"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLITOWSKI, Mieczyslaw; ZELAZNY, Tadeusz

Use of vasculat in the treatment of atherosclerosis obliterans of the extremities. Przegl. lek. 21 no.6:434-436 '65.

1. Z III Kliniki Chirurgicznej AM w Krakowie (Kierownik: Doc. dr. med. M. Politowski).

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POLITOWSKI, Mieczyslaw

Surgical therapy of congenital malformations of the thorax.
Pol. przegl. chir. 37 no.11:1112-1118 N ' 65

1. Z III Kliniki Chirurgicznej AM w Krakowie (Kierownik: doc. dr. M. Politowski).

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

L 24191-65 EWT(m)/EWP(w)/EWA(d)/T/EWP(t)/EWP(b) MJW/JD
ACCESSION NR: AP5001348 S/0167/64/000/005/0016/0019

AUTHOR: Yakunin, G. I., Mirbabayev, V. A., Politsan, V. A.

TITLE: Cause of the appearance of thermoelectric current during friction between similar metals

SOURCE: AN UzSSR. Izvestiya. Seriya tekhnicheskikh nauk, no. 5, 1964, 16-19

TOPIC TAGS: thermocurrent, friction emf, friction pair, plastic deformation, friction rate, thermal emf, oxide film steel friction

ABSTRACT: Friction between similar metals can produce an emf if a film having different thermoelectric properties from the base metal is formed on one or both of the friction surfaces. The film can be either an oxide of the metal or, since plastic deformation changes the thermoelectric properties, a thin friction-deformed layer of the metal. Since a thermal emf cannot arise if the film and the base metal are at the same temperature, a more or less significant temperature gradient is the second prerequisite. The temperature gradient may increase due to an increase in slip speed or in the presence of a cooling liquid, which probably acts as an oxidant. Seven steel types (st. 5, st. 40, st. 40Kh, KhVG, 30KhGSA, 1Kh18N9T, EI629) were tested in identical friction pairs in a medium of water and nitrogen

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L 24191-65

ACCESSION NR: AP5001348

(st. 40 was tested with and without chrome plating). The results showed that a thermocurrent appears during friction of similar metals due to oxidation of the friction surfaces. No thermocurrent results from friction of similar, unoxidized metals (stainless steel). A thermocurrent appears at slip speeds corresponding to oxidant deterioration. The experimental data confirm that when determining the cutting temperature by the natural thermocouple method, oxide films forming on friction surfaces lead to definite measurement errors. Orig. art. has: 2 figures and 1 table.

ASSOCIATION: Tashkentskiy politekhnicheskiy institut (Tashkent polytechnical institute)

SUBMITTED: 10Apr64 ENCL: 00 SUB CODE: KM,MM

NO REF SOV: 003 OTHER: 000

Card 2/2

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLITTI, M., inzh.; TREGUBOV, V.

Mechanized instruction. Prof.-tekh.obr. 20 no.10:15 O '63. (MIRA 16:12)

1. Laboratoriya transporta TSentral'nogo uchebno-metodicheskogo kabineta.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

KRETOV, A. Ye.; BESPALYY, A. S.; POLITUN, N. N.

Thiophenolsulfonic acids and their derivatives. Zhur. ob. Khim. 34 no.6:2066-2068 Je '64. (MIRA 17:7)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

KRLIOV, A.Ye.; BESPALYY, A.S.; POLITUN, N.N.

Synthesis of thiazolidine-5-acetic acid derivatives. Zhur. ob. khim. 34 no.9:3063-3066 S '64. (MIRA 17:11)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLITYCKI, A.

*The Etched Structure of Super-Purity Aluminium in Halogen Acids. A. Polityckí (*Metall*, 1954, 8, (5/6), 173–176).—Specimens of 99·99% Al were recrystallized at 400° C., pickled in NaOH to remove the adherent oxide film, rinsed, and then: (1) etched in pure soln. (5 and 10%) of HF, HCl, HBr, and HI, for periods up to 25 days, (2) anodically etched (at $5 \times 10^{-3}$ amp./dm.$^2$) in pure neutral 1*N* soln. of KF, KCl, and KI, and (3) treated in water-free molten $NH_4Cl$–LiCl and KI–$CdI_2$ melts at 300° C. The specimens were subsequently rinsed, dried, and Formvar replicas were made of the etched surfaces, which were then examined in an electron microscope. The structures revealed are described and illustrated. They show that irrespective of the etching procedure employed, corresponding halogen ions produce exactly similar structures, and these appear to be related to the relative sizes of the halogen and Al ions ($d_{Al}$ = 2·86 Å.). Thus, F ions, $d$ = 2·66 Å., produce a general but uneven removal of the surface layers of the metal, as they are small enough to penetrate well into the interstices between adjacent Al ions, and, therefore, no well-defined structures are formed; Cl and Br ions, however, being larger, $d$ = 3·62 and 3·92 Å., resp., preferentially attack and develop the (110) surfaces of the Al crystals and glide over the o.p. (111) surface, thereby producing the well-known "cube" structures with, after extended times of etching, rounded edges and corners; the large I ions, $d$ = 4·40 Å., produce overall pitting of the surface and develop occasional cubo-octahedrons—the equilibrium form of Al. It is probable that adsorption compounds are formed on the surface of the Al so that the primary products of soln. are halogen compounds rather than oxides.—E. N.

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLITYNSKA, E.

Detection of $H_2S$ Erysipelothrix rhusiopathiae with ions of various metals. Med. dosw. mikrob. 5 no.3:306-307 1953. (CIML 25:5)

1. Warsaw.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

BRILL, J.; POLITYNSKA, E.; NOWICKI, A.; ADACH, D. (Warszawa)

The phages of Erysipelothrix rhusiopathiae of swine. Rocz nauk roln wet 70 no.1/4:259-261 '60. (EEAI 10:9)

(Swine) (Erysipelas)

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

BRILL, J.; POLITYSNKA, E.(Warszawa)

Lysogenesis in Erysipelothrix rhusiopathiae suum. Rocz nauk roln wet 70 no.1/4:261-262 '60. (EEAI 10:9)

(Swine) (Erysipelas) (Lysine)

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

PROCESSES AND PROPERTIES INDEX

C/X

25

**Artificial fibers.** A. Politzer. *Chem. Listy* 32, 249–57 (1938).—P. surveys the field of synthetic fibers and describes "Svitan" and "Slovina" prepd. since 1937 in the Bata plant "Svit" (Czechoslovakia). Prepd. from wood, Svitan has the characteristics of cotton, but Slovina possesses those of wool, its fibers curling like wool fibers, spinning well, retaining their fluffiness when wet, adsorbing the usual acid wool dyes and giving a cloth with a woolly appearance. Frank Maresh

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLITZER, M.

Gonioscopic picutre of hereditary glaucoma. Cesk. oftal. 18 no.6: 446-452 N '62.

1. Ocni klin. lek. fak. Univerzity J.Ev. Purkyne v Brne, prednosta prof. dr. J. Vanysek, DrSc.
(GLAUCOMA) (GONIOSCOPY)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLITZER, M.

Effect of vitamin $B_1$ in herpetic keratitis. Cesk. ofth. 6 no. 3:165-168 1950. (CIML 20:1)

1. Of the Eye Clinic of Masaryk University in Brno (Head--Prof. B. Slavik).

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLITZER, M., As MUDr (Brno, Leninova 74)

Orbital osteoma. Lek. listy 9 no.14:321-322 Jl '54.

1. Z ocni kliniky prof. MUDr B.Slavika, Brno.
(ORBIT, neoplasms, *osteoma) (OSTEOMA, *orbit)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

CZECHOSLOVAKIA/Human and Animal Physiology - Internal Secretion. V-9

Abs Jour : Ref Zhur - Biol., No 1, 1958, 4304

Author : M. Politzer
Inst : -
Title : A Few Remarks on the Histological Changes in the Retina in Diabetic Patients.

Orig Pub : Ceskosl. ofthalmol., 1957, 13, No 2, 131-136

Abstract : No abstract.

Card 1/1

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

PREISOVA, J.; POLITZER, M.

Contribution to the differential diagnosis of bilateral uveitis caused by the irritation of the crystalline lens. Cesk. ofth. 16 no.6:344-351 S '60.

1. Ocni klinika lakarske fakulty v Brne, prednosta prof. dr. Jan Vanysek, doktor lekarskych ved.
(LENS CRYSTALLINE wds. & inj.)
(UVEITIS etiol.)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLITZER, Max

Secondary glaucoma after the extraction of senile cataract.
Cesk. ofth. 16 no.6:363-367 S '60.

1. Ocni klinika University v Brne, prednosta prof. dr. Jan Vanysek.
(CATARACT EXTRACTION compl.)
(GLAUCOMA etiol.)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLITZER, Max; VEDROVA, Drahomira

Obstruction of the lacrimal apparatus in premature infants. Cesk. oftal. 18 no.1:29-33 Ja '62.

1. Ocni klinika University J.Ev. Purkyne v Brne, prednosta prof. MUDr. J. Vanysek, Dr.Sc. I. detska klinika University J. Ev. Purkyne v Brne, prednosta prof. MUDr. Z. Brunecky.
(LACRIMAL APPARATUS diseases) (INFANT PREMATURE diseases)

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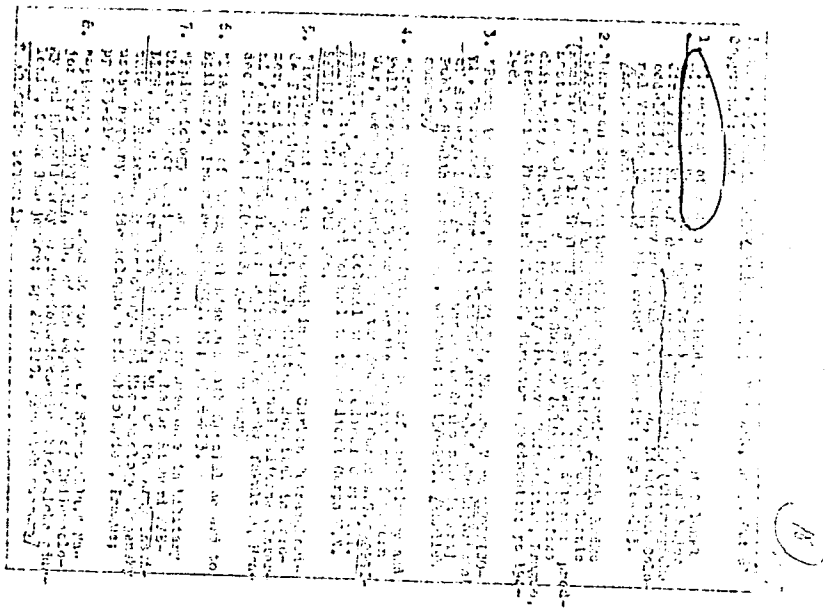
"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIUKH, V.



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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANA, M.F.

Cladocera and copepode varieties of crustaceans in Lake Onega.
Nauk.zap.Kiev.un. 13 no.6:123-145 '54. (MLRA 9:10)

(Onega, Lake--Crustacea)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANNAYA, M.F. [Polyvanna, M.F.]; POLTAVCHUK, M.O.

Rearing and nutrition of young pike perch in ponds devoid of food fishes. Nauk. zap. Kyiv. un. 15 no.11:43-56 '56. (MIRA 11:5)
(Perch) (Fish culture)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANNAYS, M.F. [Bolyvanna, M.F.]

Zooplankton of Karlovka Reservoir as a constituent of its fish food supply. Nauk. zap. Kyiv. un. 15 no.11:57-63 '56. (MIRA 11:5)
(Karlovka Reservoir--Zooplankton)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANNAYA, M. F.

SOV/21-58-2-26/28

AUTHORS: Movchan, V.A., Member-Correspondent AS UkrSSR, Polivannaya, M.F.

TITLE: The Natural Food Resources and the Ichthyofauna of the Donbas Reservoirs (Yestestvennyye kormovyye resursy i ikhtiofauna vodokhranilishch Donbassa)

PERIODICAL: Dopovidi Akademii nauk Ukrains'koi RSR, 1958, Nr 2, pp 224-227 (USSR)

ABSTRACT: The piscicultural use of the reservoirs in Donbas has heretofore been carried out without proper scientific foundations. To remedy this omission, the Ichthyology Chair of the Kiyev State University conducted for 4 years a study of 8 reservoirs of the Stalino Oblast' with a total area of about 3,000 ha. These reservoirs, which were built at different times after 1931, are characterized by small dimensions and depths, high mineralization of the water, and intensive development of plankton which is not fully utilized by the fish (the residual plankton biomass during the vegetative period amounts to 7 to 15 g per cu m). The benthonic fauna is consumed by the fish at a great rate, and its residual biomass amounts to 4 to 7 g per cu m. It is expedient to maintain at a high level the numbers of bream, carp, pike perch and Prussian carp, with carp predominating in the Kurakhovskoye, Mironovskoye

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

SOV/21-58-2-26/28

The Nautural Food Resources and the Ichthyofauna of the Donbas Reservoirs

Yenakiyevo, Luganskoye reservoirs, and bream predominating in the Karlovskoye, Ol'khovskoye, Kleban-Bykskoye and Starokrymskoye reservoirs. High fish production from the Donbas reservoirs can be attained provided that a fish nursery is established to supply the reservoirs with these species, and the possible catch of certain fish species is limited in accordance with the supply. There are 3 tables.

ASSOCIATION: Kiyevskiy gosudarstvennyy universitet (Kiyev State University)

SUBMITTED: May 21, 1957

NOTE: Russian title and Russian names of individuals and institutions appearing in this article have been used in the transliteration.

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANA, M.F.

USSR/Human and Animal Physiology - The Nervous System. V-10

Abs Jour : Ref Zhur - Biol., No 2, 1958, 9033

Author : M.F. Polivana

Inst : Kiev University

Title : Comparative Physiological Data on the Training of Nervous Processes. Report I.

Orig Pub : Nauk. zap Kiivs'k. un-t, 1956, 15, No 12, 113-125

Abstract : In four rabbits the conditioned reflexes produced by the addition of food were subjected to sudden interruptive extinction. This lead to the training of processes of excitation and inhibition in relation to their mobility and speed of comception. Four phases were established in the evolution of the training: I, wave-like extinction of the conditioned reflexes and their rapid restoration; II, alternation of wave-like extinction of the conditioned

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANNAYA, M.F. [Polyvana, M.F.]

Effect of training extinctive inhibition on the rate of extinction of food reflexes in rabbits. Fiziol.zhur.[Ukr.] 6 no.2:221-227 Mr-Ap '60. (MIRA 13:7)

1. Nauchno-issledovatel'skiy institut fiziologii zhivotnykh Kiyevskogo gosudarstvennogo universiteta im. T.G. Shevchenko.
(REFLEXES)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANNAYA, M.F.

Training of neural processes. Zhur. vys. nerv. deiat 10 no. 4:620-625 Jl-Ag '60. (MIRA 14:2)

1. Laboratory of the Comparative Physiology of the Higher Nervous Activity, Pavlov Institute of Physiology, U.S.S.R. Academy of Sciences, Kolutshi.

(CONDITIONED RESPONSE)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANNAYA, M.F.

Interaction of motor food conditioned reflexes in rabbits. Zhur. vys. nerv. deiat. 11 no.4:738-741 Jl-Ag '61. (MIRA 15:2)

1. Research Institute of Animal Physiology, Shevchenko University, Kiev.

(CONDITIONED RESPONSE)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANNAYA, M.F.; KHARCHENKO, P.D.

Differentiating inhibition in chickens in ontogenesis.
Zhur. vys. nerv. deiat. 15 no.6:1129-1132 N-D '65.
(MIRA 19:1)

1. Submitted June 15, 1964.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

TOPACHEVSKIY, A.V.; OKSIYUK, O.P.; CHERNITSKAYA, L.N.; YURCHENKO, V.V.; PUCHKOVA, L.V.; POLIVANNAYA, M.F.

Hydrobiological characteristics of canals in the southern part of the Ukrainian S.S.R. based on the materials of 1962. Trudy Gidrobiol. ob-va 14:163-169 '63. (MIRA 17:6)

1. Institut gidrobiologii AN UkrSSR, Kiyev.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANNAYA, M. F.

POLIVANNA, M.F. [Polyvanna, M.F.]

Results of hydrobiological research in the resevoirs of Stalino Province, Ukrainian S.S.R. Report No.2: Zoobenthos. Visnyk. Kyiv. un. no.2. Ser. biol. no.2:40-46'60. (MIRA 16:8)
(DONETSK PROVINCE—BENTHOS)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANNAYA, M.F.

POLIVANNA, M.F. [Polyvanna, M.F.]

Differentiation of positive conditioned signals connected with various conditioned responses by rabbits. Visnyk Kyiv. un. no.2. Ser. biol. no.2:50-58'60. (MIRA 16:8)
(CONDITIONED RESPONSE)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANNAYA, M.F.

Effect of the pollution by factory sewage on the summer zooplankton of the Desna River. Vop. ekol. 5:172 '62. (MIRA 16:6)

1. Institut gidrobiologii AN UkrSSR, Kiyev.
(Desna River--Zooplankton) (Desna River--Water--Pollution)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANNA, M.F. [Polyvanna, M.F.]

Results of hydrobiological research in reservoirs of Stalino Province, Ukrainian S.S.S.R. Report No. 1: Zooplankton. Visnyk Kyiv.un. no.1. Ser.biol. no.2:137-145 '58. (MIRA 16:4)
(DONETSK PROVINCE--ZOOPLANKTON)
(DONETSK PROVINCE--RESERVOIRS)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANNA, M.F. [Polyvanna, M.F.]

Results of hydrobiological investigation of the reservoirs of Stalino Province, Ukrainian S.S.R. Report No. 3: Invertebrates as food for fishes. Visnyk Kyiv.un. no.[illegible] Ser.biol. no.1: 113-118 '60. (MIRA 16:4)

(DONETSK PROVINCE—FISHES—FOOD)
(DONESTK PROVINCE—INVERTEBRATES)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANNA, M.F. [Polyvanna, M.F.]

Feeding habits of the herring Clupeonella delicatula (Nordmann) of Kakhovka Reservoir in the fall of 1957 and 1958. Visnyk Kyiv.un. no.3. Ser.biol. no.1:119-126 '60. (MIRA 16:4)
(KAKHOVKA RESERVOIR—HERRING)
(KAKHOVKA RESERVOIR—FISHES—FOOD)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

KOROL'KOV, I.I.; TYAGUNOVA, Z.A.; POLIVANNYY, V.I., nauchn. red.; PETRENKO, V.M., tekhn. red.

[Continuous neutralization of hydrolysates] Nepreryvnaia neitralizatsiia gidrolizatorov. Moskva, TSentr. in-t tekhn. informatsii i ekonom. issl. po lesnoi, bumazhnoi i derevoobrabatyvaiushchei promyshl., 1963. 31 p. (MIRA 16:9)

(Hydrolysis) (Lime)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANNYY, V. I.

Polivannyy, V. I. "Fermentation with a removable cover", (Sulfite-alcohol industry), Gidroliz. prom-st' SSSR, 1948, No. 5, p. 24.

SO: U-2888, 12 Feb. 53, (Letopis' Zhurnal 'nykh Statey, No. 2, 1949).

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANOV

3037. A SIMPLE METHOD FOR CALCULATING COMPLEX PERMEABILITY from Experimental Data: using the Relation Complex Permeability $= \mu - i\mu' = (A_0 + iB_0) \cdot (\mu_1 - i\mu_2)$.—Arkadiev & Polivanov (*Comptes Rendus (Doklady) de l'Acad. des Sci. de l'URSS*, 10th Jan. 1943, Vol. 38, No. 1, p. 14; in English.) For previous work *see* reference "3" and 3158 of 1943; and *cf.* Lawrentiew, 2038, below.

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANOV, A.A., vetvrach; SOMINSKIY, Z.F., dotsent; KIRILLIN, V.M., glavvetvrach

Some materials on the epizootology and clinical aspects of Aujesky's disease in cattle. Veterinariia 36 no.4:29-31 Ap '59. (MIRA 12:7)

1.Zaveduyushchiy otdelom Ul'yanovskoy oblvetbaklaboratorii (for Polivanov). 2.Ul'yanovskiy sel'skokhozyaystvennyy institut (for Sominskiy). 3.Cherdaklinskiy rayon, Ul'yanovskaya oblast' (for Kirillin).
(Ul'yanovsk Province--Pseudorabies)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANOV, K.

100 years since the death of Georg Simon Ohm. p. 22.
ELEKTROENERGIIA, Sofiya, Vol. 6, no. 1, Jan. 1955.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, no. 10, Oct. 1955, Uncl.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

L 05077-67

ACC NR: AP6013317 (N) SOURCE CODE: UR/0413/66/000/008/0136/0136

14
13

AUTHORS: Polivanov, I. V.; Goryayev, I. V.

ORG: none

TITLE: A buffer device. Class 65, No. 180970

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 8, 1966, 136

TOPIC TAGS: ship component, shock absorber

ABSTRACT: This Author Certificate presents a buffer which prevents damage to ships being docked. The device includes power hydraulic cylinders and rotating self-adjusting carriages with recoil rollers (see Fig. 1). The design increases the operational reliability of the device. The rods of the power hydraulic cylinders are connected with slide-blocks. The ends of the connecting rods are mounted on these slide-blocks so that they can move. The other ends of the connecting rods are flexibly fastened to a rotating beam. This beam is hinged on one side to the rotating self-adjusting carriage, and on the other side it is hinged to a double arm rotating lever. This double arm lever is connected with a shock absorbing torsion bar unit by a hinge-arm drawbar.

Card 1/2 UDC: 629.12.015.65

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

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L 05077-67

ACC NR: AP6013317

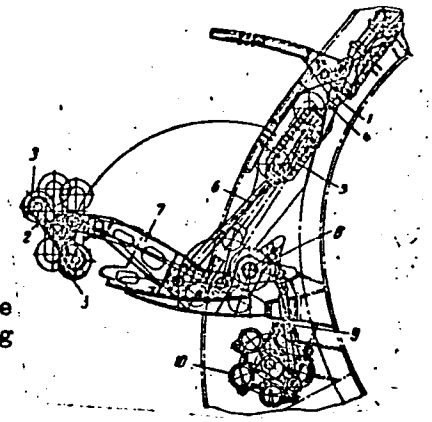

Fig. 1. 1 - power hydraulic cylinder; 2 - carriages; 3 - recoil rollers; 4 - rods of the hydraulic cylinder; 5 - slide blocks; 6 - connecting rods; 7 - rotating beam; 8 - rotating double arm lever; 9 - hinge-arm drawbar; 10 - torsion bar unit

Orig. art. has: 1 figure.

SUB CODE: 13/ SUBM DATE: 29Jun64

Card 2/2 fv

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

**Dependence of magnetic properties of a substance on frequency.** K. M. Polyanov (*Compt. rend. Acad. Sci. U.R.S.S.*, 1941, **30**, 181-184).—Ferromagnetic substances show variation of $\mu$ with frequency due to both macroscopic and microscopic non-homogeneity. The latter is determined by the presence of Weiss regions.

L. J. J.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANOV, K. M.

PROCESSES AND PROPERTIES INDEX

The Structure of a Ferromagnetic and the Permeability-Frequency Curves.
K. M. Polivanov (*J. Physics (U.S.S.R.)*, 1943, 7, (1), 18–28).—[In English.]
The observed dependence of permeability on frequency when ferromagnetics are magnetized in alternating fields of audio and high frequencies is examined theoretically. It is concluded that the effect may be due to non-homogeneity of the experimental samples. A theory is developed for the influence of Weiss domains, considered as microscopic non-homogeneities, on the permeability-frequency relationships. The observed effects are attributed to this factor.—O. V. R.

Magnetic Lab., AS USSR

RIALS INDEX

PROCESSES AND PROPERTIES INDEX

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

Subsidiary Apparatus & Materials

2017. A SIMPLE METHOD FOR CALCULATING COMPLEX PERMEABILITY [from Experimental Data: using the Relation Complex Permeability $= \mu - i\mu' = (A_0 + iB_0) \cdot (\mu_1 - i\mu_2)$].—Arkadiev & Polivanov. (*Comptes Rendus (Doklady) de l'Acad. des Sci. de l'URSS*, 10th Jan. 1943, Vol. 38, No. 1, p. 14: in English.) For previous work *see* reference "3" and 3158 of 1943: and *cf.* Lawrentiew, 2038, below.

Magnetic Lab., Dept. Tech. Sci., Acad. Sci.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

Electrical engineering; a textbook of fundamentals. Moskva, Gos. energ. izd-vo, 1946. 256 p. (51-16642)

TK146.L63

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

538.213 : 537.311.62 : 621.318.22

9121. Determination of the complex permeability of a substance from the complex permeability of a specimen by V. K. Arkadiev's method. K. M. Bulyanov. "*Problems of Ferromagnetism and Magnetodynamics*," Moscow (1946) 29-41. *In Russian.*

Differences in a.c. and d.c. magnetisation are due: (1) to the additional field set up by eddy currents; (2) difference in the a.c. and d.c. permeabilities. Complex magnetic permeability defined by $B/\mu_0 H = \mu(1 - i \tan\delta)$, where $\mu$ is the "conservative," $\mu \tan\delta = \mu$ the "consumptive" permeability; both the real and imaginary parts may depend on frequency. The representation is valuable in the solutions of problems such as ferromagnetic screening, skin-effect, iron losses, etc. A comprehensive and clear exposition is given of Arkadiev's method, applied to specimens of sheet, tape and wire form, whose average permeability has been determined by conventional experimental methods. The formulae of the original theory and Arkadiev's nomograms are simplified for practical calculation purposes.

B. F. KRAUS

A10-11A METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

538.221

5127. **The influence of the Weiss domains on the relation between the magnetic permeability of a substance and frequency.** K. M. POLIVANOV. "*Problems of Ferromagnetism and Magnetodynamics*," Moscow (1946) 43-54. *In Russian.*

The fact that the apparent permeability of a ferromagnetic falls with increasing frequency, in a measure depending on the magnetic characteristics of the particular material, to approach unity at a wavelength of about 1 cm, is a deviation from Maxwell's theory. This may, however, be explained not only by an actual variation of the permeability, but also by inhomogeneities of the magnetized material over its cross-section, which may be "macroscopic" and/or "microscopic." The latter are connected with the Weiss domains, whose boundaries shift with increasing frequency at first reversibly, and then irreversibly. It is shown how a simple treatment based on a distribution of the Weiss domains over a finite number of parallel layers of a sheet permits of a very good approximation of the observed frequency relations of the apparent permeability and of the damping of incident waves of magnetic field intensity. (Bibliography of 19 entries.) B. I. KRATS

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANOV K. M.

USSR/Electricity Jul 1947
Mathematics, Applied

"A Variation Theorem for n Factors of an Electric Circuit," K. M. Polivanov 6 p

"Elektrichestvo" Vol LXVII, No 7

Mathematical discussion of the relation of currents and voltages in any branch of a compound circuit with change of parameters of two or several branches.

17T89

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANOV, K.M.

Electrotechnics (book), 1948.

Moscow Energetics Inst. imeni V. M. Molotov.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANOV, K. M.

42274: POLIVANOV, K. M., PEREKALIN, M. A. - Istoriya Kafedry teoreticheskikh osnov elektrotekhniki. Trudy Mosk. energet. in-ta im. Molotova, VYP 3, 1948, s. 26-35.

SO: Letopis' Zhurnal'nykh Statey, Vol. 47, 1948.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANOV, K. M.

42026 POLIVANOV, K. M. - Opredelenie vektorov magnithogo polya cherez vektornyy i skalyarnyy potentsialy. Trudy mosk. Energet. In-ta im. Molotova. Vyp. 3, 1948. s. 38-40.

SO: Letopis' Zhurnal'nykh Statey, Vol. 47, 1948

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANOV, K. M.

42276: POLIVANOV, K. M., NETUSHIL, A. V. - Malyye parametry elektricheskikh pegev. Trudy Mosk. energet. in-ta im. Molotova, VYP. 7, 1948, s. 49-58.- Bibliogr: 5 nazv.

SO: Letopis' Zhurnal'nykh Statey, Vol. 47, 1948

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANOV K. M.

USSR/Physics Mar/Apr 1948
Ferromagnetism
Fields, Electromagnetic

"The Properties of Ferromagnetics in Alternating Fields," K. M. Polivanov, 18 pp

"Iz Ak Nauk SSSR, Ser Fiz" Vol XII, No 2

Properties of ferromagnetics in alternating fields can be assessed only by strengths of electric and magnetic fields on surface of object. Describes mathematical method of obtaining values for interior of object, and is illustrated with graphs and diagrams.

[redacted] 69T96

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

USSR/Electricity - Power Transmission Systems, Electric — Dec 49

"Efficiency of Power Transmission Through a Four-Terminal Network," Prof K. M. Polivanov, Dr Tech Sci, Moscow Power Eng Inst imeni Molotov, 3 pp

"Elektrichestvo" No 12

Examines conditions for most efficient power transmission through symmetrical or nonsymmetrical four-terminal network. All conclusions are based on an analysis of the equations of a four-terminal network

157T13

USSR/Electricity - Power Transmission (Contd) — Dec 49

with coefficients A, B, C, and D. Shows maximum efficiency always occurs when no-load and short-circuit losses are equal. Submitted 4 Apr 49.

157T13

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANOV, K. M.

941374

Fizicheskiye osnovy elektrotekhniki. Moscow, 1950. 555 p.

The book deals with questions connected with the physic fundamentals of electro-technique, including field chai and vibration theory, radio technique, and electric measurement. Prerequisites forunderstanding the book are knowledge of physics and higher mathematics.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

USSR/Electricity - Measurements Jul 51
Transmission Lines

"The Electromagnetic Effect of a Multiconductor Line With Consideration for Twisting of the Conductors," Prof K. M. Polivanov, Dr Tech Sci, Docent A. V. Netushil, Cand Tech Sci, B. Ya. Zhukovitskiy, Engr, Moscow Power Eng Inst imeni Molotov

"Elektrichestvo" No 7, pp 28-33

Determines the amt by which the electromagnetic effect of high-current conductors upon surrounding elec circuits is decreased when the

199T18

USSR/Electricity - Measurements Jul 51
(Contd)

conductors are twisted. Found that twisting the conductors of a 3-phase line reduced considerably the interference caused by the direct- and inverse-sequence currents but had little effect upon interference due to zero-sequence currents. Submitted 9 Mar 51.

POLIVANOV, K. M.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANOV, K. M., Prof.

PA 196T23

USSR/Electricity - Hydraulics Aug 51
Drainage

"The Application of Electroosmotic Effects in Hydraulic Engineering Structures," Prof K. M. Polivanov, Dr Tech Sci, Docent A. V. Netushil, Cand Tech Sci, N M. Burdak, Engr, all of the Moscow Power Eng Inst imeni Molotov; L. V. Kuz'menko, Cand Tech Sci, "Gidroproyekt"

"Elektrichestvo" No 8, pp 3-19

Electroosmotic water reduction and elec drainage are of practical interest for hydraulic engineering structures. Describes the use of

196T23

USSR/Electricity - Hydraulics (Contd) Aug 51

electroosmotic effects on the process of filtration of ground waters. Analysis of the general differential eq of filtration yields a method for measuring the electroosmotic consts of soils. Submitted 11 Apr 51.

196T23

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

LOMONOSOV, V.Yu.; POLIVANOV, K.M.; ANTIK, I.V., redaktor; SKVORTSOV, I.M., tekhnicheskiy redaktor

[Electric engineering; fundamentals] Elektrotekhnika; osnovnye poniatiia. Izd. perer. i dop. Moskva, Gos. energ. izd-vo, 1952. 383 p. (MLRA 9:7)

(Electric engineering)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANOV, K. M., Prof

USSR/Electricity - Education Operator Calculus Jan 52

"Concerning V. Yu. Lomonosov's Article 'Operator Calculus in Electrical Engineering Education,'" K. A. Krug, Corr Mem, Acad Sci USSR, Docent S. V. Strakhov, Cand Tech Sci, Prof K. M. Polivanov, Dr Tech Sci

"Elektrichestvo" No 1, pp 66-69

Krug and Strakhov disagree with Lomonosov's contention that operator calculus should not be taught in higher elec engineering schools, emphasizing its importance in the theory of automatic regulation and in solving problems involving transients in circuits with distributing parameters. Polivanov does not say that operator calculus is not necessary in elec engineering, but feels that it has been vastly overrated by many engineers.

201T12

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

KOLIVANOV, N. N.

Electric Measurements

Determining electrical units of an absolute practical system. Elektrichestvo No. 3, 1952.
Doktor Tekhn. Nauk, Prof. Moskovskiy Energeticheskiy Institut im. Molotova

Monthly List of Russian Accessions, Library of Congress, June 1952. Unclassified

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANOV, K. M.

PA 241T89

USSR/Physics - Ferromagnetics Jul/Aug 52

"Dynamic Characteristics of Ferromagnetics," K. M. Polivanov, Mos Power Engr Inst imeni Molotov

"Iz Ak Nauk, Ser Fiz" Vol 16, No 4, pp 449-464

Shows theoretically the strong effect of distribution of regions of spontaneous magnetization on dynamic characteristics of ferromagnetics. Comparison of computed and exptl data allows one to present graphically the structure and to evaluate the order of magnitude of the regions.

241T89

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

Nov/Dec 5

POLIVANOV, K.M.

USSR/Physics : Magnetism of Sheet Steel

"Measurements of Magnetic Properties of Sheet Steel on Whole Sheets and on Separate Plates," K. M. Polivanov and V. A. Kutyashov, Moscow Power Inst imeni Molotov

"Iz Ak Nauk SSSR, Ser Fiz," Vol 16, No 6, pp 713-717

Description of a method of subject measurements by means of the possibility of measuring the strength of magnetic field ($H_o$) and strength of the electric field ($E_o$) on the surface of a sheet in connection with the total energy loss during remagnetization and mean magnetic induction. State that use of a dc compensator circuit permits determination of specific losses directly with a wattmeter.

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANOV, K. M.

USSR/Geophysics - Filtration Jan 52

"Calculating the Filtration Processes For the Case Where Electroosmotic Activity Is Present," A. V. Netushil, K. M. Polivanov

"Zhur Tekh Fiz" Vol XXII, No 1, pp 21-32

Sets up and solves the eqs describing the flow and potential lines in the case of filtration of water from an elevated channel to a river when there is an elec field interposed between channel and river in the medium, due to cables lying in the ground. Submitted 28 Mar 51.

206T63

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

1. MALIKOV, M. F., Prof.; GORBATSEVICH, S. V.; YMATOV, A. A., Eng.; BIRZVALKS, YA. A., Eng.; POLIVANOV, K. M., Prof.

2. USSR (600)

4. Polivanov, K. M.

7. Determining amperage - the fourth fundamental unit in the practical absolute unit system, Elektrichestvo, no. 4, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April, 1953, Uncl.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANOV, K.M., professor, doktor tekhnicheskikh nauk; TATUR, T.A., dotsent, kandidat tekhnicheskikh nauk.

Relation between the coefficients A,B,C,D, of different simple quadripoles formed from the same circuit with four terminals and the complete characteristic of this circuit. Trudy MEI no.14:78-90 '53. (Electric networks) (MIRA 8:7)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANOV, K.M., professor, doktor tekhnicheskikh nauk

Magnetization of magnetodielectric cores of rectangular cross section. (MLRA 8:7)
Trudy MEI no.14:166-197 '53.
(Magnetic materials) (Ferrite)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANOV, K.M.

NETUSHIL, A.V., dotsent, kandidat tekhnicheskikh nauk; POLIVANOV, K.M., professor, doktor tekhnicheskikh nauk.

Effect of the force of moisture conductivity on the movement of moisture in soils under the action of electroosmosis. Trudy MEI no.14:198-210 '53. (MLRA 8:7)
(Soil moisture) (Soil stabilization) (Electroosmosis)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

259T91

POLIVANOV, K. M.

USSR/Physics - Electroosmosis 11 Apr 53

"Influence of Moisture Conduction During Electroosmosis," A. V. Netushil and K. M. Polivanov

DAN SSSR, Vol 89, No 5, pp 845-848

Derivation of the eqs describing moisture distribution and drainage velocity in moist ground under electroosmotic conditions, taking into account the influence of moisture conduction and heat-moisture conduction on electroosmotic drainage, as was omitted in "Iskusstvennoye Zakrepleniye Gruntov" (Artificial Strengthening of Foundations), Sbornik No 17,

259T91

1952. States that L. Casagrande (J Boston Soc Civil Eng. 39, No 1, 51 (1952)) did not correctly explain the phenomenon noted by him of drainage near cathodes. Presented by Acad P. A. Rebinder 12 Feb 53.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

Polivanov, K.M.

Polivanov, K.M.

62

3688. Theory of the determination of the permeability of ferromagnetic metals and magneto-dielectric substances from experimental data. K. M. POLIVANOV. *Elektrichestvo*, 1954, *No.* 3, 19–25. In Russian.

Measurements on a.c. circuits containing ferromagnetic substances allow the determination only of the apparent characteristics of these materials which differ from their true characteristics on account of the surface effect. In the case of ferromagnetic metals the electrical conductivity may be regarded as independent of the frequency, which enables their magnetic characteristics to be determined either by the method suggested by Arkadiev and Vvedenskii or by a method worked out by the author and described in the paper: the latter requires additional experimental investigation. In the case of magneto-dielectrics of the ferrite type, their complex conductivity undoubtedly depends on frequency, again proving that the measured values are the true ones. Several methods are given for determining the true electrical and magnetic characteristics of magneto-dielectrics and semiconducting ferromagnetics from experimental data. The materials on which the fundamental experiments were carried out belonged to the oxide type of ferromagnetics, particularly nickel-zinc and manganese ferrites. Surface effects are eliminated by comparing experimental results on specimens of basically differing configurations (flat and thin rings, tubular shapes, etc.) which are easily distinguishable by the existing theory. B. F. KRAUS

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

USSR/Physics - Polarization

Card 1/ Pub. 43 - 6/15

Authors : Polivanov, K. M.; Kolli, Ya. N.; and Khasina, M. B.

Title : Rotation of a cm-wave polarization surface with a ferrite disc

Periodical : Izv. AN SSSR. Ser. fiz. 18/3, 350-359, May-Jun 1954

Abstract : The rotations of a cm-wave polarization surface with Ni-Zn-ferrite were investigated experimentally. Basic equations were formulated for a simpler system ( plane wave in an infinitely extended plate of finite thickness ) which make it possible to explain the possible effect of numerous factors which are not always taken into consideration. The rotation of a cm-wave polarization surface with longitudinally magnetized ferromagnets was found to be analogous to the magneto-optical Faraday effect. It was also determined that the rotation of a polarization surface can find numerous applications in the cm-wave technique, e.g., for adjustment of current-controlled antenna switches, for modulation and control of emitted power, and for separation of the generator from waves reflected by the charge. Four references : 2 USA and 2 French (1951-1953). Table; graphs; illustration; diagram; drawing.

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

Izv. AN SSSR. Ser. fiz. 18/3, 350-359, May-Jun 1954 (Additional Card)

Card 2/2

Institution : The V. M. Molotov Electrical Engineering Institute, Moscow

Submitted : May 16, 1954

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

USSR/ Physics - Ferromagnetic resonance

Card 1/1 Pub. 43 - 10/15

Authors : Kolli, Ya. N., and Polivanov, K. M.

Title : A ferrite disc in a coaxial line

Periodical : Izv. AN SSSR. Ser. fiz. 18/3, 382-399, May-Jun 1954

Abstract : It is shown that the measuring line method ( for the analysis of magneto-dielectrics ) can be expanded by adaption of a circular diagram ( ferrite disc ) and by changing the measurement at two positions of the short circuiting piston to measurement at three positions of the piston (method of three reactive loads ). In the absence of a constant magnetization the measuring line method can be applied for the determination of permeability of magneto-dielectrics and the expansion of the method can serve only for accuracy evaluation of results obtained. In the presence of a lateral

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

Izv. AN SSSR. Ser. fiz. 18/3, 382-399, May-Jun 1954 (Additional Card)

Card 2/2

Abstract : constant magnetic field the part of the line with the magneto-dielectric (ferrite) retains the properties of an ordinary symmetrical quadripole but the permeability values determined cannot be identified with the permeability of the substance because magnetic permeability in various points of the disc is different. Five references : 2 USSR and 3 USA (1948-1952). Table; graphs; drawings.

Institution : The V. M. Molotov Electrical Engineering Institute, Moscow

Submitted : May 3, 1954

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

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USSR/Physics - Magnetic spectra

Card 1/2 Pub. 43 - 1/11

Authors : Katkov, N. G., and Polivanov, K. M.

Title : Magnetic spectra of a material dependent on the macroscopic structure of the latter

Periodical : Izv. AN SSSR ser. fiz. 18/4, 419-431, Jul - Aug 1954

Abstract : The dependence of magnetic permeability on the frequency of an alternating magnetic field is analyzed. By analogy with light phenomena, the magnetic spectra are considered as dispersions. In connection with various physical processes conditioning the mentioned dependence, three types of dispersion are considered: 1. dispersion of a substance (or a medium); 2. dispersion of a shape (or a body); and 3. dispersion of a structure (or a material, or a body of complex form). The third type of dispersion takes place in artificially made magneto-dielectrics (ferrites). A core (of a transformer) is considered as one of such ferrites. The author's effort to find a solution for the problem on the magnetic structural dispersion of such cores resulted in the expression of the so-called complex or imaginary magnetic permeability of a substance:

$$\bar{\mu} = \frac{\mu H_0}{H_0} = \mu \left[ 1 - \frac{64}{\pi^4} \sum_{m,n} \frac{\gamma_1^2 + \gamma_m^2 C_m'}{\gamma_1^2 + \gamma_{mn}} \right] P$$

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Card 2/2 Pub. 43 - 1/11 (Additional card)

Izv. AN SSSR ser. fiz. 18/4, 419-431, Jul - Aug 1954

Abstract : which is considered to be most gereral expression; it takes care of all possible cases. Some particular cases are considered and analyzed. Twenty-two references 3-German; 6-USA; 13-USSR (1926-1953). Diagrams.

Institution : V. M. Molotov Energetics Institute at Moscow

Submitted : July 26, 1954

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANOV, K.M.

3

Theory of Measurement of $\mu$ and $\epsilon$ of Semiconducting Ferromagnetics.—K. M. Polivanov. (*C. R. Acad. Sci. U.R.S.S.*, 1st Mar[redacted], pp. 61-64. In Russian.) The method used for determining the complex electrical impedances of a specimen in an electric circuit or a magnetic field is analogous to the open- and short-circuit method of determining characteristic impedance and propagation constant of a long line. Expressions for the complex impedances in terms of the complex values of $\mu$ and $\epsilon$ are given. The advantages of using rod or ring specimens in a coaxial line are noted.

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANOV, K.M.

4

USSR.

*A New Effect Due to Gyromagnetic Phenomena. K. M. Polivanov (*Doklady Akad. Nauk S.S.S.R.*, 1954, 95, (3), 501-503).—[In Russian]. On the basis of theoretical considerations, the occurrence of a new effect similar to the ferromagnetic Faraday rotation in ferrites was indicated. It was shown that when a ferrite plate is placed against a wall of a rectangular wave guide, the absorption of energy in the ferrite plate and the magnitude of the propagation const. depend on the direction of appn. of a static magnetic field and on the direction of wave propagation.—S. K. L.

BB

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANOV, K.M.

F-7

USSR / Magnetism. Magnetic Resonance.

Abs Jour : Ref Zhur - Fizika, No 3, 1957, 6888

Author : Polivanov, K.M.
Title : Concerning Observation of the Fischer Gyromatnetic Effect in a Body Placed in a Waveguide.

Orig Pub : Dokl. AN SSSR, 1954, 95, No 5, 969 - 970

Abstract : The Fischer effect is the only gyromatnetic effect which has not yet been observed experimentally. The causes of the failures reported in the literature are analyzed by the author, who indicates new experimental possibilities, afforded by microwave techniques, in which these causes should not manifest themselves.

Card : 1/1

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANOV, K. M., FRADKIN, B. M., KATKOV, N. G., and SKUGAREV, V. V., (Moscow)

"To the Theory of Artificial Magnetodielectric from Metallic Powder," a paper submitted at the International Conference on Physics of Magnetic Phenomena, Sverdlovsk, 23-31 May 56.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANOV, K. M., KOLLEY, Y. N., MICHKAYLOVSKIY, L. K., and FABRIKOV, V. A. (Moscow)

"Magnetodielectrics in Waveguides," a paper submitted at the International Conference on Physics of Magnetic Phenomena, Sverdlovsk, 23-31 May 56.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

Polivanov, K. M.

POLIVANOV, K. M.
and
BRAUDE, A. A.

"Nonhysteresis Magnetization and Its Application in Measuring Small Currents and Electromotive Force," pp 135-146, 11l, 8 ref

Abst: A method of measuring induction for a hysteresis-loss curve, which does not require formation in the sample of a strong dc field required for obtaining the saturation of the investigated sample, is discussed. The obtained experimental results are presented. The suggested method can be applied to various types of magnetic amplifiers and magnetic relays.

SOURCE: Trudy Moskovskogo Energeticheskogo In-ta im. V. M. Molotova MVO SSSR (Works of the Moscow Energetics Institute imeni V. M. Molotov of the Ministry of Higher Education USSR), No 19, Electric Vacuum Technology and Instrument Building, Moscow-Leningrad, Gosenergoizdat, 1956

Sum 1854

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

NETUSHIL, Anatoliy Vladimirovich; POLIVANOV, Konstantin Mikhaylovich; [redacted] ZHUKHOVITSKIY, B.Ya., redaktor; VORONIN, K.P., tekhnicheskiy redaktor

[Principles of electric engineering] Osnovy elektrotekhniki; v trekh chastiakh. Moskva, Gos. ener. izd-vo. Pt.3. [The theory of the electromagnetic field] Teoriia elektromagnitnogo polia. 1956. 190 p. (MIRA 10:2)
(Electromagnetic theory)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

LOMONOSOV, Vsevolod Yur'yevich; POLIVANOV, Konstantin Mikhaylovich; SMIRNOV, A.D., redaktor; FRIDKIN, A.M., tekhnicheskiy redaktor

[Electric engineering; basic ideas] Elektrotekhnika; osnovnye poniatiia. Moskva, Gos. energ. izd-vo, 1956. 383 p. (MLRA 10:4)
(Electric engineering)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANOV, K.M.; KUZNETSKIY, V.V.

General properties of linear systems. Izv.AN SSSR.Ser.fiz. no.11: 1310-1317 N '56. (MIRA 10:5)

1.Moskovskiy energeticheskiy institut im. V.M. Molotova.
(Ferrates--Magnetic properties)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

SOV/112-57-6-12554

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1957, Nr 6, p 133 (USSR)

AUTHOR: Polivanov, K. M., Braude, A. A.

TITLE: Nonhysteretic Magnetization and Its Application to Measuring Small Currents and EMFs (Bezgisterezisnoye namagnichivaniye i yego primeneniye dlya izmereniya malykh tokov i e.d.s.)

PERIODICAL: Tr. Mosk. energ. in-ta, 1956, Nr 18, pp 135-146

ABSTRACT: A nonhysteretic (or perfect) magnetization curve occurs when a ferromagnet is subjected to a weak constant field and simultaneously to a stronger alternating field whose amplitude gradually tapers off to zero. The magnetic permittivity $\mu_u$ on the nonhysteretic magnetization curve, in the region of very weak fields, is much higher than the permitivity $\mu$ on the curve of normal magnetization. A direct flux density measurement by a ballistic galvanometer, during the action of the attenuating AC field, is impossible because large alternating EMFs would be set up in the galvanometer circuit. The known methods of determining the nonhysteretic magnetization curve are based on the fact that all magnetization curves (normal, initial, and

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nonhysteretic) converge in the region of saturation. A ballistic galvanometer can help to find the flux-density increment when the DC field grows from a small value up to saturation. The experiment should be conducted twice: with and without an AC-field preliminary application. By subtracting the first result from the second, the flux-density increment can be found that corresponds to a substitution of a nonhysteretic magnetization curve for the initial curve. This method is inaccurate, however, because it involves a difference of commensurable quantities. A well-known differential method requires a clumsy outfit for setting up a strong DC field. A circuit (Fig. 1) is suggested that does not require bringing the specimen to saturation and that ensures the possibility of a direct measurement of the flux-density increment when changing from the initial curve to the nonhysteretic curve. Two identical torus cores have the following series-connected windings: input ($W_{11}$, $W_{12}$), measuring ($W_{21}$, $W_{22}$), and AC windings ($W_{31}$, $W_{32}$). The latter are connected in opposition, by which expedient the effect of alternating EMFs on the galvanometer circuit and on the input circuit is eliminated. Fig 2a presents the curve



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ACCESSION NR: AP4023392 S/0048/64/028/003/0470/0480

AUTHOR: Polivanov, K.M.; Pollak, B.P.

TITLE: Resonance characteristics of magnetically uniaxial polycrystalline ferrite in a microwave field [Report, Symposium on Ferromagnetism and Ferroelectricity held in Leningrad 30 May to 5 June 1963]

SOURCE: AN SSSR. Izvestiya, Seriya fizicheskaya, v.28, no.3, 1964, 470-480

TOPIC TAGS: ferrite, polycrystalline ferrite, polycrystalline ferrite resonance, microwaves, ferrite microwave resonance, polycrystalline ferrite microwave resonance

ABSTRACT: The magnetic susceptibility tensor of a partially oriented polycrystalline material, composed of uniaxial crystallites and subjected to a constant magnetic field in the direction of the anisotropy axis, is calculated by averaging over an axially symmetric distribution of crystallite orientations. It is assumed that the crystallites do not interact with each other. The expressions for the imaginary parts of the susceptibility are simplified with the aid of the assumption, valid for ferrites at microwave frequencies, that the corresponding quantities for a single crystal are appreciable at a fixed frequency only throughout a narrow range of

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ACCESSION NR: AP4023392

applied fields near the resonant value. These expressions are further simplified and put into a form suitable for computation by employing the resonance conditions derived by M.T.Weiss (IRE convent.Rec.,pt.8, 95,1955) for a single crystal in which the second anisotropy constant vanishes. A number of curves are given to facilitate computation. For the case of random orientation, the results are easily reducible to those of E.Schlomann and R.V.Jones (J.Appl.Phys.,Suppl.to v.30, No.4,177S,1959) and K.Hempel (Z.ang.Phys.,14,No.8,488,1962) for an unoriented polycrystalline ferrite. The orientation distribution function for a given ferrite sample can be derived from a single resonance curve and a knowledge of the properties of a single crystal. From this the resonance behavior under various conditions can be calculated by the methods developed. Such calculations were performed for five ferrites with different degrees of orientation, and the resulting frequency dependence of the following quantities are presented graphically: the resonant field, the width of the resonance, the height of the resonance, and the gating ratio at resonance for right- and left-hand circularly polarized waves. "The authors express their deep gratitude to Engineer Chou Chya-wen for performing a number of computations related to the present investigation." Orig.art.has: 42 formulas and 8 figures.

Card 2/3

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

Polivanov, K.M.

AUTHORS: Polivanov, K.M. and Kuznetskiy, V.V.

TITLE: General Properties of Linear Systems (Obshchiye svoystva lineynykh sistem)

PERIODICAL: Izvestiya Akademii Nauk, Vol.XX, #11, pp 1310-1317 1956, USSR, Seriya fizicheskaya

ABSTRACT: The authors apply a graphoanalytical method proposed by Bode (5) to determine the imaginary frequency characteristic of magnetic permeability by the real one.

The method consists of the following steps:

1. The available real characteristic curve is approximated by a series of straight lines,
2. The imaginary characteristic is constructed for each section, and
3. The curves obtained are summed up.

There is also a possibility to determine the phase characteristic of magnetic permeability by the frequency characteristic of magnetic permeability modulus obtained experimentally.

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POLIVANOV, KONSTANTIN MIKHAYLOVICH

POLIVANOV, Konstantin Mikhaylovich; NETUSHIL, A.V., redaktor; FRIDKIN, A.M., tekhnicheskiy redaktor

[Ferromagnetics; principles of a theory of their application in engineering] Ferromagnetiki; osnovy teorii tekhnicheskogo primeneniia. Moskva, Gos.energ.izd-vo, 1957. 256 p. (MLRA 10:9)
(Ferromagnetism)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

SOV/ 161 -58-1-2/33

AUTHOR: Polivanov, K. M., Doctor of Technical Sciences, Professor, Head of the Department of Theoretical Foundations of Electrical Engineering at the Moscow Institute of Power Engineering.

TITLE: The Application of the Mirror Method in the Computation of the Magnetic Fields of Spatially Distributed Currents (Primeneniye metoda zerkal'nykh izobrazheniy k raschetu magnitnykh poley prostranstvenno-raspredelennykh tokov)

PERIODICAL: Nauchnyye doklady vysshey shkoly, Elektromekhanika i avtomatika, 1958, Nr 1, pp. 5 - 12 (USSR)

ABSTRACT: The mirror method can be used for the determination of the magnetic field of spatially distributed currents. For this purpose the following conditions must be complied with: 1) Within each of the investigated domains the equation rot H = δ, div B = 0 must be satisfied . . . . (1) 2) On the boundary surface of two media the common boundary conditions for the magnetic field must be satisfied. The conditions at infinity are satisfied practically "by itself". These requirements lead to a number of fundamental peculiarities which are explained by actual examples. 1) A magnetic field

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SOV/ 161 58-1-2/33

The Application of the Mirror Method in the Computation of the Magnetic Fields of Spatially Distributed Currents

of a direct current I is wanted. The current passes through a long "semi-infinite" linear conductor. This is located parallel to the surface of the earth at the depth R. From the end of the wire which is considered as a spherical electrode the current passes into the earth. The specific conductivity of the earth is σ. The conducting medium fills the semi-space $z \leqslant 0$. The magnetic permeability is always equal to unity. In this case the simple formulae which are based upon the conditions of symmetry cannot be applied. Apart from the field of the current in the conductor the field of the current penetrating into the earth in an unsymmetrical manner must be computed. By application of the mirror method the author succeeds to compute the electric field in space (which is divided into two domains with different properties) by reducing the problem to a computation of the field in a homogeneous medium. The effect of the modification of the properties of the medium is represented by additional excitations. The computation of the field for the lower domain ($z \leqslant 0$) and for the upper domain ($z \geqslant 0$) is performed by computing the field of two semi-infinite

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The Application of the Mirror Method in the Computation of the Magnetic Fields of Spatially Distributed Currents

linear current carrying conductors (in the homogeneous medium the current penetrating into the earth causes no field). All components of H (field strength) are written down in a rectangular coordinate system. Formula (3) is obtained for the point $A(x,y,z)$ at $z \leqslant 0$ and at $z \geqslant 0$. 2) The magnetic field of a direct current flowing in a long "semi-infinite" linear conductor is wanted. The conductor is located at a depth h parallel to the surface of the earth. The current penetrates into the earth from the not insulated terminal of the conductor, with a length of 3 l. The specific conductivity of the earth is $\sigma$. The medium fills the semi-space $z \leqslant 0$. Following the procedure of the first example the system of the currents together with their images is constructed. In the lower domain $z \leqslant 0$ the field is determined from the superposition of the field in the conductor (which slowly decreases because of the leakage from the free terminal) and of the field of the fringes which are suspended above the surface of the earth and which are divided from the surface by a gap of the height h. For the domain above the surface ($z \geqslant 0$) the field can be computed from the model of

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The Application of the Mirror Method in the Computation of the Magnetic Fields of Spatially Distributed Currents

the fringes descending from the bare terminal of the cable, which is leading into infinity. 3) This example differs from example 1 only by the fact that the height of the conducting layer of earth is limited by the thickness h+b. 4) The mirror method can also be used in solving the problem in which the magnetic field is wanted if the current penetrating into the earth from the terminal of the conductor passes through a boundary surface between two media with different conductivities $\sigma_1$ and $\sigma_2$. This method can also be applied in the determination of the magnetic field of a spherical inclusion with a good conductivity in a homogeneous medium with a relatively low conductivity. 6) This method cannot be applied immediately to all cases of a computation of the magnetic fields of currents with a given configuration. This is only possible in cases, where not only the field equations are satisfied but also the required boundary conditions and, above all, the condition of the continuity of the magnetic field at the boundary surface of the two domains. There are 19 figures and 2 references, which are Soviet.

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SOV/161-58-1-2/33

The Application of the Mirror Method in the Computation of the Magnetic Fields of Spatially Distributed Currents

ASSOCIATION: Kafedra teoreticheskikh osnov elektrotekhniki Moskovskogo energeticheskogo instituta (The Chair of Theoretical Foundations of Electrical Engineering at the Moscow Institute of Power-Engineering)

SUBMITTED: January 20, 1958

Card 5/5

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANOV, K.M.

3-58-2-10/33

AUTHOR: Polivanov, K.M., Professor, Doctor of Technical Sciences

TITLE: Ways of Improving the Teaching Process (Puti sovershenstvovaniya uchebnogo protsessa). Teaching Laboratories in the Higher Technical School (Uchebnyye laboratorii v vysshey tekhnicheskoy shkole)

PERIODICAL: Vestnik Vysshey Shkoly, 1958, # 2, pp 49-55 (USSR)

ABSTRACT: The author discusses the role which laboratories play in the students' technical education. The position of such laboratory work (before, during or after the course) is debatable. Various sequences are possible, but in the senior courses preference should be given to later laboratory work. Laboratory work should be regarded as the first step toward indenpendent research put to the student. The student should be in working conditions characteristic of those of an engineer-researcher. As it is impossible to let all students participate in similar laboratory work at one time, it is advisable to split the work into cycles.

ASSOCIATION: Moskovskiy energeticheskiy institut (The Moscow Power Engineering Institute)

AVAILABLE: Library of Congress

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001341810017-5

POLIVANOV, Konstantin Mikhaylovich, doktor tekhn. nauk, prof.; KUTYASHOV, Vasiliy Artem'yevich, assistent.

Surface effect in anisotropic sheets. Izv. vys. ucheb. zav; elektromekh. 1 no.3:3-11 '58. (MIRA 11:6)

1. Zaveduyushchiy kafedroy teoreticheskikh osnov elektrotekhniki Moskovskogo energeticheskogo instituta (for Polivanov). 2. Kafedra teoreticheskikh osnov elektrotekhniki Moskovskogo energeticheskogo instituta (for Kutyashov).
(Sheet steel--Magnetic properties)
(Sheet steel--Electric properties)

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