

STRELKOV, S.A.

Two principles of geomorphological mapping and the selection  
of one of them for making general geomorphological maps.  
Geol. i geofiz. no.5:73-79 '60. (MIRA 13:9)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR.  
(Geology, Structural--Maps)

STRELKOV, S.

Review of G.S.Gorelik's book "Oscillations and waves; introduction  
to acoustics, radiophysics and optics)". Usp.fiz.nauk 72 no.1:  
157-158 S 60. (MIRA 13:8)  
(Waves) (Vibration) (Gorelik, G.S.)

STRELKOV, S.A.

Using the method of genetically homogeneous surfaces for the  
compilation of small-scale geomorphological maps. Trudy NIIGA  
114:180-184 '60. (MIRA 13:11)  
(Geology, Structural--Maps)

STRELKOV, S.A.

Some regular features of the formation and distribution of  
glacial deposits in the northern part of the U.S.S.R. Dokl. AN  
SSSR 144 no.2:427-430 My '62. (MIRA 15:5)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR.  
Predstavleno akademikom A.L.Yanshinym.  
(Russia, Northern--Geology, Stratigraphic)

STRELKOV, S.A.

Zoning of the northern part of Western Siberia according to the morphology and genesis of the glacier relief in connection with the dynamics of the Zyryanka glaciation. Dokl.AN SSSR 145 (MIRA 15:7) no.3:642-645 .11 '62.

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR.  
Predstavleno akademikom A.L.Yanshinym.  
(West Siberian Plain -Geomorphology)

STRELKOV, S.A.

Genesis of marginal formations and the glacial relief in the  
northeastern part of Western Siberia. Trudy Kom. chetv. per.  
21:118-125 '63. (MIRA 16:10)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR.

MARTIN, J. W., MICHIGAN, J. W., MICHIGAN, J. W.

Photography of the ... (1978)  
Kom. ... (1978)

STRELKOV, S.A.

Zyryanka glaciation on the northern part of the Central Siberian  
Plateau. Trudy Inst. geol. i geofiz. Sib. otd. AN SSSR no.9:  
5-19 '64. (MIRA 17:12)



STRELKOV, S.A.; SAKS, V.I., otv. red.

[North of Siberia; History of the development of the  
relief in Siberia and the Far East] Sever Sibiri; istoriia  
razvitiia rel'efa Sibiri i Dal'nego Vostoka. Moskva, Izd-  
vo "Nauka," 1965. 333 p. (MIRA 18:3)

1. Chlen-korrespondent AN SSSR (for Saks).

STREIKOV, S.A.

Ring tectonic structures in the northern part of the Siberian Platform.  
Dokl. AN SSSR 162 no.5:1142-1144 Je '65. (MIRA 18:7)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR.  
Submitted March 5, 1965.

STREL'KOV, S. A.

"Main stages of evolution of relief of Arctic Eurasia in Quaternary Period and their correlation with those of North America."

report submitted for the 7th Intl Cong, Intl Assoc for Quaternary Research, Boulder & Denver, Colorado, 30 Aug-5 Sep 65.

SAKS, V.H., red.; SHAPIRO, V.A., zam. glav. red.; BLIKE, D.I., red.; SHAPIRO, V.Y., red.; VOLKOVA, V.S., red.; GROMOV, V.I., red.; BYAKOVA, I.K., red.; LAVRENTYEV, A.I. red.; MARTYANOV, V.A., red.; NIKOLAYEV, N.I., red.; SIRELKOV, S.A., red.; SHATSKIY, S.L., red.; CHOCCHIA, N.G., red.; SHANTSER, Ya.L., red.; SHATSKIY, S.B., red.

[Basic problems in the study of the Quaternary period; for the VII Congress of INQUA, U.S.S.R., 1965] Osnovnye problemy izucheniya kvarternogo perioda; k VII Kongressu INQUA (SSSR, 1965). Moskva, Nauka, 1965. 495 p. (MIRA 18:9)

1. Akademiya nauk SSSR. Sibirskaya stolitsa. Institut geologii i geofiziki. 2. Chlen-korrespondent AN SSSR (for Saks).

STOBLKOV, S. S.

STRELMAN, S. I. (Veterinarian, Myassk Sovkhoz "Zolotoproduktsiya") Action of the English preparation novarsenobillon.

So: Veterinariya; 23; 4; April 1946: uncl.  
TACOM

PONOMAREV, B.V.; STRELKOV, S.N.; STARCHAKOVA, I.I., red.

[Manual for accounting in state commerce] Spravochnik  
po bukhgalterskomu uchetu v gosudarstvennoi torgovle.  
Izd.3., perer. Moskva, Ekonomika, 1964. 687 p.  
(MIRA 17:6)

STRELKOV, S.P.

Demonstration of the role of the axes of "free revolution"  
of a body. Usp. fiz. nauk 81 no.4:763 D '63. (MIRA 17:1)

STEFELSON, Sergey Pavlovich; EL'TSIN, Iosif Abramovich; YAKOVLEV,  
Ivan Alekseyevich; KHAYKIN, A.M., prof., red.;  
LIVCHITS, S.L., red.

[Problems in a general physics course] Sbornik zadach po  
obshchemu kursu fiziki. Moskva, Nauka. Pt.1. [Mechanics,  
electricity and magnetism] Mekhanika, elektrichestvo i  
magnetizm. Izd.3. 1ed red. S.E.Ishkina. 1964. 312 p.  
(MIRA 17.9)



SHIL'NIK, Sergei Pavlovich; MARGULIS, U.Ya., red.

[Introduction to the theory of oscillations] Vvedenie  
v teoriyu kolebaniy. Izd. 2., perer. Moskva, Nauka,  
1962. 437 p. (MIRA 17:12)

FA76T15

STRELKOV, S. P.

USSR/Electricity  
Amplifiers, Linear  
Distortion

May-Jun 1948

"General Theory of Linear Amplifiers, I," S. P. Strelkov, Sci Res Inst of Phys, Lab of Oscillation, Moscow State U, 12 pp

"Avtomat i Telemekhan" Vol IX, No 3

Attempts to give approximate value of distortion by new methods. Consists of two parts. Part I gives general conditions, indicates basic methods of analysis, and reaches qualitative conclusions. Submitted 20 Apr 1948.

76T15

STRELKOV, S. P.

Strelkov, S. P. - "Reproduction of a linear system," Vestnik Mosk, un-ta, 1948,  
No. 11, p. 61-68

So: U#3566, 15 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 13, 1949)

STRELKOV, S. P.

Author: Strelkov, S. P.

Title: The complete works on the general physics course. (Sbornik zadach po obshchemu kursu fiziki.)

City: Moscow

Publisher: State Printing House of Technical and Theoretical Literature

Date: 1949

Available: Library of Congress

Source: Monthly List of Russian Accessions, Vol. 4, No. 1, p. 21

STRELKOV, S.P.

On the General Theory of Linear Amplifiers (original text in Russian). S. P. Strelkov; Automatics & Telemechanics (USSR) July-Aug '49 (10-4 Bi-Midy); pp 274-285; 6 illus, 51 eq.

In order to evaluate the quality of reproduction obtained with a linear amplifier, it was necessary to introduce into the problem the relative error of reproduction. The method for the determination of errors of reproduction is described, and simple functions are explained for the evaluation of the magnitude of the relative error. The problem is concerned with the determination of the most favorable disposition of neutrals and plusses of a complex coefficient of amplification on the surface of a complex frequency system (or in Russian terminology, a complex spectrum of a reproduction system). The evaluation takes place from two points of view: (1) from the point of best reproductions obtained through forced motions (oscillations) at the discharge of the amplifier applied to the mouth of the amplifier of reaction; and (2) from the point of view of decrease-

ASR 31.4 METALLURGICAL LITERATURE CLASSIFICATION

ing the abnormal effect of natural motions originating in the moment of activating the reaction. The determination of the accompanying natural oscillations according to given formulas facilitates considerably the selection of the best disposition of individual points of the spectrum and the following conclusion can be drawn. It is desired to arrange the neutrals close to the region where the poles are distributed. The elimination of neutrals from the region of the poles increases the amplitude of the natural oscillations. Each terminal from a pair of complex-coupled terminals should, if possible, be removed from each other. A removed terminal (or pair of terminals) presents no danger when the number of neutrals is considerably smaller than the number of terminals. The closeness of two (or several) terminals to each other does not present any greater danger if they are located far from the imaginary axis

3

14-2-72

STRELKOV, S. P.

PHASE II      TREASURE ISLAND BIBLIOGRAPHICAL REPORT      AID 458 - II

BOOK

Call No.: QA935.S765

Author: STRELKOV, S. P.

Full Title: INTRODUCTION TO THE THEORY OF OSCILLATION

Transliterated Title: Vvedeniye v teoriyu kolebaniy

PUBLISHING DATA

Originating Agency: None

Publishing House: State Publishing House of Technical and  
Theoretical Literature

Date: 1950

No. pp.: 344

No. of copies: 10,000

Editorial Staff:

Others: Prof. K. F. Teodorchik and Prof. V. V. Migulin are thanked  
for their valuable advice.

TEXT DATA

Coverage: This is a textbook on the general theory of oscillation.

Taken under consideration are mechanical, electrical and electro-  
mechanical oscillations with one, two and more degrees of freedom.  
Diagrams and graphs.

Preface: The contents of this book correspond to a general course on  
the theory of oscillation which was given by the author in the  
Department of Physics of Moskva University in 1944-1949.

Introduction: Oscillations occur everywhere in the field of engineering  
and physics at various occasions. The analysis of these oscillations,

STRELKOV, S. P.

STRELKOV, S. P.

Vvedenie v teoriiu kolebanii. Dopushcheno v kachestve uchebnika dlia vysshikh ucheb. zavedenii. Moskva, Gostekhizdat, 1950. 344 p., illus.

Bibliography: p. 340.

Title tr.: Introduction to the theory of oscillations. Approved as a textbook for institutions of higher learning.

Reviewed by N. I. Esafov in Sovetskaia kniga, 1951, no. 2, p. 35-38.

TL710.S9

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.



MIGULIN, V.V.; STRELKOV, S.P.; TEODORCHIK, K.F.

The work of Moscow University scholars in the field of physics  
of vibrations and contemporary problems in the theory of vibration  
Vest. Mosk. un. 10 no. 45:125-132 Ap-May '55. (MLRA 8:8)  
(Vibration)

STRELKOV, Sergey Pavlovich; ALEKSEYEV, D.M., redaktor; NEGRIMOVSKAYA, P.A.,  
tekhnicheskii redaktor

[General course in physics] Obshchii kurs fiziki. Moskva, Gos.  
izd-vo tekhniko-teoret. lit-ry. Vol.1. [Mechanics] Mekhanika.  
1956. 456 p. (MLRA 10:2)  
(Mechanics)

SOV/112-59-1-1368

Translation from: Referativnyy zhurnal. Elektrotehnika, 1959, Nr 1, p 188 (USSR)

AUTHOR: Strelkov, S. P., and Smyslov, V. I.

TITLE: Electromechanical Model of a Flatter

PERIODICAL: V sb.: Mezhevuz. konferentsiya po primeneniyu modelirovaniya v elektrotekhnich. zadachakh i matem. modelirovaniya. M., 1957, p 130

ABSTRACT: Bibliographic entry.

Card 1/1

120-3-14/40

AUTHORS: Strelkov, S.P. and Yugov, V.A.

TITLE: Measurement of the Coefficient of Dry Friction During Harmonic Oscillations (Izmereniye koeffitsiyenta sukhogo treniya pri garmonicheskikh kolebaniyakh)

PERIODICAL: Pribery i Tekhnika Eksperimenta, 1957, Nr 3, pp.54-56 (USSR)

ABSTRACT: An apparatus is described which can be used to measure the static coefficient of friction during the action of a low frequency forcer (0 to 100 c/s). It is usually assumed that the static coefficient of friction does not depend on the nature of changes in the applied force. It is now suggested that the limiting value of the force of friction depends on the nature and the speed of changes in the applied force. Experiments were carried out in which the limiting value of the frictional force was measured with a sinusoidal variation in the applied force with the frequency of 0 to 100 c/s. The apparatus is shown diagrammatically in Fig.1. The specimen is placed on a small table which executes sinusoidal oscillations in an horizontal plane. At very low amplitudes the specimen moves together with the oscillating table. As the amplitude increases beyond a certain value the specimen moves relative to the table. At

and 1/2

120-5-14/40

Measurement of the Coefficient of Dry Friction During Harmonic Oscillations.

this moment the amplitude of the oscillation is measured. The coefficient of friction is then given by

$$\mu_c = a\omega^2/g$$

where  $\mu_c$  is the static coefficient of friction,  $a$  is the critical amplitude,  $\omega$  is the corresponding frequency and  $g$  is the acceleration due to gravity. The experimental results shown in Figs.2 to 6 indicate that the static coefficient of friction is a function of the frequency of the applied force. The coefficient of friction decreases as the frequency increases. There are 6 diagrams, no tables, and 6 references, 5 Russian and 1 English.

ASSOCIATION: Department of Physics of Moscow State University imeni M.V.Lomonosov (Fizicheskiy fakul'tet MGU im. M.V.Lomonosova)

SUBMITTED: June 5, 1956.

AVAILABLE: Library of Congress.

Card 2/2 1. Harmonic oscillators 2. Friction-Measurement-Analysis

STRELKOV, S.P.

Applying Galerkin's method to self-oscillation problems. Vest.Mosk.  
un.Ser.mat.,mekh.,astron.,fiz., khim. 12 no.3:51-55 '57.  
(MIRA 11:3)

1.Kafedra kolebaniy Moskovskogo gosudarstvennogo universiteta.  
(Oscillations) (Mathematical physics)

6484

SOV/141-1-5-6-28/28

AUTHORS: Strelkov, S. P. and Siin, R. A.

TITLE: Book Review

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiofizika, 1958, Vol 1, Nr 5-6, pp 188 - 189 (USSR)

ABSTRACT: Review of the book by V.I. Kalinin and G.M. Gershteyn - "Introduction to Radiophysics". Gostekhizdat, 1957. The book gives a short and systematic exposition of the phenomena which take place during the reception, transmission, transmission and generation of electromagnetic vibrations. The book is intended for students who need an introduction to radio. It is not suitable for universities and schools of advanced technology. In spite of a number of errors and misprints, it is suggested that the book would be very useful and it is hoped that in the second edition these errors will be rectified.

~~6484~~

9(6), 10(6)

AUTHORS: Ordanovich, A.Ye., and Strelkov, S.P. SOV/155-58-2-39/47

TITLE: Electronic Model of the Torded Bending Vibrations of an Airplane Wing (Elektronnaya model' izgibno-krutil'nykh kolebaniy kryla samoleta)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Fiziko-matematicheskiye nauki, 1958, Nr 2, pp 181-188 (USSR)

ABSTRACT: At first a long straight wing is understood as a clamped beam. Then the latter is decomposed into eight cells arranged with respect to the length of the beam which are replaced by mechanic models. The coordinates of the eight shifts and the eight angles of twist are combined one with another by a system of differential equations. Then an electronic model is proposed which corresponds to this system of equations. The model consists of 32 integrators and 48 summators, the basic scheme contains 288 tubes. The experimental examination of the model yielded relatively good agreement of the obtained results with well-known data for the first and second harmonic of wing vibrations (error 2-3%). For the third harmonic the error amounted up to 14%. There are 7 references, 3 of which are Soviet, 3 American, and 1 English.

~~Card 1/2~~

*Moscow State Univ in M.V. Lomonosov*



STRELKOV, S.P.; KHARLAMOV, A.A.

Studying the flutter of a wing with an aileron. Nauch.dokl.  
vys.shkoly; fiz.-mat.nauki no.3:116-125 '59.  
(MIRA 13:6)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.  
(Airfoils)

1(4)  
AUTHORS: Romanovskiy, Yu. M., Strelkov, S. P. SOV/179-59-4-1/40  
(Moscow)

TITLE: On the Influence of Atmospheric Turbulence on an Airplane With Elastic Wings at Different Flying Speeds

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye tekhnicheskikh nauk. Mekhanika i mashinostroyeniye, 1959, Nr 4, pp 3 - 10 (USSR)

ABSTRACT: The restrained vibrations of the elastic wing of an airplane under the influence of turbulence in dependence on the flying speed are investigated here. The investigation refers to airplanes with straight wings with a high wing aspect ratio at subsonic flying speed. Therefore, the computation of aerodynamic loads is based on the unsteady theory of motion of a wing with infinite wing aspect ratio in a plane current (Ref 1). With some restrictions, the external fluctuation effect on the wing of the airplane can be regarded as a steadily normal random process depending on time (Ref 2). For this reason, and as the entire system is assumed to be linear, the motion of this system can be described on the basis of the correlation theory. The equations of the system are investigated by the method of Bubnov and

Card 1/3

On the Influence of Atmospheric Turbulence on an  
Airplane With Elastic Wings at Different Flying Speeds

SOV/179-59-4-1/40

Galerkin and a system of equations (1.8) is obtained, the solution of which in a general form is not possible due to its extent. A program was set up to solve this system. By means of this program, the values required were obtained on the digital electron computer of the "Strela" type. The formulas for the statistic characteristics of restrained wing vibrations (i. e. the statistic characteristics of the bending and torsional moments of the wing) are indicated. The method described permits these characteristics to be obtained in a simple way. By means of them, vibrations of different degrees of freedom can be taken into account. An increase in the number of degrees of freedom by one causes an increase in the order of magnitude of the system of algebraic equations by two orders. The program must only be modified inconsiderably. Accordingly, the time required for the computation increases multiply. A comparison of statistic vibration characteristics on the same airplane model shows that the wing torsion may not be neglected at sufficiently low frequencies of the wing torsion near the critical velocities of the flutter, and that the joint bending- and

Card 2/3

On the Influence of Atmospheric Turbulence on an Airplane With Elastic Wings at Different Flying Speeds SOV/179-59-4-1/40

torsional vibrations of the wing must absolutely be taken into account in the computation. V. A. Druzhinina and V. B. Glasko compiled the program, and made the computations on the "Strela" computer. There are 7 figures, 2 tables, and 10 references, 3 of which are Soviet.

ASSOCIATION: Fizicheskiy fakul'tet MGU (Department of Physics of Moscow State University)

SUBMITTED: January 8, 1959

Card 3/3

84471

16.7300 1347, 1103, 1327  
10.6200

S/103/60/021/010/002/010  
B012/B063

AUTHORS: Landa, P. S., Strelkov, S. P. (Moscow)

TITLE: Stability of the Aileron Control System in the Presence of Turbulent Disturbances

PERIODICAL: Avtomatika i telemekhanika, 1960, Vol. 21, No. 10, pp. 1352-1364

TEXT: The wings of a flying airplane form a complex system of irregular vibrations with distributed parameters. Even modern computers are not able to solve the mathematical problem of wing stabilization. A commonly used method of approximation is that described in Ref. 1, which was devised by Rayleigh and Ritts, and was further developed by Bubnov and Galerkin. In this method, the wing and the aileron, which are in a steady flow of air, are regarded as a vibrating system with two degrees of freedom, in which some parameters depend on the flow velocity. In the present paper, the authors investigate the vibrations and stability of such a system strongly influenced by non-linear elements and statistical actions which are caused by the turbulence of the atmosphere. The statistical

Card 1/4  
3

X

Stability of the Aileron Control System in  
the Presence of Turbulent Disturbances

84471  
S/103/60/021/010/002/010  
B012/B063

estimate of the probability that such vibrations occur during a given time interval is described next. Since the calculations are very extensive and time-consuming inspite of all the approximations made here, the authors first determine the limits of the possible modes of operation by using the method of simulation. Then, they calculate the amplitudes of the limiting cycles and the excitation probabilities for the parameter values obtained. By using the Bubnov-Galerkin method, they write down equations (1) for the bending vibrations of a wing with an aileron fixed on one side (see Fig. 1), and derive the basic equations (2) for these bending vibrations. Then, they study the basic formulas for the bending vibrations of a wing with a hydraulically controlled aileron. The principle of such a control system is shown in Fig. 2 and explained. Formula (3) expresses the vibrations occurring in the hydraulic system shown in Fig. 2. Next, the authors describe the determination of the stability range of an airplane wing for the case in which there are no non-linear elements in the control system of the aileron. This is done on an electric simulator. The measurement of the probability that the system is excited in the presence of turbulent disturbances is described. Then, the authors give a theoretical calculation of the stability of airplane wings in the presence of

Card 2/4

3

Stability of the Aileron Control System in  
the Presence of Turbulent Disturbances

91171  
S/133/60/021/010/002/010  
B012/B063

turbulent disturbances by using the Krylov - Bogolyubov method (harmonic linearization). In conclusion, they note that the existence of a parasitic positive feedback in the control system leads to an extension of the range of instability. Due to a strong excitation of vibrations during the flight through a turbulent atmosphere, the vibrations of the wings may increase. The probability that this occurs within a certain time interval depends on the intensity of fluctuations caused by the turbulent disturbance of the vertical component of flying speed. This probability decreases considerably with decreasing intensity. The principal part in the excitation of the system is played by the spectral components of turbulent disturbances near the frequency of the characteristic bending vibrations of the wing. The time of excitation of dangerous vibrations of wings may be statistically estimated as a function of the flying speed and the eigenfrequency of the aileron by using the above-described theoretical methods combined with investigations of the system on a simulator. The authors thank R. L. Stratonovich for his valuable advice. There are 8 figures, 2 tables, and 12 references: 8 Soviet. X

Card 3/4  
3

ROMANOVSKIY, Yu.M.; STRELKOV, S.P.

Effect of atmospheric turbulence on an airplane with elastic wings. Trudy Inst.fiz.atm. no.4:257-266 '62. (MIRA 15:12)  
(Atmospheric turbulence) (Aerodynamics)



LANDA, P.S. (Moskva); STRELKOV, S.P. (Moskva)

Wing flutter caused by nonlinear aerodynamic forces. Izv. AN SSSR. Otd.  
tekh.nauk. Mekh. i mashinostr. no. 5: 111-117 S-0 '62. (MIRA 15:10)  
(Flutter (Aerodynamics))

SMYKLOV, V.I.; STRELKOV, S.P. (Moscow)

"Electromechanical models of flutter"

Report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow 29 Jan - 5 Feb 64.

ACC NR: ~~AMSC00031~~

AM7002473

Monograph

UR/

Strelkov, Sergey Pavlovich

Introduction to the theory of oscillations (Vvedeniye v teoriyu kolebaniy) 2d ed., rev. Moscow, Izd-vo "Nauka", 64. 0437 p. illus., biblio., index. 20,000 copies printed

TOPIC TAGS: oscillation, oscillator theory, linear system, resonance theory

PURPOSE AND COVERAGE: The material presented in this book which is intended for students of physics at the university level, is based on a series of lectures given by the author at Moscow University (Physics Department) on the theory of oscillations. For the purpose of discussion, in this book oscillations (periodic, nonperiodic, and quasiperiodic) are divided into: 1) oscillations with one, and 2) oscillations with many degrees of freedom. Each of these is further subdivided into: 1) natural oscillations, 2) forced oscillations, 3) parametric oscillations, and 4) "auto" oscillations—the latter are defined as periodic motions arising within the system in the absence of external periodic stimulation.

Card 1/3

UDC: 534.0(075.8)

ACC NR: ~~AM5001631~~

AM7C02473

Furthermore, oscillations are considered as either linear or nonlinear. The author emphasizes that his approach to the subject is physical rather than mathematical. Gratitude is expressed to R. A. Silin and N. K. Miheyeva for their assistance in preparing the present edition.

TABLE OF CONTENT [abridged]:

Foreword -- 7

Introduction -- 9

Part I. Oscillations in systems with one degree of freedom

- Ch. 1. Natural oscillations in linear systems with one degree of freedom -- 13
- Ch. 2. Natural oscillations of a nonlinear conservative system -- 44
- Ch. 3. Forced oscillations in a linear system (oscillations induced by an external force) -- 53
- Ch. 4. Elements in the theory of recording instruments -- 95
- Ch. 5. Spectral methods -- 111
- Ch. 6. Applications of the theory of resonance to radio technology -- 142

Card 2/3

ACC NR: ~~AM5007031~~  
AM7002473

- Ch. 7. Forced oscillations in simplest systems with nonlinear elements -- 156
- Ch. 8. Parametric oscillations -- 172
- Ch. 9. Auto-oscillations -- 187

Part II. Oscillations in linear systems with several degrees of freedom

- Ch. 1. Oscillations in systems with two degrees of freedom -- 233
- Ch. 2. Oscillations in linear systems with several degrees of freedom -- 294
- Ch. 3. Application of matrices to the theory of oscillations in systems with several degrees of freedom -- 358
- Ch. 4. Oscillation systems with distributed parameters -- 379

Recommended reading -- 430

Alphabetical index -- 431

SUB CODE: 20/ SUBM DATE: 02Oct64/ ORIG REF: 012

Card 3/3

STRELEKOV, Sergey Pavlovich; RAYSKAYA, N.A., red.

[Mechanics] Mekhanika. Moskva, Nauka, 1965. 526 p.  
(MIRA 18:10)

STRELOV, Sergey Semenovich

DECEASED

1964

Peat Industry

1962

STRELKOV, S. YA.

DECEASED  
C' 1957

1962/6

SEE ILC

MEDICINE



STRELKOV, T.

Distribution of tritium in 4-octene prepared by catalytic hydrogenation; abstract. Glas Hem dr 27 no.9/10:516 '64

1. The Ruder Boskovic, Institute, Zagreb.

STRELKOV, V.I.

The Lavrovskiy generator. *Nauka i tekhn mladezh* 16 no.10:  
16-18 '64.

STRELKOV, V.

Wind in the service of man. NTO 4 no.10:60-61 0 '62.

(MIRA 15:9)

1. Akademiya pedagogicheskikh nauk.

(Wind power)

Z

I 25610-65 EED(b)-3/EWT(1)/EWP(j)/EWT(m)/I Pc-4/Pae-2 IJP(c) RM  
ACCESSION NR: AP5003788 S/0029/64/000/007/0032/0036

AUTHORS: Zakharov, V.; Korop, P.; Skryagin, L.; Fedchenko, V.; Il'in, D.;  
Massayev, K.; Strelkov, V.

35  
24  
β

TITLE: From aqualung to sport submarine

SOURCE: Tekhnika - molodezhi, no. 7, 1964, 32-36

TOPIC TAGS: <sup>9</sup>submarine photography, aqualung, swimming, underwater equipment

ABSTRACT: Underwater sporting equipment which can be handcrafted is reported on in this collection of articles. To record underwater scenes, a metal waterproof case has been designed, intended for use with the motion picture camera "Kiev-16." A waterproof flash lamp "ZV-5" has been developed which is effective under water up to distances of 0.5 m. It uses two flashlight batteries and has a power of 40 w. Several units can be linked by a synchronizing circuit which fires all lamps when the first lamp flashes. To assist in underwater navigation, a "submerged pilot" has been developed which contains a compass and a log. The log is a four-bladed aluminum 120-mm diameter propeller which turns 300-400 rev in 100 m of path. The blades are set at ~ 45° to the direction of motion and can be twisted slightly

Card 1/3

L 25610-85  
ACCESSION NR: AP5003788

for precise calibration of the instrument. Since a swimmer cannot travel much faster than 2.8 km/h, submerged transportation has been developed. The simplest device for underwater travel is a sled towed by a launch, provided with hand controls for depth regulations. A new underwater plastic glider<sup>14</sup> with narrow wings measures 3.5 x 2.4 x 0.6 m. It reaches a speed of 15 km/h when towed, is controlled by horizontal rudders and heeling rudders, and is steered by a rudder on the keel. A device called an aquaped carries bicycle-type pedal gear which turns a screw propeller. The driver, strapped to a saddle, can reach a speed of 5.2 km/h. A more elaborate device called a "submarine scooter," is strapped to the back of a swimmer wearing an aqualung, or is held before him by hand grips. The body is made in two plastic sections covered by thin layers of wood and iron. One compartment contains a 72-amp-h, 24-v storage battery. The other compartment contains the small 350-700-w electric motor and reducing gears. A shaft leads from the rear of this compartment to the screw which can drive it at 10 km/h. The most sophisticated device is the sporting submarine, either the "dry" or the "wet" type. In the "wet" type the submarine is flooded, and the sportsmen wear aqualungs. A one- or two-man type, with an airplane-like cabin, is powered by either a bicycle-type pedal (one man - 5.5 km/h, two man - 9 km/h) or by a 1-hp electric motor (15 km/h). Such a submarine may operate at depths of up to 50 m. A model of the "dry" type

Card 2/3

L 25610-65  
ACCESSION NR: AP5003788

(hermetically sealed) called the "Mermaid," is still in the "dream" stage. It would have a steel hull 4.6 m long and 1.5 m wide and would weigh 1125 kg. A glass conning tower would provide 360-degree visibility. Speeds of 12 km/h would be possible from a 2-hp electric motor supplied by lead storage batteries. The Mermaid could make 24-km trips, and its air supply would be sufficient for 24 hours. The craft would be well supplied with safety features (including compressed gas for emergency surfacing) and with provisions for the sportsman to be able to abandon a disabled submarine. Orig. art. has: 11 figures.

ASSOCIATION: none

SUBMITTED: 00

NO REF SOV: 000

ENCL: 00

OTHER: 000

SUB CODE: PH, ES

Card 3/3

MALINICHEV, G.D.; STRELKOV, V.A.

Turbines from Neva banks. Standartizatsiia 29 no.5:28-29  
My '65. (MIRA 19:1)

1. Spetsial'nyye korrespondenty zhurnala "Standartisatsiya".

SMOLINA, N.I.; SHCHERBATENKO, V.V.; STRELKOV, V.A.

Industrial testing of the method of briquet rusk manufacture.  
Trudy TSNIKHP no.8:89 '60. (MIRA 15:8)  
(Baking)





STRA... ..

... screen finds the standard. Standartizatsiia 29 no.8:  
37-38 '65. (MIRA 18:10)

L 05257-67 AB:/EEC(k)-2/EWP(c)/EWP(h)/EWT(d)/FBO/FSS-2 IJF(c) DE/JT

ACC NR: AM6018825

Monograph

UR/

Zikhanov, Konstantin Ivanovich; Strelkov, Viktor Grigor'yevich

93  
B+1

Remote control of rockets (Teleupravleniye raket) Moscow, Voenizdat M-va obor. SSSR, 1966. 110 p. illus. 13,000 copies printed. Series note: za voyenno-tekhnicheskiye znaniya

TOPIC TAGS: guided missile engineering, missile guidance equipment, missile guidance radio guidance, active missile guidance, guidance communication, guidance system, command guidance system, antimissile missile, missile control

PURPOSE AND COVERAGE: This booklet is intended for enlisted men in the military services, cadets in military schools, and for wide circle of readers interested in problems of missile engineering. It may also be used by officers in the missile forces as a guide for preparing the training program for their units. The principles of building remote control guidance systems, the elements of these systems, and their interaction are presented. Problems which may be solved by means of remote control systems are also covered. Basic methods of missile target guidance using remote control systems are explained as well as methods of making the necessary commands and transmitting them to the missiles. Much of the material is based on foreign open sources and the Nike-Zeus and Nike-X antimissile missile systems are described.

Card 1/2

UDC: 623.451.8-519

I. 05257-57

ACC NR: AM6018825

TABLE OF CONTENTS:

Introduction -- 3

Ch. I. General information on remote control -- 5

- 1. Classification of remote control systems -- 7
- 2. Problems solved by remote control systems -- 15

Ch. II. Methods of guiding remote controlled missiles -- 20

- 1. Direct guidance or the "three-point" method -- 23
- 2. Guidance with a constant lead coefficient -- 26
- 3. Parallel approach method -- 27
- 4. Half-alignment method -- 31
- 5. Peculiarities of antimissile missile guidance -- 32
- 6. Combined guidance methods -- 33

Ch. III. Principles of designing remote control systems -- 36

- 1. Make-up and interconnection of remote control system components -- 36
- 2. Sights and missiles -- 42
- 3. Computers -- 56

Ch. IV. Methods and equipment for transmitting commands -- 71

- 1. Methods of generating and transmitting continuous commands -- 72
- 2. Methods of generating and transmitting discrete commands -- 86

Ch. V. Nike-Zeus and Nike-X antimissile missile guidance systems -- 106

SUB CODE: 09/ SUBM DATE: 02Nov65/

Card 2/2 *g*

ACC NR: AR7004865

SOURCE CODE: UR/0137/66/000/010/I048/I048

AUTHOR: Strelkov, V. I.

TITLE: Investigation of the nature of microcracks in Aluminum-alloy products

SOURCE: Ref. zh. Metallurgiya, Abs. 10I315

REF SOURCE: Sb. Proiz-vo stali i splavov i vliyaniye obrabotki na ikh svoystva. Tula, 1965, 76-79

TOPIC TAGS: aluminum alloy, microcrack, hot forging, metal stamping, electron microscope

ABSTRACT: Electron microscopic examination of metal zones adjacent to microcracks formed during hot forging and metal stamping showed micropores disperse to the right and to the left of microcracks. Zones 0.1—1 mm wide, above and below the microcracks, are free of micropores. A layer ( $\sim 10^{-5}$  mm) of the brittle phase was detected on the surface of microcracks. This phase separates along the boundaries of micropores and obstructs welding. P. Novik.  
[Translation of abstract] [NT]

SUB CODE: 11/

Card 1/1

UDC: 539.4.011:669.715

STEPUNIN, S.Ye., inzh.; STRELKOV, V.M., inzh.; TSAREV, M.I., inzh.;  
TSAREV, M.I., kand.tekhn.nauk

Improvement of three-phase automatic reclosing systems.  
Elek.sta. 31 no.5:69-74 My '60. (MIRA 13:8)  
(Electric switchgear) (Electric lines)

SOV-127-58-10-10/29

AUTHORS: Glazunov, V.M., Smagin, V.A. and Strelkov, V.N.

TITLE: An Analysis of the Rotary-Percussion Drilling of Blast Holes in Hard Rocks (Issledovaniye vrashchatel'no-udarnogo bureniya shpurov v krepkih porodakh)

PERIODICAL: Gornyy zhurnal, 1958, Nr 10, pp 32-38 (USSR)

ABSTRACT: The authors compared the efficiency of drilling blast holes in hard rocks with the rotary-percussion drilling machines built by the German firms Nusse and Grefer; Salzgitter and Hausher, with the efficiency of drilling with perforators ~~KTs~~ M-4, PRS-3m and F M -508. The authors give a detailed description of the German machines and their performances. They found that the speed of drilling under favorable conditions was much higher than with perforators, but this difference decreased in hard rock drilling operations. Special rotary-percussion drilling machines with increased percussion power must be built for hard rocks. The tested machines can be used for drilling in rocks of a hardness

Card 1/2

SOV-127-58-10-10/29

An Analysis of the Rotary-Percussion Drilling of Blast Holes in Hard Rocks

coefficient not higher than 10-12. There are 2 photos, 4 graphs, 3 tables, 1 diagram and 4 references, 1 of which is Soviet, 2 German and 1 American.

1. Mining industry--USSR
2. Drilling machines--Applications
3. Drilling machines--Performance

Card 2/2



BRILLIANTOV, N. A.; STRELKOV, V. P.; LIN'KOV, V. P.

"The Production of Platinum Resistance Thermometers," Zhurnal Tekh Fiz, 20, 3,  
1950.

U-1763, 17 Mar 52

STRELKOV, V.P., Inghener.

Using the ray-of-light method for markings at the "Krasnoe Sornovo"  
Plant. Sudostroenie 23 no.6:26-28 Je '57. (MLRA 10:7)  
(Gorkiy--Shipbuilding)

DOBROKHOTOV, E. I., IVANOV, D. P., MUKHOVATOV, V. S., KIRILLOV, V. D.,  
PETROV, D. P., RAZUMOVA, K. A., STREKOV, V. S., SHEPELEV, M. N. and YAVLINSKIY,  
N. A.

"Investigation of Plasma Heating in Toroidal Chambers."

paper to be presented at the 2nd UN Intl. Conf. on the peaceful uses of Atomic  
Energy, Geneva, 1 - 13 Sep 58.

REZINA/BUENRO, A. L., GOLOVIN, I. N., KOLLOV, P. I., STRELKOV, V. S. and YAVLINSKIY, N. A.

"The Electrodeless Discharge with High Current in a Toroidal Chamber with a Longitudinal Magnetic Field." (Work carried out in 1956-57); pp. 116-133.

"The Physics of Plasmas; Problems of Controlled Thermonuclear Reactions." Vol. IV. 1958, published by Inst. Atomic Energy, Acad. Sci. USSR.  
resp. ed. M. A. Leontovich, editorial work V. I. Kogan.

Available in Library.

STREIBER, V. I.

"Investigation of the Radiation of an Electrodeless Discharge in Deuterium."  
(Work carried out in 1958); pp. 156-169.

"The Physics of Plasma; Problems of Controlled Thermonuclear Reactions." Vol. IV.  
1958, published by Inst. Atomic Energy, Acad. Sci. USSR.  
resp. ed. M. A. Leontovich, editorial work V. I. Kogan.

Available in Library.

ИЗВЕСТИЯ АКАДЕМИИ НАУК СССР, ФИЗИКА ПЛАЗМЫ, 1959, Т. 5, № 1, С. 10-14.  
V. G.

"Investigation of a T-shaped Discharge in a Strong Magnetic Field."

paper presented at the Fourth International Conference on Ionization Phenomena  
in Gases, 17-21 Aug 59, Uppsala, Sweden.

U.S.

21(0) PART I BOOK EXPLOITATION 807/2061

International Conference on the Peaceful Uses of Atomic Energy, 2d., Geneva, 1958  
Soviet Atomic Energy, Moscow, Atomizdat, 1959. 552 p. (Series: IAEA Treaty, Vol. 1)  
8,000 copies printed.

Ms. (Title page); A.I. Alkhimov, Akademicheskii V.I. Vozler, Akademicheskii; and  
K.A. Vlasov, Candidate of Physical and Mathematical Sciences; Ed. of this  
volume; B.Y. Pirogov and D.P. Zavaritskiy, Candidates of Physical and Mathematical  
Sciences; Ed. (Inside book); G.L. Smolynskiy, Tech. Ed.; V.I. Maslov.

NOTE: This collection of articles is intended for scientific research workers  
and other persons interested in nuclear physics. The volume contains 4) Papers  
presented by Soviet scientists at the Second Conference on Peaceful Uses of  
Atomic Energy, held in Geneva in September 1958.

CONTENTS: It is divided into two parts. Part I contains 17 papers dealing with  
plasma physics and controlled thermonuclear reactions, and Part II contains 26  
papers on nuclear physics, including problems of particle acceleration and of  
cosmic ray physics. The first paper by L.A. Artsimovich presents a review of  
Soviet work on controlled thermonuclear reactions. The remaining papers in  
Part I deal with particular problems in this field.

Papers in Part II deal in detail with various problems in nuclear physics,  
such as the fission of heavy atoms and their isotopes, and with the study of  
cosmic radiation by means of artificial earth satellites and rockets, described  
in a paper by S.H. Wurmser. The Russian-language edition of the proceedings of  
the conference is published in 16 volumes. The first 6 volumes contain all the  
papers presented by Soviet scientists as follows: Volume (1), Vozlerova  
(Nuclear Reactor and Nuclear Power); Volume (2), Vozlerova (Nuclear Reactor and  
Nuclear Power); Volume (3), Vozlerova (Nuclear Reactor and Nuclear Power);  
Volume (4), Vozlerova (Nuclear Reactor and Nuclear Power); Volume (5),  
Vozlerova (Nuclear Reactor and Nuclear Power); Volume (6), Vozlerova (Nuclear  
Reactor and Nuclear Power). The other 10 volumes contain selected papers  
presented at the Conference by non-Soviet scientists. In the present volume  
discrepancies between the Russian and English language editions of the proceed-  
ings have been noted in three articles where the texts are not identical:  
Vlasov, A.I., et al., "High Current Pulsed Discharge"; Vozler, V.I., et al.,  
"High Frequency Plasma Oscillations"; and Pirogov, B.Y., "Investigations of the Many-  
body Problem". The serial numbers of reports 2505 and 2504 are reversed in the  
English edition. Report 2211, by Kuznetsov, et al., is numbered 2556 in the  
English edition.

TABLE OF CONTENTS:

Reports of Soviet Scientists; Nuclear (Cont.) 807/2061  
THERMONUCLEAR REACTIONS

Artsimovich, L.A. Controlled Fusion Research in the USSR (Report 2505) 3

Andrianov, A.M., O.A. Kuznetsov, S.I. Kuznetsov, S.O. Kravchenko,  
I.G. Koval'skiy, I.N. Kozlovskiy, N.O. Prokhorov, E.P. Filipov, I.I.  
Pillipov, G. Ruzhichanskiy, and V.A. Ruzhichanskiy. High Current Pulsed Dis-  
charge (Report 2501) 31

Kuznetsov, S.H., N.V. Shvortsov, and S.H. Shvortsov. Development of a  
Neutral Beams in Fusion (Report 2504) 53

Parameters mentioned include: G.H. Petrov, D.S. Petrov, G.H.  
Kuznetsov, K.A. Leontovich, I.N. Gol'tsman and S.P. Petrovskiy.

Compte, S.H., N.P. Maslov, V.I. Vozler, N.P. Petrov, and S.I.  
Kuznetsov. Plasma Loop in a Transverse Magnetic Field (Report 2211) 65

Vozlerova, K.A. The Many-Body Problem in Nuclear Physics (Report 2507)  
Part 4/2 85

CORBUNOV, Ye.P.; DOLGOV-SAVEL'YEV, G.G.; UKHOVATOV, V.S.;  
STRELKOV, V.S.; YAVLINSKIY, N.A.

[Studying a toroidal discharge in a strong magnetic field]  
Issledovanie toroidal'nogo razriada v sil'nom magnitnom  
pole. Moskva, In-t atomnoi energii im. I.V.Kurchatova, 1960  
23 p. (MIRA 16:12)  
(Electric discharges through gases)  
(Magnetic fields)



VASIL'YEVSKIY, V.S.; MUKHOVATOV, V.S.; STRELKOV, V.S.; YAVLINSKIY,  
N.A.

[The "Tokomak-2" toroidal plant with a high magnetic field]  
Toroidal'naia ustanovka s sil'nym magnitnym polem  
"Tokomak-2". Moskva, In-t atomnoi energii AN SSSR, 1960.  
17 p. (MIRA 17:1)

84722

S/057/60/030/010/001/019  
B013/B063

26.1300  
24.2120

AUTHORS: Vasil'yevskiy, V. S., Mukhovatov, V. S., Strelkov, V. S.,  
Yavlinskiy, N. A.

TITLE: "ТОКАМАК-2" (Tokamak-2) - a Toroidal Apparatus With a  
Strong Magnetic Field 26 24

PERIODICAL: Zhurnal tekhnicheskoy fiziki, 1960. Vol. 30, No. 10,  
pp. 1137-1144

TEXT: As deuterium impurities and the heavy atoms struck out of the chamber walls by plasma lead to considerable energy losses of a deuterium plasma and, thus, prevent an increase of temperature, studies on plasma of the highest possible degree of purity are of particular significance. For this purpose, a special toroidal pulsed high-vacuum chamber was developed, which is described in the present paper. The experimental apparatus "Tokamak-2" was designed for investigating the Joulean heating of plasma in a strong, longitudinal magnetic field. The following factors were taken into account by the designers: 1) The areas of the discharge chamber facing the plasma must be subjected to a careful heat treatment.

UX

Card 1/3

84722

"ТОКАМАК -2" (Tokamak-2) - a Toroidal Apparatus S/057/60/030/010/001/019  
With a Strong Magnetic Field B013/B063

2) The vacuum pump and the design of the chamber must guarantee a vacuum of up to  $10^{-8}$  -  $10^{-9}$  mm Hg. 3) The dimensions of the apparatus must correspond to those of "Tokamak-1". The apparatus is schematically represented in Fig. 1. Fig. 2 is a general view of the internal chamber. The basic circuit diagram of the apparatus is reproduced in Fig. 3. Two units of the type BA05-2 (VA05-2) are used for producing a high vacuum in the internal chamber. The highest maximum attained after degassing by heating to  $450^{\circ}\text{C}$  amounted to  $5 \cdot 10^{-10}$  mm Hg. The entire vacuum system of the internal chamber is connected by metal seals, so that it may be degassed by heating up to  $400-450^{\circ}\text{C}$ . Two types of seals are used (see Fig. 4). Fig. 5 shows the sealing and insulation of the joints of the external chamber. The tubes of the water-cooling installation were laid on the outer side of the copper chamber (Fig. 1). The internal chamber is electrically insulated from the external chamber and separated from it by a vacuum (Fig. 6). Fig. 7 illustrates the pressure change prevailing inside the internal chamber during heat treatment. The plasma properties were studied with the above-described apparatus under two different conditions: In one case, the entire system was cooled after a continuous heat treatment - "cold chamber"; in the second case, the internal chamber was kept

Card 2/3

81722

"ТОКАМАК -2"(Tokamak-2) - a Toroidal Apparatus S/057/60/030/010/001/019  
With a Strong Magnetic Field B013/B063

at a temperature of 400-450°C, whereas the vacuum unit and the traps remained cold. - "hot chamber". Data ascertained under equal conditions are given in Ref. 3. The introduction of observation windows and of the measuring apparatus is described (see Figs. 8 and 9). Since the apparatus serves a double purpose in that it should produce the highest vacuum possible and purify the walls of the discharge chamber, its design is rather complicated. As was shown by measurements, this is fully justified, since otherwise the discharge would be considerably affected by impurities. The character of the process is considerably changed by a long heat treatment (Ref. 3). Nonetheless, it is not possible to produce a perfectly pure deuterium plasma. There are 9 figures and 3 Soviet references.

SUBMITTED: April 23, 1960

Card 3/3

10.8500 only 2307, 2407

84724

S/057/60/030/010/003/019

B013/B063

26.2311

AUTHORS:

Gorbunov, Ye. P., Dolgov-Savel'yev, G. G., Mukhovatov, V. S.,  
Strelkov, V. S., Yavlinskiy, N. A.

TITLE:

Investigation of a Toroidal Discharge in a Strong Magnetic  
Field <sub>21</sub>

PERIODICAL:

Zhurnal tekhnicheskoy fiziki, 1960, Vol. 30, No. 10,  
pp. 1152-1164

TEXT: The authors describe investigations on the heating and stability of a plasma column in a strong, longitudinal magnetic field (Figs 1-11). The experiments were carried out on the toroidal apparatus "Tokamak-2" (for details see Ref. 2) under different conditions of the chamber walls: 1) cold, not degassed walls - "contaminated" chamber; 2) cold walls, which, prior to the experiment, had been heated at 400-450°C for several hours - "pure" chamber; 3) hot walls at temperatures from 400° to 450°C - "pure" chamber. The pressure of the residual gases was  $1 \cdot 10^{-6}$  mm Hg in the first and the third case, and  $1 \cdot 10^{-7}$  mm Hg in the second case. It was found that the character of the process was changed by the degassing of

Card 1/3

84724

Investigation of a Toroidal Discharge in  
a Strong Magnetic Field

S/057/60/030/010/003/019  
B013/B063

the walls: a) The conductivity of the plasma increases; b) oscillations occur in the heated plasma; c) the current attains a second maximum at zero voltage, the conductivity of the plasma reaching considerable values. Pictures taken with a time-lapse camera show that at high values of  $k$  (coefficient of stability), the discharge column is bounded by the diaphragm slits. Thus, hydromagnetic stability may be observed under these conditions. The presence of accelerated electrons having energies of 1-2 Mev is indicative of a good particle retaining. The extinction of X-radiation is probably due to the occurrence of oscillations. The successive appearance of spectral lines of different excitation energies can be explained by the rise of the electron temperature. An increase of the magnetic field strength increases the conductivity of the plasma at the first current maximum, and improves the conditions of retaining. Table 1 gives data on the instant of time at which ionization in discharges with different electric field strengths is perfect. These data are specified for three values of the initial deuterium pressure. The electron concentration is assumed to increase in the course of time. Table 2 gives data on the electron temperature for two values of the magnetic field. The authors thank L. A. Artsimovich and M. A. Leontovich for their interest in

Card 2/3

Investigation of a Toroidal Discharge in  
a Strong Magnetic Field

84724  
S/057/60/030/010/003/019  
B013/B063

the work, as well as N. V. Krasnov, G. A. Yegorenkov, Yu. A. Gusev,  
A. V. Glukhov, and G. N. Ploskirev for their assistance. There are  
11 figures, 2 tables, and 6 references: 5 Soviet.

SUBMITTED: April 23, 1960

X

Card 3/3

DOLGOV-SAVEL'YEV, G.G.; MUKHOVATOV, V.S.; STRELKOV, V.S.; SHEPELEV, M.N.;  
YAVLINSKIY, N.A.

Investigating a toroidal discharge in a strong magnetic field. Zhur.  
eksp.i teor.fiz. 38 no.2:394-403 F '60. (MIRA 14:5)  
(Plasma (Ionized gases)) (Magnetic fields)



~~L 11364-65 EWT(1)/EWG(k)/EWT(m)/EPA(sp)-2/EPA(w)-2/EEC(t)/EEC(b)-2/T/EWA(m)-2  
Pz-6/Pr-4/Pab-10/Pi-4 IJP(s)/ESD(gs)/ASD(p)-3/AFETR/AEDG(b)/ESD(t) AT~~

ACCESSION NR: AP4045327

S/0089/64/017/003/0170/0176

AUTHOR: Artsimovich, L. A.; Mirnov, S. V.; Strelkov, V. B.

TITLE: Investigation of plasma ohmic heating on a "Tokamak-3"  
toroidal machine 19 B

SOURCE: Atomnaya energiya, v. 17, no. 3, 1964, 170-176

TOPIC TAGS: plasma heating, plasma pinch, plasma conductivity,  
plasma pinch instability, Tokamak 3 machine, controlled fusion  
reaction, controlled thermonuclear reaction

ABSTRACT: Experiments were performed on a "Tokamak-3" machine to investigate the heating of plasma by means of a current passing through it in the presence of a strong longitudinal magnetic field, used to prevent the most dangerous forms of magnetohydrodynamic instability of the plasma pinch. It was found that the correction of the magnetic field substantially changes the discharge characteristics. Measurements of the main discharge characteristics show that even the very small transverse components of the stabilizing magnetic field, appearing as a result of a nonideal magnetic field, strongly affect the

Card 1/1

L 11364-65

ACCESSION NR: AP4045327

0

behavior of the plasma pinch in the toroidal chamber. The compensation of the stationary component of the transverse field on the "Tokamak-3" considerably improves the discharge characteristics and particularly increases the conductivity of the plasma pinch. When the stabilizing field is very strong and the equilibrium position of the plasma pinch is such that the axial line of the pinch passes through the center of the opening of the limiting diaphragm, then the average electric conductivity over the plasma cross section reaches  $(1-2) \times 10^{16}$  CGS units. During the process the plasma pinch is gradually displaced in the direction of the chamber outer wall. If the longitudinal magnetic field is not too strong and the initial gas pressure in the chamber is not too low, then at some moments the movement towards the outer wall is interrupted, and the plasma pinch returns to the inner wall. Discontinuities on the potential oscillograms correspond to this intermittent motion, and sharp peaks correspond to it on current oscillograms. Orig. art. has: 6 figures and 1 formula.

ASSOCIATION: none

Card 2/3

1.5816645 INT(1)/EPF(n)-2/ENG(m)/EPA(w)-2 Pz-6/Po-4/Pab-10/P1-4 IJP(c)  
UR/3136/64/000/684/0001/0054  
ACCESSION NR: AT301043

AUTHOR: Artimovich, L. A.; Gorbunov, Ye. P.; Mirnov, S. V.; Mukhovatov, V. S.;  
Borisenko, V. S.; Borisenko, V. S.

TITLE: Investigation of ohmic heating of a plasma in toroidal Tokamak installations

SOURCE: Moscow, Institut atomnoy energii. Doklady, no. 684, 1964. Issledovaniye omicheskogo nagrevaniya plazmy v toroidal'nykh ustanovkakh Tokamak, 1-54

TOPIC TAGS: plasma heating, plasma equilibrium, plasma pinch, plasma stability, plasma diagnostics, plasma containment/ Tokamak

ABSTRACT: The authors report the results of a theoretical analysis of the plasma heating process and of the conditions for the equilibrium instability of a plasma loop in toroidal installations of the Tokamak type. The construction of the installations is described and the diagnostic methods are explained. The measurement results show that the macroscopic characteristics of the discharge depend essentially on the controlling transverse magnetic field and on the magnitude of the longitudinal magnetic field. Under optimal discharge conditions, they obtained a magnetohydrodynamically stable plasma pinch with electric conductivity reaching  $2 \times 10^{16}$

Card 1/2

L 58324.65

ACCESSION NR: AT501043

5  
e.g.  $e_{au}$  (electron temperature  $\sim 150$  eV). The experimentally obtained lifetime of the charge particles is compared with the value expected in the presence of Bohm or classical diffusion. The prospects of using the ohmic method of plasma heating in Tokamak equipment are discussed. "The authors thank G. G. Dolgov-Savel'yev and V. D. Shafranov for a discussion of the experimental results and procedures, L. L. Golovinski and V. V. Stitskin for participating with the experiments on the plasma energy balance, E. I. Kuznetsov for help with the optical measurements, and the Tokamak crew." Orig. art. has: 19 figures, 18 formulas, and 1 table.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: ME

NR REF SOV: 009

OTHER: 005

AR  
Card 2/2

ARTSUNGVICH, L.A.; MERNOV, S.V.; STRELKOV, V.S.

Use of the "Tokamak-3" toroidal setup in studying ohmic  
heating of a plasma. Atom. energ. 17 no.3:170-176 S '64.  
(MIRA 17:9)

L 22411-66 EWT(1)/EPF(n)-2/EWG(m) IJP(c) AT  
ACC NR: AP6007952 SOURCE CODE: UR/0089/66/020/002/0146/0148

AUTHORS: Bazhanova, A. Ye.; Strelkov, V. S.; Shafranov, V. D. 66

ORG: none B

TITLE: Effect of the finite <sup>21, 44, 5</sup>electric conductivity of the jacket on the equilibrium of the plasma pinch in the 'Tokamak' installation

SOURCE: <sup>21, 44, 5</sup>Atomnaya energiya, v. 20, no. 2, 1966, 146-148

TOPIC TAGS: electric conductivity, plasma generator, plasma pinch, plasma temperature, magnetic trap, plasma diffusion/ ~~Tokamak~~

ABSTRACT: The authors refine the previously derived formulas (Voprosy teorii plazmy [Problems in Plasma Theory], No. 2, 1963, page 92) for the radius and the temperature of the plasma pinch produced in the Tokamak system, by taking into account the finite electric conductivity of the jacket, which in the earlier calculations was assumed to be infinite. The calculations show that allowance for the finite conductivity does not change the form of the equation for the displacement of the plasma pinch inside the conducting jacket, 2

Card 1/2 UDC: 533.9

L 22411-66

ACC NR: AP6007952

but changes the value of the perpendicular component of the magnetic field, which must now be determined from the diffusion equation for the dipole component of the magnetic field on the walls of the jacket. The effect of the finite conductivity on the equilibrium of the plasma is evaluated and it is shown that in the case of plasmas of approximately 20 msec duration the correction necessitated by its inclusion is small and increases with increasing plasma confinement time. .  
Orig. art. has: 3 figures and 19 formulas.

SUB CODE: 20/      SUBM DATE: 17Aug65/      ORIG REF: 004/

Card

2/2 *HW*

— STRELKOV, Ye. I.

Ecology of the hazel hen in the taiga zone of Tomsk Province.  
Uch. zap. TGPI 20:26-30 '61. (MIRA 15:7)  
(Tomsk Province—Grouse)



STREIKOV, Yu.

Position of Axine belongs in the system of monogenetic trematoda.  
Trudy Zool.inst. 13:145-154 '53. (MLRA 7:5)  
(Trematoda) (Parasites--Garpikes)

STRELKOV, Yu. A.

Strelkov, Yu. A. -- "Endoparasitic Worms of Ocean Fish in Eastern Kam-  
chatka." Acad Sci USSR. Zoological Inst. Leningrad, 1956.  
(Dissertation for the Degree of Candidate in Biological Science)

So: Knizhnaya Letopis, No 12, 1956

STREIKOV, YU. A. and SHUL'MEN, S. S.

"Parasite Infestation of Fish in the Projected Lake-Construction  
Area of the Amur River Basin."

Tenth Conference on Parasitological Problems and Diseases with Natural  
reservoirs, 22-29 October 1959, Vol. II, Publishing House of Academy of  
Sciences, USSR, Moscow-Leningrad, 1959.

Institute of Lake and River Fishing and the Zoological Institute of the  
USSR Academy of Sciences, Leningrad

BAUER, O.N.; STRELKOV, Yu.A.

Diseases of the young of Baltic salmon under conditions of artificial rearing. Trudy sov.Ikht.kom. no.9:86-90 '59.  
(MIRA 13:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut ozernogo i rechnogo rybnogo khozvastva.  
(Russia, Northwestern--Salmon--Diseases and pests)

ZHUKOV, Ye.V.; STRELKOV, Yu.A.

Parasites of fishes in the Far Eastern seas. Trudy sov. Ikht.  
kom. no.9:188-191 '59. (MIRA 13:5)

1. Zoologicheskiy institut Akademii nauk SSSR.  
(Soviet Far East--Parasites)  
(Parasites--Fishes)

17(15)  
AUTHORS: Gusev, A. V., Zhukov, Ye. V., Strelkov, Yu. A. SOV/20-125-5-60/61

TITLE: On the Degree of Infestation of Mintay (Theragra Chalcogramma Pal.)  
With Parasites and Its Use in Fishery (O zarazhennosti mintaya  
parazitami i yego promyslovom ispol'zovanii)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 5, pp 1174-1176  
(USSR)

ABSTRACT: The natural sources should be opened up to the highest possible  
extent and an abundant supply of food should be established.  
Theragra chalcogramma belongs to the hitherto not sufficiently  
known fish species of the Far East. Many fish species of better  
taste occur in the Far East, and the afore-said species is,  
moreover, not liked because of its infestation by parasites. This  
infestation renders the fish species unappetizing for the consumer  
and leads to misunderstandings and to the fact that the fish finds  
no sale. The authors tried to answer the following questions: 1) Is  
flesh of Theragra chalcogramma infected with parasitic worms?; if  
this is the case, how far? 2) Are among the parasites of Theragra  
chalcogramma any species which are harmful to man? 3) Which  
investigations are to be carried out in order to decide definitely

Card 1/3

On the Degree of Infestation of Mintay (Theragra Chalcogramma SO7/20-125-5-60/61 Pal.) With Parasites and Its Use in Fishery

the problem of the use of Theragra chalcogramma? - Table 1 shows the results of the sections in 1951-55 in the region of the zaliv Petra Velikogo ( Petr Velikiy Bay ), Avachinskaya bukhta (Avachinskaya Bay), Kamchatskiy zaliv (Kamchatka Bay), and Kronotskiy Bay. None of the known parasites of Theragra chalcogramma is harmful to man. There is no reason for disqualifying entire catches or fishery regions because of infestation of the flesh. Careful sanitary control, the elimination of highly infected fish, furthermore, the removal of infected intestines may easily eliminate parasites in fish for sale. The working process is to be chosen according to the kind of infestation (salting, freezing, hashing, etc.). In order to find out the best time and the best regions for catch, investigations of the age- and seasonal dynamics of parasites have to be carried out. There is assumed that the frequently voiced alarming news from the (Soviet) Far East are not fully justified. It is 1 table.

ASSOCIATION: Zoologicheskii institut Akademii nauk SSSR (Zoological Institute of the Academy of Sciences, USSR)

Card 2/3

STRELKOV, Yu.A.

Endoparasitic worms from marine fishes of eastern Kamchatka. Trudy  
Zool. inst. 28:147-196 '60. (MIRA 13:12)  
(Kamchatka--Worms, Intestinal and parasitic)  
(Parasites--Fishes)



GUSEV, A.V.; STRELKOV, Yu.A.

Ancylodiscoides (Monogenoidea) parasitic in catfishes (Silurus and Parasilurus) of the Far East; analysis of the morphology and evolution of the group. Trudy Zool. inst. 28:197-255 '60. (MIRA 13:12)  
(Far East--Trematoda) (Parasites--Catfishes)

STRELKOV, Yu.A.

On a new species of monogenetic trematodes, *Acolpenteron petruschewskyi*, adapted to habitation in the excretory system of bitterlings. Dokl. AN SSSR 147 no.5:1253-1255 D '62. (MIRA 16:2)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut ozernogo i rechnogo rybnogo khozyaystva. Predstavleno akademikom Ye.N. Pavlovskim.

(Zeya River—Parasites—Bitterling)

(Zeya River—Trematoda)

STREIKOV, Yu.A.; KHA YI

A new instance of an unusual localization of the monogenetic  
trematode of the genus *Dactylogyrus* in nasal cavities of a  
fish. Zool. zhur. 43 no.8:1236-1238 1964. (MIRA 17:11)

.. Gosudarstvennyy nauchno-issledovatel'skiy institutchernogo i  
ruchnogo rybnogo khozyaystva, Leningrad.

SMIRNOVA, T.S.; STRELKOV, Yu.A.; TIMOFEYEV, V.A.; SHUL'MAN, S.S.

Nasal cavities of bony fishes as a habitat of parasites. Zool.  
zhur. 43 no.11:1649-1658 '64. (MIRA 18:11)

1. Zoologicheskiy institut AN SSSR, Leningrad.