

ALEKSANDRENKO, Gleb Vasil'yevich [Aleksandrenko, H.V.]; POVOLOTS'KIY,  
A., red.; MEYEROVICH, S., tekhn.red.

[Economic councils of the economic administrative regions of  
the Ukrainian S.S.R.; legal problems connected with their work  
and organization] Radnarhoapy ekonomichnykh administratyvnykh  
raioniv Ukraini's'koi RSR; pravovi pytannia organizatsii ta  
diial'nosti. Kyiv, Derzh.vyd-vo polit.lit-ry URSS, 1959. 158 p.  
(MIRA 12:10)

(Ukraine--Economic policy)

RUMANIA / Chemical Technology, Industrial Synthesis of H  
Dyes.

Abs Jour: Ref Zhur-Khimiya, No 22, 1958, 74913.

Author : ~~Aleksandresku.~~  
Inst : Not given.  
Title : Chrysophenine.

Orig Pub: Rev. chim., 1956, 7, No. 3, 171.

Abstract: No abstract.

Card 1/1

ALEKSANDRESKU, D. [Aleksandrescu, D.]; SKURTU, N. [Scurtu N.]; ZHOREZESKU, L.  
[Georgescu, L.]

Hormonally active tumors of the ovary and fibromatosis of the  
uterus. Akush.i gin. no.6:44-48 '60. (MIRA 14:1)

1. Iz rodil'nogo doma "Polizu", Bukharest.  
(OVARIES—TUMORS) (UTERUS—TUMORS)

ALEKSANDRESKU, Viktoriya [Alexandrescu, Victoria]

Decomposition of tributyrin and sunflower oil under the action of pancreas lipase in the presence of biliary mucus. Rev chimie 6 no.1: 137-142 '61.

1. Institut biokhimii Akad. RNR.

USSR / Human and Animal Morphology. Nervous System. S-2

Abs Jour: Ref Zhur-Biol., No 14, 1958, 64762.

Author : ~~Aleksandrevskaya, M. M.~~

Inst : Institute of Higher Nervous Activity, AS USSR.

Title : Histological Changes of the Central Nervous  
System in Experimental Diphtherial Intoxication  
of White Rats.

Orig Pub: Tr. in-ta vyssh. nervn. deyatsti, AN SSSR,  
ser. patofiziol., 1957, 3, 325-335.

Abstract: No abstract.

Card 1/1

USSR/Human and Animal Physiology. Thermoregulation.

T

Abs Jour: Ref Zhur-Biol., No 20, 1958, 93059.

Author : Aleksandri, A.I.

Inst :

Title : The Effect of the Conditioned Reflex on the Course of  
Fever Reactions.

Orig Pub: V sb.: Fiziol. mekhanizmy lihoradochn. reaktsii, L.,  
Medgiz, 1957, 252-253.

Abstract: No abstract.

Card : 1/1

ALEKSANDRI, A.V.

Controlling weeds in orchards and vineyards. Zashch. rast.  
ot vred. i bol. 8 no.3:49-50 Mr '63. (MIRA 17:1)

1. Nauchno-issledovatel'skiy institut sadovodstva i vino-  
gradarstva, Bukharest.

ACC NR: AP7005657

(A, N)

SOURCE CODE: UR/0413/67/000/002/0114/0114

INVENTOR: Aleksandridi, T. M.; Legovich, Yu. S.

ORG: None

TITLE: A multiplication unit. Class 42, No. 190658 (announced by the Institute of Automation and Telemechanics [Technical Cybernetics] [Institut avtomatiki i teleme-khaniki (tekhnicheskoy kibernetiki)])

SOURCE: Izobreteniya, promyshlennyye obraztzy, tovarnyye znaki, no. 2, 1967, 114

TOPIC TAGS: computer component, arithmetic unit, flip flop circuit

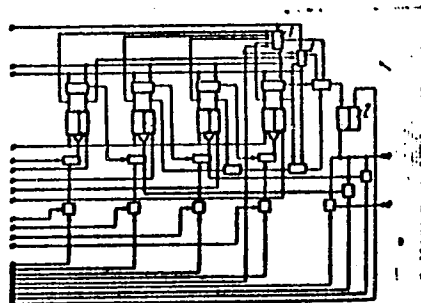
ABSTRACT: This Author's Certificate introduces a multiplication unit of the series-parallel type in which one of the numbers is given in parallel binary-decimal code and the other is given in number-pulse code. The device contains a control unit (e. g. a shift register), storage-carry flip-flops and a reversible binary-decimal counter with logic circuits for addition and correction by digital place. To reduce the end-around carry time, an additional end-around carry circuit is introduced into each decade of the counter. Each of these circuits contains two coincidence gates for conditions of addition and subtraction. These gates are controlled by the carry-storage flip-flop of the preceding decade and by flip-flops in their own decades.

Card 1/2

UDC: 681.142.07:621.385.831



ACC NR: AP7005657



1--coincidence gates; 2--carry-storage flip-flop

SUB CODE: 09/ SUBM DATE: 19Feb66

Card 2/2

f 33345-66 EWP(k)/EAT(d)/EWP(h)/EWP(l)/EWP(v) GD

ACC NR: AT6005905

SOURCE CODE: UR/0000/65/000/000/0239/0249

AUTHOR: Aleksandridi, T. M.; Dilligenskiy, S. N.; Krug, Ye. K.

ORG: None

TITLE: Digital controls 14

SOURCE: International Federation of Automatic Control. International Congress. 2d, Basel, 1963. Tekhnicheskiye sredstva avtomatiki (Technical means of automation); trudy kongressa. Moscow, Izd-vo Nauka, 1965, 239-249

TOPIC TAGS: control system, dynamic stability, digital system

ABSTRACT: In addition to specialized digital control systems, there is now a need for the development of all-purpose digital systems. The construction of such control systems is possible on the basis of an analysis of dynamic characteristics of digital systems. The present authors investigate some of the characteristics of the dynamic properties of digital controls and describe operational principles of single-channel and multi-channel digital controls. The all-purpose digital control systems examined incorporate the proportional-integral (PI) law of control. Other investigations have shown that PI controls assure high-quality control for many controlled plants. Orig. art. has: 8 figures and 10 formulas.

SUB CODE: 09 / SUBM DATE: 23Jun65 / ORIG REF: 004 / OTH REF: 003

Card 1/1

JS

*ALEKSANDRI G.*

RUMANIA / Microbiology. Antibiosis and Symbiosis. Antibiotics

F-2

Abs Jour : Ref Zhur - Biol., No 1, 1958, No 644

Author : Aleksandri, Gulya

Inst : Not Given

Title : Use of Antibiotics for Plant Protection

Orig Pub : Natura (Romin.), 1956, 8, No 6, 128-134

Abstract : No abstract

Card : 1/1

ALEKSANDRI-SADOVA, T. A.

Dissertation: "Stratigraphy of Coal-Bearing Deposits of Karaganda Basin on the Basis of a Study of a Pelecypoda Fauna." Cand Geol-Min Sci, Laboratory of Coal Geology, Department of Geologico-Geographical Sciences, Acad Sci USSR, Leningrad, 1953. Referativnyy Zhurnal--Geologiya, Geografiya, Moscow, Jul 54.

SO: SUM No. 356, 25 Jan 1955

ALEKSANDRI-SADOVA, T.A.

~~Pelecypoda~~ Pelecypoda of Karaganda coal-bearing deposits and their stratigraphic significance. Trudy Lab.geol.ugl. no.2:154-159 '54. (MIRA 8:7)  
(Karaganda Basin—Lamellibranchiata, Fossil)

15-57-4-4154

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 4,  
p 17 (USSR)

AUTHORS: Monakhova, L. P., Aleksandri-Sadova, T. A., Bushmina,  
L. S., Zaspelova, V. S., Lyuber, A. A., Borsuk, M. O.

TITLE: The Use of Paleontologic Methods for Studying Coal-  
Bearing Formations (K voprosu o primenenii paleontolo-  
gicheskogo metoda pri izuchenii uglenosnykh tolshch)

PERIODICAL: Tr. Labor. geologii uglya AN SSR, 1956, Nr 5, pp 58-64.

ABSTRACT: This work is based on data from the eastern part of the  
USSR (Karaganda, Kuzbass) and has to do with the fauna  
and flora of continental deposits. Spores and pollen  
are very important in studying the stratigraphy of the  
coal-bearing sequence. This importance stems from the  
presence of spores and pollen in the coal beds them-  
selves, from their ability to travel through the air  
which leads to wide distribution, and also from the fact  
that they are well preserved. Insects are widespread in

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15-57-4-4154

The Use of Paleontologic Methods for Studying (Cont.)

the fine-grained lacustrine sediments. The value of the insects is enhanced by the fact that they are delicate indicators of changes in the ecological environment. The fresh-water pelecypod fauna may be traced over great distances in sediments of synchronous basins. Fresh-water pelecypods are very sensitive to changes in the external environment and may be of considerable use in paleogeographic investigations. More detailed study of this group is needed. Ostracods are also important, many of them having a narrow vertical range and showing insignificant variations horizontally in different types of rock. Phyllopods, living in brackish-water and fresh-water reservoirs, may also be useful for correlation and age determination of strata. Gastropods and fish have not yet been studied sufficiently. The author notes that a stratigraphic boundary should be established by the appearance of a group of new, persistent forms. In the Karaganda basin, where the pelecypods, brachiopods, phyllopods, ostracods, and flora were studied, emphasis is placed on the value of composite investigations when making stratigraphic and facies analyses.

Card 2/2

S. V. G.

ALEKSANDRI-SADOVA, T.A.; ZAKHAROVA, L.V.

Fauna distribution in cross sections of Suchan Basin coal-bearing and overlying formations and their importance for age determination. Trudy Lab.geol.ugl. no.8:252-261 '58.  
(MIRA 11:12)

(Suchan Basin--Paleontology)



ALEKSANDRI-SADOVA, T.A.

Using data on marine pelecypods for determining the age of  
Karaganda lower series. Trudy Lab.geol.ugl. no.9:162-173  
'59. (MIRA 13:4)  
(Karaganda Basin--Lamellibranchiata, Fossil)

ALEKSANDRI-SADOVA, T.A.

Corbicula and Trigonia in the Severnaya Suchan series of the  
Suchan Basin. Trudy lab. geol. ugl. no.10:394-200 '60.  
(MIRA 13:9)  
(Suchan Basin--Lamellibranchiata, Fossil)

ALEKSANDRI-SADOVA, T.A.; ZASPELOVA, V.S., kand. geol.-miner. nauk,  
otv. red.

[Lamellibranchiata from Carboniferous sediments in the  
Karaganda Basin] Platinchatozhabernye iz kamennougol'-  
nykh otlozhenii Karagandinskogo basseina. Moskva,  
Nauka, 1965. 67 p. (MIRA 18:9)

ROMANOV, A.V.; ALEKSANDRI, V.F.

Filtration calculations of waste disposal reservoirs. Vop. fil'tr.  
rasch. gidr. soor. no.4:53-77 '64. (MIRA 17:6)

ROMANOV, A.V.; ALEKSANDRI, V.F.; KUZ'MENKO, I.D.

Calculation of spatial flow toward drains under complex hydrogeological conditions. Vop. fil'tr. rasch. gidr. soor. no. 4: 91-107 '64.  
(MIRA 17:6)

ALEKSANDRID, T. M. (Eng.)

"The Electrostatic Memory Device of the M-2 Machine" a paper presented at the Conference on Methods of Development of Soviet Mathematical Machine-Building and Instrument-Building, 12-17 March 1956.

Translation No. 596, 8 Oct 56

*Aleksandridi, T.M.*

PHASE I BOOK EXPLOITATION 474

Kartsev, M.A., Aleksandridi, T.M., Knyazev, V.D., Tanetov, G.I.,  
Legezo, L.S., Lavrenyuk, Yu.A., Shchurov, A.I., Brusentsov, N.P.,  
Kuznetzova, V.P.

Bystrodeystvuyushchaya vychislitel'naya mashina M-2 (High-speed  
Computer M-2) Moscow, Gostekhizdat, 1957. 228 p. 10,000 copies  
printed.

Ed. (title page): Bruk, Isaak Semenovich, Corresponding Member,  
USSR Academy of Sciences; Ed. (inside book): Bezborodov, Yu. M.;  
Tech. Ed.: Gavrilov, S.S.

PURPOSE: The book is written for engineers and students of vuzes,  
specializing in computer techniques, and for specialists interested  
in computer applications.

COVERAGE: The book describes the M-2, a small-dimensioned, universal,  
high-speed digital computer developed by the Laboratory of Control  
Machines and Systems of the Academy of Sciences, USSR. A detailed  
description is given of the basic computer units: the arithmetic  
Card 1/13

High-speed Computer M-2

474

unit, internal memory devices, control devices and output devices. This description is supplemented with an exposition of the guiding principles of computer design, the binary system, coding and programming, and the design of basic components of the system. This makes the book accessible to readers who have no special training in electronic computers. The basic characteristics of the computer are as follows: the calculation system is binary; the code presentation is with a floating and fixed binary point; the number of binary digits is 34; the computation accuracy, with a floating binary point, is about eight decimal bits, and with a fixed binary point, about ten decimal bits (computations with doubled accuracy are also possible); the range of numbers in operations with a floating binary point is from  $2^{31}$  to  $2^{-32}$ ; the coding system is a three-address code; operations performed are: addition, subtraction, multiplication, division, congruence with modulus, algebraic congruence, logical (signed) multiplication, sign inversion, transfer of numbers, and auxiliary operations (30 in all); the average speed of operation is

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the following engineers: M.A. Kartsev, V.V. Belinskiy and A.B. Zalkind, who developed the arithmetic unit; the electrostatic memory device was developed by T.M. Aleksandridi and Yu.A. Lavrenyuk; control devices by L.S. Legezo, V.D. Knyazev and G.I. Tanetov; magnetic memory devices by A.I. Shchurov and L.S. Legezo; input and output devices by A.B. Zalkind; the power supply system by V.V. Belynskiy, Y.A. Lavrenyuk and V.D. Knyazev; the control panel by V.V. Belynskiy and A.I. Shchurov. The design work was supervised by M.A. Kartsev. The following laboratory constructors, technicians, mechanics and assemblymen also worked on the project; I.Z. Gel'fgat, A.D. Grechushkin, N.A. Nemtsev, F.F. Rzhetskii, I.K. Shvil'pe, D.U. Yermochkov, L.I. Fedorov, and G.I. Korostylev. The following persons collaborated in the writing of the book: M.A. Kartsev (Chapters I to VI and XI), I.M. Aleksandridi (Chapter VII), V.D. Knyazev (Chapters II, III, VII and IX), V.P. Kuznetsova (Chapter XII), Yu. A. Lavrenyuk (Chapters V and VII), G.I. Tanetov (Chapters VI, IX and XIII), A.I. Shchurov (Chapter VIII), N.P. Brusentsov (Chapters VIII, IX, XIV) and L.S. Legezo (Chapter X).

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There are no references.

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Appendix 5. Time-segmential diagrams explaining the performance of operations with numbers

AVAILABLE: Library of Congress (QA76.8.M2B7)

JP/ksv  
9-25-58

Card 13/13

ALEKSANDRID, T. M.

55

PHASE I BOOK EXPLOITATION SOV/6012

Akademiya nauk SSSR. Institut avtomatiki i telemekhaniki.

Avtomaticheskoye regulirovaniye i upravleniye (Automatic Regulation and Control) Moscow, Izd-vo AN SSSR, 1962. 526 p. Errata slip inserted. 9000 copies printed.

Resp. Ed.: Ya. Z. Tsypkin, Professor, Doctor of Technical Sciences;  
Ed. of Publishing House: Ye. N. Grigor'yev; Tech. Ed.: I. N. Dorokhina.

PURPOSE: This book is intended for scientific research workers and engineers concerned with automation.

COVERAGE: The book is a collection of articles consisting of papers delivered at the 7th Conference of Junior Scientists of the Institute of Automation and Telemekhanics, Academy of Sciences USSR, held in March 1960. A wide range of scientific and technical questions relating to automatic regulation and control is covered.

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Automatic Regulation (Cont.)

SOV/6012

The articles are organized in seven sections, including automatic control systems, automatic process control, computing and decision-making devices, automation components and devices, statistical methods in automation, theory of relay circuits and finite automatic systems, and automated electric drives. No personalities are mentioned. References are given at the end of each article.

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PART I. AUTOMATIC CONTROL SYSTEMS

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Automatic Regulation (Cont.)

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PART VI. THEORY OF RELAY CIRCUITS AND FINITE AUTOMATIC DEVICES

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ALEKSANDRIDI, T. M.; Deligenski

"Digital Controllers."

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

L 17764-63 EWT(d)/FOC(w)/BDS ASD/ESD-3/APGG/IJP(C) Pg-4/Pk-4/Po-4/Pq-4 GG  
 ACCESSION NR: AT3001881 S/2906/62/000/0139/0149

AUTHORS: Aleksandridi, T. M.; Fateyeva, Ye. A. 175

TITLE: Transistorized digit-analog translator 16C

SOURCE: Kombinirovannyye vychislitel'nyye mashiny; trudy II Vsesoyuznoy konferentsii-seminara po teorii i metodam matematicheskogo modelirovaniya. Moscow, Izd-vo AN SSSR, 1962, 139-149

TOPIC TAGS: computer, translator, transistorized, transistor, digital, analog, digit-analog, analog-digit

ABSTRACT: The paper describes a transistorized digit-analog translator (T), constructed by the authors, which is intended for operation in industrial automation equipment and which serves for the linking of a digital computing machine with operating equipments. The T serves not only for the translation of a discrete quantity into an analog quantity, but also for the storage of the translated values for the time of a cycle, that is, the time between two successive switchings to a given control channel. The output of the T consists of a direct current of 0-5 ma which serves for the control of an electropneumatic drive. 1. Fundamental T circuitry: The block scheme of the T is described and shown schematically. The switching

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L 17764-63

ACCESSION NR: AT3001881

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circuit is based on that described by I. R. Harris (Direct-coupled transistor logic circuitry, IRE, Trans., v. EC9, no.1, 1958). 2. Selection of T circuit parameters: The design of the T basically reduces to the selection of the magnitude of the current  $I_0$  for each of the digit circuits which, in essence, is specified by the requirement that the total current, in the event of each of the digits being unity, must not exceed a specified maximum value. The other unit parameters are then computed from  $I_0$  by the Harris method. 3. T-error analysis: The errors of the T circuit described are determined by the instability of the  $I_0$  currents, the scatter of the resistance values, and the changes of the various circuit parameters due to temperature changes. Each of these error sources is investigated separately, and the maximum error contribution of each source is explored. 4. Experimental results: A seven-digit mock-up of the T was tested. Maximum output current: 5 ma; stable current of a single digit,  $I_0=5.9$  ma; resistance  $R=500$  ohm. Total error at operating temperatures up to  $40^\circ\text{C}$ : 0.5%; up to  $50^\circ\text{C}$ : 0.8%. An appendix explains the reasonings leading to the determination of the greatest magnitude of the current  $I_0$ . Orig. art. contains 7 figures and 18 numbered equations.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 11Apr63

ENCL: 00

SUB CODE: CP, MM

NO REF SOV: 000

OTHER: 001

Card 2/2

16 8100  
S/103/63/024/002/009/020  
D201/D308

AUTHOR: Aleksandridi, T.M. (Moscow)

TITLE: Problems in the design of a multi-channel digital regulator

PERIODICAL: Avtomatika i telemekhanika, v. 24, no. 2, 1963, 202-214

TEXT: From the analysis of operation of a multi-channel digital regulator working as a controller and consisting of a centralized control machine, a multi-channel digital regulator, output stage and a digital-t-analog converter, the author derives and analyzes the structure of two types of proportional-integral digital regulators by means of comparing their phase characteristics. The second type of the regulator reproduces the proportional-integral control with some approximation, it is therefore faster and simpler in its structure. The simplified type is used for the design of a multi-channel regulator in the form of inter-connected units, the operation of which, (in particular the operation of the coefficient

/B

Card 1/2



Problems in the design ...

S/103/63/024/002/009/020  
D201/D308

setting unit), is analyzed in detail. There are 7 figures.

SUBMITTED: June 1, 1962

13

Card 2/2

L 37693-66 EWP(k)/EWT(d)/EWP(h)/EWP(l)/EWP(v) BC

ACC NR: AP6021396

SOURCE CODE: UR/0103/66/000/006/0133/0142

AUTHOR: Aleksandridi, T. M. (Moscow)

59  
B

ORG: none

TITLE: Selection of principal parameters of multichannel digital controllers

14

SOURCE: Avtomatika i telemekhanika, no. 6, 1966, 133-142

TOPIC TAGS: ~~automatic control~~, automatic control system, automatic control theory, digital controller, digital computer

ABSTRACT: A general analysis of the multichannel multipurpose industrial digital supervisory-control system is offered. Selection of control law, number of channels, rate of transmission, setting range is described; an algorithm for calculating the control input (output variable) is set up. Three structural schemes are briefly considered: (A) number-pulse code; reversible-counter-type arithmetic unit; single-shot multivibrator and binary divider; (B) serial binary code; serial arithmetic unit; diode nonvolatile storage; (C) parallel binary code; parallel arithmetic unit; diode nonvolatile storage. The relation is explored between the amount of equipment, the number of channels, and the setting factors of a proportional-integrating controller. These recommendations are offered: (1) The number of channels should be 15--50; (2) Whenever the rate of transmission permits, the structure A should be

Cord 1/2

UDC: 62-523.8:681.14

L 37693-66

ACC NR: AP6021396

used; (3) The rate of transmission should not be selected higher than necessary to satisfy the plant-parameter requirements. Orig. art. has: 4 figures, 8 formulas, and 1 table. [03]

SUB CODE: 13, 09 / SUBM DATE: 19Nov65 / ORIG REF: 002 / ATD PRESS: 5041

*re*  
Card 2/2

ALEKSANDRIN, I.I.; SHAPOVALOV, I.F.

Automatic production line for machining crawler links of the DT-54  
tractors. Biul. tekhn.-ekon. inform. no.10:15-17 '59.  
(MIRA 13:3)

(Crawler tractors) (Grinding machines)

*AleksandrIN, I.P.*

BELIAYEV, N.M.; ALEKSANDRIN, I.P.; BELYAVSKIY, L.A.; KACHURIN, V.K.; KIP-  
NIS, Ya.I.; KOZHEVNIKOV, I.A.; MONAKHOV, N.I.; MOROZOV, S.M.; MORO-  
ZOV, Yu.N.; STEPKIN, S.A.; FIGURNOV, N.M.; KACHURIN, V.K., redaktor;  
SNITKO, I.K., redaktor; GAVRILOV, S.S., tekhnicheskii redaktor.

[Laboratory testing of the strength of materials] Laboratornye raboty  
po soprotivleniiu materialov. Izd. 5-e, perer. Moskva, Gos. izd-vo  
tekhniko-teoret. lit-ry, 1954. 286 p. (MLRA 7:12)

(Materials--Testing) (Metals--Testing) (Strength of materials)

ALEKSANDRIN, Ivan Pavlovich, professor, doktor tekhnicheskikh nauk;  
SHRAMTAYEV, B.G., professor, doktor tekhnicheskikh nauk, redaktor;  
PUL'KINA, Ye. A., tekhnicheskiiy redaktor.

[Quality control of concrete in construction] Stroitel'nyi kontrol'  
kachestva betone. 6-e perer. izd-. Pod red B.G. Shramtaeva. Lenin-  
grad, Gos. izd-vo lit-ry po stroitel'stvu i arkhitekture, 1955.  
226 p. (MLRA 8:8)  
(Concrete construction)

ALEKSANDRIN, I. S. (Dec

USSR/Medicine - Mastoid, Surgery  
Medicine - Penicillin

May/Jun 1948

"Test of the Use of Penicillin Salve and Primary  
Suture in an Operation for Mastoiditis," I. S. Alek-  
sandrin (Deceased), Cand Med Sci, Ear, Nose and Throat  
Sec, Ryazan'sk Oblast Clinical Hosp, Item 1 N. A. Semash-  
ko, 5 pp

"Vest Oto-Rino-Laringol" Vol I, No 3

Gives results of studies conducted in 1945 to deter-  
mine whether or not application of penicillin salve  
to incision before primary suturing would speed up  
recovery period of patients after operations for

USSR/Medicine - Mastoid, Surgery (Contd) May/Jun 1948

mastoiditis. Though method is still new and has not  
been used much, it is recommended treatment even in  
cases of complicated mastoiditis.

76758

ALEKSANDRIN, I. S.

33588. Penitsillinovaya Pasta I Pervichnyy Shov Pri Operatsii Mastoidiia. Sbornik Nauch. Rabot (Ryaz. Obl. Otd. Zdravookhraneniya), Vyp. 2, 1949, c. 7-21. Bibliogr: 10 Nazv.

SO: Letopis' nykh Statey, Vol. 45, Moskva, 1949



ALEKSANDRIN, M.

...And then sickness will be reduced. Sov.shakht. 13 no.1:31 Ja  
'64. (MIRA 17:3)

1. Zaveduyushchiy punktom zdgravookhraneniya shakhty "Chertinskaya-Yuzhnaya", Kemerovskaya obl.

ALEKSANDRIN, M.K. (Stanitsa Dobrinskaya na Khopre Balashovskoy oblasti)

Midwife A.N.Parakhovataia. Fel'd. i akush. 21 no.9:58 S '56.

(PARAKHOVATAIA, ANASTASIYA NIKOLAEVNA)

(MLRA 9:10)

ALEKSANDRIN, N. I.

ALEKSANDRIN, N. I.: "The system of irrigation and methods of flooding  
winter wheat under the conditions of Rostov Oblast." Min Higher  
Education USSR. Novocherkassk Soil Improvement Engineering Inst.  
Novocherkassk, 1955  
(Dissertation for the Degree of Candidate in Sciences)  
Agricultural

So: Knizhnaya Letopis', No 17, 1956

USSR/Cultivated Plants. Cereals.

M

Abs Jour: Ref Zhur-Biol., No 17, 1958, 77586.

Author : Aleksandrin, N.I.

Inst : Azov-Black Sea Agricultural Institute.

Title : Study of Irrigation System of Winter Wheat in the  
Conditions of Rostov Oblast.

Orig Pub: Sb. nauchno-issled. rabot. Azovo-Chernomorsk.  
s.-kh. in-t, 1957, 15, 335-341.

Abstract: No abstract.

Card : 1/1

ALEKSANDRIN, R.

Automobile Trust of the Stalingrad Economic Council. Avt. transp.  
36 no.12:28 D '58. (MIRA 11:12)  
(Stalingrad Province--Transportation, Automotive)

ALEKSANDRIN, R.

Active role of voluntary organizations. Avt. transp. 42 no.6:  
9-10 Je'64 (MIRA 17:7)

1. Predsedatel' Volgogradskogo oblastnogo komiteta professio-  
nal'nogo soyuza rabotnikov svyazi, rabochikh avtotransporta  
i shosseynykh dorog.

ALEKSANDRIN, R.P.

Communist labor movement assists in the upbringing of the new  
man. Vest. svyazi 23 no.9:23-25 S '63. (MIRA 16:10)

1. Predsedatel' Volgogradskogo oblastnogo komiteta professional'nogo  
soyuza rabotnikov svyazi, rabochikh avtotransporta i shosseynykh  
dorog.

ALEKSANDRIN, R.P.

Use all means to develop community participation in trade  
union work. Vest. svyazi 24 no.8:22 Ag '64. (MIRA 17:10)

1. Predsedatel' Volgogradskogo oblastnogo komiteta professional'-  
nogo soyuza rabotnikov svyazi, rabochikh avtotransporta i  
shosseynykh dorog.



ALEKSANDRIN, V.I.

Operational amplifier with a differential input. Priboro-  
stroenie no.4:14-16 Ap '60. (MIRA 13:6)  
(Amplifiers, Electron-tube)

9.2540

S/194/62/000/006/157/232  
D256/D308

AUTHOR:

Aleksandrin, V.I.

TITLE:

Transistorized pulse voltage stabilizers

PERIODICAL:

Referativnyy zhurnal. Avtomatika i radioelektronika,  
no. 6, 1962, abstract 6-5-72 zh (Poluprovodnik. pro-  
bory i ikh primeneniye, no. 7, M., Sov. Radio, 1961,  
229-242)

TEXT: Pulsed control of the regulator transistor is introduced to increase the efficiency of DC voltage stabilizers operating at large variations of the mains supply voltage and strong load currents. The stabilizer with pulsed control has a nonlinear bridge as a measuring element whose output voltage is used to control the time-modulator; the latter produces rectangular pulses (of variable duration) used for control of the regulating element. The astatic stabilizer employs a frequency converter as a measuring element; its pulse-length is determined by the variations of the output voltage, a pedestal frequency generator being used as a standard. Both frequencies are fed to a phase-sensitive regulating element, con-

✓  
B

Card 1/2

Transistorized pulse voltage stabilizers S/194/62/000/006/137/232  
D256/D308

trolled by means of the phase difference which is proportional to the integral of the frequency difference. The static stabilizer for 12 V output voltage and 0.5 A current has an output impedance of 0.1 ohm and 20 mV pulsation using an output capacity of 100  $\mu$ F. The astatic stabilizer gives practically no voltage deviation in case of a  $\pm 10\%$  change in the supply voltage. 4 references. [Abstracter's note: Complete translation.] ✓ B

Card 2/2

L 11433-67 EWT(1) GD  
ACC NR: AT6023378

(N)

SOURCE CODE: UR/0000/65/000/000/0035/0037

AUTHOR: Aleksandrin, V. I. (Ryazan')

ORG: none

TITLE: A precision voltage divider<sup>15</sup> for compensating voltage generating circuits 31

SOURCE: Vsesoyuznaya konferentsiya po avtomaticheskomu kontrolyu i metodam elektricheskikh izmereniy. 5th, Novosibirsk, 1963. Avtomaticheskii kontrol' i metody elektricheskikh izmereniy; trudy konferentsii. t. I: Metody elektricheskikh izmereniy. Tsifronnyye izmeritel'nyye pribory. Elementy izmeritel'nykh sistem (Automatic control and electrical measuring techniques; transactions of the conference. v. 1: Electrical measuring techniques. Digital measuring instruments. Elements of measuring systems). Novosibirsk, Izd-vo Nauka, 1965, 35-37

TOPIC TAGS: voltage divider, analog digital converter, circuit design

ABSTRACT: A voltage divider circuit (Fig. 1) has an inherent accuracy exceeding the precision of the resistors on which it is based by a factor of 2—3. The divider operates as follows: relay  $P_1$  interchanges the position of the precision resistors  $r_1$  and  $r_2$  periodically with frequency  $\omega$ . If the voltage  $U_{div}$  is averaged over one period of relay vibration, the resulting voltage is exactly equal to  $1/2 U_{in}$  for any ratio of  $r_1$  and  $r_2$ . The averaging of  $U_{div}$  is implemented by the integrator circuit

Card 1/2

L 11433-67

ACC NR: AT6023378

consisting of relay  $P_2$  (operating at  $2\omega$ ) and capacitor  $C_f$ . This divider circuit was

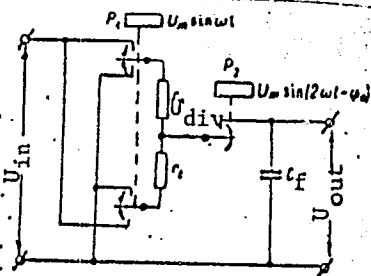


Fig. 1. A divider circuit whose voltage division ratio is  $1/2$ .

tested experimentally with the following parameters:  $r_1$  and  $r_2$  were nominally  $10k\Omega$  (their resistances actually differed by  $\sim 1\%$ ),  $U_{in}$  was 50V. The accuracy of the voltage division ratio thus obtained was 99.9985%. This circuit together with the high input impedance isolation amplifiers was used in a voltage to cyclic binary code converter whose accuracy was equal to 99.998%. Orig. art. has: 3 formulas and 2 figures.

SUB CODE: 09/ SUBM DATE: 20Sep65/ ORIG REF: 002

Card 2/2 bab

ALEKSANDRIN, V.I.

Time-pulse multiplier member of a transistorized simulator unit.  
Priboestroenie no.4:6-9 Ap '62. (MIRA 15:4)  
(Electronic analog computers)

L 55105-65

ACCESSION NR: AP5010651

UR/0119/65/000/004/0007/0008

AUTHOR: Aleksandrin, V. I. (Candidate of technical sciences)

681.142.622:621.374

TITLE: Using the adaptivity principle in time-coding voltage-to-code converters

SOURCE: Priborostroyeniye, no. 4, 1965, 7-8

TOPIC TAGS: adaptivity, voltage to code converter, adaptive converter

ABSTRACT: An engineering solution of the problem of an adaptive voltage-to-code converter is presented. The number of discharges and the time of operation are two variable parameters. When the instantaneous difference  $\Delta U(t) = U_n(t) - U_m(t)$ , where  $U_n$  and  $U_m$  are input and sawtooth voltages, respectively, exceeds a certain value  $\Delta U_{th}$ , a logical unit switches the converter circuit in such a way that the rate of rise of the sawtooth voltage is increased 2 times. Hence, the speed of operation is increased, partly at the expense of the accuracy of conversion. Orig. art. has: 3 figures, 11 formulas, and 1 table.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: DP, EC

NO REF SOV: 002

OTHER: 000

811  
Card 1/1

ALEKSANDRINA, L. I.

"Observations on the Epidemiological and Biological Efficiency of  
vaccinations against outbreaks of typhus in the USSR. Zhurnal  
epidemiol. i immunobiol., No. 2-5, 1962.

Inst. Microbiol. and Epidemiol.



AUTHOR: Aleksandrina, N.I. (Moscow). 24-4-12/34

TITLE: Impact of a load on a beam. (Udar gruzha o balku).

PERIODICAL: "Izv. Ak. Nauk, Otd. Tekh. Nauk" (Bulletin of the Ac. Sc., Technical Sciences Section) 1957, No.4, pp.85-92 (USSR).

ABSTRACT: The impact is considered of a load on a beam with an infinite number of degrees of freedom, taking into consideration local elastic-plastic deformations. The problem is solved on the assumption that the dependence between the forces of interaction and local elastic-plastic deformations is sectionally linear. The usual assumptions are made, for instance, the supports are considered as being absolutely rigid, the influence of local stresses during the impact on the general shape of the bending of the beam etc. are not taken into consideration. The hitting mass is assumed as being a material point moving in the direction of a straight line which coincides with the direction of the initial speed. The ~~problem is reduced to~~ the simultaneous solution of the motion equations of the hitting mass and the elastic system. The derived formulae are applied for verifying the correctness of the approximate method of calculation of an elastic-plastic impact on a beam, considering the beam as a system with one or two degrees of freedom. The calculation is made for a beam of

Card 1/2

Impact of a load on a beam (Cont.). 24-4-12/34

90 cm length, 4 kg weight and  $EJ = 150 \times 10^6 \text{ kg/cm}^2$ ; the impact is effected by a 4 kg weight with an initial speed of 172 cm/sec hitting the centre of the beam. The graph, Fig.2, shows the forces of interaction between the hitting load and the beam on the assumption that the contact between them is elastic-plastic. Thereby, the beam was considered as a system with two degrees of freedom. For comparison the changes in this force for the first impact are also entered (dotted line), which were calculated according to the formulae derived in this paper, and so are some values which were calculated for the second impact (points denoted by crosses). There are 2 figures, 5 Russian references.

Card 2/2

SUBMITTED: October 2, 1956.

AVAILABLE:

SMIRNOV, Anatoliy Pavlovich, inzh.; KHODULIN, Boris Nikolayevich, inzh.;  
ALEKSANDRINA, V.P., red.; FREGER, D.P., red. izd-va; GVIRTS, V.L.,  
tekhn. red.

[Some problems in the technology and properties of high-strength  
sand concretes] Nekotorye voprosy tekhnologii i svoistv vysoko-  
prochnykh peschanykh betonov. Leningrad, 1962. 23 p. (Leningrad-  
skii dom nauchno-tekhnicheskoi propagandy. Obmen peredovym opytom.  
Seria: Stroitel'naya promyshlennost', no.22) (MIRA 16:2)  
(Concrete--Testing)

ALEKSANDRINA-SHCHEDOVITSKAYA, N. A. Cand. Tech. Sci.

Dissertation: "Load Impact Against a Beam." Inst of Machine Science, Acad Sci USSR,  
24 Dec 47.

SO: Vechernyaya Moskva, Dec, 1947 (Project #17836)

137-58-4-8068

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 4, p 242 (USSR)

AUTHORS: Mitrenin, B.P., Aleksandriya, B.V.

TITLE: Forms of Fracture of Germanium and Silicon Crystals (Formy razloma kristallov germaniya i kremniya)

PERIODICAL: V sb.: Rost kristallov. Moscow. AN SSSR, 1957, pp 170-173

ABSTRACT: The forms of fracture of single crystals of Ge and Si, as observed at low and at electron microscope magnifications, are described. For purposes of comparison observations made under the same conditions of the forms taken by glass fractures are adduced. It is noted that the conchoidal type of fracture in Ge and Si fractures is actually a fracture along the plane of junction with fine, clearly-defined steps (along the 111 plane of Ge) about 0.1-0.2 micron in size. The steps are approximately parallel and the shape of the fractures thereon is virtually rectangular. The elements of the fracture figure in the fine structure of the crystals are clearly visible under electron-microscopic enlargement and is absent in the fine structure of glass. The anisotropy of the crystals is manifested in some cases in the fracture shapes in the form of striations in the lines com-

Card 1/2

137-58-4-8068

Forms of Fracture of Germanium and Silicon Crystals

prising the fracture rose, and in a degree of discontinuity in the transition from one direction of the lines to another. Fracture rings were also noted on the fracture surfaces of Ge and Si crystals.

1. Single crystals--Fracture--Analysis      2. Germanium crystals--Fracture      A.A.  
3. Silicon crystals--Fracture

Card 2/2

29.6210

25035  
S/057/61/031/007/018/021  
B104/B206

AUTHORS: Guseva, M. I. and Aleksandriya, B. V.  
TITLE: Effect of the ion current density on structure and concentration of isotope targets prepared in an electromagnetic separator

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 7, 1961, 867 - 875

TEXT: The structure of  $\text{Si}^{30}$  and  $\text{Ag}^{109}$  targets prepared in an electromagnetic separator on copper backings, and the concentration of atoms of these isotopes penetrated into the copper support were investigated, the effect of the ionic ray intensity having been considered. The tests were made to clarify problems connected with the direct preparation of isotope targets of solid elements in an electromagnetic separator. The dependence of the collection factor of  $\text{Si}^{30}$  and  $\text{Ag}^{109}$  isotopes on copper backings, on the ion current density was studied, and electronographic phase- and microstructural analyses were made of the surface layer of the irradiated copper backings.  $\text{Si}$  and  $\text{Ag}$  were chosen on account of their different evaporation properties. The collection factor  $g$  of silicon onto the copper support is shown in Fig. 1 as a function of the current density  $j$ ,  
Card 1/3

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S/057/61/031/007/018/021

B104/B206

Effect of the ion...

and the sputtering factor  $N$  also as a function of  $j$ . The ion energy in these experiments amounted to 20 kev. The collection factor for silicon proved to be greater than that of silver. The silver atoms, however, had better sputtering properties than the silicon ions. A reduction of the  $Ag^+$  ion current density from 300 to 3 microamperes per  $cm^2$  led to a reduction of the sputtering factor from 12.6 to 2.5 atoms/ions. For Si, this factor was reduced from 3.5 to 0.4 at/ion (Fig. 1). The increase of the collection factor with decreasing ion current density is explained by the formation of films on the surface of the backing, consisting of combinations between the atoms of the backing and the penetrated isotope atoms with molecules adsorbed on the surface. The structural analyses show that the targets investigated here consist of two parts. An outer layer consists of the sputtered atoms and of combinations with them; an inner layer consists of the basic lattice into which atoms of the sputtered isotope have penetrated. The concentration of the isotope atoms reaches values up to some hundred micrograms per  $cm^2$ . If targets are prepared at relatively high current densities, so that sputtering of the support develops, the target consists essentially of atoms penetrated into the

Card 2/3



Effect of the ion...

25035

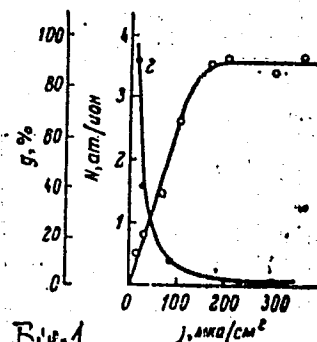
S/057/61/031/007/018/021

B104/B206

basic lattice of the support substance, and only a small amount of the isotope is deposited on the surface. The authors thank I. F. Kvartskhav, V. M. Gusev, and R. G. Shvangeradze for their interest and discussion. There are 8 figures, 3 tables, and 13 references: 4 Soviet-bloc and 9 non-Soviet-bloc. The most important references to English-language publications read as follows: S. Thulin, Phys. Rev., 76, 871, 1949; J. Koch, Nature, 161, 566, 1948; J. Koch et al., Electrom. Isotope Separators a. Applications of Electrom. Enriched Isotopes, pp. 166, 57, Amsterdam, 1958.

SUBMITTED: December 11, 1960

Fig. 1: Collection factor  $g$  (curve 2) and sputtering factor  $N$  (curve 1) as a function of the ion current density  $j$ .



Card 3/3

ALEKSANDRIYA, B.V.; BARONI, Ye.Ye.; SHVANGIRADZE, R.R.

Electron diffraction study of a plastic scintillator. Vysokom.soed.  
3 no.8:1285 Ag '61. (MIRA 14:9)  
(Scintillation counters)

GUSEVA, M.I.; ALEKSANDRIYA, B.V.

USSR

Effect of the density of an ion current on the structure and concentration of isotopic targets produced in an electromagnetic separator. Zhur. tekhn. fiz. 31 no.7:867-875 J1 '61.

(MIRA 14:7)

(Isotope separation)

(Ion beams)

S/564/57/000/000/011/029  
D258/D307

AUTHORS: Mitrenin, B. P., and Aleksandriya, B. V.  
TITLE: Forms of fracture in germanium and silicon crystals  
SOURCE: Rost kristallov; doklady na Pervom soveshchanii po rostu kristallov, 1956 g. Moscow, Izd-vo AN SSSR, 1957, 170-173

TEXT: The present work is a description of spherical forms of fracture observed at small and electron microscope magnifications. The fractures were made by moderately strong blows. The discussion is influenced by the work of D. B. Gogoberidze (Nekotoryye ob'yemnye defekty kristallov / Some volume defects of crystals /, L., Izd. LGU, 1952, p. 196), who classified fractures into "rose" and "ring" types. The results are compared with the fracture of glass. Conclusions: The conchoidal fractures in both Si and Ge crystals follow largely the planes of cleavage, giving rise to steps 0.1 - 0.2  $\mu$  in height. Anisotropy is some-  
Card 1/2

Forms of fracture...

S/564/57/000/000/011/029  
D258/D307

times shown by the form of fracture, as discontinuities in lines marking out the "rose" fracture and as a certain discontinuity in transition of the lines from one direction to another. There are 9 figures.

Card 2/2

16.5600

S/044/62/000/009/023/069  
A060/A000

AUTHOR: Aleksandriya, G.

TITLE: Certain boundary problems with various displacements in the class of generalized analytic functions

PERIODICAL: Referativnyy zhurnal, Matematika, no. 9, 1962, 55 - 56, abstract 9B263 ("Tr. Tbilissk. un-ta", 1960, v. 86, 321 - 331, Georgian; Russian summary)

TEXT: Let  $\Gamma$  be a simple closed Lyapunov curve.  $\alpha_i(t)$ ,  $i = 1, \dots, n$ , are functions defined on  $\Gamma$  such that the points  $t, \alpha_i(t)$  describe the curve  $\Gamma$  in one and the same direction, the derivatives  $\alpha_i'(t) \neq 0$  and satisfy the Hoelder condition. The following boundary problem is considered: In a simply connected region bounded by the curve  $\Gamma$  to find the generalized analytic vectors  $\varphi(z) = (\varphi_1, \dots, \varphi_n)$ ,  $\psi(z) = (\psi_1, \dots, \psi_n)$ , whose boundary conditions on  $\Gamma$  are constrained by the condition

$$\varphi_i + [\alpha_i(t)] = \sum_{k=1}^n [a_{ik}(t)\psi_k(t) + b_{ik}(t)\overline{\psi_k(t)}] + g_i(t), \quad (1)$$

Card 1/2

Certain boundary problems with...

S/044/62/000/009/023/069  
A060/A000

where  $a_{ik}(t)$ ,  $b_{ik}(t)$ ,  $g_i(t)$  are functions defined on  $\Gamma$ , satisfying the Hoelder condition, and such that the matrix  $\|b_{ik}(f)\|$  is non-singular. The case when in condition (1)

$$\alpha_1(t) = \dots = \alpha_n(t), \psi_1(t) = \varphi_1(t)$$

holds is also considered. By the use of certain integral representations the problem (1) is reduced to a singular integral equation and the conditions for the existence of a solution of the problem are determined.

B. V. Khvedelidze

[Abstracter's note: Complete translation]

Card 2/2

ALEKSANDRIYA, G.-N.

Mathematical Reviews  
Vol. 14 No. 8  
Sept. 1953  
Analysis

(Tbilisi State Univ. im I. V. Stalin)

several unknown functions. *Sobolevnyi Akad. Nauk Gruzii*, SSR 12, 585-590 (1951). (Russian)

Let  $L$  be a simple, closed, suitably smooth curve, limiting a finite domain  $S^+$ ;  $S^-$  is the complement of  $S^+ \cup L$ ;  $\alpha(t)$  transforms  $L$  one-to-one on itself; the derivative  $\alpha'(t)$  is in  $H$ ;  $t$  and  $\alpha(t)$  describe  $L$  in opposite directions; a function is meromorphic in  $S^+$  if it is analytic in  $S^+$  except for a finite number of poles and if it can be continuously extended to  $L$ . The problem considered is to find in  $S^+$  meromorphic vectors  $\phi_v = [\phi_{v1}, \dots, \phi_{vn}]$  ( $v = 1, 2$ ) so that on  $L$

$$(1) \quad \phi_1'[\alpha(t_0)] = G(t_0)\overline{\phi_2'(t_0)} + g(t_0),$$

where the matrix  $G = (G_{kj})$  ( $k, j = 1, \dots, n$ ) and the vector  $g$  are assigned in  $H$  on  $L$ ;  $\det G \neq 0$  on  $L$ . The homogeneous problem (1;  $g = 0$ ) is transformed into a system of singular integral equations of normal type and of index zero, if the adjoint problem of (1;  $g = 0$ ) has no analytic solutions, then (1;  $g = 0$ ) has meromorphic solutions (given explicitly and involving integrations in the sense of principal values and standard rational vectors). The problem (1;  $g = 0$ ) is always solvable in terms of certain singular integrals, the expressions for their densities involving a solution of a certain singular integral equation. The author obtains all the solutions of (1;  $g = 0$ ), having at the origin singularities of order  $\lambda = (p+1)/2$ . It is indicated that the above can lead to the proof of existence of canonical solutions, in terms of which all the solutions of (1;  $g = 0$ ) and of (1) are representable. *W. I. Trjitsinsky (Urbana, Ill.)*.



ALEKSANDRIYA G.N.

[illegible]

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**Dissertation for Degree of**

**Candidate Mathematical Sciences**

SECRET

ALEKSANDRIYA, G.N.

One linear conjugate boundary problem for some unknown functions.  
Soob. AN Gruz. SSR 14 no.2:65-70 '53. (MLRA 7:5)

1. Tbilisskiy gosudarstvennyy universitet im. Stalina.  
(Functions)

ALEXSANDRIYA, G.N.

One linear conjunction problem with given displacements in a  
class of generalized analytic functions. Soob. AN Gruz.SSR 21  
no.3:257-262 S '58. (MIRA 12:4)

1. Tbilisskiy gosudarstvennyy universitet im. Stalina. Pred-  
stavleno chlenom-korrespondentom Akademii N.P. Vekua.  
(Functions, Analytic)

Author: A.P.; BAKANINA, A.I.; ZOLOTOV, V.I.

Production of stamped shoe sections made of artificial leather.

Legislation: No. 108-87 of 1987.

(MLRA 10:9)

(Shoe Industry) (Leather, Artificial)

Mathematical Reviews  
May 1954  
Analysis

10-7-54  
LL

Aleksandriiskii, B. I. On the theory of certain linear integro-differential systems. Doklady Akad. Nauk SSSR (N.S.) 91, 181-184 (1953). (Russian)  
The author studies the system

$$(1) \quad \phi^{(n)}(x) - \sum_{i=0}^{n-1} a_i(x) \phi^{(i)}(x) - \lambda \sum_{i=1}^m K_i \circ \phi^{(i)} = f(x)$$

$$\left( K_i \circ \phi^{(i)} = \int_a^b K_i(x, s) \phi^{(i)}(s) ds \right),$$

$$(1^0) \quad \phi^{(j)}(x)|_{x=x_j} = 0 \quad (j=0, \dots, n-1),$$

$f$  and the coefficients being possibly complex-valued; if  $n \geq m$ , the  $a_i$  and  $f$  are  $L_2(a, b)$  and the  $K_i(x, s)$  are  $L_2(a \leq x, s \leq b)$ ; when  $n < m$ , the  $a_i, K_i, f$  are  $m-n$  times derivable in  $x$ , the  $a_i^{(m-n)}, f^{(m-n)}$  are  $L_2(a, b)$  and the  $K_i^{(m-n)}(x, s)$  are  $L_2(a \leq x, s \leq b)$  (here the superscripts denote  $\partial^{m-n}/\partial x^{m-n}$ ). Let  $x_0, \dots, x_{n-1}$  be arbitrary on  $[a, b]$ ; (1) is equivalent to (2)  $\phi^{(n)}(x) - Q \circ \phi^{(n)} - \lambda Q' \circ \phi^{(n)} = f(x)$  (subject to (1<sup>0</sup>)), when  $n \geq m$ , and to

$$(3) \quad \phi^{(n)}(x) - Q \circ \phi^{(n)} - \lambda \sum_{i=0}^{m-n} Q_i' \circ \phi^{(n+i)} = f(x)$$

(over)

(subject to (1')), if  $n < m$ ; here  $Q, Q', Q_j'$  are certain functions depending on the  $x_i, K_i$ . (1) is equivalent (\*) to (4)  $u(x) - \lambda Q[u(x)] = R(x)$ , where  $Q[\dots]$  is a linear operator, provided that, if  $\phi$  satisfies (1), then  $u = \phi^{(n)}$  satisfies (4) and that, if  $u$  satisfies (4), then  $\phi(x) = \int_{x_0}^x \dots \int_{x_{n-1}}^x u(x) dx \dots dx$  satisfies (1). (1) is n.s. (non-singular) if there is a non-characteristic value. There exist s. (singular) systems. A n.s. (1) is equivalent (\*) to an equation (4), where the operator  $Q[\dots]$  depends on the kernels  $Q', Q_j'$  and  $R$  depends on  $f$ . The author also finds systems to which a s. (1) is equivalent (\*).

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L 59231-65 EWT(m)/EPF(c)/EWP(j)/T Pc-4/Pr-4 RM

ACCESSION NR: AP5015572

UR/0153/65/008/002/0297/0300

AUTHOR: Kharitonova, V. P., Bykov, A. N., Aleksandriyskiy, S. S.

TITLE: Synthesis and study of certain colored copolyesters

SOURCE: IVUZ. Khimiya i khimicheskaya tekhnologiya, v. 8, no. 2, 1965, 297-300

TOPIC TAGS: polyester, polyethylene terephthalate, ethylene glycol, adipic acid, terephthalic acid, colored polymer

ABSTRACT: Colored copolyesters were synthesized from dimethyl terephthalate, di-methyl adipate (2, 5, and 10 wt. % of terephthalate), ethylene glycol, and a dye (rhodanine 3-methyl-6-nitro-2-pyridine). They had a deep color, were highly resistant to wear, wear-resistant, and stable to the action of hot water and organic solvents. Their spinnability was good. Adipic acid was added to the colored polyethylene terephthalate; its solubility in the solvents used increased. Pure polyethylene terephthalate melts at 260-263°C but when adipic acid was added, the melting point was lowered more the higher the content of the aliphatic component. Spectrophotometric analysis, reprecipitation without color change, and the impossibility of extracting the color component from the colored copolyester indicate that the dyes, which contain carboxyl groups, are chemically bound to the chain of the copolyester. Orig. art. has: 1 figure and 3 tables.

Card 1/2

L 59281-65

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ASSOCIATION: Kafedra tekhnologii khimicheskikh volokon, Ivanovskiy khimiko-  
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Engineering Institute)

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2/2

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