L 08301-67 EWT(1) GW
ACC NR: AT6031975 (N) SOURCE CODE: UR/3199/66/000/015/0080/0082

AUTHOR: Kirillova, T. V. (Candidate of physico-mathematical sciences); Malevskiy-Malevich, S. P.

28
B+1

ORG: none

TITLE: Evaluation of random errors of the Laykhtman-Kucherov differential pyrogeometer

SOURCE: AN SSSR. Mezhduvedomstvennyy geofizicheskiy komitet. Meteorologicheskiye issledovaniya, no. 15, 1966, 80-82

TOPIC TAGS: differential pyrgeometer, radiation flux, sun shadow method, random error, PYROMETER, METEOROLOGIC INSTRUMENT, EARTH RADIATION

ABSTRACT: The Laykhtman - Kucherov differential pyrgeometer is an instrument with an operating principle different from most other instruments for measuring radiation fluxes. Therefore, a more careful statistical analysis is necessary to estimate the values of random instrumental errors. Calculations, show that a method offered by the instrument designers for the processing data is undoubtedly preferred. The accuracy of measuring radiation fluxes at night and the low reliability daytime made measurements with the unshaded receiver are evaluated. It is concluded that the conversion factor obtained by the sun-shadow

Card 1/2

L 08301-67

ACC NR: AT6031975 O

method is not sufficiently accurate and that it is necessary to calibrate the instrument by other methods. When comparing the values of random errors of the differential pyrgeometer with the errors of some other instruments, it is necessary to take into account the technical specifications of the instrument according to the number of measurements for a certain period of time and to compare random errors of different instruments for an equal number of readings. Orig. art. has: 2 formulas.

SUB CODE: 04/ SUBM DATE: none/ ORIG REF: 002

Card 2/2 nst

ACC NR: AT6031977 (N) SOURCE CODE: UR/3199/66/000/015/0093/0097

AUTHOR: Malevskiy-Malevich, S. P.

ORG: none

TITLE: Relation of the upward flux of long-wave radiation and surface temperature

SOURCE: AN SSSR. Mezhduvedomstvennyy geofizicheskiy komitet. Meteorologicheskiye issledovaniya, no. 15, 1966, 93-97

TOPIC TAGS: radiation flux, surface temperature, balancemeter, temperature measurement, thermometer, ATMOSPHERIC RADIATION, ERROR MEASUREMENT

ABSTRACT: An analysis is made of the errors of surface-temperature measurements and the relation of the upward flux of radiation measured at a height of 1 m using the Stefan-Boltzmann rule ($E = \sigma T^4$) with a known absolute surface temperature. Calculation errors resulting from ignoring radiation capacity under the various surface temperatures, the influence of the intermediate air layer and the errors of the mercury thermometer which is caused by disparity between the mean temperature of the thermometer reservoir and the surface temperature. The values of errors caused by the first two factors are given in the form of a diagram, subject to meteorological conditions. Examples of calculation

Card 1/2

ACC NR: AT6031977

of these three types of errors are given for the typical conditions for comparing balancemeters. For the final estimation of the total error for daytime measurements, it is necessary to take into account the error resulting from differences of heat radiating from the surface under study and from the thermometer reservoir. It was concluded that at night, the measured radiation flux is always lower than the computed, while during the day it is always greater. Some quantitative characteristics of these differences were calculated. Studies of one of these instruments, designed for calibration of radiometers with a germanium filter are made, and the data received using this instrument are being compared with the obtained calculation results. Orig. art. has: 5 formulas and 2 figures.

SUB CODE: 04/ SUBM DATE: none/ ORIG REF: 004

Card 2/2

MALEWICZ, Jerzy, inz. (Wroclaw)

Replacing 15 W, 220 V bublbs for the illumination of house numbers by 1,5 W, 6,3 pygmy incandescent lamps. Gosp paliw 11 Special issue no.(95)57 Ja '63.

MALEWICZ, Jerzy, inz.(Wroclaw)

Replacing 15 W, 220 V bulbs for the illumination of house numbers by 1,5 W,6,3 pygmy incandescent lamps. Gosp paliw 11 Special issue no.(95): 57 Ja '63.

MALEWICZ, Julian, inz. (Nowosybirsk)

Cooling installations for condenser systems. Energetyka 14 no.12: 378 D '60. (EEAI 10:5)
(Condensers (Steam)) (Cooling)

RZADKOWOLSKA, Elzbieta; OSUCHOWSKA, Izabela; MALEWSKA, Krystyna

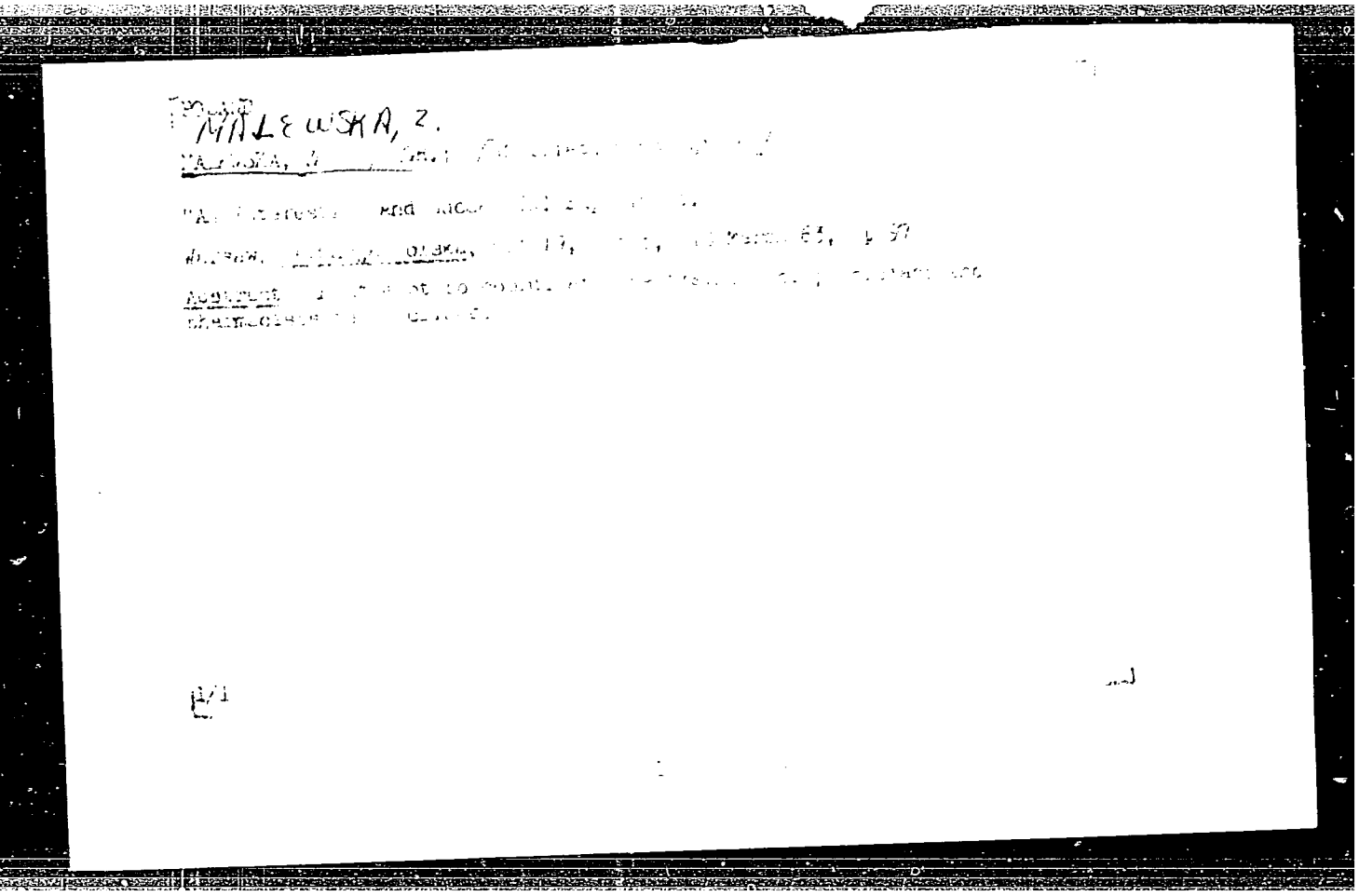
Group Psychotherapy of neuroses. Neurol., neurochir. psychiat. Pol. 14 no.6:929-933 N-D '64

1. Z Panstwowego Sanatorium dla Nerwowo Chorych w Warszawie (Dyrektor: dr. med. F. Szumigaj).

JANKOWSKI, Tadeusz; ZALEWSKI, Jozef; MALEWSKA, Sabina

Clinical significance of some congenital defects of the extrahepatic bile ducts. Pol. tyg. lek. 20 no.3:94-96 18 Ja '65

1. Z II Kliniki Chirurgicznej Akademii Medycznej w Bialymstoku (Kierownik: prof. dr. T. Jankowski).



MALEWSKA, Zofia, mgr

An interesting and successful experiment. Farmacja Pol 19 no.5: 97 10 Mr '63.

MALEWSKA, Zofia

An excursion to Hungary. Farmacja Pol 20 no. 3/4: 124-125
25 F '64.

KANDROR, I.S.; MALEWSKAJA, L.A.

Evidence for the physiological basis of salt content norms in drinking water; chloride and chloride-sulfate complexes. J. Hyg. Epidem., Praha 2 no.2:217-228 1958.

1. Physiologisches Laboratorium fur allgemeine und Kommunalhygiene der AMW, UdSSR, Moskau, Pogodinka No.10.

(WATER,
normal salt levels in drinking water, physiol. basis (Ger))
(CHLORIDES, effects
tap water containing chlorides on gastric secretion & on absorp. rate (Ger))
(GASTRIC JUICE,
secretion, eff. of tap water containing chlorides & sulfates (Ger))
(SULFATES, effects
tap water containing sulfates on gastric secretion & on absorp. rate (Ger))

POLAND/Pharmacology and Toxicology. Tranquilizers V-2

Abs Jour : Ref Zhur - Biol., No 15, 1958, No 71094

Author : Dlugokecki Mieczyslaw, Malewski Jan
Inst : -
Title : The Use of Frenquel in Psychiatric Treatment

Orig Pub : Polski tygod. lekar., 1957, 12, No 47, 1810-1813

Abstract : No abstract

Card : 1/1

MALEWSKI, Jan; RZADKOWOLSKA, Elzbieta; MICHNIEWICZ, Maria

On corrective experience in psychotherapy. Neurol neurochir psych 12 no.2:281-285 Mr-Ap '62.

1. Panstwowe Sanatorium dla Nerwowo Chorych, Warszawa, ul. Dolna 42. (Kierownik: dr F. Szumigaj; ordynator: dr M. Dlugokecki).

*

POLAND
7 Oct 63

MALEWSKI, Juliusz

Member of the Sejm; head, delegation of the Front of National Unity, arrived in Czechoslovakia for a week-long visit at the invitation of the Czechoslovak National Front, Prague, 7 October.

Rude Pravo, Prague, 8 Oct 63, p 1.

(1)

MALEWSKI, K.

SIEROSZEWSKI, Jozef; SAKOWSKI, Jan; MALEWSKI, Konrad

Treatment of thrombosis of the lower extremities by drip transfusion of the blood or plasma. Polski tygod. lek. 9 no.38:1236-1237 20 Sept 54.

1. Z Kliniki Poloznictwa i Chorob Kobiecych A.M. w Lodzi, kierownik: prof. dr med. J.Sieroszewski.

(BLOOD TRANSFUSION, in various diseases,
thrombosis of leg, drip transfusion)
(THROMBOSIS,
leg, ther., drip blood transfusion)
(LEG, BLOOD SUPPLY,
thrombosis, ther., drip blood transfusion)

MALEWSKI, R.

"Soviet Method of Complex Intensification in Fishponds." P. 2, (GOSPODARKA RYBNA, Vol. 5, No. 11, Nov. 1953. Warszawa, Poland.)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12, Dec. 1954, Uncl.

WALEWSKI, R.

"Fish Breeding Center in Kluczyki." p. 13, (GOSPODARKA RYBNA, Vol. 6, No. 1, Jan. 1954. Warszawa, Poland.)

SO: Monthly List of East European Accession, (EEAL), LC, Vol. 3, No. 12, Dec. 1954, Uncl.

MALEWSKI, R.

"Fish Breeding Center in Kluczyki." (To be contd.) p. 14, (GOSPODARKA RYBNA, Vol. 6, No. 2, Feb. 1954. Warszawa, Poland.)

SO: Monthly List of East European Accession, (EEAL), LC, Vol. 3, No. 12, Dec. 1954, Uncl.

MALEWSKI, R.

"Fish Breeding Center in Kluczyki." (Conclusion). p. 16. (GOSPODARKA, RYBNA, Vol. 6, No. 3, Mar. 1954. Warszawa, Poland.)

SO: Monthly List of East European Accession, (EEAL), LC., Vol. 3, No. 12, Dec. 1954, Uncl.

L 13142-63 BDS/EWT(m) AFFTC/ASD P/046/63/008/001/002/004

52
51

AUTHORS: Kaczmarek, Włodzimierz; Malewski, Stefan 19

TITLE: Absolute measurement of the activity of radioactive sources with a 4-π counter

PERIODICAL: Nukleonika, v. 8, no. 1, 1963, 29-39

TEXT: Absolute measurements of β and β-γ activities were conducted by means of a 4-π counter. β-particle sources with maximum energy of particles exceeding 0.5 Mev were measured correctly to 2-3% (Fig. 5). The conditions in which the probability of registration in the counter was 1 - 0.0047 for various nuclides, were established (Table 1). The characteristics of counters for various discrimination and amplification voltages were determined (Fig. 6). The absorption of β particles in the aluminum foil, used as a target backing, was measured (Fig. 8). Losses due to finite resolving and dead times of the counter were also determined (Fig. 7). A description of active solutions used as radioactive sources is included. Their self-absorption was examined and its effects established. A photograph of the 4-π counter and a diagram of the counting circuit are also included in the article. One Polish and 6 Western references.

Card 1/1

MALEWSKI, S 12

L 19670-65 EWT(m)/EPF(c)/EPF(n)-2/EPR Pr-4/Ps-4/Pu-4 3SD

ACCESSION NR: AP4045667 P/0046/64/009/07-/0575/0585

AUTHOR: Jamski, L.; Arkuszewski, J. (Arkushevski, Ya.); Bednarz, R. (Bednarzh, R.); Jozefowicz, E. T. (Yuzefovich, E. T.); Jozefowicz, K. (Yuzefovich, K.); Kaczmarek, W. (Kachmarek, V.); Kulikowska, T. (Kulikovska, T.); Malewski, S. (Malevski, S.); Mika, J. (Mika, Ya.); Szechter, A. (Shekhter, A.); Weiss Z. (Vayss, Z.); Bryhn-Ingebrigtsen, K. (Bry*n-Ingebrigt*sen, K.); Smit, J. (Smit, ..); Stamm'ler, R. J. J. (Stamm'ler, R. I. I.); Jockovic, M. (Jotskovich, M.); Pop-Jordanov, J. (Pop-Iordanov, I.); Takac, S. (Takach, M.) B

TITLE: Microscopic neutron flux distributions in unit cells of critical assemblies of the NPY Project 19

SOURCE: Nukleonika, v. 9, no. 7-8, 1964, 575-585

TOPIC TAGS: neutron distribution, reactor physics, intracell neutron distribution, unit cell, critical reactor, NPY project

ABSTRACT: This article, which is one of the first official reports

Card 1/3

of the NPY Project, contains a preliminary study of intracell neutron distributions in three critical assemblies operating in Norway, Poland, and Yugoslavia. The NPY lattices that were studied and the experimental techniques used in three zero-power reactors (NORA, ANNA, and RB) are discussed and experimental and theoretical results are given in tabular form (refer to the Enclosures). The computational methods used in Norway and applied to the NPY lattices involved the use of two integral transport codes (available for use on the Ferranti Mercury computer) developed by the Netherlands-Norwegian K-7 Project at Kjeller-K-7 THERMOS and K-7 TRANSPO; cross-sections used in these codes are given in tables. Two analytical methods were used in Poland: the first, used for NORA and ANNA, made use of a one-group Amouyal-Benoist approach applied to a multilayer system; the second used the Laguerre polynomial expansion for distributions in the moderator. Two computational methods were employed in Yugoslavia: a standard one-velocity P_3 method with isotropic flux return at the outer boundary and an improved analytical neutron thermalization method developed in Yugoslavia. The experimental and theoretical results obtained for NORA lattices show that the experimental values

L 19670-65
ACCESSION NR: AP4045667 3

of the disadvantage factors lie within the range of theoretical values obtained by different methods. Orig. art. has: 3 figures and 6 tables.

ASSOCIATION: Institute of Atomic Energy, Kjeller, Norway; Institute of Nuclear Research, Swierk, Poland; Boris Kidrich Institute of Nuclear Sciences, Vincha, Yugoslavia

SUBMITTED: 00 ENCL: 04 SUB CODE: NP

NO REF SOV: 002 OTHER: 020

Card 3/7

32200
S/201/61/000/003/003/006
D299/D303

16,4100

AUTHOR: Maley, L. V.

TITLE: Exact estimate of approximation to quasi-linear functions by Poisson integrals

PERIODICAL: Akademiya nauk Bielorusskoy SSR. Izvestiya. Seriya fiziko-tekhnicheskikh nauk. no. 3, 1961, 25-32

TEXT: Let $f(x)$ be a continuous function of period 2π and

$$f(r,x) = \frac{1}{2\pi}\int_{-\pi}^{\pi} f(x+t)P_r(t)dt \qquad (1)$$

where

$$P_r(t) = \frac{1-r^2}{1-2r\cos t + r^2} \qquad (0 \leq r < 1)$$

Card 1/5

Exact estimate of ...

is its Poisson integral. One sets

$$\Delta(f,r) = \max_{|x|<\infty} |f(x) - f(r,x)|$$

A. F. Timan (Ref. 1: DAS USSR, 74, no. 1, 1950) proved that the exact estimate of the approximation for each $0 \leq r < 1$ has the form:

$$\sup_{f \in MH} \Delta(f,r) = \frac{2M}{\pi}(1 - r) \ln \frac{1}{1 - r} + M\varepsilon_r \qquad (2)$$

where

$$\varepsilon_r = \frac{2}{\pi} \int_0^{1-r} \left\{ \frac{1}{1 - t} \ln \frac{2 - t}{t^t} + 1 \right\} dt \qquad (3)$$

Card 2/5

Exact estimate of ...

and that for $r \to 1$, the asymptotic formula

$$\mathcal{E}_r = \frac{2}{\pi}(1 + \ln 2)(1 - r) + o(1 - r) \qquad (4)$$

holds. The author considers a broader class of functions than those considered in Ref. 1(Op. cit.), namely the class f(x) of continuous (quasi-linear) functions of period 2π which satisfy on the entire number axis the inequality

$$|f(x - h) - 2f(x) + f(x + h)| \leq 2M|h| \qquad (5)$$

The method of integration by parts, used in Ref. 1 (Op.cit.) cannot be applied to this class of functions, as there are quasi-linear functions which are not differentiable at any point. The main object of the present article is to derive an asymptotic formula for $\mathcal{E}_r$ which would permit calculating $\mathcal{E}_r$ to any degree of accuracy. In addition, A. F. Timan's conjecture that as to the validity of for-

Card 3/ 5

Exact estimate of ...

mula (2) for the broader class of functions, is proved. Theorem: If the function f(x) belongs to the class MH_2 (i.e. the class of quasi-linear functions), then for each $0 \leqslant r < 1$ the exact formula

$$\sup_{f \in MH_2} \Delta(f,r) = \frac{2M}{\pi}(1 - r) \ln \frac{1}{1 - r} + M\varepsilon_r \qquad (6)$$

holds, where ε_r is given by formula (3), satisfying for $r \to 1$ the asymptotic formula

$$\frac{\pi}{2}\varepsilon_r = (1 + \ln 2)(1 - r) + \ln \frac{1}{1-r} \sum_{k=2}^{m-1} \frac{(1-r)^k}{k} +$$

Card 4/5

Exact estimate of ...

$$+\sum_{k=2}^{m-1} a_k(1-r)^k + O\left[(1-r)^m \ln\frac{1}{1-r}\right],$$

$$a_k = \frac{1}{k}\left[\ln 2 + \sum_{s=1}^{k}\frac{1}{s\cdot 2^{k-s}}\right] - \sum_{s=1}^{k-2}\frac{1}{(k-s)\cdot 2^s}. \qquad (7)$$

The proof of the theorem involves expansion in series and evaluation of integrals (for the proof of formula (6)); the proof of formula (7) involves integration by parts and expansion in series. For m = 2, one obtains from Eq. (7) the estimate

$$\varepsilon_r = \frac{2}{\pi}(1 + \ln 2)(1 - r) + O\left[(1 - r)^2 \ln\frac{1}{1 - r}\right] \qquad (30)$$

with a more exact expression for the remainder than that of A. F. Timan's formula (4). There are 3 Soviet-bloc references.

Card 5/5

MALEY, T.P., inzh.

Adjusting supports for setting dies. Mash.Bel. no.6:185-187 '59.
(MIRA 13:6)

(Dies (Metalworking)--Testing)

ACC NR: AT6036703 SOURCE CODE: UR/0000/66/000/000/0155/0157

AUTHOR: Severdenko, V. P. (Academician AN BSSR); Maley, T. P.

ORG: none

TITLE: The production of intricately shaped parts by liquid steel forging

SOURCE: AN BSSR. Fiziko-tekhnicheskiy institut. Plastichnost' i obrabotka metallov davleniyem (Plasticity and metalworking by pressure). Minsk, Nauka i tekhnika, 1966, 155-157

TOPIC TAGS: molten metal forging, shaft, tractor/ MTZ-50 tractor

ABSTRACT: Liquid steel forging was used in the production of a transmission guide shaft for the MTZ-50 tractor. The liquid forging technique was developed at the Belorussian Polytechnical Institute. A special die mold was built with two mutually perpendicular joints, one of which served as a plunger and master die. The plunger was made of 3Kh2V8 steel which was heat treated to 30-35 R_c. In some parts of the die where maximum temperatures occurred, 3Kh2V8 die inserts were used. The punch-die clearance was 0.2-0.5 mm. During liquid forging the punch overlaps the die cavity and the injected metal crystallizes under pressure. A 50 kilogram induction fur-

Card 1/2

ACC NR: AT6036703

nace melted the steel, and an IZh-50 hydraulic press supplied the required pressure. A refractory slurry (87% water by weight) was used as a die lubricant. The liquid forging conditions were as follows: metal temperature (steel 45) before initial pressing was 1500-1520°C, the liquid forging pressure was 78.4-98 mN/m^2 (8-10 kg/mm^2), time for holding the pressed part under pressure was 15-18 sec. Extraction of the finished part was done semiautomatically. The steel parts (head of guide shaft) had clean surfaces with a 4V finish (GOST 2789-59), and a uniform fine-grained structure. Thermal shrinkage was about 1%. The process had the following economic advantages over forging: 15 min production time compared to 40 min (conventional forging), negligible scrap loss, a press capacity of 50 T instead of 150 T needed for conventional forging. Orig. art. has: 1 figure.

SUB CODE: 13/ SUBM DATE: 08Jul66

Card 2/2

MALEYEV, A.I.

Mathematical Reviews
Vol 14 No. 11
December, 1953
Algebra

Maleev, A. I. Multiplicative congruences of matrices. Doklady Akad. Nauk SSSR (N.S.) 90, 333-335 (1953). (Russian)

Soient: F_n le système multiplicatif des matrices n x n a elements dans un corps F, F_n^r le sous système multiplicatif de F_n constitué par les matrices n x n de rang $\leq r$. Le groupe multiplicatif de F sera désigné par F^*. L'auteur établit ici le théorème suivant: Pour que la relation binaire R entre elements de F_n^r soit une relation d'equivalence compatible avec la structure multiplicative il faut et il suffit qu'il existe une suite non décroissante $G_1 \subset G_2 \subset \ldots \subset G_{\delta-1}$ de sous groupes de F^* et une sous groupe distingué G_μ du groupe linéaire dans F_n tels que les matrices A et B de F_n^r soient dans la relation R si et seulement si l'une des trois conditions suivantes est remplie: (a) rang $A \leq r-\mu$, rang $B \leq r-\mu$; (b) rang $A = r - i + 1$, et il existe $\lambda \in G_i$ $(\mu-1 \leq i \leq r)$ tel que $B = \lambda A$; (c) rang A = rang $B = r - \mu + 1$, $LA = LB$, $B = AU$, $U_0 \in G_\mu$ ou U est une matrice de rang $r - \mu + 1$, ou L est l'espace des vecteurs-lignes 1 x n, ou U_0 est la matrice de la transformation induite par U dans le sous espace LA. On voit facilement que la condition est suffisante. La démonstration de la nécessité de la condition résulte de raisonnements assez analogues a ceux de l'auteur [Mat. Sbornik 31(73), 136-151 (1952); ces Rev. 14, 349]. Ce résultat donne un dénombrement complet de toutes les equivalences compatibles sur F_n^r. Depuis Dickson, on connait tous les sous groupes distingués du groupe linéaire.

J. Riguet (Paris)

KAZANSKIY, N.; ORLOV, A.; MALEYEV, A.I., red.; FILIMONOV, I.M., red.; MUKHINA, Ye.S., tekhn. red.

[Methodological manual for training radiotelegraph operators] Metodicheskoe posobie po obucheniiu radiotelegrafistov. Moskva, Izd-vo DOSAAF, 1960. 135 p. (MIRA 14:6)
(Radiotelegraph) (Radio operators)

MALEYEV, A. N.

36229 Usovershenstvovaniye avtomaticheskogo r[illegible]yatora (na odnoprotsessnykh mashinakh tipa OT-1). Tekstil. Prom-st', 1949, No. 11, S. 31

SO: Letopis' Zhurnal'nykh Statey, No. 49, 1949

MALEYEV, A. N.

Textile industry and fabrics

Rationalization in mixing raw materials.
Tekst. Prom., No. 2, 1952.

9. Monthly List of Russian Accessions, Library of Congress, March 1952. UNCLASSIFIED.

MALEYEV, A.P.

Dismountable formwork for culvert inlets. Avt.dor. 17 no.2:26 S-O '54. (MLRA 8:4)
(Culverts)

MAIEYEV, B.

Cheese

Attachment for horizontal presses. Mol. prom. 13, no. 2, 1952.

Monthly List of Russian Accessions, Library of Congress, November 1952. UNCLASSIFIED

MALEYEV, B.

Plants of the All-Union Trust of Subsidiary Establishments in the current seven-year plan. Muk.-elev.prom. 25 no.7:11-14 Jl '59. (MIRA 12:11)

1. Upravlyayushchiy Vsesoyuznym trestom podsobnykh predpriyatiy Gosudarstvennogo komiteta Soveta Ministrov SSSR po khleboproduktam.
(Grain-handling machinery) (Grain-milling machinery)

MALEYEV, G.B., kand. tekhn. nauk.

Kinematic and dynamic investigations of cutter chains in mining. Nauch. dokl. vys. shkoly; gor. delo no.2:221-227 '58. (MIRA 11:6)

1. Predstavlena kafedroy gornykh mashin Donetskogo industrial'nogo instituta im. N.S. Khrushcheva.
(Coal mining machinery)

KULYEV, G. V.

KULYEV, G. V.: "The dynamics of long chains as applied to the building of mine roadways." Min Higher Education USSR. Dnepropetrovsk Order of Labor Red Banner Mining Inst imeni Artem. Dnepropetrovsk, 1956.
(Dissertation for the Degree of Candidate in Technical Sciences).

SO: Knizhnaya Letopis', No 23, 1956

MALEYEV, G.V., kand.tekhn.nauk, dotsent; FILIPPOV, V.M., inzh.

Measuring the value and the direction of bearing pressure in reducing gears. Vest.mash. 40 no.3:37-39 Mr '60. (MIRA 13:6)

(Gearing)

AL'SHITS, Yakov Isaakovich, dots.; VERKLOV, Boris Abramovich; VOROVITSKIY, Abram Nakhimovich, dots.; KOSTYUKEVICH, Fedor Vasil'yevich, dots.; MALEYEV, Georgiy Vasil'yevich, dots.; OSOKIN, Pavel Andreyevich, assist.; ROZENBERG, Boris Lazarevich, dots.; LADYGIN, A.M., inzh. retsenzent; SHURIS, N.A., red.; SHOROKHOVA, A.V., red. izd-va; BOLDYREVA, Z.A., tekhn. red.; MAKSIMOVA, V.V., tekhn. red.

[Mining machinery] Gornye mashiny. By IA.I.Al'shits i dr. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1961. 491 p. (MIRA 14:12)

1. Glavnyy inzhener Spetsial'nogo konstruktorskogo byuro Kopeyskogo mashinostroitel'nogo zavoda (for Verklov).
(Mining machinery)

MALKOV, G [illegible]

Introduction of multipurpose [illegible] with interchangeable parts in enterprises of the Ukrainian [illegible] Mashinostroenie no.[illegible] [illegible] (MIRA 18:2)

MALE'EV, I. A.

"Forced Oscillations of Systems With Two Limiters." Cand Phys-Math Sci, Molotov State U imeni A. M. Gor'kiy, Min Higher Education USSR, Molotov, 1954. (KL, No 5, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55

ACC NR: AP7001951 SOURCE CODE: UR/0120/66/00/006/0141/0142

AUTHOR: Maleyev, I. A.

ORG: Perm' State University (Permskiy gosudarstvennyy universitet)

TITLE: A-c voltage regulator

SOURCE: Pribory i tekhnika eksperimenta, no. 6, 1966, 141-142

TOPIC TAGS: voltage regulator, voltage stabilization, electronic circuit, alternating voltage

ABSTRACT: An a-c voltage regulator circuit is described which consists of input and output transformers and a push-pull circuit configuration that is controlled by a feedback control circuit. Input voltage (220 v a-c) is fed to the push-pull circuit through the regulator input transformer. The push-pull circuit consists of two 6Ж5Б vacuum tube triodes which act as a variable resistor whose resistance is controlled by the feedback control circuit. The feedback control circuit, coupled to the regulator output by a transformer, compares the rectified regulator output voltage with a d-c reference voltage generated across a voltage regulating tube, amplifies the difference, and applies it to the variable resistor (the push-pull triode configuration). The regulator weighs ~20 kg and has a 300-w maximum output; its output nonlinear distortion does not exceed 5% and its output impedance is less than 0.1% of the load impedance for regulation factors of ~50. Orig. art. has: 1 figure. [IV]

SUB CODE: 09/ SUBM DATE: 03Dec65/ ORIG REF: 003/ ATD PRESS: 5110

Card 1/1 UDC: 621.316.722.1-187.4

MALEYEV, I.I.

CHERKASHIN, Ye.Ye.; TESLYUK, M.Yu., student III kursa; MALEYEV, I.I., student III kursa.

Cryoscopic analysis of organic systems with aniline. Nauk.zap. L'viv.un. 21:79-82 '52. (MLRA 10:7)

1. Kafedra obshchey i neorganicheskoy khimii.
(Systems (Chemistry)) (Cryoscopy) (Aniline)

YURZHENKO, A.I.; MALEYEV, I.I.

Studying the adsorption of high polymers on carbon black. Dop. ta pov. L'viv. un. no.7 pt.3:204-206 '57. (MIRA 11:2)
(Adsorption)
(Macromolecular compounds)
(Carbon black)

YURZHENKO, A. I. and MALEYEV, I. I.

(Lvov, State Franka University, Lvov, USSR.)

"Adsorption of Certain High Polymers by Carbon Black in Dilute Solutions," paper submitted at Soviet High-Polymers, Intl. Conference, Nottingham, 21-24 July 1958.

E-3,109,661

YURZHENKO, A.I. [IUrzhenko, O.I.]; MALEYEV, I.I. [Malieiev, I.I.]

Adsorption of polystyrene, methyl methacrylate polymers, and methyl acrylate polymers on carbon black. Nauk.zap.L'viv.un. 46: 43-47 '58. (MIRA 12:7)
(Polymers) (Adsorption) (Carbon black)

APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R001031810002-5"

PALASHCHUK, G.S.; M.I[illegible]EV, I.T.

Repairing large defects in iron castings. Lit. [illegible] [illegible] (MIRA 18:4)
0 '64.

MALEYEV, L. I.

MALEYEV, L. I.: "Factors in the scoop capacity of mine crane buckets". Dnepropetrovsk, 1955. Min Higher Education Ukrainian SSR. Dnepropetrovsk Order of Labor Red Banner Metallurgical Inst imeni I. V. Stalin. (Dissertations for the degree of Candidate of Technical Science.)

SO: Knizhnaya Letopis' No. 50 10 December 1955. Moscow.

MALEYEV, L.

LEYNER, F.; MALEYEV, L., kand.tekhn.nauk, dotsent.

Improved system of operating two-motor clamshell winches on gantry cranes. Mor.flot 17 no.9:4-7 S '57. (MIRA 10:12)

1. Starshiy inzhener otdela mekhanizatsii Zhdanovskogo porta (for Leyner). 2. Zhdanovskiy metallurgicheskiy institut (for Maleyev).
(Cranes, derricks, etc.)

MALEYEV, L.I., kand. tekhn. nauk.

Effect of certain factors on the ladling capacity of buckets. Vest. mash. 37 no.8:26-30 Ag '57. (MLRA 10:9)
(Dredging machinery)

MALEYEV, L.I., kand.tekhn.nauk

Selecting the type and basic parameters of clamshell ore buckets. Izv.vys.ucheb.zav.; chern.met. no.8:141-152 Ag '58. (MIRA 11:11)

1. Zhdanovskiy metallurgicheskiy institut.
(Ore handling--Equipment and supplies)

SOV/118-58-12-15/17

AUTHOR: Maleyev, L.I., Candidate of Technical Sciences

TITLE: A New Grab (Novyy greyfer)

PERIODICAL: Mekhanizatsiya trudoyëmkikh i tyazhëlykh rabot, 1958, Nr 12, pp 44 - 45 (USSR)

ABSTRACT: The Zhdanovskiy metallurgicheskiy institut (the Zhdanov Metallurgical Plant) has developed and tested in cooperation with the Zhdanovskiy port (Zhdanov Harbor), a new grab of the type R10A for 10 ton cranes. The grab, designed for the loading of manganese ore, has been tested on a 10 ton gantry crane in the port and has proved to work satisfactory. The test results confirm the practicability of designing ore cranes with a more favorable relation between the weight of the grab and the weight of the scooped material. Cranes equipped with such grabs have a higher efficiency factor and will cut down the net cost of loading operations. There is 1 photograph.

Card 1/1

KIYANOV, I.; LEYNER, F.; MALEYEV, L., dots. kand. tekhn. nauk.

One trend in modernizing portal cranes. Mor. Flot 18 no.10:11-12 O '58. (MIRA 11:11)

1. Starshiy inzhener otdela mekhanizatsii Zhdanovskogo porta (for Kiyanov, Leyner). 2. Zhdanovskiy metallurgicheskiy institut (for Maleyev).
(Cranes, derricks, etc.)

MALEYEV, L.I., kand.tekhn.nauk

Some problems connected with selecting the type and basic parameters of clam-shell buckets. Izv.vys.uchev.zav.; chern. met. 2 no.6:117-132 Je '59. (MIRA 13:1)

1. Zhdanovskiy metallurgicheskiy institut. Rekomendovano kafedroy mekhanicheskogo oborudovaniya metallurgicheskikh zavodov Zhdanovskogo metallurgicheskogo instituta.
(Metallurgical plants--Equipment and supplies)

MALEYEV, L., kand.tekhn.nauk, dotsent; KIYANOV, I.

Important potentiality for improving the performance of cranes with clamshell gear. Mor. flot 21 no.4:6-11 Ap '61. (MIRA 14:4)

1. Zhdanovskiy metallurgicheskiy institut (for Maleyev). 2. Starshiy inzh. Zhdanovskogo porta (for Kiyanov).
(Cranes, derricks, etc.)

MALEYEV, L.I., kand.tekhn.nauk

Operating grab cranes. Bezop.truda v prom. 6 no.7:24-27 Jl '62.
(MIRA 15:7)

1. Zhdanovskiy metallurgicheskiy institut.
(Cranes, derricks, etc.)

MALEYEV, L., kand.tekhn.nauk

Lightweight grab buckets. Rech. transp. 21 no.3:15-17 Mr '62.
(MIRA 15:4)
(Cranes, derricks, etc.)

KIYANOV, I.; LEYNER, F.; MALEYEV, L., kand. tekhn. nauk, dotsent

Loading and unloading of asphalt and bitumen by grab cranes. Mor. flot 23 no.10:14-16 O '63. (MIRA 16:10)

1. Glavnyy tekhnolog tresta Donbassprommontazh (for Kiyanov). 2. Nachal'nik TSentral'nykh remontno-mekhanicheskikh masterskikh Zhdanovskogo porta (for Leyner). 3. Zhdanovskiy metallurgicheskiy institut (for Maleyev).
(Bituminous materials—Transportation)
(Cranes, Derricks, ect.)

GALANI, V.P.; CHEPURKIN, S.S.; MALEYEV, L.I.

Investigating dynamic forces in the operation of a hot-rolled strip coiler (determination of acceleration). Izv.vys.ucheb.zav.; chern. met. 8 no.8:172-177 '65. (MIRA 18:8)

1. Zhdanovskiy metallurgicheskiy institut.

L 20755-66 EWT(m)/T/EWA(d)/EWP(w)/EWP(t) IJP(c) DJ/JD
ACC NR: AP6010124 SOURCE CODE: UR/0122/66/000/003/0022/0022

AUTHOR: Maleyev, L. I. (Candidate of technical sciences; Docent)

ORG: none

TITLE: Wear resistance of some light alloys under abrasive friction

SOURCE: Vestnik mashinostroyeniya, no. 3, 1966, 22

TOPIC TAGS: alloy, titanium alloy, aluminum alloy, magnesium containing alloy, copper containing alloy, alloy wear resistance/AMg alloy, AMg 5v alloy, AMg 6 alloy, DIM alloy, DIT alloy

ABSTRACT: The wear resistance of eight light titanium-and aluminum-base alloys has been tested under operational conditions in excavator jaws. The wear resistance was evaluated as the coefficient of wear resistance: the ratio of the specific linear wear of St3 steel to that of the alloy tested. It was found that titanium alloy had the highest wear resistance with a coefficient of 2.5. All the aluminum alloys tested had a low wear resistance with a coefficient varying from 0.30 for Al aluminum to 0.40 AMg-6 alloy.

[ND]

SUB CODE: 11/ SUBM DATE: none/ ATD PRESS: 4225

Card 1/1

UDC: 620.178.162:[669.715+669.295]

REIZOV, N.; TITS, Yu.; TOLOK, V.V.; MAMAYEV, L.M.; MALSYEV, L.I., dotsent; RYBOCHKIN, G.

Eliminate unnecessary load testing of bridge cranes. Metallurg 10 no.8:33-35 Ag '65. (MIRA 18:8)

1. Glavnyy mekhanik Magnitogorskogo metallurgicheskogo kombinata (for Reizov). 2. Glavnyy mekhanik Zhdanovskogo metallurgicheskogo zavoda im. Il'icha (for Tits). 3. Inspektora po kranovomu khozyaystvu Metallurgicheskogo zavoda im. Dzerzhinskogo (for Tolok, Mamayev). 4. Glavnyy mekhanik Kuznetskogo metallurgicheskogo kombinata (for Rybochkin).

MALEYEV, M.

Feeding, fattening, and finishing of cattle in procurement enterprises. Mias.ind. SSSR 33 no.3:21-22 '62. (MIRA 15:7)
(Beef cattle—Feeding and feeds)

ROSTOVTSEV, N.; DOBRYNIN, P.; TIKHOMIROV, V.; LOGACHEV, A.; SHAKUN, V.; GRUDEV, D.; KUDRYAVTSEV, P.; MALEYEV, M.; SOKOV, N.; KORNIKOV, V.; TOLOKONNIKOV, A.; PUSTOVALOV, A.; REDKIN, A.; BLOMKVIST, M.; PETROV, N.; SHUBSKIY, I.; SEMENOV, S.; POPOV, G.; BRODOV, K.; KORENEV, P.

Professor M.N. IAkovlev; obituary. Zhivotnovodstvo 19 no.12:90 D '57. (MIRA 10:12)
(IAkovlev, Mitrofan Nikolaevich, 1878-1957)

MITROFANOV, I.A., inzh.; MALEYEV, M.A., inzh.

Construction of the grillage of a bridge footing at great depth.
Transp. stroi. 12 no.6:14-17 Je '62. (MIRA 15:6)
(Bridges--Foundations and piers)

MALEYEV, M.A., inzh.; NEYRU". N.V., tekhn. red.

[Technical information; reinforced-concrete slab enclosures used in the construction during erection of bridge foundation supports] Tekhnicheskaia informatsiia; ograzhdenie ' helezobetonnykh plit pri sooruzhenii fundamentov opor mostov (iz opyta raboty Mostootriada-5, Mostostroia-2). Moskva, Orgtransstroi, 1963. 13 p.
(MIRA 16:12)

(Concrete footings) (Bridges, Concrete)

S/049/59/000/12/024/027
E131/E391

AUTHORS: Balabanova, V.N., Zhigalovskaya, T.N. and Maleyev, M.N.

TITLE: Effect of the Air Temperature on the Action of Silver Iodide Particles When Used as the Nucleus for Crystallization

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geofizicheskaya, 1959, Nr 12, pp 1889 - 1890 (USSR)

ABSTRACT: The purpose of this work was to clarify the relationship between the crystallization power of the particles of silver iodide and the temperature of the surrounding air. The experiments were carried out in a large container where the air temperature was varied from -10 to 100 °C. Particles of silver iodide were injected in the form of a mist. The action of the mist was determined in relation to the amount of ice crystals formed at the temperature of -10 °C. Table 1 gives the results obtained and shows the number of ice crystals (n) per 1 cm^3 produced after 1, 15 and 30 min at mist temperatures of 20 and 60 °C. It was found that the number of ice crystals decreased the longer the mist was kept in the container. The relationship between the number of ice crystals and the

Card1/2

S/049/59/000/12/024/027
E131/E391

Effect of the Air Temperature on the Action of Silver Iodide Particles When Used as the Nucleus for Crystallization

temperature was affected by the following two factors:
1) influence of the temperature on the action of the silver-iodide particles when used as the nucleus for crystallization;
2) influence of the temperature on the rate of deposition of silver iodide particles on the walls of the container during the various periods of the experiments (Tables 2 and 3).
There are 4 tables and 4 references, 1 of which is Soviet and 3 are English.

ASSOCIATION: Akademiya nauk SSSR Institut prikladnoy geofiziki (Ac.Sc.USSR, Institute of Applied Geophysics)

SUBMITTED: July 10, 1958

Card 2/2

BALABANOVA, V.N.; MALEYEV, M.N.; ZHIGALOVSKAYA, T.N.

Rate of silver iodide particle disintegration brought about by thermal dispersion methods. Izv.AN SSSR.Ser.geofiz, no.9: 1413-1416 S '60. (MIRA 13:9)

1. Akademiya nauk SSSR, Institut prikladnoy geofiziki.
(Atmospheric nucleation) (Silver iodide)

KHALEZOVA, Ye.I.; MALEYEV, M.S.

"Organizing the work of the assistant foreman in the sliver-roving shop of a cotton spinning mill." A.L.Magnitskii. Reviewed by E.I.Khalezova, M.S.Maleev. Tekst.prom. 16 no.9:69 S '56. (MLRA 9:12)

1. Zaveduyushchiy tekhnicheskoy bibliotekoy Furmanovskoy fabriki no.1 (for Khalezova). 2. Normiroshchik tekhnicheskoy biblioteki Furmanovskoy fabriki no.1 (for Malayev).
(Cotton spinning) (Magnitskii, A.L.)

57-28-3-4/33

AUTHORS: Vitovskiy, N. A. , Maleyev, P. I. , Ryvkin, S. M.

TITLE: The Mechanism of Pulse Formation in Crystal Counters at the Formation of a "Through Conducting Channel" (Mekhanizm formirovaniya impul'sov v kristallicheskikh schetchikakh pri obrazovanii "skvoznogo provodyashchego kanala")

PERIODICAL: Zhurnal Tekhnicheskoy Fiziki, 1958, Vol. 28, Nr 3, pp.460-469 (USSR)

ABSTRACT: The authors here investigate the peculiarities of the mechanism of pulse formation for the case where the ionization range extends from one electrode to the other. As ionizing agent the authors used α-particles of polonium (Po^{210}) with an energy of 5,3 MeV. In order to realize a "through" passage of the α-particles through the samples, thin CdS-monocrystals were selected. The investigations showed that the process of pulse formation according to the "through current" system may take place at least in two different forms. 1) The first variant can be realized by the construction with a one-sided application of the electrodes or in

Card 1/3

The Mechanism of Pulse Formation in Crystal Counters at the Formation of a "Through Conducting Channel"

thick crystals with electrodes applied on both sides. Here a through current which is limited by the resistance of the "dark sections" of the crystal flows in the pulse. In such a counting arrangement the "dark"-conductivity of the crystal plays the decisive part. A considerable increase in the pulse height can in this process be attained by an increase in σ_0 ("dark"conductivity), e.g. by a rise of temperature. 2) The second variant can only be observed in sufficiently thin crystals in the case of "two-sided" application of electrodes. Here the passage of the α-particles through the crystal can take place and a "conducting channel" between the electrodes can be formed. The pulse height is in this case not dependent on the initial conductivity of the sample. It is to be expected that a similar mechanism of pulse formation will even occur in the case of some isolating crystals, in case the life of the current carriers not being in equilibrium in them (i.e. the crystals) will not be too small and electrodes forming anti-barrier--layers are selected. The authors performed an experimental investigation of the process of pulse formation in "thin" counters at the formation of a "conducting channel". It is

The Mechanism of Pulse Formation in Crystal Counters at the Formation of a "Through Conducting Channel"

shown that in such a case the simplest variant for the formation of pulses can be realized according to the scheme of the passing current. The obtained experimental results are in good agreement with the prediction of theory. The high quality (from the point of view of pulse-height) of the counters with thin crystals and"two-sided" applied electrodes is pointed out. In this construction the pulse heights attain 20 V and amount to up to 90 % of the voltage applied. There are 11 figures, 1 table, and 3 references, 3 of which are Soviet.

ASSOCIATION: Leningradskiy fiziko-tekhnicheskiy institut AN SSSR (Leningrad Physical-Technical Institute AS USSR)

SUBMITTED: November 20, 1957

1. Crystal counters--Analysis

Malyev, P. I.

24(4) PHASE I BOOK EXPLOITATION SOV/3140

Akademiya nauk Ukrainskoy SSR. Institut fiziki

Fotoelektricheskiye yavleniya v poluprovodnikakh; trudy pervogo Vsesoyuznogo soveshchaniya po fotoelektricheskim i opticheskim yavleniyam v poluprovodnikakh, g. Kiyev, 20-26 noyabrya 1957 g. (Photoelectric and Optical Phenomena in Semiconductors; Transactions of the First Conference on Photoelectric and Optical Phenomena in Semiconductors...) Kiyev, 1959. 403 p. 4,000 copies printed.

Additional Sponsoring Agency: Akademiya nauk SSSR. Prezidium. Komissiya po poluprovodnikam.

Ed. of Publishing House: I. V. Klimna; Tech. Ed.: A. A. Matveychuk; Resp. Ed.: V. Ye. Lashkarev, Academician, Ukrainian SSR, Academy of Sciences.

PURPOSE: This book is intended for scientists in the field of semiconductor physics, solid state spectroscopy, and semiconductor devices. The collection will be useful to advanced students in universities and institutes of higher technical training specializing in the physics and technical application of semiconductors.

COVERAGE: The collection contains reports and information bulletins (the latter are indicated by asterisks) read at the First All-Union Conference on Optical and Photoelectric Phenomena in Semiconductors. A wide scope of problems in semiconductor physics and technology are considered: photoconductivity, photoelectromotive forces, optical properties, photoelectric cells and photoresistors, the actions of hard and corpuscular radiations, the properties of thin films and complex semiconductor systems, etc. The materials were prepared for publication by E. I. Rashba, O. V. Snitko, K. B. Tolpygo, A. . Lubchenko, and M. K. Sheynkman. References and discussion follow each article.

Table of Contents:

Photoelectric and Optical Phenomena (Cont.) SOV/3140

Tigrinskiy, M. A., P. I. Malyev, and S. M. Ryvkin. Mechanism of the Forming of Impulses in Crystal Counters During the Formation of a Through Conducting Channel 379

Ryvkin, S. M., L. P. Bogomazov, B. M. Konovalenko, and O. A. Matveyev. Semiconductor Pickups for Indicating γ-Radiation 386

Akhriadiani, Z. G., I. D. Konozenko, and V. I. Ustyanov. The γ-Conductivity of CdS 389

Rakhmanovich, I. G., and V. I. Shcherbakova. The Photoelectric Effect of X-Rays on Semiconductor Rectifier Cells (Thesis) 396

Arkhangelskiy, A. A., I. V. Vorob'yev, and G. D. Latyshev. Test of the Use of Photoresistors to Record γ-Rays in Engineering 398

Card 15/16

VITOVSKIY, N.A.; MAYEYEV, P.I.

Measurement of the length of the diffusion path of holes in cadmium sulfide. Fiz. tver. tela 1 no.6:984-985 Je '59. (MIRA 12:10)

1. Leningradskiy fiziko-tekhnicheskiy institut AN SSSR.
(Cadmium sulfide) (Photoelectricity)

9,4160

SOV/109-4-8-27/35

AUTHORS: Vitovskiy, N.A., Maleyev, P.I. and Ryvkin, S.M.

TITLE: Optimum Operating Conditions for the Photo-diodes Used With Small Signals

PERIODICAL: Radiotekhnika i elektronika, 1959, Vol 4, Nr 8, pp 1387 - 1392 (USSR)

ABSTRACT: The characteristic of a photo-diode can be expressed by (Ref 2):

$$I = I_s\left(e^{\frac{q\varphi}{kT}} - 1\right) + I_f + \frac{\varphi}{R'} \qquad (5)$$

where I is the current flowing through the photo-diode, R' is the leakage resistance of the diode and φ is the voltage across the n-p junction. I_s is the "dark" saturation current, q is an electron charge, k is the Boltzmann constant and T is the absolute temperature. Eq (5) was employed to plot the voltage-current characteristics shown in Figure 1. Curves I_{T1} and I_{T2} show the "dark" characteristics at temperatures

Card1/4

4

Optimum Operating Conditions for the Photo-diodes Used With Small Signals

of +20 °C and -78 °C, while Curves I_{f1} and I_{f2} are the "illumination" characteristics at the same temperatures. The curves are calculated for a photo-diode which has a "dark" current of 8 μA and the resistance $R' > 10^6$ Ω at room temperature. The quantity R_o is represented by ctg α, where α is the slope of the "dark" current-voltage characteristics at $\varphi = 0$. This angle α_2 at the room temperature is equal to 90 °, while at low temperatures $\alpha = \alpha_1$ and tends to zero. If the device works as a photo-diode with a load characteristic $R = \text{ctg } \beta$, the load line intersects the characteristics I_T and I_f in the saturation region; consequently, at both the low and the room temperatures, the output signal taken from the device is the same. On the other hand, if the diode is operated as a photo-electric source, the intersection of the load line with the characteristic occurs in the saturation region only at the low temperature.

Optimum Operating Conditions for the Photo-diodes Used with Small Signals

In this case, again, the output signal is equal to that obtainable in the photo-diode operation. From the above, it follows that the photo-diode can be operated as a photo-electric source, provided it is maintained at a low temperature. Under these conditions, it should be expected that the noise level would be very low. The above conclusion was checked experimentally. The principal experimental characteristic was the relative sensitivity P which was defined as the ratio of the output signal obtained from the device as a photo source and as a photo-diode. This ratio can be defined by Eq (10). The experimental dependence of P on temperature is shown by the solid curve in Figure 3. The dependence of P on temperature for large signals is illustrated by the obtained line in Figure 3. The noise in the device when employed as a photo-diode was 0.5 mV, while when used as a photo-electric source, the noise was 10 μV. The inertia effects in the diode are illustrated in Figure 5, where the first oscillogram refers to the photo-diode operation, while the

Optimum Operating Conditions for the Photo-diodes Used with Small Signals

next four oscillograms show the photo-electric response at various temperatures; this effect is further illustrated in Figure 4, which shows that provided the temperature is about -80 °C, the time constant of the device is the same for both the photo-diode and photo-electric operation. There are 5 figures, 1 table and 7 Soviet references.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN SSSR (Physico-engineering Institute of the Ac.Sc.USSR)

SUBMITTED: June 4, 1958

Card 4/4

MALEYEV PI

PHASE I BOOK EXPLOITATION SOV/5512

Dolgirev, Yevgeniy Ivanovich, Pavel Ivanovich Maleyev, and Vladimir Vladimirovich Sidorenko

Detektory yadernykh izlucheniy (Nuclear Radiation Detectors) Leningrad, Sudpromgiz, 1961. 222 p. Errata slip inserted. 4,300 copies printed.

Ed. (Title page): K. K. Aglintsev, Professor; Reviewer: V. A. Kozlova, Engineer; Ed.: I. G. Azarova; Tech. Ed.: R. K. Tsal.

PURPOSE: This book is intended for technical personnel who, although not specialists in nuclear physics, are engaged in operations involving nuclear radiation. It may be also useful to personnel who operate or design X-ray and radiometric equipment.

COVERAGE: The book discusses the principle of operation, basic properties, and structure of various types of contemporary radiation detectors, and presents their connection diagrams and testing methods. Reference material, including characteristics of industrial gas-discharge counters, scintillation phosphors and photoelectric multipliers, is given. Nuclear radiation, X-ray and radiometric quantities, and their measuring units are briefly discussed. The

Card 1/7

authors thank A. B. Dmitriyev for his help on Chs. II and III, and E. I. Dombrovski, A. L. Dudnik, and V. A. Antamonov for their suggestions and advice. There are 79 references: 54 Soviet (including 5 translations), 24 English, and 1 German.

TABLE OF CONTENTS:

Foreword 3

Ch. I. General Information
1. Nuclear radiation 5
2. Radiometric quantities and their measuring units 12
3. On methods of detecting radiation 15

Ch. II. Ionization Chambers
4. Volt-ampere characteristic of gas discharge 16
5. Types and structures of ionization chambers 19
6. Current ionization chambers for measuring α-radiation 21
7. Ionization chambers for measuring β-radiation 23

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S/120/61/000/002/012/042
E210/E594

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24.6810

AUTHORS: Vitovskiy, N. A., Maleyev, P. I., Matveyev, O.A., Ryvkin, S.M. and Tarkhin, D. V.

TITLE: Silicon N-P Counters of Heavy Charged Particles Operating Without an External Power Supply

PERIODICAL: Pribory i tekhnika eksperimenta, 1961, No.2, pp.82-83

TEXT: Fused silicon diodes having an n-p junction area of about 1 mm^2 have been studied in order to determine their counting properties when operated as short-circuited rectifiers. The saturation current in the counters studied was not over 0.1 μA; the leakage resistance was several megohms. Under such conditions, short-circuit current rectification can be realized by using a 250 kilohm load. In counters irradiated with α-particles under the above conditions and tested at room temperature, pulse amplitudes reached 2-3 mV with practically no noise. This performance equals that of counters operating as photodiodes, but the noise in the latter case increases rapidly with increasing cut-off voltage. In both cases (operating as rectifiers or photodiodes) pulse rise time varies from 1 to 5 μsec. The decay time is determined by the R-C of the circuit. This is shown in the oscillograms, Fig.1. In

Silicon N-P Counters of ... S/120/61/000/002/012/042
E210/E594

Fig.1a the duration of the markers is 1 μsec. Fig.1б - leading edge of the pulse; marker duration 0.2 μsec. Trigger delay 0.5 μsec. With decreasing temperature the pulse amplitude and duration remain unchanged. Silicon n-p counters are regarded as highly promising since even at room temperature they can operate as photovoltaic cells without an external power supply.
Comments made during the proof-reading: The here described counters show considerable variance in the amplitudes of the pulses during the counting of monochromatic particles, i.e. they are not suitable for spectrometry. At present, the laboratory of the authors manufactures surface-barrier silicon counters which are suitable for spectrometry (amplitude resolution less than 1% for α-particles with energies of 5.5 MeV). The considerations presented in the paper are in principle applicable also for such spectrometric n-p counters. There are 1 figure and 3 Soviet references.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN SSSR (Physico-technical Institute AS USSR)

SUBMITTED: February 20, 1960

Card 2/3

Silicon N-P Counters of ...

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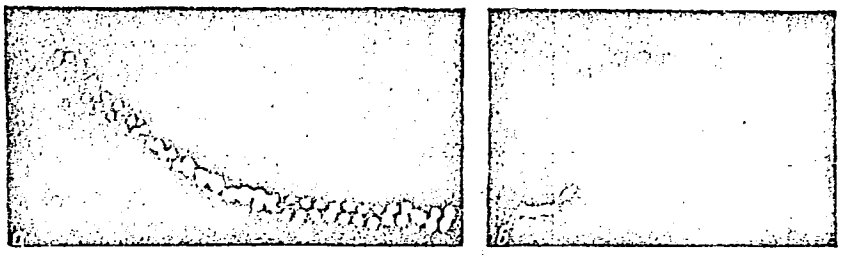
S/120/61/000/002/012/042
E210/E594

Fig.1



Card 3/3

MALEYEV, S V

AUTHOR: Maleyev, S. V., 56-4-27/54

TITLE: Scattering of Slow Neutrons in Ferromagnetics (Rasseyaniye medlennykh neytronov v ferromagnetikakh)

PERIODICAL: Zhurnal Eksperim. i Teoret. Fiziki, 1957, Vol. 33, Nr 4, pp. 1o1o-1o21, (USSR)

ABSTRACT: The scattering of slow neutrons in ferromagnetics at low temperatures is treated for the case that the behavior of the ferromagnetics can be described by the theory of the spin waves. The following problems are posed and solved:
1) Derivation of the scattering formula.
2) Elastic scattering.
3) Scattering of spin waves (magnons) in monocrystals.
4) Scattering of spin waves (magnons) in semi-crystals.
There are 2 Slavic references.

ASSOCIATION: Physico-Technical Institute AN USSR (Fiziko-tekhnicheskiy institut Akademii nauk SSSR)

SUBMITTED: April 5, 1957

AVAILABLE: Library of Congress

Card 1/1

MAL'YEV, S.V. Cand Phys-Math Sci -- (diss) "The Dispersion of the slow neutrons in the ferromagnetics." Len, 1958. 7 pp (Acad of Sci USSR, Len Phys-Techn Inst). 100 copies. Bibliogr at the end of the text (10 titles). (KL, 37- 58, 110.)

MALEYEV, S. V.

AUTHOR: Maleyev, S. V. 56-1-20/56

TITLE: On the Polarization of Slow Neutrons Scattered in Crystals (O polyarizatsii medlennykh neytronov pri rasseyanii v kristallakh).

PERIODICAL: Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, 1958, Vol. 34, Nr 1, pp. 129-130 (USSR).

ABSTRACT: An expression for the cross section of the scattering of polarized neutrons on crystals with polarized nuclei was computed by M.E. Rose (reference 1). It was assumed that the crystal consists only of atoms of one single isotope. The present communication generalizes these results to crystals consisting of several isotopes. Besides, the author computes an expression for the modification of the polarization of the neutrons as a result of scattering. A formula is given explicitly for the amplitude of the scattering of a slow neutron. From this formula it is easily possible to obtain an expression for the coherent and for the incoherent part of the cross section of scattering, this expression representing the mean value of the orientations of the spins of the neutron and of the nuclei, and of all possible distributions of the isotopes

On the Polarization of Slow Neutrons Scattered in Crystals. 56-1-20/56

in the lattice. The formulae found here hold for the differential cross section and for the total cross section of scattering. If the scattering substance consists only of one single isotope, the formulae given here transform into the expressions given by Rose. At this point it is no longer difficult to compute the polarization of neutrons with respect to scattering to a certain direction. The respective formulae are given here for different special cases. There are 2 references, 1 of which is Slavic.

ASSOCIATION: Leningrad Physical Institute (Leningradskiy fiziko-tekhnicheskiy institut).

SUBMITTED: July 11, 1957

AVAILABLE: Library of Congress

Card 2/2

AUTHOR: Maleyev, S. V. SOV/56-34-6-19/51

TITLE: The Multimagnon Processes in the Scattering of Slow Neutrons in Ferromagnetics (Mnogomagnonnyye protsessy pri rasseyanii medlennykh neytronov v ferromagnetikakh)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol. 34, Nr 6, pp. 1518-1525 (USSR)

ABSTRACT: First the author reports on some previous papers concerning this subject. This paper calculates the cross section of the two-magnon scattering. For the sake of simplicity the author limits himself to scatterers with cubic lattices. The calculation of this cross section is discussed step by step. For the purpose of comparison also the cross section of the one-magnon scattering is given. In general the two magnon scattering is weaker than the one-magnon scattering. Then the three-magnon scattering is estimated; it is weaker than the one-magnon scattering. In the general case those multi-magnon processes in which the total number of the spin waves does not change more than by 1 play the principal role among the multi-magnon processes. If one takes into account that the

Card 1/3

projection of the total spin of a ferromagnetic is not an exact integral of the motion, there may be also scattering processes in which the total number of the magnons changes by more than 1. The simplest processes of this type are the scattering and the absorption of 2 magnons and also the scattering with emission of 2 magnons. If there is a scattering with the emission of 2 and the absorption of 1 magnon, its cross section is small with respect to the cross section of the two-magnon scattering. If the magnon energy is a square function of the momentum the cross sections of all the possible multimagnon scattering processes are small with respect to the cross section $\sigma^{\tau}_{+1,-1}(p,P)$ of the two-magnon scattering processes. $\sigma^{\tau}_{+1,-1}$ is small with respect to the cross section of the one-magnon scattering. The multimagnon processes therefore play an unimportant role in the non-elastic scattering of slow neutrons in a ferromagnetic. In particular, it is not possible to explain the great value of the non-elastic magnetic scattering in ferromagnetics at high temperatures by the above-mentioned multimagnon processes. In an appendix the calculation of the

SOV/56-34-6-19/51

The Multimagnon Processes in the Scattering of Slow Neutrons in Ferromagnetics

cross section of the two-magnon scattering is discussed step by step. There are 6 references, 1 of which is Soviet.

ASSOCIATION: Leningradskiy fiziko-tekhnicheskiy institut Akademii nauk SSSR (Leningrad Physical-Technical Institute of the AS USSR)

SUBMITTED: December 21, 1957

Card 3/3

S/056/60/039/003/042/045
B004/B060

AUTHOR: Maleyev, S. V.

TITLE: Utilization of the Mossbauer Effect for the Study of Localized Atomic Vibrations in Solids

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 39, No. 3 (9), pp. 891-892

TEXT: The author starts from the following premises: A nucleus which emits a gamma quantum during decay will either abandon its place in the lattice and enter the interstitial space, or, if it remains in the lattice, it will act as a defect due to a change in its atomic number and, consequently, a variation in the forces holding it in the lattice. The vibrational spectrum of a "defect" atom shows a continuous spectrum corresponding to the vibrational spectrum of the ideal lattice, and discrete, deviating frequencies are additionally found. It is probable that the emission of a gamma quantum is accompanied by the emission (or absorption) of a quantum belonging to the localized vibration. The peaks

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Utilization of the Mossbauer Effect for the Study of Localized Atomic Vibrations in Solids

S/056/60/039/003/042/045
B004/B060

of this emission can be observed if the absorber moves at such a velocity that the Doppler shift of the nonshifted absorption line becomes equal to the frequency of the localized vibration. A more intensive absorption will then be observed as compared with adjacent frequencies. The velocity required is of the order of 10^4 cm/sec, and can be attained when the absorber is placed at the edge of a rotating disk. There is 1 non-Soviet reference.

ASSOCIATION: Leningradskiy fiziko-tekhnicheskiy institut Akademii nauk SSSR (Leningrad Institute of Physics and Technology of the Academy of Sciences, USSR)

SUBMITTED: June 29, 1960

Card 2/2

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24.7900 (1035, 1055, 1160, 1144)

AUTHORS: Bar'yakhtar, V. G., Maleyev, S. V.

TITLE: Scattering of Slow Neutrons in Ferrites and Antiferromagnetics

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 39, No. 5(11), pp. 1430 - 1436

TEXT: The cross sections for elastic scattering of neutrons in antiferromagnetics and ferrites and the cross sections for neutron scattering involving emission or absorption of a single spin wave are calculated by means of a phenomenological spin wave method. The former lead to the conclusion that there is a temperature dependency of the Bragg peaks while the latter lead to the intensity of these peaks in the case of single quantum scattering. The following equation is obtained for antiferromagnetics:

Card 1/6

Scattering of Slow Neutrons in Ferrites and Antiferromagnetics

S/056/60/039/005/037/051
B006/B077

$$\frac{d\sigma_o}{d\Omega} = r_o^2\gamma_o^2 \frac{(2\pi)^3}{v_o}\sum_{\tau}\delta(\vec{q}+\vec{\tau})\frac{1}{n}\sum_{\nu\nu'}\left[\vec{\varepsilon}_\nu\vec{\varepsilon}_{\nu'} - (\vec{e}\vec{\varepsilon}_\nu)(\vec{e}\vec{\varepsilon}_{\nu'})\right] S_\nu S_{\nu'} F_\nu(q)F_{\nu'}^*(q)\cdot$$

$$\cdot\exp\left\{i\vec{q}(\vec{r}_\nu - \vec{r}_{\nu'})\right\}\exp\left\{-W_{\nu q} - W_{\nu' q}\right\}\left[1 - G_\nu(T) - G_{\nu'}(T)\right];$$ where

$S_\nu = v_o M_{o\nu}/n\mu$ denotes the effective atomic spin of the sublattice; $\exp\left\{-W_{\nu q}\right\}$ is the thermal factor of the atoms of the sublattice; $G_\nu(T) \ll 1$; $\vec{\varepsilon}_\nu$ - unit vector in the direction of the magnetization of the sublattice; v_o - volume of the lattice unit, μ - electron magnetic moment, r_o - classical electron radius, γ_o - neutron magnetic moment, and $\vec{\tau}$ is the vector of the reciprocal lattice multiplied by 2π. ν denotes the atoms of the lattice unit. If the scatterer is made up of two sublattices magnetized in the opposite direction then:

$$\frac{d\sigma_o}{d\Omega} = r_o^2\gamma_o^2 S^2 \frac{(2\pi)^3}{v_o}\left|F(q)\right|^2\cdot\left[1-2G(T)\right]e^{-2W_q}\sum_{\tau}\delta(\vec{q}+\vec{\tau})(1-e_z^2)(1+\cos\vec{r}_{12}\vec{\tau});$$

Card 2/6