

SOV/148-59-1-2/19

38(5)

AUTHOR: Sigov, A.A., Candidate of Technical Sciences

TITLE: Analysis of Temperature Curves in Sintering (Analiz temperaturnykh krivyykh pri aglomeratsii)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy - Chernaya metallurgiya, 1959, Nr 1, pp 11-21 (USSR)

ABSTRACT:

In order to complete the existing data on sintering processes of iron ore, information is given on experiments carried out with the use of thermocouples for determining temperatures and for the chemical and physical analyses of outlet gases. Best results were obtained at the laboratory of sintering of the Kiyev Polytechnical Institute with the use of a method suggested by Engineer Yu.I. Red'ko. Sintering was carried out in a container of 153 mm in diameter with the use of an aviation supercharger controlling the quantity of infiltrated air and the vacuum. It was proved that the slope of the temperature curve depended directly on the speed of gas infiltration i.e. higher sintering speed of the charge caused a steeper temperature curve. According to the maximum temperature of curves shown in Figures 2 and 4, it was confirmed that the burning process in the layer, adjacent to the hot junction of the

Card 1/2

SOV/148-59-2-3/24

18(5)

AUTHOR: Sigov, A.A., Candidate of Technical Sciences, **Docent**

TITLE: The Part of Heat Regeneration and Ignition in the Sintering Process (O roli regeneratsii tepla i zazhiganiya v aglomeratsionnom protsesse)

PERIODICAL: Izvestiya Mashikh uchebnykh zavedeniy, Chernaya metallurgiya, 1959, Nr 1, pp 13-25 (USSR)

ABSTRACT: Experimental investigations of the sintering process included the amount of heat regeneration, the ignition intensity and its effect on sintering, ignition of the charge in fluxed sinter production and heat distribution in the charge layers. The amount of heat regeneration was determined by computing heat balances of elementary charge layers (1 cm in height and 1 m² surface). Thermograms taken by electronic potentiometers showed that the temperature in the layer raised from 50°C to a maximum temperature of 1,400 - 1,600°C in the periphery of the charge within 1.0 to 1.5 minutes, and within 1.5 to 3.0 minutes near the ladle axis. The fraction of regenerated heat in the central layer of the charge was 63% from the general heat amount. Insufficient development of regeneration caused a deficit of heat in the upper layers which must be filled up by ignition. The ignition intensity had to be determined by the amount of heat produced by the burners per 1 sq m of the surface.

Card 1/2

SIGOV, A.A., kand.tekhn.nauk

Analyzing temperature curves during sintering. Izv.vys.ucheb.zav.;
chern.met. 2 no.1:11-21 Ja '59. (MIRA 12:4)

1. Kiyevskiy politekhnicheskii institut.
(Sintering) (Thermocouples)

SIGOV, A.A., dotsent, kand.tokhn.nauk

Role of heat regeneration and firing in the sintering process.
Izv.vys.ucheb.zav.; Chern.mst. 2 no.2:13-25 F '59.

(MIRA 12:6)

1. Kiyevskiy politekhnicheskiy institut. Rekomendovano kafedroy
metallurgii i teorii metallurgicheskikh protsessov Kiyevskogo
politekhnicheskogo instituta.

(Sintering) (Waste heat)

SIGOV, A.A.; SHURKHAL, V.A.

Carbon combustion during the sintering process. Izv. vys. ucheb.
sav.; Chern. met. no.12:23-30 '60. (MIRA 14:1)

1. Kiyevskiy politekhnicheskiy institut.
(Sintering) (Carbon)

SIGOV, A.A.; SHURKHAL, V.A.

Accurate curve of the affinity of elements to oxygen and its use to study the thermodynamics of reduction processes in the blast furnace. Izv.vys.ucheb.zav.; Chern.met. no.4:15-25 '61. (MIRA 14:4)

1. Kiyevskiy politekhnicheskii institut.
(Thermodynamics) (Cast iron--Metallurgy)

SIGOV, A.A.; SHURKAL, V.A.

Nomograms for the composition of carbon combustion products in a sinter layer and their use. Izv. vys. ucheb. zav.; Chern. met. 4 no.8:18-23 '61. (MIRA 14:9)

1. Kiyevskiy politekhnicheskii institut.
(Sintering) (Combustion gases--Analysis)

SIGOV, A. A.; SURHAL, V. A. [Shurkhal, V. A.]

A more accurately defined diagram of the affinity of elements in the presence of oxygen, and its use in the thermodynamic investigations of reduction processes in blast furnaces. *Analele metalurgie* 15 no.4:16-27 O-D '61.

(Oxygen) (Blast furnaces) (Reduction)

SIGOV, A.A.; SHURKHAL, V.A.

Reduction processes in the sintering of iron ores. Izv.vys.ucheb.
zav.; chern.met. 5 no.6:26-31 '62. (MIRA 15:7)

1. Kiyevskiy politekhnicheskii institut.
(Sintering--Testing)

SIGOV, A.A.; SHURKHAL, V.A.

Role of moisture in the sintering of Krivoy Rog ores.
Izv. vys. ucheb. zav.; chern. met. 5 no.10:18-24 '62.
(MIRA 15:11)

1. Kiyevskiy politekhnicheskii institut.
(Krivoy Rog Basin--Iron ores)
(Sintering)

SHURKHAL, V.A.; SIGOV, A.A.

Nomograms for determining the theoretical composition of the gaseous phase during the sintering of fluxed charge mixtures and their use. Izv. vys. ucheb. zav.; Chern. met. 7 no.3:29-36 '64.

(MIRA 17:4)

1. Kiyevskiy politekhnicheskii institut i Dnepropetrovskiy metallurgicheskii institut.

1. 17, A. 11: 111111, 111.

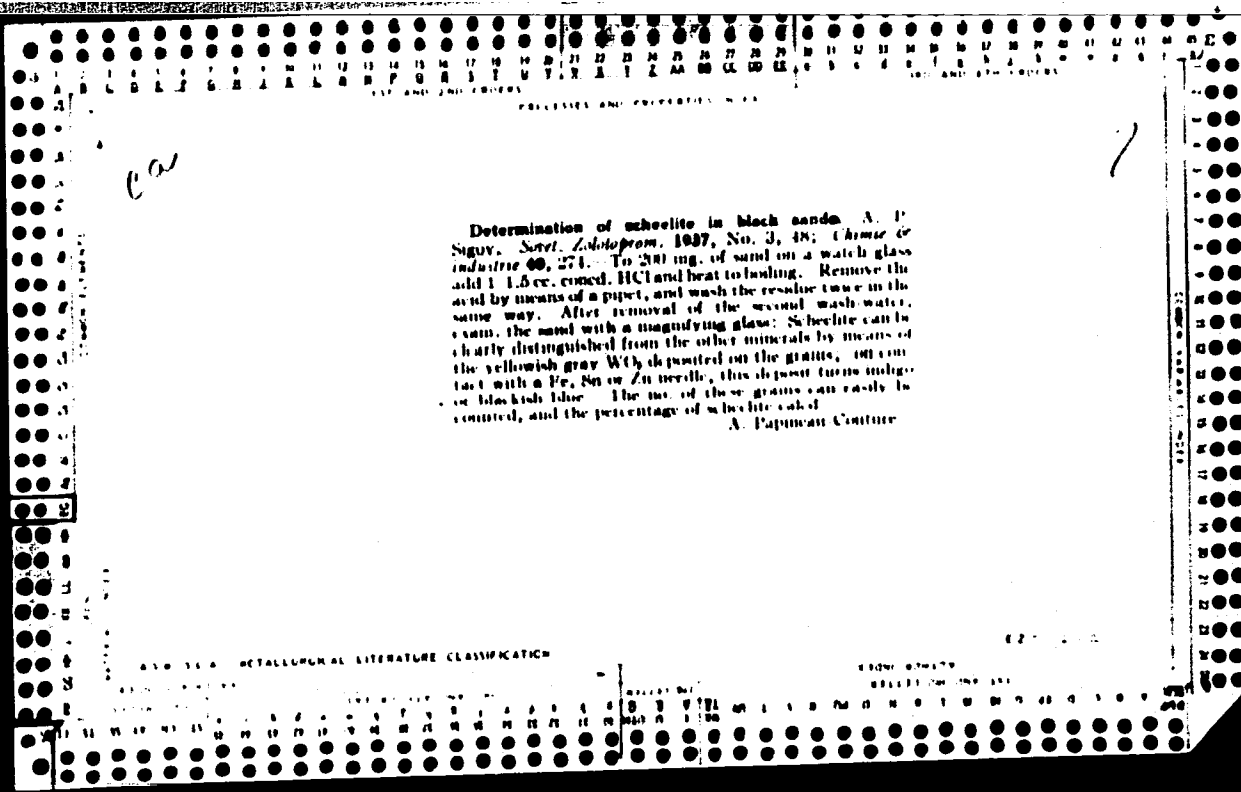
Effect of certain factors on the composition of solid fuel
combustion products in a sintering bed. Izv. vys. ucheb. zav.
shern. nat. 7 no. 12:11-18 '64 (MIRA 18:1)

1. Niyevskiy politekhnicheskii institut.

SIGOV A. A. 1965.

Development of oxidation-reduction processes during the sintering
of magnetite concentrates. Izv.vys.ucheb.zav.; Chern.Met. 8 no.6:38-
42 '65. (MIRA 18:8)

1. Kiyevskiy politekhnicheskiy institut.



1. SIGOV, A. P .
2. USSR (600)
4. Pyshma Valley-Geology
7. Porous continental deposits in the basin of the Pyshma and Iset^o Rivers on the eastern slope of the Urals. [Abstract.] Izv.Glav.upr.geol.fon. no. 3, 1947.

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

СИН, А. П.,

Redistribution of the Hydrographic Net of the Eastern Slope
of the Central Urals. Materials on the Geomorphology of the
Urals, State Geology Press. 1948.

PA 69747

SIGOV, A. P.

USSR/Geological Prospecting
Gold
Platinum

1948

"Importance of Geomorphology in Prospecting for Gold
and Platinum Placers," A. P. Sigov, 6 PP

"Sovet Geolog" No 29

Using geomorphological map of Urals (RF 1:500,000)
produced by Ya. S. Bial'shteyn, author shows how it
is possible to determine theoretically sites which
might be valuable for placer mining of gold and
platinum.

69747

SIGOV, A.P.

Age and origin of longitudinal depressions of the Urals. Geog. sbor. 1:
93-107 '52. (MLBA 6:7)
(Ural Mountains--Geology, Structural) (Geology, Structural--Ural
Mountains)

11: V. A. P.

"I. The... of... of a Petrol... in the North...
... 1961...," ... No. 5, pp 1-8.
196

10: 11-31-71, 1961

SIGOV, A.P.

Tertiary Kustanay series of the northern part of the Turgay
Lowland and of the part of Western Siberia. *Biul.MOIP. Otd.*
geol. 29 no.3:29-35 My-Je '54. (MLRA 7:8)
(Turgay Lowland--Geology, Stratigraphic) (Geology,
Stratigraphic--Turgay Lowland) (Siberia, Western--Geolo-
gy, Stratigraphic) (Geology, Stratigraphic--Siberia, Wes-
tern)

SIGOV, A.P.

Age of kainotype effusives of Kushmurin Lake region. Dokl. AN
SSSR 95 no.3:625-628 Mr '54. (MLBA 7:3)

Predstavleno akademikom D.V. Malivkinym.
(Kushmurun Lake region--Geology) (Geology--Kushmurun Lake region)

Sigov, A.P.

Application of commercial prognosis to terrigenous components. A. P. Sigov. *Razvedka i Okhrana Nedr* 22, No. 10, 14-22 (1967). Heavy mineral analysis for sediments of the Ural region are given. The differences between strata make these of value in correlation, and in indicating the conditions of weathering in the source area and of sedimentation, which indicate the favorability of the strata for placer deposits. D. I. Milton

SIGOV, A.P.

Origin of Tertiary eolitic iron ores of the trans-Ural region. Trudy
Ger.-geol. inst. no. 24: 172-177 '56. (MIRA 10:1)
(Ural Mountain Region--Iron ores)

SIGOV, A. P.

USSR/ Geology

Card 1/1 Pub. 22 - 27/43

Authors : Burdina, O. V.; Sigov, A. P.; and Shub, V. S.

Title : Kainosite effusions in Chelyabinsk

Periodical : Dok. AN SSSR 106/1, 103-105, Jan 1, 1956

Abstract : Geological data are presented on the kainosite effusive rock deposits of the Permian-Triassic eras discovered in the Chelyabinsk region USSR. Four USSR references (1949-1954). Map.

Institution : Ural Geological Office of the Ministry of Geology USSR

Presented by: Academician D. S. Korzhinskiy, August 2, 1955

SIGOV, A.P.

Weathering of the earth's surface in the Urals. Razved. i okh. nedr
23 no.7:11-19 J1 '57. (MIRA 10:11)

1. Ural'skoye geologicheskoye upravleniye
(Ural Mountains--Weathering)

SIGOV, A.P.

Geology and mineral resources in the southern part of the trans-Ural region. Mat.po geol.i pol.iskop,Urala no.6:120-128 '58.
(MIRA 12:10)

(Ural mountain region--Geology, Economic)

SIGOV, A.P.

Earlier Quaternary overdeepened Tobol-Ubagan Valley. Geog.sbor.
no.10:165-168 '58. (MIRA 12:1)
(Tobol Valley--Geology, Stratigraphic)
(Ubagan Valley--Geology, Stratigraphic)

SIGOV, A.P.

Stratigraphic and correlative value of terrigenous constituents of sedimentary rocks. *Sov. geol.* 3 no.3:28-39 Mr '60. (MIRA 13:11)

1. Ural'skoye geologicheskoye upravleniye.
(Rocks, Sedimentary)

SIGOV, A. E.

Problematic organic Mesozoic and Cenozoic formations in the
eastern slope of the Urals. Trudy Gor.-geol. inst. UFAI SSSR
no.61:89-93 '61. (MIRA 15:10)

(Ayat Valley—Paleontology, Stratigraphic)
(Mugay Valley—Paleontology, Stratigraphic)

SIGOV, A.P.

Isolation of geological and metallogenic formations in the
Mesozoic and Cenozoic of the Urals. Mat.po geol.i pol.iskop.
Urala no.10:3-12 '62. (MIRA 16:2)
(Ural Mountains--Geology, Structural)
(Ural Mountains--Ore deposits)

SIGOV, A.P.

Metallogeny of the weathering surface in the Urals in the light
of geomorphology. Kora vyvetr. no.5:169-187 '63.
(MIRA 16:7)

1. Ural'skoye geologicheskoye upravleniye.
(Ural Mountains—Ore deposits)
(Ural Mountains—Weathering)
(Ural Mountains—Geomorphology)

SIGOV, A.P.; YAKUSHEV, V.M.

Materials on the geology of Cenozoic-type effusives in the trans-Ural
region. Sov.geol. 6 no.2:143-150 F '63. (MIRA 16:4)

1. Ural'skoye geologicheskoye upravleniye.
(Ural Mountain region—Rocks, Igneous)

SIGOV, B. [Sihov, B.], nauchnyy sotrudnik

Figures at the controls. Nauka i zhyttia 12 no.12:22 D '62.
(MIRA 16:8)

1. Institut elektrotehniki AN UkrSSR.

SIGOV, B.O. SA

Comparative investigation of pulse motors and method for recomputing their parameters [with summary in English]. Avtomatyka no.4:86-105 (MIRA 11:1) '57.

1. Institut elektrotehniki AN URSS.
(Pulse techniques (Electronics))

SECRET, D. I.

AUTHOR: B.O. Shtov. SOV/102-58-2-1/10

TITLE: The synthesis of digital program control systems
(Deyaki pytannya sinteza skhem tsyfrovoho programnoho upravlinnya)

PERIODICAL: Avtomatyka, 1958, No.2, pp. 1-11 (USSR)

ABSTRACT: This paper presents an analysis of ways of synthesizing digital programme control systems in which the effector acts continuously and not merely stepwise. Position control systems are envisaged, including ones with integral and derivative feedback. The various possible systems are illustrated in Table 1, which reads (across the top) I. Continuous-acting systems, II. With continuous-acting motors, III. With stepping motors (both in sampled-data programme control systems); and vertically downwards: integral, position, rate. Here p denotes a differentiator, $1/p$ an integrator, RL a reversible counting unit and D/N a digital-analogue converter. The treatment given on p 3 extends that of Minors'kiy as applied to the quantities introduced on p 1, which are (in sequence) the displacement specified by the programme, the output (of the nature of a displacement) and the sum of the inputs to the amplifier (which latter converts the programme recorded on a tape in code into signals to the system). The quantity C introduced on p 3 is termed the suitability index of the system for digital programme control. The subsequent discussion shows that C must be constant, finite and nonzero, but even so the zero of the system

Card 1/2

The Synthesis of digital programme control systems.

SOV/102-58-2-1/10

may creep. The three systems illustrated in Fig.2. are then discussed, and the discrete Laplace transform is applied to a system in which a continuous function is converted to a sampled-data (stepped) function. The results are applied to the integral, position and rate systems shown in Fig.1. The Table lists the values of C for the various cases, and thus indicates which systems are suitable. The paper contains 2 Figures, 1 Table, about 45 equations in the text, and 4 References, 3 of which are Soviet.

ASSOCIATION: Instytut Elektrotekhniki AN URSR (Institute of Electrical Engineering
Ac.Sc. Ukrainian SSR)

SUBMITTED: December 24, 1957.

1. Digital recording systems--Control systems 2. Digital recording
systems--Performance

Card 2/2

05365

SOV/102-59-1-9/12

AUTHOR: Sigov, B.O.

TITLE: Switching Circuits for a Stepping Motor

PERIODICAL: Avtomatika, 1959, Nr 1, pp 84-89 (USSR)

ABSTRACT: A stepping motor is used in a lathe controlled by a digital computer to drive the tool slide. The motor has a maximum stalled torque M of 1 kg-m; the maximum pulse repetition rate to give a load torque of $0.4M$ without stalling is 150 per sec; the moment of inertia of the rotor is 1.4 g-dm-sec^2 . The winding has an inductance (unsaturated) of 0.85 henry and a resistance of 15 ohms. Reasons are given why magnetic amplifiers and transistors are unsuitable (lag and low working voltages respectively). Fig 1 illustrates thyatron circuits that may be used; part a shows a d.c. circuit with switching capacitors and Fig 2 illustrates the operations in that circuit. The maximum repetition frequency is rather low, so the circuits of Fig 1, b and c have been designed to work at higher frequencies; Fig 3 (top half) shows waveforms for the circuit of Fig 1, b for repetition frequencies ranging from 50 c/s to 120 c/s; the bottom

Card 1/2

SIGOV, B. A., Cand Tech Sci -- (diss) "Research into systems of digital programming control and development of some elements of these systems." Kiev, 1960. 19 pp with illustrations; (Ministry of Higher and Secondary Specialist Education Ukrainian SSR, Kiev Order of Lenin Polytechnic Inst); 150 copies; price not given; (KL, 27-60, 154)

16,8000 (1121, 1132, 1069)

26162

S/O44/6:/000/005/025/025
C:11/C444

AUTHOR: Sigov, B. A.

TITLE: Comparing study and development of the elements of positional, integral and velocity systems of digital program control

PERIODICAL: Referativnyy zhurnal, Matematika, no. 5, 1961, 46, abstract 5V316. (Teoriya i primeneniye diskretn. avtomat. sistem, M., ANSSSR, 1960, 296 - 313)

TEXT: In digital program controlling one uses positional schemes. From a general point of view one considers the theory of automatic controls of various schemes and discusses the demands on the control systems which transform numbers into displacements of the working elements. In order to be able to compare the positional system concretely with the step-by-step motor operators, an example is considered. It is stated that the open positional schemes with step-by-step motors proposed by the firm "Industrial controls"(USA) 1955, are unsuitable. One also considers integral systems of the digital program control with continuous and with step-by-step motors. One points out the advantages and disadvantages of an integral system with discrete influ-

Card 1/2

X

KOVAL'SKIY, N.V. [Koval's'kyi, M.V.]; KREMENTULO, Yu.V.; REUTSKIY, V.Ye.
[Reuts'kyi, V.IU.]; SIGOV, B.A. [Sihov, B.O.]

Digital program control system for a milling machine with a
step-wise power motor. Avtomatyka no.2:81-83 '60.

(MIRA 13:7)

1. Institut elektrotehniki AN USSR.
(Milling machines) (Automatic control)

KOVAL'SKIY, Nikolay Vladimirovich; KREMENTULO, Yuriy Vasil'yevich;
REUTSKIY, Vadim Yefimovich; SIGOV, Boris Alekseyevich;
IVAKHNIENKO, A.G., red.; KOVAL'CHUK, A.V., red.; GUSAROV,
K.F., tekhn. red.

[Numerical programmed control] TSifrovoye programmnoye upravlenie [By] N.V.Koval'skii i dr. Pod red. A.G.Ivakhnenko.
Kiev, Gos. izd-vo tekhn. lit-ry USSR, 1962. 124 p.
(MIRA 15:3)

1. Chlen-korrespondent Akademii nauk USSR (for Ivakhnenko).
(Machine tools--Numerical control)

KOVAL'SKIY, N.V. [Koval's'cyi, M.V.] (Kiyev); REUTSKIY, V.Ye. [Reuts'kyi, V.IU.] (Kiyev); SIDOV, B.A. [Sihov, B.O.] (Kiyev)

Reversive ring-type commutators. Avtomatyka no.1:74-78 '62.

(Switching theory)(Electric relays)

(MIRA 15:2)

S/102/63/000/001/003/004
D201/D308

AUTHOR: ⁴ Siřov, B.O. (Kiev)

TITLE: Improving the accuracy of a digital integrator based on a frequency divider

PERIODICAL: Avtomatyka, ⁸ no. 1, 1963, 39-53

TEXT: The author shows that the errors of a frequency dividing digital integrator may be reduced to the required level by means of averaging triggers introduced into the integrator output. These errors may be considerably reduced if an additional shift (besides averaging) is introduced into the averaging triggers. Conclusions: 1) With averaging and additional shift a frequency dividing linear interpolator in a digital integrator produces an error not exceeding one sampling period; 2) A frequency dividing digital integrator can integrate with the accuracy of a digital integrator with two adders; 3) The errors introduced by the analyzed digital integrator may be made either positive or negative depending on the requirements. There are 6 figures and 3 tables.

SUBMITTED: July 30, 1962
Card 1/1

SIGOV, B.A. [Sihov, B.O.] (Kiyev)

Errors of a linear interpolator based on a digital integrator with parallel transfer. Avtomatyka 10 no.2:81-84 '65.

(MIRA 18:6)

SIGOV, I.

Division and changes in labor during the transition to communism.
Sots. trud 7 no.5:18-25 My '62. (MIRA 15:5)

(Division of labor)
(Labor and laboring classes)

SIGOV, I.

Overcoming essential differences between industrial and agricultural
labor in the U.S.S.R. Sots. trud 8 no.9:111-121 S '6).
(MIRA 15:10)

18(5)
AUTHOR: Vostrikov, S.M., Sigov, I.I., and Skvortsov, A.M.,
Engineers SOV/128-59-8-21/29
TITLE: Inverted Conical Bunker for Molding Sand
PERIODICAL: Liteynoye proizvodstvo, 1959, Nr 8, p 38 (USSR)
ABSTRACT: In the steel casting department of the Leningrad Ki-
rov plant, an inverted conical bunker for molding
sand has been erected. The form of the bunker en-
ables improved emptying. There is 1 drawing.

Card 1/1

SIGOV, Ivglaf Ivanovich; BORISOVSKAYA, M.A., red.; GUZHANOVA, T.N.,
Mlad. red.; PONOMAREVA, A.A., tekhn. red.

[Division of labor in agriculture during the transition to
communism] Razdelenie truda v sel'skom khoziaistve pri pe-
rekhode k kommunizmu. Moskva, Ekonomizdat, 1963. 262 p.
(MIRA 16:10)

(Agriculture) (Division of labor)

Apr 50

USSR/Engineering - Machines, Testing
Stresses, Bending

"The Seat of Fatigue Failure in Bending," I. V.

Sigov, 4 pp

"Zavod Lab" Vol XVI, No 4

Describes special machine constructed for reversed bending fatigue tests and develops method for determining seat of fatigue breakdown under conditions of bending for two cases: (1) stresses under tension and compression are equal to each other and (2) stress under compression is greater than tension stress by

160739

USSR/Engineering - Machines, Testing (Contd) Apr 50

30-40%. Solution of this problem has great practical significance since many parts actually are subjected to such conditions.

SIGOV, I. V.

160739

1977, 1. 1.

1977, 1. 1. -- "CERTAIN PROBLEMS OF THE DESIGN AND CONSTRUCTION OF PLANETARY REDUCTION
GEARINGS." (THE 17 JUNE 50, Moscow) (DEPT. OF LAB. OF BAHU Higher Technical School
(FROM BAHU) (DISSERTATION FOR THE DEGREE OF CANDIDATE IN TECHNICAL SCIENCES)

NO: VECHERNAYA MOSKVA, JANUARY-DECEMBER 1977

1. SIZOV, Eng. I. V.
2. USSR (600)
4. Standards, Engineering
7. Principles in establishing standard types of parametric series of reducers, Vest. mash., 32, No. 11, 1952.

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

Sign out, H.U.

25(2) **PHASE I BOOK EXPLANATIONS** 509/2099

Konferentsiya po voprosam razvitiya konstruktivnykh i isledovatel'skikh subkharakteristik i provedeniya gibkoy svyazi. Odessa, 1977

Shchet, konstruktivnyye i isledovatel'skiye trebnya konferentsii, (t. 1) 1 (Bridg, Construction and Analysis of Transmission; Transactions of the Conference on Problems in Design, Construction and Analysis of Gears and Gearable Transmissions, Vol. 1) [Odessa] Odesskiy politekhnikh in-t, 1978. 199 p. 5,000 copies printed.

Sposobiya Analizirovaniya Mashinotekhnicheskogo obekta stroitel'noy i stroitel'skoy mashinostroyeniya, Odesskiy politekhnikh in-t, Odessa, 1977

Ed.: I.P. KIKHOTOV, Engineer; Tech. Ed.: A. E. Kuznetsov; Editorial Board: L.G. Borovik, Candidate of Technical Sciences, M.S. Belyayev, Engineer, M.D. Guskis, Candidate of Technical Sciences, E. I. Zablomskiy, Candidate of Technical Sciences (Supp. Ed.), P. S. Zak, Candidate of Technical Sciences, Ya.O. Kiselev, Candidate of Technical Sciences, V. I. Kuznetsov, Doctor of Technical Sciences, V.P. Mal'tsev, Candidate of Technical Sciences, M. S. Polotskiy,

Card 1/8

Candidate of Technical Sciences, and L. B. Krilich, Candidate of Technical Sciences.

CONTENTS: This book is the first of three volumes dealing with the transactions of the conference. This first volume contains articles on the design and construction of gearings and worm gearings. The second volume treats flexible transmissions. The third, theoretical and experimental analysis of transmissions. References follow several of the articles.

TITLE OF CONTENTS:

Signy, I.L. Some Problems in the Organization of Mechanized Production of Speed Reducers and Gear Drives	155
Siba, R.S. Design for Strength of a Solid Toothed Gear, Weakness by Bore Shrinkage	165
Formulas are derived for forces and moments acting on sections of a gear weakened by splines (6 slots) and key (one slot) joints.	
Klokh, O.S. Increase in the Accuracy of Kinematic Worm Gear Trains Used for Reducing Mechanisms of Instruments	177
The author analyzes the accuracy of cylindrical worms and wheels for high-precision instruments. He makes recommendations for reducing the margin of error in the gear trains in order to reduce the total margin of error of the mechanism.	
Belyayev, M.S., and E. I. Zablomskiy. Consideration of Simultaneous Engagement of Two Pairs of Teeth in Gearing Design	187
Card 7/8	
The distribution of load between two pairs of meshing teeth is basically determined by the rigidity of teeth and by the errors in engagement, chiefly the segmented error of the circular pitch, causing the cyclic character of stresses. The author states that for a pair of gears of a given type the characteristic diagram for distribution of errors can be determined. He further states that this determination has been confirmed by inspection of several lots of gears manufactured by different methods.	
Resolution of the Conference on the Problems of Design, Construction, and Analysis of Transmissions	195
The resolution stresses both the progress made and the deficiencies noted in design, construction, and manufacture of gearings and worm gear trains, and the fields of continuous speed control, chain drives, and flexible shafts.	

ANALYSIS: Inventory of Congress

Card 8/8

50/51
8-3-59

(1)

SIGOV, I.V., kand.tekhn.nauk

Tensioned state of apparatuses having shells with indentations.
Sbor. st. NIIKHIIMASH no.21:33-43 '58. (MIRA 11:7)
(Pressure vessels--Testing)

SIGOV, I.V., kand.tekhn.nauk

Distribution of forces among concurrently working teeth of
planetary-toothed reduction gears. Sbor. st. NIIXHIIMMASH no.21:
69-77 '58. (MIRA 11:7)
(bearing)

SIG07, I.V., konstr. tekhn. nauk

Reducing gears for vertical mixing apparatus. Khim. mash. no. 1:45-46
Ja '59. (MIRA 12:?)

(Mixing machinery)

S/028/60/000/01/004/033
D041/D002

28(3)

AUTHOR:

Sigov, I.V.

TITLE:

Basic Design Parameters of Planetary "ZK" Reduction Gears

PERIODICAL:

Standartizatsiya, 1960, Nr 1, pp 14-18 (USSR)

ABSTRACT:

Standardization principles for planetary "ZK" reduction gears are discussed and calculation formulas suggested (the diagram of a planetary reduction gear is shown in figure 1), starting with the diameter of the pinion carrier, on which all basic dimensions of the component units and parts depend. This reduction gear was treated by the author previously ("Standartizatsiya", 1959, Nr 6). The dependence of the pinion carrier diameter (D) from the torque is determined by the formula $D = f(M_{kr})$ (where "M_{kr}" is torque), which is recommended for practical use in the design of reduction gear series with a torque range from 10,000 to 160,000 kg . m. Calcula-

Card 1/2

S/028/60/000/01/003/033
D041/D002

Rational Load Capacity Series

capacity series be introduced: 0.05, 0.08, 0.125, 0.2, (0.25), 0.32, 0.5, 0.8, 1, 1.25, 1.6, 2, 2.5, 3.2, 4, 5, 6.3, 8, 10, 12.5, 16, 20, 25, 32, (40), 50, (63), 80, 100, 125, 140, 160, 180, 200, 225, 250, 280, 315, 355, 400, 450, 500, 560, 630, 710, 800, 900, and 1.000 tons. There are 2 tables, 5 diagrams, and 1 Soviet reference.

Card 2/2

SIGOV, I.V., kand.tekhn.nauk; VOLOVA, T.A., inzh.

Planetary drive for the SN-150 mixer. Khim. mash. no. 3:37-39
My-Je '60. (MIRA 14:5)

(Mixing machinery)

SIGOV, I.V., kand.tekhn.nauk

Designing reducing gears with an extracentroidal cycloid
engagement. Vest.mash. 40 no.9:31-34 S '60. (MIRA 13:9)
(Gearing)

SIGOV, I.V., kand.tekhn.nauk; VERUGA, V.F., inzh.; VOLOVA, T.A., inzh.

Motor-reducers based on high-speed electric motors. Vest.
mashinostr. 42 no.8:9 Ag '62. (MIRA 15:8)
(Electric driving)

SIGOV, I. V., kand. tekhn. nauk

Preliminary determination of structural parameters of the
2K-N planetary transmission. Vest. mashinostr. 42 no.12:
17-18 D '62. (MIRA 16:1)

(Gearing)

SIGOV, I.V.; VERUGA, V.F.

Standardization of reducing gears and electric-motor reducers.
Standartizatsiia 27 ro.2:12-14 P '63. (MIRA 16:4)
(Gearing)

SIGOV, I.V., kand.tekhn.nauk; VERUGA, V.F., inzh.

Planetary reducing gears manufactured abroad. Vest.mashinostr. 43 no.4:
81-86 Ap '63. (MIRA 16:4)

(Gearing)

SIGOV, I.V., kand.tekhn.nauk; GROBEV, M.L., inzh.

Multipurpose planetary reducing gears. Vest.mashinostr. 43
no.9:43-44 S '63. (MIRA 16:10)

SIG V, Il'ya Vyacheslavovich [Syhov, I.V.], kand. tekhn. nauk;
DOLLEZHAL', V.A., prof., retsenzent

[Planetary reducing gears] Planetarni reduktory. Kyiv,
Tekhnika, 1964. 170 p. (MIRA 17:8)

PERFIL'YEV, A.I. (Voronezh); RUBINSHTEYN, Ye.S.; SIGOV, K.A. (Sverdlovsk);
ZARUDI, Ye.O. (Ufa); SUKHORUKOVA, A.V. (g. Yuzhno-Sakhalinsk)

Editor's mail. Geog. v shkole 25 no.3:62-65 My-Je '62. (MIRA 15:7)

1. Zaveduyushchiy kabinetom geografii Primorskogo krayevogo
instituta usovershenstvovaniya uchitoley (for Rubinshteyn).
(Geography--Study and teaching)

SIGOV, N.

Promote activities of members of the Scientific Technological
Society. Avt. transp. 37 no.7:58 J1 '59. (MIRA 12:10)
(Transportation, Automotive)

79-28-5-37/69

AUTHORS: Zavgorodniy, S. V., Sigov, O. V., Bayev, I. F.

TITLE: Synthesis of 1,4-Diisopropylbenzene and Some of its
Conversions (Sintez 1,4-diizopropilbenzola i nekotoryye yego
prevrashcheniya)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 5,
pp. 1279 - 1284 (USSR)

ABSTRACT: In the present work the alkylation of the isopropylbenzene
with propylene in the presence of $\text{BF}_3 \cdot \text{H}_3\text{PO}_4$ was dealt with.
When using these three compounds at equimolar ratios
(4 : 1 : 0,26) at 98 - 100°C the 1,4-diisopropylbenzene was
obtained in a yield of 73% (at 52 to 55°C - 19%). The oxidation
of the 1,4-diisopropylbenzene (in liquid phase) with atmospheric
oxygen in the presence of various stimulators in mono- and
dihydrogen peroxide was investigated. During some time of this
oxidation an accumulation of peroxide to a certain maximum
takes place, on which the decomposition begins and the amount
decreases. At 110°C such a maximum is reached after 12-14 hours,

Card 1/3

79-28-5-37/69

Synthesis of 1,4-Diisopropylbenzene and Some of its Conversions

at 85°C after 20-40 hours, depending on the stimulators. The stimulator mixture, consisting of manganese resinate and cobalt acetate with an addition of calcium hydrogen peroxide stimulates oxidation much more than the first two, taken singly. The addition of sodium stearate to the mixture accelerates the oxidation and makes it possible to obtain 51% hydrogen peroxide at 85°C during 17 hours, whereas without stearate only 33% result at 110°C during 16 hours, on which the decomposition of the peroxide starts. Calcium-hydrogen-peroxide also accelerates the oxidation and strengthens the hydrogenperoxide which leads to a deeper oxidation. The oxidation is mainly directed to the formation of monohydrogen peroxide of the diisopropylbenzene in the cleavage of which in acidous medium the 4-isopropylphenol forms in a yield of 90%. Partially also dihydrogen peroxide of the diisopropylbenzene forms which then splits into hydroquinone. There are 2 figures, 1 table

Card 2/3

79-28-5-37/69

Synthesis of 1,4-Diisopropylbenzene and Some of its Conversions

and 5 references, 4 of which are Soviet.

ASSOCIATION: Voronezhskiy gosudarstvennyy universitet (Voronezh State University)

SUBMITTED: April 8, 1957

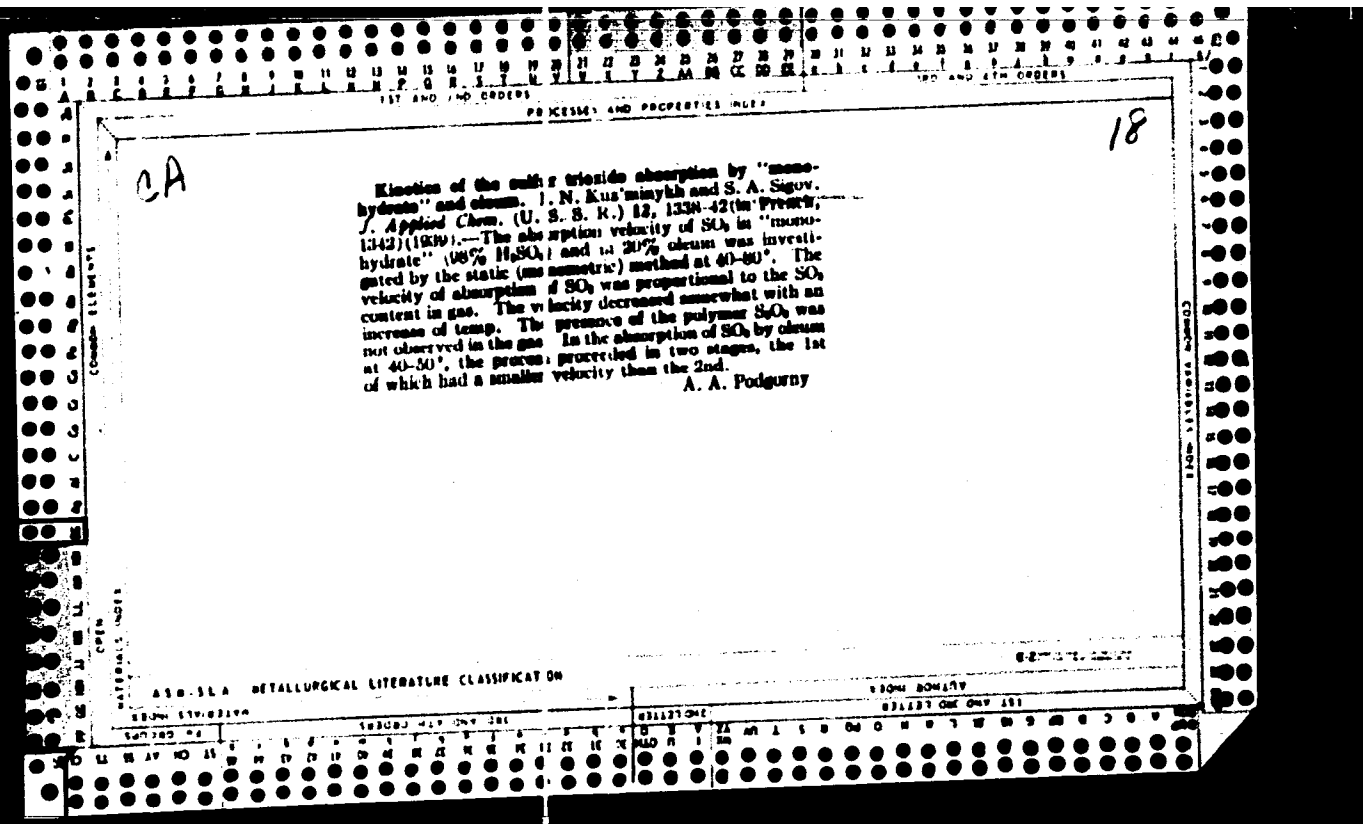
Card 3/3

SIGOV, O.V.; ZAVGORODNIY, S.V.

Autoxidation of isopropylcyclohexane by atmospheric oxygen.
Zhur.ob.khim. 32 no.3:562-567 F '62. (MIRA 15:2)

1. Voronezhskiy gosudarstvennyy universitet i Kiyevskiy
politekhnicheskii institut.

(Cyclohexane)
(Oxidation)



SIGOV, S.A.; IBRAGIMOV, Yu.I.

Mechanism of conversion process of carbon monoxide by steam.
Izv. AN Uz. SSR. Ser. Khim. nauk. no.3:21-27 '57. (MIRA 11:9)
(Carbon monoxide) (Steam)

SIGOV, S.A.; LEVKIN, Z.M.; IBRAGIMOV, Yu.I.

Effect of compression on the mechanical strength and activity of
catalysts. Dokl. AN Uz. SSR no.10:31-34 '57. (MIRA 11:5)

1. Sredneasiatskiy politekhnicheskiy institut. Predstavleno akade-
mikom AN UzSSR M.N. Kadiyevym.
(Catalysts)

Sigov, S.A.

3-58-6-31/34

AUTHORS: Rustamov, Kh.R., Professor, Doctor of Chemical Sciences;
Sigov, S.A. Dotsert, Candidate of Chemical Sciences.

TITLE: Bibliography (Bibliografiya) A Brief and **Concise Textbook**
(Kratkiy i soderzhatel'nyy uchebnik)

PERIODICAL: Vestnik Vysshey Shkoly, 1958, Nr 6, pp 91-92 (USSR)

ABSTRACT: The only textbook for a course in general chemistry at non-chemical vuzes was, until recently, that of N.L. Glinka. This seriously hampered the study of general chemistry at higher schools, where 100 hours are assigned for this subject. The problem has now been solved to a certain extent by the publication of M.K. Strugatskiy's and B.P. Nadeyinskiy's textbook [Ref. 1]. The article contains a review on the various chapters of the book. There is 1 Soviet reference.

ASSOCIATION: Sredneaziatskiy politekhnicheskiy institut (Central Asian Polytechnical Institute)

Card 1/1

SIGOV, S.A.; SADYKOVA, G.Ye.

Equilibrium in the system $P_2O_5 - Fe_2O_3 - H_2O$. Uzb.khim.

zhur. no.4:18-21 '59.

(MIRA 13:1)

1. Sredneaziatskiy politekhnicheskiy institut.
(Phase rule and equilibrium) (Phosphorus oxide)
(Iron oxide)

SIGOV, S.A.; MIRZAYEV, F.H.

Decomposition of the phosphites from the Yegor'yevsk deposit
by nitric acid containing sodium sulfate. Uzb.khim.zhur.
no.5:23-29 '59. (MIRA 13:2)

1. Sredneaziatskiy politekhnicheskiy institut.
(Yegor'yevsk region (Moscow Province)--Phosphites)
(Nitric acid) (Sodium sulfate)

SIGOV, S.A.; IBRAGIMOV, Yu.I.

Decomposition of Karatau phosphorites by nitric acid containing
ammonium sulfate. Uzb.khim.shur. no.6:12-16 '59. (MIRA 13:4)

1.Sredneaziatskiy politekhnicheskiy institut.
(Phosphorites) (Nitric acid)

SIGOV, S.A.; MIRZAYEV, F.M.

Concentration of solutions of phosphoric acid containing sodium
nitrate. Uzb. khim. zhur. no.1:13-17 '60. (MIRA 14:4)

1. Sredneaziatskiy politekhnicheskiy institut.
(phosphoric acid)
(sodium nitrate)

IBRAGIMOV, Yu.I.; GRENENSHCHIKOVA, N.P.; ALIYEV, Ya.Yu.; SIGOV, S.A.

Conversion of natural gas and water vapor on iron-nickel catalysts. *Usb. khim. zhr.* no.4:49-54 '60. (MIRA 13:9)

1. Institut khimii ~~U~~ USSR.
(Catalysts, Nickel) (Gas, Natural)

SIGOV, S.A.; SADYKOVA, G.Ya.

Equilibrium of the system $P_2O_5 - Al_2O_3 - H_2O$. Uzb.khim.zhur.
no.2:7-12 '61. (MIRA 14:10)

1. Sredneaziatskiy politekhnicheskiy institut.
(Aluminum phosphate) (Systems (Chemistry))

SIGOV, S.A.; LEYKIN, Z.M.; DAYCHI, R.I.

Thermodynamics of some processes for the preparation of calcium cyanamide by a noncarbide method. Uzb. khim. zhur. 7 no.2: 25-34 '63. (MIRA 16:8)

1. Tashkentskiy politekhnicheskiy institut.
(Calcium cyanamide) (Thermodynamics)

SIGOV, S.A.; LEYKIN, Z.M.; DAYCHI, R.I.

Production of calcium cyanamide by the carbideless method.
Uzb.khim.zhur. 8 no.4:73-78 '64. (MIRA 17:5)

1. Tashkentskiy politehnicheskiy institut.

Slav, . . . ; AMERICA

Conversion of Central Asia with regard to 8
no. 5:67-73 (MIRA 18:5)

1. Institut Khimicheskoi Obrab.

SIGOV, S. G.

DECLASSIFIED

1964

FINANCE

1963

L 43888-66 EWT(1) GW

ACC NR: AT6011144

SOURCE CODE: UR/3197/65/000/002/0158/0163

AUTHOR: Sigov, V. A.ORG: Ural Geological Administration (Ural'skoye geologicheskoye upravleniye)

TITLE: Comparative evaluation of the contemporary deformation of the Urals

SOURCE: AN EstSSR. Institut fiziki i astronomii. Sovremennyye dvizheniya zemnoy kory. Recent crustal movements, no. 2, 1965, 158-163

TOPIC TAGS: epeirogeny, orogeny, crustal deformation, repeated leveling, seismicity

ABSTRACT: Leveling, run twice along three lines over the Urals (Liyepaya—Sverdlovsk, Chelyabinsk—Kurgam, and Bezenchuk—Ufa—Urzhumka) provides the basic data used in a study of the contemporary crustal movements in the Ural Mountains. The study indicated that the rates of movements for the West Siberian Plain were 5 mm/yr in 100 km, 1.4—4.2 mm/yr in 100 km on the Russian platform and 1.7—2.3 mm/yr in 100 km, in the southern Urals. The article stresses the importance of determining the magnitudes, directions, and periodic variations of secular movements in these areas. Orig. art. has: 1 table. [ER]

SUB CODE: 08/ SUBM DATE: none/ ORIG REF: 006
Card 1/1

SIGOV, V.V.

Over-all mechanization of the loading and unloading of charcoal.
Gidroliz.i lesokhim.prom.9 no.1:20 '56. (MLRA 9:6)

1.Glavnyy inzhener Ashinskogo lesokhimicheskogo kombinata.
(Charcoal) (Loading and unloading)

SIGOV. L. V.

Ashinskiy Wood Chemical Combine will be remodeled. Gidroliz i
lesokhim. prom. 12 no.5:31 '59. (MIRA 12:10)
(Ashinskiy--Wood-using industries)

SIGOV, V.V.

Operation of the report section on liquid fuel. Hidroliz. 1
lesokhim, prom. 14 no.2:19-21 '61. (MIRA 14:3)

1. Ashinskiy lesokhimicheskiy kombinat.
(Asha--Wood--Chemistry)
(Liquid fuels)

ABDUVALIYEV, A.A.; KHAYDAROV, Kh.F.; SULTANOV, A.S.; SIGOV, V.V.;
DORONIN, N.L.; TARASOVA, A.G.

Production of polysylvan from the wood-chemical sylvan. Gidroliz.
i lesokhim.prom. 17 no.2:22-23 '64. (MIRA 17:4)

1. Institut khimii polimerov AN UzbSSR (for Abduvaliyev,
Khaydarov, Sultanov). 2. Ashinskiy lesokhimicheskiy kombinat
(for Sigov, Doronin, Tarasova).

S/203/63/003/001/005/022
A06.1/A126

24.2120

AUTHORS: Sigov, Yu. S., Tverskoy, B. A.

TITLE: On the structure of the boundary layer between a magnetic field and a plasma stream

PERIODICAL: Geomagnetizm i aeronomiya, v. 3, no. 1, 1963, 43 - 49

TEXT: The boundary layer between a plasma stream and a magnetic field was investigated by taking account of the thermal spread of the ion velocities. By starting from the linear equations of electron motion in a magnetic field it is shown that the electric field can be neglected when examining an equilibrium boundary between corpuscular stream and magnetic field. The plane boundary layer between a magnetic field being uniform in $+\infty$ and a plasma stream coming from $-\infty$ is investigated. The problem, which is mathematically equivalent to the problem of equilibrium of a plasma stream being normal to a magnetic field and consisting of positive and negative ions of equal mass, is solved by the method of velocity groups. Taking the thermal spread of ion velocities into account

✓B

Card 1/2

On the structure of the boundary layer

9/203/63/003/001/005/022
A061/A126

leads to a thin structure of the boundary layer. The existence of a boundary layer of elevated particle density can be the cause of autonomous instabilities. The oscillations occurring as a result of these instabilities are apt to produce interesting effects, e.g. the trapping of particles by the geomagnetic field. There are 5 figures.

ASSOCIATION: Matematicheskiy institut im. V. A. Steklova AN SSSR
(Institute of Mathematics imeni V. A. Steklov AS USSR)
Moskovskiy gosudarstvennyy universitet, Institut yadernoy fiziki (Moscow State University, Institute of Nuclear Physics)

SUBMITTED: October 16, 1962

Card 2/2

VB

10 2000

24.2120

25330

S/020/61/138/006/012/019
B104/B214

AUTHOR: Sigov, Yu. S.

TITLE: Electrostatic effects during the motion of a rarefied plasma in an inhomogeneous magnetic field

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 138, no. 6, 1961
1337 - 1340

TEXT: An inhomogeneous magnetic field $\vec{H}(r)$, in which a current of charged particles is moving, causes a separation of the electron and ion components of the plasma in regions whose dimensions are determined by the scale L of the inhomogeneity of the magnetic field. The formation of extensive space charges in plasma leads to a jump of the electrostatic potential whose magnitude depends on the degree of inhomogeneity of \vec{H} as well as on the physical characteristics of the plasma current. This nonlinear effect is studied in this paper for the case $\vec{H} = \vec{H}(x)$. A plane steady motion of a twocomponent plasma in the magnetic field $\vec{H}(x) = H_0 \vec{i} +$

Card 1/6

25336

Electrostatic effects during ...

S/020/61/138/006/012/019
B104/B214

$\psi(x)$ is investigated. Here $\eta(x)$ is a nondecreasing function with $\eta = 0$ for $x \leq L/2$ and $\eta = 1$ for $x \geq L/2$. The author limits himself to the approximation in which the kinetic "drift" equations (N. V. Bogolyubov et al., Ukr. matem. zhurn., 7, no. 1, 5, (1955); L. I. Rudakov et al., Sborn. fizika plazmy, 2, Izd. AN SSSR, 1958) can be used for the distribution functions $f_{i,e}(r, v, t)$ of the ions (electrons):

$$\mu = \frac{v_{\perp}^2}{2\omega} = \text{const}; \quad \frac{\pi v^2}{2} + e\varphi + \mu B = \xi = \text{const}; \quad \omega = \text{const}. \quad (4)$$

Here $\vec{H} = \vec{H}_0 + \vec{h}$, where \vec{h} is the magnetic field associated with the drifting currents in the plasma. v and v_{\perp} are the longitudinal and transverse components of the particle velocity with respect to \vec{H} . m, e, μ are the mass, charge, and magnetic moment of the particles; φ is the electrostatic potential. Currents are investigated for which

Card 2/6

25338

S/O20/61/138/006/012/019

B104/B214

Electrostatic effects during ...

$$\frac{\partial f}{\partial y} = H \frac{\partial f}{\partial x} = 0 \text{ for } x = -\infty.$$

If thereby f_i and f_e are known for $x = -\infty$, i.e., the velocity distributions of both kinds of particles in the incident particle flux are known, f_i and f_e are determined by the relations (4) as solution of the "drift" equation. Solutions of a system of nonlinear differential equations for $\psi(x)$ and $h(x)$ are obtained only with great difficulty. However, the exact behavior of the potential is not of interest for the ring problem; it is only the discontinuity $\Delta\psi = \psi(\infty) - \psi(-\infty)$ caused by the interaction of the plasma current with the inhomogeneity of \vec{H} . Using the plane character of the inhomogeneity of the magnetic field the problem becomes very much simplified and reduces to the solution of a system of transcendental equations for the asymptotic values of ψ and h . From (5) and the known electrostatic results the author obtains: $\psi(-\infty) = 0$, $\psi(\infty) = \psi_1$; $-h_y(-\infty) = h_y(\infty) = h_1$. The equations for the "discontinuities" ψ_1 and h_1 are obtained from the condition of quasineutrality of the transmitted and

Card 3/6

25336

S/020/61/138/006/012/019
B104/B214

Electrostatic effects during ...

reflected plasma currents $n_{i1}^+ = n_{e1}^+$, $n_{i0}^- = n_{e0}^-$, and the condition of the continuity of the XY components of the momentum flux density of the system "particle-field" $(T_{xy}^{(i)} + T_{xy}^{(e)})_0 = T_{xy}^{(i)} + T_{xy}^{(e)}_1$. From these relations

$$\int_0^{\infty} \int_0^h (f_{i1}^+ - f_{e1}^-) dq dw = 0; \tag{6}$$

$$\frac{2A^2 n_0}{V} \int_0^{\infty} \int_0^h \left\{ \frac{H_0 h_1}{H_0^2 + h_1^2} (f_{i0}^+ + e f_{e0}^-) - \frac{H_0 (H_w + h_1)}{V (H_0^2 + h_1^2) [H_0^2 + (H_w + h_1)^2]} (f_{i1}^+ + e f_{e1}^-) \right\} w^2 dq dw = \frac{h_1}{H_0}, \tag{7}$$

where $f_i^+ = \frac{I_{i1}}{\sqrt{w^2 - \psi - \tau(s-1)q}}$, $f_e^- = \frac{I_{e0}}{\sqrt{w^2 + \psi/e - \theta(s-1)q/e}}$

Card 4/6

25336

S/020/61/138/006/012/019
B104/B214

Electrostatic effects during...

are derived for $\psi^1 = 2e\phi^1/m_1V^2$ and h_1 . f_1 , f_e , and f are normalized according to the condition:

$$\int_0^{\infty} \int_0^{\infty} s \left[\begin{matrix} \psi^1 & \psi^0 \\ 0 & 0 \end{matrix} \right] f^1 dq dw \Big|_{10}^+ = \langle n \rangle_0^+ = n_0.$$

Here, $\xi = m_e/m_1$; $\theta = 0 \frac{1}{h_0} / C \frac{1}{10}$ is the ratio of the "transverse temperatures" of the ions and electrons; $T = 2\theta_{10}/m_1V^2$; $s = H/H_0$;

$\lambda = \sqrt{H_0^2/4\pi n_0 q_0 V^2}$. (6) and (7) become very much simplified for $\lambda \gg 1$.

As an example the passage of a particle packet through the field (1) is investigated. It is found that the potential jump in an inhomogeneous \hat{H} field leads to an electrostatic displacement of the critical value $s_{cr}^1 = (H_1/H_0)_{cr}$, and the "penetration" of electrons through ions causes a strong adiabatic "transverse heating" of the light electron component.

Card 5/6

83934
S/188/60/000/004/010/014
B005/B060

26.2244
AUTHOR:

Sigov, Yu. S.

TITLE:

The Effect of Scattering Anisotropy¹⁹ on the Critical State of a Multiplying Sphere

PERIODICAL:

Vestnik Moskovskogo universiteta. Seriya 3, fizika, astronomiya, 1960, No. 4, pp. 79-85

TEXT: The so-called S_N method by Carlson is particularly well suited for the calculation of fast reactors, since it yields very precise results with relatively simple calculations. By this method the integro-differential equation for the neutron transfer is integrated successively over the angle μ and the coordinate r on the assumption that the dependence of the neutron flux on the cosine of the angle μ and on the coordinate r is linear in each of N equal integrals over μ and of M equal integrals over r . In the one-group theory, this method leads to a system of $M(N + 1)$ linear algebraic equations. Carlson's method, correspondingly generalized, is applied here to determine the

Card 1/3

The Effect of Scattering Anisotropy on the
Critical State of a Multiplying Sphere

8393h
S/188/60/000/004/010/014
B005/B060

effect of scattering anisotropy on the critical radius and on the spatial distribution of neutron flux density in a reactor. The calculation in one-group approximation was carried out for the case of a non-reflected homogeneous spherical U^{235} reactor for a neutron energy of $\sim 1-2$ Mev. The kinetic equation for the neutron flux density as a function of r and μ , applying to the present case, is written down. The calculations were made on the electron computer "Strela". From 11 to 15 iterations were necessary in the different variants to attain the required accuracy (two safe decimals for the critical radius). The scattering anisotropy was both accurately calculated by the S_N scheme ($N = 10$) and determined in transport and isotropic approximation for five given indicatrices. Fig. 1 shows the dependence of these scattering indicatrices on the cosine of the scattering angle. The fundamental characteristics of indicatrices and calculation results for the individual variants are compiled in a Table. Two Figs. show the general course of the curves for the radial dependence of neutron density and neutron flux density under precise consideration of anisotropy in isotropic and transport approximation. Another Fig. illustrates the general course of the

Card 2/3