

AUTHOR:

Domanitskiy, S.M.

SOV/19-59-11-70/277

TITLE:

A Servosystem for Synchronizing the Speed of Electric Motors

PERIODICAL:

Byulleten' izobreteniy, 1959, Nr 11, p 21 (USSR)

ABSTRACT:

Class 21c, 62⁰¹. Nr 120244 (597507/24 of 17 April 1958). 1) A servosystem as in title, containing an amplifier to the input of which is supplied the mismatching signal, and motor connected to its output and driving the control element. To increase the accuracy of the speed synchronization by obtaining the mismatching signal in the form of three alternating voltages with 120° phase shift, and with frequencies, depending upon the speed-mismatching value, two three-phase tachometer generators are applied as the mismatch pickups. The windings of these generators, A₁, B₁, C₁, and A₂, B₂, C₂, are opposite connected, according to the circuit

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A Servosystem for Synchronizing the Speed of Electric Motors

diagram: $A_1 - A_2$, $B_1 - C_2$, $C_1 - B_2$, to three rectifiers feeding the control circuits of three magnetic amplifiers, to the output of which is connected a three-phase motor. 2) The application of a selsyn, or a synchronous motor, as the drive motor in this system.

Card 2/2

SISYAKYAN, N.M.; FRANK, G.M.; SHCHERBAKOV, D.I., akademik; SIDORENKO, A.V.;
ARTOBOL'EVSKIY, I.I., akademik; IL'IN, V.A., doktor tekhn. nauk;
DOMANITSKIY, S.M., kand. tekhn. nauk; PETROV, A.P.; BUDNIKOV, P.P.

Soviet scientists on the exhibition. Vest. AN SSSR 28 no.11:100-118
N '58. (MIRA 11:12)

1.Chlen-korrespondent AN SSSR. (for Sisyakyan, Siderenko, Petrov,
Budnikov). 2.Chlen-korrespondent AMN SSSR (for Frank).
(Brussels--Exhibitions)

30(7)

AUTHORS:

Il'in, V. A., Doctor of Technical Sciences, Domanitskiy, S. M., Candidate of Technical Sciences SOV/30-58-11-33/48

TITLE:

Soviet Scientists on the Exposition (Sovetskiye uchenyye o vystavke)

PERIODICAL:

Vestnik Akademii nauk SSSR, 1958, Nr 11, pp 112-113 (USSR)

ABSTRACT:

The authors were mainly interested in exhibits from the field of automation. In their opinion the Belgian pavilions presented the greatest number of interesting exhibits. They mention the exhibits of some large Belgian firms as well as of Belgian branches of American firms (digital computers which can not only be used for office and banking operations, but also for the automation of production processes; a contactless automatic telephone exchange for 36 parties, and other features). In the field of metalworking machinery with automatic controls the pavilions of the USSR, Czechoslovakia, Great Britain and Belgium are mentioned as worthwhile seeing, whereas the corresponding exhibits in the US pavilion are called somewhat less interesting. The Soviet pavilion contained electronic control apparatus as well as the simulator plant

Card 1/2

Soviet Scientists on the Exposition

SOV/30-58-1-33/48

BO-8 and other exhibits which could be operated by the visitors in contrast to other pavilions. Finally the author states that some of the exhibits in the Soviet pavilion were less effectively arranged than those in the Czech pavilion. Furthermore, he expresses his astonishment at the fact that the USSR exhibited several obsolete recording instruments. There is 1 figure.

Card 2/2

8.2.000
9(2)

80335

S/O19/59/000/18/061/245
D032/D002

AUTHORS: Domanitskiy, S.M., and Chelyustkin, A.B.

TITLE: A Control Device for Electric D.C. Drive ↗

PERIODICAL: Byulleten' izobreteniy, 1959, Nr 18, p 19 (USSR)

ABSTRACT: Class 21c, 50²⁰. Nr 122516 (617216/24 of 22 January 1959). A control device for "G-D" or "URV-D" d.c. drive designed for producing preset displacements by changing the speed of a motor on a triangular or a trapezoidal graph line with automatic switchover for braking. The switchover moment is determined by an electronic key which is connected for the difference between the mismatch voltage removed from a program and a follow-up potentiometer and the voltage removed from an integrator proportional to the braking travel of the drive. This integrator is connected to the speed-voltage generator of the motor for the acceleration period. 2) Two

Card 1/2

DOMANITSKIY, S.M.

PHASE I BOOK EXPLOITATION

SOV/4650

Aven, Oleg Ivanovich, and Sergey Mikhaylovich Domanitskiy

Beskontaktnyye ispolnitel'nyye ustroystva promyshlennoy avtomatiki
(Contactless Servodevices in Industrial Automation) Moscow, Gosenergoizdat,
1960. 343 p. Errata slip inserted. 12,000 copies printed.

Ed. (Title page): A. Ya. Lerner, Doctor of Technical Sciences;
Ed. (Inside book): Yu. P. Ustinova; Tech. Ed.: K. P. Voronin.

PURPOSE: This book is intended for technical personnel concerned with design-
ing and operating automation equipment.

COVERAGE: This book examines the theoretical and technical aspects of the design
of contactless servodevices for automation equipment in various branches of
industry. Much attention is paid to the problem of an adequate selection of
components for contactless servodevices and to their connecting circuits. The
authors include some typical examples of the use of these devices in automatic
regulation systems. A. Ya. Lerner, Doctor of Technical Sciences and editor of

Card 1/6

Contactless Servodevices in (Cont.)

SOV/4650

the book, wrote the preface. Ch. I, VI and VII were written by S. M. Domanitskiy; Ch. VIII and IX by O. I. Aven; and Ch. II, III, IV, and V by both authors jointly. In their foreword the authors thank I. I. Moroz, Yu. I. Svet, I. V. Vyadro, F. S. Shapiro, and G. L. Bruns of the Chelyabinskiy zavod "Teplopribor" (Chelyabinsk "Teplopribor" Plant), as well as Ya. A. Rozenman, Candidate of Technical Sciences, and Engineers M. G. Sedrakyan and B. E. Buyanov. There are 37 references, all Soviet.

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PART I. PRINCIPLES OF DESIGN AND CHARACTERISTICS OF CONTACTLESS SERVODEVICES

Ch. I. Purpose and Basic Types of Servodevices	
1. Servodevice functions in automatic regulation systems	19
2. Varieties of servodevices	24
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Card 2/6

DOMANITSKIY, S.M.

PHASE I BOOK EXPLOITATION

SOV/4411

Konferentsiya po voprosam teorii i primeneniya diskretnykh avtomaticheskikh sistem,
Moscow, 1958

Teoriya i primeneniye diskretnykh avtomaticheskikh sistem; trudy konferentsii
(Theory and Application of Discrete Automatic Systems; Transactions of the
Conference) Moscow, AN SSSR, 1960. 572 p. 5,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Natsional'nyy komitet SSSR po avtomati-
cheskomu upravleniyu. Institut avtomatiki i telemekhaniki.

Editorial Board: M.A. Gavrilov, Doctor of Technical Sciences, Yu.V. Dolgolenko,
Doctor of Technical Sciences, V.A. Kotel'nikov, Candidate of Technical Sciences,
A.Ya. Lerner, Doctor of Technical Sciences, I.S. Morosanov (Scientific Secretary),
G.S. Pospelov, Doctor of Technical Sciences, A.A. Fel'dbaum, Doctor of Technical
Sciences, A.V. Khramoy, Candidate of Technical Sciences, and Ya.Z. Tsypkin,
Doctor of Technical Sciences; Resp. Ed.: Ya.Z. Tsypkin, Doctor of Technical
Sciences; Ed. of Publishing House: M.L. Podgoyetskiy; Tech. Ed.: S.G. Markovich.

PURPOSE: These transactions are intended for the members of the conference and
other specialists in automatic control.

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Theory and Application of Discrete Automatic Systems (Cont.)

SOV/4411

COVERAGE: The Conference on the Problems of Theory and Application of Discrete Automatic Systems took place in Moscow from September 22 to 26, 1958. It was the first conference devoted to discussions of the present status of the theory and techniques of discrete automatic systems and to planning for future development. The papers discussed at the conference have been divided into four groups. In the first group optimization switching circuits are discussed as well as methods of relay control systems, in particular plant lag control systems in which are realized optimal processes as to quick response. The second group of papers is devoted to the analysis and synthesis of pulse systems with variable parameters, of pulse systems with several pulse components, to the study of self-oscillation phenomena in nonlinear pulse systems, and to the methods of calculating linear pulse systems. Problems of simulating pulse systems and descriptions of some pulse regulators have also been included. The third group of papers deals with digital systems. Problems of using elements of digital technique and digital computers for the automation of various fields of engineering, i.e., power engineering, mining, radio communication, metallurgy, etc., are discussed. Problems of analog-digital conversion and vice versa as well as problems of developing specialized functional converters have been included in this group. The fourth group of papers includes theoretical elements and certain practical applications of the simplest types of self-adjusting systems, optimizing control systems, which are developed as relay, pulse and digital devices. Here are also found

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Theory and Application of Discrete Automatic Systems (Cont.)

SOV/4411

papers describing various methods of investigating steady state conditions in optimizing systems, results of studying the effects of random factors on the process of automatic scanning, and examples of existing optimizing control systems. Some of the more interesting communications and observations made during the discussion of the various conference papers have also been included in the Transactions. Personalities and references accompany most of the papers.

TABLE OF CONTENTS:

Introduction

Tsyarkin, Ya.Z. (Moscow). Discrete Automatic Systems. Theoretical Problems and Prospects of Development 3
The author describes characteristic features and potentialities of optimizing systems. There are 11 references: 2 Soviet and 9 English. 5

I. OPTIMALIZING RELAY SYSTEMS

Butkovskiy, A.G., and S.M. Domanitskiy (Moscow). Synthesis of the Controlling Part of Optimizing Systems For Certain Items With Lag 27
The authors discuss some cases of synthesis of the controlling element of regulating systems optimizing as to quick operation in which the permanent part consists of a delay section and two integrating sections connected in series. They formulate and solve some problems for such systems.

8(3)

AUTHOR:

Domanitskiy, B. M., Candidate of Technical Sciences SOV/105-60-1-5/25

TITLE:

Optimum Control Systems⁴ for the Drive of Flying Shears in a Rolling Mill⁴

PERIODICAL:

Elektrichestvo, 1960, Nr 1, pp 27-33 (USSR)

ABSTRACT:

Nonlinear systems of automatic control which warrant a maximum snap-action (under certain restrictions imposed on the coordinates of the controlled subject) are meant by optimum systems. Problems of the analysis and synthesis of very important classes of such systems were solved in the papers (Refs 1, 2, 3). A method for the setup of the control part of optimum systems, the objective of which can be represented by 2 integrated links and a link with pure time delay, is explained in the paper (Ref 4). The ideas contained in these papers were applied to the setup of optimum control systems with alternating current motors and especially to the drive of the flying shears in a rolling mill. The basic theses of the theory of optimum transition processes, applied to the control object - the alternating current motor - are explained here first. There are usually restrictions for such drives with regard to amperage, voltage and motor heating.

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Optimum Control Systems for the Drive of Flying
Shears in a Rolling Mill

SOV/105-60-1-5/25

The case most important for the practice, where there is only one restriction, namely that with regard to the motor amperage, is dealt with here. For this purpose, the simplest case of a system, consisting of a controlled mercury rectifier and motor is investigated. The control of the drive of the flying shears is then described. The blank is supplied to the rolling mill at an incidental moment and the piece cut first is therefore of arbitrary length. When applying the new control circuit on the basis of the theory of optimum processes, the first piece is obtained with an always equal specified length, that is independent of the moment of the exit of the blank from the rolling mill. The control device of the system permits to carry out the following operations automatically: it determines and remembers the misalignment between the position of the shear knives and the front end of the rolled stock, gives the control action for the shears drive circuit (which causes the braking of the motor), determines the moment for reversing the sign of the control action, warrants the acceleration of the motor to the stabilized speed n_0 and switches off the control action. After cutting off the front end, the drive takes place in accordance with the

Card 2/4

Optimum Control Systems for the Drive of Flying
Shears in a Rolling Mill

SOV/105-60-1-5/25

tachymetric circuit (by voltage comparison of two generator voltmeter tachometers) and the shears cut the rolled stock to measure. The circumstances to be considered for the setup of optimum systems for the control of the drive of flying shears are pointed out and in this connection the suitability of reducing the speed of the motor is mentioned. At the IAT AN SSSR (Institute of Automation and Telemechanics of the AS USSR) two circuits were worked out which warrant the elimination of the misalignment according to the optimum laws: 1) with the LN-0 installation with a computer consisting of an integrator and a square law function generator; 2) with the LN-1 control installation, at which the square law function generator is replaced by a further integrator. Both circuit schemes (Figs 3,4) are described here and their method of operation is explained. The experimental investigation of the optimum control systems was carried out on the continuous electronic simulator EMU-6 and on a physical simulator for the flying shears. The investigations on the first showed that the transition processes take an almost optimum course at $T_{EMU} < 0.1$ sec.

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Optimum Control Systems for the Drive of Flying
Shears in a Rolling Mill

SOV/105-60-1-5/25

The oscillograms taken on the physical simulator show that the transition processes for all misalignments took their course according to the optimum law. The investigations on the physical simulator were carried out by Engineer L. N. Zagal'skiy and B. V. Buyanov. There are 7 figures and 6 Soviet references. ✓

ASSOCIATION: Institut avtomatiki i telemekhaniki AN SSSR (Institute of Automation and Telemechanics of the AS USSR)

SUBMITTED: September 12, 1959

Card 4/4

28.1000

22923

S/123/61/000/007/014/026
A004/A104

AUTHORS: Butkovskiy, A.G., Domanitskiy, S.M.

TITLE: On the synthesis of the control part of optimum systems for some members with lag

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 7, 1961, 3, abstract 7D26 (V sb. "Teoriya i primeneniye diskretn. avtomat. sistem", Moscow, AN SSSR, 1960, 27 - 35)

TEXT: The authors analyze some cases of the synthesis of the control part of control systems of optimum rapid action, the permanent part of which consists of delay components and two integrating components connected in series. The system is given the instruction to finish within the shortest time the misalignment on the output coordinate and of the rate of change of this coordinate during the limiting of the magnitude of the control response. It is pointed out that the shape of the optimum transient response does not depend on the lag. Therefore, in systems of the second order with lag the optimum transient response consists, as in systems without lag, of two intervals. During the duration of each of them it is necessary to maintain the control response on one of the boundary values. The

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On the synthesis of the control part ...

22923
S/123/61/000/007/014/026
A004/A104

X

authors suggest, for the shaping of the control response, to use a model of the permanent part of the system, consisting of two integrating components with the same amplification factor as the object. Since the model does not contain a lag, under certain initial conditions fed to the model its coordinates are going to predict in a certain way during the lag time of the object the deviation of coordinates in the real object. As an example of the realization of the optimum system where a model object is used to determine the sign of the control response the authors analyze a control system of a rolling mill shears developed by the IAT AN SSSR. There are 9 figures and 6 references.

V. Genishta

[Abstracter's note: Complete translation]

Card 2/2

DOMANITSKIY, S. M.; IMEDADZE, V. V.; *TSINDADZE, Sh. A.*
~~LEKVINADZE, A. G.~~

" Digital Optimal System of Programme Control and Its Application
for Blooming Mill Press Device. "

Paper to presented at the IFAC Congress to be held in
Basel, Switzerland, 27 Aug to 4 Sep 63

L 9887-6)

ACCESSION NR: AP3000469

S/0103/63/024/005/0657/0665

44

AUTHOR: Domanitskiy, S. M.; Prangishvili, I. V. (Moscow)

TITLE: Methods for precision designing of semiconductor switching circuits used in industrial automation

SOURCE: Avtomatika i telemekhnika, v. 24, no. 5, 1963, 657-665

TOPIC TAGS: transistors, industrial transistors, "or-not"

ABSTRACT: A method is offered for calculating parameters of switching logical circuits ("or-not" type); the method ensures reliable operation with the most unfavorable spread in resistance values, supply-voltage and ambient-temperature variations, and aging of transistors. Maximum utilization of the base current and amplification is sought for. Open and closed "or-not" circuits are examined by means of elementary transistor formulae, as well as some circuits with backup transistors ensuring proper operation in case of an internal fault. A numerical example illustrates the design method. Orig. art. has: 15 equations, 7 figures, and 1 table.

ASSOCIATION: none

SUBMITTED: 30Dec62

DATE ACQ: 12Jun63

ENCL: 00

SUB CODE: IE

NR REF SOV: 003

OTHER: 000

Card 1/1

AP/62

NEVRAYEV, Vsevolod Yur'yevich; PETELIN, Diner Prokof'yevich;
DOMANITSKIY, S.M., red.; BORUNOV, N.I., tekhn. red.

[Automated a.c. drive systems] Sistemy avtomatizirovannogo
elektroprivoda peremennogo toka. Moskva, Izd-vo "Energiya,"
1964. 103 p. (Biblioteka po avtomatike, no.94)

(MIRA 17:4)

MIL'MAN, Yakov Vladimirovich; SHVYREV, Sergey Sergeevich;
DOMANITSKIY, S.M., kand. tekhn.nauk, dots., retsenzent;
MAYZEL', M.M., doktor tekhn. nauk, prof., retsenzent;
SOKOLOVA, V.Ye., red.

[Fundamentals of the automation of technological processes
in the textile industry] Osnovy avtomatizatsii tekhnologi-
cheskikh protsessov v tekstil'noi promyshlennosti. Moskva,
Izd-vo "Legkaia industriia," 1964. 389 p. (MIRA 17:6)

ACCESSION NR: AP4033596

S/0119/64/000/004/0001/0004

AUTHOR: Domanitskiy, S. M. (Candidate of technical sciences);
Petrukhin, B. P. (Engineer); Prangishvili, I. V. (Engineer)

TITLE: Semiconductor logical elements for industrial automation and
telemechanics

SOURCE: Priborostroyeniye, no. 4, 1964, 1-4

TOPIC TAGS: semiconductor, semiconductor device, automation, industrial
automation, telemechanics, industrial telemechanics, logical element

ABSTRACT: Three logical elements — N O R , AND (diodes), and trigger —
were selected as fundamental to industrial automation, etc., schemes. Type P14-
P16 transistors, D7 (D9D) and D220 diodes are selected for use in the logical
elements which are required to reliably operate under the most unfavorable
combination of these factors: (a) ambient temperature, 0-60C; (b) supply-voltage

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ACCESSION NR: AP4033596

variation, $\pm 20\%$; (c) resistor rating spread, $\pm 10\%$; aging variation of transistor gain and collector current; low-voltage sensors, 1-3 v. Typical schemes and data on the NOR gate, AND gate, and trigger are presented, as well as a timing element for up to 10-15 sec. Orig. art. has: 7 figures.

ASSOCIATION: Institut avtomatiki i telemekhaniki AN SSSR (Institute of Automation and Telemechanics, AN SSSR)

SUBMITTED: 00

DATE ACQ: 11May64

ENCL: 00

SUB CODE: EC, IE

NO REF SOV: 002

OTHER: 000

Card 2/2

DOMANITSKIY, S.M., kand. tekhn. nauk (Moskva); KOSSOV, O.A., kand. tekhn.
nauk (Moskva)

Study of a reversible half-cycle d. c. amplifier with regulated
rectifiers. Elektrichestvo no.9:71-75 S '64.

(MIRA 17:10)

DOMANITSKIY, S.M.--(Moskva); PRANGISHVILI, I.V. (Moskva)

Reliable logical elements and output amplifiers with
redundant structure. Avtom. i telem. 25 no.4:555-561 Mr '64.
(MIRA 17:6)

AVEN, O.A.; DVORETSKIY, V.M.; DOMANITSKIY, S.M.; ZALMANZON, L.A.;
KRASSOV, I.M.; KRUG, Ye.K.; TAL', A.A.; KHOKHLOV, V.A.;
BULGAKOV, A.A.; DEMIDENKO, Ye.D.; BERNSHTEYN, S.I.; YEMEL'YANOV,
S.V.; LERNER, A.Ya.; MEYEROV, M.V.; PEREL'MAN, I.I.; FITSNER,
L.N.; CHELYUSTKIN, A.B.; ZHOZHIKASHVILI, V.A.; IL'IN, V.A.;
AGEYKIN, D.I.; GUSHCHIN, Yu.V.; KATYS, G.P.; MEL'TTSER, L.V.;
PARKHOMENKO, P.P.; MIKHAYLOV, N.N.; FITSNER, L.N.; PARKHOMENKO,
P.P.; ROZENBLAT, M.A.; SOTSKOV, B.S.; VASIL'YEVA, N.P.; PRANGISHVILI,
I.V.; POLONNIKOV, D.Ye.; VOROB'YEVA, T.M.; DEKABRUN, I.Ye.

Work on the development of systems and principles of automatic
control at the Institute of Automatic and Remote Control
during 1939-1964. Avtom. i telem. 25 no. 6:807-851 Je '64.
(MIRA 17:7)

L 20250-65 AFVL/ASD(a)-5/ESD(dp)/ESD(t)
ACCESSION NR: AP4041472

S/0103/64/025/006/0997/1003

AUTHOR: Domanitskiy, S. M. (Moscow); Prangishvili, I. V. (Moscow) **B**

TITLE: Probabilistic method of calculating semiconductor logical elements

SOURCE: Avtomatika i telemekhanika, v. 25, no. 6, 1964, 997-1003

TOPIC TAGS: logical element, semiconductor, semiconductor logical element,
OR-NOT gate, transistorized logical element

ABSTRACT: A method is suggested in which transistorized logical-element parameters are so selected that the probability $(1-p)$ of a NOR element failure due to its parameter spread and aging will be lower by several orders than the probability of failure of the same element due to a breakdown of its parts (the latter is characterized by the failure intensity λ). Two cases of the probability calculation are considered: 1) Given the circuit resistor values and transistor parameters, find the probability of a faultless operation of the NOR element

Card 1/2

L 20250-65

ACCESSION NR: AP40414/2

over a time period T; 2) Given the required probability p of a faultless operation over a time period T, find the circuit parameters and the transistor gain which would ensure p . A numerical example with P-14 transistors is used to illustrate the method. Orig. art. has: 1 figure and 28 formulas.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: MA,EC

NO REF SOV: 003

OTHER: 000

Card 2/2

VERSHIN, Viktor Yevgen'yevich; DOMANITSKIY, S.M., red.

[High-speed transistor switching circuits] Bystro-
deistvuyushchie poluprovodnikovye perokliuchateli. Mo-
skva, Energiia, 1965. 102 p. (MIRA 18:6)

L 51315-65 EWP(k)/EWP(d)/EWP(h)/EWP(l)/EWP(v) Pf-4

ACCESSION NR: AP5009788

UR/0292/65/000/004/0011/0014
681.142.67:621.316.925.001.3

AUTHOR: Girshberg, V. V. (Engineer); Kutler, N. P. (Engineer); Khodnev, V. V. (Engineer); Petrukhin, B. P. (Engineer); Domanitskiy, S. M. (Candidate of technical sciences); Prangishvili, I. V. (Candidate of technical sciences)

20
B

TITLE: Transistor logical and functional elements of the standardized ET series intended for industrial automatic systems 4

SOURCE: Elektrotehnika, no. 4, 1965, 11-14

TOPIC TAGS: logical element, functional element, industrial automation / ET automatic element

ABSTRACT: Data on 18 Soviet-made NOR, OR, AND and MEMORY elements is given. The elements are designed to operate at -40+50C, humidity up to 80% at +30C, supply-voltage variation of -15+10%. The intensity of failure of the principal 2NOR ("ET-L01") element is 10^{-6} per hr which is much lower than the

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L 51315-65

ACCESSION NR: AP5009788

statistical intensity for relays. The life of the elements - 40000 hrs - is independent of the number of operations. The principal logical elements operate at a frequency up to 10 kc. Supply voltages, -12 or -25 v; bias voltage, +6 v; load voltage, 24 v dc. Signal levels, 0.2-0.8 v or 4 v dc. Orig. art. has: 10 figures and 3 tables.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: IE

NO REF SOV: 000

OTHER: 000

059
Card 2/2

L 3241-66 EWT(1)/EWA(h)
ACCESSION NR: AP5022017

UR/0286/65/000/014/0087/0087
681.142.07

AUTHOR: Domanitskiy, S. M.

TITLE: Standby NOT-OR semiconductor logical element. Class 42, No. 173031

6
B

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 14, 1965, 87

TOPIC TAGS: NOT gate, OR gate, logical element

ABSTRACT: The proposed "NOT-OR" standby semiconductor logical element contains four p-n-p and n-p-n transistors in series-parallel connection. For detecting damaged parts the collector load circuits are separated by low resistances connected in parallel with an indicator, while the transistors are connected in parallel with a balanced bridge containing another indicator in its output (see Fig. 1 of the Enclosure). Orig. art. has: 1 figure.

[WC]

ASSOCIATION: none

SUBMITTED: 09Jul64

ENCL: 01

SUB CODE: EC

NO REF SOV: 000

OTHER: 000

ATD PRESS: 4104

Card 1/2

L 3241-66

ACCESSION NR: AP50220.7

ENCLOSURE: 01

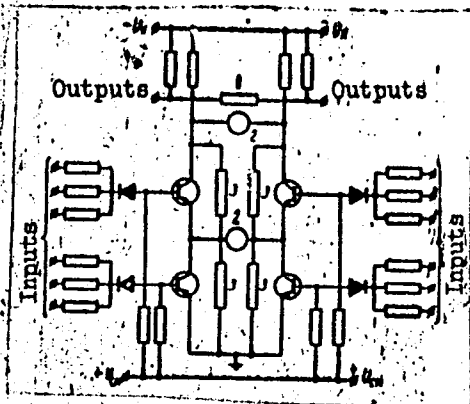


Fig. 1. Standby NOT-OR logic element

1 - Resistance; 2 - indicators; 3 - bridge resistance.

Card 2/2

59562-65 EMT(a)/MCI(L)/EMP(v)/EEG(b)-2/EMP(k)/EMP(h)/EMP(l)/EWA(h) Pa-l/
ro-l/Pq-l/PI-l/Pg-l/Ieb/Fk-l/Pl-l IJP(c) BC

ACCESSION NR: AP5013446

UR/0103/65/026/005/0898/0905
681.142.67:621.1.319.3.001.24

AUTHOR: Domanitskiy, S. M. (Moscow)

48
3

TITLE: Estimating the reliability of logical elements and single-cycle control systems

SOURCE: Avtomatika i telemekhanika, v. 26, no. 5, 1965, 898-905

TOPIC TAGS: component reliability, logical element, control system, system reliability

ABSTRACT: A general method for estimating the reliability of logical elements and control systems is proposed; the method takes into account the probability of occurrence of various sets of input variables. This allowance is important because it determines, in combination with the component-fault intensity, the actual probability of faultless operation of the element or system in question. A special "fault table" is compiled which permits finding correct and false output, for a given logical element, when various types of component faults are present. The reliability estimation of a 3-input transistorized NOR element illustrates the application of the method. Depending on the probability of occurrence of input-

Card 1/2

L 59562-65

ACCESSION NR: AP50130.16

variable sets, the reliability of a system can be estimated for "essential" faults (of c element which result in the system failure) and for "nonessential" faults. Orig. art. has: 3 figures, 9 formulas, and 3 tables.

ASSOCIATION: none

SUBMITTED: 09Jul64

ENCL: 00

SUB CODE: DP

NO REF SOV: 002

OTHER: 000

Card 2/2 *lm*

ACC NR: AP5027891

SOURCE CODE: UR/0103/65/026/011/1996/2003

AUTHOR: Domanitskiy, S. M. (Moscow); Prangishvili, I. V. (Moscow)

ORG: None

TITLE: A method of calculating the parameters of transistorized threshold logical elements

SOURCE: Avtomatika i telemekhanika, v. 26, no. 11, 1965, 1996-2003

TOPIC TAGS: logic element, transistorized circuit, circuit theory, circuit design, Boolean function

ABSTRACT: Recently, threshold elements are being widely incorporated in automatic control and computer devices. The use of threshold logical elements usually leads to a decrease in the total number of elements needed for the realization of complicated logical Boolean functions. The present article outlines a method for the calculation of parameters of threshold resistive-transistorized logical elements. It is based on the method of resistive-transistorized element design discussed earlier by the authors (Avtomatika i telemekhanika, t. XXIV, no. 5, 1963.). The investigation covers the worst conditions for the threshold element transistor blocking, the worst conditions for transistor opening, the calculation of the parameters of the threshold transistor element for a given transistor amplification, and the evaluation of the optimum parameters of the threshold transistorized element corresponding to the minimum possible transistor amplification. It was widely believed that reliable threshold elements using ordinary resistive-transistorized schemes could not be constructed because of the changes

Card 1/2

UDC: 621.374.335:681.142.67

L 7802-66

ACC NR: AP5027891

in threshold following the aging of the parts and the dispersion of their parameters. However, results of present calculations show that by choosing optimum parameters in schemes utilizing existing transistor triodes reliable logical threshold elements can be designed with three inputs, three outputs, and a threshold of 2. Orig. art. has: 20 formulas, 5 figures, and 1 table.

SUB CODE: EC,IE / SUBM DATE: 20Dec64 / ORIG REF: 002 / OTH REF: 001

Card 2/2

DOMANK, A., gvardii mayor

Use all the possibilities of motion pictures. Komm. Vooruzh. Si:
46 no.9:64-65 My '65. (MIRA 18:7)

DOMAN'KOV, V. M., Cand Tech Sci -- (diss) "Research into the effect of wear of parts of gas-distribution mechanism on change in the basic working parameters of self-propelled tractor motors and selection of rational methods of the restoration of the parts." Minsk, 1960. 14 pp; (Ministry of Higher and Secondary Specialist Education Belorussian SSR, Belorussian Polytechnic Inst im I. V. Stalin); 200 copies; price not given; (KL, 26-60, 135)

ARDASHEV, G.R.; MIKHAYLOV, I.N.; ZAMORSKIY, V.V.; DOVGICH, I.A.;
SEVERNEV, I.M.; DOMAN'KOV, V.M.; Prinimali uchastiye:
FEDOSOV, I.M.; KRIVENKO, P.M.; KUDRYAVTSEV, P.R.;
BARABANOV, V.Ye.; BRIL', E.P., red.; PARSHIN, V.G., tekhn.
red.

[Technical maintenance of the KD-35, KDP-35, and T38
tractors] Tekhnicheskii ukhod za traktorami KD-35, KDP-35
i T38. Moskva, Biuro tekhn.informatsii GCSNITI, 1962. 153 p.
(MIRA 16:10)

1. Russia 1923- U.S.S.R.) Ministerstvo sel'skogo khozyaystva. 2. Gosudarstvennyy vsesoyuznyy nauchno-issledovatel'skiy tekhnologicheskii institut remonta i ekspluatatsii mashinno-traktornogo parka (for Ardashev, Mikhaylov, Fedosov, Krivenko, Kudryavtsev, Barabanov). 3. Ukrainskiy nauchno-issledovatel'skiy institut mekhanizatsii i elektrifikatsii sel'skogo khozyaystva (for Zamorskiy Dvglich). 4. Beloruskiy nauchno-issledovatel'skiy institut mekhanizatsii i elektrifikatsii sel'skogo khozyaystva (for Severnev, Doman'kov).
(Tractors--Maintenance and repair)

SEVERNEV, M.M.; DOMAN'KOV, V.M.; IODO, I.I.; CHERKASSKIY, A.G.

Substantiation for the tractor maintenance system. Sbor. rab. GOSNITI
no.17:8-18 '62. (MIRA 17:9)

~~ДОМАНОВ, А. Д.~~

~~ДОМАНОВ, А. Д., кандидат технических наук.~~

Kinematic analysis of chain transmissions. Trudy NPI 33:212-227
'56. (MIRA 10:9)

(Belts and belting)

PEKKER, I.I.; DOMANOV, A.D.; SHMOYLOV, N.F.; KOMOV, A.N.

Automatic instrument for the sorting of permanent magnets
according to their magnetic properties. Trudy inst. Kom.stant.mer
i izm. prib no.64:123-129 '62. (MIRA 16'5)
(Magnets—Standards) (Magnetic measurements—Equipment and supplies)

DOMANOV, G. [Domanov, H.]

Donets temperament. Nauka i zhyttia 12 no.1:20-22 Ja '63.

(MIRA 16:3)

1. Redaktor gazety "Sotsialisticheskiy Donbass".
(Donets Basin--Coal mines and mining--Labor productivity)

DOMANOV, I.I.

~~Conditioned masticatory reflexes in sheep. Fiziol.shur. 42 no.9:~~
811-816 8 '56. (MLBA 9:11)

1. Kafedra fiziologii zivotnykh Ul'yanovskogo sel'skokhozyaystven-
nogo instituta.

(REFLEX, CONDITIONED,
masticatory in sheep (Rus))

DOMANOV, I.I., Doc Biol Sci -- (diss) "Study of ~~the~~ higher nervous activity in sheep by the method of motor alimentary conditional^{ad} reflexes." Kazan', 1957. 28 pp. with illustrations. (Min of Agr, Kazan' State Vet Inst im ~~M.~~ N.E. Bauman.) 170 copies. (KL, 12-58, 97)

DOMANOV, V. (Moskva); POKROVSKIY, F. (Moskva); KOZHUKHAREV, I. (Minsk)

KARMAZONOV, A. (Chelyabinsk); POZDNYAKOV, V. (Leningrad);

YEMEL'YANOV, A. (Krasnodar); PUGOVKIN, Ye. (Astrakhan');

CHUPAKOV, A.

Suggestions of the readers. Radio no.8:55 Ag '60. (MIRA 13:9)
(Radio)

VALITOV, Rafkat Amirkhanovich, prof.; TARASOV, Vladislav Lukich; SHISHKIN, Leonid Adrianovich; TSARENKO, Viktor Timofeyevich; FILONENKO, Sergey Nikonovich; DOMANOVA, Yelena Alekseyevna; BARKANOV, Nikolay Arsent'yevich; SYTYI, Gennadiy Fedorovich; KURILOVA, T.M., red.; TROFIMENKO, A.S., tekhn. red.

[Measurement of transistor parameters] Izmereniia parametrov poluprovodnikovyykh triodov. Khar'kov, Izd-vo Khar'kovskogo Gos. univ. im. A.M.Gor'kogo, 1960. 193 p. (MIRA 14:8)
(Transistors)

VALITOV, Rafkat Amir Khanovich, prof.; TARASOV, Vladislav Lukich;
SHISHKIN, Leonid Adrianovich; TSARENKO, Viktor Timofeyevich;
FILONENKO, Sergey Nikonovich; DJMANOVA, Yelena Alaksseyevna;
BARKANOV, Nikolay Arsent'yevich; SYTTY, Gennadiy Fedorovich;

[Measurement of transistor parameters] Izmereniia parametrov
poluprovodnikovyykh triodov. Khar'kov, Izd-vo Khar'kovskogo
univ., 1960. 193 p. (MIRA 16:4)

(Transistore,

ACCFSSION NR: AR4020696

S/0275/64/000/001/B024/B024

SOURCE: RZh. Elektronika i yeye primeneniye, Abs. 1B156

AUTHORS: Valitov, R. A.; Domanova, Ye. A.; Ivashkevich, E. D.

TITLE: Use of Hall effect in semiconductors to stabilize microwave power level

CITED SOURCE: Uch. zap. Khar'kovsk. un-t, v. 132, 1962, Tr. Radiofiz. fak., v. 7, 141-145

TOPIC TAGS: semiconductor, Hall effect, microwave power stabilization, germanium plate stabilizer, electrically controlled power stabilizer

TRANSLATION: The feasibility is demonstrated of producing an electrically controlled waveguide microwave power stabilizer using the Hall effect in semiconductors. The operating principle of the stabilizer is based on changing the carrier density in the semiconductor by means of the Hall effect. At low losses this change is directly proportional to the magnetic and electric fields. Variation

Card 1/2

ACCESSION NR: AR4020696

of the electric conductivity is accompanied by a change in the transparency of a semiconductor plate relative to the electromagnetic field. The shortcomings of other stabilization methods are briefly discussed. The article includes a block diagram of a semiconductor stabilizer, the parameters of the employed germanium plate, plots of the attenuation (in decibels) against the amplitude of the pulsed voltage applied to the plate, the dependence of the plate SWR on the plate dc current, and the stabilization characteristic of the assembly. The range of stabilization reaches 6 dB at a stabilization coefficient of 96 and an accuracy ± 0.25 dB. The possibility of improving the stabilizer characteristics by using a germanium plate with optimal parameters and improving the feedback circuit is discussed. The inertia of the described apparatus, estimated from the time necessary for the attenuation to become steady (to vanish), amounts to ~ 50 microseconds. Bibliography, 6 titles. L. Sh.

DATE ACQ: 03Mar64

SUB CODE: GE, SD

ENCL: 00

Card 2/2

ACCESSION NR: AR4014771

S/0058/63/000/012/H020/H020

SOURCE: RZh. Fizika, Abs. 12Zhl35

AUTHORS: Valitov, R. A.; Domanova, Ye. A.

TITLE: Microwave power attenuator based on variation of the electric conductivity of an intrinsic semiconductor through the Hall effect

CITED SOURCE: Uch. zap. Khar'kovsk. un-t, v. 132, 1962, Tr. Radiofiz. fak, v. 7, 146-151

TOPIC TAGS: Hall effect, semiconductor, microwave power control, microwave power stabilization, Hall effect attenuator, n type germanium

TRANSLATION: The possibility of controlling the flux of electromagnetic energy by varying the electric conductivity, through the Hall

Card 1/3

ACCESSION NR: AR4014771

effect in intrinsic semiconductors, is theoretically verified. A practical use of this phenomenon is described for a microwave power attenuator with linear attenuation scale. A semiconductor plate inserted in the waveguide at an angle of 30° to its longitudinal axis (to reduce the reflections) so as to cover the entire waveguide cross section, is situated in crossed electric and magnetic fields. The absorption coefficient of the specially processed plate depends in this case on the magnitude of the electric and magnetic fields. The attenuation produced by the plate can be varied smoothly by changing the control voltage applied to its ends. Experimental data are presented on such an attenuator with a plate made of polycrystalline n-type Ge, operating at 9370 Mcs. The use of a pulsed control voltage extends the range of linear attenuation by a factor of several times (in this case from 5 to 12 dB). It is indicated that the limits of the attenuation can be greatly increased and the standing wave ratio decreased by using thinner semiconductors of higher resistivity. Among the noted advantages of this method of attenu-

Card 2/3

ACCESSION NR: AR4014771

ation over the existing ones are a greater bandwidth and practical
absence of time lag. K. Yermilin.

DATE ACQ: 24Jan64

SUB CODE: PH, GE

ENCL: 00

Card 3/3

VALITOV, R.A.; DOMANOVA, Ye.A.; TSARENKO, V.T.

Device for stabilizing the power of microwave oscillations in a
wide frequency range. Radiotekh. i elektron. 8 no.10:1793-1795
0 '63. (MIRA 16:10)

ACCESSION NR: AP4040755

S/0142/64/007/002/0253/0256

AUTHOR: Valitov, R. A.; Domanova, Ye. A.; Tsarenko, V. T.

TITLE: Waveguide broadband power stabilizer

SOURCE: IVUZ. Radiotekhnika, v. 7, no. 2, 1964, 253-256

TOPIC TAGS: waveguide element, standing wave ratio, microwave equipment, power stabilizer

ABSTRACT: A stabilizer is described, capable of maintaining the load power constant within several per cent in a frequency range of 20%. The stabilizer is made broad-band by using an electrically controlled germanium-slab attenuator with a rectifying p-n junction. The input measuring element is a gas-discharge junction. Whenever the waveguide power deviates from the minimum level, an error signal modifies the admittance of the germanium slab and restores the power level. The accuracy of the apparatus is estimated at 3.5% when the

Card 1/5

ACCESSION NR: AP4040755

input power drops by 10 dB from not less than 2 mW initial level. The stabilizer can be used as an attachment to a sweep generator of the klystron type with mechanical automatic tuning provided the fm signal is additionally modulated in amplitude at approximately 1 kcs frequency. Orig. art. has: 4 figures and 5 formulas.

ASSOCIATION: None

SUBMITTED: 13Aug63

ENCL: 03

SUB CODE: EC

NR REF SOV: 004

OTHER: 000

Card 2/5

L 18064-63

EWI(d)/FOC(w)/BDS AFITC/IJP(G)

S/2944/63/000/001/0012/0026

ACCESSION NR: A33002554

54

AUTHORS: Daugavet, I. I., Domanovskaya, Ye, F.

TITLE: Quadrature formulas adapted for solving integral equations

SOURCE: Leningrad. Universitet. Kafedra vychislitel'noy matematiki i Vychislitel'nyy tsentr. Metody vychisleniy, no. 1, 1963, 12-26

TOPIC TAGS: quadrature formula, eigenvalue, differential equation

ABSTRACT: The author constructs formulas for approximate quadrature for use in integral and differential equations. Among the applications is accurate determination of eigenvalues. Orig. art. has: 14 formulas and 10 tables.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 28Jun63

ENCL: 00

SUB CODE: MM

NO REF SCV: 002

OTHER: 000

Card 1/1

DOROKHOV, V.N.; RUBAKHIN, V.N.; BIL'GIL'DEYEV, A.S.; DOMANOVSKIY, A.V.

Use of synthetic oils and fatty acids for oil-coating of rabbit
pelts. Kozh.-obuv.prom. 2 no.5:15-17 My '60. (MIRA 13:9)
(Hides and skins)

DOMANOVSKY, GY.

DOMANOVSKY, GY. Current and new tasks for our porcelain art. p. 95.

Vol. 49, no. 6, June 1956

EPITOANYAG

Budapest, Hungary

SO: East European Accession Vol. 6, no. 3, March 1957

DCMANOVSENY, GY.

Incubus variants in the Hungarian folk belief.

p. 41. (ACTA ETHNOGRAPHICA) Vol. 6, no. 1/2, 1957, in Russian
Budapest, Hungary

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, No. 3,
March 1958

Domancowski, J. R.

V Non-Ferrous Heavy-Metal Centrifugal Casting: A Contribution on the Development and Practice of the Centrifugal-Casting Process. J. R. Domancowski (*Metall.* 1953, 8, 17-8), 261-267).--The following aspects of centrifugal casting are discussed: history; the various processes; equipment; mould materials; precautions necessary for the successful casting of various metals and alloys; techniques; advantages; metals and alloys suitable for centrifugal casting and the I.N. specifications for the mech. properties of the products in comparison with similar sand- and chill-cast materials. --E. N.

of

DOMANSKA, Alicja
DABROWSKI, Tadeusz, mgr inż.; MISZCZAK, Stanislaw, mgr inż.; DOMASKA,
Alicja, mgr inż.

Analysis of ambiophony. Przegl telekom 35 [i. e. 36] no.2:
47-54 P '63.

Domanskiy, H.

Resistance of wheat varieties to drought during germination and early growth. P. Strubayko and H. Domanskiy (*Russk. Nauch. Pol.*, 1954, 81, A, 117-120). — Varietal differences in drought resistance of wheat cannot be explained by differences in size of root systems. Factors concerned include the suction force of the root hairs and the rate of early development of the plants. Rapid development of seedlings permits early utilization of available soil moisture. A. G. POLLARD.

COUNTRY : POLAND
CATEGORY : Plant Physiology. Water Conditions. I
ABS. JOUR. : RZBRIol., No. 3 1959, No. 10609
AUTHOR : Strebeyko, F., Domanska, H.
INST. : -
TITLE : The Effect of Leaf Water Content Change on Dry Matter Increases in Oats and Rape.
ORIG. PUB. : Roczn. nauk rolniczych. 1957. 475. No. 3. 339-369
ABSTRACT : Oat and rape plants were grown in vegetative vessels in soil with a moisture content of 10-50% of the capillary moisture capacity. A month after the sowing, the diurnal course in the variations of water content in the leaves was studied for 3 days. In the daytime the water content was lower than at night. Changes in soil moisture affected the water content negligibly in the leaves but had a strong effect on the growth of the plants and increase in

END: 1/2

9

COUNTRY :
CATEGORY : I
ABST. JOUR. : RZhBiol., No. 1959, No. 10609
AUTHOR :
INST. :
TITLE :
ORIG. PUB. :
ABSTRACT : dry matter, which the authors explain by the change in the activity of photosynthesis. Rape proved to be more sensitive to moisture deficiency than oats. With water deficiency in the soil, the growth of the stems was retarded more severely than the growth of the roots. Bibliography of 35 titles. -- M. P. Shteraberg

CARD: 2/2

CP :
CATEGORY : Chemical Technology. Chemical Products and Their Applications. Pesticides.
ABS. JOUR. : RZhKhim., No 19, 1959, No.68967
AUTHOR : Domanska, H.; Sobotka, W.
INSTRUMENT : -
SUBJECT : Herbicides considered in Herbicides. Herbicides
Chemistry of Aryloxyalkanoic Acids
ORIG. PUB. : Krestov nauk zhurn., 1959, 5, No 1, 21-22

ABSTRACT : No abstract.

Card: 1/1

LISTOWSKI, Anatol; DOMANSKA, Halina

Influence of the autumn and spring drought on the development of
winter rye and barley. Rocznik nauki rolniczej 83 no.2:229-241 '60.
(EEAI 10:9/10)

1. Instytut Uprawy, Nawożenia i Gleboznawstwa, Pulawy.

(Rye) (Barley) (Droughts)

JANKOWSKI, Wladyslaw, mgr., inz.; KUBICKI, Jerzy, mgr., inz.; JANUSZEWICZ,
Krystyna, mgr., inz.; DOMANSKA, Hanna, mgr., inz.; SAWICKI, hipolit.,
mgr., inz.; GACIARZ, Kazimierz, mgr., inz.

A chemical combine for Turkey. Architektura Pol no.10:384-385 '61.

DOMANSKA, Helena; ECKSTFIN, Zygmunt; EJMOCKI, Zdzislaw; MAJEWSKI, Krzysztof;
ZUKOWSKI, Edward

Possibilities of utilizing 2,5-dichlorophenol in the synthesis of plant protection agents; experiments in applying 2,5-dichlorophenoxyacetic acid as a herbicide. Postepy nauk roln 9 no.3:59-76 My-Je '62.

1. Katedra Technologii Organicznej II, Politechnika, Warszawa, i Zaklad Ogolnej Uprawy Roli i Roslin, Szkola Glowna Gospodarstawa Wiejskiego, Warszawa.

DOMANSKA, Helena; DYSZER, Elzbieta; BURACZEWSKI, Krzysztof

Searching for analogues of 2-methylo-4-chlorophenoxyacetic acid.
Postepy nauk roln 9 no.6:123-124 N-D '62.

1. Zakład Ogólnej Uprawy Roln i Roslin, Wyższa Szkoła Gospdarstwa
Wiejskiego, Warszawa, i Katedra Technologii Organicznej II,
Politechnika, Warszawa.

POLAND

MCMAJNSKA, H., Mgr, chief of Pharmacy Section, Department of Health and Public Welfare, Powiat People's Council (Odzial Farmacji Wydz. Ziwrowia i Op. Spol. PRN), Krakow; and KUBIAK, Z., Dr, senior assistant professor (adiunkt) to the Chair of Applied Pharmacy, Krakow Medical Academy (Katedra Farmacji Stosowanej AM w Krakowie)

"Hospital Pharmacies on the Territory of Krakow."

Warsaw, Farmacja Polska, Vol 19, No 3, 10 Feb 63, pp 53-55

Abstract: Brief review of the premises, equipment, and turnover of the nine institutional hospitals in the city of Krakow. No references.

1/1

DOMANSKA, H.; ECKSTEIN, Z.

Herbicidal properties of saccharose esters of phenoxyacetic acid derivatives. Rocznik nauki rolniczej 88 no.1:59-72 '63.

1. Katedra Ogólnej Uprawy Rolnictwa i Roslin, Szkoła Główna Gospodarstwa Wiejskiego, Warszawa i Katedra Technologii Organicznej II, Politechnika, Warszawa.

DOMANSKA, STEFANIA

✓Production of standardized leavens. Stefania Domanska.
Przemysł Sposowy 9, 605-0(1955)(English summary).
The lab. prepa. of standardized leaven for the production of
rye bread is detd. by (a) the no. of fermentation phases,
(b) the addn. of lactic acid, (c) measured acidity of separate
phases, (d) temp. and time of fermentation, (e) the propor-
tion of flour and water, (f) microbiol. test. The last fermenta-
tion phase being over, the leaven has been pressed into a
cube weighing 0.5 kg. and wrapped in parchment or cello-
phane. The method of making rye dough on prepd. leaven
is desc. ibcd. W. Szybalki

110

DOMANSKAYA, E.N.

KOSTINA, K.F., kandidat sel'skokhozyaystvennykh nauk; DOMANSKAYA, E.N.

Experiment on self-pollination of apricots. Dokl. Akad. Sel'khoz.
21 no.5:12-14 '56. (MLRA 9:8)

1. Gosudarstvennyy Nikitskiy botanicheskiy sad imeni V.M. Molotova.
Predstavlena akademikom P.N. Yakovlevym.
(Apricot)

DOMANSKAYA, G. M.

PA 190T25

USSR/Chemistry - Manganese Aug 51

"Preparation of Potassium Manganate and Permanganate by Anodic Solution of Metallic Manganese," R. I. Agladze, G. M. Domanskaya

"Zhur Prikl Khim" Vol XXIV, No 8, pp 787-797

Anodic soln of electrolytic metallic Mn in K₂CO₃ and dil KOH solns yielded KMnO₄, in concd KOH solns K₂MnO₄. In chemically pure KOH solns small amt of sludge (mostly MnO₂) formed. Use of tech grade KOH decreased yield slightly. Detd optimum conditions for prepn of K₂MnO₄ and KMnO₄.

190T25

USSR/Chemistry - Manganese (Contd) Aug 51

Consumption of 11 kw-hr/kg of product and conversion of 80-90% of anodic Mn are feasible.

190T25

DOMANSKAYA, G. M.

193T24

USSR/Chemistry - Oxidants (Contd) Oct 51
kv-hr/kg, with yield of 80-95% in respect to Mn,
current yield of 30-58% for NaOH solns, 20-32% for
Na₂CO₃ solns.

193T24

"Zhur Pril Khim" Vol XXIV, No 9, pp 915-924
Describes method for anodic soln of electrolytic
metallic Mn in Na₂CO₃ and dilute NaOH solns to
prep MnO₂ and in concd NaOH solns to prep Na₂MnO₄.
Discusses optimum temp, anodic cd, cathodic area.
Method makes possible prepn of MnO₂ with energy
consumption of 4-6 kv-hr/kg, of Na₂MnO₄ with 20

PA 193T24
USSR/Chemistry - Oxidants
"Preparation of Sodium Manganate and Permanganate
by Anodic Solution of Metallic Manganese," P. I.
Agladse, G. M. Domanskaya

Oct 51

DOMANSKAYA, G.M.

MORAKIDZE, G.K.

20) **PLANE I ROSE SEPARATION** 887/161
 Anshel's and Gruzinsky 88, 2121a. Institut Prikladnoy Khimii i Elektrokhimii
 Elektrokhiyaya saryptov, 5. 1 (Electrochemistry of Magnesium, Vol. 1) Tallin,
 146-vo Aka, sub Gruzinsky 88, 1977. 516 p. 2,000 copies printed.
 Additional Sponsoring Agency: Tallin, Sovetskoye politsobshchestvennoye izdatel'stvo.
 Nauchno tekhnicheskoye elektrokhiyayemost'noye predpriyatiye.
 Dr. I. S. Gruzinsky; M. of Publishing House: O.B. Gruzinsky; Pub. No.:
 A.B. 146a.

REMARKS: This book is intended for specialists working in the field of magnesium
 technology and related fields.
CONTENTS: This collection of articles presents most accomplished research in the
 field of magnesium electrochemistry. The two main objectives of research were:
 new industrial methods for the production of high-purity magnesium, and the
 utilization of low-grade ores and magnesium wastes. Special attention is given
 to the

Electrochemistry of Magnesium, Vol. 1 887/161

to the low-grade magnesium ores of the Urals (see also the Chemical
 Abstracts under: Production of electrolytic magnesium 22 of primary interest
 is the research on the production of high-purity magnesium and the
 utilization of low-grade ores for the production of a variety of magnesium alloys
 in different media for the production of a variety of magnesium alloys
 and 7 related magnesium alloys in this respect of magnesium tech-
 nology led to the construction of a plant for the production of potassium per-
 manganate at the Khar'kov electrochemical plant (Khar'kov Plant of Nitrogen per-
 manganate). For electrochemical methods for the production of magnesium and
 potassium permanganate were described by I. S. Gruzinsky, the Academy of Sciences,
 Georgian SSR, jointly with colleagues of research workers from the Zestafoni
 Permutitovyy zavod (Zestafoni Permutit Plant) and the Khar'kov Electrochemical
 Plant (Khar'kov Plant of Nitrogen Permanganate). Several papers on the cathodic
 and anodic behavior of magnesium and related problems were contributed by the
 authors of the papers on electrolytic magnesium and electrochemistry of the
 surface of applied chemistry and electrochemistry, Academy of Sciences,
 Georgian SSR, and the Chair of Electrochemical Technology, Georgian Polytechnical
 Institute.

Electrochemistry of Magnesium, Vol. 1 887/161

- 4. Effect of reducing agents, surfactants, and oxidizing agents on the
 electrolytic deposition of magnesium 121
- 5. Effect of temperature, electrolyte concentration, and other factors
 on the electrolytic production of magnesium 139
- Ch. VIII. Agladze, R.I., R.Z. Guban, P.M. Puchanashvili, and I.G.
 Gogidze, Institute of Chemistry of Magnesium from Low Grade Ores by Means
 of Processes of Electrochemical Metallurgy (Part I. Deinitallye
 Deposits of Carbonate Ores) 143
- 1. Recovery of magnesium from the Uralskoye ores by leaching 143
- 2. Development of the Uralskoye ores by the percolation method 145
- Ch. IX. Agladze, R.I., and G.M. Domanskaya, Institute of Chemistry of
 Magnesium in Akhalik 145

REMARKS: Library of Congress (S8799.R6A43)
 28/Jan
 5-8-79

SOV/137-58-10-20478

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 10, p 19 (USSR)

AUTHORS: Agladze, R.I., ~~Domanskaya, G.M.~~

TITLE: Anodic Polarization of Manganese in Caustic Solutions (Anodnaya polyarizatsiya margantsa v shchelochnykh rastvorakh)

PERIODICAL: V sb.: Elektrokimiya margantsa. Tbilisi, AN GruzSSR, 1957, pp 503-514

ABSTRACT: A study is made of anodic polarization (AP) of Mn in solutions of KOH, NaOH, and Na₂CO₃ of various concentrations, by plotting polarization curves by the compensation method, and also by means of the Vagramyan recording apparatus. The use of the Vagramyan method and apparatus made it possible to discover segments on curves for concentrated KOH and NaOH solutions where O₂ liberation proceeds without formation of Mn⁴⁺, and also made it possible significantly to diminish the effect of oxidation of the surface on the process of AP and of determining the shape of the curves in the first stages of polarization and oxidation of the anode. This did not prove possible by the method of compensation. Bibliography: 8 references. 1. Manganese
N.P.
--Polarization 2. Anodes--Oxidation 3. Potassium hydroxide--Performance
Card 1/1 4. Sodium carbonates--Performance 5. Sodium hydroxide--Performance

Domanskaya, G.M.

AGLADZE, R.I., akademik; DOMANSKAYA, G.M.

Anodic solution of manganese with the formation of permanganate and dioxide. Soob. AN Gruz. SSR 18 no.6:695-702 Je '57. (MIRA 10:10)

1. AN GSSR, Otdeleniye tekhnicheskikh nauk, Tbilisi.
(Manganese) (Electrolysis)

DOMANSKAYA, G.M.

Electrochemical preparation of sodium permanganate. Trudy Inst.
prikl.khim.i elektrokhim.AN Gruz.SSR 3:27-37 '62. (MIRA 16:1)
(Sodium permanganate) (Electrolysis)

DOMANSKAYA, G.M.; AGLADZE, R.I.

Electric conductance of alkaline electrolytes used in
permanganate production. Trudy Inst.prikl.khim.i elektrokhim.
AN Grus.SSR 3:39-47 '62. (MIRA 16:1)
(Alkalies—Electric properties) (Alkali metal permanganates)

MARKMAN, A.I.; UMAROV, A.U.; BAPAM, B.M.; LOMONOSOV, P.P.

Gils from certain species of Cruciferae. Khim. prirod. soed.
no. 4:295-296 '65.

(MIRA 1961)

1. Institut khimii rastitel'nykh veshchestv AN UzSSR.
Submitted January 27, 1965.

9 (2), 28 (2)

SOV/115-59-10-8/29

AUTHORS: Grazhdankina, N.P., ~~Domanskaya, I. I.~~ and Kikoin, A.K.

TITLE: Measuring the High Pressure Chamber Temperature With a Thermal Resistor

PERIODICAL: Izmeritel'naya tekhnika, 1959, Nr 10, pp 18-21 (USSR)

ABSTRACT: The author studied the possibility of replacing the thermo-couples by thermal resistors to measure the temperature in high pressure chambers. As the use of thermocouples requires very extensive research to calculate the effect of very high pressures on their precision, the author tentatively investigated the possibility of using Soviet produced thermal resistors of the MMT-4 type (copper-manganese) (Fig 1). The investigation of the influence of high pressure on the precision of thermal resistors at 5,000 kg/sq cm and 8,000 kg/sq cm pressure was made in two high pressure chambers. In the first chamber the temperature was 15.6, 17.3, 18.5, 24.4, 33.2 and 35.2°C at a pressure up to 5,000 kg/sq cm; in the second chamber the temperature was 17.4°C

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Measuring the High Pressure Chamber Temperature With a Thermal Resistor

at a pressure of up to 8,000 kg/sq cm. The resistance of the resistors was measured with a bridge having an error possibility of up to 0.5 ohm. Graphs 2,3 and 4 show the results of these tests. A table showing the corrections which must be introduced in the temperature indicated by a thermal resistor is given in the article. The table shows that a resistor is no more precise than a thermocouple. The high pressure chambers were constructed according to the plans prepared by M.I. Oleynik and V.A. Stepanov. There are 3 graphs, 1 diagram, 1 table and 5 references 1 of which is Soviet, 2 French, 1 American and 1 Canadian.

Card 2/2

DOMANSKAYA, L.I.; OMEL'YANOVSKIY, E.M.; FISTUL', V.I.; TSIDIL'KOVSKIY, I.M.

Nernst-Ettingshausen effect in heavily alloyed n-type germanium.
Fiz. tver. tela 5 no.10:3046-3048 0 '63. (MIRA 16:11)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut redkometallicheskoj promyshlennosti, Moskva, i Institut fiziki metallov AN SSSR, Sverdlovsk.

L 24914-65 EWT(1)/EWT(m)/EWP(t)/EWP(b) IJP(c) JD/AT
ACCESSION NR: AP5003412 8/0181/65/007/001/0046/0053

AUTHORS: Domanskaya, L. I.; Kharus, G. I.; Tsaidil'kovskiy, I. M.

TITLE: The Nernst-Ettingshausen effect² in doped n-type silicon

SOURCE: Fizika tverdogo tela, v. 7, no. 1, 1965, 46-53

TOPIC TAGS: silicon¹, Nernst Ettingshausen effect, doping, temperature dependence, concentration dependence, Hall effect

ABSTRACT: The Nernst-Ettingshausen (NE) effect was measured in single-crystal silicon doped with antimony, in the temperature interval 100--400K. The measurements were made in magnetic fields up to 15 kOe, directed in all cases along the [111] axis. The temperature gradients in the samples were in the range 3--8 deg/cm. The electron concentrations were determined by the Hall effect, and amounted to 10^{16} -- 10^{20} cm⁻³ arsenic atoms. The values obtained for the NE coefficient and its temperature dependence are illustrated

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in Fig. 1 of the enclosure. An analysis of the conditions for the applicability of the Born approximation and the screened Coulomb potential has shown that the Brooks-Herring formula for the probability of scattering by impurity atoms is valid for the conditions in these experiments. A reversal of the sign of the NE effect at large arsenic contents was observed, but cannot be explained on the basis of this formula. A coefficient K determined by the scattering mechanism and independent of the mobility is introduced as a convenient characteristic of the NE effect. The experimental and theoretical values of this coefficient are compared and the discrepancies between them are explained by taking into account the role of the "ion core" in scattering in the case of a large degree of doping. Orig. art. has: 16 formulas, 5 figures, and 1 table.

ASSOCIATION: Institut fiziki metallov AN SSSR, Sverdlovsk (Institute of Metal Physics AN SSSR)

Card

2/4

SEREBRYAKOV, I.G.; DOMANSKAYA, W.P.; RODMAN, L.S.

Morphogenesis of life forms of shrubs exemplified by the filbert.
Biol.MOIP. Otd.biol. 59 no.2:57-70 Mr-Apr '54. (MLRA 7:6)
(Filbert) (Botany--Morphology)

DOMANSKAYA, N.P., Cand Biol Sci -- (diss) "Formation
and seasonal growth of the root system of the peduncular
oak in Stalingradskaya and Moskovskaya Oblasts."
Mos, 1958, 13 (Mos City Pedagogical Inst im S.P.
Potemkin) 150 copies (KL, 50-58, 122)

- 34 -

DOMANSKA'YA, N.P.

Growth in length of the skeleton roots of the oak *Quercus*
robur L. Nauch.dokl.vys.shkoly;biol.nauki no.4:139-142
'58. (MIRA 11:12)

1. Rekomendovana kafedroy botaniki Moskovskogo gorodskogo
pedagogicheskogo instituta im.V.P.Potemkina.
(Oak) (Roots (Botany)) (Growth (Plants))

AUTHOR: Domanskaya, N. P. 20-119-6-50/56

TITLE: The Formation of the Root System in *Quercus robur* L. (Formirovaniye kornevoy sistemy chereschatogo duba)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol. 119, Nr 6, pp. 1233 - 1235 (USSR)

ABSTRACT: The author makes an attempt to represent this process for *Quercus robur* L. from the germination up to the grown-up state. Artificial afforestations on light chestnut-brown grounds in the Stalingrad district and natural stands in the same region served as observation objects. One part of the comparative data was collected near Moscow. During germination of the acorn an embryonal root appears, which is the base of the taproot. Only 1,5 - 2 weeks later the small stalk appears. Directly under the cotyledon knob the taproot has a stalk structure, which gradually passes into a root structure. Hypocotyl is well marked at the *Quercus robur* L., 3-5 up to 25 cm length (contrary to reference 3). Its length is greatest under the arid conditions of Stalingrad. Its limitation as compared to the root cannot be reasoned by a deficiency of marrow, because marrow also occurs on the roots at high moisture.

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The Formation of the Root System in *Quercus robur* L. 20-119-6-50/56

When the taproot reaches a length of 11 - 18 cm, side- and adventitious roots of second order form on it, then of third, fourth and following orders. Towards the end of the first vegetation period 6 branching-off orders can be determined. As is well known, a division of functions between extended and retracted roots, which got the name of skeletal-, vegetative roots, haustorine and nutritive roots, respectively, exist in the root system of the arboreal species. This classification is not possible at *Quercus robur* L., because a large group of roots occupies an intermediate position. The period before the appearing of the skeletal roots is called the first period of development by the author. Now the taproot is much longer than the small stalk (figure 1). With the appearing of the skeletal roots the second period begins. The nutritive surface increases much; the structure of the future root system of the grown-up tree begins to form. From the second year growth of the taproot is much slowed down, when the supply of food of the acorn is used up. The side- and adventitious roots soon relieve them (figure 2). Now the epicotyleal vegetative roots form as well. The third and last period is characterized

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The Formation of the Root System in *Quercus robur* L. 20-119-6-50/56

by the dying of the skeletal and vegetative roots of higher orders, whereby the top dies and iries. The died roots are relieved by new young roots of the orders I - IV. They approach the stalk basis and do not function for a long time (up to 4 years): the dying of the tree is connected with their dying. There are 2 figures and 3 references, 2 of which are Soviet.

PRESENTED: February 3, 1958, by V. N. Sukachov, Member, Academy of Sciences, USSR

SUBMITTED: February 1, 1958

Card 3/3

DOZHANSKAYA, Y. N., and KOSTINA, K. P., Cand. Agr. Sci.

"Opyt po samoopyleniyu abrikosa", Dokl. vses. ord. "enina akad. Sel'skokh. nauk im. V.I. Lenin, No 5, pp12-14, 1956.

DOMANSKAYA, Yu., inzh.

Attachment to the device used in determining the specific
elasticity of gluten. Muk.-elev. prom. 26 no. 11:24-30
N '60. (MIRA 13:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zerna i
produktov yego pererabotki.
(Gluten)

DOMANSKAYA, Z. B.

"Calculation of Wooden Glued Beams, Considering the Elastic Anisotropy of Wood." Cand Tech Sci, Leningrad Forestry Acad Leningrad, 1954.
(RZhMakh, Nov 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (11)

SO: Sum. No. 521, 2 Jun 55

SOV/124-58-5-5903

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 5, p 137 (USSR)

AUTHOR: Domanskaya, Z.B.

TITLE: Calculation of Glued Wooden Beams With Consideration of the Elastic Anisotropy of Wood (Raschet kleyenykh derevyannykh balok s uchetom uprugoy anizotropii drevesiny)

PERIODICAL: Tr. Leningr. lesotekhn. akad., 1957, Nr 78, pp 19-25

ABSTRACT: Bibliographic entry

1. Beams--Mathematical analysis
2. Beams--Materials
3. Wood--Elasticity
4. Glues--Applications

Card 1/1

DOMANSKI, A.

3853

Domanski A. The Effect of Peroxide Content on the Durability of Lard stored in Cooled Rooms. 663.222:665.112.2 AG

„Wplyw zawartosci polaczen nadtlenujacych na trwałość smalcu przy skladowaniu w pomieszczeniach chlodzonych”. Przemysl Spozycwy. No. 1, 1935, pp. 12-24, 4 figs., 8 tabs.

This work sets out to determine the approximate storage-life of pork lard of varying initial peroxide-content in cooled rooms. The results obtained led to the following practical conclusions: 1) only lard of a peroxide value less than about 1.5 may be stored longer than 4 months; 2) lard of peroxide value not exceeding 2 may be stored for two months at the utmost; 3) if the peroxide value exceeds 2, the lard should be appropriated for immediate use.