BODRETSOVA, A.I.; LEVIKOV, S.I.

New developments in disc-type lamps with light-emitting electrodes.
Svetotekhnika 7 no.3:21-24 Mr '61.   (MIRA 14:8)

1. Gosudarstvennyy opticheskiy institut.
                        (Electric lamps)

SANDLER, N.I.; LEVIKOV, Ye.A.; KOTKIS, M.A.

Effect of arsenic admixtures on the acidity of steel and iron.
Fiz.met.i metalloved. 1 no.3:523-528 '55.   (MLRA 9:6)

1.Ukrainskiy nauchno-issledovatel'skiy institut metallov.
          (Iron-arsenic alloys)

LEVIKOV, Ye.A.

Considering the secondary extinction in polycrystals. Fiz. met. i metalloved. 17 no.1:10-19 Ja '64.   (MIRA 17:2)

1. Fiziko-tekhnicheskiy institut AN UkrSSR.

ACCESSION NR: AP4013087   S/0126/64/017/001/0010/0019

AUTHOR: Levikov, Ye. A.

TITLE: On the computation of secondary extinction in polycrystals

SOURCE: Fizika metallov i metalloved., v. 17, no. 1, 1964, 10-19

TOPIC TAGS: polycrystal, single crystal, laminar model, grain size, distribution function, absorption coefficient

ABSTRACT: The author studied the effect of secondary extinction on the intensity of x-ray reflection from polycrystals. Relations were obtained that would make possible the study of secondary extinction at any grain size. A laminar model was used for the theory, consisting of a plane specimen with plane grains of the same thickness (T), arranged parallel to the surface of the specimen. The grain size in the plane of the specimen was assumed to be considerably larger than the thickness. The orientation of a block in a coordinate system hkl, (with corresponding indices g, s, and h) was described by a distribution function $n_s^h(k_g,k)$ (k_g being the unit vector along which n_s^h was a minimum) such that it integrated to unity over all solid angles. The orientation of the grain was described by a distribution func-

Card 1/4

ACCESSION NR: AP4013087

tion $n_g^h(k_g)$ which integrated to p_h - the recurrence factor for the h-plane. The effective cross section for scattering was written in the form

$$\tau_i^h(k_h,\ k) = \frac{P_i^h(k_h,\ k)}{I_o},$$

where I_0 is the intensity of incident radiation. The average value of this cross section is given by

$$\overline{\tau_i^h} \approx \int_L n_i^h(k_g,\ k_h)\, dL \int \tau_i^h(k_h,\ k)\, d\Omega,$$

where L is a contour through the grain. Representing the contour integral by w_s^h, the average cross section is written in the form

$$\overline{\tau_i^h} = w_i^h Q_h J_h v_{i,s}$$

v_s being the volume of the block. The following expressions are derived for the coefficients of reflection (χ_h) and transmission (ψ_h)

$$\chi_h(k_g,\ k_h) = \frac{\sigma_g^h(1 - e^{-\frac{2KT}{T_o}})}{\sigma_g^h + \mu_o + K - (\sigma_g^h + \mu_o - K)e^{-\frac{2KT}{T_o}}};$$

$$\psi_h(k_g,\ k_h) = \frac{2K e^{-\frac{KT}{T_o}}}{\sigma_g^h + \mu_o + K - (\sigma_g^h + \mu_o - K)e^{-\frac{2KT}{T_o}}}$$

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ACCESSION NR: AP4013087

where $\quad \sigma_\varepsilon^h(k_g, k_h) = \dfrac{\tau_g^h}{\tau_g} = w_s^h \, Q_h f_{h}, \qquad K = \sqrt{(\mu_0 + \sigma_\varepsilon^h)^2 - (\sigma_\varepsilon^h)^2}\,.$

and μ_0 is the coefficient of absorption, and γ_0 and γ_k are direction cosines. In the limits of large and small grains respectively, the expression for the coefficient of reflection is reduced to

$$\chi_h = \frac{\sigma_\varepsilon^h}{2\mu_0}\left(1 - \frac{\sigma_k^h}{\mu_0}\right), \qquad \chi_h = \sigma_\varepsilon^h\frac{T}{\gamma_0}\left(1 - \frac{\mu_0 T}{\gamma_0}\right)\left(1 - \frac{\sigma_\varepsilon^h T}{\gamma_0}\right).$$

Expressions are obtained for the average value of the coefficient of reflection by taking the first moment with the distribution function. An approximate expression is obtained for ψ_h by means of an expansion in powers of σ_g^h/μ_0. Noting the possibility of reflection by monolayer grains, the following expression is derived for reflection from the upper layer of the grain in the case of large grains:

$$\bar\chi_h = n_\varepsilon^h(k_h^0)\frac{Q_h f_h}{2\mu_0}\left(1 - g_h\frac{Q_h f_h}{\mu_0}\right)$$

The secondary extinction manifested itself in the intensity of reflection from coarse-grained polycrystals. Orig. art. has: 50 formulas, 2 figures, and 2 tables.

Card 3/4

ACCESSION NR: AP4013087

ASSOCIATION: Fiziko-tekhnicheskiy institut, AN UkrSSR (Physico-technical Institute AN UkrSSR)

SUBMITTED: 15Dec62   ENCL: 00

SUB CODE: SS   NO REF SOV: 004   OTHER: 003

Card 4/4

LEVIKOVA, A. M.

USSR/Medicine - Melanin Nerve Cells   Sep 49

"Nerve Cells in the Human Brain Which Contain Melanin," I. I. Cutner, A. M. Levikova, 3 pp

"Dok Ak Nauk SSSR" Vol LXVIII, No 1

Used tens of embryos (3-10 months) and tens of brains from both children and adults for the study. Showed that process of melanin accumulation begins in its first phase (prepigmentation) in the prenatal period, and is completed in its second phase (pigmentation) in the first months and years (not later than 2 years) of life. Submitted by Acad L. A. Orbeli 4 Jul 49.

PA 2/50T86

LEVIKOVA, A.V., meditsinskaya sestra

  Use of Bruns' paper in mud bath centers. Med. sestra no.5:56 My
  '61.   (MIRA 14:6)

  1. Poliklinika No.1 Ministerstva zdravookhraneniya RSFSR, Moskva.
      (BATHS, MOOR AND MUD)

LEVIN, A.

State capitalism during the transitional period. Vop. ekon.
no.5:136-144 My '62.
    (Government ownership)
                    (MIRA 15:6)

LEVIN, A.

"Safety measures in the transportation, distribution, and consumption of gas fuel," by M.A. Nechaev. Reviewed by A. Levin. Gaz.prom. 6 no.9:54-55 '61.   (MIRA 14:12)

(Gas as fuel)
(Nechaev, M. A.)

LEVIN, A., kand. tekhn. nauk; MOLCHANOVA, T., insh.;
OKSYUTA, G., insh.

Using gas burners for drying buildings. Zhil.-kom. khoz. 11
no.11:22-23 N '61.   (MIRA 16:7)

        (Gas burners)   (Drying apparatus)

LEVIN, A., inzh.

Planes of vertical takeoff and landing. Kryl. rod. 16 no.2:
24-25 F '65.   (MIRA 18:3)

MANESCU, L., prof. emerit (R. Vilcea); BEJAN, Mircea (Galati); MUNTEANU,
Dumitru (Bistrita); SACTER, O.; SIMION, A. (Iasi); LEVIN,
Alexandru, (Tallin, U.S.S.R.); HADIRCA, L., prof. (Breaza);
LIVIU, Petre (Pucioasa); GRECU, Eftimie (Bucuresti); BENA,
Dorin (Caransebes); SIMOVICI, Dan (Iasi); ILIE, Nicolae
(Gaiesti); BOICESCU, Vlad (Craiova); VOICULESCU, Dan (Bucuresti);
POPESCU, Adrian (Sibiu); PESTROIU, Daniel (Tirgu Jiu);
NANUTI, Ion (Timisoara); MUSTA, St. (Oradea); POPESCU, Adriana
(Sibiu); IONESCU-TIU, C.; LAZAR, Maria (P. Neamt); FOCSENFANU,
M.I.; ACU, D. (Cluj); ZAMFIRESCU, Tudor; MOCANU, H. Ovidiu
(Iasi); GEORGESCU, G. (Craiova); BERDAN, C. (Bacau);

IACOMI, Ioana (P. Neamt)

Proposed problems. Gaz mat B 15 no.3:122-127 Mr '64.

ZAMFIRESCU, Tudor (Bucuresti); LEVIN, Alexandru (Tallin, U.S.S.R.); ACU, Dumitru
(Nasaud); SANDULACHE, C. (Negresti); PRAVAT, V.V. (Iasi); SACTER, O.;
POPA, Eugen (Iasi); ZAMFIRESCU, Tudor; VOICULESCU, Dan (Bucuresti);
IONESCU-TIU, C.; BOICESCU, Vlad (Craiova); HANUTI, Ion (Timisoara);
MUSTA, Stefan (Oradea); BERDAN, C. (Bacau); PETRESCU, P. Anastasie
(Craiova); LUSZTIG, Gh. (Bucuresti); BRIINZANESCU, V. (Bucuresti)

Solved problems. Gaz mat B 16 no.2:64-82 F '65.

ALEKHIN, N., kand.tekhn.nauk; LEVIN, A., doktor tekhn.nauk

Meeting of chemist-scientists in Warsaw. NTO 7 no.3:59-60 Mr '65.
(MIRA 18:5)

9.8200

S/112/59/000/012/064/097
A052/A001

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1959, No. 12, p. 182,
25162

AUTHOR: Levin, A.A..

TITLE: The Practice of Adjustment of Long-Distance Telemetering Devices

PERIODICAL: Naladochnyye i eksperim. raboty ORGRES, No. 15, 1958, pp. 144-150

TEXT: The experience of adjustment of long-distance telemetering devices
of the ORGRES - "Elektropul't" systems, including ТЧУ-56 (TNCh-56), is generaliz-
ed. The main service characteristics of individual assemblies are given: error,
time stability, measurement range, reliability, etc. Some practical results of
adjustment of primary devices-converters, transmitters, receivers and a comparison
of various types of these devices are given. In the process of adjustment the
problem of direct reliability control of receiving device indications has been
cleared up. Methods of adjustment of telemetering equipment developed by ORGRES
and applied to the adjustment of all frequency telemetering systems are briefly
described. The methods provide for an adjustment of individual links of the

Card 1/2

YEMEL'YANOV, A.P.; LEVIN, A.A.; BLAZHEVICH, P.V., otv.red.; PEVZNER, A.S., zav.red.izd-va; TEMKINA, Ye.L., tekhn.red.

[Uniform time and pay standards for construction, assembly, and repair operations in 1960] Edinye normy i rastsenki na stroitel'nye, montazhnye i remontno-stroitel'nye raboty, 1960 g. Moskva, Gos.izd-vo lit-ry po stroit., arkhit. i stroit.materialam. Sbornik 24. [Hoisting operations] Takelazhnye raboty. 1960. 46 p.
(MIRA 13:6)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po delam stroitel'stva. 2. Normativno-issledovatel'skaya stantsiya No.13 (NIS-13) Ministerstva stroitel'stva RSFSR (for Yemel'yanov). 3. TSentral'noye normativno-issledovatel'skoye byuro Ministerstva stroitel'stva RSFSR (for Levin).
        (Wages)   (Hoisting machinery)

SUBJECT   USSR/MATHEMATICS/Algebra   CARD 1/1   PG - 873
AUTHOR   VILENKIN N.Ja, AKIM E.L., LEVIN A.A.
TITLE   Matrix elements of irreducible unitary representations of the
            group of Euclidean motions of a three-dimensional space and
            their properties.
PERIODICAL Doklady Akad. Nauk 112, 987-989 (1957)
            reviewed 6/1957

At the Third Mathematical Union Congress Radov has presented an adress on
the computation of the matrix elements of the irreducible unitary
representations of the group M(3,R) of the Euclidean motions of a three-
dimensional space. The authors carry out the computation of the same
elements with the aid of an integral method. Here certain functions are
appearing which satisfy certain relations which can be denoted as
generalizations of well-known relations between Bessel functions. The
authors give a theorem of addition and recurrence formulas for these
functions which originate in it.

INSTITUTION: Military Engineer Academy.

LEVIN, A.

Pencil shaped soldering bit. Nauka i zhizn' 30 no.5:60 My '63.
(MIRA 16:10)

LEVIN, A.

      Mixed excavator brigades. Na stroi. Ros. 3 no.5:31-32 My '62.
                                        (MIRA 15:9)

    1. Nachal'nik otdela truda i zarabotnoy platy tresta
    Yuzhuralspetsstroy.
               (Excavation)

LEVIN, A.

Determining the economic efficiency of the widespread use of chemistry
in agriculture. Vop. ekon. no.2:52-57 F '63.   (MIRA 16:3)
                                (Agricultural chemicals)

LATCU, D., prof. (Hunedoara); PETRESCU, N., prof. (Tg. Cartunesti); CERCHEZ, Mihu; ZENEMBISI, I., prof. (P. Neamt); TEODORESCU, Voltaire (P. Neamt); IONESCU-TIU, C.; TOMESCU, Ion (Bucaresti); DUMITREASA, Gh. (P.Neamt); MIHAILESCU, D., prof. (Pitesti); DUMITRU, Acu (Cluj); LEONTE, Alexandru (Bucaresti); ANGHELACHE, Tudorica (Bucaresti); POPA, Al. (Pucioasa); BRINZANESCU, V. (Bucaresti); LUSTIG, Gh. (Bucaresti); ISAC, E. (Tg. Jiu); LEVIN, Alexandru (Tallin, U.S.S.R.); SIMION, A. (Bacau); AVADANEI, Cornelia (P. Neamt); SIMIONESCU, Gh.D.; FLONDOR, Elena, (Bucuresti)

Proposed problems in mathematics. Gaz. mat B 15 no.4:172-177 Ap '64.

SOV/124-57-4-4151

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 4, p 43 (USSR)

AUTHORS: Polikovskiy, V. I., Levin, A. A.

TITLE: Some Refinements of the TsAGI Method of Fan Design Calculation
           (Nekotoryye utochneniya metoda TsAGI, primenyayemogo pri
           raschete ventilyatorov)

PERIODICAL: Tr. MAI, 1955, Nr 50, pp 57-67

ABSTRACT: Two analytical formulas are given. The first formula serves to
          determine uniquely the size of the inflow port of the pump; the
          second formula permits a determination of the pitch setting of the
          impeller vanes of the fan. Bibliography: 3 references.
                                                          I. A. Shepelev

Card 1/1

LEVIN, A.A.

AID P - 5183

Subject   : USSR/Engineering

Card 1/2   Pub. 103 - 5/24

Authors   : Levin, A. A., and Ya. V. Loginov

Title   : Machine for making holes for piston wrist pins

Periodical : Stan. i instr., 7, 20-24, Jl 1956

Abstract   : Description and operation of the A940 machine-tool for
making holes in pistons to hold the wrist-pins is given
by the authors, designers at the Experimental Scientific
Research Institute for Metal-Cutting Machines (ENIMS).
The machine was built by the "Stankokonstruktsiya"
(Machine-tool Manufacturing Plant) for the factory for
automatic production of pistons (Zavod Avtomat in Moscow)
and is capable of handling four pistons simultaneously,
finishing up to 400 pistons per hour. Three photos and
7 diagrams.

LEVIN, A. A.

BUROV, Petr Ivanovich; KAPUSTIN, Ivan Il'ich; VLADZIYEVSKIY, A.P., doktor
tekhn.nauk, retsenzent; LEVIN, A.A., inzh., retsenznet; RESHETNIKOV,
I.I., inzh., red.; TIKHANOV, A.Ya., tekhn.red.

[Calculating productive capacity of machine tools] Raschet proizvodi-
tel'nosti rabochikh mashin. Moskva, Gos.nauchno-tekhn.izd-vo mashino-
stroit. lit-ry, 1958. 213 p.   (MIRA 11:7)
        (Machine tools)

LEVIN, A.A.

Problems in the analysis of structural diagrams of automatic
production lines. Stan. i instr. 29 no.3:1-3 Mr '58.

(MIRA 12:1)

(Factory management)

LEVIN, A.A., insh.

Selection of long-distance telemetering equipment. Elek sta.
30 no.2:72-76 F '59.   (MIRA 12:3)
          (Telemetering--Equipment and supplies)

LEVIN, A.A.

Calculating machines and the structural analysis of crystals.
Vest.AN SSSR 31 no.9:131-132 S '61.   (MIRA 14:10)
            (Electronic calculating machines)
            (Crystallography, Mathematical)

AYZENSHTADT, L.A.; PEN'KOV, P.M.; GLADKOV, B.A.; LIKHT, L.O.;
    KRIMMER, T.Ye.; KASHEPAV, M.Ya., kand. tekhn. nauk;
    MERPERT, M.P., kand. tekhn. nauk; KOPERBAKH, B.L.;
    CHERNIKOV, S.S., kand. tekhn.nauk; BELOV, V.S.; ZHURIN,
    B.F.; MONAKHOV, G.A., kand.tekhn.nauk; MOROZOV, I.I.;
    MUSHTAYEV, A.F.; OGNEV, N.N.; PALEY, M.B., kand. tekhn.
    nauk; FURMAN, D.B.; LIVSHITS, A.L., kand.tekhn.nauk;MECHETNER,
    B.Kh.;SOSENKO,A.B;AVDULOV, A.N.; LEVIN, A.A., kand.tekhn.
    nauk; YAKOBSON, M.O., doktor tekhn.nauk; MAYOROVA, E.A.,
    kand.tekhn.nauk; MOROZOVA, Ye.M.; ZUSMAN, V.G., kand.tekhn.
    nauk; NAYDIS, V.A., kand.tekhn.nauk; VLADZIYEVSKIY, A.P., prof.,
    doktor tekhn. nauk, red.; BELOGUR-YASNOVSKAYA, R.I., red.;
    CHIGAREVA, E.I., red.; ASVAL'DOV, M.Ya., red.; KOGAN, F.L.,
    tekhn. red.

[Machine-tool industry in capitalist countries] Stanko-
stroenie v kapitalisticheskikh stranakh. Pod red. i s pre-
disl. A.P.Vladzievskogo. Moskva, 1962. 822 p. (MIRA 15:7)

1. Moscow. TSentral'nyy institut nauchno-tekhnicheskoy in-
formatsii mashinostroyeniya. 2. Eksporimental'nyy nauchno-
issledovatel'skiy institut metallorezhushchikh stankov
(for Vladziyevskiy, Belogur-Yasnovskaya, Chigareva, Asval'dov,
Kogan).
                (Machine-tool industry)

LEVIN, A.A.; BEREZIN, V.P.

Mechanized cutting of rolled paper and rolled cardboard. Med.prom.
16 no.4:42-44 Ap '62.   (MIRA 15:8)

1. Mediko-instrumental'nyy zavod "Krasnogvardeyets".
        (PAPER-CUTTING MACHINES)   (MEDICAL TECHNOLOGY)

GRINBERG, N.B.; ZAK, L.A.; LEVIN, A.A.; PRANGISHVILI, I.V.

The BTA-PU-S noncontact telecontrol system for over-all automation.
Priborostroenie no.5:8-12 My '64.   (MIRA 17:6)

L 55921-65   EWT(1)/EPA(s)-2/EPF(n)-2/EPR/T-2/EPA(bb)-2   Ps-4

ACCESSION NR: AP5012437   UR/0281/65/000/002/0129/0133
                                     621.525;621.631

AUTHOR: Levin, A. A.; Polikovskiy, V. I.   29
                                                              B
TITLE: Calculation of the pressure characteristics of centrifugal pumps and
fans at zero flow rate

SOURCE: AN SSSR. Izvestiya. Energetika i transport, no. 2, 1965, 129-133

TOPIC TAGS: centrifugal pump pressure, centrifugal fan pressure, zero flow
pump operation, optimum pump operation

ABSTRACT: The existing theory of vane devices (pumps, fans, etc.) does no
supply the pressures for flow rates which are substantially smaller than those
for which the device was designed. Consequently, if one could calculate the
pressure for even one such low-flow operating point, this would permit a much
more exact estimate of the entire pressure characteristic than is the case at
the present time. The case of zero flow rate probably corresponds to the most
characteristic point of this kind, and the authors therefore investigated the
mechanism of fluid motion at the input of a centrifugal wheel during zero flow.
This is followed by an outline of the method for the calculation of the pressure

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L 55921-65

ACCESSION NR: AP5012437 O

generated by the wheel based on the model of the fluid motion. Calculated re-
sults are in good agreement with experimental data published by M. I. Nevel'son
(Tsentrobezhnyye ventilyatory (Centrifugal fans), Gosenergoizdat, 1954). The
excellent agreement seems to indicate that there is no need for the introduction
of an experimentally derived coefficient nor does one have to include any coef-
ficients describing losses (their influence on pressure within the framework of
the calculation seems to be negligible). During the operation of fans within
casings, additonal factors appear which affect the pressure; however, this issue
was not investigated. Orig. art. has: 18 formulas and 3 figures.

ASSOCIATION: None

SUBMITTED: 15Aug64   ENCL: 00   SUB CODE: IE

NR) REF SOV: 005   OTHER: 000

Card 2/2

L 4517-66   EWT(l)/EWT(m)/EPF(c)/T   JD/DJ

ACC NR: AP5024140   SOURCE CODE: UR/0096/65/000/010/0071/0074

AUTHOR: Polikovskiy, V. I. (Deceased; Doctor of technical sciences; Professor); Levin, A. A. (Candidate of technical sciences)

ORG: Moscow Aviation Institute (Moskovskiy aviatsionnyy institut)

TITLE: On operation of pumps and blowers at regimes of reduced feed

SOURCE: Teploenergetika, no. 10, 1965, 71-74

TOPIC TAGS: fluid pump, blower, suction pump

ABSTRACT: It is generally known that the flow of fluid at the pump suction loses its regularity when the feed rate is reduced. A reverse flow develops and penetrates continually deeper into the suction pipe. The flow acquires a clearly defined swirl, especially at the periphery, which increases in intensity as well as in penetration farther from the periphery toward the axis and upward toward the flow. In many cases, such disturbances of the smoothness, nature, and regularity of flow at the suction are noticeable only at low flow rates $Q \ll Q_{nom}$, where Q_{nom} is the rated (calculated) flow rate, and Q, the actual flow rate. Despite the fact that the described reduced-feed phenomena have been known for quite some time, until now, attempts at calculating the characteristics at $Q < Q_{nom}$ have been made without taking them into account. As a result of this, the authors analyze the process of fluid flow in pumps under reduced-feed regimes. It is noted that extensive experiments will have to be carried out in

Card 1/2   UDC: 621.6.053.001.24

L 4517-66

ACC NR: AP5024140

order to solve this problem and enable a rational approach toward optimizing some of the geometric parameters of rotors, which,until now,have been determined by approximate methods. The following relationship between active flow diameter D, pump rpm n, flow rate Q, and suction pipe diameter D_0 is derived:

$$D = K_i \sqrt{\frac{Q}{nD_0}}.$$

Here, K is the proportionality coefficient. This relationship applies equally to both compressors and blowers. Orig. art. has: 6 figures and 16 formulas.   [AV]

SUB CODE: ME/E/SUBM DATE: none/ ORIG REF: 007/ OTH REF: 000/ ATD PRESS: 4/30

Card 2/2

LEVIN, A.A., kand. tekhn. nauk; POLIKOVSKIY, V.I., doktor tekhn. nauk, prof.

Calculation of the pressure characteristic of centrifugal pumps and ventilators with zero expenditure. Teploenergetika 12 no.6: 18-20 Je '65. (MIRA 18:9)

1. Moskovskiy aviatsionnyy institut imeni Ordzhonikidze.

L 21486-66   EPF(n)-2/EWT(1)/EWT(m)/ETC(m)-6/T-2   WW/JD

ACC NR: AP6007307   SOURCE CODE: UR/0096/66/000/003/0049/0053

AUTHOR: Polikovskiy, V. I. (Doctor of technical sciences, Professor, Deceased);
Levin, A. A. (Candidate of technical sciences)

ORG: Moscow aviation institute (Moskovskiy aviatsionnyy institut)

TITLE: Investigation of the operation of pumps and blowers at reduced feed regimes

SOURCE: Teploenergetika, no. 3, 1966, 49-53

TOPIC TAGS: pump, blower, gas dynamics, fluid dynamics

ABSTRACT: The paper describes a theoretical and experimental investigation of pumps
and blowers at reduced-feed regimes. Two extreme cases were investigated: a) a full
vortex regime when the toroidal vortex transmits maximal energy to the incoming flow,
and b) a regime without swirl where the suction flow passes through the inside of the
vortex, practically without swirling. The two regimes were analyzed and formulas for
their calculation derived. The experimental results are presented in the form of figures
and graphs. The calculated theoretical results of the investigation were checked by
experiments and found to be in good agreement. Orig. art. has: 5 figures and 15
formulas.   [AV]

SUB CODE: 21/ SUBM DATE: none/ ORIG REF: 002/ ATD PRESS:4222

Card 1/1   UDC: 621.6.053/001.24

LEVIN, A.A. (Monkva)

Method for solving a partial eigenvalue problem. Zhur. vych.
mat. i mat. fiz. 5 no.4:732-737 Jl-Ag '65. (MIRA 18:8)

AUTHOR: Levin, A.A.   SOV/70-3-4-4/26

TITLE: On the Determination of the Parameters of an Anisotropic
          Temperature Factor (Ob opredelenii parametrov anizotropnogo
          temperaturnogo faktora)

PERIODICAL: Kristallografiya, 1958, Vol 3, Nr 4, pp 420-427 (USSR)

ABSTRACT: The anisotropic temperature factor is studied particularly
          in connection with the anisotropic distribution of electron
          density in atoms. The dependence of the parameters of the
          temperature factor and the anisotropy of the electron
          density is established. Means of determining the principal
          values of an anisotropic temperature factor are indicated.
          The present method assumes the principal directions of
          the thermal vibration tensor are known from X-ray data. The
          variations in electron density (reckoning from the centre
          of the j-th atom) are :

$$\left(\frac{\partial^2 \rho}{\partial x_j \, \partial x_k} \right)_{x_j \, = \, x_j^0} = a_{jk}$$

Card 1/3

On the Determination of the Parameters of an Anisotropic Temperature Factor

or

$$\left(\frac{\partial^2 \rho_{exp}}{\partial x_j'^2}\right)_{x_j' - x_j^{0'}} = \tilde{a}_{jj}$$

referred to the principal axes using the experimentally determined electron density distribution. The thermal vibration factors are given by:

$$B_1 = \left\{\left(\frac{k}{2}\right)^2 \pi^3 \left(\frac{\tilde{a}_{22}\tilde{a}_{33}}{\tilde{a}_{11}^4}\right)\right\}^{1/5} - \alpha;$$

$$B_2 = \left\{\left(\frac{k}{2}\right)^2 \pi^3 \left(\frac{\tilde{a}_{11}\tilde{a}_{33}}{\tilde{a}_{22}^4}\right)\right\}^{1/5} - \alpha;$$

Card 2/3

On the Determination of the Parameters of an Anisotropic Temperature Factor

SOV/70-3-4-4/26

$$B_3 = \left\{ \left(\frac{k}{2}\right)^2 \pi^3 \left(\frac{\tilde{a}_{11}\tilde{a}_{22}}{\tilde{a}_{33}^4}\right)\right\}^{1/5} - \alpha .$$

Acknowledgements to M.A. Poray-Koshits.
There are 5 English references

AUTHOR: Levin, A.A.   SOV/70-3-6-1/25

TITLE: On the Possibilities of the
          Structural Analysis of Crystals (O vozmozhnostyakh
          strukturnogo analiza kristallov)

PERIODICAL: Kristallografiya, 1958, Vol 3, Nr 6, pp 655-658 (USSR)

ABSTRACT: The potentialities of the method of trial and error are
          examined. The number of atoms in the unit cell which
          sets a limit to the complete structure analysis of a
          crystal is found as is also the number of atoms percell for
          which a structure analysis is still meaningful. As no
          other method has greater possibilities, the limits found
          are general.
          N_0 is the least number of atoms per unit cell for which
          the structure just cannot be solved. N' is the greatest
          number of atoms per unit cell for which structure analysis
          can be carried out. For Patterson methods Kitaygorodskiy
          has estimated N_0 at 200 and Poray-Koshits has, by a
          more careful analysis, put it at 100. This calculation
          is carried out here for the space group P1 for the
          trial and error method. The criterion used is equivalence
Card1/2   of the errors in measuring the amplitude of F and the

On the Possibilities of the
Analysis of Crystals

SOV/70-3-6-1/25
Structural

errors in the calculated F due to inaccuracies in
the positions. The limit obtained is N_0 = approx. 200.

It is shown that N' = approx. 0.75 N_0 . Direct ("sign")

methods have a similar basis and therefore similar limits.
More accurate experimental measurement of structure
amplitudes is a pre-requisite for progress towards the
solution of more complicated structures. Acknowledgments
to M.A. Poray-Koshits. There are 4 references, 3 of
which are Soviet and 1 English.

ASSOCIATION: Institut obshchey i neorganicheskoy khimi
.\(Institute of General and Inorganic Chemistry)

SUBMITTED: September 10, 1957

Card 2/2

AUTHORS: Levin, A.A., and Poray-Koshits, M.A.   SOV/70-4-2-3/36

TITLE: X-ray Structure Calculations on the Universal Computing
Machine "Strela" (Rentgenostrukturnyye raschety na univ-
ersal'noy vychislitel'noy mashine "Strela")

PERIODICAL: Kristallografiya, 1959, Vol 4, Nr 2, pp 157-162 (USSR)

ABSTRACT: Programmes for the three principal calculations used in
structure analysis (calculations of Fourier and
Patterson functions, structure factors and refinements
of atomic coordinates) have been written by Shedrin and
Ageyeva for the Strela 4 machine of Moscow University
for all plane groups, for all monoclinic space groups and
for 15 orthorhombic groups. A universal programme for all
groups has been written by Brusentsov and a programme
for statistical sign determination has been written by
Rumanova. These are described briefly. The sign deter-
mination programme is of particular interest. It has
been compiled for the 65 groups (except
D_{2h}^{24}, T_h^4, O_h^7, O_h^8 in 3 dimensions and Pmm, Pmg, Pgg,

Card1/4   Cmm, P4g, P4m in 2 dimensions) for which

X-ray Structure Calculations on the Universal Computing Machine "Strela"

SOV/70-4-2-3/36

$$F_{hkl} = f(hkl) F_{|h||k||l|}$$

is valid where $f(hkl) = +1$ or -1 depending on the parity of h, k and l or their linear combinations. The first part of the programme ensures the obtaining of chains of "banker" structure amplitudes with definite sign relations between the members of each group. Each reflexion can be a member of a chain only when its sign is determine with sufficient certainty by the other members. The sign is counted as certain if the difference of the number of pairs determining one sign and the number of pairs determining the opposite sign is not less than two. The chain constructing process lasts till there are no more reflexions which can be found from any of the chains. All chains are pointed out, with the sign conditions between their terms, when signs are arbitrarily allocated to each. There are two later stages to the programme for determining the true signs of reflexions in the chains and

Card2/4

X-ray Structure Calculations on the Universal Computing Machine
"Strela"

for finding, by Zachariasen's method, the signs of all
reflexions from the signs of the "bankers".
Examples of calculations are given:
1) $SbCl_2(C_6H_5)_3$ with space group $P2_12_12_1$. Signs
were calculated for 150 (hoℓ) and (okℓ) reflexions
from the Sb, Cl_I and Cl_{II} positions. ρ(xz) and
ρ(yz) were computed. In all, the calculations took an
hour.
2) One Fourier projection from $PbSb_2S_4$ with 100
reflexions was calculated in 20 min.
3) One Fourier projection (plane group pmg) from
$ZnPy_2Cl_2$ with 200 reflexions took 20 min. Calculation of
2 000 signs for $P2_1/c$ and C2/c structures with 25 atoms
in the unsymmetric units took an hour each.
A three-dimensional electron density calculation for
l-prolyl glycine $(P2_1/m)$ with 1 200 reflexions took

Card3/4

X-ray Structure Calculations on the Universal Computing Machine "Strela"

SOV/70-4-2-3/36

about 10 hours because of the long input and output times. There are 9 Soviet references.

ASSOCIATION: Institut obshchoy i noorganicheskoy khimii (Institute of General and Inorganic Chemistry)

SUBMITTED: November 19, 1958

Card 4/4

24029
S/020/61/138/003/001/017
C 111/C333

24.4400

AUTHORS: Akim, E. L., Levin, A. A.

TITLE   Generating function for Clebsch-Gordan's coefficients.

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 138, no. 3, 1961,
            503-505

TEXT: For the coefficients of Clebsch-Gordan $C(l_1 l_2 m_1 m_2 | lm)$, see
E. P. Wigner (Ref. 1: Gruppentheory und ihre Anwendung auf die
Quantenmechanik der Atomspektren [Group theory and its application
to quantum mechanics of atomic spectra] , N. Y.- London, 1959) the
authors gives with the aid of the results of J. M. Gel'fand and
Z. Ya. Shapiro (Ref. 2: UMN, 10, v. 3 (1955)) on "generalized spherical
functions " $P_{mn}(\mu)$, a so called "generating function" such that the
$C(l_1 l_2 m_1 m_2 | lm)$ occur as coefficients of the series of this function:

$$(-1)^{1-m} a_1 t^{\frac{l_2 - l_1 - m}{2}} (1-t)^{l_1 + l_2} P^l_{l_2 - l_1, m} \left(\frac{1+t}{1-t} \right) =$$

Card 1/4

Generating function for . . .

$$= \sum_{m_1 + m_2 = m} C(l_1 l_2 m_1 m_2 \mid lm)\ n_{m_1}^{l_1}\ n_{m_2}^{l_2}\ t^{l_2 - m_2} \ , \quad t = \frac{z_2}{z_1}$$

where $n_m^l = \dfrac{(-1)^{l-m}}{\sqrt{(l-m)!\,(l+m)!}}$, $a_1 = \sqrt{\dfrac{2l+1}{(l_1 + l_2 - 1)!\,(l_1 + l_2 + l + 1)!}}$,

and the left side is denoted as the "generating function". With the aid of the hypergeometric function this generating function can also be written in the form

$$(-1)^{l-m} a_l \frac{1}{(m+l_1-l_2)!} \sqrt{\frac{(l+l_1-l_2)!\,(l+m)!}{(l+l_2-l_1)!\,(l-m)!}} (1-t)^{l_1+l_2-l} \times$$
$$\times F(m-l,\ l_1-l_2-l,\ l_1-l_2+m+1,\ t) =$$
$$= \sum_{m_1+m_2=m} C(l_1 l_2 m_1 m_2 \mid lm)\ n_{m_1}^{l_1}\ n_{m_2}^{l_2}\ t^{l_2-m_2}$$

(A)

Card 2/4

Generating function for . . .

for $l_2 - l_1 \leq m \leq 1$ and similarly for $-1 \leq m \leq l_2 - l_1$.

With the aid fo the "generating function" the authors obtain the representations

$$C\,(l_1 l_2 m_1 m_2 \,|\, lm) = (-1)^{l-m} a_l \, [n_{m_1}^{l_1} n_{m_2}^{l_2} (l_2 - m_2)! \, (m + l_1 - l_2)! \,]^{-1} \times$$

$$\times \sqrt{\frac{(l+l_1-l_2)!\,(l+m)!}{(l+l_2-l_1)!\,(l-m)!}} \times \tag{B}$$

$$\times \left\{ \frac{d^{l-m_2}}{dt^{l-m_2}} (1-t)^{l_1+l_2-l} \, F(m-l,\, l_1-l_2-l,\, l_1-l_2+m+1,\, t) \right\}_{t=0}.$$

$$C\,(l_1 l_2 m_1 m_2 \,|\, ml) = (-1)^{l-m}\, i^{l_1+l_2+m_2-m_2}\, 2^{-(l_1+l_2)}\, \frac{(2l+1)\,n_{m_1}^{l_1} n_{m_2}^{l_2}}{a_l} \times$$

$$\times \int_{-1}^{+1} (1-\mu^2)^{\frac{l_1+l_2}{2}} \left(\frac{1-\mu}{1+\mu}\right)^{\frac{m_1-m_2}{2}} P_{l_2-l_1,\,m}^{l}\,(\mu)\,d\mu, \tag{C}$$

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Generating function for . . .

8/020/61/138/003/001/017
C 111/C333

24029

for the coefficients $C(l_1 l_2 m_1 m_2 \mid lm)$. Furthermore, the asymptotic representation

$$C(l_1 l_2 m_1 m_2 \mid lm) \approx (-1)^{l_1 + l_2 - l} \frac{(l+m+1)^{l-m_2}}{(l-l_2-m_1)!} \times$$

$$\times \sqrt{\frac{(2l+1)(l+l_1-l_2)!(l+m)!(l-m)!(l_1-m_1)!(l_2+m_2)!}{(l+l_2-l_1)!(l_1+l_2-l)!(l_1+l_2+l+1)!(l_1+m_1)!(l_2-m_2)!}} \cdot$$

(D)

which holds for l_1, l_2, l, $m \gg l_1 + l_2 - m$.

The results and notations from (Ref. 2) and from M. A. Neymark (Ref.3: UMN, 9, v. 4 (1954)) are essentially used in the paper. There are 2 Soviet-bloc and 1 non-Soviet-bloc references.

PRESENTED: January 21, 1961, by A. N. Kolmogorov, Academician

SUBMITTED: January 13, 1961

Card 4/4

LEVIN, A.A.; VOLKOV, V.M.

      Calculation of the proton affinity of methane and its homologs.
Zhur.strukt.khim. 3 no.6:721-723 '62.   (MIRA 15:12)

      1. Institut obshchey i neorganicheskoy khimii imeni N.S.
Kurnakova AN SSSR.
                 (Methane)   (Protons)

PORAY-KOSHITS, M.A.; LEVIN, A.A.; SHCHEDRIN, B.M.

Use of high-speed electronic computers for calculations in X-ray diffraction analysis; review. Kristallografiia 7 no.4:648-656 Jl-Ag '62.   (MIRA 15:11)

1. Institut obshchey i neorganicheskoy khimii imeni N.S.Kurnakova.
                    (Electronic digital computers)
                         (X rays--Diffraction)

AUTHOR: Levin, A.A.

TITLE: On the classification and separation of levels in an
               external field

TEXT: The classification of levels is based on the following
property of representations of point groups of symmetry of the
second kind (i.e. containing only one rotation): all irreducible
representations of each such group G occur in pairs; the
operators of the representation D(g) in each such pair coincide
over all elements of the first kind (pure rotations)
$g' = \{g_1', g_2', \ldots\}$ and differ in sign over all elements of the
second kind $g'' = \{g_1'', g_2'', \ldots\}$ (transformations which are not pure
rotations). All characters of irreducible representations of
points groups of the second kind can be divided into three classes:
the characters of the first two classes coincide in pairs over all
pure rotations and differ in sign over elements of the second kind;
characters of the third class are zero for all elements of the
second kind. In the case when the group G of a symmetrical

Card 1/3

On the classification ...

S/051/62/013/004/012/023
E031/E413

quantum-mechanical field is of the second kind but does not contain an inversion, a unique determination of the evenness or oddness of the levels cannot be made since the character of one and the same irreducible representation of such a group can be a positive number for one element of the second kind and negative for another equivalent element of the second kind.   However, the energy levels can still be classified by observing that the characters of the irreducible representations of the levels fall into three classes, of which the first two can be divided into conjugate pairs of levels.   The levels of the third class, corresponding to characters zero for elements of the second kind are called "neutral", being neither even nor odd.   If the group of symmetries of an external field is of the second kind, not containing an inversion, even and odd levels of a free atom can each be separated into three classes – even, odd and neutral – and the following rule can be formulated: if some even level of a free atom is separated in an external field into n_1 even, n_2 odd and n_0 neutral levels, then the same, but odd, level of the free atom is separated into n_2 even, n_1 odd and n_0 neutral

Card 2/3

On the classification ...

S/051/62/013/004/012/023
E031/E413

levels.   Quantum transitions in fields without a centre of inversion will be considered later.

SUBMITTED: February 24, 1962

Card 3/3

VOLKOV, V.M.; LEVIN, A.A.

Mechanism of the addition of proton to methane. Zhur.strukt.khim.
4 no.1:114-116 Ja-F '63.   (MIRA 16:2)

1. Institut obshchey i neorganicheskoy khimii imeni N.S. Kurnakova
AN SSSR.
              (Methane)   (Protons)

LEVIN, A.A.

Use of symmetry in the method of maximum overlap. Zhur.strukt.
khim. 4 no.5:739-743 S-O '63.   (MIRA 16:11)

1. Institut obshchey i neorganicheskoy khimii imeni N.S.Kurnakova
AN SSSR.

LEVIN, A.A.; VOLKOV, V.M.; DYATKINA, M.Ye.

> Theoretical examination of the stereochemistry of complex compounds of elements with F-electrons. Part 1: Conversion of the f-orbital of the central atom. Zhur.strukt.khim. 4 no.6:930-934 N-D '63.
>
> (MIRA 17:4)
>
> 1. Institut obshchey i neorganicheskoy khimii imeni Kurnakova AN SSSR.

VOLKOV, V.M.; LEVIN, A.A.; DYATKINA, M.Ye.

On the relative stability of isomers in MX_2Y_2 molecules.
Dokl. AN SSSR 152 no.2:359-362 S '63.   (MIRA 16:11)

1. Institut obshchey i neorganicheskoy khimii im. N.S. Kurnakova
AN SSSR. Predstavleno akademikom I.I. Chernyayevym.

LEVIN, A.A.

Locating the best hybrid orbitals of the central atom in
MXk-type molecules. Zhur.strukt.khim. 5 no. 2:288-292
Mr-Ap '64.
(MIRA 17:6)

1. Institut obshchey i neorganicheskoy khimii imeni Kurnakova
AN SSSR.

LEVIN, A.A.

Theory of the location of the most stable configuration of
MX_K molecules by the method of maximum overlap. Zhur.strukt.
khim. 5 no. 2:329-331 Mr-Ap '64.   (MIRA 17:6)

1. Institut obshchey i neorganicheskoy khimii imeni N.S.
Kurnakova AN SSSR.

LEVIN, A.A.; VARYUSHCHENKO, L.I.; DYATKINA, M.Ye.

Application of the variation-iteration method for the
determination of the most stable configuration of MX_k
molecules. Part 1: Molecules of MX_4 in approximation of
σ-bonds. Zhur. strukt. khim. 5 no.4:654-655 Ag '64.

AREF'YEV, V.B.; LEVIN, A.A.; SHCHEDRIN, B.M.; PORAY-KOSHITS, M.A.

Realization of an "algebraic" method for finding symbols by a large computer. Zhur. strukt. khim. 5 no.6:902-905 N-D '64.   (MIRA 18:4)

1. Institut obshchey i neorganicheskoy khimii imeni Kurnakova AN SSSR i Vychislitel'nyy tsentr Moskovskogo gosudarstvennogo universiteta.

LEVIN, A.A.

Substitution of ligands from the viewpoint of oriented
valencies. Zhur. neorg. khim. 9 no.5:1290-1292 My '64.
(MIRA 17:9)

1. Institut obshchey i neorganicheskiy khimii im N.S.
Kurnakova AN SSSR.

AREF'YEV, V.B.; SHCHEDRIN, B.M.; LEVIN, A.A.

Experimental study of the X-criterion by means of an electronic computer. Zhur. strukt. khim. 6 no.1:137-140 Ja-F '65.

(MIRA 18:12)

1. Vychislitel'nyy TSentr Moskovskogo gosudarstvennogo universiteta i Institut obshchey i neorganicheskoy khimii imeni N.S.Kurnakova AN SSSR. Submitted May 23, 1963.

GERMAN, E.D.; LEVIN, A.A.; DYATKINA, M. Ye.

Spin-orbital interaction with self-consistency for molecules
with open shells. Zhur. strukt. khim. 6 no. 4:614-618 Jl-Ag '65
(MIRA 19:1)

1. Institut obshchey i neorganicheskoy khimii imeni N.S. Kurnakova
AN SSSR. Submitted December 30, 1964.

L 37662-66   EEC(k)-2/EWT(d)   GD

ACC NR: AT6012347   SOURCE CODE: UR/0000/66/000/000/0098/0109

AUTHOR: Akopyan, N. F.; Buksa, V. P.; Levin, A. A.; Skoropistseva, S. F.

ORG: none

TITLE: Real noise rejection in the reception of tele-signals and ways to enhance it by adaptation

SOURCE: Nauchno-tekhnicheskaya konferentsiya po sredstvam promyshlennoy telemekhaniki. Moscow, 1963. Promyshlennaya telemekhanika (Industrial telemechanics); materialy konferentsii. Moscow, Izd-vo Energiya, 1966, 98-109

TOPIC TAGS: remote control system, telemetry system, signal noise separation

ABSTRACT: The nature of noise in tele-systems using h-v power lines as carrier channels is examined; transmission-adaptive systems are discussed in general terms. Estimated and experimental noise-distribution curves (duration vs. noise level) for an EPO-400 h-f tele-station are shown. An experimental noise (42—124 mv) vs. time (0—2000 sec) curve exhibits fast and slow noise-level variations; the noise was measured on a carrier channel connected to a 400-kv power

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L 37662-66

ACC NR: AT6012347

O

line. The noise level is clearly correlated with the amount of power transmitted by the line. The effect of noise level on the flow of errors in the tele-channel is briefly discussed. Usually, the rate of information transmission decreases when the noise level increases, which may result in an operational paradox: the information flow may stop (under system emergency conditions) at the moment when the information is most needed. Hence, the transmission process proper should be automatically optimized; a transmission-adaptive system matches the end-apparatus parameters with the variable traffic capacity of the channel. The adaptation efficiency can be evaluated by: (a) the decrease in the number of errors against the decreased trans-mission rate and (b) the decrease in apparatus reliability as a consequence of the increased apparatus redundancy. Orig. art. has: 7 figures and 1 formula.

SUB CODE: 09 / SUBM DATE: 08Jan66

Card 2/2

L 37659-66   EWP(k)/EWI(d)/EWP(h)/EWP(1)/EWP(v)   BC/GD

ACC NR: AT6012355   SOURCE CODE: UR/0000/66/000/000/0202/0208

AUTHOR: Prangishvili, I. V.; Zak, L. A.; Levin, A. A.; Grinberg, N. B.   67   B+1

ORG: none

TITLE: Unitized contactless tele-automatic BTA-PU-S system for mining industries

SOURCE: Nauchno-tekhnicheskaya konferentsiya po sredstvam promyshlennoy telemekhaniki. Moscow, 1963. Promyshlennaya telemekhanika (Industrial telemechanics); materialy konferentsii. Moscow, Izd-vo Energiya, 1966, 202-208

TOPIC TAGS: automatic control, automatic control system, automatic control theory, industrial automation / BTA-PU-S automatic control system

ABSTRACT: Developed by IAT and "Red Metallist" plant, the BTA-PU-S automatic control system is intended for automating production flowlines and transportation lines in the coal and mining industries. The system is connected (via contactless transducers and amplifiers) with level sensors, machine and mechanism controls (flight and belt conveyers, rolls, etc.), position limit switches, contactors, etc. The system tolerates parameter spread of its elements, permits interchanging its

Card 1/2

LEVIN, A.A.

"Nature of chemical bond" by E. M. Shustorovich. Zhur. neorg.
khim. 10 no.5:1288-1289 My '65.   (MIRA 18:6)

Levin, A. B.

USSR/Analysis of Inorganic Substances

G-2

Abs Jour: Ref Zhur-Khimiya, No 6, 1957, 19629

Author : A. B. Levin, V. A. Shestakov
Inst : Uralsk Polytechnical Institute
Title : Fractional Detection of Chlorine Ion

Orig Pub: Tr. Ural'skogo Politekhn. In-ta, 1956, sb. 57, 57 - 60

Abstract: For the fractional detection of Cl^-, it was pro-
posed to use the solution of $Hg(NO_3)_2$ as precipi-
tator and the solution of $Hg_2(NO_3)_2$, that produc-
ed with Cl^- the precipitate Hg_2Cl_2 insoluble in
diluted HNO_3, as a reagent for Cl^-. The solu-
tion of $Ba(NO_3)_2$ is recommended as precipitator
of SO_4^{2-}. Solution of $Na_2B_4O_7$ is used to elimin-

Card 1/2

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LEVIN, A.B.

137-58-5-11163

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 5, p 323 (USSR)

AUTHOR: Levin, A. B.

TITLE: Another Version of the Fractional Reaction Employed in the Detection of Aluminum Ions (Variant drobnoy reaktsii otkrytiya ionov alyuminiya)

PERIODICAL: Tr. Ural'skogo politekhn. in-ta, 1957, Nr 69, pp 126-128

ABSTRACT: The author introduces an important correction into the fractional reaction for determination of Al^{3+}, a reaction employing NaOH for the precipitation of the second group of the fractional analysis, as well as for the formation of aluminate, zincate, and chromate. After separating out the first cation group in the form of metals by the action of powdered metallic Zn in the filtrate, the second group is precipitated with the aid of alkaline carbonate in the presence of H_2O_2. The precipitate contains the basic Zn carbonate and $Al(OH)_3$, while Cr passes into solution in the form of Na_2CrO_4. The Mn is in the form of Na_2MnO_3.

1. Aluminum ions--Detection

K. K.

Card 1/1

LEVIN, A.B.

Fractional (drop) reaction for the detection of antimony.
Trudy Ural. politekh. inst. no.94:106-109 '60.   (MIRA 15:6)
(Antimony--Analysis)

LAKOZA, I.I., doktor sel'skokhozyaystvennykh nauk, prof.; LEVIN, A.B.

Practices in the maintenance of dairy cattle under the conditions of mechanized livestock farms. Izv. TSKHA no.2:57-67 '62.

(Dairy farms)   (Farm mechanization)   (MIRA 15:9)

L 57747-65   ENT(m)/EWP(w)/EWP(v)/T-2/EWP(k)   Pf-4   EM
ACCESSION NO   AP5017884

Byulleten' izobreteniy i ovarnykh znakov,

TOPIC TAGS: rotor blade flapping, coaxial rotor

ABSTRACT: An Author Certificate has been issued for a method of observing flapping in rigidly mounted blades of coaxial rotors. The method utilizes two flapping-angle inductive pickups mounted on each rotor blade. For increased precision in controlling blade approach of the upper and lower rotors, there is a provision horizontal sweep which describes blade flapping on the screen of a dual-beam oscilloscope. For this, using a saw-toothed voltage generator synchronized with the rpm, positive voltage is fed to one pair of horizontal deflection plates and negative voltage to the other pair.   [JB]

ASSOCIATION: none

Card 1/2

L 57747-65
ACCESSION NR: AP5017880

SUBMITTED: 06Jan64

NO REF SOV: 000

ENCL: 00   SUB CODE: AC   C

OTHER: 000   ATD PRESS: 4040

Card 2/2

ACC NR: AR6022468

SOURCE CODE: UR/0169/66/000/003/D019/D019

AUTHOR: Lerner, B. L.; Levin, A. E.; Yerokhin, B. A.

TITLE: New apparatus incorporating an intermediate stage of magnetic recording as the basis for further improvement of the MOV method of seismic prospecting

SOURCE: Ref. zh. Geofiz, Abs. 3D118

REF SOURCE: Tr. Nizhne-Volzhsk. n.-i in-t geol. i geofiz., vyp. 2, 1964, 75-78

TOPIC TAGS: seismic prospecting, geophysic instrument

TRANSLATION: New apparatus, developed at the Design Bureau of the Nizhnevolganefte-geofisika includes a seismic station equipped with an SS-24-61M magnetic recorder, a PSZ-2 seismic recording converter and an MS-1 magnetic integrator. This stationary instrumentation is used to process the data which were magnetically recorded by the method of directionally controlled reception. One machine, the PSZ-2 can process seis- mograms recorded at 9 or 10 simultaneously operated stations. A. Fedorenko.

SUB CODE: 08

UDC: 550.834

Card 1/1

LEVIN, A.F.; MASTYAYEV, N.Z., kand. tekhn. nauk, rotsenzent;
GALKIN, Yu.M., kand. tekhn. nauk, red.; VASIL'YEVA,
I.A., red.izd-va; GORDEYEVA, L.P., tekhn. red.

[Reliability of the electrical equipment and devices of
motor vehicles and tractors] Nadezhnost' avtotraktornogo
elektrooborudovaniia i priborov. Moskva, Mashgiz, 1963.
114 p.   (MIRA 17:2)

LEVIN, A.G.

36-64-3/7

AUTHOR: Levin, A. G. and Myachikov, V. D.

TITLE: Evaluation and Mapping of Precipitation (K metodike ucheta i karto-
            grafirovaniya osadkov)

PERIODICAL: Trudy Glavnoy geofizicheskoy observatorii, 1956, Nr 64, pp. 17-23 (USSR)

ABSTRACT: Hydrometeorologists working in remote regions of Asiatic USSR have
            compared the results obtained with a Tret'yakov precipitation re-
            corder and those obtained with an ordinary pluviometer. It was
            found that a pluviometer with a conical protector does not perform
            satisfactorily, particularly in winter when a large part of the
            snow is blown away. Tret'yakov's recorder gives better results.
            An analysis of the vertical distribution of precipitation indi-
            cates a zonal pattern, where first the sum total of precipitation
            increases, and then diminishes with a change in elevation. This
            factor should be taken into account in calculating precipitation.
            Both types of meters give nearly identical ($\pm 2\%$) results in measur-
            ing liquid precipitation, though during the winter months Tret'yakov's

Card 1/2

Evaluation and Mapping of Precipitation   (Cont.)   36-64-3/7

gauge requires a correction by adding 10-15%. Authors S. V.
Kalesnik, P. I. Koloskov, G. P. Kulimin, T. S. Abal'yev,
D. L. Sokolovskiy, and B. V. Shostakovich are mentioned. There are
5 figures, 4 tables, and 13 references, all Soviet.

AVAILABLE: Library of Congress

Card 2/2

LEVIN, A.G.; MYACHNIKOV, V.D.

Vernal transition of air temperature through $0°$ in the north-
eastern region of the U.S.S.R. Trudy TSIP no.67:148-152 '58.
(MIRA 11:6)

(Atmospheric temperature)

LEVIN, A.G.; MYACHIKOV, V.D.

Reduction of the precipitation layer over the area around a mobile
rain center. Sbor. rab. po gidrol. no.1:48-55 '59.
(MIRA 15:2)

1. Severo-Vostochnoye geologicheskoye upravleniye.
(Precipitation(Meteorology)—Measurement)

LEVIN, A.G

Leningrad. Glavnaya geofizicheskaya observatoriya

Voprosy obshchey i sinopticheskoy klimatologii (Problems in General and Synoptic Climatology) Leningrad, Gidrometeoizdat, 1960. 141 p. (Series: Its: Trudy, vyp. 88) Errata slip inserted. 1,000 copies printed.

Additional Sponsoring Agency: USSR. Sovet Ministrov. Glavnoye upravleniye gidrometeorologicheskoy sluzhby.

Ed. (Title Page): O. A. Drozdov, Doctor of Geographical Sciences; Ed. (Inside book): T. V. Ushakova; Tech. Ed.: M. Ya. Flaum.

PURPOSE: This publication is intended for meteorologists and synoptic climatologists.

COVERAGE: This issue of the Main Geographical Observatory's Transactions contains 12 articles dealing with wind-caused redistribution of precipitation, ice accretion under various relief conditions, the characteristics of snow depositions, and forest shelter belts. The microclimatic peculiarities of a large city

Card 1/4

Problems in General and Synoptic (Cont.)

Problems in General and Synoptic (Cont.)

SOV/4489

Agafonova, S. M. Variability of the Total Precipitation During the
Spring-Summer Period Over the Arid Regions of European and Asiatic USSR
in Relation to the Variability of the Elements of Total Atmospheric Circula-
tion

AVAILABLE: Library of Congress

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Card 4/4

JA/dwm/fal
11-13-60

DMITRIYEVA, Nataliya Georgiyevna; LEVIN, A.G., otv.red.; PIOTROVICH, V.V.,
otv.red.; KORNILENKO, V.S., red.; ZARKH, I.M., tekhn.red.

[Elements of water economy and runoff forecast in the Amur Basin]
Elementy vlagooborota i prognoz stoka v Priamur'e. Moskva, Gidro-
meteor.izd-vo, 1960. 210 p.   (MIRA 14:1)
                    (Amur Valley--Runoff)

KALININ, O.P.; LEVIN, A.G.

Use of electron models in forecasting floods resulting from
rainfalls. Meteor. i gidrol. no.12:14-18 D '60.   (MIRA 13:11)
    (Floods) (Electronic analog computers)

PUSHEK, B.S., kand geogr. nauk; POPOV, I.V., kand. geogr. nauk; OBRAZTSOV,
I.N., inzh.; FEDOROV, N.N., kand. tekhn. nauk; GRUSHEVSKIY, M.S.,
kand. tekhn. nauk; KRIVOSHEY, B.Z., inzh.,; POPOV, O.V., star.
nauchnyy sotr.; PIKUSH, N.V., kand. tekhn.nauk; LEVIN, A.G., kand.
tekhn. nauk; ZHIDIKOV, A.P., inzh.; GAVRILOV, A.M., kand. geogr. nauk;
KONDRAT'YEV,N.Ye., kand. tekhn.nauk, red.; URYVAYEV, V.A., kand. tekhn.
nauk, red.; SHATILINA, M.K., red.; SOLOVEYCHIK, A.A., tekhn. red.

[Investigation of unsteady flow of water in the Tvertsa and Oredezh
Rivers] Issledovaniia neustanovivshegosia dvizheniia vody na rekakh
Tvertse i Oredezh. Pod red. N.E.Kondrat'eva i V.A.Uryvaeva. Lenin-
grad, Gidrometeor. izd-vo, 1961. 287 p. 6 charts (in pocket)
(MIRA 14:8)

1. Leningrad. Gosudarstvennyy gidrologicheskiy institut.
(Tvertsa River—Hydrology) (Oredezh River—Hydrology)

S/777/61/000/000/004/005

AUTHORS: Pukhov, G. Ye., Vasil'yev, V. V., Grezdov, G. I., Karandakov, G. V.,
Proskurin, Ye. A., Levin, A. G.

TITLE: Device for the visual observation of the voltage distribution in electric-grid models.

TEXT: The paper proposes a device that provides a reading of the most signifi-
cant voltage values in electric analogs and thus afford a representation, for example,
of the maximum values and the general character of the variation of bending moments
in an electric analog of a stressed beam. The voltages to be measured enter a multi-
channel commutator, where a control block governs their successive entry into the
imput of a cathode-ray indicator (CRT) over a time τ. The scanning of the CRT
is synchronized with the beginning of the commutation, and its duration is selected
to equal the commutation period of the entire ensemble of the voltages to be meas-
ured. The 3 alternative versions of this arrangement differ in the type of the com-
mutator used and the method of the synchronous scanning along the axis of the
abscissae: (1) An electromechanical commutator with a step-by-step switch.

Card 1/2

Device for the visual observation of the S/777/61/000/000/004/005

(2) An electromechanical commutator with a collector. (3) An electronic commuta-
tor. An experimental investigation of these 3 types of commutators denotes their
respective advantages and shortcomings: Advantages: Type (1) - simple design;
permits the use of stock types of step-by-step switches; type (2) - relative freedom
from noise; type (3) - total freedom from noise. Types (1) and (2) - direct voltage
commutation with a transmission coefficient equal to 1 in all channels; type (3) -
elevated commutation rate. Type (1) - commutator can be stopped at any step of the
switch; type (2) - can operate with the ordinary ЭО7 (EO7) indicator; type (3) - no
mechanical contacts, no rotation. Shortcomings: Type (1) - requirement for an in-
dicator with prolonged image persistence; type (3) - awkward design if ordinary
electron tubes are used for the commutation with a large number of points; types
(1) and (2) - requirement for mechanical contacts and rotating parts; type (3) - need
for equalisation of the constants of the component gates and of the amplification
according to channels to prevent a scatter of circuit and tube parameters when
tubes are replaced; type (1) - significant noise effects during the motion of the
switch. All three types do not permit the reading of voltages when the latter vary
with a frequency that is close to the scanning frequency.   There are 6 figures.

Card 2/2

LEVIN, A.G.; ZHIDIKCV, A.P.

Numerical prediction of water level in the Volga River below the
Stalingrad Hydroelectric Station by the electrical analog method.
Meteor. i gidrol. no.8:38-41 Ag '61.   (MIRA 14:7)
  (Volga River--Hydrology) (Electronic analog computers)

ZHIDKOV, A.P.; LEVIN, A.G.; NECHAYEVA, N.S.

Special hydrometric observations in the after bays of hydroelectric
power stations. Trudy TSIP no.113:112-144 '61.   (MIRA 14:9)
    (Stream measurements) (Hydroelectric power stations)

ACCESSION NR: AR4034741   s/0124/64/000/003/V020/V020

SOURCE: Ref. zh. Mekhan., Abs. 3V142

AUTHOR: Levin, A. G.

TITLE: On one method of electrical modeling of the equation of vibration of a girder

CITED SOURCE: Tr. Seminara po metodam matem. modelir. i teorii elektr. tsepey. In-t kibernetiki AN USSR, vy*p. 1, 1963, 73-78

TOPIC TAGS: elasticity, vibration, girder vibration, computer, electronic computer, electronic modeling

TRANSLATION: For modeling the equation of vibration of the girder

$$EJ \frac{\partial^4}{\partial x^4} y + m(x) \frac{\partial^2}{\partial t^2} y + k \frac{\partial}{\partial t} y = q(x, t)$$

where EJ is the rigidity of the girder, x is the spatial coordinate, y is the sag in the girder axis, m(x) is the mass of a unit of length of the girder, t is the time, k is the coefficient characterizing the dispersion of energy, q is the linear

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ACCESSION NR: AR4034741

load. It is written in a final differential form

$$EJ\frac{\delta^4}{h^4}y + A + m(x)\frac{d^2}{dt^2}y + k\frac{d}{dt}y = q(x,t) \quad (1)$$

in which case, δ is the final differential operator equivalent to the operator of differentiation, h is the pitch of transverse differences, and A is the error of the final differential approximation.

To set equation (1) written for a concrete point i on an electronic modeling machine, it is presented in a form which does not contain derivatives

$$y_i = -\frac{EJ}{h^4 m_i}\iint [y_{i-2} - 4y_{i-1} + 6y_i - 4y_{i+1} +$$
$$+ y_{i+2} - \frac{h^4}{EJ}q_i(t)]\,dt^2 + \frac{k}{m_i}\int y_i dt \quad (2)$$

This equation can be used for various boundary conditions. Equation (2) is easily modeled on MN-7 (with three concentrated masses), and MPT-9 (with eight concentrated masses) continuous operation mathematical machines.

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ACCESSION NR: AR4034741

DATE ACQ: 02Apr64   SUB CODE: AP, OP   ENCL: 00

Card 3/3

KALININ, G.P., doktor geograf. nauk, prof.: LEVIN, A.G., kand. tekhn. nauk

Precalculation of a hydrograph by the water budget method using an electronic computer. Meteor. i gidrol. no.7:3-10 Jl '64   (MIRA 17:8)

1. Moskovskiy gosudarstvennyy universitet i TSentral'nyy institut prognozov.

LEVIN, A.G.

Calculation of losses in the forecasting of rain floods.
Trudy TSIP no.134:32-55   '64   (MIRA 17:8)

LEVIN, A.G.

Forecasting hydrograph of rain floods by means of electronic analog computers. Trudy TSIP no.132:44-78 '64.

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