of precision forged parts which can be finished by polishing and lapping only. Such methods have led to substantial savings in metal and man hours in the production of turbine blades. The 20th Congress of the Communist Party indicated the necessity of using periodically rolled stock in forging for the sake of greater economy and efficiency. Large-sized aluminum alloy extruded structural members with complex cross sections are said to have wide application in airplanes, helicopters, and diesel locomotives. Research and experimental work in this field is reported to have resulted in improved production methods and higher mechanical properties of large-sized aluminum alloy structural parts. The results of these developments, together with some experimental work in sheet metal forming, are presented and graphed in this book. A part of the book deals with the study of plasticity and resistance to deformation of the new heat-resistant titanium, molybdenum, and aluminum alloys, and their suitability for forging and press forming. The authors mention the names of senior technicians P.I. Potanov, R.N. Yakovleva, and laboratory technicians V.B. Emelyanov, and A.V. Sokolov, who assisted in the experimental work.

TABLE OF CONTENTS;

Skugarev, I. G., and Korneyev, N. I.

"Investigation of the Deformation of Heat-Resistant Iron- and Nickel-Base Alloys", pp 34-40 from book "Obrabotka Splavov Davleniyem", Oborongiz, 1958 (TS 205 ob 6).

PHASE I BOOK EXPLOITATION SOV/3559

Akademiya nauk SSSR. Institut metallurgii. Nauchnyy sovet po probleme zharoprochnykh splavov

Issledovaniya po zharoprochnym splavam, t. 5 (Investigations of Heat-Resistant Alloys, Vol 5) Moscow, Izd-vo AN SSSR, 1959. 423 p. Errata slip inserted. 2,000 copies printed.

Ed. of Publishing House: V.A. Klimov; Tech. Ed.: I.F. Kuz'min; Editorial Board: I.P. Bardin, Academician, G.V. Kurdyumov, Academician, N.V. Ageyev, Corresponding Member, USSR Academy of Sciences (Resp. Ed.), I.A. Oding, I.M. Pavlov, and I.F. Zudin, Candidate of Technical Sciences.

PURPOSE: This book is intended for metallurgical engineers, research workers in metallurgy, and may also be of interest to students of advanced courses in metallurgy.

COVERAGE: This book, consisting of a number of papers, deals with the properties of heat-resisting metals and alloys. Each of the papers is devoted to the study of the factors which affect the properties and behavior of metals. The effects of various elements such as Cr, Mo, and W on the heat-resisting properties of various alloys are studied. Deformability and workability of certain metals as related to the thermal conditions are the object of another study described. The problems of hydrogen embrittlement, diffusion and the deposition of ceramic coatings on metal surfaces by means of electrophoresis are examined. One paper describes the apparatus and methods used for growing monocrystals of metals. Boron-base metals are critically examined and evaluated. Results are given of studies of interatomic bonds and the behavior of atoms in metal. Tests of turbine and compressor blades are described. No personalities are mentioned. References accompany most of the articles.

SKUGAREV, I. G.

2/2

PHASE I BOOK EXPLOITATION SOV/3791

Soveshchaniye po obrabotke zharoprochnykh splavov, Moscow, 1957.

Obrabotka zharoprochnykh splavov; [sbornik dokladov...] (Treatment of Heat-Resistant Alloys; Collection of Papers Read at the Conference), Moscow, Izd-vo AN SSSR, 1960. 231 p. 3,500 copies printed.

Sponsoring Agencies: Akademiya nauk SSSR. Institut mashinovedeniya. Komissiya po tekhnologii mashinostroyeniya; Akademiya nauk SSSR. Institut metallurgii im. A.A. Baykova. Nauchnyy sovet po problemam zharoprochnykh splavov.

Resp. Ed.: V.I. Dikushin, Academician; Ed. of Publishing House: V.A. Kotov; Tech. Ed.: V.V. Bruzgul'.

PURPOSE: This book is intended for metallurgists.

COVERAGE: The book consists of thirty papers read at the Conference on the Treatment of Heat-Resistant Alloys held in Moscow by the Committee on Machine-Building Technology, Institute of the Science of Machines, Academy of Sciences USSR, in 1957. The papers deal with four principal areas of alloy metallurgy: casting, forming, machining, and welding. The alloys (together with refractory carbides, borides, nitrides, and oxides) are discussed especially in connection with their application in the manufacture of turbine blades, heat engines, boilers, reactors, containers for high-temperature media, dies, casting molds, and metal-cutting tools. No personalities are mentioned. Some of the articles are accompanied by references, mainly Soviet.

PHASE I BOOK EXPLOITATION SOV/4708

Korneyev, Nikolay Ivanovich, Honored Scientist and Technologist, Doctor of Technical Sciences, Professor; and Ivan Grigor'yevich Skugarev, Candidate of Technical Sciences, Docent

Osnovy fiziko-khimicheskoy teorii obrabotki metallov davleniyem; termomekhanicheskiye faktory obrabotki metallov i splavov (Fundamentals of the Physicochemical Theory of Pressworking of Metals; Thermomechanical Factors in the Working of Metals and Alloys) Moscow, Mashgiz, 1960. 315 p. 5,000 copies printed.

Reviewer: G.A. Smirnov-Alyayev, Doctor of Technical Sciences, Professor; Ed.: G.M. Makovskiy, Engineer; Ed. of Publishing House: L.A. Osipova; Managing Ed. for Literature on Heavy Machine Building: S.Ya. Golovin, Engineer; Tech. Ed.: Z.I. Chernova.

PURPOSE: This book is intended for scientific workers, process engineers, and designers working in the fields of machine building and pressworking of metals. It can also be used by students attending schools of higher technical education.

COVERAGE: The book deals with the fundamental regularities (necessary as the scientific basis of the pressworking process) in relationships between thermomechanical factors of pressworking and the structure and mechanical properties

Card 1/7

of metals and alloys used in industry. The authors explain this relationship by using the "diagrams of plasticity", stress temperature curves for various types of deformation (tension, compression, twisting, impact toughness, etc.) True stresses, deformation resistance, recrystallization, anisotropy of mechanical properties, as well as constitution diagrams, typical structures and reference slides of micro- and macrostructures of deformed steels and alloys are discussed. Diagrams and structures are given for carbon steels, alloy steels, and high-alloy steels, for aluminum, magnesium, copper, titanium and their alloys, for the rare metals and alloys based on them (molybdenum, chromium, etc.). The author uses the term "obshchaya deformatsiya" (whole deformation), which is the ratio of the cross-section area of the ingot to the cross-section area of the finished product, or of the blank: $A_i/A_p = K$. Coefficient K is called the degree of the whole deformation. No personalities are mentioned. There are 108 references: 73 Soviet, 22 English, 11 German, and 2 French.

TABLE OF CONTENTS:

KABANOV, Yu. N.; KORNEYEV, N. I.; PEVZNER, S. B.; SKUGAREV, I. G.; KALUGIN, V. F.

Extra-strong pressed steel semifinished articles. Biul.tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch. i tekh.inform. no.10: 37-38 '62. (MIRA 15:10)

(Deep drawing(Metalwork))

NIKOL'SKIY, Leonid Aleksandrovich; SKUGAREV, I.G., kand.tekhn. nauk, retsenzent; SHUMSKAYA, L.G., red.izd-va; ORESHKINA, V.I., tekhn. red.

[Forging titanium alloy blanks] Goriachaia shtampovka zagotovok iz titanovykh splavov. Moskva, Mashinostroenie, 1964. 227 p. (MIRA 17:3)

ACCESSION NR: AP4012434 S/0129/64/000/002/0055/0058

AUTHOR: Kabanov, Yu. N.; Korneyev, N. I.; Kalugin, V. F.; Skugarev, I. G.; Pevzner, S. B.

TITLE: Technology of hot work hardening of steel during rolling and compression

SOURCE: Metalloved. i term. obrab. metallov, no. 2, 1964, 55-58

TOPIC TAGS: VL1steel, martensite steel, austenite steel, steel rolling, steel compression, steel strain hardening, steel work hardening

ABSTRACT: A technology for hot work hardening of steel during rolling and compression was developed using martensite class VL1 type steel for testing. The carbon content in the austenite has a vital bearing upon the process after work hardening had been attained. It was established that work hardening is augmented with a carbon content up to 0.5%. Steel with a carbon content of 0.6% or more is subject to brittle fracture after hot work hardening.

Card 1/2

ACCESSION NR: AP4012434

The optimal carbon content in steel for hot work hardening is from 0.45 to 0.55% with best hot work hardening attained with one roll pass. It was found that it is impossible to get a 90% deformation with a single pass, but up to 87% reduction with a single pass with some small billets was obtained with rapid temperature rises from 550 to 700C at the point of deformation. The sharp increase of temperature causes a partial recrystallization with ensuing reduction in work hardening. The specific pressure also rises sharply at deformations above 80%. The austenite which is most stable at 450C and least stable at 650C is preferably deformed at temperature slightly above 450C to prevent small reductions in temperature which may cause the austenite to transform. It is important that during the hot work hardening the prescribed temperatures during rolling (500-600C) be maintained without sharp heating and cooling. The austenite rolled with several passes was found to be harder than that with only one pass. The two rolling sequences which are given for this process are very complex, especially if used in industrial conditions. Orig. art. has: 6 figures.

ASSOCIATION: None

SUBMITTED: 00 DATE ACQ: 03Mar64 ENCL: 00

SUB CODE: ML NO REF SOV: 000 OTHER: 000

Card 2/2

L 22842-66 EWP(e)/EWT(m)/T/EWP(t)/EWP(k) JD/HW/DJ/WH

ACC NR: AP6011221 SOURCE CODE: UR/0413/66/000/006/0057/0057

INVENTOR: Bulanov, A. V.; Korneyev, N. I.; Skugarev, I. G.; Kalugin, V. F.

ORG: none

TITLE: Method of producing a lubricant for hot working of metals. Class 23, No. 179869

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 6, 1966, 57

TOPIC TAGS: lubricant, metal hot working, metal lubrication, metal lubricant

ABSTRACT: This Author Certificate introduces a method of producing a lubricant for hot working of metals based on aluminoborosilicate glass. To improve the lubricant quality and prevent crack formation on the surface of metal parts, the aluminoborosilicate glass is impregnated with sulfite waste liquor, which is followed by drying and application of a metal powder such as copper or iron. [ND]

SUB CODE: 11/ 13/ SUBM DATE: 30Nov64/ ATD PRESS: 4229

Card 1/1 UDC: 621.892:621.7.016.2

ACC NR: AP7004792 SOURCE CODE: UR/0413/67/000/001/0127/0127

INVENTOR: Pevzner, S. B.; Korneyev, N. I.; Skugarev, I. G.; Malashenko, Yu. V.; Yemel'yanov, V. B.; Zakharova, G. V.

ORG: none

TITLE: Method of welding dissimilar metals. Class 49, No. 190182

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 1, 1967, 127

TOPIC TAGS: dissimilar metal welding, ~~metal~~ vacuum welding, ~~welded~~ metal extrusion, WELDING TECHNOLOGY

ABSTRACT: This Author Certificate introduces method for welding dissimilar metals. Articles to be welded are heated and extruded in vacuum. To improve the weld quality, they are extruded through a die. [AZ]

SUB CODE: 11, 13/ SUBM DATE: none

Card 1/1 UDC: 621.791.4

8(6), 14(6) SOV/112-59-5-8703

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 5, p 42 (USSR)

AUTHOR: Skugarev, V.

TITLE: Standardization of Power House Dimensions for Rural Hydroelectric Generating Stations

PERIODICAL: Str-vo i arkhitektura, 1958, Nr 2, pp 20-22

ABSTRACT: The album of standardized dimensions for rural hydroelectric stations (T-462) published by the Ukranian Branch of Giprosel'elektro needs corrections: in some cases, the column and pier axes do not register, the modulus adopted for industrial constructions is not always observed, etc. As a result of the standardization of projects, the layouts of machine rooms of 100-7,500-kw stations are being recommended as proposed standards; all plan dimensions are multiples of the 0.5-m modulus, all vertical dimensions, 0.6-m modulus. A table of alternate projects is presented.

A.A.K.

Card 1/1

SKUDAREV, V. V.

SKUDAREV, V. V. - "On the theory of artificial magnetodielectrics". Moscow, 1955. Min Higher Education USSR. Moscow Order of Lenin Power Engineering Inst imeni V. M. Molotov, Chair of the Principles of Radio Engineering. (Dissertation for the Degree of Candidate of Technical Sciences).

SO: Knizhnaya Letopis' No. 46, 12 November 1955. Moscow

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

"To the Theory of Artificial Magnetodielectric from Matallic Powder," a paper submitted at the International Conference on Physics of Magnetic Phenomena, Sverdlovsk, 213-31 May 56.

9(2) SOV/162-58-3-9/26

AUTHOR: Skugarev, V.V.

TITLE: Modeling the Microstructure of Artificial Magnetodielectrics (Modelirovaniye mikrostruktury iskusstvennykh magnitodielektrikov)

PERIODICAL: Nauchnyye doklady vysshey shkoly, Radiotekhnika i elektronika, 1958, Nr 3, pp 63-69 (USSR)

ABSTRACT: The idea of modeling artificial magnetodielectrics is not new, it was practiced in the USSR by M.N. Grigor'yev and I.M. Kirko [Ref 1], and in England by Kharadly and W. Jackson [Ref 2]. However, these methods are inconvenient, especially the latter require a model of large dimensions. For investigating the medium permeability of the magnetodielectric, the author suggests using a ball, made of the material to be investigated, around which a measuring coil is wound and the ball is then placed in a homogenous magnetic field of the measuring unit. For experimental purposes, the author used steel balls of 15 mm diameter. The results of these experiments are shown

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Modeling the Microstructure of Artificial Magnetodielectrics

by graphs, figures 1-6. The author shows that the Ollendorf formula will change when taking into consideration the influence of the own magnetic fields of the particles on the magnetic permeability. The experimental data presented by the author confirm the possibility of controlling the frequency characteristic of magnetodielectrics by changing their structure. There are 6 graphs and 6 references, 1 of which is English, 1 German and 4 Soviet.

ASSOCIATION: Kafedra Rascheta i konstruirovaniya radioapparatury Ryazanskogo radiotekhnicheskogo instituta (Chair of Calculating and Designing Radio Equipment of the Ryazan' Institute of Radio Engineering)

SUBMITTED: April 11, 1958

30142
S/194/61/000/007/072/079
D201/D305

9,3280

AUTHOR: Skugarev, V.V., Ismailov, Sh.Yu., and Korichnev, L.P.

TITLE: A pulse-generator for the study of ferromagnetic materials

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 7, 1961, 34, abstract 7 K198 (V sb. Ferrity. Fiz. i fiz.-khim. svoystva, Minsk, AN BSSR, 1960, 643-644)

TEXT: Basic properties and circuit description are given of a pulse generator for the study of ferromagnetic materials. The generator supplies load currents $\approx$ 4 A. The leading edge of current pulse $\sim$ 0.02 μ sec, with pulse duration 1 - 20 μ sec. [Abstracter's note: Complete translation]

Card 1/1

SKUGAREV, V. V.

PHASE I BOOK EXPLOITATION SOV/4893

Vsesoyuznoye soveshchaniye po fizike, fiziko-khimicheskim svoystvam ferritov i fizicheskim osnovam ikh primeneniya. 3d, Minsk, 1959

Ferrity; fizicheskiye i fiziko-khimicheskiye svoystva. Doklady (Ferrites; Physical and Physicochemical Properties. Reports) Minsk, Izd-vo AN BSSR, 1960. 655 p. Errata slip inserted. 4,000 copies printed.

Sponsoring Agencies: Nauchnyy sovet po magnetizmu AN SSSR. Otdel fiziki tverdogo tela i poluprovodnikov AN BSSR.

Editorial Board: Resp. Ed.: N. N. Sirota, Academician of the Academy of Sciences BSSR; K. P. Belov, Professor; Ye. I. Kondorskiy, Professor; K. M. Polivanov; Professor; R. V. Telesnin, Professor; G. A. Smolenskiy, Professor; N. N. Shol'ts, Candidate of Physical and Mathematical Sciences; E. M. Smolyarenko; and L. A. Bashkirov; Ed. of Publishing House: S. Kholyavskiy; Tech. Ed.: I. Volokhanovich.

PURPOSE: This book is intended for physicists, physical chemists, radio electronics engineers, and technical personnel engaged in the production and use of ferromagnetic materials. It may also be used by students in advanced courses in radio electronics, physics, and physical chemistry.

COVERAGE: The book contains reports presented at the Third All-Union Conference on Ferrites held in Minsk, Belorussian SSR. The reports deal with magnetic transformations, electrical and galvanomagnetic properties of ferrites, studies of the growth of ferrite single crystals, problems in the chemical and physicochemical analysis of ferrites, studies of ferrites having rectangular hysteresis loops and multicomponent ferrite systems exhibiting spontaneous rectangularity, problems in magnetic attraction, highly coercive ferrites, magnetic spectroscopy, ferromagnetic resonance, magneto-optics, physical principles of using ferrite components in electrical circuits, anisotropy of electrical and magnetic properties, etc. The Committee on Magnetism, AS USSR (S. V. Vonsovskiy, Chairman) organized the conference. References accompany individual articles.

SOV/4893

Ferrites (Cont.)

AVAILABLE: Library of Congress (TK453.V75)

JA/dfk/os
5/2/61

Card 18/18

Card 4/18

SKUGAREV, V.V.

Generator of long pulses for the study of magnetic materials. Izv. vys. ucheb. zav.; radiotekh. 3 no.4:512-515 Jl-Ag '60. (MIRA 13:10)

1. Rekomendovano kafedroy avtomatiki i telemekhaniki Ryazanskogo radiotekhnicheskogo instituta.
(Oscillators, Electric) (Magnetic materials)

24229

9.2580
24.7900

S/142/61/004/001/008/008
E033/E135

AUTHORS: Skugarev, V.V., and Romanenko, A.P.

TITLE: A precision pulse generator for investigation of ferromagnetic materials

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiotekhnika, 1961, Vol.4, No.1, pp. 96-98

TEXT: The reliability of measurements of the pulsed characteristics of magnetic materials is determined to a great extent by the slope of the leading edge of the current pulse in the magnetizing coil of the sample under test and by the parasitic parameters of this coil. The conditions for measurement are optimum when the current pulse from the measuring generator has as steep a front as possible, and when the magnetizing winding consists of a single turn. Then, if a multi-coil is not used, a large current pulse is required from the output of the generator. The apparatus developed consists of a two-channel, current-pulse generator (Fig.1). The whole apparatus is synchronized by a symmetrical multivibrator (tubes Л1 and Л2), the differentiated pulses of which alternately trigger the trigger-pulse forming

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A precision pulse generator for ....

circuits (tubes Л3, Л4, Л5 and Л8, Л9, Л10). These circuits ignite the thyratrons Л6 and Л11, in the cathode circuits of which arise rectangular power pulses. These pulses are used in three channels. Firstly, they pass to the final stage (tubes Л7 and Л12), which consists of circuits with reservoir capacitors. The rectangular current pulse I_1, arising in the anode circuit of tube Л7, passes through the turn 1-1 of the magnetizing winding of the toroidal ferromagnetic sample. The current pulse I_2 of the anode circuit of tube Л12 passes through the turn 2-2 of the magnetizing winding. Since the magnetic fields of the currents I_1 and I_2 are in opposite directions, and tubes Л7 and Л12 operate for equal intervals of time successively, a successive reversal of magnetization of the sample occurs. The amplitudes of the currents I_1 and I_2 can be regulated independently from 0 to 15 A each by changing the anode voltage of the tubes Л7 and Л12. The slopes of the leading edges of the pulses are approximately 7 n-sec (7×10^{-9}). The pulse duration of the apparatus was 0.25 microseconds. Rectangular pulses from the tubes Л6 and Л11 after integration are also used as saw-tooth, sweep-voltages for synchronizing the display with the generator. Part of the voltage of the rectangular pulses

A precision pulse generator for ... S/142/61/004/001/008/008
E033/E135

is used for brightening up the tube. Thus, in the apparatus described, "jitter" of the investigated e.m.f. (taken from the measurement winding of the toroid) is excluded from the screen of the tube. This is a complete translation.
There are 1 figure and 1 Soviet reference.

ASSOCIATION: Kafedra avtomatiki i telemekhaniki Ryazanskogo radiotekhnicheskogo instituta
(Department of Automatics and Telemechanics of the Ryazan Radio-Engineering Institute)

SUBMITTED: May 21, 1960

Card 3/5

9.2586

S/142/60/003/004/011/013
E192/E382

AUTHOR: Skugarev, V.V.

TITLE: Generator of Long Pulses for the Investigation of Magnetic Materials

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiotekhnika, 1960, Vol. 3, No. 4, pp. 512-515

TEXT: A pulse generator for the investigation of magnetic materials should meet the following requirements: the current pulses at their output should have double polarity and it should be possible to change the amplitude of the pulses of each polarity. In this way, it would be possible to make measurements on symmetrical systems. The pulses should be sufficiently long so that all the transient processes are completed during each pulse. The instrument described meets the above requirements. The system consists of a driver oscillator operating at 500 c.p.s. and two identical pulse channels. The outputs of each channel are applied to two magnetizing coils of the measured sample. These coils are connected "against each other" so that the direction of the magnetizing field can be changed. A detailed circuit diagram of the

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Generator of Long Pulses for the Investigation of Magnetic Materials

driver oscillator and one of the channels is shown in Fig. 2. The pulses obtained from the oscillator are differentiated and applied to a monostable circuit; they are also applied to a sharpening amplifier stage. The output of this amplifier stage triggers a thyratron which produces a very fast pulse with an exponential tail. Simultaneously, another thyratron is triggered and this commences the charging of a storage capacitance C_{18} whose charge increases exponentially. The outputs of the two thyratrons are combined in the common load of two output tubes, where a sharp rectangular pulse is thus produced. The duration of the pulse produced by the monostable circuit is 500 ms. When this pulse is terminated the storage capacitance C_{18} is rapidly discharged by a switching tube. The pulse obtained at the anodes of the output tubes is therefore terminated. The control of the current amplitude at the output is effected by varying the anode

S/120/62/000/001/024/061
E140/E463

AUTHORS: Miroshnik, I.A., Skugarev, V.V.

TITLE: Two-channel pulse generator

PERIODICAL: Pribory i tekhnika eksperimenta, no.1, 1962, 108

TEXT: The instrument is intended to generate high-current pulses (3 to 20 A) for the study of thin-film magnetic memories. Rise-times of the order of 2 ns are obtained by the use of a transmission line with nonlinear inductance. Repetition rate is 50 cps, duration 250 ns. The display is jitterfree precisely because of operation synchronous with the mains. Vacuum tube and thyratron circuits are used throughout. A CRT monitor is built into the instrument. There are 2 figures.

ASSOCIATION: Ryazanskiy radiotekhnicheskiy institut
(Ryazan' Radio Engineering Institute)

SUBMITTED: June 25, 1961

Card 1/1

L 04709-67 EWT(d)/EWP(c)/EWP(v)/EWP(k)/EWP(h)/EWP(l) JT-2
ACC NR: AP6017930 SOURCE CODE: UR/0378/66/000/002/0103/0103

AUTHOR: Skugarev, V. V.

81 82
B

ORG: none

TITLE: Second Conference on the Results of Scientific Research Studies Carried Out in 1965 in the Sector of Engineering Cybernetics

SOURCE: Kibernetika, no. 2, 1966, 103

TOPIC TAGS: medical conference, cybernetics, data processing conference, computer application, computer technology, computer theory, pattern recognition, data processing, automation, computer memory, analog computer/Dnepr-2 computer

ABSTRACT: The Second Conference on the Results of Studies Carried Out in 1965 in the Sector of Engineering Cybernetics of the Institute of Cybernetics of the Ukrainian Academy of Sciences was held in Kiev at the Institute of Cybernetics from 17 to 21 January 1966. It was attended chiefly by scientists and engineers from Kiev and by some individual representatives of other cities. Fifty-five papers were presented on the development of special-purpose computers, units and elements of electronic digital computers, and on the application of control computers, pattern recognition, and others. A great deal of attention was paid to a series of papers on the development of a new computer, the "Dnepr-2," which is intended for solving technological control problems as well as for data processing.

Card 1/2

L 04709-67

ACC NR: AP6017930

A series of papers dealt with information and information-control systems, with results obtained in the theory of control computers and their practical application to continuous technological processes, and also with prospects of further development of studies in this field.

A large number of articles were dedicated to development of analog computers. The principles of constructing and the methods of studying dynamic models were analyzed. It was reported that a new, special-purpose electrical analog computer for calculating PERT systems has been developed.

Three papers dealt with theoretical pattern recognition problems. In one paper, data on a newly developed model of a reading automaton with an electro-optical converter and an optical gage were presented.

A great deal of interest was shown in a paper dealing with the development of a memory using thin ferromagnetic films. Storage of information on magnetic cards, recording on electrochemical paper, and the problem of developing analog-digital converters were analyzed and information concerning a system of mechanisms linking slow technological processes with digital control computers was presented in a series of papers. In several papers, computer methods for calculating electromagnetic fields and the automatic analysis of complex direct-current networks were considered. [ATD PRESS: 5018-F]

SUB CODE: 06, 09 / SUBM DATE: none

Card 2/2 fv

ACC NR: AT7028121 SOURCE CODE: UR/0372/66/000/005/G036/G036

AUTHOR: Skugarev, V. V.; Noskova, A. P.; Kislenko, S. A.

TITLE: Computer design of linear dc circuits

SOURCE: Ref. zh. Kibernetika, Abs. 5G243

REF SOURCE: Sb. Metody matem. modelir. i teoriya elektr. tsepey. Vyp. 6. Kiyev, 1965 38-62

TOPIC TAGS: electronic circuit, circuit design, computer technique, computer programming

ABSTRACT: The efficiency of loop current and node voltage circuit analysis methods is compared. In most cases the permissible amount of data on circuit branches that can be stored in an immediate-access memory unit is about the same for both methods; however, when the permissible amount of data on circuit nodes is considered the loop current method seems to be more practical. In the case in which the loop current method is used definite difficulties are encountered in finding independent loops for the analysis. A technique is proposed for storing circuit data by which circuits containing up to 63 nodes can be analyzed on a 3-address machine with a 4096-cell immediate-access storage unit. A specific program for the search of independent loops has been constructed for machines with a 36-unit address of operative memory cells. [Translation of abstract] 9 illustrations and bibliography of 4 titles. G. Ya.

SUB CODE: 09

Card 1/1 UDC: 62-506:681.142.62

KORNEYEVA, N.I., doktor tekhn. nauk, prof., red.; SKUGAREVA, I.G., kand. tekhn. nauk, dots., red.; DUKHOVNYY, A.S., inzh., red.; STARYKH, A.P., red.izd-va; CRESHKINA, V.I., tekhn.red.

[Precision forging of parts from high-alloy steels and alloys]Tochnaia shtampovka detalei iz vysokolegirovannykh stalei i splavov; sbornik statei. Moskva, Oborongiz, 1963. 128 p. (MIRA 16:3)

(Forging)

[redacted], M. A.

Electric Currents

Distribution of electric current in an infinite circular cylinder. Trudy Geof. inst. AN SSSR no. 12 (139):66-68 '50.

9. Monthly List of Russian accessions, Library of Congress, July 1952, UNCL.

SKUGAREVSKAYA, O. A.

USSR/ Geophysics - Geophysical Prospecting
Resistivity Method

Jul/Aug 50

"Establishment of an Electric Current in a Nonhomogeneous Stratified Medium, II," A. N. Tikhonov, O. A. Skugarevskaya, Geophys Inst, Acad Sci USSR

"Iz Ak Nauk SSSR, Ser Geograf i Geofiz" Vol XIV, No 4, pp 281-293

Solves problem of electric current set up in stratified medium z 0. Current is excited when supply circuit on the surface z = 0 is closed. Gives asymptotic formulas for layer lying on nonconducting half-space, which are convenient for calculating final stages. Compares results with initial stage as discussed in previous article. Submitted 12 Jan 50

[redacted]

PA 164T35

USSR/Geophysics - Electrical Field Nov/Dec 51
In Layer

"Initial Stage of the Process of Growth of an Electrical Current in a Layer Lying Upon an Ideally Conducting Basis," O. A. Skugarevskaya, Geophys Inst, Acad Sci USSR

"Iz Ak Nauk SSSR, Ser Geofiz" No 6, pp 28-36

Considers the problem concerning the growth of an elec field in a conducting layer lying on an ideally conducting foundation. Gives computational formulas that permit one to det the initial stage of the process. Gives graphs of the curves

199T73

USSR/Geophysics - Electrical Field Nov/Dec 51
In Layer (Contd)

showing the growth of an elec field, calcd for various thicknesses of the layer. Submitted 13 Jun 51.

199T73

USSR/Geophysics - Electrical Field Nov/Dec 51
in Earth

"Final Stage of the Process of Growth of an Electrical Current in a Layer Lying Upon an Ideally Conducting Basis," O. A. Skugarevskaya, Geophys Inst, Acad Sci USSR

"Iz Ak Nauk SSSR, Ser Geofiz" No 6, pp 37-49

Determines the asymptotic (for large values of the time) field of growth of an elec current in a layer lying on an ideally conducting foundation. Considers 2 schemes for the disposition of the receiving and supplying (feeder)

199T74

, O. A.

USSR/Geophysics - Electrical Field Nov/Dec 51
in Earth (Contd)

electrodes: parallel disposition and axial disposition. The computed curves are composed of the curves of the field growth which represent the initial stage of the process. The curves are computed for various values of the depth of the layer. Submitted 16 Jun 51.

199T74

USSR/Geophysics - Electrical Field Nov/Dec 51
in Layers

"Growth of an Electrical Current in a Nonhomogeneous Laminar Medium," A. N. Tikhonov, O. A. Shugarevskaya, Geophys Inst, Acad Sci USSR

"Iz Ak Nauk SSSR, Ser Geofiz" No 6, pp 50-55

Gives results of computations relating to the problem concerning the growth of an electromagnetic field in a stratified nonhomogeneous space (in z-plane) which is excited upon the closing of the supply circuit lying on the surface z=0. Considers a conducting layer of

199T75

USSR/Geophysics - Electrical Field Nov/Dec 51
in Layers (Contd)

thickness L (cond s), lying on a nonconducting foundation; also considers the case for a conducting foundation. In both cases 2 schemes of the disposition of the receiving and feeding electrodes are considered: parallel and axial. Submitted 13 Jun 51.

199T75

SHUGAREVSKAYA, O.A.

ENENSHTEYN, B.S.; RYBAKOVA, Ye.V.; SKUGAREVSKAYA, O.A.

Some results of experimental research in conditions of formation of an electric current in the earth. Izv.AN SSSR.Ser.geofiz. no.4: 475-478 Ap '56. (MLRA 9:8)

1. Akademiya nauk SSSR, Geofizicheskiy institut.
(Terrestrial electricity)

VLADIMIROV, N.P.; MAUMENKOV, N.L.; RASSOMAKHIN, G.I.; SKUGAREVSKAYA, O.A.

Experimental studies of the phenomena of electromagnetic field formation in a multilayered medium. Izv.AN SSSR Ser.ge ofiz.no.6:708-711 Je '56. (MLRA 9:9)

1.Akademiya nauk SSSR, Geofizicheskiy institut.
(Terrestrial electricity)

Skugarevskaya, O.A.

49-58-3-7/19

AUTHORS: Tikhonov, A.N. and Skugarevskaya, O.A.

TITLE: On the Interpretation of the Creation of an Electric Field in a Layered Medium (Ob interpretatsii protsessa stanovleniya elektricheskogo polya v sloistykh sredakh)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geofizicheskaya, 1958, Nr 3, pp 358-362 (USSR)

ABSTRACT: It is assumed that the field is excited by a direct current dipole on the surface of a layered, semi-infinite medium. Curves are calculated of the spatial distribution of the field for the equatorial and axial positions of the source and the measuring dipoles. The electric field is found to depend on the specific resistance of the medium, the distance from the field source and the time. Graphs are given for examples with two and three layers and an equatorial layout at constant time. The two-layered example has a conductor resting on an insulator and the three-layered has a top layer with four times the resistance of the middle layer and, again, an insulator as the base. The author next gives curves for the variation of field with time. The experimental curves in this type of experiment are usually plotted as apparent specific resistance against either distance between the dipoles or time. To interpret this experimental data, the curve thus

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On the Interpretation of the Creation of an Electric Field in a Layered Medium.

drawn is replaced by the most appropriate theoretical wave. In the particular case of a layered medium underlain by a semi-infinite expanse of high resistance an asymptotic form of the calculation can be made in order to find the specific resistance, etc. Acknowledgement is made to K.P.Koroleva for her participation in the calculations. There are 8 figures and 8 Russian references.

ASSOCIATION: Academy of Sciences USSR, Institute of Physics of the Earth (Akademiya nauk SSSR, Institut fiziki Zemli)

SUBMITTED: May 28, 1957.

AVAILABLE: Library of Congress.

SKUGAREVSKAYA, O. A., Candidate Phys-Math Sci (diss) -- "A theoretical study of the establishment of an electromagnetic field in laminar media". Moscow, 1959. 7 pp (Acad Sci USSR, Inst of Phys of the Earth im O. Yu. Shmidt), 125 copies (KL, No 25, 1959, 127)

AUTHOR: Skugarevskaya, O. A. SOV/49-59-1-7/23

TITLE: Calculation of the Final Stage of the Process of Establishment of an Electric Field in a Three-Layer Medium (Raschet konechnoy stadii protsessa stanovleniya elektricheskogo polya v trekhsloynoy srede)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geofizicheskaya, 1959, Nr 1, pp 59-72 (USSR)

ABSTRACT: The paper discusses establishment of an electric field in a medium consisting of two horizontal uniform and isotropic layers lying on an ideal insulator (Fig.1). The insulator lies at a depth ℓ below the surface of the top layer, the thickness of which is equal to $q\ell$. Permeability of all the layers is taken to be the same and equal to 1. The semi-space above the top layer is assumed to be an insulator ($\sigma_0 = 0$). Electrical conductivities of the two isotropic layers are denoted by σ_1 and σ_2. It is assumed that the electromagnetic field is excited by a dipole (shown as AB in Fig.2). The problem reduces to a solution of Maxwell's equations for a quasi-stationary case allowing for continuity of

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Calculation of the Final Stage of the Process of Establishment of an Electric Field in a Three-Layer Medium

the tangential components of the electric and magnetic field vectors E and H at the boundaries of the layers. The solution must also allow for zero initial conditions, disappearance of the fields at infinity and the special property of the magnetic field which can be expressed in the form

$$\oint H_s ds = \frac{4\pi}{c} I$$

which gives the circulation of the magnetic field vector H along an infinitely small contour enclosing a conductor carrying a current I. The method of solution of this problem was given by A. N. Tikhonov in Refs. (2) and (3). The paper includes a graph of the electric field plotted against a reduced time τ (Fig.3) which can be used as an aid in calculation, if it is made into a transparent grid.

Acknowledgments are made to A. N. Tikhonov for his advice.

SOV/49-59-1-7/23

Calculation of the Final Stage of the Process of Establishment of an Electric Field in a Three-Layer Medium

There are 3 figures and 7 Soviet references.

ASSOCIATION: Akademiya nauk SSSR, Institut fiziki Zemli (Ac.Sc. USSR, Institute of Earth Physics)

SUBMITTED: September 19, 1957

Card 3/3

SOV/49-59-6-2/21

AUTHORS: Tikhonov, A. N., Skugarevskaya, O. A.

TITLE: Asymptotic Behaviour of Formation of the Electromagnetic Field.

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geofizicheskaya, 1959, Nr 6, pp 804-814 (USSR)

ABSTRACT: The formation of an electromagnetic field in the ground at greater distances from an underground dipole is described. The components of the electric field on the axis x are denoted as $E_x(x, y, z, t)$ while the vertical components of the magnetic field are denoted as $H_x(x, y, z, t)$. The receiving dipole is placed at the distance $\varrho = \sqrt{x^2 + y^2}$ (Fig 1). In order to obtain the asymptotic expression of the field, the Bessel function, Eq (1), and the expressions (2) and (3) are introduced. Thus the formulae (4) to (6) are obtained. It should be noted that $X_0(z, t) = 0$ (Eqs 7-9). Therefore, the terms in Eqs (4), (5) and (6) containing $X_0(0, t)$ are excluded. As an example, a

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Asymptotic Behaviour of Formation of the Electromagnetic Field

homogeneous layer of the thickness ℓ and of the conductivity $\sigma = \sigma_1$, placed on a non-conductive base (Fig 2) is considered. The conditions describing $X_1(z, t)$ are:

$$\frac{\partial^2 X_1}{\partial z^2} = \frac{1}{a^2} \frac{\partial X_1}{\partial t} \quad ;$$

$$\frac{\partial X_1}{\partial z} = -2 \ (z = 0); \quad \frac{\partial X_1}{\partial z} = 0 \ (z = \ell);$$

$$X_1(z, 0) = 0 \quad (t = 0) .$$

The function $X_1(z, t)$ at $t \to \infty$ cannot converge to $X_1(z, \infty)$ due to $z = 0$ (direct current), i.e. it would increase together with an increase of t. Therefore it cannot be shown that:

Asymptotic Behaviour of Formation of the Electromagnetic Field

$$X_1(z, t) = Ct + \bar{X}_1(z, t)$$

$$\bar{X}_1(z, t) = X_1^{(o)}(z) + \tilde{\bar{X}}_1(z, t),$$

$$\lim_{t \to \infty} \tilde{\bar{X}}_1(z, t) = 0$$

where $\tilde{\bar{X}}_1(z, t)$ represent the limiting values described by Eqs (10) to (19). Figs 3 and 4 illustrate the curves characterizing the formation of the electric field, for the case of equatorial and axial distribution of electrodes, respectively. The axis y represents the logarithms of $\bar{E}|_{\rho=y}$ and $\bar{E}|_{\rho=x}$ while the axis x represents the

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Asymptotic Behaviour of Formation of the Electromagnetic Field

logarithm of τ (top of p 812). The values of

$$\frac{I\,dx}{2\pi\sigma_1\rho^3} \quad \text{and} \quad \frac{I\,dx}{\pi\sigma_1\rho^3}$$

are equivalent to the stationary components E_x. The curves were plotted for various $L = \rho/l$ according to Ref 4. The dotted curves were calculated from the formulae of this work. Fig 5 shows the curve calculated from Eqs (17) to (19) for the following data: $l = 1/20$ of the distance between the electrodes, $\sigma_1 = 0.1$. The asymptote intersects the axis $\log \rho_k = 0$ at the point ξ; for which $\log t_o$ was calculated from Eq (20), where:

$$S = 10^3 \sqrt{\frac{t_o}{0.314}}$$

Card 4/5 The conductivity σ_1 was determined from:

Asymptotic Behaviour of Formation of the Electromagnetic Field

$$\sigma_1 = \frac{2t_0}{3(\varphi_k t_0 - t)}$$

Thus the segment ABC of the curve is described in terms of $S = \sigma_1 l$ for the large $L = \varphi/l$. Acknowledgments are made to K. P. Korolev for his work on the calculations. There are 5 figures and 15 references, of which 12 are Soviet and 3 are English.

ASSOCIATION: Akademiya nauk SSSR, Institut fiziki Zemli (Academy of Sciences USSR, Institute of Physics of the Earth)

SUBMITTED: April 15, 1958.

SOV/49-59-7-1/22

AUTHORS: Tikhonov, A. N. and Skugarevskaya, O. A.

TITLE: On the Asymptotic Behaviour of Formation of the Electro-Magnetic Field in Stratified Media

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geofizicheskaya, 1959, Nr 7, pp 937-945 (USSR)

ABSTRACT: This is a continuation of the work published in this journal, 1959, Nr 6 (Ref 1). The assumption is made that the source of disturbances is represented by a dipole dx long, placed in the origin of the coordinates xyz (Fig 1). Then the asymptotic formula of the electric field $E_x(x, y, z, t)$ and the vertical components of the magnetic field $H_z(x, y, z, t)$ are defined as Eqs (1)-(3) (Ref 1). The problem of the formation of the asymptotic field can be solved when the limiting conditions of X_n and Z_n are defined. This can be done when the main terms of Eqs (1)-(3) are calculated in respect to ρ, i.e. the functions X_2 and Z_o and the function X_1 are determined. The former are expressed as in Ref 1, the latter can be written as:

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On the Asymptotic Behaviour of Formation of the Electromagnetic Field in Stratified Media

$$X_1(z, t) = Ct + \bar{X}_1(z) + \bar{\bar{X}}_1(z, t) \quad ,$$

where the functions $\bar{X}_1(z)$ and $\bar{\bar{X}}_1(z, t)$ are defined by Eqs (4) to (6). The function $\bar{X}_1(x)$ within the limits z and l, which are equivalent to 0 and z, can be defined as Eqs (7) to (9). Since the function $\bar{\bar{X}}_1(z, t)$ for large t with the accuracy of e^{-kt} is disregarded, then the expression for $X_1(z, t)$ will take the form as stated at the top of p 940. The conditions of the function $X_2(z,t)$ can be described as Eqs (10) to (14). The function $Z_o(z,t)$ can be derived from the relation $Z_o(z,t) \approx R(z)t + \bar{Z}(z)$ where $R(z)$ and $\bar{Z}(z)$ are limited by the conditions Eqs (15)

On the Asymptotic Behaviour of Formation of the Electromagnetic Field in Stratified Media

and (16), where the value of R is related to the earth's stratification (Fig 2), as shown in Eq (17). The function $Z_o(0, t)$ in Eqs (1) and (2) will be determined when its derivate is found. This can be done when the term $\overline{Z}'(\zeta) = \beta$ is introduced in Eq (16). Thus, Eqs (18) to (21) are obtained. Finally, when the derivate

$$\frac{\partial X_2}{\partial t}(0, t) = 2Nt + M(0)$$

is determined and substituted into the expressions for

$$\frac{dR}{dz}, \quad \frac{d\overline{Z}}{dz}, \quad N, \quad M(0), \quad \overline{X}_2(0)$$

in Eqs (1) to (3), the components $\overline{E}_x$ and $\overline{H}_z$ will be found as shown in the lower part on p 944. Thus, the components of the electromagnetic field of the stratified

On the Asymptotic Behaviour of Formation of the Electromagnetic Field in Stratified Media

medium are determined in terms of a total conductivity S and by the supplementary characteristics of the medium

$$E_o^{ekv}, \quad E_o^{os}, \quad H_1 .$$

The latter can be found experimentally in the same way as S and σ_1 were obtained. The case of a 2-layer cross-section described by σ_1, σ_2, h_1 and h_2 placed on an insulator will be published later. There are 2 figures and 1 Soviet reference.

ASSOCIATION: Akademiya nauk SSSR, Institut fiziki Zemli (Academy of Sciences, USSR, Institute of Physics of the Earth)

SUBMITTED: April 15, 1958.

SOV/49-59-10-8/19

AUTHORS: Enenshteyn, B. S., Skugarevskaya, O. A., and Rybakova, Ye. V.

TITLE: Some Data on the Sounding by a Method of Electric Current Generated in the Ground

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geofizicheskaya 1959, Nr 10, pp 1486-1491 (USSR)

ABSTRACT: An apparatus and the method of its application is described. The design of a receiving station is illustrated in Fig 1. It consists of a DC amplifier 1 (Fig 2), a cathode-ray oscillograph 2, whose screen is photographed during the setting up of a tension ΔV in the receiver, and a pulse generator 3 (Fig 3). The measurements were carried out "in situ" and the curves of resistivity as a function of time, $\tilde{\rho}_k(t)$, were determined (Figs 4 to 6). The analysis of the curves showed that by this method a quantitative data of the geo-electric properties in a given cross-section can be determined. This method can be very economical if a fast plotting of graphs can be accomplished with the help of an electric computing machine. There are 6 figures and 2 Soviet references.

Card 1/2

SOV/49-59-10-8/19

Some Data on the Sounding by a Method of Electric Current Generated in the Ground

ASSOCIATION: Akademiya nauk SSSR Institut Fiziki Zemli (Academy of Sciences USSR. Institute of Physics of the Earth)

SUBMITTED: June 17, 1958

Card 2/2

KOROLEVA, K.P.; SKUGAREVSKAYA, O.A.

Late stage of generating a magnetic field in layered media. Izv. AN SSSR. Ser. geofiz. no.4:506-513 Ap '62. (MIRA 15:4)

1. Magnitnaya laboratoriya AN SSSR.
(Electromagnetic prospecting)

ACCESSION NR: AP4030337 S/0049/64/000/003/0354/0359

AUTHORS: Ivanov, A. P.; Nikitina, V. N.; Skugarevskaya, O. A.

TITLE: Frequency interpretation of curves for the establishment of an electrical field

SOURCE: AN SSSR. Izv. Ser. geofiz., no. 3, 1964, 354-359

TOPIC TAGS: electric field, frequency sounding, geophysical prospecting, field buildup

ABSTRACT: A method for setting up electrical fields for purposes of geophysical prospecting, with simplicity of equipment and techniques as primary objectives, is considered. This method is distinguished by the use of alternating current through a very broad, almost continuous, range of frequencies from tens of cycles to steady current. The field is simply established: sudden switching of direct current into a grounded electrical dipole. The entire process of field buildup is recorded by a DC amplifier in a short interval of time, on the order of a few tens of seconds. As the field spreads through the ground, it is attenuated irregularly by variations in the ground, and phase shifts give a time factor to

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ACCESSION NR: AP4030337

the buildup process. Methods for transposing the buildup curves to frequency-sounding curves for interpreting subsurface conditions are discussed. Replotting the buildup curves to frequency-sounding curves is suitable only when the buildup curves are satisfactorily recorded and are good enough for interpretation as build-up curves. If the record is made against a noisy background, the curves are unsuitable for interpretation as buildup curves. Orig. art. has: 1 figure and 11 formulas.

ASSOCIATION: Akademiya nauk SSSR Geologicheskiy institut (Academy of Sciences SSSR, Geological Institute)

SUBMITTED: 23Apr63 DATE ACQ: 29Apr64 ENCL: 00

SUB CODE: ES NO REF SOV: 005 OTHER: 000

Card 2/2

KOROLEVA, K.P.; SKUGAREVSKAYA, O.A.

Formation of a magnetic field induced by a horizontal electric dipole immersed in a homogeneous conducting half-space. Izv. AN SSSR. Fiz. zem. no.2:28-40 '65. (MIRA 18:6)

1. Geologicheskiy institut AN SSSR.

[redacted], V.N.; [redacted]

[redacted] of an electric field in a homogeneous half-space in the case of an immersed source. Izv. AN SSSR. Fiz. zem. no.2:41-49 '65. (MIRA 18:6)

1. Geologicheskiy institut AN SSSR.

T[illegible]KHONOV, A.N.; SH[illegible]AR[illegible]KAYA, C.A.; FR[illegible]OV, F.F.

Resolving power of the method of magnetic field establishment. Izv. AN SSSR Fiz. zem. no.5:42-51 '65. (MIRA 18:6)

1. Geologicheskiy institut AN SSSR.

SKUGAREVSKAYA, Ye.I.

Change in serotonin metabolism during the treatment of patients suffering from manic-depressive psychosis. Zdrav.Bel. 8 no.12: 28-30 D '62. (MIRA 16:1)

1. Kafedra psikhiatrii Minskogo meditsinskogo instituta (zav. kafedroy - prof. M.A.Chalisov).
(SEROTONIN) (MANIC-DEPRESSIVE PSYCHOSES)

SKUGAREVSKAYA, Ye.I.

Induced insanity. Zdrav. Bel. 9 no.7:33-34 Jl '63 (MIRA 17:4)

1. Iz kafedry psikhiatrii (zav. - prof. V.I. Akkerman) Grodnenskogo meditsinskogo instituta i Grodnenskoy oblastnoy klinicheskoy psikho-nevrologicheskoy bol'nitsy "Boyary" (glavnyy vrach A. Ye. Kaplan).

SKUGAREVSKAYA, Z.I.

[Organization of obstetrical and gynecological assistance in the U.S.S.R.] Organizatsiia akushersko-ginekologicheskoi pomoshchi v SSSR. Moskva, Medgiz, 1956. 202 p. (MLRA 9:7)
(OBSTETRICS)

SKUGAREVSKAYA, Z.I.(Moskva)

Obstetrical visits in rural areas. Fel'd. i akush.no.1:26-31 Ja '56 (MLRA 9:4)

(MIDWIVES) (PUBLIC HEALTH, RURAL) (GYNECOLOGY)

SKUGAREVSKAYA, Z.I. (Moskva)

Development of a network of obstetrical and gynecological beds in rural districts. Sov. zdrav. 19 no.6:20-23 '60. (MIRA13:9)

1. Iz kafedry akusherstva i ginekologii (zav. - prof. K.N.Zhmakin) I Moskovskogo ordena Lenina meditsinskogo instituta im. I.M.Sechenova.
(OBSTETRICS) (GYNECOLOGY) (HOSPITALS, RURAL)

SKUGAREVSKIY, A.F.

Effect of aminazine therapy on the dynamics of some free amino acids in the blood serum in schizophrenia. Zdrav.Bel. 8 no.5:30-35 My '62. (MIRA 15:10)

1. Kafedra psikhiatrii Minskogo meditsinskogo instituta (zav. kafedroy - prof. M.A.Chalisov).
(SCHIZOPHRENIA) (AMINO ACIDS) (CHLORPROMAZINE)

SKUGAREVSKIY, A.F.

Effect of aminazine therapy on the serotonin in the blood and the excretion of 5-hydrozyindolacetic acid in the urine of patients with schizophrenia. Zdrav. Bel. 8 no.6:45-48 Je'62. (MIRA 16:8)

1. Kafedra psikhiatrii Minskogo meditsinskogo instituta (zav. kafedroy - prof. M.A.Chalisov)
(CHLORPROMAZINE) (SEROTONIN)
(SCHIZOPHRENIA) (INDOLACETIC ACID)

SKUGAREVSKIY, A.F.

Neuroleptic syndrome in schizophrenia. Zdrav. Bel. 9 no.8: 25-28 Ag '63 (MIRA 17:3)

1. Iz kafedry psikhiatrii (zav. - prof. V.I.Akkerman) Grodnenskogo meditsinskogo instituta.

SKUGOREVA, G.

Our reply to Ignatov. Mias. ind. SSSR. 30 no.4:25 '59.
(MIRA 12:12)

1.Kiyevskaya kolbasnaya fabrika.
(Sausages)

SKUBOROV, V.

Adult Education

"From Zaporozhe to Simferopol," Klub, No. 5, 1952.

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

1. SHUBOROV, V.

2. USSR (600)

4. Coal Miners

7. For labor discipline. Klub no. 10, 1952.

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

1. V. SKUGOROV
2. USSR (600)
4. Adult Education
7. Dormitory's red corner. Klub No. 11. 1952

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

1. [illegible], V.
2. U13[illegible] (ed.)
4. Community Centers
7. Under the fire of criticism, Klub no. 12, 1953.

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

[redacted]

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

SKUGOROV, V.

Mingechaur - Industrial recreation

Well-organized leisure for the builders of Mingechaur. Klub 2, No. 3, 1953.

Monthly List of Russian Accessions, Library of Congress, June 1953. Unclassified.

1. SKUCHOV, V.

2. USSR (600)

4. Lumbermen

7. Club mobilizes lumbermen to carry out the five-year plan, Klub, 2, no. 4, 1953.

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

SKUGOROV, V.N., inzh.

Transient processes in wide band RC amplifiers. Trudy MEI no.13: 162-173 '53. (MIRA 11:4)
(Electronic circuits)

Skugorov, V.N.

2

2179. A SELF-REGULATED OSCILLATOR. 621,373.42,029.3
Elektrichestvo, 1956, No. 11, 74-6. In Russian. V.N.Skugorov.

The audio-frequency oscillator described is of the type used in bridge circuits for measuring non-electrical quantities. Variations of mains voltage cause greater measuring errors than any other source of error unless the amplitude of the generator can be stabilized not only against relatively slow variations (which is possible by known methods), but also against sudden surges of the mains voltage. This problem is solved by the use of a reference oscillator which is controlled by the difference between the output of the a.f. oscillator and a reference voltage. A correcting bias is applied to the grid of the oscillator. The controlling voltage, even after rectification, contains an appreciable a.c. component and harmonics, and therefore must be filtered before being applied to the grid. Large variations of anode and heater voltage of the oscillator have a negligible effect on its output voltage. The control is practically inertia-less.

B.F.Kraus

119-3-5/14

AUTHOR: Skugorov, V. N.

TITLE: Conductometric Transmitter Without Electrodes (Bezelektrodnyy konduktometricheskiy datchik)

PERIODICAL: Priborostroyeniye, 1958, Nr 3, pp. 15 - 19 (USSR)

ABSTRACT: A disadvantage of the conductometers used so far is the fact that the chemical solutions to be analyzed can be modified by the immersion of the electrodes.
In the new conductometers the liquid to be investigated is put into a glass vessel. Metal plates are applied to the outer wall of the vessel. By this means a condenser system is formed.
For this whole system, which can be regarded as a condenser connected in parallel and a resistance, at first theoretically and then by experiment are computed or determined respectively:

the general electric conductivity and
the sensitivity of the transmitter in dependence on the electric conductivity of the chemical solution.

Card 1/2

119-3-5/14

Conductometric Transmitter Without Electrodes

There are 9 figures, and 9 references, 1 of which is Slavic.

AVAILABLE: Library of Congress

1. Transmitters 2. Chemicals--Analysis--Theory

Card 2/2

AUTHOR: Skogorev, V.N SOV/ 78-3-7-26/44

TITLE: On the Problem of the Analysis of Multicomponent Systems by Means of Physical and Physical-Chemical Methods (K voprosu ob analize mnogokomponentnykh sistem fizicheskimi i fiziko-khimicheskimi metodami)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol 3, Nr 7, pp 1616-1619 (USSR)

ABSTRACT: In multicomponent systems determination of the concentration of the components by determining physical and physical-chemical parameters is possible. The determination of the concentration of the components in multicomponent systems by means of physical and physical-chemical methods facilitates complete automatization and acceleration of important technological processes. The evaluation of the additivity of physical parameters was found to be the most useful method. For n-component systems the following equation is given in which the concentration and the physical properties of the system are expressed:

$$c_1(a_{(n-1)1} - a_{(n-1)n}) + c_2(a_{(n-1)2} - a_{(n-1)n}) + \ldots + c_{n-1}(a_{(n-1)(n-1)} - a_{(n-1)n}) + a_{(n-1)n} - a_{(n-1)m} \quad (4)$$

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On the Problem of the Analysis of Multicomponent Systems SOV/ 78-3-7-26/44
by Means of Physical and Physical-Chemical Methods

concentrations in the system, a = parameter amount characterizing the pure component. The physical parameters in real systems are not in all cases governed by the rule of additivity. A particularly considerable deviation from this rule occurs in the case of strong electrolytes of higher concentration. In such cases the equation (4) is transformed into the nonlinear equations: $f_{n-1}(x_1, x_2 \ldots x_{n-1}) = 0$ (6)
The diagrams necessary for determining the concentration of the components by the determination of electric conductivity and density of the system H_2SO_4-HNO_3-H_2O are given. By means of the physical parameters it is possible to calculate the concentration of individual components in this system. This method also makes it possible to calculate other multicomponents by changing one of the other component. There are 2 figures, and 1 reference

SUBMITTED: June 10, 1957

Card 3/2

1. Complex compounds--Analysis 2. Complex compounds--Physical properties 3. Complex compounds--Chemical properties 4. Complex compounds--Electrical properties 5. Mathematics--Applications

5 (4)

AUTHOR: Skugorov, V. N., Engineer SOV/119-59-8-5/15

TITLE: The Analysis of a Multicomponent System by Means of Physico-chemical Methods

PERIODICAL: Priborostroyeniye, 1959, Nr 8, pp 15-18 (USSR)

ABSTRACT: The determination of the concentration of a binary system by measuring the physical or physico-chemical parameters is widely practised in factories and laboratories. The application of this method to multicomponent systems is far more complicated owing to the fact that an arbitrary parameter of the system does not uniquely determine the existence of a certain substance. For the introduction of automatic analysis this method is of great importance, and the determination of the percentage of two substances in a three-component system by means of physico-chemical methods is investigated in the present paper. For this purpose, the system of equations (1) is used as a basis, in that two arbitrary physical parameters of the mixture, which have the property of additivity, are represented as functions of the concentration of the three components. Provided that the determinant of the system is not equal to zero, the concentration of the three components is determined by means of Cramer's rule. This method is

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applied in an analogous manner to an n-component system, and for the concentration of a component formula (5) is given. As the parameters of real systems do not possess the property of additivity, the system of equations (1) is nonlinear. If only a certain range of concentration is dealt with, linearity may be assumed also for real systems. For a three-component system the dependence of the physical parameters may be represented graphically, and this dependence is shown as an example in figure 1 for the system H_2SO_4 - HNO_3 - H_2O. Specific conductivity and density serve as parameters. Instruments, which work according to this principle, were built for some three-component systems. Some physical quantities, which are suited as parameters for use in multicomponent systems, are given, and in the following the possibility of measuring the concentration of an n-component system by (n - 1) parameters is investigated. For this purpose, proper selection of the parameters is recognized to be of importance and the concentrations of the individual components are determined by the same method as before. For this system the error is then calculated, and the demand is made that such

parameters be selected in which this error is a minimum. This error-calculation is then carried out for a three-component system. In the last part of the paper block schemes of the instruments for determining concentration are dealt with. There are 4 figures and 4 references, 2 of which are Soviet.

SKUGOROV, V.N., inzh.

Frequency-type level indicator. Priborostroenie no. 10: 25-27 O '65 (MIRA 19:1)

L 27203-66 ETC(m)-6 WW

ACC NR: AP6017439 SOURCE CODE: UR/0119/66/000/001/0001/0003

27
B

AUTHOR: Skugorov, V. N. (Engineer)

ORG: none

TITLE: String transducers for measuring force and pressure

SOURCE: Priborostroyeniye, no. 1, 1966, 1-3

TOPIC TAGS: wire, pressure transducer/GOST 3910-47 wire

ABSTRACT: A series of string transducers for measuring force and pressure has been developed at the Institute of Automation and Telemechanics. The principal difference between the design of these pickups and that of conventional instruments is the provision for adjustment of performance characteristics. A diagram of the force gauge is shown in figure 1. The pickup consists of string 1 in a lever mechanism for conversion of the force being measured (levers 2 and 4), a pretightening device 3 and a magnetic system 5 for excitation of the gauge and for taking readings, all mounted on a common base 6. The filament string is the force measuring element in the pickup. The performance characteristics of the pickup are controlled by moving the tie rod between levers 2 and 4 and by adjusting the tension of spring 3 to change the transfer constant. Both levers are mounted on elastic supports to reduce friction and error. The method used for fastening the string filament is shown in figure 2. The filament is made from a steel wire (GOST 3910-47) with a diameter of 0.25 mm and a length of 57 mm. The instrument was designed for measuring forces in the interval from zero to

UDC: 621.3.083.8:531.78

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2.5-6 kg. This range may be varied by changing the transfer ratio of the lever mechanism. This design may be used as a basis for developing instruments to measure other parameters. A pressure pickup was developed on this principle which is a combination of a pressure gauge and an elastic manometric element. Frequency response curves are given for both pickups.

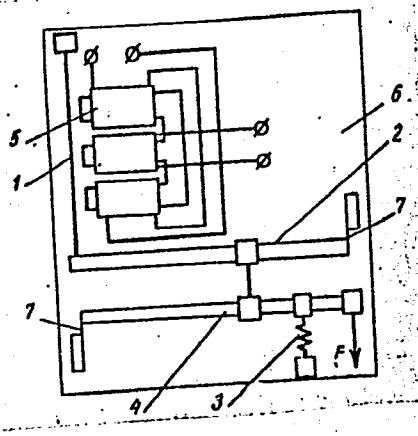

Figure 1.
Diagram of Force Gauge

L 27203-66
ACC NR: AP6017439

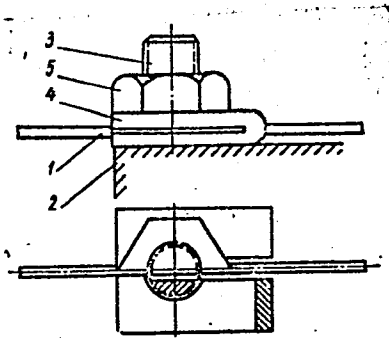

Figure 2
Method Used For Fastening the String

1. string
2. base
3. pin
4. holder
5. nut

Orig. art. has: 7 figures and 7 formulas. [JPRS]

SUB CODE: 09 / SUBM DATE: none

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L 29204-66 EWT(1)
ACC NR: AP6007592 SOURCE CODE: UR/0119/66/000/002/0004/0006

AUTHOR: Sinyukhin, Yu. A. (Candidate of technical sciences); Skugorov, V. N. (Candidate of technical sciences)

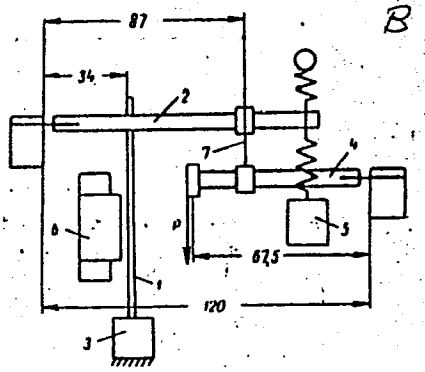
ORG: none

TITLE: Bar-type frequency transducers

SOURCE: Priborostroyeniye, no. 2, 1966, 4-6

TOPIC TAGS: frequency transducer, frequency sensor

ABSTRACT: A bar-type force-to-frequency transducer (see figure) is explored theoretically and experimentally. The frequency of the unloaded bar and the critical force at temperature t are given by these formulas: $f_{0t} = f_0\left[1+\frac{1}{2}(\alpha_B+\alpha_l)\Delta t\right]$; $P_{kt} = P_k[1+(\alpha_B+2\alpha_l)\Delta t]$. The transducer comprises steel bar 1, whose ends



Bar-type force-to-frequency transducer

Card 1/2 UDC: 621.317.39:531.78

L 29204-66
ACC NR: AP6007592

0

are constrained in lever 2 and frame 3; to adjust the transducer characteristic, levers 2 and 4 are provided that transform the measured force P and tension device 5 is provided that causes initial compression of the bar; magnetic unit 6 excites bar vibrations and transforms them into electric oscillations. Ribbon 7 can travel along the levers changing the force transmission ratio. An experimental model had these characteristics: measurement span, 0—1.4 kg; frequency range, 612—314 cps; basic error, ± 0.3%; temperature-caused error, 0.2% per 20C. By adapting a manometer tube, this device was turned into a pressure-to-frequency transducer for 0—4 kg/cm, 617—475 cps. Orig. art. has: 6 figures and 13 formulas.

SUB CODE: 09 / SUBM DATE: none

Card 2/2 CC

SHUGOROVA, L. P.

Shugorova, L. P. - "Testing the Operating Properties of Borated Surfaces of the Cutting Edge for Drilling Petroleum Wells." Min Higher Education USSR. Moscow Order of Labor Red Banner Petroleum Inst imeni Academician I. M. Gubkin. Moscow, 1956 (Dissertation for the Degree of Candidate in Technical Sciences).

So: Knizhnaya Letopis', No. 10, 1956, pp 115-127

USSR / Phase Conversions in Solids. E-5

Abs Jour : Ref Zhur - Fizika, No 4, 1957, No 9284

Author : Taran, V.D., Skugorova, L.P.
Title : Rate of Growth of the Diffusion Layer When Boriding Steel.

Orig Pub : Fiz. metallov i metallovedeniye, 1956, 3, No 1, 66-69

Abstract : An investigation is made of the rate of growth of the boride layer, obtained from low-alloy structural steels 30KhGSZ, 12KhN2A, and 40Kh and carbon steel type 35. It is shown that the change in the thickness of the borided layer is in close enough agreement with the rate of growth of the diffusion layer. The heat of breakup Q and the factor B_0 ahead of the exponent, which characterize the speed of diffusion of the boron in the investigated steel, depend to a considerable extent on the chemical composition of the steel. The values of the heat of breakup and of the factor ahead

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SOV/137-57-1-1046

Translation from: Referativnyy zhurnal. Metallurgiya, 1957, Nr 1, p 135 (USSR)

AUTHORS: Taran, V. D., Skugorova, L. P.

TITLE: Hardening of the Supports of Drilling Bits by Boronizing (Uprochneniye opory burovykh dolot metodom borirovaniya)

PERIODICAL: Tr. Mosk. neft. in-t, 1956, Nr 16, pp 125-134

ABSTRACT: A report on the successful employment of electrolytic boronizing (B) for hardening of the supports of drilling bits (the shank of the claw). Investigations were carried out on steels of the types 40Kh, 30KhGSA, and 12KhN2A. It is shown that the wear resistance of boronized steels is significantly greater than that of case-hardened steel. Experimental B was conducted in a bath of molten crystalline borax $N_2B_4O_7 \cdot 10\ H_2O$ in an electric crucible furnace; the anode was in the form of a carbon electrode while the article being treated served as the cathode. The optimal temperature of B of the steels investigated is 950-980°C, the current density 0.25 a/cm^2. The depth and quality of the diffusion layer are functions of the exposure time during B. The depth of the diffusion layer does not increase significantly if B is carried beyond the

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Hardening of the Supports of Drilling Bits by Boronizing

period of six hours; at the same time, the diffused layer becomes brittle and exhibits a tendency toward peeling.

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TARAN, V.D., professor; SKUGOROVA, L.P.

Determining operating characteristics of drill bit pin mounts in models. Trudy MNI no.16:135-147 '56. (MLRA 9:10)

(Boring machinery)

SKUGOROVA, L. P.

Taran, V. D., and L. P. Skugorova. "Behaviour of a Boronized Surface Under Conditions of Dynamic-Impact Load on a Cone Bit"

Problems of Petroleum Production and Petroleum Engineering, Moscow, Neftyanoy institut, Gostpptekhizdat, 1957, 393pp. (Trudy vyp. 20)
This book is a collection of articles written by professors and faculty members of the Petroleum Inst. im I. M. Gubkin.

122-5-22/35

AUTHORS: Taran, V.D. (Dr.Tech.Sc., Professor) and Skugorova, L.P., (Cand.Tech.Sc.)

TITLE: The Hardening of Rubbing Surfaces in Low Alloy Steels by Boron Treatment. (Uprochneniye borirovaniyem trushchikhsya poverkhnostey nizkolegirovannykh staley)

PERIODICAL: Vestnik Mashinostroyeniya, 1957, Nr 5, pp.62-65 (USSR)

ABSTRACT: The known information on boron treatment is briefly reviewed. A Vickers hardness of 2000 is achieved at the surface, maintained even after repeated heating to 950°C. Resistance against acids and heat resistance up to 800°C are claimed. A wear resistance exceeding that of nitrided surfaces has been observed. A study of electrolytic boron treatment is reported. After melting of borax ($Na_2B_4O_7$), in a stainless steel crucible, a carbon (or graphite) anode and the workpiece cathode are immersed in the bath. The electrochemical processes are discussed resulting in the formation of boron which diffuses into the metal producing iron borides, boron carbides and oxygen escaping into atmosphere. The authors have established that the boron enriched layer grows with a rise in temperature up to 950°C. Relations between thickness and exposure are given. Beyond eight hours'

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SKUGOROVA, L.P.

AUTHORS: Taran, V. D., Dr. Tech. Sc. Prof. and Skugorova, L.P., Candidate of Technical Sciences.

TITLE: Surface borating of low alloy steels. (Poverkhnostnoye borirovaniye nizkolegirovannykh staley).

PERIODICAL: "Metallovedenie i Obrabotka Metallov" (Metallurgy and Metal Treatment), 1957, No.6, pp.43-47 (U.S.S.R.)

ABSTRACT: So far most Russian work on this subject (1-3) has related to borating of iron and carbon steels. Kontorovich, I. Ye and L'vovsky, M.Ya.(4) studied the influence of certain alloying elements on the formation and properties of the diffusion layer during borating. Blanter, M.Ye and Besedin, N.P.(5) studied the influence of alloying elements on the depths of penetration of the boron into the iron and the heat of formation of the diffusion layer. The aim of the here described investigations was to study the structure and the properties of the borated layer obtained on several low alloy structural steels. Standard specimens of the low alloy steels 12XH2A, 12XH3A, 30XГCA, 55C2A, 40X, and for comparison specimens of the carbon Steel 35, were used, the analyses of which are given in Table 1, p.43. The thermochemical treatment was effected in an electrolytic bath of molten borax, the specimens being used as cathodes, inside stainless steel crucibles with a

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