BOROVSKIY, V.R., kand.tekhn.nauk; PIYEVSKIY, I.M., inzh.; VYHICHAK, I. I., inzh.

Conversion of gypsum plaster driers to an accelerated system. Stroi. mat. 8 no.8:26-28 Ag '62. MCRA 15:8

(Drying apparatus)
(Gypsum products—Drying)

MEDNIKOV, V.M.; PIYEVSKIY, L.S.

Unit for a hydraulic cleaning of castings. Mashinostroitel' no.2:18-19 F '62. (MIRA 15:2)
(Founding—Equipment and supplies)

PIYGLI, E.I., inzh. (g. Asbest)

Concerning E.V.Makarov's article, "Laying water pipelines through a peat bog without using piles". Vod.i san.tekh. no.4:33 Ap '62. (MIRA 15:8)

(Aqueducts) (Piling (Civil engineering)) (Makarov, E.V.)

PIYK, E. [Piik, E.]; ROOKS, I.

Introducing the "Telzen" water refluxing tar separator device into the Ge
Generating Station of the Lenin Oil Shale Processing Combine in Kohtla
Jarve. Khim. i tekh.gor.slan. i prod. khr perer. n.

MIRA 17.

YEFIMOV, V.M.; LILLE, Yu. [Lille, J.]; PIYK, E. [Piik, E.]; TUL'P, M. [Tulp, M.]; MURD, A.

Results of the heat treatment of Estonian shales in a small test gas generator. Khim. i tekh.gor.slan. i prod. ikh perer. no.1:[illegible]. (MIRA 17:2)

PIYK, E.E. [P[illegible], P.]; [illegible]M.V. V.M.; TUL'P, M.Yu. [Tulp, M.]

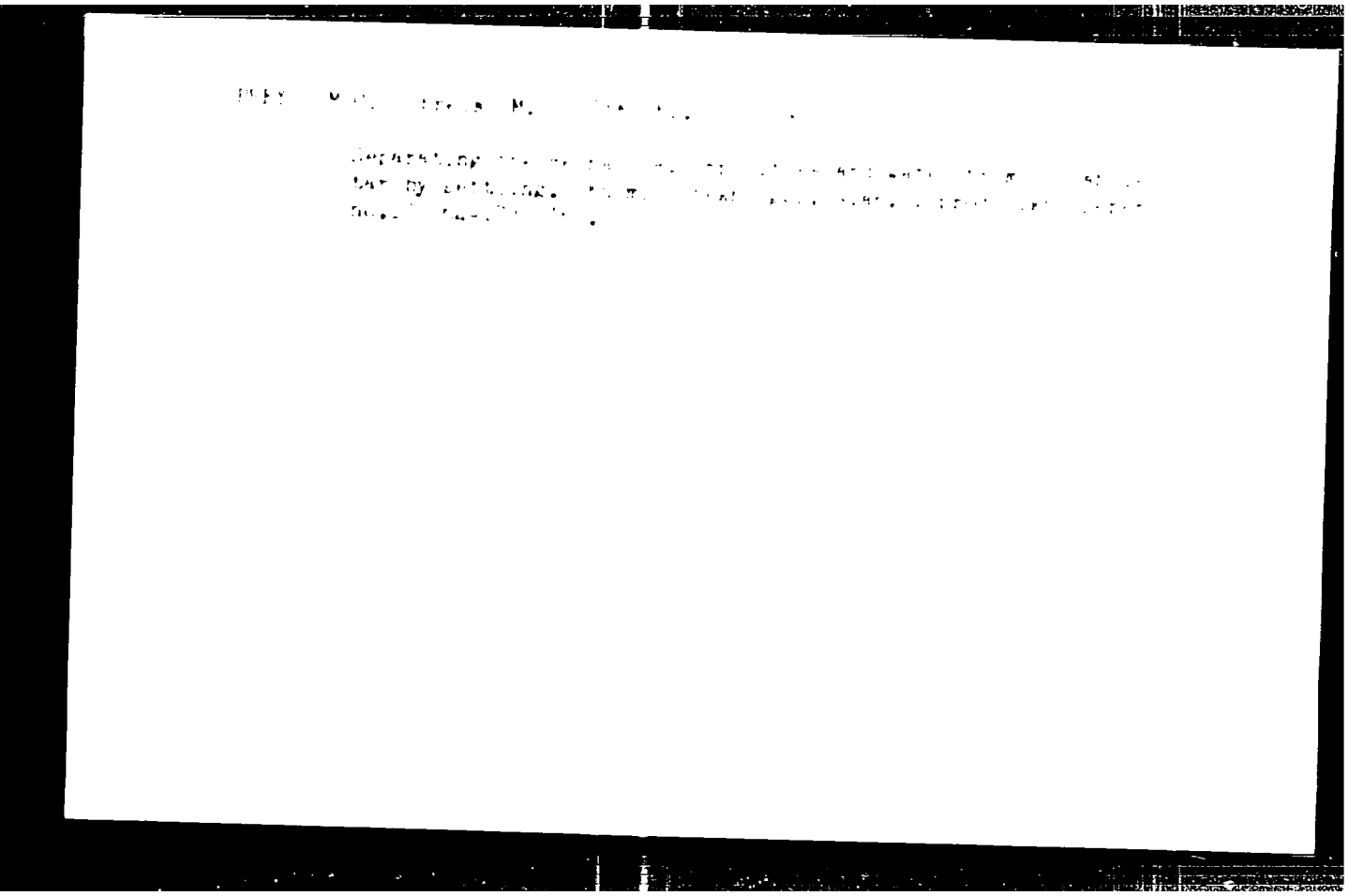
Tar recovery from the vapor-gas mixture in the condensation sections of gas producer shops. Khim. i tekh. gor. slan. i prod. ikh perer no.13:108-119 '64. (MIRA 18:9)

PIYK, E.E. [Piik, E.]; RAPPU, L.I.

Distribution of water-soluble phenols in the fractions of condensing tar. Khim. i tekh. gor. slan. i prod. ikh perer no.13:204-212 '64. (MIRA 18:9)

METSIK, P.I.; PIYK, L.L. Piyk, L.

Investigating the mechanical contaminants of shale tars. Khim. i tekh. gor. slan. i prod. 1kh perer. no.11:189-197 '62.
(MIRA 17:3)



25223
S/103/61/022/009/006/014
D206/D304

16.6800

AUTHORS: Lazarev, V.G., and Piyl', Ye.I. (Moscow)

TITLE: A method of synthesizing switching circuits

PERIODICAL: Avtomatika i telemekhanika, v. 22, no. 9, 1961, 1194 - 1201

TEXT: In the present article, the elements of feedback (EOC-EOS) are considered which produce at the output voltage signals. Conditions when they have to be used are analyzed and their minimum number evaluated for a given set of conditions, and finally a method of synthesizing switching circuits is proposed for the case when feedback elements are used which react to the signals resulting from any transition of the combination of input into any of the output (EOC-B - EOS-B) feedback elements of B type. In this case the feedback elements can be switched-in independently of their previous state by signals resulting from a transposition of signals not met before. Let the switching be given by Fig. 1a with

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the following notation: x_i - input signals; z_i - output signals; — - signal present at main input; – - signal present at the subsidiary input x at the output. Since the output signals result from transitions of certain input conditions into other signals, a definition of these transitions is needed. They are described by voltagepulse formulae introduced by A.D. Talantsev (Ref. 6: Ob analize i sinteze nekotorykh elektricheskikh skhem pri pomoshchi spetsiyal'nykh logicheskikh operatorov (Analysis and Synthesis of Certain Electric Circuits by Special Logic Operators), Avtomatika i telemekhanika, v. XX, No. 7, 1959) which include 'and' 'or' 'nor' and d transformation circuits. Transitions exist from the 'on' state of input signal into 'zero' and vice versa: d x(t) = 1 - transition from 'one' to 'zero' state, $d\bar{x}(t) = 1$ - from zero to one when dx(t) = 0 and $d\bar{x}(t) = 0$ - no transition exists. The signals from main outputs have a voltage character and are described by

$$z_1 = \bar{x}_1 x_2 x_3 \bar{x}_4 x_5 \vee \bar{x}_1 x_2 x_3 x_4 x_5 \vee \bar{x}_1 \bar{x}_2 x_3 \bar{x}_4 \bar{x}_5 \vee x_1 \bar{x}_2 x_3 x_4 x_5 \vee x_1 x_2 x_3 x_4 x_5$$

$$z_2 = x_1 \bar{x}_2 \bar{x}_3 x_4 \bar{x}_5 \vee \bar{x}_1 x_2 x_3 x_4 \bar{x}_5 \vee \bar{x}_1 \bar{x}_2 x_3 x_4 x_5 \vee \bar{x}_1 \bar{x}_2 x_3 x_4 x_5.$$

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A method [illegible]ng ..

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D206 D304

parameter t being omitted. The signals for switching the EOS-B circuits may be designated by boolean functions if function F is found such that y = dP/dt. If a voltage function F exists, whose differentiating produces the required pulse signal. The circuit becomes that shown in Fig. 7 in which all signals, but y, are voltage signals. The process of determining function F is called the integrating of a voltage pulse from y (Ref. 6: Op. cit.). Function F can be obtained directly from operating conditions of the circuit. Function F_z is given by

$$F_z = x_1 x_2 x_3 x_4 x_5 + x_1 x_2 x_3 x_4 x_5$$

The values may thus be produced in the same form as main input signals x and the switching circuit may be designed by the known methods around and, or and not elements. The design procedure in using EOS-B elements is thus as follows: Additional inputs are connected, required for realizing the given conditions of operation. By weighting input signals the absolutely necessary and

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conditiona. number se.e-tions of output signa.s z are obtained. 3) This determines the abso.utely necessary numbers for function F. In genera. two forms of function F may be obtained. 4) Therefore each form of F both F and z functions are simp.ified using the conditiona. numbers, and the circuit is built using and or or nor elements. It is stated in conclusion that the circuit as shown in Fig. 3 is not always possible to realize since for some voltage-pu.se forms, not one but many F functions can be found whose differentia. is y There are 7 figures, and 15 references: 13 Soviet-bloc and 2 non-Soviet-bloc The references to the English-language publications read as follows: W Keister, A E Ritchie, S W. Waschburn. The design of switching circuits. N Y Van Nostrand. 1951. D.A Huffman. The synthesis of sequential switching circuits Journal of the Franklin Inst., v 257, no 3, 4 1954

SUBMITTED: February 14, 1961

Card 4 -

25707
S/020/61/139/003/006/025
B104/B201

9,4000 (1159,1139,1161)

AUTHORS: Lazarev, V. G., and Piyl', Ye. I.

TITLE: Integrating of potential-pulse shapes

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 139, no. 3, 1961, 556 - 559

TEXT: A description is offered of algebraic methods of integrating potential-pulse shapes, which permit the circuit diagram of the electronic devices concerned to be simplified appreciably. The potential-pulse shapes can be represented as disjunction g of conjunctions of the form

$$\beta_i = x_{i_1}^{p_{i_1}} x_{i_2}^{p_{i_2}} \dots x_{i_{n-1}}^{p_{i_{n-1}}} dx_{i_n}^{p_{i_n}}, \qquad Y = \bigvee_{i=1}^{g} \beta_i \qquad (1).$$

Here, $p_i = 0, 1$; $x_i^{p_i} = x_i p_i \vee \bar{x}_i \bar{p}_i$; $g \leq n2^n$. These conjunctions are designated as unconditional if $Y = 1$ is satisfied. If $Y = 0$ they are called forbidden conjunctions. Such for which Y is undefined are designated as conditional conjunctions. Taking account of the latter enables one to simplify the electronics in a number of cases. The

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Integrating of...

integration method described here proves the most effective in cases, where a large number of conditional conjunctions appear. A potential-pulse shape is said to be integrable if it is possible to indicate a Boolean function $P(x_1, \ldots x_n)$ such that $dP = Y(2)$ F, like any Boolean function, can be defined by a great number of constituents, by which F assumes the value 1. They are called unconditional constituents. Such as assign F the value 0 are termed forbidden constituents, and such in which F is not defined are designated as conditional constituents. Conjunction $\alpha_i = x_{i_1}^{p_{i_1}} \ldots\ldots x_{i_n}^{p_{i_n}}$ is an unconditional onstituent of function F, and conjunction $\alpha_i' = x_{i_1}^{p_{i_1}} \ldots x_{i_r}^{\bar{p}_{i_r}} \ldots x_{i_n}^{p_{i_n}}$ is a forbidden conjunction.

Both constituents are designated as a pair of constituents and denoted by $A_i = \begin{pmatrix} \alpha_i \\ \alpha_i' \end{pmatrix}$. Each of the conjunctions of an integrable potential-pulse

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shape defines a pair of constituents for the function F. The potential-pulse shape is defined as a system of constituent pairs, which is denoted by $[Y] = [A_{i_1}, \ldots, A_{i_r}]$. The totality of forbidden conjunctions defines a system of sets of constituents, which may be represented in the form $|Y| = |B_{j_1}|, \ldots, B_{j_s}|$. The system $\{Y\} = \{A_{i_1}, \ldots, A_{i_n}, B_{j_1}, \ldots, B_{j_h}\}$ is defined as a general system of pairs and sets. If, in this general system, one of the unconditional constituents does not appear among the forbidden ones, this system is said to be coordinate. Otherwise, this general system can be divided into coordinate subsystems, and the general system will be partially coordinate. To each of these subsystems there corresponds a function F^j. A potential-pulse shape (1) is designated as being partially integrable if $\bigvee_{j=1}^{m} dF^j = Y$ (3). If no function F can be found to satisfy (2) or (3), this potential-pulse shape will be not integrable. The following theorems are formulated: Theorem 1: A potential-pulse shape is integrable if a coordinate general system of

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pairs and sets of constituents corresponds to it. Theorem 2: A potential-pulse shape is partially integrable if a partially coordinate general system of pairs and sets of constituents corresponds to it. Theorem 3: A potential-pulse shape is not integrable if an absolutely noncoordinate general system of pairs and sets of constituents corresponds to it. Two examples are finally discussed. It is assumed in them that, if no forbidden conjunctions appear, all the others are conditional conjunctions, with the exception of those defining the potential-pulse shape. In this case there is no system of sets of constituents, and the general system of pairs and sets will agree with the system of pairs of constituents. A. D. Talantsev is mentioned. M. L. Tsetlin is thanked for interest displayed and advice given. There are 3 Soviet-bloc references.

PRESENTED: February 21, 1961, by B. N. Petrov, Academician

SUBMITTED: February 22, 1961

Card 4/4

LAZAREV, V. G. and PIYL, Ye. I.

"Reduction of member of internal states in certain classes of finite automata"

report submitted for the Intl. Symposium on Relay Systems and Finite Automata Theory (IFAC), Moscow, 24 Sep-2 Oct 1962.

LAZAREV, V.G. (Moskva); PIYL', Ye.I. (Moskva)

Method for obtaining a complex algorithm by joining simple algorithms. Izv. AN SSSR. Otd. tekh. nauk. Energ. i avtom. no.4: 189-195 My-Je '62. (MIRA 15:6)
(Machine translating) (Information theory)

LAZAREV, V.G. (Moskva); PIYL', Ye.I. (Moskva)

Certain classes of finite automats. Zhur.vych.mat.i mat.fiz. 2 no.4:695-702 Jl-Ag '62. (MIRA 15:8)
(Automation)

36908
S/020/62/143/005/004/018
B104/B102

16.6800

AUTHORS: Lazarev, V. G., and Piyl', Ye. I.

TITLE: Reduction of the number of states of one class of finite automatons

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 143, no. 5, 1962, 1064-1066

TEXT: Automatons described by

$$\varkappa(p+1) = \varkappa\{d[\mu(p-1)]\} = \varkappa\{d[\varrho(p-1); \varkappa(p-1)]\};$$
$$\lambda(p) = \Gamma[\varrho(p); \varkappa(p)]$$

are investigated. $\varkappa(p)$ is the inner state of the automaton, $\lambda(p)$ is the output state, $\varrho(p)$ is the input state, p is the time interval corresponding to the period T of an automaton cycle, d is a transition operator describing the variation in state of the automaton, $d[\mu(p-1)]$ denotes the variation in state of the automaton during its transition from cycle p-1 to cycle p. The description of the operation of an asynchronous automaton by means of a transition matrix is studied (D. D. Aufenkamp,

Card 1/2

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[illegible]/103/62/023/008/[illegible]
[illegible]

(2403)

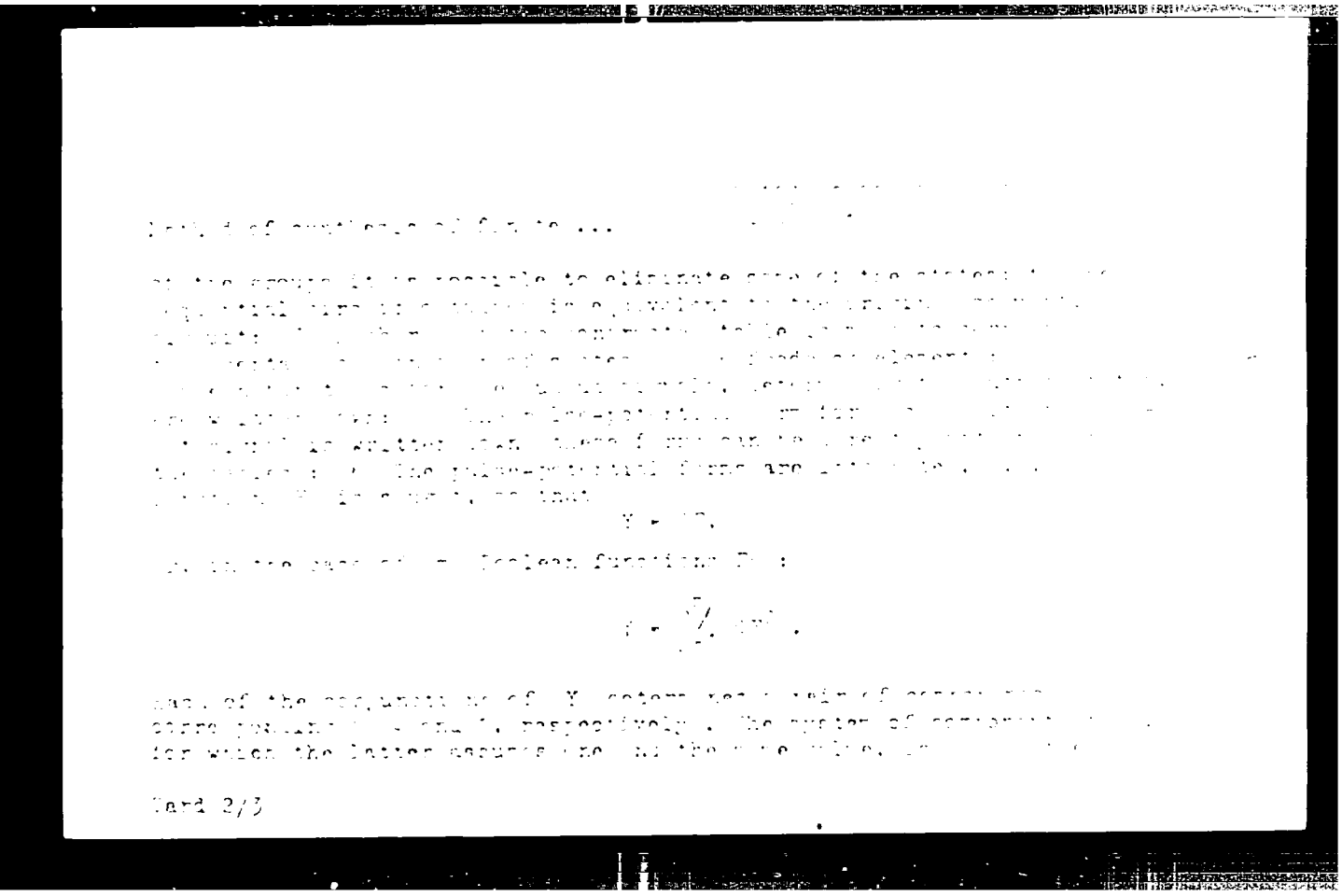
AUTHORS: Lazarev, V.G. and [illegible], Ye.I. (Moscow)

TITLE: [illegible] of synthesis of finite automata [illegible] [illegible]-potential [illegible]

PERIODICAL: Avtomatika i telemekhanika, v. [illegible], no. [illegible]

TEXT: A method of synthesis of sequential [illegible] proposed, based on [illegible] transition tables and [illegible] [illegible] feedback [illegible]; the latter [illegible] [illegible] [illegible] the authors. [illegible] number of rows of [illegible] [illegible] [illegible] [illegible] [illegible] the [illegible] [illegible] [illegible] method [illegible] synthesis [illegible] [illegible] [illegible] [illegible] table [illegible] [illegible] [illegible] tables [illegible] [illegible] [illegible]-potential [illegible] elements, [illegible] [illegible] replaced by stable [illegible] introducing new notation [illegible] [illegible] thereby groups of similar stable states appear in the table. [illegible]

Card [illegible]



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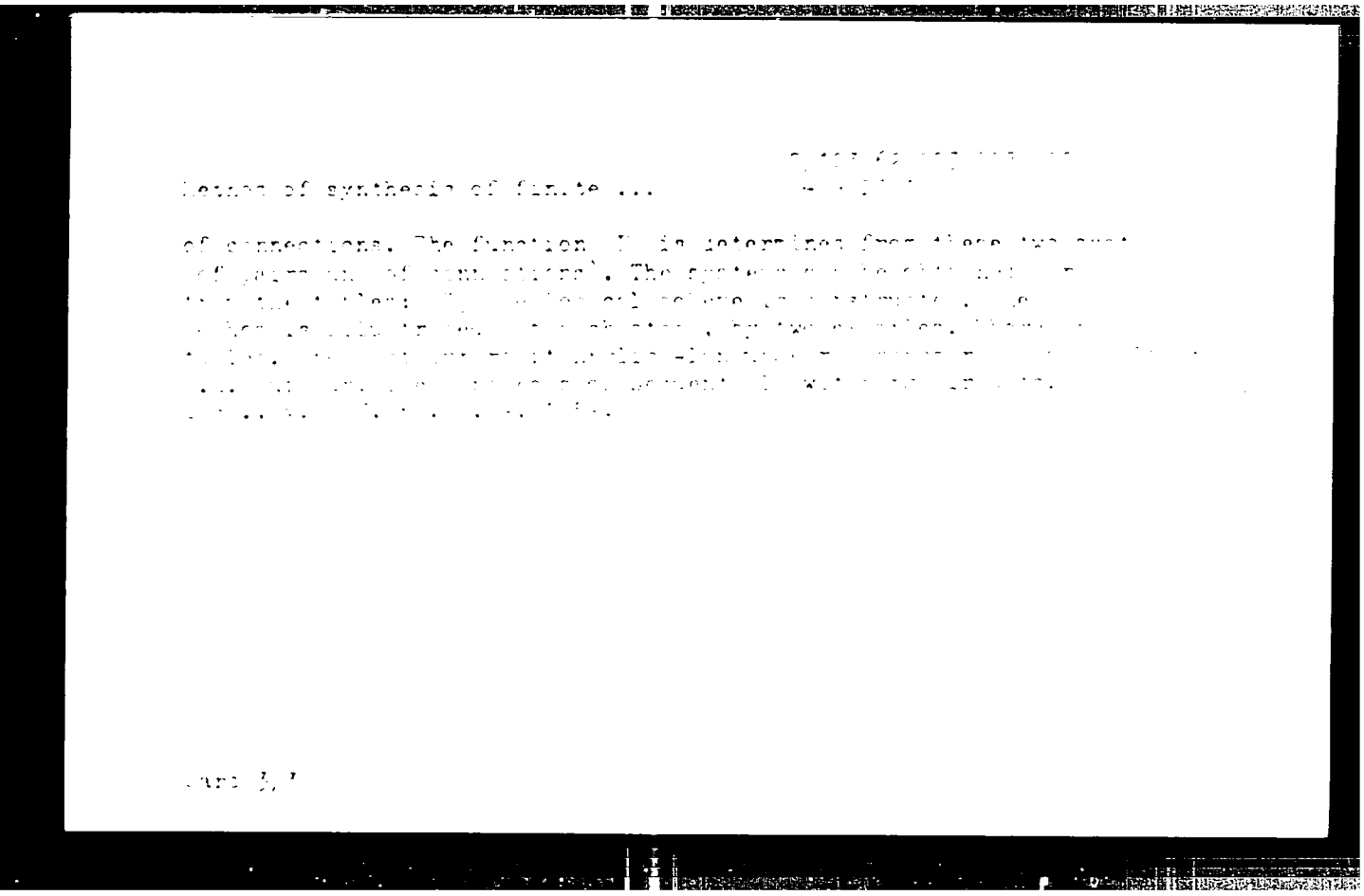

L 11127-63 EWT(d)/FCC(w)/BDS AFFTC IJP(C)

ACCESSION NR: AT3001255 S/0542/63/000/012/0039/0052 53 52

AUTHOR: Lazarev, V. G.; Piyl', Ye. I.

TITLE: Determination of the number of inner states for one class of finite automata

SOURCE: AN SSSR. Inst. problem peredachi informatsii. Problemy* peredachi informatsii, no. 12, 1963, 39-52

TOPIC TAGS: synthesis of finite automata, minimal-state automata, minimization problem

ABSTRACT: The synthesis of one class of finite automata, the behavior of which is described by the equations:

$$\lambda(p) = \Gamma[x(p), \rho(p)],$$

$$x(p+1) = \Phi[d[\mu(p-1)]] = \Phi[d[\rho(p-1), x(p-1)]], \quad (1)$$

where $x(p)$ is the inner state of the automaton, $\rho(p)$ is the input state, $\lambda(p)$ is the output state, p is the interval of time defined by the state of an automaton,

Card 1/3

ACCESSION NR: AT4008642 S/2945/63/000/015/0023/0035

AUTHORS: Lazarev, V. G.; Piyl', Ye. I.

TITLE: Methods for construction of a programmed control block in a control system

SOURCE: AN SSSR. Institut problem peredachi informatsii. Problemy* peredachi informatsii, no. 15, 1963. Sistemy* raspredeleniya informatsii. Opoznaniye obrazov, 23-35

TOPIC TAGS: programmed control block, control block construction, control system, block asynchronous operation, block synchronous operation, finite automatic system, functional block, algorithm logic circuit, Mealy automaton, Mur automaton, asynchronous operation mode, synchronous operation mode, coding control, sequential logic network

ABSTRACT: Methods are considered for the construction of a program

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control block, which determines the sequence with which functional blocks of an information distribution system are to operate in order to service the incoming calls in accordance with a specified algorithm. The program control block issues control signals which initiate operation of the functional block. At the end of the operation, the functional block generates a signal fed back to the program control unit, following which the latter can issue the next control signal. The Lyapunov algorithm logic circuit (Problemy kibernetiki, No. 1, Fizmatgiz, 1958) is used to describe the sequence of the program control block signals. The case of realization of a single algorithm and of several algorithms whose sequence depends on various parameters is considered in detail. Realization of the program control block by means of both Mealy and Moore automata is discussed. It is shown that synchronous and asynchronous operating modes of the programmed control block are approximately equivalent with respect to the number of elements necessary to synthesize the system. The asynchronous operating mode has the advantage that it permits more ef-

ACCESSION NR: AT4008642

fective utilization of the operating speed of the control block, but may cause some complications in the functional blocks, owing to the need of generating signals that indicate the termination of their operation. Consequently, the choice of the program control block used for a specific automatic system depends primarily on the concrete operating conditions of the control block. Orig. art. has: 5 figures, 16 formulas, and 8 tables.

ASSOCIATION: Institut problem peredachi informatsii AN SSSR (Institute of Information Transmission Problems AN SSSR)

SUBMITTED: 00 DATE ACQ: 23Jan64 ENCL: 00

SUB CODE: MM,CO NO REF SOV: 005 OTHER: 003

Card 3/3

S/103/63/024/002/017/020
D201/D308

AUTHORS: Lazarevm V.G. and Piyl', Ye.I. (Moscow)

TITLE: Simplification of pulse-potential forms

PERIODICAL: Avtomatika i telemekhanika, v. 24, no. 2, 1963, 271-276

TEXT: The authors describe a simplification of pulse-potential forms by separating common factors from adjacent homogeneous conjunctions. The simplification is carried out in two stages: in the first stage the simplifications are based on the use of absolutely homogeneous conjunctions, leading to the elimination of variables and in the second stage they are related to introduce the D-operator.

SUBMITTED: January 4, 1962

Card 1/1

L 26331-65 EWT(d)/EWP(e)/EWA(d)/EWP(v)/T/EWP(k)/EWP(h)/EWP(l) Pf-4
ACCESSION NR: AT5001701 S/2945/64/000/017/0056/0069

AUTHOR: Piyl', Ye. I.

TITLE: Method of assigning the internal states of an asynchronous finite automaton

SOURCE: AN SSSR, Institut problem peredachi informatsii. Problemy peredachi informatsii, no. 17, 1964. Printsipy [illegible] (Principles of [illegible]) [illegible]

[illegible] automaton; state assignment, automaton synthesis, abstract theory, structural synthesis, logic converter, asynchronous automaton, critical state

ABSTRACT: A method is presented which permits the determination of whether, in a given automaton, it is possible to assign internal states which will fulfill the two requirements: 1) that there be no critical states, and 2) that the logic converter of the automaton be as simple as possible. The concepts of a separation $\mathcal{N}_c$ compatible with a normal separation $\mathcal{N}_n$ of the set of internal states having the above properties is introduced. It is pointed out that if there is no $\mathcal{N}_c$ for the $\mathcal{N}_n$ selected this does not mean that in general it is not possible to

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ACCESSION NR: AT5001701

arrange the internal states of the automaton so that there are no critical states, but it does mean that the separation Π_n may not be used and, consequently, it is impossible to reduce the dependence between variables of the automaton logic converter simultaneously with the elimination of critical states. Orig. art. has: 7 tables, 2 theorems, 7 formulas and 4 figures.

ASSOCIATION: Institut problem peredachi informatsii AN SSSR (Information transfer problems institute, AN SSSR)

SUBMITTED: 00 ENCL: 00 SUB CODE: IE, DP

NO REF SOV: 001 OTHER: 004

Card 2/2

L 24508-65 ASD(a)-5/ESD(c)/ESD(dp)

AM4046246

BOOK EXPLOITATION

S

Ivanova, Ol'ga Nikolayevna; Lazarev, Vladimir Georgiyevich; Pivl', Yelena Ivanovna

B+1

Synthesis of electronic circuits with discrete action (Sintez elektronnykh skhem diskretnogo deystviya) Moscow, Izd-vo Svyaz, 1964. 175 p. illus., biblio. 6100 copies printed. Responsible editor: Ye. V. Markhay; Editor: E. M. Volkova; Technical editor: L. A. Trishina; Proofreader: F. A. Shtromberg

TOPIC TAGS: discrete action electronic circuit, algebra of logic, potential circuit, potential pulse circuit, diode circuit, transistor circuit, circuit theory, telephony, equipotential function, Boolean function

PURPOSE AND COVERAGE: This book is intended for students and aspirants in communications institutes and for engineers working in the field of electronic discrete-action devices. Some methods of synthesizing the structures of electronic discrete-action devices are described. In this, certain concepts are given from the algebra of logic that are applied in the methods analysed, as well as methods of synthesizing potential and potential-pulse circuits and methods of

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the electrical design of operators that carry out the basic operations of the algebra of logic. Only the minimum information necessary to designers for constructing circuits by the methods of circuit theory are presented, beginning with the presentation of conditions and ending with the construction of the functional circuit and its electrical design. The electrical designing is performed only for diode and transistor circuits. This textbook is written on the assumption that the reader is acquainted with the fundamentals of circuit theory from a course in telephony. The authors express their gratitude to Professor Ye. V. Markhay and also to Candidates of Technical Sciences Z. S. Kokhanov and G. G. Savvin.

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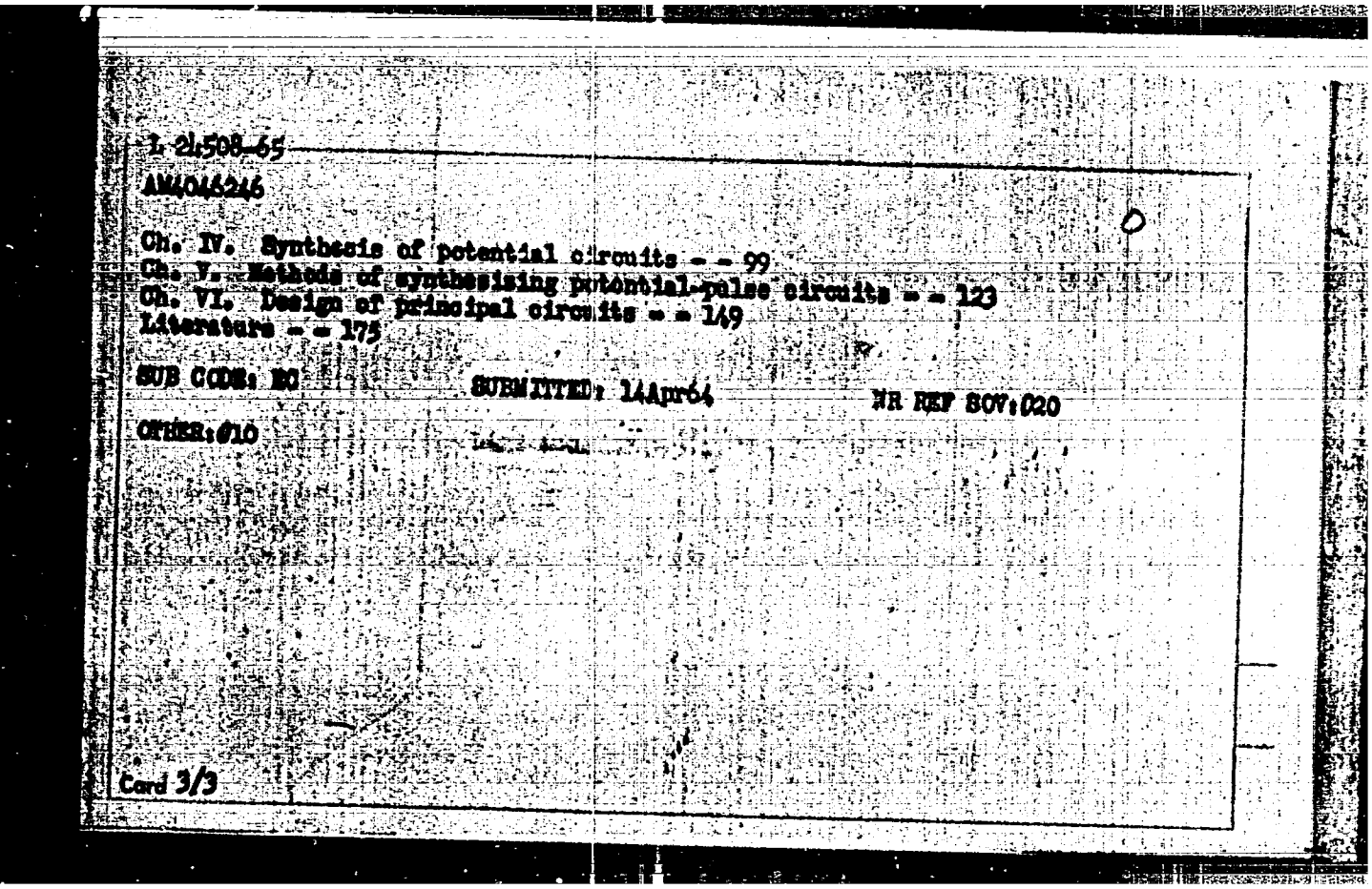

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Ch. VI. Design of principal circuits - - 149
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SUB CODE: EC SUBMITTED: 14Apr64 NR REF SOV: 020

OTHER: 010

Card 3/3

L 55152-65 EWT(d)/EWT(l)/EWP(v)/EWP(k)/EWP(h)/EWA(h)/EWP(l) Pf-4/Pab S/

ACCESSION NR AM5000996 BOOK EXPLOITATION

17
B+1

Lazarev, V. G.; Piyl', YE. I.

Synthesis of asynchronous terminal automatic devices (Sintez asinkhronnykh konechnykh avtomatov), Moscow, Izd-vo "Nauka", 1964, 258 p. illus., biblio. Errata slip inserted. 2,800 copies printed. (At head of title: Akademiya nauk SSSR. Institut problem peredachi informatsii)

TOPIC TAGS: circuit theory, sequence switch, relay system, automatic control, canonic equation, logic circuit

TABLE OF CONTENTS (abridged):

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Ch. II. Minimization of the number of internal states of asynchronous finite automatic machines — 38
Ch. III. Obtaining canonic equations — 164
Ch. IV. Synthesis of a logic converter of an automatic machine — 207
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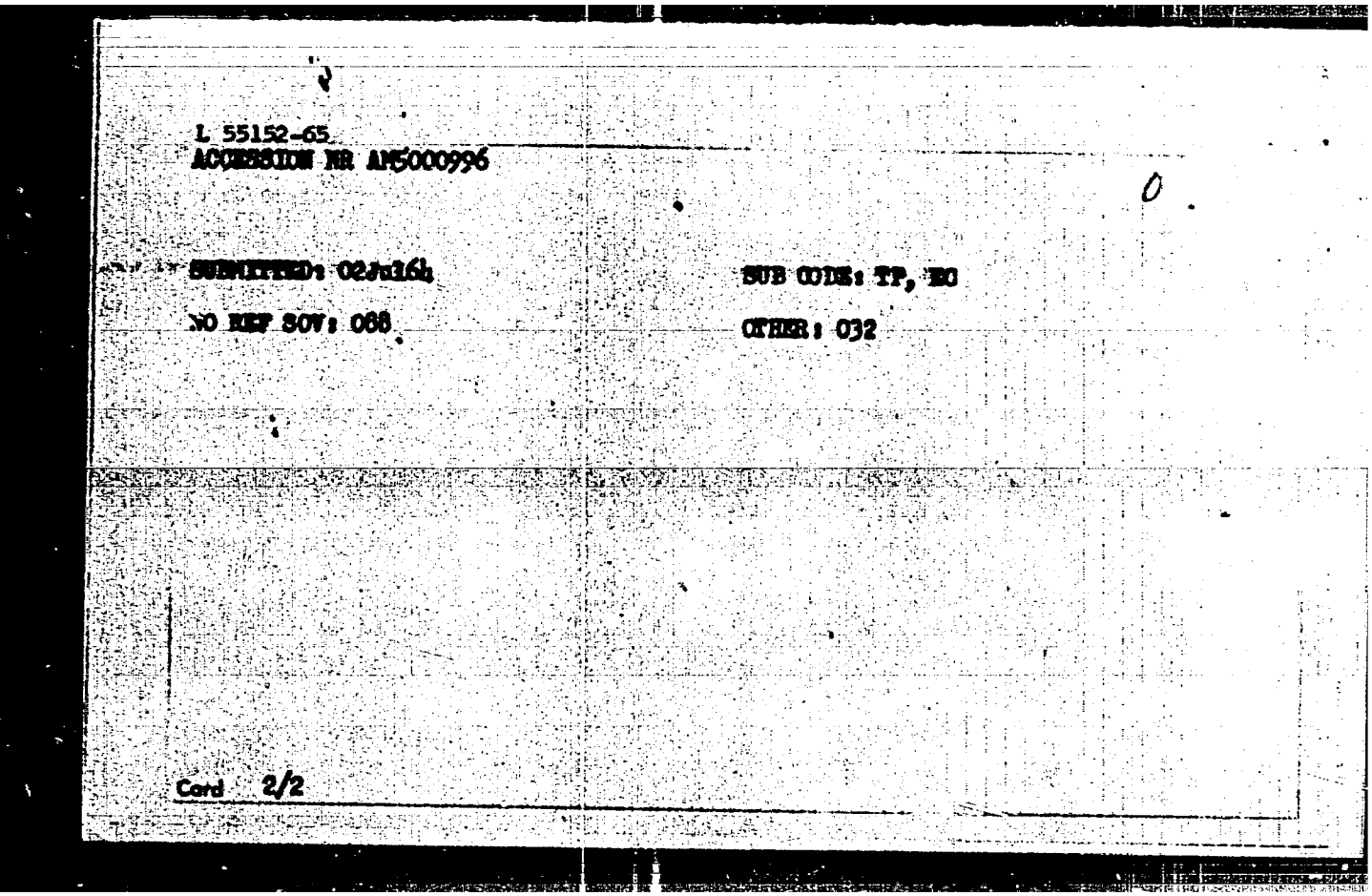
Card 1/2



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ACCESSION NR AM5000996

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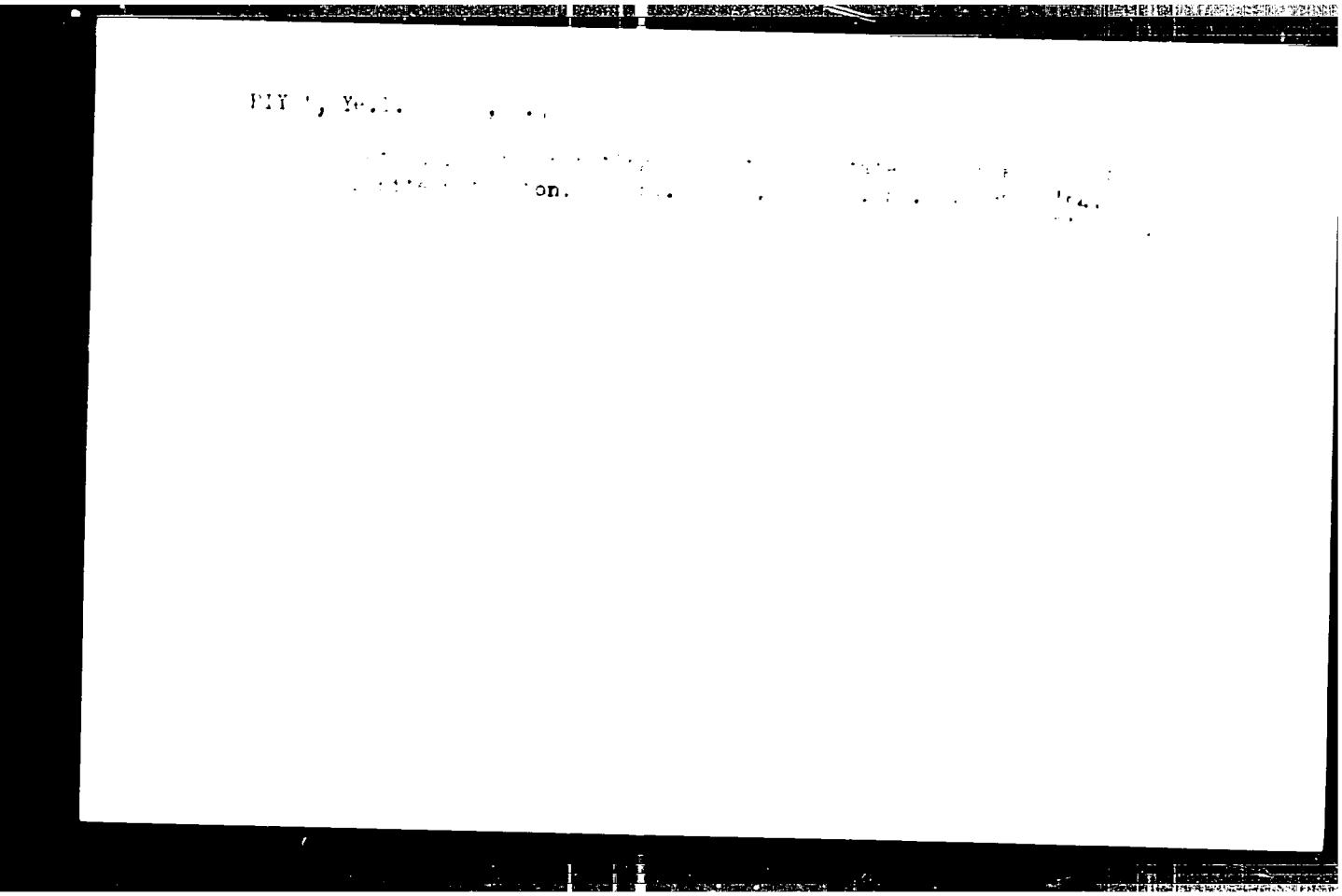


ACCESSION NR: AT4042437 S/0000/64/000/000/0059/0066

AUTHOR: Zenchenko, V. P.; Lazarev, V. G.; Plyl', Ye. I.

TITLE: Synthesis of pneumatic systems with track control using transition operations

SOURCE: Vsesoyuznoye soveshchaniye po pnevmo-gidravlicheskoy avtomatike. 5th, Leningrad, 1962. Pnevmo- i gidroavtomatika (Pneumatic and hydraulic control); materialy* soveshchaniya, Moscow, Izd-vo Nauka, 1964, 59-66

TOPIC TAGS: automation, automatic control system, pneumatic control system, track control, transition operation, cyclogram, control system design

ABSTRACT: In an earlier paper by the first author (V. P. Zenchenko. Strukturnyy metod postroyeniya pnevmaticheskikh sistem s putevym kontrolem. Stanki i instrument, 1962, No. 4), a method was proposed for the synthesis of pneumatic systems with track control based on devices which realized the operations AND, OR, NOT, and MEMORY, and which allowed one to obtain dynamically stable systems. In the present paper, the authors start with a discussion of the transition operations. The cyclograms of a machine for crimping covers and of a loading device are illustrated by way of example. They then show how to eliminate the coincidence of the stages and how to simplify the pulse-potential forms. Using the method

Card 1/2

L 58542-65

ACCESSION NR: AP5012876 UR/0280/65/000/002/0058/0065

AUTHOR: Piyl', Ye. I. (Moscow)

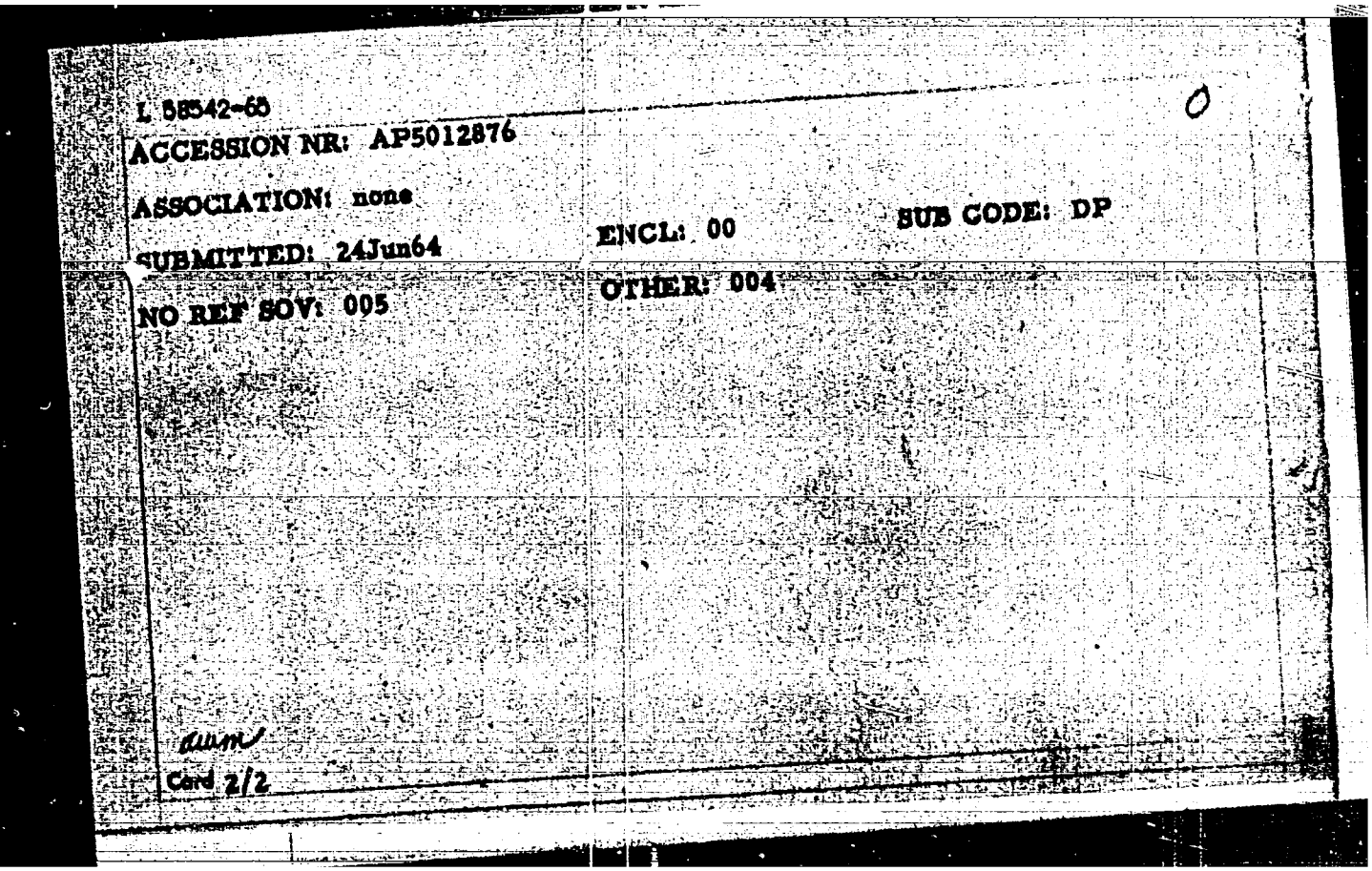
TITLE: Internal state assignment in a finite automaton

SOURCE: AN SSSR. Izvestiya. Tekhnicheskaya kibernetika, no. 2, 1965, 58-65

TOPIC TAGS: finite automaton

ABSTRACT: Connected with the work of R. E. Stearns and J. Hartmanis (IRE Trans., EC-10, 1961, no. 4), this article suggests a method for assigning the internal states for a finite asynchronous automaton in such a way that non-permissible contests among storage units are precluded and the scheme of the logical converter is simplified for the case of paired partitions (divisions). The logical converter is a representation of the finite automaton as a multipole having n fundamental input signals, k fundamental output signals, and s feedback elements (or binary storage units). The author's method can be utilized in synthesizing digital (including control-type) computers. Orig. art. has: 4 figures, 13 formulas, and 1 table.

Card 1/2



L 58542-65
ACCESSION NR: AP5012876 0
ASSOCIATION: none
SUBMITTED: 24Jun64 ENCL: 00 SUB CODE: DP
NO REF SOV: 005 OTHER: 004
Card 2/2

ACC NR: AP6007534

SOURCE CODE: UR/0406/65/001/002/0079/0086

AUTHOR: Plyl', Ye. I.

ORG: none

TITLE: [illegible] for assig[illegible] pulse potential memory elements

SOURCE: Problemy peredachi informatsii, v. 1, [illegible], 1965, [illegible]

TOPIC TAGS: finite automaton, logic[illegible], computer memory, [illegible] core

ABSTRACT: A method is considered [illegible] nous finite automaton with pulse-pote[illegible] based on a sequential expansion of the [illegible] makes it possible not only to simplify [illegible] dependence of its variables, but also [illegible] Differences in the operation of autom[illegible] are noted, as they pertain to the false[illegible]

Card 1/2

UDC: 62-607

ACC NR: AP6007534

diagrams are given to illustrate the [illegible] proposed. Orig. art. has: [illegible]

SUB CODE: 05,09/ SUBM DATE: [illegible]

Card 2/2

L 32166-66 EWT(1) GW

ACC NR: AP6010062 SOURCE CODE: UR/0387/66/000/003/0024/0032

25
B

AUTHOR: Oblogina, T. I.; Piyn, V. B.

ORG: Geological Department, Moscow State University im. M. V. Lomonosov (Geologicheskiy fakul'tet, Moskovskiy gosudarstvennyy universitet)

TITLE: Study of the kinematic properties of waves in nonuniform media

SOURCE: AN SSSR. Izvestiya. Fizika Zemli, no. 3, 1966, 24-32

TOPIC TAGS: seismic wave, ~~propagation~~, propagation velocity, hodograph

ABSTRACT: Calculations were made for the ray structure, fronts and hodographs of seismic waves as a function of two coordinates for dimetric media having a variable propagation velocity $v(x,y)$. The velocity characteristics of the nonuniform media were obtained as functions of the velocity and velocity gradient fields. Differential equations were related to these fields for calculation of the ray structure and a combined graphical-analytical method was developed to solve the equations. For seismic waves moving through media with a velocity

$$v(x,y) = v_0 \exp(k_1 \operatorname{arctg} x + k_2 \operatorname{arctg} y),$$

scalar velocity fields and vector fields of the velocity gradients were given as a func-

UDC: 550.834

Card 1/2

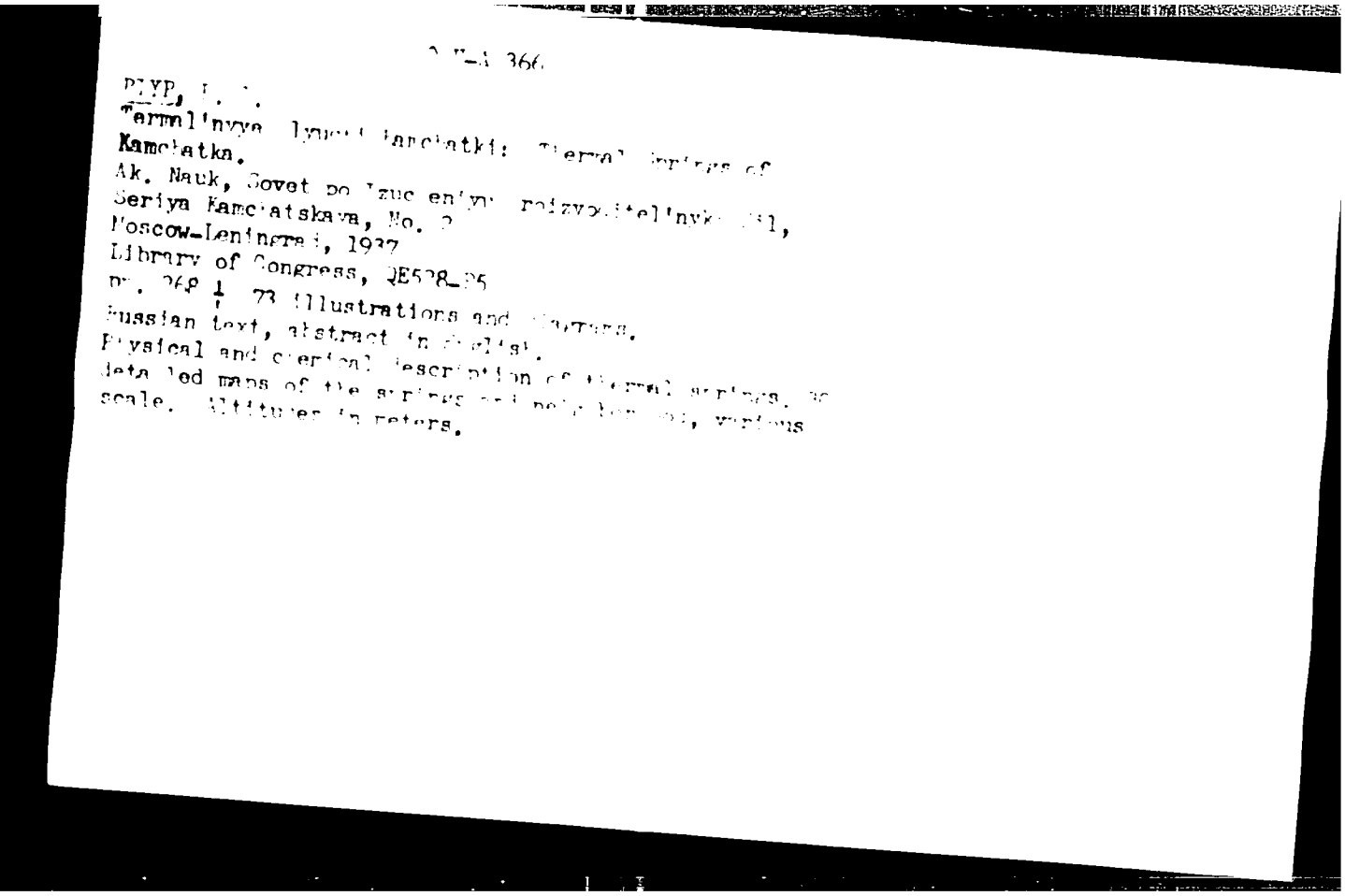
L 32166-66

ACC NR: AP6010062

tion of x-y coordinates. Isochronic curves were constructed for sections along which the velocity varied linearly and these were plotted jointly with the hodographs. The shapes of these curves were explained on the basis of the boundary conditions. The velocity field and the velocity gradient field characterized the velocity distributions in the media and their rate of increase of decrease in any arbitrary direction. The trajectories of seismic rays in nonuniform media were described by second order differential equations with variable coefficients and the above semigraphical method of solution relied on a geometrical interpretation of these equations. Orig. art. has: 5 figures, 1 table, 16 formulas.

SUB CODE: 08/ SUBM DATE: 10May65/ ORIG REF: 005

Card 2/2



366.

PIYP, I. V.

Termal'nyye istochniki Kamchatki: Thermal springs of Kamchatka.

Ak. Nauk, Sovet po izucheniyu proizvoditel'nykh sil, Seriya Kamchatskaya, No. 2

Moscow-Leningrad, 1937

Library of Congress, QE508.P5

pp. 248, 1 l. 73 illustrations and charts.

Russian text, abstract in English.

Physical and clerical description of thermal springs, de-
tailed maps of the springs and location, various
scale. Altitudes in meters.

PIYP, B. I.

IA 21729

USSR/Geology
Volcanology Sep 1946

"The Eruptions of the Kamchatka Volcanoes in 1944 - 1945," B.I.Piyp, 18 pp

"Iz Ak Nauk SSSR, Ser Geologi" No 6

A discussion is given of the volcanic periodicity and physical picture of the four largest volcanoes of Kamchatka: Klyuchevskoy, Shivelouch, Avacha and Ksudnovskaya.

21729

PIYP, B.I.

Itinerary geological observations in southern Kamchatka.
Trudy Lab.vulk. no.3:89-135 '47. (MLRA 9:2)
(Kamchatka--Volcanoes)

PIYP, B.I. (Petropavlovsk-Kamchatskiy)

The summit a[illegible] a recent eruption of Zhupanova Sopka. Biul.Vulk. sta. no.11:14-[illegible] '47. (MLRA 8:11)
(Zhupanova Sopka)

PLVP B.I.

Eruptions of Klyuchevskaya Sopka during 1944-1945. Biul.Vulk.sta. no.14:3-37 '48. (MLRA 9:12)
(Klyuchevskaya Sopka)

PIYP, B.I.

New eruptive conditions of Shiveluch Sopka from the end of 1944 to May, 1945, and some observations on the geological structure of this volcano and its past eruptions. Biul.Vulk.sta. no.14:38-51 '48.

(Shiveluch Sopka) (MLRA 9:12)

PIYP, B. I.

State of active volcanoes of Kamchatka from May, 1943 to November, 1944. Biul.Vulk.sta. no.17:3-5 '53. (MIRA 8:11)
(Kamchatka--Volcanoes)

PIYP, B.I.

Eruption of Avachinskaya Sopka in 1945. Biul.Vulk.sta. no.17:6-23 '53. (MLRA 8:11)

(Avachinskaya Sopka)

PIYP, B. I.; GORSHKOV, G. S.; KVASHA, L. G.

"Aleksandr Nikolayevich Zavaritskiy," Tr. Labor, vulkanologii AN SSSR, No 8, 5-17, 1954

An article in memory of Academician A. N. Zavaritskiy (1884-1953), outstanding Soviet scientist; specialist in the field of petrography, mineral deposits, vulcanology, general geology, and tectonics; and author of more than 220 works.

PIYP, B.I.

Eruption of the Bylinkina cone. (Klyuchevskaya sopka) Biul.Vulk.sta. no.20:48-51 '54. (MLRA 8:11)

PIYP, B.I.; SVYATLOVSKIY, A.Ye.

Eruption of Krenitsyn Peak during 1952 Biul.Vulk.sta. no.20:64-68 '54. (MLRA 8:11)

(Onekotan Island)

PIYP, B. I.

Tolbachik Sopka. Biul.Vulk.sta. no.20:69-71 '54. (MLRA 8:11)
(Tolbachik Sopka)

PIYP, B. I.

State of the active volcanoes in northern Kamchatka from May, 1950 through October, 1951. Biul. 21:6-10 '54. (MLRA 8:11)
(Kamchatka--Volcanoes)

PIYP, B.I.

State of the active volcanoes in northern Kamchatka from November, 1951 through October, 1952. Biul.Vulk.sta. no.21:11-13 '54.
(Kamchatka--Volcanoes) (MLRA 8:11)

PIYP, B. I.

Formation of a new adventive cone, the Beliankin (telegraphic communication) Biul.Vulk.sta. no.22:6-7 '54. (MLRA 8:11)
(Klyuchevskaya Sopka)

PIYP, Boris Ivanovich; VLODAVETS, V.I., redaktor; FEDOT'YEV, K.M., redaktor; MAKUNI, Ye.V., tekhnicheskiy redaktor.

[Klyuchevskaya Sopka and its eruption during 1944-1945 and in the past] Kliuchevskaia sopka i ee izverzhenila v 1944-1945 gg. i v proshlom. Moskva, Izd-vo Akademii nauk SSSR, 1956. 308 p.(Akademiia nauk SSSR. Laboratoriia vulkanologii. Trudy, no.11) (MLRA 9:6)

(Klyuchevskaya Sopka)

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 3, p 63 (USSR) 15-1957-3-2897

AUTHOR: Piyp, B. I.

TITLE: **Klyuchevskaya Sopka, Its Eruptions in 1944-45 and in the Past (Klyuchevskaya sopka i yeye izverzheniya v 1944-1945 gg. i v proshlom)**

PERIODICAL: Tr. Labor. volkanologii AN SSSR, 1956, Nr 11, 311 pp

ABSTRACT: In the first part of the paper the author presents the essential information on the **Klyuchevskaya Sopka group** volcanoes: physico-geographic and geologic data and an outline of the geologic history of the volcanoes. In the second part the data of past eruptions are cited and general conclusions are given on the past activity of all the volcanoes. The third part describes the eruptions of the **Klyuchevskaya Sopka volcanoes in 1944-45**. The volcanoes had become quiescent immediately after the end of the preceding volcanic cycle (March, 1939). In

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15-1957-3-2897

Klyuchevskaya Sopka, Its Eruptions in 1944-45 and in the Past

December, 1944, the activity of the Klyuchevskaya Sopka was renewed, beginning in the end crater with continuous explosions, which gradually grew more intense. After continuing for three weeks, the activity reached its maximum force and then suddenly ceased. After a pause of five months eruptions began again at the foot of the cone, where a chain of new secondary craters broke out and emitted gases and escaping fragments of lava. At the time of the last eruption, the ejected material was not sufficient to raise the height of the secondary cone to the great height of the summit crater. The cycle of 1945 ended with a comparatively moderate explosive eruption from the chief crater. In October, 1946, at almost the same spot where the crater had broken through in 1945, an eccentric eruption occurred. This eruption was apparently associated with the last residual of the magma body that had been injected into the volcano at the time of the last eruption in 1945. The lava of this final eruption consisted of bombs, scoria, and volcanic ash; in general composition it is plagioclase basalt. The chemical analysis

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Klyuchevskaya Sopka, Its Eruptions in 1944-45 and in the Past

gives SiO_2 52.90%; TiO_2 1.06%; Al_2O_3 17.70%; Fe_2O_3 3.36%; FeO 5.36%; MnO 0.16%; MgO 6.40%; CaO 9.21%; BaO 0.08%; Na_2O 2.30%; K_2O 1.00%; H_2O+ 0.20%; H_2O- 0.08%; P_2O_5 0.17%; Cl 0.12%; F 0.01%; SO_3 0.10%; CO_2 0.06%: total 100.27%. The products of the eccentric eruption were effusive lava, bombs, scoria, and ash. The following data on the chemical analyses are for the effusive lava and represent the first and the last phase of magmatic composition (respectively): SiO_2 53.22% and 51.22%; TiO_2 0.80% and 1.11%; Al_2O_3 17.28% and 17.02%; Fe_2O_3 3.64% and 4.20%; FeO 6.22% and 5.81%; MnO 0.20% and 0.20%; MgO 5.42% and 5.97%; CaO 8.60% and 9.02%; BaO 0.10% and 0.04%; Na_2O 2.90% and 2.71%; K_2O 1.20% and 1.07%; H_2O+ 0.11% and 0.98%; H_2O- 0.08% and 0.29%; P_2O_5 0.20% and 0.11%; Cl 0.10% and not determined: total 100.15% and 100.21%. The volcanic bombs, scoria, and lapilli consist of a rock type containing phenocrysts of plagioclase, olivine, clinopyroxene, and considerable glass in the groundmass. Data on two chemical analyses are given for the explosive lava at the time of the break through, from two different

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Klyuchevskaya Sopka, Its Eruptions in 1944-45 and in the Past

craters (Obruchev and Zavaritskiy respectively): SiO_2 53.12% and 53.30%; TiO_2 1.12% and 1.09%; Al_2O_3 18.19% and 17.72%; Fe_2O_3 3.18% and 3.58%; FeO 6.68% and 6.40%; MnO 0.10% and 0.26%; MgO 5.23% and 5.93%; CaO 7.91% and 8.70%; BaO 0.04% and 0.12%; Na_2O 3.52% and 2.42%; K_2O 1.11% and 1.40%; H_2O+ 0.10% and 0.10%; H_2O- 0.08% and 0.04%; P_2O_5 0.09% and 0.12%; Cl none and 0.12%; F 0.01% and 0.02%; O_3 [SO_3!] 0.10% and a trace; CO_2 none and none; total 100.68% and 100.38%. The volcanic sands consist chiefly of glass, but crystal fragments (plagioclase, olivine, and clinopyroxene) occur occasionally in subordinate quantities. Two dominant types of glass occur: brown transparent (n = 1.554 to 1.556) and black opaque (n = 1.556 to 1.565). The chemical composition of the sand is SiO_2 53.38%; TiO_2 0.92%; Al_2O_3 18.58%; Fe_2O_3 2.81%; FeO 5.64%; MnO 0.12%; MgO 4.84%; CaO 10.04%; BaO none; Na_2O 3.30%; K_2O 0.29%; H_2O+ 0.16%; H_2O- 0.06%; P_2O_5 0.20%; Cl 0.03%; F 0.03%; SO_3 a trace; CO_2 none; total 100.50%. Small quantities of solid material were carried to the surface during eruption by the masses of lava. This material, sometimes de-

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15-1957-3-2897

Klyuchevskaya Sopka, Its Eruptions in 1944-45 and in the Past

posited as individual fragments and sometimes fused into the mass of lava, ranges in composition from rocks completely foreign to the magma, torn from the walls of the conduit, to rocks related to the magma in different genetic ways. The author proposes to call these inclusions chadaliths (xenoliths). Several varieties of chadaliths are distinguished. 1) Microtinites--small fragments consisting of transparent grains of plagioclase closely pressed together, with small specks of a black mineral uniformly scattered through the aggregate. Such chadaliths were formed from fluids which were squeezed out of the parent melt and injected into the country rocks. 2) Melilitic chadaliths--accumulations of thick melilite plates, which are most numerous at the rim. They apparently formed by the introduction of volatile silicate material and by metasomatic exchange between this material and a rather pure limestone. 3) Chadaliths of hornfels. 4) Chadaliths of peridotite. 5) Chadaliths of Tertiary sediments. 6) Chadaliths of pumice. 7) Chadaliths of old lava. The principal conslusions of the

Card 5/6

PIYP, B.I.

State of active volcanoes of northern Kamchatka in 1954 (from Jan.1 to Sept.1). Biul.Vulk.sta. no.24:14-20 '56. (MLRA 9:10)

(Kamchatka--Volcanoes)

VLADOVETS, V.I.; PIYP, B.I.

Catalog of active volcanoes in Kamchatka. Biul. Vulk. sta. no.2 S-
pe 1952. (MLRA 10:8)

(Kamchatka--Volcanoes)

VLODAVETS V.I.; GORSHKOV, G.S.; PIYP, B.I.

Foreword. Biul. Vulk. sta. no.25:3-4 '57. (MLRA 10:8)
(Volcanoes)

15-1957-10-13871

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 10, p 71 (USSR)

AUTHOR: Vlodavets, V. I., Piyp, B. I.

TITLE: Catalog of the Active Volcanoes of Kamchatka (Katalog deystvuyushchikh vulkanov Kamchatki)

PERIODICAL: Byul. Volkanol. st. AN SSSR, 1957, Nr 25, pp 5-95

ABSTRACT: A map and detailed descriptions of the following 28 volcanoes of Kamchatka are given: Sheveluch, Klyuchevskiy, Bezymyannyy, Ploskiy Tolbachik, Kizimen, Komarov, Gamchen, Kronotskiy, Krasheninnikov, Kikhpinych, Uzon, Burlyashchiy, Tsentral'nyy Semyachik, Malyy Semyachik, Karymskiy, Zhupanovskiy, Dzenzurskiy, Avachinskiy, Koryakskiy, Mutnovskiy, Gorelyy khrebet (Range), Opala, Ksudach, Zheltovskiy, Il'inskiy, Koshelev, Kambal'nyy, and Ichinskiy. A description of each volcano is given in accordance with aunified scheme: synonyms, location, height, form of the volcano, geological characteristics,

Card 1/2

VLODAVETS, V.I.; PIYP, B.I., otv. red.; NOSOV, red. izd-va,; POLENOVA, T.P., tekhn. red.

[Volcanoes and volcanic formations in the Semyachik area] Vulkany i vulkanicheskie obrazovaniia Semiachinskogo raiona. Moskva, Izd-vo akad. nauk, SSSR, 1958. 192 p. (Akademiia nauk SSSR. Laboratoriia vulkanologii. Trudy, no. 15). (MIRA 11:8)
(Kamchatka--Volcanoes)

PIYP, B.I.

Eruptions of the Klyuchevskiy volcano. Trudy Lab.vulk. no.13:99-119 '58. (MIRA 12:3)

(Klyuchevskiy volcano)

PIYP, B.I.

Kurile-Kamchatka expedition of the Presidium of the Academy of Sciences of the U.S.S.R. Biul. Vulk. sta. no.27:82-84 '58. (MIRA 11:10)

(Kurile Islands--Scientific expeditions)
(Kamchatka--Scientific expeditions)

SVYATLOVSKIY, A.Ye.; KELL', N.G., otv.red.; PIYP, B.I., otv.red.; PAFFENGOL'TS, K.N., red.; RENGARTEN, V.P., red.; SOLOV'YEV, S.P., doktor geol.-min.nauk, red.; LADYCHUK, L.P., red. izd-va; STRELETSKIY, I.A., tekhn.red.; POLENOVA, T.P., tekhn.red.

[Atlas of the volcanoes of the S.S.S.R.] Atlas vulkanov SSSR. Sostavitel' i avtor teksta A.E.Sviatlovskii. Moskva, 1959. 173 p. (MIRA 12:8)

1. Akademiya nauk SSSR. Laboratoriya vulkanologii. 2. Chlen-korrespondent AN SSSR; Laboratoriya aerometodov AN SSSR (for Kell'). 2. Chlen-korrespondent AN SSSR; Laboratoriya vulkanologii AN SSSR (for Piyp). 3. Deystvitel'nyy chlen Akademii nauk Armyanskoy SSR (for Paffengol'ts). 4. Chlen-korrespondent AN SSSR (for Rengarten).

(Volcanoes)

[redacted]

PIYP, B.I.

Kronotskoye ignimbrites of Kamchatka. Trudy Lab. vulk. no.20: 90-91 '61. (MIRA 14:11)

1. Geologo-geofizicheskaya observatoriya Sibirskogo otdeleniya AN SSSR.
(Kronotskoye Lake region—Volcanic ash, tuff, etc.

AVE.'YeV, V.V.; KABOKO, S.I.; PIYP, B.I.

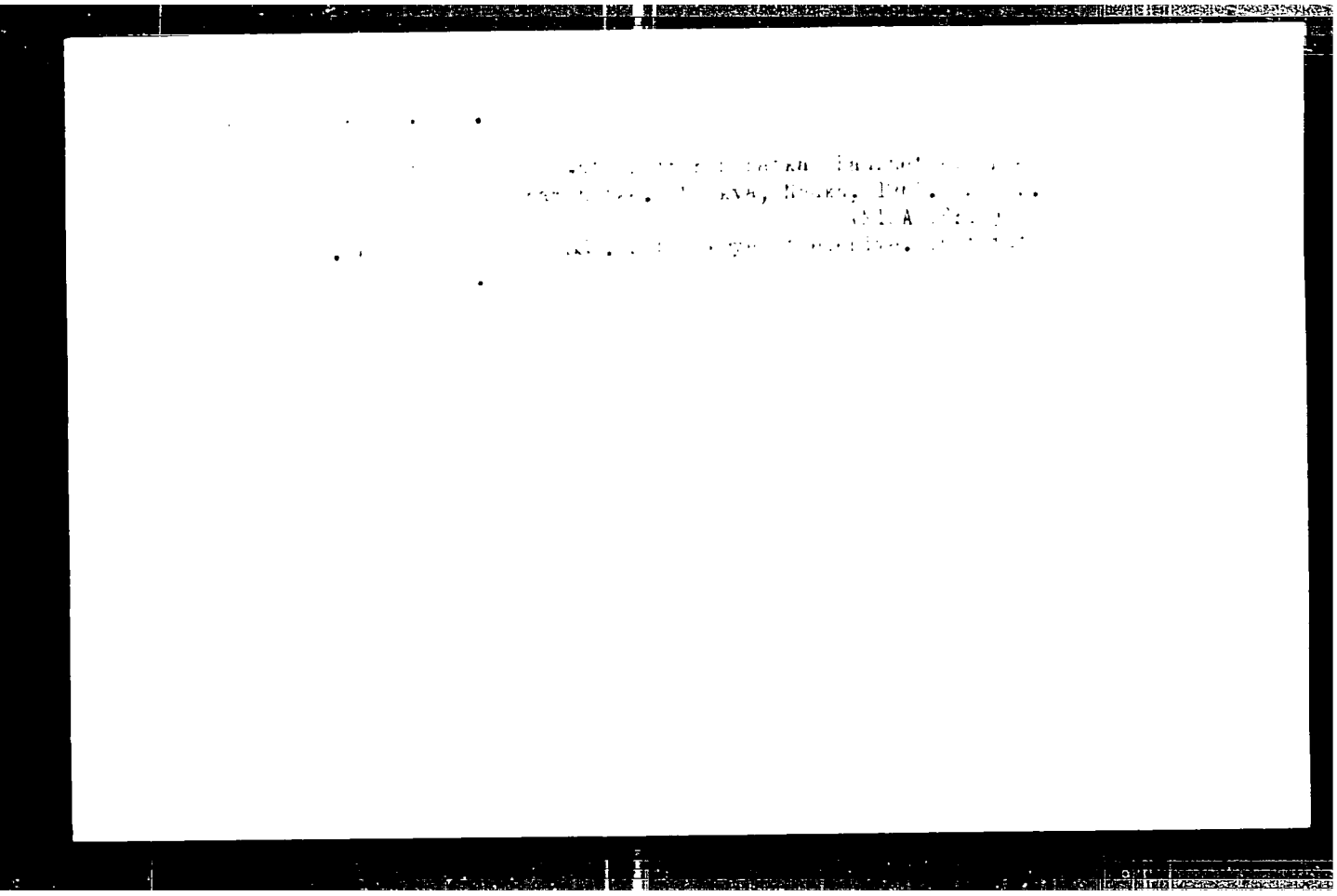
Recent hydrothermal metamorphism in areas o active volcanism. Dokl. AN SSSR 137 no.2:407-410 Mr '61. (MIA 14:2)

1. Laboratoriya vulkanolo ii AN S.S.. 2. Chlen-korrespondent AN SSSR (for Piyp).
(Kamchatka—Geysers) (New Zealand—Geysers)
(Metamor, ism—Geolo y)

VLODAVETS, V.I.; GORSHKOV G.S.; NABOKO, S.I.; PIYP, B.I.

Development of volcanologic studies in the U.S.S.R. Geol. i geofiz. no.11:24-2[illegible] 6[illegible]. (MIRA 16:3)

1. Laboratoriya vulkanologii Moskva. (Volcanoes)



GORSHKOV, Georgiy Stepanovich; MELEKESTSEV, Igor' Vasil'yevich; POPOGOYAVLENSKAYA, Genriyetta Yevgen'yevna; PIP[illegible], [illegible] otv. red.

[Bezymyannyy Volcano and the characteristics of its recent eruption, 1955-1963] Vulkan Bezymiannyi i osobennosti ego poslednego izverzheniia (1955-1963 gg.) Moskva, Nauka, 1965. 169 p. (MIRA 18:8)

OBLOGINA, T.I.; PIYP, V.B.; KOCHIAY, S.

Using seismic methods to study intrusives. Izv. AN SSSR. Ser. geofiz. no.9:1191-1205 S '62. (MIRA 15:8)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
(Seismic prospecting)

PIYPER, E.O. (Tartu, Estonskoy SSR, ul.Kreytsval'di, d.14, kv.1)

Growth and multiplication of cells in the human adrenal [with summary in English]. Arkh.anat.gist. i embr. 34 no.4:54-63 Jl-Ag '57. (MIRA 10:11)

1. Iz kafedry genetiki i darvinizma (zav. - dots. O.F.Mikhaylov) Tartuskogo gosudarstvennogo universiteta.

(ADRENAL GLAND, anatomy and histology,
cell growth & division (Rus))
(CELL DIVISION,
adrenal gland (Rus))

KUMARI, E.V., professor, otvetstvennyy redaktor; ONNO, S.Kh.[Onno, S.H.] redaktor; PIYPER, I.Ya. [Piiper, I.J.], professor, redaktor; TAL'TS, S.Ya. [Talts, S.J.], kandidat biologicheskikh nauk, redaktor; KHABERMAN, Kh.M. [Haberman, H.M.], redaktor; KARTASHEV, N.N., redaktor izdatel'stva; POLYAKOVA,T.V., tekhnicheskiy redaktor

[Proceedings of the Second Baltic Ornithological Conference] Trudy Vtoroi Pribaltiiskoi ornitologicheskoi konferentsii. Moskva, Izd-vo Akademii nauk SSSR, 1957. 427 p. (MLRA 10:2)

1. Pribaltiyskaya ornitologicheskaya konferentsiya.2d, Tallin, 1954. 2. Institut zoologii i botaniki Akademii nauk Estonskoy SSR (for Kumari, Onno) 3. Deystvitel'nyy chlen Akademii nauk Estonskoy SSR (for Khaberman)

(Baltic Sea region--Birds)

[illegible]IYR, I. R.

[illegible]IYR, I. R. — "Non-Linear Effects in the Movement of [illegible] in a Quantized Gravitational Field." Tartu [illegible], Tartu, [illegible]. [illegible] Dissertation for the Degree of Candidate in Physico-Mathematical Sciences [illegible]

SO: Knizhnaya Letopis', No 1, 195[illegible], pp [illegible]-1[illegible], 1[illegible]

1. CHIKOV, Ya. I. PIYR, A.I.

2. USSR (600)

3. Hoisting Machinery

4. Loading winch with drive from the automobile wheels.
Les. Prom. No. 11 - 1952.

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

L 41023-66 EWT(m)/EWP(t) /ETI IJP(c) JD
ACC NR: AP6019653 SOURCE CODE: UR/0368/66/004/006/0529/0534

AUTHOR: Pae, A.; Rebane, K. S.; Piyr, K.

ORG: none

TITLE: Luminescence of ZnS-$AgAlS_2$

SOURCE: Zhurnal prikladnoy spektroskopii, v. 4, no. 6, 1966, 529-534

TOPIC TAGS: zinc sulfide optic material, luminescence, emission spectrum, spectrographic analysis

ABSTRACT: The luminescence of ZnS-$AgAlS_2$ phosphors was investigated. To prepare $AgAlS_2$, Ag_2S and Al_2S_3 were mixed in a dry form and heated in an evacuated sealed quartz ampule at 850—950C for 12 hr. To prepare the ZnS-$AgAlS_2$ the powder of ZnS was preliminarily heated in a flow of H_2S at 450C for 1 hr, mixed with $AgAlS_2$ and heated for 4.5 hr at 1150C. The concentration of $AgAlS_2$ varied from $5 \cdot 10^{-5}$ to 1.0 mol %. The emission spectra were measured by a monochromator and photomultiplier and the excitation spectra by spectrophotometers. The emission spectrum of ZnS-$AgAlS_2$ revealed three bands with peaks of about 2.8 (blue band), 2.4 (green band), and 2.0 eV (red band). However, all these bands were evident only at low concentrations of $AgAlS_2$ in the phosphor. The blue band dominated

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UDC: 535.37

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ACC NR: AP6019653

at higher concentrations of the activator. The excitation spectra consisted of three characteristic regions: 1) encompassed the group of peaks found within the absorption limits of the main lattice of ZnS; 2) contained only one characteristic band near the fundamental absorption edge (this band at 77K was at about 3.8 eV); and 3) encompassed all excitation bands, the peak energy of which was less than 3.8 eV. The most interesting of them were the excitation bands of green luminescence at about 3.00 eV and red luminescence at about 2.63 eV. It was found that the peaks of the emission bands shift to the longwave side when the concentration of $AgAlS_2$ and the temperature are increased. It is postulated that the excitation band at 3.80 eV is due to absorption of the exciting light by S^{2-} ions surrounding the activator ion. The red emission band was explained by means of the donor-acceptor model of luminescence. Orig. art. has: 3 tables and 3 figures.

SUB CODE: 11,20/ SUBM DATE: 30Jun65/ ORIG REF: 009/ OTH REF: 007

Card 2/2 hs

L 60909-65 EWT(l)/EWT(m)/EWP(t)/EWP(b) LJP(c) JD
ACCESSION NR: AT5013544 UR/2613/64/000/026/0203/0212

AUTHORS: Pae, A.; Piyr K.

TITLE: On the structure and luminescent properties of the system $ZnS-CuAlS_2$

SOURCE: AN EstSSR. Institut fiziki i astronomii. Trudy, no. 26, 1964. Issledovaniya po lyuminestsentsii (Research on luminescence), 203-212

TOPIC TAGS: copper activated phosphor, zinc sulfide optical material, solid solution, luminescence spectrum, concentration dependence

ABSTRACT: The authors investigated methods of preparing $CuAlS_2$ and $ZnS-CuAlS_2$ solid solutions with an aim at developing a luminor in which the activator can have a concentration commensurate with that of the coactivator. Two methods of preparing $CuAlS_2$ were used. The $ZnS.CuAlS_2$ system was prepared by mixing ZnS and $CuAlS_2$ in an agate

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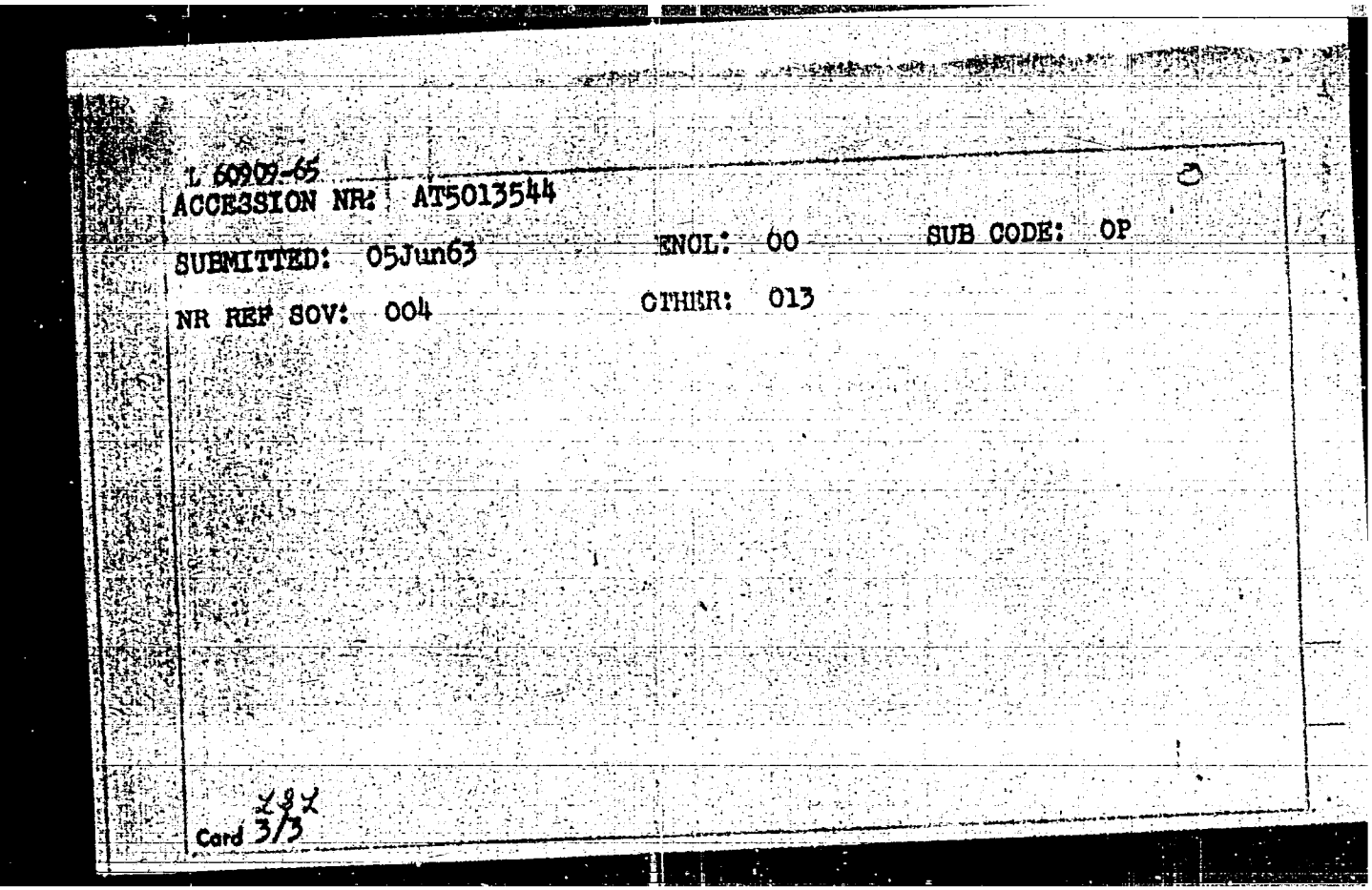
L 60909-65
ACCESSION NR: AT5013544 2

pestle and firing in a stream of H_2S at 950 or 1100 -- 11500 from 30 minutes to 2.5 hours. The emission spectrum consists of four bands: blue (~ 460 nm), green (~ 1230 nm), and two orange; a red infrared emission band appears with increasing $CuAlS_2$ concentration. The spectra were analyzed with an automatic spectrograph. The results show that $ZnSnCuAlS_2$ form mixed solid solutions in all ratios. The Zn-$CuAlS_2$ phosphors are typical phosphors up to a copper concentration 10^{-2} g/g at room temperature and up to a concentration 10^{-1} g/g at liquid-air temperature, and exhibit all the typical luminescence bands of copper, depending on the concentration. Samples with more than 1.6 molar per cent $CuAlS_2$ do not emit at room temperature.

'The authors thank Docent K.-S.K. Rebane for suggesting the topic and for valuable remarks.' Orig. art. has: 4 figures

ASSOCIATION: Institut fiziki i astronomii AN EstSSR (Institute of Physics and Astronomy, AN EstSSR)

Card 2/3

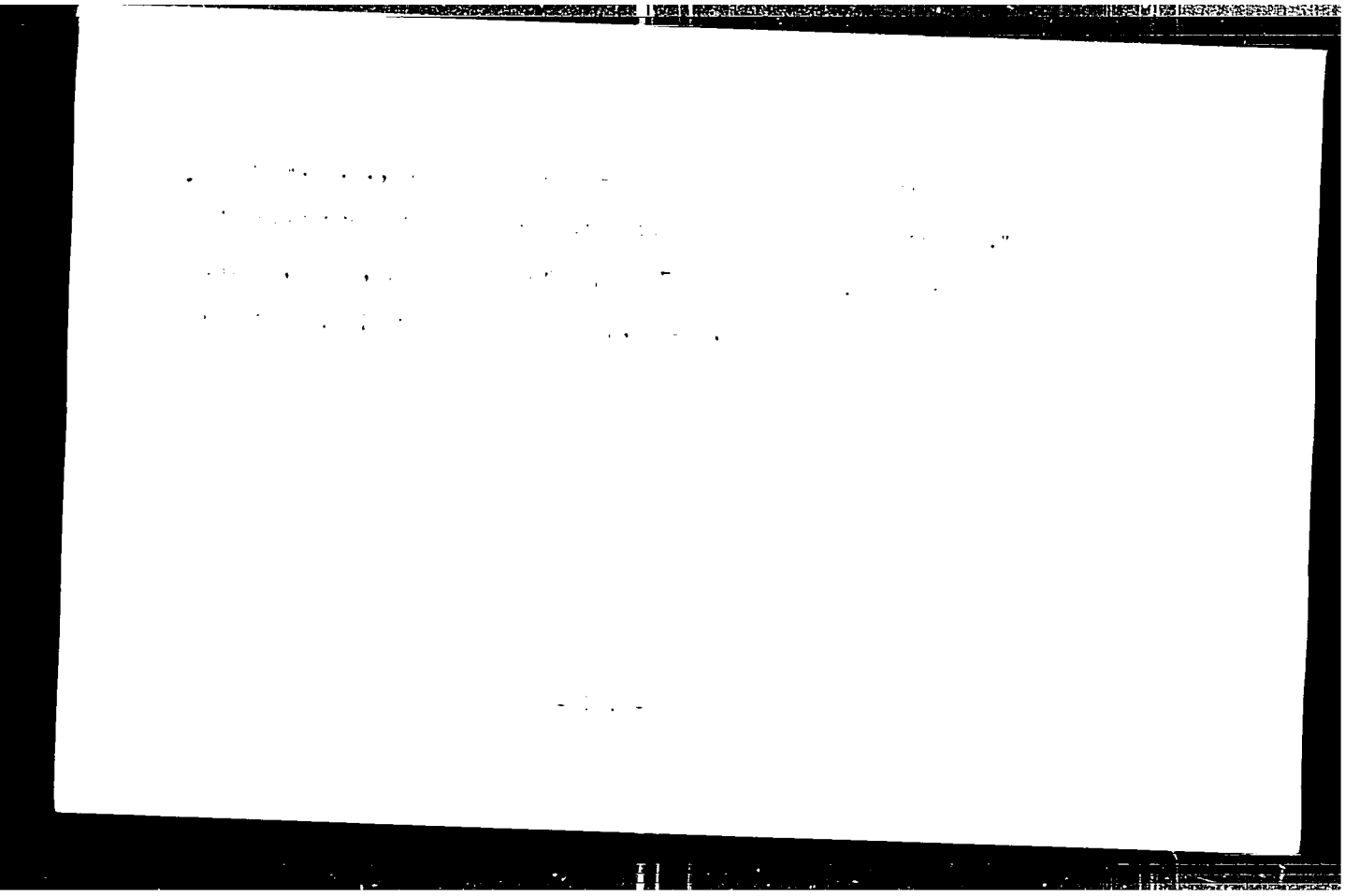


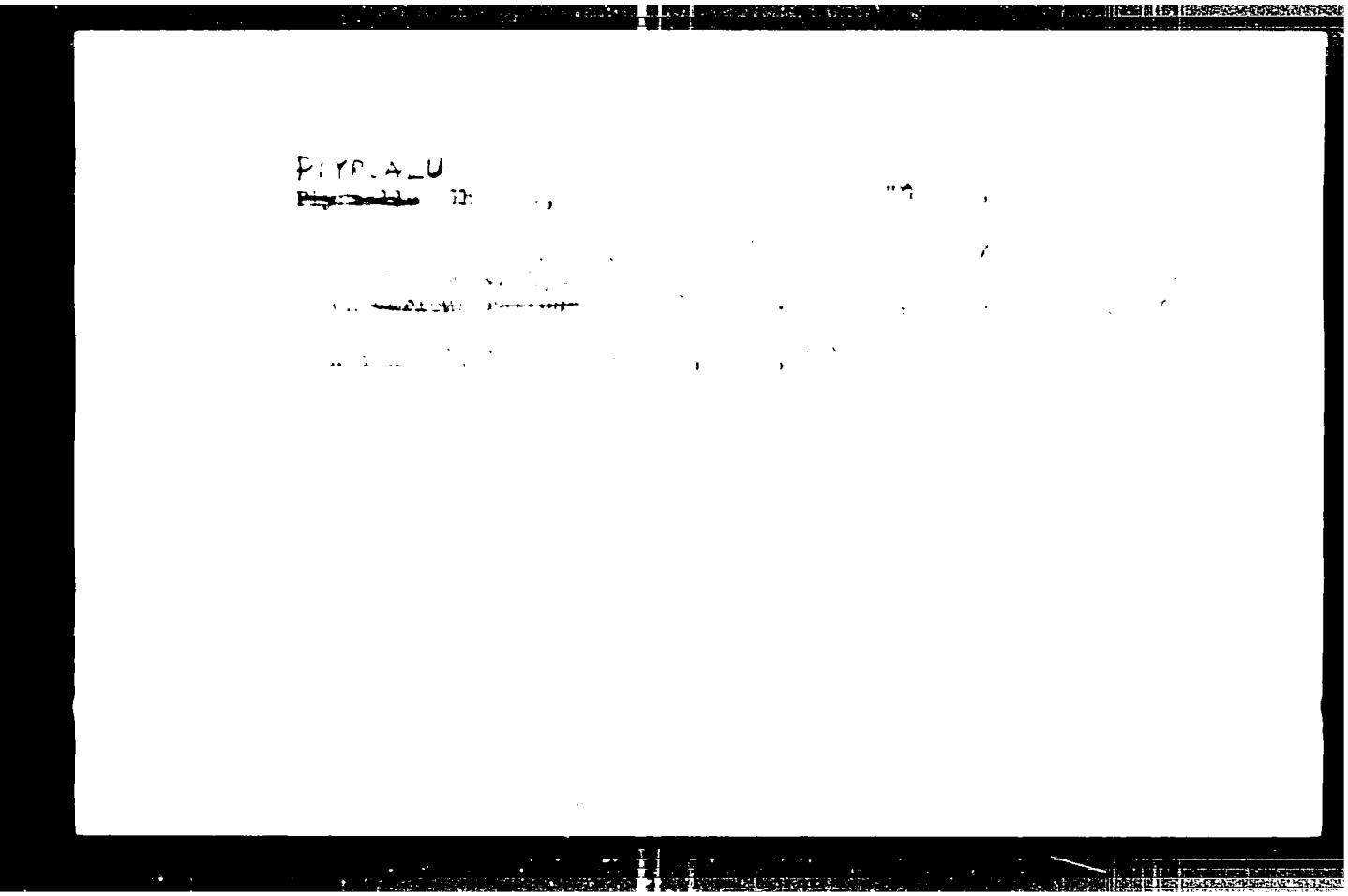
L 60909-65
ACCESSION NR: AT5013544

SUBMITTED: 05Jun63 ENCL: 00 SUB CODE: OP

NR REF SOV: 004 OTHER: 013

Card 3/3





KUSHNIR, P.V., kandidat tekhnicheskikh nauk; BUZHANSKIY, A.B., inzhener; KNYAZEV, A.D., inzhener; PIYUK, L.A., inzhener

"How a radio station for intradistrict communication should be organized." Response to V.M. Rozov's article published in no. 1 of the journal for 1955. Vest. sviazi 15 no.7:13-15 Jl '55. (MLRA 8:8)

1. Nachal'nik laboratorii Leningradskogo otdeleniya nauchnoissledovatel'skogo instituta svyazi (for Kushnir).
(Radio stations, Short wave)

L 63795-65 EWT(m)/EPF(c)/T DJ

ACCESSION NR: AP5018796 UR/0318/65/000/007/0015/0017
665.5.022.37.012.2

AUTHOR: In'kova, N. M.; Piyunkina, Yu. I.

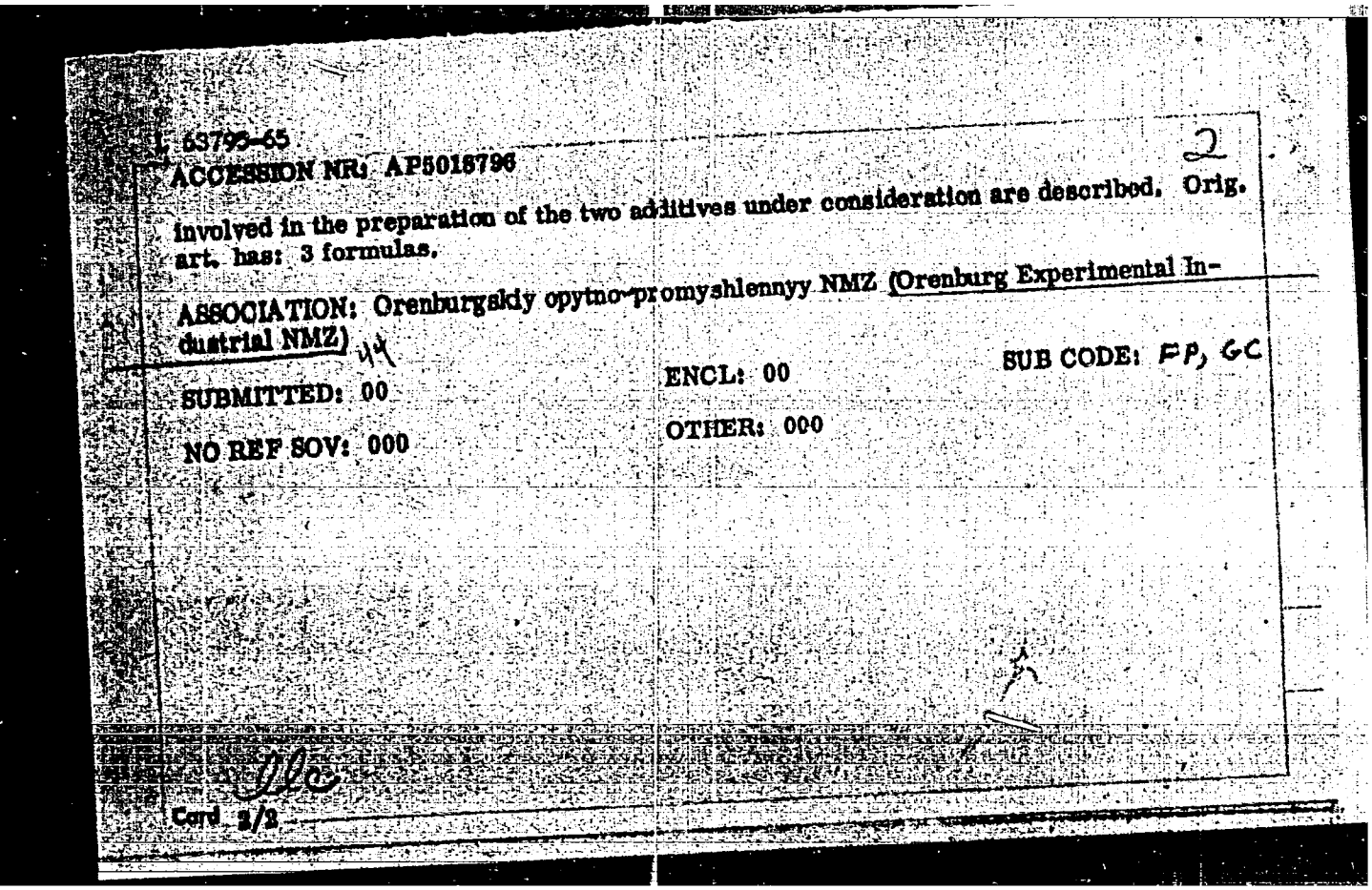
TITLE: Step-by-step operational checking of the production of TsIATIM-339 and VNIINP-360 alkylphenol additives

SOURCE: Neftepererabotka i neftekhimiya, no. 7, 1965, 15-17

TOPIC TAGS: alkylphenol, oil additive, phenol determination

ABSTRACT: The article describes the methods used at the Orenburgskiy opytno-promyshlennyy neftemaslozavod (Orenburg Experimental Industrial Petroleum and Oil Refinery) for the step-by-step operational checking of the quality of TsIATIM-339 and VNIINP-360 alkylphenol additives. The first analysis of both additives, which involves the determination of free phenol in the crude alkylphenol, is described in detail. The phenol content of alkylphenol for TsIATIM-339 should be no more than 0.7%. After the alkylphenol has been washed with hot water (70-80C), the acidity of the latter is determined. The alkylphenol is considered to be ready when it has a kinematic viscosity of 5-6.3 centistokes, a flash point of 100-110C, and a water content of no more than 0.05%. The sulfurized alkylphenol is periodically analyzed for the content of water-soluble acids. All the steps

Card 1/3



L 53793-65
ACCESSION NR: AP5015796

2

involved in the preparation of the two additives under consideration are described. Orig. art. has: 3 formulas.

ASSOCIATION: Orenburgskiy opytno-promyshlennyy NMZ (Orenburg Experimental Industrial NMZ) 44

SUBMITTED: 00 ENCL: 00 SUB CODE: FP, GC

NO REF SOV: 000 OTHER: 000

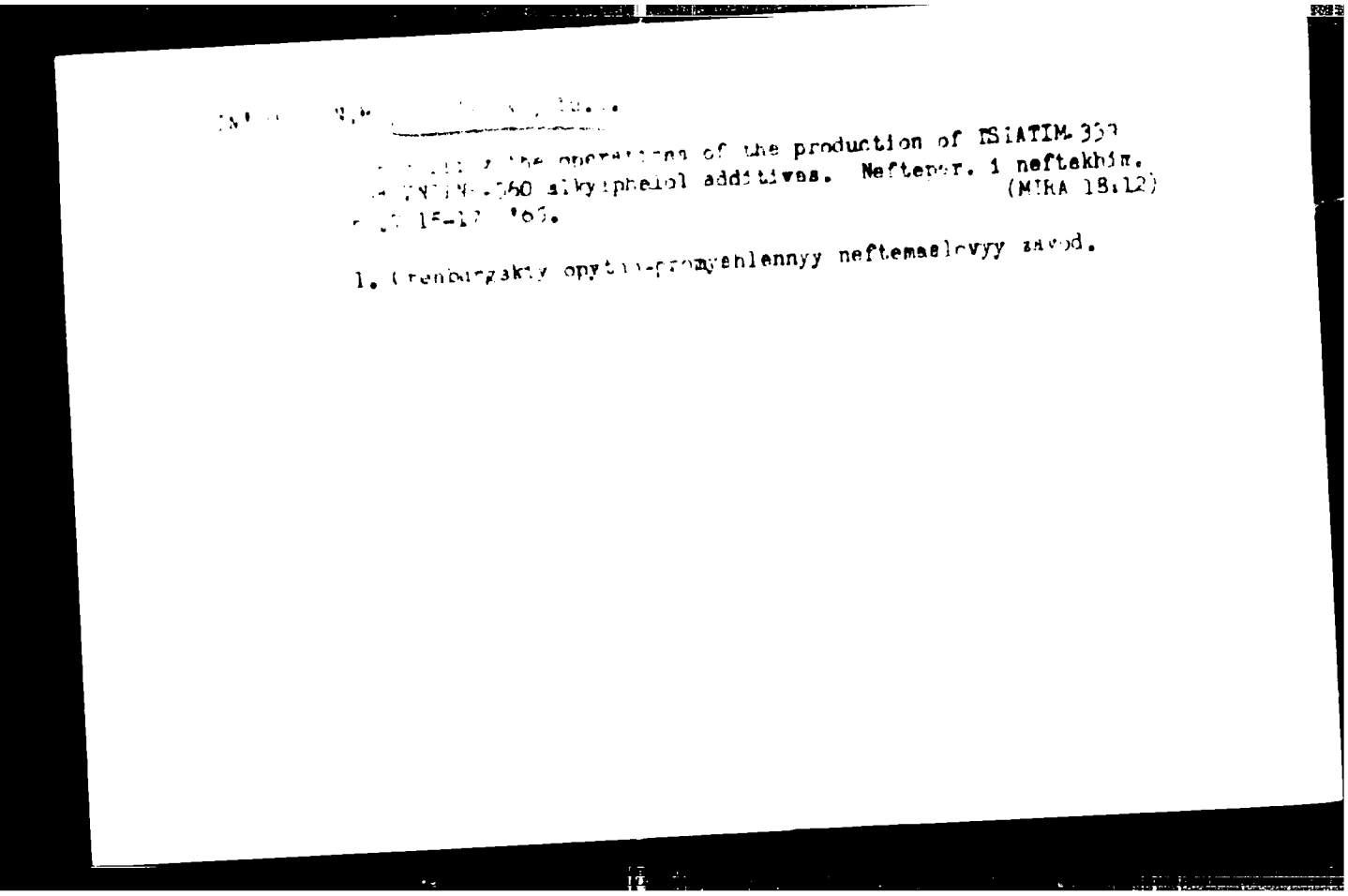
Card 2/2

PISZAK, J.

POLAND

"Certitude of Iron Castings Qualification as Influenced by the Mode of Designing and Taking Tensile Strength Samples," by R. KRISSINSKI, and J. PISZAK; Prace Instytutow Ministerstwa Hutnictwa, No. 2, 19[illegible].

[redacted]



[illegible] the operation of the production of IS1ATIM-339
[illegible]-360 alkylphenol additives. Neftepererab. i neftekhim.
[illegible] 15-17 '66. (MIRA 18:12)

1. Orenburgskiy opytno-promyshlennyy neftemaslozavod.

Pizak, F

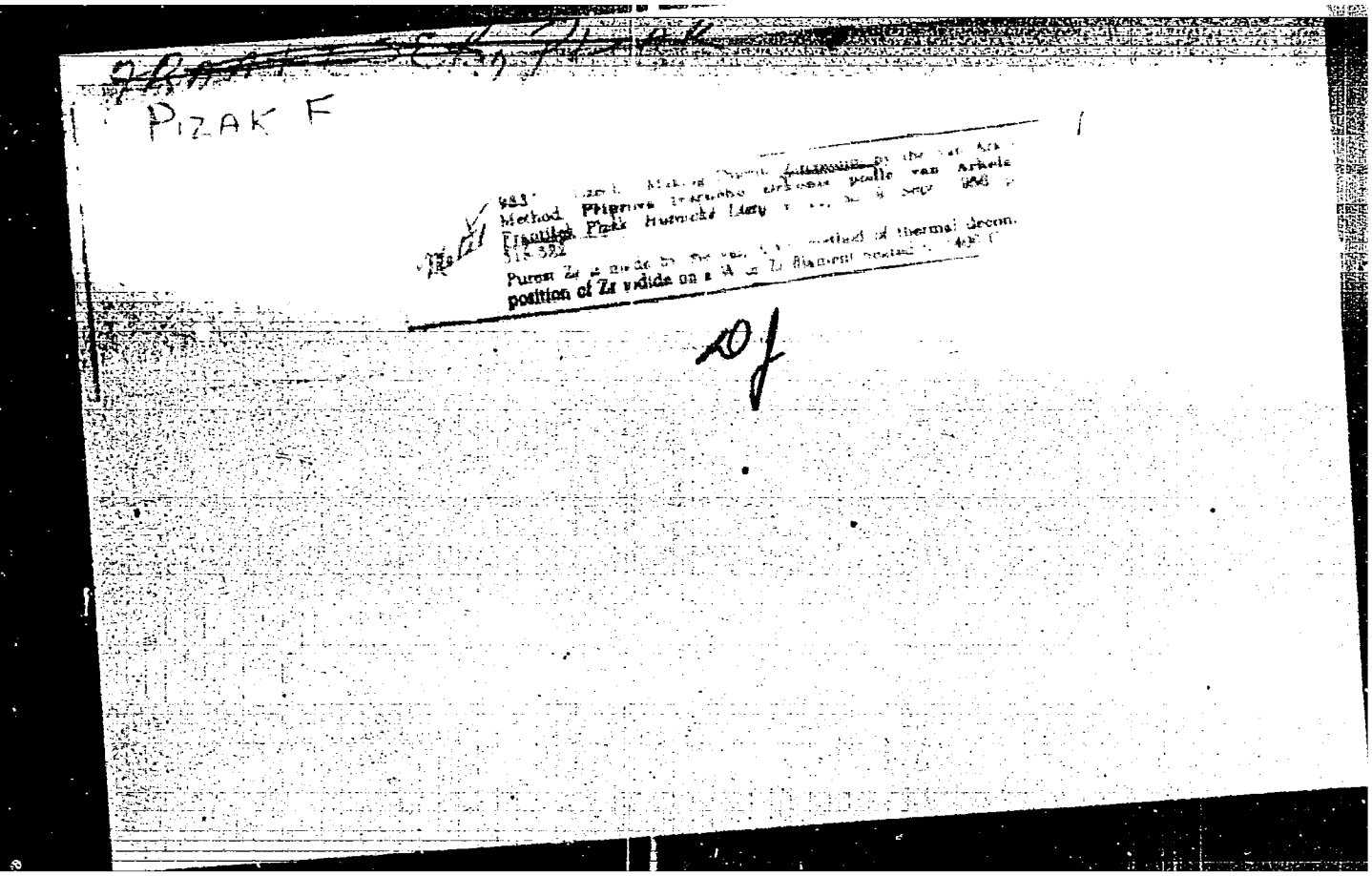
HUTNICKE LISTY
Nr 1, Vol 13, 1958

J. PIZAK - V. Kleblu Zirconium Preparing by Reduction of Zirconium Tetrachloride and by Electrolytic Way

Zirconium/Preparing
by Reduction of Zirconium Tetrachloride
and by Electrolytic Way

The authors give a description of the technological process of zirconium preparation by reducing zirconium tetrachloride with magnesium. The zirconium tetrachloride was obtained by chlorinating zirconium oxide. By this method a smaller amount of powdered zirconium was produced. This sample was also subjected to practical tests in one of the factories of the electronic industry where it has given full satisfaction in the manufacture of special electron valves.

A description follows of a way of preparing zirconium by electrolysis of molten potassium fluozirconate. In this fashion, a smaller amount of powdered zirconium was produced which was also subjected to tests for checking the quality and purity of the product. In the course of these tests it has been proved that the product is less pure than zirconium made by other methods; it contains slightly more silicium and iron and some mechanical impurities that had entered there partly from the material of the crucible and partly during the isolation of the product. Finally, the authors make a comparison of different ways of making zirconium from the technical and economic points of view, as applied the use of zirconium for different purposes.



PIZANOV, I.I.

Physicogeographical description of the Dniester River, her bottom-land waters and limans. Mat. po gidrobiol. i rybol. lim. severozap. Pricher. no.2:7-17 '53. (MIRA 12:8)
(Dniester River--Description)

SHTARKH, B.V., kandidat tekhnicheskikh nauk; PIZARENKO, A.P., doktor khimicheskikh nauk.

Electron microscope examination of materials used in the artificial leather industry. Leg.prom. 16 no.5:27-30 My '56. (MLRA 9:8)

(Leather, Artificial) (Electron microscopy)

KOROCHKIN, V.; PIZHENGOL'TS, M.

Labor productivity indices at machine-tractor stations. Sots. trud no.12:74-83 D '57. (MIRA 11:1)

(Machine-tractor stations)