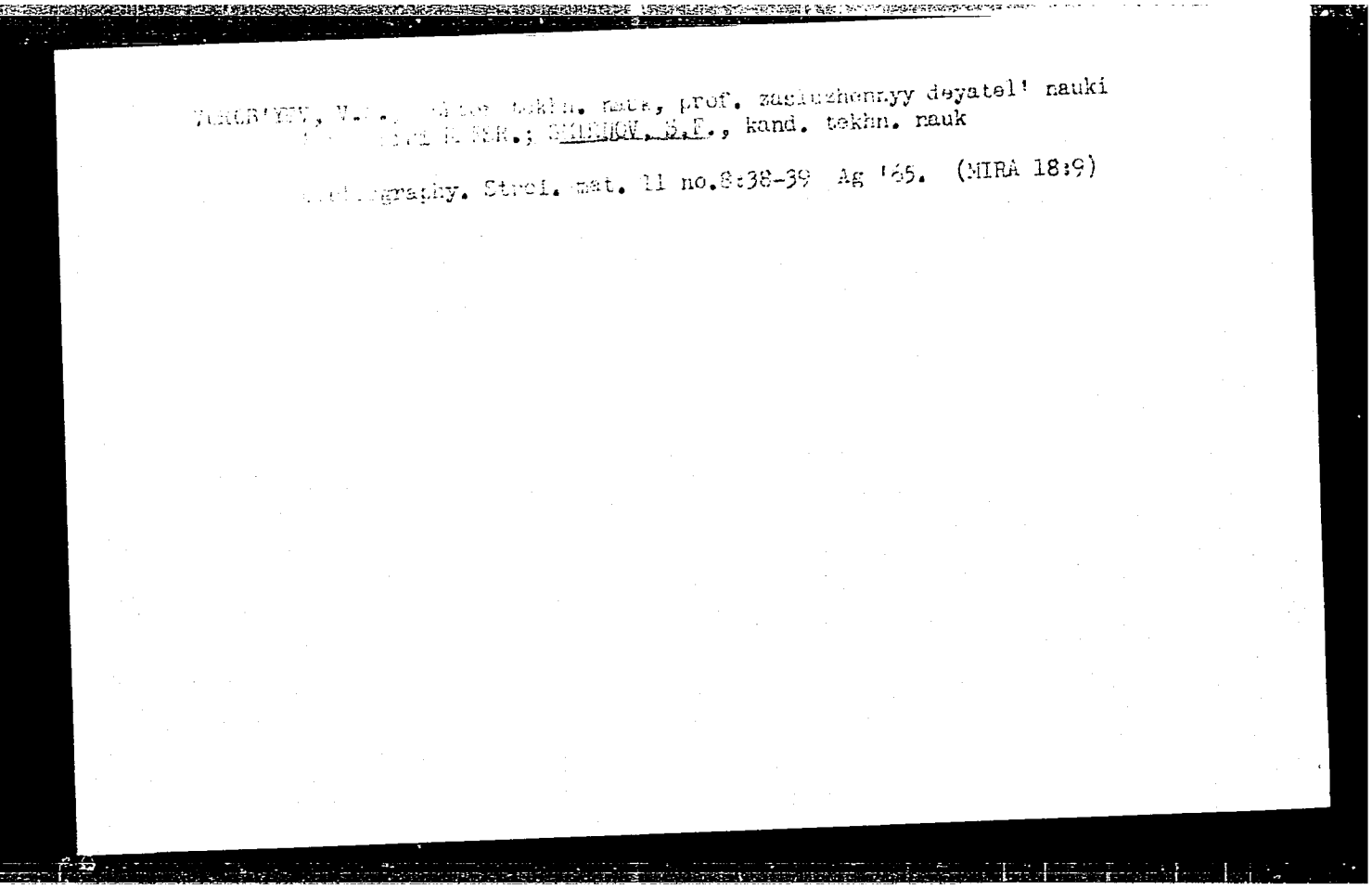
1. Glavnyy inzhener Stroitel'no-montazhnogo uchastka No.7 (for Tishchenko).

(Pipelines)

SMIRNOV, S.F.

Expansion of the Poshekhon interfarm building organization.
Sel'.stroi. 13 no.3:13-14 Mr '59. (MIRA 12:5)

1. Predsedatel' soveta Poshekhonskoy mezhkolkhoznoy stroitel'noy organizatsii Yaroslavskoy oblasti.
(Poshekhon District--Building)



[illegible], V.[illegible] [illegible] tekhn. nauk, prof., zasluzhennyy deyatel' nauki [illegible] R.S.F.S.R.; SMIRNOV, S.E., kand. tekhn. nauk

[illegible]graphy. Stroi. mat. 11 no.8:38-39 Ag '65. (MIRA 18:9)