"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POPELOV, B.S.

Jockings in automatic hydraulic transmissions of motor vehicles.
Avt. prom. 31 no.3.25-29 Mr '65. (MIRA 18:7)

1. Gor'kovskiy avtomobil'nyy zavod.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, D.N., inzh. (poselok Komsomol'skiy, Khar'kovskoy ob.); NIKULIN, V.D., inzh. (poselok Komsomol'skiy, Khar'kovskoy obl.)

Operation of high-pressure feed pumps. Energetik 13 no.5: 24-26 My '65. (MIRA 18:8)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, B.S.

Improved free-wheeling mechanism of the automatic transmission of a motor vehicle. Avt. prom. 30 no.3:24-27 Mr '64. (MIRA 17:6)

1. Gor'kovskiy avtomobil'nyy zavod.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

SOLOV'YEV, V.S.; POSPELOV, B.S.

Automatic transmission of the "Chaika" automobile. Avt. prom. no.2:7-10 F '61. (MIRA 14:3)

1. Gor'kovskiy avtozavod.
(Automobiles--Transmission devices, Automatic)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POZNYAK, G. M.

Poznyak, G. M., Shmakova, M. G., Shumikhina, K. G., Bozhkova, A. I., Gromova, K. B. Zheleznyak, M. B., Mazing, G. A., Mal'kova, A. G., Mashinskaya, T. I., Mitrofanova, E.A., Perlin, F. Kh. Worked under Zagrebin, D. V. and Kulikov, D. K. on book: YEARBOOK ON ASTRONOMY USSR FOR 1955 (Astronomicheskiy ezhegodik USSR na 1955 g.) by Akademiya Nauk SSSR. Institut Teoreticheskoy Astronomii.

SO: AID Library of Congress (Call No. AF558001)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, B.V., inzhener.

Placing concrete from movable bridges. Gidr.stroi. 23 no.2:14-18 '54. (MLRA 7:4)
(Concrete construction)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, B. V.

AID P - 2115

Subject : USSR/Engineering

Card 1/1 Pub. 35 - 4/20

Author : Pospelov, B. V.

Title : The construction and operation of a large cofferdam

Periodical: Gidro. stroi., no.3, 12-15, 1955

Abstract : A very detailed description accompanied by tables is given of the construction of a cofferdam with wood cutoffs on a large navigable river. The pumping of the pit and the capacity of the pumps are reported. Some recommendations on the dimensions of the cutoffs and the drainage system, and for the construction of the cofferdam (preferably in two stages) are made. Four diagrams.

Institution: None

Submitted : No date

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, B.V., kandidat tekhnicheskikh nauk

Construction and operation of large cofferdams. Gidr.stroi. 24 no.3:12-16 '55. (MLRA 8:6)
(Cofferdams)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

PROCESSES AND PROPERTIES INDEX

1ST AND 2ND ORDERS

5

4

"Stakhanov" Methods of Operating the No. 3 Blast-Furnace at Zaporozhstal Works. D. Pospelov. (Stal, 1939, No. 10–11, pp. 1–7). (In Russian). The output of the 1300-cu. m. No. 3 blast-furnace of the Zaporozhstal works has been gradually increased from an average of 1551 tons of pig iron per day during October, 1939, to 1580 tons per day during the first twenty days of November. The maximum daily output was 1975 tons. The author describes the working of a furnace crew using "Stakhanov" methods, and gives specimens from the log for the various operations between tappings. The methods adopted to control the working of the furnace are also discussed.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

9

ca

Regulation of blast-furnace operation by the content of carbon dioxide in furnace gases. D. A. Pospelov. *Teoriya Prakt. Met.* 11, No. 9, 11-15(1939).—The content of CO_2 in the furnace gas and its constancy must be regarded only as a criterion of the more or less uniform course of the blast-furnace process. The content of CO_2 in furnace gases can be detd. by the automatic gas analyzer "MONO." The blast and temp. and the amt. of ore added can be detd. from the heating of the slag and cast Fe and from the performance of the tuyères. The temp. of slag and cast Fe can be measured by an optical pyrometer. The temps. of slag and cast Fe must be measured every time they are drawn. Besides the blast pressure it is necessary to utilize the pressure curves of the dirty gas. These curves show to the best advantage all deviations from the proper course of the process. Chem. analyses of cast Fe alone are not sufficient for properly judging the blast-furnace process. W. R. Henn

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

5

4

The Output of Dust and the Distribution of the Gas Stream in the Throat of the Blast-Furnace. D. A. Pospelov. (Metallurg, 1939, No. 10-11, pp. 44-53). (In Russian). In some introductory remarks, reference is made to the unsatisfactory results accompanying the excessive moistening of the ore charged into the blast-furnace in an attempt to reduce the evolution of dust. The distribution of the gas stream in the throat of the No. 3 blast-furnace of the Zaporozhstal works was investigated in view of its obvious connection with dust evolution. This was done by taking measurements of the carbon dioxide present at points along the radius of the throat in the space just below the lower edge of the distributor cone. It was observed that with an increase in the carbon-dioxide content of the gas near the periphery, and a decrease near the centre, the dust evolution increases and the working of the furnace becomes less steady. In order to get undisturbed working of the furnace a steady gas stream, either peripheral or axial, must be obtained; a low dust evolution is, however, most frequently obtained with a steady peripheral gas stream. The level of the charge must also not be allowed to drop too low. The distribution of the gas stream may be controlled by varying the weight of the charges dropped into the furnace from the distributor. In the Zaporozhstal furnaces a decrease in the charge results in less ore reaching the centre, whilst an increase in the charge favours peripheral distribution of the blast. The way in which the above observations can be utilised in

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

Pospelov, D. A. PRODUCTION OF HIGH-ALUMINA SLAGS FOR THE ALUMINUM INDUSTRY IN BLAST FURNACES OF 950 CUBIC METERS CAPACITY. *Metallurg*, 15 [11-12] 23-24 (1940).—In the production of high-Al_2O_3 slags the operation of the blast furnace is quite normal; difficulties are encountered only on tapping the Fe. The lining suffers considerably, because high temperature is necessary for reduction of the silica. To operate at lower temperatures the furnaces must be charged with SiO_2-free bauxite, obtained by separate concentration and purification. The amount of Fe per ton of slag must be lowered to such a degree that the tapping can take place without disturbance. Small amounts of Fe and Ti oxides in the slag do not interfere with Al recovery; they lower the melting temperature and increase the fluidity. If SiO_2-free bauxite is used, less coke is needed, the capacity of the furnace increases, and the S content of the slags diminishes. For the melting of this type of slag, limestone with a maximum of 1% SiO_2 should be used.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

C4

9

Two years of operation of the "Saporoshstal No. 3" blast furnace. D. A. Pospelov. *Tsvetnye i Prakht. Met.* 12, No. 12, 3-6(1940); *Chem. Zentr.* 1941, II, 1787.—The influence of the nature of the ore and flux on the coke consumption is discussed, as is also the effect of various used addns. of scrap Fe. The occasionally poor operation of this furnace could be corrected by manipulation either of the feed or of the blast. A crit. evaluation is made of the quality of the coke and the temp. of the blast.

Harold J. Kantliner

COMPOUND ELEMENTS

OPEN

MATERIALS INDEX

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APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

SHIGIN, A., kand. tekhn. nauk; POSPELOV, D., starshiy prepodavatel'

Cybernetics in automotive transportation. Za rul. 21 no.3: 16-17 Mr '63. (MIRA 16:4)

1. Moskovskiy energeticheskiy institut.

(Transportation, Automotive) (Cybernetics)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, D.A.

Problems solved by logic machines. Trudy MEI no.41:33-44 '62. (MIRA 16:7)

(Electronic computers)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, D.A.

Structure of a computer with several arithmetical units. Trudy MEI no.41:57-60 '62. (MIRA 16:7)

(Electronic computers)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, D.A.

Some features of Boolean matrices. Trudy MEI no.41:95-96 '62.
(MIRA 16:7)

(Matrices) (Perceptrons)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, D.A.; PYATKIN, V.P.

Minimization of logic algebra functions using present-day analog computers. Trudy MEI no.53:117-132 '64.
(MIRA 17:6)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, D.A.

Implicative logic and its use in circuit synthesis. Trudy MEI no.53:31-42 '64. (MIRA 17:6)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPISIL, Evzen, inz.

Following the experiences of Polish road builders. Siln doprava 12 no.5:12-14 My '64.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

MALUSHINSKI, Ya.; POSPELOV, D.A.

Method for separating independent bits in a program system. Trudy MEI no.53:111-116 '64. (MIRA 17:6)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, D.A.

Some mathematical problems arising in the simultaneous operation of several computers. Trudy MEI no.53:97-110 '64. (MIRA 17:6)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, D.A.

Logical synthesis of data units of periodic binary codes.
Trudy MEI no.42:145-151 '62. (MIRA 16:7)

(Automata) (Sequences (Mathematics))

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, D.A.

Some problems in probabilistic logic. Trudy MEI no.42:153-159 '62. (MIRA 16:7)

(Relativity (Physics))
(Logic, Symbolic and mathematical)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, D.A.; FAL'K, V.N.

Realization of ternary functions by means of three-phase codes.
Izv. vys. ucheb. zav.; radiofiz. 5 no.4:791-798 '62. (MIRA 16:7)

1. Moskovskiy energeticheskiy institut.
(Electronic calculating machines)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, D.A.

Binary decimal codes with a single negative weight. Izv.vys.ucheb. zav.; prib. 5 no.6:71-76 '62. (MIRA 15:12)

1. Moskovskiy ordena Lenina energeticheskiy institut. Rekomendovana kafedroy vychislitel'noy tekhniki.
(Electronic digital computers)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, Dmitriy Aleksandrovich; SHIGIN, A.G., red.

[Solution of problems using numerical computers] Reshenie zadach na vychislitel'nykh [redacted] shinakh diskretnogo deistviia. Moskva, Mosk. energ. in-t. Pt.1. [Principles of programming] Osnovy programmirovaniia. 1961. 159 p. (MIRA 17:1)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, Dmitriy Aleksandrovich; SHIGIN, A.G., dots., red.

[Arithmetical and logical principles of digital computers] Arifmeticheskie i logicheskie osnovy vychislitel'nykh mashin diskretnogo deistviia. Moskva, Mosk. energeticheskii in-t. Pt.2.[Logic algebra functions, synthesis and analysis of networks with time independent operation] Funktsii algebry logiki, sintez i analiz skhem, rabota kotorykh ne zavisit ot vremeni. Red. A.A. Shigin. 1961. 107 p. Pt.3. [Time dependent and recurrent Boolean functions, analysis and synthesis of networks with time dependent operation] Vremennye i rekurrentnye bulevy funktsii, analiz i sintez skhem, rabota kotorykh zavisit ot vremeni. Red. A.G.Shigin. 1961. 79 p. (MIRA 16:4)
(Electronic computers)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, D. A.

"Minimization problems of normal forms of Boolean functions on all-purpose Computers"

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

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, D.A.

Binary-decimal codes with two negative balances and complement property. Izv.vys.ucheb.zav.; prib. 5 no.3:63-66 '62. (MIRA 15:8)

1. Moskovskiy ordena Lenina energeticheskiy institut. Rekomendovana kafedrami spetsial'nykh dursov vysshey matematiki i vychislitel'noy tekhniki.
(Electronic digital computers)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

S/146/62/005/006/003/006
D201/D308

9.7800

AUTHOR: Pospelov, D.A.

TITLE: Binary-decimal codes with one negative weight

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Priborostroyeniye, v. 5, no. 6, 1962, 71-76

TEXT: The author considers binary-decimal codes with one negative weight and complementary properties. A theorem is proved stating that there exist only seventeen groups of such codes and all their possible combinations are given. The results obtained solve, in full, in conjunction with those obtained by the author elsewhere (Priborostroyeniye, no. 1, 1962; no. 3, 1962), the problem of binary-decimal weighted codes with complementary properties suitable for computer applications.

ASSOCIATION: Moskovskiy ordena Lenina energeticheskiy institut (Moscow 'Order of Lenin' Power Engineering Institute)

SUBMITTED: December 1, 1961

Card 1/1

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, D.A.

Number of binary-decimal codes with positive weights which are convenient for computers. Izv.vys.ucheb.zav.; prib. 5 no.1:79-81 '62. (MIRA 15:2)

1. Moskovskiy energeticheskiy institut. Rekomendovana kafedroy vychislitel'noy tekhniki.
(Electronic digital computers)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

41407

S/141/62/005/004/007/009
E140/E435

AUTHOR: Pospelov, D.A.

TITLE: The realization of logical functions in a certain class of functional circuits

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Radiofizika, v.5, no.4, 1962, 784-790

TEXT: The basic circuits discussed by the author consist of 1) a ferrite-transistor element, where the transistor is employed as an output amplifier and buffer and 2) a transistor gate with the element acting as a saturated switch. The elements (1) can be connected to the elements (2) either by means of Oksifer transformers, or directly with the possible use of diodes. To supply a complete set of logical operations, it is necessary to use a two-wire logic (modelling of variable and its complement) and to realize explicitly a function and its cofunction (two cores per function). In this scheme the cores simply replace transistor flip-flops, the number of transistors in the combinatorial switching circuits being the same as with the use of flip-flops as the intermediate memories in synchronous logic. An example is given of a binary adder, using 4 cores, 14 transistors and 8 diodes.

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APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

The realization of logical ... S/141/62/005/004/007/009
E140/E435

There are 9 figures.

ASSOCIATION: Moskovskiy energeticheskiy institut
(Moscow Power Engineering Institute)

SUBMITTED: September 12, 1961

Card 2/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

L 41847-65

ACCESSION NR AM5004028 BOOK EXPLOITATION S/

Pospelov, Dmitriy Aleksandrovich

Logical methods of analysis and synthesis of circuits (Logicheskiye metody analiza i sinteza skhem), Moscow, Izd-vo "Energiya", 1964, 319 p. illus., biblio. 9,000 copies printed.

TOPIC TAGS: circuit analysis, circuit synthesis, mathematics, Boolean logic

PURPOSE AND COVERAGE: This book is devoted to methods used in designing logical systems of discrete action. In addition to the widely known methods, little known and new methods of analysis and synthesis are examined. The book contains examples. The book is intended for engineers designing and developing logical methods of discrete action and for students and graduate students in the appropriate specialties.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

L 41847-65

ACCESSION NR AM5004028

Part 1. Synthesis and analysis of circuits that are independent of time
Ch. I. Functions of the algebra of logic and their basic properties -- 13
Ch. II. Minimization of functions of the algebra of logic -- 47
Ch. III. Problems of analysis and synthesis of time-independent circuits -- 77
Ch. IV. Synthesis of circuits for separate classes of functional elements -- 129
Part 2. Synthesis and analysis of circuits that are time dependent
Ch. V. Time Boolean functions and the synthesis of multi-contact circuits -- 201
Ch. VI. Recurrent Boolean functions -- 216
Ch. VII. Evaluation of the complexity of functions and circuits -- 259
Part 3. Use of multi-value logic in circuit analysis and synthesis
Ch. VII. K-value logic and its use -- 268
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SUBMITTED: 20Aug64 SUB CODE: MA, EC, DP

NR REF SOV: 061 OTHER: 024

Card 2/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, D.A.

Use of three-valued logic in analysis and synthesis of circuits. Trudy MEI no.41:135-148 '62. (MIRA 16:7)

(Electric networks)
(Electronic computers)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

S/141/62/005/004/008/009
E140/E435

9.7200

AUTHORS: Pospelov, D.A., Fal'k, V.N.

TITLE: Realization of ternary logic using three-phase codes

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Radiofizika, v,5, no.4, 1962, 791-798

TEXT: The authors propose a complete system of logical operations for a ternary code in which the variables take the values -1, 0, +1. The logical operations analogous to complement, sum and product in binary logic are defined, together with two inate functions called characteristic functions. These latter are important in expanding functions of several variables about a single variable. The circuit elements discussed previously (Izv. vyssh. uch. zav. - Radiofizika, v.5, 1962, 784) are applied in a three-wire logic to a ternary adder. There are 7 figures and 2 tables.

ASSOCIATION: Moskovskiy energeticheskiy institut (Moscow Power Engineering Institute)

SUBMITTED: September 12, 1961

Card 1/1

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

S/146/62/005/003/008/014
D201/D308

AUTHOR: Pospelov, D.A.

TITLE: Binary-decimal codes with two negative weights and complementary properties

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye, v. 5, no. 3, 1962, 63-66

TEXT: In a short analysis of codes as used in digital computers the author shows that only 2 codes, 86(-4)(-1) and 84(-2)(-1) can have both negative weights and complementary properties. There are 2 tables.

ASSOCIATION: Moskovskiy ordena Lenina energeticheskiy institut (Moscow Order of Lenin Energetics Institute)

SUBMITTED: September 11, 1961

Card 1/1

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

84475

S/103/60/021/010/006/010
B012/B063

9.7000

AUTHOR: Pospelov, D. A. (Moscow)

TITLE: Synthesis of Circuits the Operation of Which Is Expressed by Boolean Time Functions

PERIODICAL: Avtomatika i telemekhanika, 1960, Vol. 21, No. 10, pp. 1410-1413

TEXT: The present paper gives several methods of synthesizing circuits the operation of which is fully expressed by a certain time-dependent relation between their input and output parameters. The methods described in Refs. 1, 2, and 5 were applied when the circuit in question could be reduced to an equivalent trigger circuit. Here, the author studies problems of analyzing and synthesizing a special class of circuits which cannot be reduced to trigger circuits. All possible setups $(x_1, x_2, \ldots, x_n, t)$ - formula (1) - are investigated. Here, x_i $(i = 1,2,\ldots,n)$ can only be equal to 0 or 1, whereas the quantity t can be equal to any integer from 0 to s-1 inclusive. The total number of the various setups (1) is equal to $s \cdot 2^n$ for a given value of n. This function, which is

Card 1/2

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84475

Synthesis of Circuits the Operation of Which Is Expressed by Boolean Time Functions

S/103/60/021/010/008/010
B012/B063

determined by the setups and may be equal to 0 or 1, is called a Boolean time function. The methods of examining this class of functions is illustrated by six examples. Finally, the author investigates the synthesis of a circuit developed from a given Boolean time function. The pertinent functional scheme is represented in Fig. 2. The practical realization of this scheme by means of electron tubes is illustrated in Fig. 3. There are 3 figures, 3 tables, and 6 Soviet references.

SUBMITTED: May 5, 1960

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

Pospelov, D. P.

POSPELOV, D.P., kand.tekhn.nauk

Distribution of temperatures in heads and cylinders of low-power engines with air cooling. Avt.i trakt.prom. no.9:24-27 S '57. (MIRA 10:11)

1. Nauchno-issledovatel'skiy avtotraktornyy institut.
(Gas and oil engines--Cooling)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, D. R. Cand Tech Sci

Dissertation: "Investigatio of the Heat Loss of Automobile Radiator."

23/6/50

Moscow Motor Road Inst imeni V. M. Molotov

SO Vecheryaya Moskva
Sum 71

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSTELOV, D. B.

"Investigation of the Heat Losss of an Automotile Radiator." Thesis for degree of Can. Technical Sci. Sub 23 Jun 50, Moscow Highway Inst imeni V. M. Molotov.

[redacted] Summary 71, 4 Sep 52, Dissertations Presented for Degrees in Science and Engineering in Moscow in 1950. From Vechernyaya Moskva, Jan-Dec 1950.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, D. R.

Babichev, V. Z.

Automobile radiators. V. Z. Babichev. Reviewed by D. R. Pospelov. Avt. trakt. prom. No. 131, 1953.

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

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, D. R.

USSR/Engineering - Automobile fans

Card 1/1 : Pub. 12 - 4/16

Authors : Pospelov, D. R.

Title : A fan with reversible blades

Periodical : Avt. trakt. prom. 7, 17-20, July 1954

Abstract : A description is given of a fan with reversible blades used for the KD-35 tractor engines. The fan consists of six blades, each equipped with two pivots. Drawings; graphs; table.

Institution : .....

Submitted : .....

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, D.R., kandidat tekhnicheskikh nauk.

Air-cooled engines. Avt. i trakt. prom. no.2:25-28 F '56.
(MLRA 9:6)
1.Nauchno-issledovatel'skiy avtotraktornyy institut.
(Automobiles--Engines)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, D.R.

POSPELOV, D.R., kand.tekhn.nauk

Foreign tractor engines having air cooling. Avt.i trakt.prom. no.10:33-38 O '57. (MIRA 10:12)

(Tractors--Engines--Cooling)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, D.R., kand. tekhn. nauk

Methods for selecting a centrifugal ventilator. Trakt. i sel'khozmash. no.7:16-20 Jl '64. (MIRA 18:7)

1. Gosudarstvennyy soyuznyy nauchno-issledovatel'skiy traktornyy institut.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, D.R., kand. tekhn. nauk

Standard series of starting motors for tractor diesel engines. Trakt. i sel'khozmash. no.8:1-4 Ag '64.

(MIRA 17:11)

1. Gosudarstvennyy souyznyy nauchno-issledovatel'skiy traktornyy institut.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, D.R., kand.tekhn.nauk

Problems of starting tractor engines. Trakt. i sel'khozmash. 33 no.12:1-4 D '63. (MIRA 17:2)

1. Gosudarstvennyy soyuznyy nauchno-issledovatel'skiy traktornyy institut.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, Dmitriy Razumnikovich; KALISH, G.G., doktor tekhn. nauk, retsenzent; ~~KALABIN, V.P., doktor tekhn.~~ nauk, red.; YEGORKINA, L.I., red. izd-va; MODEL', B.I., tekhn. red.

[Air-cooled interval combustion engines] Dvigateli vnutrennego sgoraniia s vozdushnym okhlazhdeniem. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1961. 555 p. (MIRA 14:8)
(Gas and oil engines—Cooling)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, D.R., kand. tekhn. nauk; SMIRNOV, I.I., inzh.

Calculation method for axial fans of air-cooled engines. Trakt. i sel'khozmash. 30 no.8:8-12 Ag '60. (MIRA 13:8)

1. Nauchno-issledovatel'skiy avtotraktornyy institut.
(Gas and oil engines--Cooling)

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

5

4

Some Data on the Working of the Zaporozhstal Blast-Furnaces.

D. Z. Pospelov. (Metallurg, 1938, No. 6, pp. 70–77). (In Russian).

The two furnaces considered have been in operation for four years, and their useful life is estimated at five, or even six, years. Some of the early difficulties encountered are mentioned, and the author then deals with the factors which he considers have contributed to the good condition of the furnaces. These include the cooling of the shaft and the comparatively great distance which the tuyeres protrude into the interior, thus keeping the centre of combustion away from the lining. On the operating side, contributory factors include the careful grading of the ore and the control of the composition of the furnace charge, which depends, among other factors, on the rate of flue-dust removal, the maintenance of a constant blast, which should not be interrupted during tapping, and the more frequent tapping of the iron (seven times in 24 hr.) and slag.

COMMON ELEMENTS

COMMON VARIABLES INDEX

MATERIALS INDEX

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

GILENKO, A.; LASOVSKIY, K., red.; MEYSAK, N., red.; PADERIN, G., red.; POSPELOV, G., red.; SEL'KINA, D.G., red.; GOSTISHCHEVA, Ye.M., tekhn. red.

[The "505" sails to Kuyumba] 505 idet v Kuiumbu. Novosibirsk, Novosibirskoe knizhnoe izd-vo, 1962. 86 p. (MIRA 16:7)
(Yenisey Valley--Inland navigation)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, G.

Flax

Advanced cultivation technique for all flax plantings, Kolkh. proizv. 13, No. 2, 1953.

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

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

TAURIN, Frants Nikolayevich; LISOVSKIY, K., red.; MEYSAK, N., red.; PADERIN, G., red.; POSPELOV, G., red.; SEL'KINA, D.G., red.

[Bright oil] Svetlaia neft'. Novosibirsk, Novosibirkoe knizhnoe izd-vo, 1963. 39 p. (MIRA 17:4)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, G.A.

Determining the reaction of a plane fluid flow on an infinite cylinder. Trudy KAI no.62:139-150 '61. (MIRA 17:2)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

SHISHEYEV, M.D.; POSPELOV, G.A.

Investigating vibration resistance of gas lubricated bearings. (MIRA 16:10)
Trudy KAI no.66:97-109 '61.

(Gas lubricated bearings—Vibration)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, G.A.

Stability of the equilibrium position of the journal in gas-lubricated bearings. Trudy KAI 72:40-63 '62. (MIRA 16:8)
(Gas lubricated bearings)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

L 8466-66 EWT(1)/EWT(m)/FCS(f)/T-2/ETC(m) JD/WW/DJ

ACC NR: AT5026397 SOURCE CODE: UR/2529/63/000/081/0059/0068

AUTHOR: Pospelov, G. A. (Candidate of technical sciences)

ORG: Kazan Aviation Institute (Kazanskiy aviatsionnyy institut)

TITLE: Journal stability in an aerodynamic bearing with peripheral air supply

SOURCE: Kazan. Aviatsionnyy institut. Trudy, no. 81, 1963. Prikladnaya mekhanika (Applied mechanics), 59-68

TOPIC TAGS: aerodynamic characteristic, bearing stability, journal bearing, gas bearing, differential equation

ABSTRACT: The journal stability for an aerodynamic bearing with peripheral air supply (see Fig. 1) is theoretically investigated. The static load capacity for such a bearing is derived as

$$P_l = \sum_{i=1}^{i=n/2} \Delta P_i \cos \alpha_i$$

(where

$$\Delta P_i = \frac{32\pi Da}{3Kn}\left[\frac{1+\bar{p}_i K}{(1+2\bar{p}_i K)^{1/2}} - 1\right] p_0 a \cos \alpha_i$$

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and

$$K = \left(\frac{D}{24\mu a n a d} \right)^2 \frac{\gamma_1 \delta^4 p_0}{g}$$

with the nomenclature shown in Fig. 2.

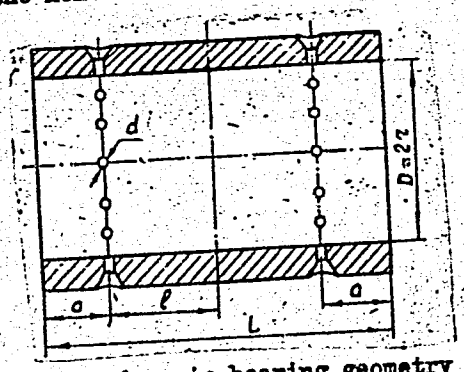

Fig. 1. Aerodynamic bearing geometry

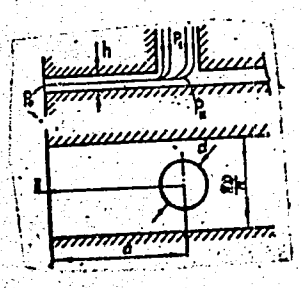

Fig. 2. Clearance geometry

The differential equations for the perturbed motion of the journal are derived from the geometry in Fig. 3

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ACC NR: AT5026397

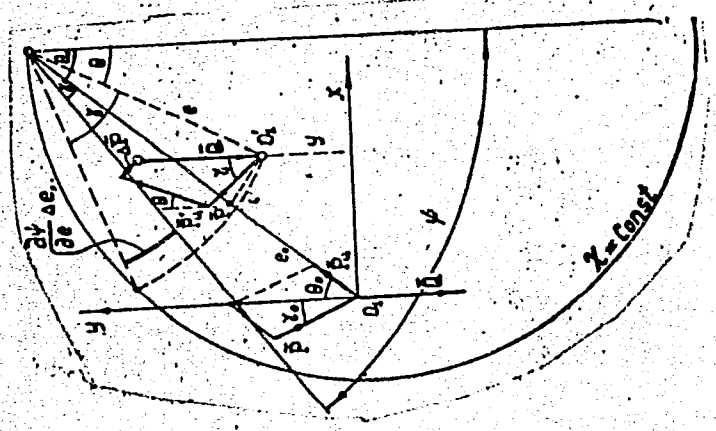

Fig. 3. Perturbed motion geometry.

as

$$\ddot{x}_1 + C_1 x_1 - D_1 y_1 = 0,$$
$$\ddot{y}_1 + C_2 y_1 + D_2 x_1 = 0$$

(with differentials with respect to dimensionless time $\tau = t\sqrt{\frac{r^3 p_0}{m\delta}}$)

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ACC NR: AT5026397

where coefficients C_1, C_2, D_1 and D_2 represent stiffness coefficients of the lubricating layer given by four expressions. From the characteristic equation of the perturbed motion equations, the journal stability conditions are derived as

$$\nu^2 = \frac{C_1 + C_2}{2} \pm \sqrt{\left(\frac{C_1 - C_2}{2}\right)^2 - D_1 D_2} > 0.$$

From this it is found that as $p_1 \to \infty$ the bearing is always stable and since in the general case

$$C_1 + C_2 = A\left[-\frac{\partial K_n}{\partial \varepsilon}\cos(\psi - 2\gamma) - K_n \frac{\partial \psi}{\partial \varepsilon}\sin\psi\right] + 2S,$$

$$C_1 - C_2 = A\left[-\frac{\partial K_n}{\partial \varepsilon}\cos\psi - K_n \frac{\partial \psi}{\partial \varepsilon}\sin(\psi - 2\gamma)\right],$$

the peripheral air supply helps the bearing stability. Orig. art. has: 34 formulas and 3 figures.

SUB CODE: 13/ SUBM DATE: 24Jun63/ ORIG REF: 005

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APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

L 8467-66 EWT(1)/EWT(m)/FCS(f)/T-2/ETC(m) JD/WW/DJ

ACC NR: AT5026398 SOURCE CODE: UR/2529/63/000/081/0069/0080

AUTHOR: Pospelov, G. A. (Candidate of technical sciences)

ORG: Kazan Aviation Institute (Kazanskiy aviatsionnyy institut)

TITLE: Effects of radial clearance on the journal stability in aerodynamic bearings

SOURCE: Kazan. Aviatsionnyy institut. Trudy, no. 81, 1963. Prikladnaya mekhanika (Applied mechanics), 69-80

TOPIC TAGS: aerodynamic characteristic, bearing stability, journal bearing, gas bearing, ANTIFRICTION BEARING

ABSTRACT: The stability of aerodynamic journal bearings according to the Stodola method (G. A. Pospelov. Ustoychivost' ravnovesnogo polozheniya shipa v podshipnikakh s gazovoy smazkoy. Trudy KAI, vyp. 72, 1962) neglects the effects of the velocity of the center of the journal. It can be assumed that the perturbations of Δe and $\Delta\psi$ and their derivatives with time are small w.r.t. the stationary values of the coordinates and velocities. The reaction gradients w.r.t. velocity ($\partial P/\partial \dot{e}$, $\partial P/\partial \dot{\psi}$ etc) for this case are theoretically investigated. For the

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geometry shown in Fig. 1

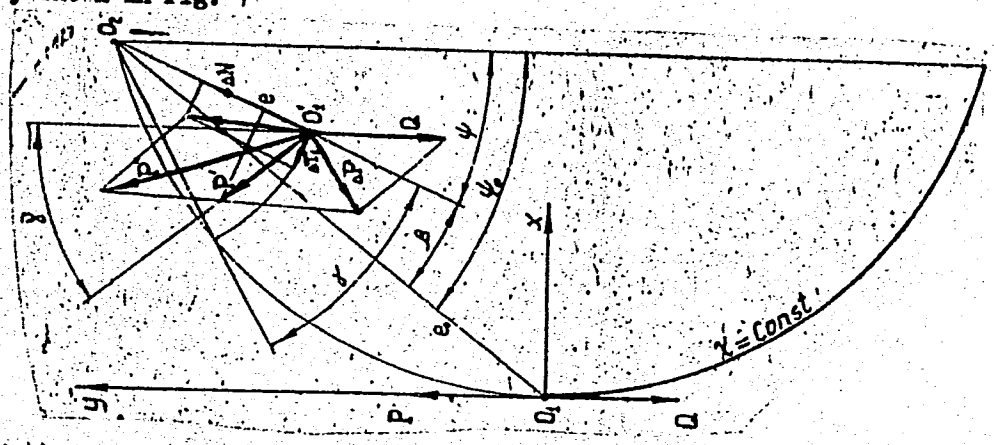

Fig. 1. Geometry of perturbed motion.

the perturbed equations are derived as

$$m\frac{d\vec{s}}{dt} = \Delta\vec{P} + \Delta\vec{N} + \Delta\vec{T},$$

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$$\begin{cases} \Delta N = \dfrac{\partial N}{\partial \dot{e}} \Delta \dot{e} + \dfrac{\partial N}{\partial \dot{\psi}} \Delta \dot{\psi}, \\ \Delta T = \dfrac{\partial T}{\partial \dot{e}} \Delta \dot{e} + \dfrac{\partial T}{\partial \dot{\psi}} \Delta \dot{\psi}. \end{cases}$$

After deriving

$$\begin{cases} \dfrac{\partial N}{\partial \dot{\psi}} = -\dfrac{12\mu r^3}{\delta^3 p_1} \cdot \dfrac{\partial N}{\partial \chi}, \\ \dfrac{\partial T}{\partial \dot{\psi}} = -\dfrac{12\mu r^3}{\delta^3 p_1} \cdot \dfrac{\partial T}{\partial \chi} \end{cases}$$

and

$$\begin{cases} \dfrac{\partial N}{\partial \dot{e}} = \dfrac{\partial P}{\partial \dot{e}} = \dfrac{12\pi r^3 l \mu}{\delta^3} \cdot \dfrac{1 - \sqrt{1 - \varepsilon^2}}{\varepsilon^2 (1 - \varepsilon^2)}, \\ \dfrac{\partial T}{\partial \dot{e}} = 0, \end{cases}$$

and substituting, the perturbed equations in dimensionless form become

$$\begin{cases} \ddot{x}_1 + C_1 x_1 + D_1 y_1 + k E_1 \dot{x}_1 + k F_1 \dot{y}_1 = 0, \\ \ddot{y}_1 + D_2 x_1 + C_2 y_1 + k E_2 \dot{x}_1 + k F_2 \dot{y}_1 = 0, \end{cases}$$

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(where $x_1 = \frac{x}{\delta}$, $y_1 = \frac{y}{\delta}$, $\tau = t\sqrt{\frac{rlp_1}{m\delta}}$, $k = \frac{12\pi r^2 \mu}{\delta^3}\sqrt{\frac{rl}{m\delta p_1}}$)

and the coefficients C, D, E, and F are given by lengthy equations. The characteristic equation becomes

$$\nu^4 + \nu^3(E_1 + F_2)k + \nu^2[C_1 + C_2 + k^2(E_1F_2 - E_2F_1)] + \\ + \nu[k(F_2C_1 + E_1C_2) - k(F_1D_2 + E_2D_1)] + (C_1C_2 - D_1D_2) = 0,$$

which for k = 0 reduces to that obtained by the A. Stodola method. From the characteristic equation, the stability criteria are derived as

$$a_1 = E_1 + F_1 > 0,$$
$$a_2 = C_1 + C_2 + k^2(E_1F_2 - E_2F_1) > 0,$$
$$a_3 = F_2C_1 + E_1C_2 - F_1D_1 - E_2D_1 > 0,$$
$$a_4 = C_1C_2 - D_1D_2 > 0,$$
$$a_3(a_1a_2 - a_3) - a_1^2a_4 > 0.$$

The two limiting conditions $\chi \to \infty$ and $\chi \to 0$ are considered, showing that for the former case the bearing is always stable (independent of k) while for the latter

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L 8467-66

ACC NR: AT5026398

case a decrease in radial clearance results in improved stability for equal values of χ. Orig. art. has: 35 formulas, 6 figures, and 1 table.

SUB CODE: 13/ SUBM DATE: 24Jun63/ ORIG REF: 004

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, G.A.

Investigating the stability of the equilibrium position of the rigid rotor in gas-lubricated bearings. Tren. i izn. v mash. no.18:34-67 '64 (MIRA 18:1)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

ACCESSION NR: AT4024400 S/2529/61/000/066/0097/0109

AUTHOR: Shisheyev, M. D.; Pospelov, G. A.

TITLE: Investigation of the vibrational stability of gas lubricated bearings

SOURCE: Kazan. Aviatsionny*y institut. Trudy*, no. 66, 1961. Aviatsionny*ye dvigateli (Aircraft engines), 97-109

TOPIC TAGS: bearing, gas lubricated bearing, gas lubrication, bearing stability, bearing vibration, vibration stability, aerodynamic bearing, bearing failure, electro-spindle

ABSTRACT: At the present time, gas lubricated bearings are used in various branches of machine-building, particularly in electro-spindles. However, the very first trials of aerodynamic bearings showed that it is not always possible to obtain vibrationless operation. At some speeds of rotation, strong vibrations occur with a frequency close to the half-value of the basic rotation; this phenomenon has been named the half-speed vortex. After development of a half-speed vortex, the aerodynamic lift of the lubricating layer is unable to contain the off-center movement of the journal, and the journal slides along the bearing wall. Such a movement is accompanied by dry friction and usually leads to bearing failure. The only known method to prevent this condition is to inject

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additional air under pressure into the lubricating gap through the bearing shell, using one of two systems: the "circular" system, in which air is supplied through two rows of radial capillary holes located near the end faces of the bearing bushing; and the "differential" system, in which air is blown through a central hole into an axial groove and then into two circumferential grooves near the ends of the bushing. However, wide industrial application of gas lubricated bearings has been prevented by the lack of engineering methods suitable for the stabilization of aerodynamic supports. In order to contribute to the creation of such methods, the present authors have carried out theoretical and experimental investigations on the conditions leading to vibrationless operation of aerodynamic bearings. Differential equations of motion were established according to the d'Alembert principle and were brought to a dimensionless form. The stability of the position of the journal center in gas lubricated bearings is determined by two criteria: the relative eccentricity $\xi = \frac{e}{\delta}$ and the Sheynberg number $\varkappa = \frac{6\mu vr}{\delta^2 p}$, where μ = coefficient of dynamic viscosity, p = gas pressure, e = absolute eccentricity, r = journal radius, δ = R-r = radial clearance, R = radius of the bearing, and v = the sliding velocity of the journal. The value of the disturbing force has been assumed to be proportional to the displacement of the journal center from its equilibrium position. Depending on the entering coefficients, the solution of the differential equations can be harmonic or hyperbolic. In the last case, the trajectory of the journal center becomes a

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spreading spiral, i.e. the operation becomes unstable. Figure 1 of the Enclosure shows the results of theoretical calculations of aerodynamic bearing stability. One of the ways to prevent unstable operation at values of $K < 3.0$ is to operate the bearing at higher χ values. However, during start, the rotor has to pass through an unstable region. To prevent failure in this region, it has been recommended that the bearing be additionally loaded (use $K > 3.0$) during start and at run-out. The theoretical results obtained are valid only for the case of lubricant feeding from the end faces, and only for laminar flow conditions. For other cases, these results may serve as first approximations. The theoretical findings have been confirmed by experiments conducted at the laboratory of ENIMS on a test stand described by the authors, using an electro-spindle on aerodynamic supports (model A-48-19). The location of the journal center was measured by two capacitor-type transducers included in the circuit of the high-frequency generators of a two-channel frequency modulator. The half-speed vortex and the stabilizing influence of both additional air injection and additional bearing loading at rotor speeds of 12, 24, and 48 thousand revolutions per minute were investigated. Orig. art. has: 11 figures and 2 formulas.

ASSOCIATION: Kazanskiy aviatsionny*y institut (Kazan Institute of Aviation)

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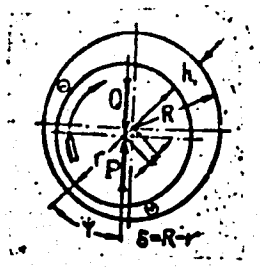

Fig. 1 - Sector of the Dynamic Equilibrium of Gas Lubricated Bearings.
Region above dotted line - unstable;
below dotted line - stable.

ε = relative eccentricity;
$\varkappa$ = Sheynberg constant;
$K = \frac{Q}{rlp}$ = relative specific loading,

where Q = bearing load,
l = length of bearing,
r = journal radius, and
p = gas pressure

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I054/I254

11.9000

AUTHOR: Pospelov, G.A.

TITLE: The determination of fluid flow reaction in an infinitely long cylinder

PERIODICAL: Referativnyy zhurnal, Mekhanika. Svodnyy tom, no. 8S, 1962, 55, abstract 8B354. (Tr. Kazansk. aviats. in-ta, no. 62, 1961, 139-150)

TEXT: The first part of the work deals with the determination of the resulting forces of the hydrodynamic action of a symmetric flow of an ideal fluid in an infinitely long cylinder. It was assumed that the pressure distribution on the cylinder is represented by a uniformly convergent trigonometric series

$$p(\alpha) \sim \sum_{n=0}^{\infty} (a_n \cos n\alpha + b_n \sin n\alpha); \qquad (1)$$

where: α is the angle between the radius-vector of a point on the cylinder and the horizontal diameter; a_n and b_n are Fourier coefficients, determined by Euler's formula (in the case of an experimental investigation, obtained by numerical integration of the measured pressures). The investigation led to the conclusion, that the value of the resulting pressure force in the cylinder is

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given by the first harmonic of the series only. In the second part of the work, the flow between two non-coaxial cylinders was considered. Ideal fluids were first examined and a relationship found for the moment of pressure forces with reference to the center of the outer cylinder. Viscous fluids were then investigated and here the normal components were obtained from series (1), and from the tangential components by Newton's Law. The absolute value of the vector of the principal friction force is determined by the first two harmonics of the series (1). In the expression for the moments of the friction force only b_1 appears from the coefficients of the series (1). These results have been applied to the calculation of bearings, assuming that the clearance between the bearing shell and the journal is completely filled with a viscous fluid. Non-compressible fluids were initially considered and compressible fluids were investigated subsequently.

[Abstracter's note: Complete translation.]

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POSPELOV, G.A.

Using the harmonic method for calculating gas-lubricated bearings with finite length. Trudy KAI 72:64-75 '62. (MIRA 16:8)
(Gas lubricated bearings)

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L 20688-65 EWT(1)/EWT(m)/EPF(c)/EPR/T Pr-4/Ps-4 JD/DJ

ACCESSION NR: AR4047541 S/0277/64/000/008/0041/0041

SOURCE: Ref. zh. Mashinostr. mat., konstr. i raschet detal. mas. Otd. vy*p., Abs. 8.48.283

AUTHOR: Pospelov, G.A.

TITLE: Journal stability in an aerodynamic bearing with circular blow-through

CITED SOURCE: Tr. Kazansk. aviats. in-ta, vy*p. 81, 1963, 59-68

TOPIC TAGS: aerodynamic bearing, journal stability, circular blowthrough, throttle bearing, booster pressure

TRANSLATION: The author considers the stability of the journal in a double-row, aerodynamic, throttle bearing with allowance for the dynamic component of the bearing capacity. The static component is determined on the end sections of the bearing. The pressure distribution from the feeder to the end is assumed to be parabolic. From the flow rate equality through the feeder and slot the distribution of pressures in the slot is found as a function of the free play and the dimensions of the feeder and slot. The dynamic component is determined on the section between the feeder series (with the aerodynamic component of the reaction on the bearing edge sections disregarded). After substitution

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of the bearing capacity components in the motion equations, the solutions are studied for stability. It is established that as booster pressure p_1 tends toward infinity, the position of the journal in a gas-static bearing with circular blow-through is always stable. A. Bragin

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ASD(p)-3/ESD(gs) JD/DJ
ACCESSION NR: AR4047540

S/0277/64/000/008/0040/0041

SOURCE: Ref. zh. Mashinostr. mat., konstr. i raschet detal. mash. Otd. vy*p., Abs. 8.48.282

AUTHOR: Pospelov, G.A.

B

TITLE: The effect of radial free play on journal stability in aerodynamic bearings

17

CITED SOURCE: Tr. Kazansk. aviats. in-ta, vy*p. 81, 1963, 69-80

TOPIC TAGS: aerodynamic bearing, journal stability, radial free play, oil film, gas lubricant, damping

TRANSLATION: In investigations of stability, the assumption that the reaction of the oil film is independent of the speed of the center of the journal is frequently employed. The author solved the problem of determining the forces in a gas film, which arise in the case of disturbed journal movement. The circumferential components of these forces are determined on the basis of the expression for the determining factor of the gas lubricant χ. The radial components are computed by an approximate solution of the differential equation describing the forward motion of the journal. The Trefts method

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is used in the solution. After substitution of the forces in the motion equation, a characteristic equation is written, which is studied for stability by the Raus-Gurvits method. An instability zone boundary diagram is presented in "dimensionless eccentricity load angle" coordinates. The damping properties of the gaseous lubricant are characterized by the following parameter

$$k = \frac{12\pi \cdot l^2 \cdot \mu}{\delta^3} \sqrt{\frac{r \cdot l}{m \delta p_1}},$$

where r is the radius of the shaft; μ is the absolute viscosity; δ is the radial free play; l is the length of the bearing; m is the mass of the journal; and p_1 is the pressure of the surrounding medium. A. Bragin

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, G.I.

Structural geological features in the distribution of iron ore districts in the Altai-Sayan area. Izv.vost.fil. AN SSSR no.3:12-26 '57. (MIRA 10:9)

1. Zapadno-Sibirskiy filial Akademii nauk SSSR.
(Ural Mountain region--Iron ores)
(Sayan Mountain region--Iron ores)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, G.I.; YAKUNANSKAYA, F.I.

Deformation of rocks caused by the growth of crystals in them during volumes diffusion of reagents (experimental data). Geol. i geofiz. no.9:38-48 '65. (MIRA 18:8)

1. Vsesoyuznyy geologicheskiy i geofizicheskiy Sibirskogo otdeleniya AN SSSR, Novosibirsk.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, G. L.

"A Structural Classification of Eluvium," Dok AN AS USSR, 48, No 2, 1945.
West Siberian Affil., AS, Novosibirsk.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7"

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PA 61/49175

POSPELOV, G. L.

USSR/Mining
Iron Ore
Ore Deposits

Aug 48

"Special Features of the Tectonics of the Kondom Group of Deposits," G. L. Pospelov, S. S. Lapin, 5 pp

"Gorn Zhur" No 8

Discusses structural studies of the Tashtagol and Sheregeshev deposits. Investigated causes of mine shaft deformation in the Kondom Group of iron ore deposits. Stresses significance of flexure-fault structure in analyzing these areas. Shows several sketches of deposits investigated.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, G.L.

The role of carbonates in formation of some skarn-iron ore deposits of Western Siberia. G. L. Pospelov. *Izvest. Akad. Nauk S.S.S.R., Ser. Geol.* 1954, No. 2, 104–10.—A discussion is given of the role of limestones and carbonate-contg. silicate rock in formation of skarn-iron ore deposits of Western Siberia. In the earlier literature such deposits have attained the reputation as deposits not connected with limestones. Also discussed is the problem concerning the role of local carbonates in formation of skarn deposits lying within the eruptive body. Gladys S. Macy

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, G.L., kandidat geologo-mineralogicheskikh nauk (Novosibirsk)

Land of great possibilities. Nauka i zhizn' 23 no.11:16-19 N '56. (MLRA 9:11)

(Siberia--Economic geography)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001342610016-7

POSPELOV, G.L.

Types of mechanical geological stresses and the geotectonic lattice. Izv. vost. fil. AN SSSR no.1:14-26 '57. (MIRA 11:4)

1. Zapadno-Sibirskiy filial AN SSSR.
(Geology, Structural) (Strains and stresses)

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Rasp 8(0-V), G.L.

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Akademiya nauk SSSR. Mezhdunvedomstvennaya postoyannaya komissiya po zheleznu

Zheleznorudnyye mestorozhdeniya Altaye-Sayanskoy gornoy oblasti, tom. 1, kniga. 1: Geologiya (Iron Ore Deposits of the Altay-Sayan Mountain Region, Vol 1, Book 1: Geology) Moscow, 1958. 350 p. (Series: Zheleznorudnyye mestorozhdeniya SSSR) Errata slip inserted. 2,500 copies printed.

Additional Sponsoring Agencies: Akademiya nauk SSSR. Sibirskoye otdeleniye, USSR. Gosudarstvennaya planovaya komissiya. Glavnoye upravleniye nauchno-issledovatel'skikh i proyektnykh organizatsiy, Institut Giprorudy, USSR. Ministerstvo geologii i okhrany nedr, USSR. Zapadno-Sibirskoye geologicheskoye upravleniye, USSR. Krasnoyarskoye geologicheskoye upravleniye, Sibirskiy geofizicheskiy trest, Vsesoyuznyy nauchno-issledovatel'skiy geologicheskiy institut.

Eds. of the vol.: P. Ye. Sledzyuk, and G.A. Sokolov; Resp. Ed. of Series: I.P. Bardin, Academician; Scientific Eds.: I.P. Bardin, Academician, T.P. Gorbachev, A.L. Bodin, N.A. Yerofeyev, A.S. Kalugin, N.N. Nekrasov, G.L. Pospelov, M.L. Shubnikov, P. Ye. Sledzyuk, S.S. Smirnov-Verin (Deceased) G.A. Sokolov, S.S. Strunilin, Academician, V.B. Khlebnikov, N.A. Chinakal, and I.S. Shapiro; Ed. of Publishing House: I.G. Khidasheva; Tech. Ed.: I.F. Kha'min.

PURPOSE: This book is intended for structural, exploration and mining geologists, for geophysicists and mineralogists, and industrial planners.

COVERAGE: This work purports to be the first attempt to review and summarize all the material that has been published on the iron-ore deposits of the Altay-Sayanskaya oblast' during the last 20 years. This area, the work reports is fast becoming one of the most important iron-ore bases in the Soviet Union. The book discusses the economic aspects of the geography and geology of the individual deposits, presents a qualitative and quantitative (as of January 1, 1957) analysis of ore reserves, and evaluates the prospects and possibilities of further development of the Altay-Sayanskaya iron-ore base. The genetic characteristics of iron-ore mineralization of the area are described. Extensive information on the geology of individual deposits, complexes, and regions is provided, and a general genetic description of ore mineralization in the Altay Sayanskaya region is given. There is a historical account of the exploration and development of the region, and of the development of concepts on the genesis of mineralization in the area. The following scientists participated in the preparation and writing of this volume: G.L. Pospelov, S.S. Lapin, N.Kh. Belous. V.M. Klyarovskiy, O.G. Kibe, and V.A. Vakhrushev of the West Siberian Branch of the AN SSSR, I.S. Shapiro of the Permanent Interdepartmental Committee on Iron, A.S. Kalugin, A.S. Makkin, N.A. Gardets, Yu. A. Speyer, M.I. Selivestrova, V.S. Burkovich, G.P. Rykov, N.I. Nikopov, and K.G. Sakovich of the West Siberian Geological Administration V.I. Medvedkov, A.S. Aladyshkin and F. Ya. Pan of the Krasnoyarsk Geological Administration, M.G. Rusanov, E.A. Yakhutis, Yu. V. Rozhdestvenskiy, G. Ye. Savitskiy, and A.D. Prodanchuk of the West Siberian Geological Survey Chernozavodsk Trust, P.A. [illegible], [illegible] Lepedev, T.Ye. [illegible], A.I. Nadelnikov and R. Pipar of the Siberian Geophysical Trust, A.L. Bodin of the VSEGEI, A.S. Mitropol'skiy of the Mining Expedition, V.A. Lukin of the Mining Administration of the Kuznetsk Metallurgical Combine, S.S. Zilain of the Tomsk Polytechnic Institute, I.V. Derbikov of the Sibnerfegeofizika Trust, and V.G. Korel' of the Siberian Metallurgical Institute. There are 103 diagrams including insert maps and 10 tables. There are 271 references, all Soviet.

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POSPELOV, G.L., starshiy nauchnyy sotrudnik; LAPIN, S.S.; BELOUS, N.Kh.; [redacted]OVSKIY, V.M.; KINE, O.G.; VAKHRUSHEV, V.A.; SHAPIRO, I.S., starshiy nauchnyy sotrudnik; KALUGIN, A.S.; MUKHIN, A.S.; GARNETS, N.A.; SPEYT, Yu.A.; SELIVESTROVA, M.I.; RUTKEVICH, V.G.; BYKOV, G.P.; NIKONOV, N.I.; SAKOVICH, K.G.; MEDVEDKOV, V.I.; ALADYSHKIN, A.S.; PAN, F.Ya.; RUSANOV, M.G.; YAZBUTIS, E.A.; ROZHDESTVENSKIY, Yu.V.; SAVITSKIY, G.Ye.; PRODANCHUK, A.D.; LYSENKO, P.A.; LEBEDEV, T.I.; KAMENSKAYA, T.Ya.; MASLENNIKOV, A.I.; PIPAR, R.; DODIN, A.L.; MITROPOL'SKIY, A.S.; LUKIN, V.A.; ZIMIN, S.S.; KOREL', V.G.; DERBIKOV, I.V.; BARDIN, I.P., akademik, nauchnyy red.; GORBACHEV, T.F., nauchnyy red.; YEROFEYEV, N.A., nauchnyy red.; NEKRASOV, N.N., nauchnyy red.; SKOBNIKOV, M.L., nauchnyy red.; SMIRNOV-VERIN, S.S., nauchnyy red. [deceased]; STRUMILIN, S.G., akademik, nauchnyy red.; KHLEBNIKOV, V.B., nauchnyy red.; CHINAKAL, N.A., nauchnyy red.; SLEDZYUK, P.Ye., red.toma; SOKOLOV, G.A., red.toma; BOLDYREV, G.P., red.; VOGMAN, D.A., red.; KASATKIN, P.F., red.; KUDASHEVA, I.G., red.izd-va; KUZ'MIN, I.F., tekhn.red.

[Iron-ore deposits of the Altai-Sayan region] Zhelezorudnye mestorozhdeniia Altae-Saianskoi gornoi oblasti. Vol.1. Book 1. [Geology]

(Continued on next card)

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POSPELOV, G.L.---(Continued) Card 2.

Geologiia. Otvetstvennyi red. I.P. Bardin. Moskva. 1958. 330 p. (MIRA 12:2)

1. Akademiya nauk SSSR. Mezhduvedomstvennaya postoyannaya komissiya po zhelezu. 2. Postoyannaya mezhduvedomstvennaya komissiya po zhelezu Akademii nauk SSSR (for Pospelov, Shapiro, Sokolov). 3. Zapadno-Sibirskiy filial Akademii nauk SSSR (for Vakhrushev, Pospelov.) 4. Zapadno-Sibirskoye geologicheskoye upravleniye (for Sakovich). 5. Krasnoyarskoye geologicheskoye upravleniye (for Pan). 6. Zapadno-Sibirskiy geologo-razvedochnyy trest Chermetrazvedka (for Prodanchuk). 7. Sibirskiy geofizicheskiy trest (for Pipar). 8. Vsesoyuznyy geologicheskiy nauchno-issledovatel'skiy institut (for Dodin). 9. Gornaya ekspeditsiya (for Mitropol'skiy). 10. Gornoye upravleniye Kuznetskogo metallurg.kombinata (for Lukin). 11. Tomskiy politekhnicheskiy institut (for Zimin). 12. Sibirskiy metallurg.institut (for Korel'). 13. Trest Sibneftegeofizika (for Derbikov). (Altai Mountains--Iron ores) (Sayan Mountains--Iron ores)

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POSPELOV, G.L.

Some principles of plotting metallogenetic maps. Izv. Sib. otd. AN SSSR Geol. i geofiz. no. 1:16-22 '58. (MIRA 14:5)

1. Zapadno-Sibirskiy filial AN SSSR.
(Ore deposits—Maps)

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CHINAKAL, N.A.; POSPELOV, G.L.

A valuable bibliographic manual ("Iron ores"; a bibliographic manual. Reviewed by N.A. Chinakal, G.L. Pospelov). Izv. Sib. otd. AN SSSR no.1:155 '58. (MIRA 11:8)
(Bibliography--Iron ores)

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VAKHRUSHEV, Valentin Aleksandrovich; POSPELOV, G.L., otv.red.; CHERNOVA, L.I., red.; MAZUROVA, A.F., tekhn.red.

[Mineralogy, geochemistry, and genesis of iron ores in the Kondoma region of Gornaya Shoriya (Western Siberia)] Voprosy mineralogii, geokhimii i genezisa zheleznykh rud Kondomskogo raiona Gornoi Shorii (Zapadnaia Sibir'). Otvetstvennyi red. G.L.Pospelov. Novosibirsk, Izd-vo Sibirskogo otd-niia AN SSSR, 1959. 188 p. (MIRA 13:6)
(Gornaya Shoriya--Iron ores)

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POSPELOV, G.L.

BARDIN, I.P., akademik, otv.red.; ANTIPOV, M.I., nauchnyy red.; GORBACHEV, T.F., nauchnyy red.; DODIN, A.L., nauchnyy red.; YEROFEYEV, B.N., nauchnyy red.; KALUGIN, A.S., nauchnyy red.; NEKRASOV, N.N., nauchnyy red.; POSPELOV, G.L., nauchnyy red.; SKOBNIKOV, M.L., nauchnyy red.; SLEDZYUK, P.Ye., nauchnyy red., red.toma; SMIRNOV-VERIN, S.S., nauchnyy red. [deceased]; SOKOLOV, G.A., nauchnyy red., red.toma; STRUMILIN, S.G., akademik, nauchnyy red.; KHLEBNIKOV, V.B., nauchnyy red.; CHINAKAL, N.A., nauchnyy red.; SHAPIRO, I.S., nauchnyy red.; KUDASHEVA, I.G., red.izd-va; POLENOVA, T.P., tekhn.red.

[Iron ore deposits of the U.S.S.R.] Zhelezorudnye mestorozhdeniia SSSR. Otv.red.I.P.Bardin. Moskva. Vol.1. [Iron ore deposits of the Altai-Sayan mountainous region] Zhelezorudnye mestorozhdeniia Altae-Saianskoi gornoi oblasti. Book 2. [Description of the deposits] Opisanie mestorozhdenii. 1959. 601 p. (MIRA 13:3)

1. Akademiya nauk SSSR. Mezhduvedomstvennaya postoyannaya komissiya po zhelezu.
(Altai Mountains--Iron ores)
(Sayan Mountains--Iron ores)

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POSPELOV, G.L.

Regularities in the distribution of magmagene iron-ore deposits of the Altai-Sayan folded area. Zakonom. razm. polezn. iskop. 2:244-288 '59. (MIRA 15:4)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR.
(Altai Mountains--Iron ores) (Sayan Mountains--Iron ores)

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3(5) SOV/11-59-3-1/17

AUTHOR: Pospelov, G.L.

TITLE: On the "Source Zone" of the Earth's Crust, the "Magmatogene Crown" of the Earth, the "Areals of Magmatism" and "Structural Associations of Intrusives" (Ob "Ochagovoy Zone" zemnoy kory, "Magmatogennoy Korone" zemli, "Arealakh Magmatizma" i "Strukturnykh Assotsiatsiyakh Intruzivov")

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geologicheskaya, 1959, Nr 3, pp 19-35 (USSR)

ABSTRACT: The author deals with the problem of explaining some hypotheses on regional structural elements of magmatism derived from the analysis of commonly known factors. The idea is developed concerning the existence of the "source zone" of the Earth's crust regulating its magmatic and tectonic movements. The article is divided into 3 parts: 1) deals with the Earth's crust and its "source zone"; 2) examines the "magmatogene crown" of the Earth and "areals of magma-

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On the "Source Zone" of the Earth's Crust, the "Magmatogene Crown" of the Earth, the "Areals of Magmatism" and "Structural Associations of Intrusives"

tism"; 3) looks at the structural associations of intrusives and the development of areals of magmatism. It is pointed out that seismic data have disclosed the Earth appears to be solid down to a depth of 1,000 km at most. The separation surface bordering "the Earth's crust" or the so-called "Makharovichich surface" is widely considered the basis for dividing the Earth's crust. There exist however, other separation surfaces by which, in particular, the dual layer structure of the Earth's crust is determined. These structural peculiarities have a chemico-petrological hypothetic interpretation according to which the Earth's crust (sial) consists of granite and basalt inclosures resting upon a peridotic substratum or "mantiya" (sima). Ideas on the chemical stratification of the Earth are at variance with the conception of its chemical homogeneity, as supported by V.N. Lodochnikov. Some geologists and geophysicists

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