

SHLYAMIN, B.A.

"Permanent" currents in the Caspian Sea. Trudy Okean. kom. 5:208-  
213 '59. (MIRA 13:6)  
(Caspian Sea--Ocean currents)

SHELYAMIN, B.A.

Prognosis of ice conditions in the Caspian Sea and their possible  
regulation. Trudy Okean. kom, 5:214-219 '59. (MIRA 13:6)  
(Caspian Sea--Ice)

SHLYAMIN, B.A.

Some data on waves in the Caspian Sea. Trudy Okean. tom. 5:220-  
221 '59. (MIRA 13:6)  
(Caspian Sea--Waves)

SHLYAMIN, B.A.

A long-range prognosis of the Caspian Sea level. Izv. Vses.  
geog. ob-va 94 no.1:26-33 Ja-F '62. (MIRA 15:3)  
(Caspian Sea)

PETRZHAK, K.A.; NIKOL'SKAYA, Ye.B.; PETROV, Yu.G.; SHLYAMIN, E.A.

Possibility of using a method involving the slowing down and collection of fission fragments of gas for the study of fragment isotopes. Part 1: Radiochemical study of the distribution of fragments from their paths. Radiokhimiia 1 no.2:227-230 '59.  
(MIRA 12:8)

(Fission products)

85680

S/056/60/038/006/022/049/XX  
B006/B070

26.22.11

AUTHORS: Petrzhak, K. A., Petrov, Yu. G., Shlyamin, E. A.

TITLE: Range and Kinetic Energy Dispersion of  $U^{233}$  Fission Fragments

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960,  
Vol. 38, No. 6, pp. 1723-1728

TEXT: The range distribution of the following  $U^{233}$  fission fragments in different gases was investigated:  $Sr^{91-92}$ ,  $Y^{92-93}$ ,  $Zr^{97}$ ,  $Ba^{140}$ , and  $Ce^{144}$ .  
The uranium target was placed in a hermetically sealed aluminum cylinder. The container had 30 films each  $\sim 6\mu g/cm^2$  thick and separated from each other by 2.5 mm. The distance between the target and the first film was 136 mm. The container was filled with various gases (hydrogen, helium, nitrogen, air, neon, and argon). The thicknesses of the  $U^{233}$  target were 76, 110, 145, 228, and 284  $\mu g/cm^2$ . The container was irradiated at constant temperature for 1-2 hours on the reactor of the AS USSR in a flux of  $10^{12}n/cm^2sec$ . After the irradiation, the activity of each film was measured with an end-window beta counter. Sr, Y, Zr, Ba, and Ce were

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Range and Kinetic Energy Dispersion of  $U^{233}$   
Fission Fragments

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separated by the usual method of chemical analysis. The range distribution curves of the above-mentioned fission fragments in the various gases were obtained from the results of the radiochemical analysis; the average values of the range and the range dispersion were determined therefrom. For illustration, Fig. 2 shows the range distribution curve of the  $Ba^{140}$  nucleus in  $H_2$ . The ordinate gives the relative activity of  $Ba^{140}$  in the various films, while the abscissa gives the fragment range at  $p_{H_2} = 760$  mm Hg and  $t = 15^\circ C$ . The experimental distribution falls nearly on a Gaussian curve. Analogous results were obtained for the other fragments and gases. The scattering of the fragment ranges is assumed to be due to energy fluctuations of fragments caused by nuclear deformations, changes in kinetic energy as a result of fluctuation of the initial charge of the nucleus during fragment emission, statistical fluctuations of the electron number and the number of nuclear collisions during the slowing down of fragments in the gas; change of kinetic energy on emission of a neutron from a fragment, slowing down in the target material and, finally, to the geometry of the apparatus. A formula is given for determining the scattering  $S$  of the ranges. The

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Range and Kinetic Energy Dispersion of  $U^{233}$   
Fission Fragments

S/056/60/038/006/022/049/XX  
B006/B070

experimental values of the range and S are given in Table 1 after making allowance for absorption in the film and in the target material. Formulas are given also for the scattering of kinetic energy, and the data are collected in Table 2. The accuracy with which the ranges could be given was 2%; the error in range scattering on making allowance for all effects was found to be 10%. The data obtained for the scattering of kinetic energy agree well with American publications (Refs. 2-8). Ye. B. Nikol'skiy is thanked for help in the radiochemical analysis. There are 4 figures, 2 tables, and 10 references: 2 Soviet, 7 US, and 1 Danish.

ASSOCIATION: Radiyevyy institut Akademii nauk SSSR (Radium Institute of the Academy of Sciences USSR)

SUBMITTED: January 28, 1960

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| Газ     | Gas            | Sr <sup>90-91</sup> |       | Y <sup>90-91</sup> |      | Zr <sup>91</sup> |       | Ba <sup>134</sup> |       | Ce <sup>138</sup> |       |
|---------|----------------|---------------------|-------|--------------------|------|------------------|-------|-------------------|-------|-------------------|-------|
|         |                | R. cm               | S. %  | R. cm              | S. % | R. cm            | S. %  | R. cm             | S. %  | R. cm             | S. %  |
| Водород | H <sub>2</sub> | 10,05               | 7,37  | 10,05              | 6,66 | 9,61             | 7,92  | 7,58              | 6,13  | 7,68              | 5,12  |
| Гелий   | He             | 15,75               | 7,09  | 15,68              | 6,84 | 15,61            | 6,99  | 11,93             | 7,03  | 12,02             | 5,86  |
| Азот    | N <sub>2</sub> | 2,58                | 9,51  | 2,52               | 9,41 | 2,50             | 10,27 | —                 | —     | 1,86              | 9,26  |
| Воздух  | Air            | 2,54                | 8,04  | 2,51               | 7,61 | 2,44             | 8,20  | 1,85              | 9,87  | 1,84              | 8,71  |
| Неон    | Ne             | 4,80                | 9,86  | 4,84               | 8,69 | 4,66             | 9,60  | —                 | —     | —                 | —     |
| Аргон   | Ar             | 2,60                | 10,59 | 2,58               | 9,88 | 2,49             | 9,38  | 1,85              | 11,38 | 1,81              | 10,31 |

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SHLYAPIN, E. A.

Cond Phys-Math Sci - (diss) "Dispersion of paths  $\overline{\text{probegi}}$  and kinetic energies of U-233 fission fragments." Leningrad, 1961. 7 pp; (Leningrad Technical Physics Inst of the Academy of Sciences USSR); 200 copies; free; bibliography at end of text (11 entries); (KI, 5-61 sup, 174)

SHLYAMIN, V.

Concerning O.K.Leont'ev's and P.V.Fedorov's article "History of the Caspian Sea during the recent Khvalynian and post-Khvalynian periods." B.Shliamin. Izv. AN SSSR. Ser.geog. no.4:89-90 JI-Ag '54. (Caspian Sea reagon) (MLRA 7:8)

SHLYAMIN, V. A.

26264 Krugovorot vody i problema zasukhi. (Teoriya ll kasatkina o vnutrimaterikovom. Blagooborote). Geografiya v shchkole, 1949, No. 4, s. 4-7.

SO: LETOFIS' NO. 35, 1949

AKSEL'ROD, Solomon Moiseyevich; BERMAN, Mark Mikhaylovich; VINOGRAD, Lazar' Il'ich; GOL'DZAND, Samuil Shlemovich; DUGIN, Yakov Sergeevich; DULEPOV, Konstantin Vasil'yevich; KALUGA, Ivan Ivanovich; LERNER, Yefim L'vovich; LUTSKIY, Moisey Leybovich; PILETSKIY, Vladimir Kirillovich; SADOVNIKOV, Petr Pavlovich; SHLYANOVICH, Abram Aronovich; VASIL'YEV, B.A., red.; SOBOLEV, Ye.M., tekhn. red.

[Problems of radio engineering and radar]Zadachnik po radiotekhnike i radiolokatsii. [By]S.M.Aksel'rod i dr. Moskva, Gosenergoizdat, 1962. 414 p. (MIRA 15:12)

(Radio) (Radar)

SHLYAMOVICH (Moreva), V.P., inzh.; POBBEL'SKIY, G.N., kand.tekhn.nauk

Improving the method of determining the optical density of benzene  
extracts of coals. Nauch. trudy KuzNIIUgleobog. no.1:133-139  
'62. (MIRA 16:8)

(Benzene--Optical properties)  
(Kuznetsk Basin--Coal--Analysis)

PA 13/49T27

SHLYANDIN, V. M.

USSR/Electronics  
Servo Systems

Jul/Aug 48

"Computing the Optimum Air Gap in Electro-mechanical Systems with Constant Galvanometric Type Magnets." V. M. Shlyandin. Moscow Aviation Inst imeni S. Ordzhonikidze, 74 pp

"Avtomatika i Telemekh" Vol IX, No 4

Examines relation between the useful mechanical work performed in galvanometric type electro-mechanical systems and the energy of the magnetic field in the air gap. Shows that the maximum of the useful mechanical work corresponds to the maximum of the magnetic field energy in the air

13/49T27

USSR/Electronics (Contd)

Jul/Aug 48

gap. Gives method of computing optimum air gap for systems with interference magnets. Submitted 27 Nov 1947.

~~TOP~~

13/49T27

PHASE I TREASURE ISLAND BIBLIOGRAPHICAL REPORT AID 464 - I

AID 17 - I

BOOK

Call No.: TK2851.S55

Author: SHLYANDIN, V. M.

Full Title: ELEMENTS OF AUTOMATIC CONTROL AND TELEAUTOMATICS

Transliterated Title: Elementy avtomatiki i telemekhaniki

PUBLISHING DATA

Originating Agency: None

Publishing House: State Publishing House of the Defense Industry  
(OBORONGIZ)

Date: 1952

No. pp.: 435

No. of copies: Not given

Editorial Staff:

Contributors and appraisers: I. V. Strizhevskiy, B. A. Ass,  
B. S. Sotskov and E. I. Gitis

PURPOSE: The book is written in conformity with the program approved by the Administration of Schools of the Ministry of the Aviation Industry for technical schools of aviation instrument construction. It is a textbook written for wide circles of persons interested in elements and installations of automatic control and teleautomatcs. Only elementary knowledge of electrical and radio engineering, electrical measurements and calculus is required.

TEXT DATA

Coverage: The book deals with the electric elements of automatic control and teleautomatcs. It introduces the basic theoretical rela-

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Elementy avtomatiki i telemekhaniki

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tionships necessary for the simplest calculations of measuring and controlling devices. Discussed are: methods of electrical measurements; conversion of non-electrical into electrical values; electrical relays, convertors, drives, amplifiers, computers and other elements of remote control; automatic control systems; and examples of recent automatic control installations in aeronautics. The book is richly illustrated and contains many numerical examples.

No. of References: None

Facilities: Among Soviet engineers the author names: T. N. Sokolov, K. A. Druzhinskiy, I. I. Verin, A. M. Razygrayev, A. G. Nazarov, K. I. Burtsev with the group of engineers of the Magnitogorsk Kombinat, V. B. Umanskiy, I. I. Bazhenov, G. A. Shaumyan; from the "Soviet school of regulation": A. A. Andronov, V. S. Kulebakin, V. L. Lossiyevskiy and A. V. Mikhaylov; and several Russian inventors and constructors of some elements of electric control.

2/2

SHLYANDIN, V.M.; BOGOMOLOVA, M.F., redaktor; GLADKIKH, N.N., tekhnicheskii redaktor.

[Elements of automatic control and telemechanics] Elementy avtomatiki i telemekhaniki. Izd. 2-e, perer. Moskva, Gos. izd-vo oboronnoi promysh., 1954. 463 p. (MLR 8:1)  
(Automatic control) (Remote control)

SPLYANDIN, V.M.

Automatic device for the relative measurement of alternating voltage  
in active electrical networks. Izv. tekhn. no. 4:55-58 J1-Ag '56,

(MLRA 9:11)

(Electronic measurements) (Electromechanical analogies)

*SHLYANDIN V. M.*

USSR /Chemical Technology. Chemical Products  
and Their Application  
Control and Measuring Devices.  
Automatic Regulations.

H-3

Abs Jour: Referat Zhur - Khimiya, No 1, 1958, 1576

Author : Shlyandin V. M.

Inst : Penza Industrial Institute

Title : Automatic Direct Current Compensator with  
Numerical Reading Values

Orig Pub: Izmerit. tekhnika, 1957, No 2, 41-43

Abstract: Description of a simple direct-current, automatic  
compensator (C) with numerical reading values,  
which permits to carry out the measurements with an  
error not exceeding  $\pm 0.1\%$  of the upper limit of  
the measurement range, and within a length of time

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USSR /Chemical Technology. Chemical Products  
and Their Application  
Control and Measuring Devices.  
Automatic Regulations.

H-3

Abs Jour: Referat Zhur - Khimiya, No 1, 1958, 1576

of the order of 1-1.5 seconds. The C was developed at the Penza Industrial Institute. In the C is utilized a 3-decade compensation circuit with stepped, electromagnetic selectors. The entire power supply of the C is derived from the alternating current distribution network. Standard feed voltage of the compensation circuit is set in the usual manner by means of a standard cell and a zero-deflection galvanometer or is taken from a stabilized source of direct-current voltage. By means of an additional changeover switch and a corresponding standard-voltage divider circuit the C can be readily made automatic. A description of the electric circuit of the apparatus

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USSR /Chemical Technology. Chemical Products  
and Their Application  
Control and Measuring Devices.  
Automatic Regulations.

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Abs Jour: Referat Zhur - Khimiya, No 1, 1958, 1576

and of the procedure of carrying out measurements  
are included.

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28(1)

PHASE I BOOK EXPLOITATION SOV/1335

Shlyandin, Viktor Mikhaylovich

Osnovy avtomatiki (Principles of Automatic Control) Moscow, Gosenergoizdat, 1958. 591 p. 25,000 copies printed.

Ed.: Kolosov, S.P.; Tech. Ed.: Voronin, K.P.

PURPOSE: The monograph is a textbook for students specializing in instrument making. It may also be used by electrical engineering students.

COVERAGE: The author describes automatic control systems and their electrical components. He also discusses the basic theoretical aspects of control systems and presents examples of designing system components. The book is based on a course taught by the author at Penza Polytechnic Institute. The material in the book corresponds to the approved programs for a course in "Fundamentals of Automatic Control and Telemechanics." The author thanks Professor B.I. Domanskiy and A.A. Voronov, Candidate of Technical Sciences.

Card ~~1/7~~

Principles of Automatic Control SOV/1335

Sciences, for reviewing the manuscript. There are 66 references, of which 65 are Soviet and 1 English.

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Card ~~2/7~~



SHLYANDIN, V.M.

Digital electromechanical voltmeters and ohmmeters. Izv. tekhn. no. 3:  
45-50 Mr '60. (MIRA 13:6)  
(Electric meters)

SHLYANDIN, V.M.

High-speed electromechanical digital voltmeter. Izv.tekh. no.4:27-29  
Ap '61. (MIRA 14:3)

(Voltmeter)

L 41182-65 EWT(d)/EWP(c)/EWP(v)/T/EWP(k)/EWP(1) Pf-4  
ACCESSION NR: AP5004677 S/0115/64/000/009/0058/0059

50 c  
70  
18  
8

AUTHOR: none

TITLE: Fourth scientific and technical conference on "Cybernetics for the improvement of measurement and inspection methods"

SOURCE: Izmeritel'naya tekhnika, no. 9, 1964, 58-59

TOPIC TAGS: cybernetics, electric measurement, electric quantity instrument, digital computer, electronic equipment, electric engineering conference

ABSTRACT: The conference was held 1-4 July at the All-Union Scientific Research Institute of Metrology by the Section of Electrical Measurements of the Council on the Problem of "Scientific Instrument Making" of the State Committee on Coordination of Scientific Research Work in the USSR together with the All-Union Scientific Research Institute of Electrical Measurement Instruments and the Leningrad Regional Administration of the Scientific and Technical Division of the Instrument Making Industry. More than 400 delegates from 29 cities of the country participated. Fifty-seven reports were heard and discussed. Reports were given by: P. Y. NOVITSKIY (Leningrad)--"Definition of the Concept of Informational Error in Measurement and its Importance in Practical Use" and "On the Problem of the Average Informational Criterion of Accuracy Throughout the Entire Scale of an Instrument"; Ya. A.  
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L 41182-65

ACCESSION NR: AP5004677

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KUPERSHVIDT (Moscow)--"On Determination of the Criteria of Accuracy for Measurement Devices"; S. M. MANDEL'SHTAM (Leningrad)--report on a new criterion of accuracy of measurement instruments; P. F. PARSHIN (Leningrad)--report on optimization when using Fourier transforms on electronic digital computers; S. P. DMITRIYEV, G. Ya. DOLGINTSEVA and A. A. IGNATOV (Leningrad)--proposal of a new method for solving problems of optimum filtering for non-stationary random signals and interference; I. B. CHELIPANOV--"Calculation of the Dynamic Characteristics of an Optimum Complex Two-Channel System which Uses Signals from a Position Meter and from a Speed Meter"; R. A. POLUSKTOV (Leningrad)--"Optimum Periodic Correction in the Measurement of Continuous Signals"; S. P. ADAMOVICH (Moscow)--"Analysis and Construction of Devices for Correction of Non-linearity and Scaling for Unitary Codes"; G. Y. GORELOVA (Taganrog)--"A Method for Statistical Optimization in Graduating the Scales of Electrical Measuring Instruments"; M. A. ZEMEL'MAN (Moscow)--"Analog-Digital Voltage Converter with Automatic Error Correction"; B. N. MALINOVSKIY, V. S. KALENCHUK and I. A. YANOVICH (Kiev)--"Automatic Monitoring of the Parameters of the Electrical Signals of Complex Radio and Electronic Equipment"; V. P. PEROV (Moscow)--"Operational Cybernetics as an Independent Scientific Specialization"; Ye. N. GIL'BO (Leningrad)--"On the Problem of Effective Non-linear Scales"; A. I. MARKELOY (Moscow)--"Devices for Preliminary Processing of the Results of Measurements Presented in the Form of

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ACCESSION NR: AP5004677

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Graphic Recordings For Subsequent Introduction of the Information into Universal Digital Computers"; O. M. MOGILVER and S. S. SOKOLOV (Leningrad)--"On a Method for Reducing Excess Information"; T. V. NIKOLAYEVA (Leningrad)--"A Device for Temporal Discretization of Continuous Signals"; A. A. LYOVIN and M. L. BULIS (Moscow)--"Optimization of the Transmission of Telemetric Information as a Means for Raising the Efficiency and Eliminating Interference"; D. E. GUKOVSKIY (Moscow)--"On a Statistic Approach to the Detection of Events in Automatic Inspection"; N. I. LANIN (Leningrad)--"Method for Calculating the Holding Time of Communications in a Centralized Inspection System or Constant Servicing Time"; O. N. BRONSHTSYN, A. L. RAYKIN and V. V. RYKOV (Moscow)--"On a Single-Line Mass Service System with Losses"; V. M. SHLYANDIN (Penza)--report on circuit designs for direct compensation electrical digital measuring instruments; A. N. KOMOV (Novocherkassk)--report on a new method for compensation of digital bridges; M. N. GLAZOV (Leningrad)--report on the problem of voltage-to-angular rotation conversion; V. S. GUTNIKOY (Leningrad)--"Methods for Construction of Frequency Capacitance Pickups with a Linear Scale"; R. Ya. SYROPYATOVA and R. R. KHARCHENKO (Moscow)--report on the determination of the amplitude-frequency and phase characteristics of PFM and PWM modulators; Ye. I. TSHYAKOV (Novocherkassk)--"The Phototransistor as a Switch for Electrical Measurement Purposes"; N. V. MALYGINA (Leningrad)--a report on ways for making universal equipment for measurement of current, voltage and power; P. P. ORNATSKIY and V. I. ZOZULYA (Kiev)--reports on the construction of static voltmeters, wattmeters and

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phase motors; A. V. TRIKHANOV, I. G. SMYSHLYAYEV, N. I. SABLIN, V. M. RAZIN and V. A. GORBUNOV (Tomsk)--report on a device for automatic processing of the measurements of vibration amplitude of pneumatic hammers; L. K. RUKINA and V. G. KNORRING (Leningrad)--report on the development of a digital compensator for measuring pressure, force, etc.; N. B. DADUKINA (Leningrad)--report on a method for constructing frequency pickups for gas analysis; Ye. M. KARPOV, V. A. BRAZHNIKOV and B. Ya. LIKHITSINDER (Kuybyshev)--reports on analysis and recording of boring speeds; Yu. V. PSHCHICHNIKOV (Kuybyshev)--"A High Speed Voltage-to-Digital Code Converter for ac Pickups"; G. P. VIKHROV and V. K. ISAYEV (Vilna)--"A Highly Accurate Digital Peak-to-Peak Voltmeter"; and S. M. PERSIN (Leningrad)--"A Low Level Analog-Digital Voltage Converter."

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: EE, EC

NO REF SOV: 000

OTHER: 000

JPRS

*me*  
Card 4/4

L 25848-66 EWT(d)/EWP(v)/EWP(k)/EWP(h)/EWP(l)

ACC NR: AR5020509

SOURCE CODE: UR/0271/65/000/008/0051/0052

AUTHOR: Shlyandin, V. M.

ORG: none

TITLE: Discrete methods for automatic gaging and monitoring electric values.

SOURCE: Ref. zh. Avtomatika, telemekhanika i vychislitel'naya tekhnika, Abs. 8A393

REF SOURCE: Uch. zap. Penzensk. politekhn. in-t, vyp. 2, 1964, 3-12

TOPIC TAGS: electric measuring instrument, automatic regulation, voltmeter, computer circuit, automatic control system, automatic programming

ABSTRACT: A study was made of general problems in the transformation of electric values into discrete ones. The most widely used method applied in digital devices for measuring electric values (voltage, current, and resistance) is based on the principle of automatic equilibrium coding with discrete shaping of the compensating value. At the same time, the tracking or scanning equilibrium is used. Data are given on some digital voltmeters designed by the Polytechnical Institute in Penza. Problems are analysed on the development of theoretical designing principles and on the schematic principles of general-duty circuits for automatic devices of running monitoring of circuits in complex electrotechnical devices operating at the greatest speed and with the greatest volume. In monitoring circuits for, e.g., resistance only, it is generally necessary to monitor 2 parameters: the active and the reactive resistance of the circuit, for each of which it is possible to assign several toler-

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UDC: 658.562.011.56

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ACC NR: AR5020509

ances. Because the monitoring of the parameters may be achieved only by comparing their values with the assigned ones, it is necessary to have a very large set of standard parameters and a system allowing from this set the selection of the necessary values for monitoring each given circuit. The general-duty of the installation is determined by the programming device. The best programming device is the one which plots the program with the help of perforated cards. Orig. art. has: 2 tables and 11 references.

SUB CODE: 09, 13/ SUBM DATE: none

Card 2/2 *MM*



L 29075-66

ACC NR: AP6017782

SOURCE CODE: UR/0115/65/000/007/0024/0026

39  
B

AUTHOR: Shlyandin, V. M.

ORG: none

TITLE: Electrical measuring direct equilibrating digital instruments

SOURCE: Izmeritel'naya tekhnika, no. 7, 1965, 24-26

TOPIC TAGS: voltmeter, computer logic, computer switching/VK7-5 voltmeter, VOTs-1 voltmeter, ShCh1311 voltmeter, ShCh1411 voltmeter, R339 voltmeter, VTs-2 voltmeter

ABSTRACT: In recent years, intensive work has been performed to reduce the switching time of electromagnetic relays and develop optimal logic in the equilibration process, in order to reduce the number of necessary switching operations and increase the rate of measurement of digital instruments with contact switching elements. The results attained in the USSR are shown in the table.

| Voltmeter type                | VK7-5 <sup>16</sup> | VOTs-1 <sup>17</sup> | Shch1311 <sup>17</sup> | Shch1411 <sup>26</sup> | R339 <sup>26</sup> | VTs-2 <sup>26</sup> |
|-------------------------------|---------------------|----------------------|------------------------|------------------------|--------------------|---------------------|
| Relative corrected error, %   | ±0.1<br>±1<br>sign  | ±0.1<br>±1<br>sign   | ±0.1<br>±1<br>sign     | ±0.05                  | ±0.05              | ±(0.01-<br>-0.02)   |
| Time for one measurement, sec | 3                   | 2                    | 1.5                    | 1.5                    | 3                  | 2                   |

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ACC NR: AP6017782

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As can be seen from the table, the time for one measurement is about one order higher than desirable, but further improvement by reduction of switching time and improvement of logic should not be anticipated. The reduction of measuring times to 0.1-0.2 sec would allow greatly expanded application of these instruments in general equipment, centralized control over slowly changing parameters, slow operating computers, etc. Logical and statistical elements could also be more widely used. With direct equilibration, in which the measured quantity is compared directly with the full scale of the compensating quantity, which is time-constant, the process of equilibration is not a function of time; therefore, the problem can be solved. When this type of equilibration is combined with a tracing measurement regime, reliable, economical and simple voltmeters can be devised. Orig. art. has: 1 table, 2 figures and 2 formulas. [JPRS]

SUB CODE: 09, 12 / SUBM DATE: none / ORIG REF: 007

Card 2/2 *ce*

SHLYANIKOV, YU. A.

Feb 1948

USSR/Metals  
Lead Alloys  
Metallography

"The Kinetic Method of Physical and Chemical Analysis, III," V. A. Shushunov, Yu. A. Shlyanikov, Sci Res Inst of Chem, Gor'kiy State U, 4 pp

"Zhur Fiz Khim" Vol XXII, No 2

Determine that additions of magnesium to alloys of NaPb do not alter the nature of kinetic curves of reaction in the formation of tetraethyl lead. Induction period does not alter its relation to temperature. Show that additions of up to 0.2% of magnesium to sodium stannate will greatly decrease the induction period.

Submitted 27 May 1947

PA 64T65

OKHOTNIKOV, S.S., inzh.; SHLYANIN, A.A., inzh.

Small burners. Trudy TSNII MPS no.228:19-35 '62.  
(Liquid fuels) (Burners)

(MIRA 15:7)

SHLYANIN, V.N., inzh.

Feed yeast in agriculture. Zhivotnovodstvo 21 no.7:53-58  
Ja '59. (MIRA 12:9)  
(Yeast as feed)

SHLYANIN, Vasilii Nikitich; OSADA, P.A., red.; GERASIMOVA, Ye.S.,  
tekhn.red.

[Wood chemistry industry from 1959 to 1965] Lesokhimicheskaya  
promyshlennost' v 1959-1965 gg. Moskva, Gosplanizdat, 1960.  
97 p. (MIRA 13:6)

(Wood--Chemistry)

SHLYANIN, V.N.

Increases the output of the hydrolysis, wood-chemistry, and sulfite alcohol industries. *Gidroliz. i lesokhim.prom. 14 no.2:1-2 '61.*  
(MIRA 14:3)

1. Gosplan SSSR.  
(Hydrolysis) (Wood--Chemistry) (Alcohol)

SHLYANKEVICH, M.A. (Murmansk)

Use of wide-necked vacuum bottles for the inactivation of sera.  
Lab. delo no.8:505-506 '65. (MIRA 18:9)



SHLYANOV A. I.

Morgullis L. S., Sitnov M. A. And Shlyanov A. I., "Adjustment of Regulation of the AK-25-2 Steam Turbine at the Leningrad Metals Plant," *Naladochnyye i eksperimental'nyye raboty ORORES* / Corrective and Experimental Work of the ORORES, 1953, No 6, Pages 47-55.

8(2,5)

SOV/112-58-3-3700

Translation from: Referativnyy zhurnal. Elektrotehnika, 1958, Nr 3, p 24 (USSR)

AUTHOR: Bunkin, V. I., Morgulis, L. S., and Shlyanov, A. I.

TITLE: Testing and Adjusting the Regulation System of Type AK-50 KhTGZ Turbines ( Ispytaniye i naladka regulirovaniya turbin tipa AK-50 KhTGZ)

PERIODICAL: Naladochn. i eksperim. raboty ORGRES, 1956, Nr 13, pp 21-27

ABSTRACT: Violent jarring of levers, valve slide, and servomotor stem that resulted in stem breakage were formerly observed in the functioning of the governing system of turbines. On a sudden loss of 80%-rated load, the turbine ran away until the automatic overspeed device tripped. In the course of governor adjustments, the servomotor-piston stroke was reduced by 30% and both the dead band and the proportional band were brought to normal. As a result of the above adjustments, the governor system was capable of coping with the dropping of full rated load and showed a stable functioning within the whole range of loads.

L.S.M.

Card 1/1

8(2,5)

SOV/112-58-3-3699

Translation from: Referativnyy zhurnal. Elektrotehnika, 1958, Nr 3; p 24 (USSR)

AUTHOR: Bunkin, V. I., Man'kin, M. N., and Shlyanov, A. I.

TITLE: Adjusting the Controls of LMZ Type AK-50-1 (TN-250) Turbines  
(Naladka regulirovaniya turbin LMZ tipa AK-50-1 (TN-250))

PERIODICAL: Naladochn. i eksperim. raboty ORGRES, 1956, Nr 13, pp 27-36

ABSTRACT: The turbine regulation system formerly worked poorly: under no-load conditions, the turbine had a runaway tendency and did not correctly respond to the synchronizer control. To eliminate these troubles, the radial gaps between pilot valves and their seats were reduced, new valve springs were mounted and their initial tension increased, window contours in the throttle valve and its shell were altered, etc. To increase the response speed of the regulating system on sudden loss of electric load, a new-design pilot valve with an additional internal oil overflow was installed. Recommendations on the method of adjusting and tuning up the regulating system for such turbines

Card 1/2

8(2,5)

SOV/112-58-3-3699

Adjusting the Controls of LMZ Type AK-50-1 (TN-250) Turbines

are given. Drawings of the new type of pilot vavle and axle box and sketches of the window shapes in the valve and its shell are presented, as well as specifications for the gaps in the governing and the steam-distributing systems.

L.S.M.

Card 2/2

SHLYAPAK, S. I.

У Д О К

/ Increase of the resistance of wheat against wet smut by the influence of nutrients. V. P. Muravlov and S. I. Shlyapak. *Visnik Akad. Nauk Ukr. R.S.R.* 25, N3-10, 29-33 (1954).—Expts. were conducted to show that resistance against several plant diseases can be increased by different nutrients. Two different kinds of winter wheat seeds (Ukrainka and Lutecence 17) were cultivated during a 3-year period, applying certain micro- and macronutrients. Micronutrients such as B, Cu, Mg, Mn, to which P, N and K phosphate fertilizers were added increased resistance against smut in both wheats. Treatment was more efficient for winter wheat of Ukrainka than for Lutecence 17. Particularly good results were received with Ukrainka wheat by applying B, Zn and Mn. Wheat, exptly. infected and treated with nutrients also showed an increased yield, on comparing with a control. M. Charmandarian

KOSMATYY, Ye.S.; SHLYAPAK, S.I.

New chromatopolarographic method for determining DVT in food products. Vop. pit. 22 no.5:83-89 S-0 '63.

(MIRA 17:1)

1. Iz Ukrainского nauchno-issledovatel'skogo instituta zashchity rasteniy, Kiyev.

SHLYAPENTOKH, G.M.

Use of cards in testing the knowledge of grade 5-8 students.  
Geog. v shkole 26 no.3:48-51 My-Je '63. (MIRA 16:6)

1. 45-ya shkola Leningrada.  
(Geography---Study and teaching)

SHLYAPENTOKH, V.E., s. Elan' Balashovskoy oblasti.

Propaganda of Malthusianism in the pages of "Nature" and "Atomes."  
Priroda 43 no.3:118-124 Mr '54. (MIRA 7:3)  
(Malthusianism)



BLYUMIN, I.; SHLYAPENTOKH, V. V.

Econometric direction of bourgeois economics. Vop.ekon. no.11:  
79-93 N '58. (MIRA 11:11)  
(Economics, Mathematical)

BLYUMIN, Izrail' Grigor'yevich. Priginal uchastiye SHLYAPENTOKH, V.<sup>V.</sup>  
kand.ekonom.nauk. SAFRONCHUK, V.S., red.; SHCHETININ, V.D.A.  
red.; ROMANOVA, N.I., tekhn.red.

[Crisis of present-day bourgeois political economy] Krizis  
sovremennoi burzhuaznoi politicheskoi ekonomii. Moskva, Izd-vo  
In-ta mezhdunar.otnoshenii, 1959. 563 p. (MIRA 13:1)  
(Economics)

SHLYAPENIKH, V.V.

- 2) A Ya Byrskiy - The Differential Equations of Expanded Reproduction
  - 3) I V Kuznetsov - Optimal Planning and Economic Indicators
  - 4) A A Bogus - Mathematical Analysis of the Organic Composition of Production
  - 5) N I Vokhmin - Mathematical Analysis of Rates and Proportions in the National Economy (Practical Application in Determining the Economic Efficiency of Capital Investment)
  - 6) B I Plyubbin, B P Mazurov - Price Relationships in Expanded Reproduction
  - 7) L M Dushin and V S Vakman - Statistical [sic] and Dynamic Models of a Socialist National Economic Balance in Physical Terms
6. Evening Session - 15 December 1959, 1600 hours
- II. The Theory of Linear Programming
  - 1) G S Rubinshain - Review of Methods for the Solution of Linear Programming Problems
  - 2) A I Kurys - Algorithmic Solutions of Transport Problems through Approximation by Means of Hypothetically Optimal Plans
  - 3) Ya P Gorbunov - The Algebra of Linear Programming
  - 4) B V Khabalov - A Recommendation for a Method of Re-computing Members of Dual Linear Coefficient under Conditions of Changing Technology
  - 5) R Chetyrshain - A Practical Interpretation of Kantorovich's Controlling Multipliers
  - 6) Ektor and Harvey - Linear Programming Methods and Material Supply
4. Morning Session - 16 December 1959, 1000 hours
- III. Economic Models and Dynamic Programming
  - 1) V V Zvezdov - Mathematical Models of the National Economy in Bourgeois Economics and a Critique thereof
  - 2) B B Winkler - Mathematical Methods of Determining the Maximum Efficiency of Capital Investment
  - 3) V V Babitskiy - Economic Cycle Models and Dynamic Economic Models of National Economies
  - 4) V V Zvezdov - Problems in the Application of Dynamic Programming in Economic Research Areas
  - 5) I Gorkov - Simple-Product Economic Models and the Analysis of Certain Economic Indicators
  - 6) V I Ruznitskiy - The Dynamic Programming Method and Its Use in Economics
  - 7) D I Opatin - The Bifurcating (stomaya) Matrix as a Model for the Application of Mathematical Methods in Long-Term Economic Planning
8. Evening Session - 16 December 1959, 1600 hours
- IV. The Transportation Problem
  - 1) D I Volozov - Finding the Most Suitable Assignment of Various Types of Fleet Vessels to Lines
  - 2) A M Poyzill'berg - Extremal Methods in Economic Research on the Optimum Spatial Distribution of Projects
  - 3) Z P Baryantseva - The Application of Linear Programming to Air Transport Economics

Report submitted at the Joint Conference on Problems in the Application of Mathematical Methods in Economic Research, Leningrad, 14-21 January 1960.

LASKIN, Dmitriy Fedorovich, starshiy nauchnyy sotr.; SHLYAPIN,  
Aleksandr Andreyevich; MASHKINA, A., red.; YAKOVLEVA, Ye.,  
tekh. red.

[Penless fattening of swine] Otkorm svinei bez stankov. Moskva, Mosk. rabochii, 1962. 28 p. (MIRA 15:11)

1. Nauchno-issledovatel'skiy institut sel'skogo khozyaystva tsentral'nykh rayonov nechernozemnoy zony (for Laskin).
2. Glavnyy zootekhnik sovkhosa imeni Moskovskogo soveta (for Shlyapin).

(Swine)

SHLYAPIN, A., zotekhnik; VOLODIN, V., zotekhnik

Advanced methods for fattening swines. NTO 5 no.8:21-24 Ag '63.  
(MIRA 16:10)

SHLYAPIN, B. P.

PA 163T53

USSR/Metals - Steel, Chromium  
Chemistry - Chromium, Determination Jun 50

"Semi-microchemical Determination of Chromium in the  
Process of Making Chromium Steel," B. P. Shlyapin,  
Z. P. Pevneva, Chusovoy Metallurgical Plant

"Zavod Lab" Vol XVI, No 6, pp 661-663

Describes rapid method for determination of chromium  
during steelmaking process with permanganate used  
for oxidation. Determination takes 7-9 min and  
method is accepted in laboratories of open-hearth

163T53

USSR/Metals - Steel, Chromium Jun 50  
(Contd)

shops. Main features are decreasing of sample to  
0.2 g and selection of proper solvent. Accuracy of  
determination is  $\pm 0.3\%$ .

163T53

SHIVAPIN, D. S.

Mbr. Moscow, Inst. Obstetrics and Gynecology, Dept. Clinical Med., Acad. Med. Sci. -c1948-. Mbr. Chair Pathological Physiolo, 1st. Moscow Ord. Lenin Med. Inst; -c1948-. "Effect of Peacental Albumi on the Cardiovascular System in Conditions of Hemosensitization." Arkhiv Patol., 10, No. 3, 1948.

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[Survey and comparison of foreign standards for designing the structural section of electric power transmission systems] Obzor i sravnenie zarubezhnykh norm na proektirovanie konstruktivnoi chasti linii elektropredachi. Pod obshchei red. S.S. Rokotiana. Moskva, Gos. energ. izd-vo, 1960. 143 p.

(MIRA 14:5)

(Electric power distribution)



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February, 1954  
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996. TRIALS OF MACHINE FOR CUTTING DRIFTS. Shlyapin,  
K. B. (Ugol (coal), Sept. 1953, 40-42). A description and  
performance figures are given for a new machine which cuts  
a 6.27 in. diameter hole in rock with two planetary discs  
each carrying twenty four blades. (L).

S. L. VAPIN, 1951, Dokl. Akad. Nauk SSSR (Engl. transl.) "Study of methods of cutting  
mountain rock as applied to the mechanical cutting of tunnels of  
the Kiev <sup>Subway</sup> ~~Subway~~ ~~System~~, 1951. 16 pp with ill. (In: *Transport Con-  
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1950 no. 10 (10,00-11), 147)

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BARON, L.I., doktor tekhn.nauk, prof.; GLATMAN, L.B., gornyy inzhener;  
SHLYAPIN, K.B., kand.tekhn.nauk

Evaluacting the cutting resistance of rocks. Transp. stroi. 10  
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(Rocks)

SHLYAPIN, K.B., kand.tekhn.nauk; MOTOVILOV, E.A., inzh.; LINENKO, Yu.P.,  
inzh.

Cutters for the mechanical working of abrasive rock. Transp.  
stroil. 12 no.12:46-48 D '62. (MIRA 16:1)  
(Tunneling--Equipment and supplies)  
(Stonecutting--Equipment and supplies)

BARON, L.I., prof., doktor tekhn.nauk; GLATMAN, L.B., kand.tekhn.nauk;  
SHLYAPIN K.B., kand.tekh.nauk

Intensity of dust formation in cutting rocks. Bor'ba s sil. 5:  
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1. Institut gornogo dela imeni A.A.Skochinskogo (for Baron, Glatman).
2. Tsentral'nyy nauchno-issledovatel'skiy institut transportnogo stroitel'stva Ministerstva transportnogo stroitel'stva (for Shlyapin).

(Mine dusts)

SHLYAPIN, Kirill Romanovich, inzh.; SUKHOV, I.V., red.; SHILLING, V.A.,  
red. izd-va; BELOGUROVA, I.A., tekhn. red.

[The VARZ-1 small-bracket swing crane] Malogabaritnyi konsol'no-  
povorotnyi kran VARZ-1. Leningrad, 1961. 13 p. (Leningradskii Dom  
nauchno-tekhnicheskoi propagandy. Obmen peredovym opytom. Seriya:  
Mekhanicheskaiia obrabotka metallov, no.13) (MIRA 14:7)  
(Cranes, derricks, etc.)

SHLYAPIN, R.P.

Loci of evolutes. Sbor. nauch.-issl. rab. TTI no.4:217-238 '57.  
(MIRA 11:9)

(Curves in engineering)

SHLYAPIN, R. P.

Cand Tech Sci - (diss) "Evolute curves." Tashkent, 1958. 14 pp;  
(All-Union Correspondence Polytechnic Inst); 130 copies; price  
not given; (KL, 7-61 sup, 249)



SHLYAPIN, R.P.

Cycloidal formation of curves. Sbor.nauch.-issl.rab.TTI no.12:251-257  
'61. (MIRA 15:11)

(Curves) (Machinery—Design and construction)

SHLYAPIN, V.A., aspirant

Torsion of right-angle wooden rods. Trudy Ural. politekh. inst.  
no.71:205-208 '59. (MIRA 12:8)  
(Torsion) (Elastic rods and wires)

SHLYAPIN, V.A., aspirant

Stability of eccentrically compressed wooden rods resulting  
from the plane action of the moment. Trudy Ural. politekh.  
inst. no.71:209-222 '59. (MIRA 12:8)  
(Flexure) (Elastic rods and wires)

CHUVATOV, V.V.; BEREZIN, N.N.; METSGER, E.Kh.; NAGIN, V.A.; KARTASHOV, N.A., kand. tekhn. nauk, dots.; MIL'KOV, N.V., kand. tekhn. nauk; BYCHKOV, M.I., kand. tekhn.nauk, dots.; SUKHANOV, V.P., SHLYAPIN, V.A.; KORZHENKO, L.I.; ABRAMYCHEV, Ye.P.; KAZANTSEV, I.I.; YARES'KO, V.F.; LUKOYANOV, Yu.N.; DUDAROV, V.K.; BALINSKIY, R.P.; KOROTKOVSKIY, A.E.; PONOMAREV, I.I.; NOVOSEL'SKIY, S.A., kand. tekhn.nauk, dots.; IL'INYKH, N.Z.; TSITKIN, N.A.; ROGOZHIN, G.I.; PRAVOTOROV, B.A.; ORLOV, V.D.; RACHINSKIY, M.N.; KULTYSHEV, V.N.; SMAGIN, G.N.; KUZNETSOV, V.D.; MACHERET, I.G.; SHEGAL, A.V.; GALASHOV, F.K.; ANTIPIN, A.A.; SHALAKHIN, K.S.; RASCHKHTAYEV, I.M.; TISHCHENKO, Ye.I.; FOTIYEV, A.F.; IPPOLITOV, M.F.; DOROSINSKIY, G.P.; ROZHKOV, Ye.P.; RYUMIN, N.T.; AYZENBERG, S.L.; GOLUBTSOV, N.I.; VUS-VONSOVICH, I.K., inzh., retsenzent; GOLOVKIN, A.M., inzh., retsenzent; GUSELETOV, A.I., inzh., retsenzent; KALUGIN, N.I., inzh., retsenzent; KRAMINSKIY, I.S., inzh., retsenzent; MAYLE, O.Ya., inzh., retsenzent; OZERSKIY, S.M., inzh., retsenzent; SKOBLO, Ya.A., dots., retsenzent; SPERANSKIY, B.A., kand. tekhn. nauk, retsenzent; SHALAMOV, K.Ye., inzh., retsenzent; VOYNICH, N.F., inzh., red.; GETLING, Yu., red.; CHERNIKHOV, Ya., tekhn. red.

[Construction handbook] Spravochnik stroitelia. Red.kollegia: M.I. Bychkov i dr. Sverdlovsk, Sverdlovskoe knizhnoe izd-vo. Vol.1. 1962. 532 p. Vol.2. 1963. 462 p. (MIRA 16:5)  
(Construction industry)

SHLYAPIN, V.B.

3631. SHLYAPIN, V.B. Elyektrokontaktnaya Svarka Parovbznnykh Dyshyel. M. Transzhyeldorizdat, 1954 24s. s Chyert. 20sm (Vsyeysoyuz Nauch-isslyed, in-t Zh-D Transpoata, ia form, Pis'mo No. 316) 800ekz. Byespl-Na obl Avt. Nye Ukazan- (54-14150zh) 621.13, 01:621.791.76+ 621.791. U

SO: Knizhnaya Letopis', Vol. 3, 1955

SHLYAPIN, V. B.

USSR/Engineering - Contact welding

Card : 1/1 Pub. 128 - 15/32

Authors : Obukhov, A. V. and Shlyapin, V. B.

Title : Electrical contact welding of locomotive drive shafts

Periodical : Vest. mash. 34/7, 52 - 54, July 1954

Abstract : General information is given on electrical contact welding of locomotive drive shafts, conducted by "Shevchenko" locomotive repairing factory, and a maintenance train #13. A description is given of welding procedures, and attempts are made to determine the influence of welding on steel characteristics. Illustrations; graphs.

Institution : ...

Submitted : ...

AID P - 4519

Subject : USSR/Engineering-Welding  
Card 1/1 Pub. 107-a - 5/13  
Author : Shlyapin, V. B.  
Title : Fatigue Strength of Locomotive Welded Connecting Rods  
Periodical : Svar. proizv., 2, 16-17, F 1956  
Abstract : The observation of the fatigue strength of the main  
resistance-welded connecting rods, the equipment used,  
and the results obtained are presented in a concise  
manner. Four graphs, 3 micro-photos, and 2 drawings.  
Institution : Central Scientific Research Institute of the Ministry  
of Railways - TsNII MPS.  
Submitted : No date

SHLYAPIN, V. B.

AID P - 5415

Subject : USSR/Engineering

Card 1/1 Pub. 11 - 5/13

Authors : Obukhov, A. V., and V. B. Shlyapin

Title : Mechanical and heat treatments of resistance-welded butts.

Periodical : Avtom. svar., 5, 31-36, My 1956

Abstract : The authors describe their method of tempering and normalizing resistance welded joints of large specimens like I-beams, rails, etc., which improves mechanical properties. Four charts and 2 micro-pictures.

Institution : Central Scientific Research Institute of the Ministry of Railways (TsNII MPS).

Submitted : 16 Mr 1956



AID P - 5242

Subject : USSR/Engineering

Card 1/1 Pub. 107-a - 2/9

Author : Shlyapin, V. B., Kand. of Tech. Sci. (TsNII MPS)

Title : Influence of cold dressing on the dynamic strength of resistance-welded parts.

Periodical : Svar. proizvod., 8, 7-11, Ag 1956

Abstract : The author presents the results of experiments conducted with a special welded I-shaped steel part in order to determine the effect of dressing and straightening on the dynamic strength of the welded section. Five graphs, 5 photo-microstructures, 2 drawings and 1 table. Two Russian references (1946-53).

Institution : Central Scientific Research Institute of the Ministry of Railways (TsNII MPS).

Submitted : No date

SHLYAPIN, V.B.

OBUKHOV, A.V.; SHLYAPIN, V.B.

Thermomechanical treatment of resistance welded butt welds. Avtom.  
svar.9 no.5:31-36 S-0 '56. (MLRA 10:2)

1. Tsentral'nyy nauchno-issledovatel'skiy institut Ministerstva pu-  
tey soobshcheniya.  
(Electric welding)

25(1); 25(6)

PHASE I BOOK EXPLOITATION

SOV/3575

Vinogradov, Yu.G., Ye.A. Greyl', M.M. Kraychik, and V.B. Shlyapin

Metody issledovaniya kachestva svarki (Methods of Quality Control of Welded Joints), Moscow, Transzheldorizdat, 1959. 132 p. 1,200 copies printed. (Series: Vsesoyuznyy nauchno-issledovatel'skiy institut zheleznodorozhnogo transporta. Trudy, vyp. 175)

Ed. (Title page): V.B. Shlyapin, Candidate of Technical Sciences;  
Ed. (Inside book): A.V. Popov, Engineer; Tech. Ed.: P.A. Khitrov.

**PURPOSE:** This book is intended for technical and scientific personnel concerned with the welding of various parts and structures.

**COVERAGE:** The book deals with welding defects and their detection, as well as with mechanical testing and metallographic investigation of welded joints. There are 28 references, all Soviet.

Card 1/3

SOV/3575

Methods of Quality (Cont.)

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Methods of Quality (Cont.)

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Bibliography

AVAILABLE: Library of Congress

VK/jb  
4-12-60

Card 3/3

S/019/60/000/013/057/112  
A152/A029

AUTHORS: Kolesnichenko, A.N.; Rovkakh, S.Ye.; Vinogradov, Yu.G.; Shlya-  
pin, V.B.

TITLE: An Automatic Machine for the Pulse-Arc Building-Up of Weld  
Metal <sup>14</sup>

PERIODICAL: Byulleten' izobreteniy, 1960, No. 13, p.43

TEXT: Class 21h, 30<sup>17</sup>. No. 129764<sup>18</sup> (615935/25 of January 7, 1959).  
This machine incorporates a feed mechanism for the electrode wire, and an  
outlet spout that directs the electrode onto the article, with an adjust-  
able eccentric mechanism. It has the following special feature: to work  
(as required) surfaces with various cross-sections in articles of different  
configurations, this machine is fitted with a link mechanism having an ad-  
justing supporting screw, with the help of which the angle of inclination  
of the spout can be varied, and a precise adjustment of the amplitude of  
the swinging of the spout can be achieved.

Card 1/1



SOV/125-12-2-9/14

18(5)

AUTHOR: Kraychik, M.M., and Shlyapin, V.P.

TITLE: The Search for a Method of Repairing Crack Damage Using One-Sided Welding (Izyskaniye sposoba vosstanovleniya povrezhdennogo treshchinoy mesta pri odnostoronney svarke)

PERIODICAL: Avtomaticheskaya svarka, 1959, Vol 12, Nr 2, pp 71-75 (USSR)

ABSTRACT: Various parts can often be welded from only one side if cracks are found in them (e.g. the frame of rail trucks, etc.). In these cases a method of cutting out the crack is needed which would ensure the greatest heating of the damaged section and would reduce to a minimum the non-fusing of the edges. 4 types of experiment are illustrated by different methods: 2 using machinery, 1 using electric-arc smelting of the channel, and the fourth using a through-cut (either by machinery, electric-arc or gas smelting). It was found that a Y-shaped crack can only be satisfactorily removed by using an electric arc in the vertical position, because otherwise great uneven-

Card 1/3



SOV/125-12-2-9/14

The Search for a Method of Repairing Crack Damage Using One-Sided Welding

ness results, no matter what electrodes are used. Good results were obtained when the edges of the cut had axes forming an angle of 40-60°, clearance between the edges being 4-5 mm. Detailed recommendations are made to this end. It was found that the main reason for the formation of cracks when welding in the remaining lining was high sulphur content which was up to 0.16%. When cutting a lining made of St3 with a phosphorus and sulphur content in accordance with GOST 380-50, no cracks appeared. The article then describes fatigue tests on 3 series of girders to compare their resistance to vibration. Each girder was welded with differently cut edges. Their fatigue life is shown in a table. The conclusions are that of 3 types of one-sided cutting (triangular and trapezoidal by mechanical methods, and arc-smelting) preference should be given to mechanical cutting with an opening angle of not less than 80°. Secondly when welding a lining in situ, as a rule the edges are fully heated. In production conditions preparation of cracks

Card 2/3

The Search for a Method of Repairing Crack Damage Using One-Sided  
Welding

SOV/125-12-2-9/14

should be done by a gas-oxygen cut. Thirdly the girders which have the longest fatigue life are those in which cracks are welded on the remaining lining. There are 3 illustrations, 2 tables and 1 Soviet reference.

ASSOCIATION: TsNII MPS SSSR

SUBMITTED: May 12, 1958

Card 3/3

KRAYCHIK, M.M., kand. tekhn. nauk; SHLYAPIN, V.B., kand. tekhn. nauk

Causes of damages occurring in the truckframe of the TE3 diesel  
locomotive and remedy measures. Vest. TSNII MPS 18 no.5:28-31 Ag  
'59. (MIRA 13:1)

(Diesel locomotives)

SHLYAPIN, V.B., kand.tekhn.nauk, VINOGRADOV, Yu.G., inzh,  
LEONT'YEV, D.V., inzh., IONSKIY, Ye.D., kand.tekhn.nauk.

Built-up welding under flux by means of a weaving arc.  
Svar. proizvod. no.2:24-26 F '60. (MIRA 13:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zhelez-  
nodorozhnogo transporta Ministerstva putey soobshcheniya.  
(Electric welding)  
(Machinery--Maintenance and repair)

S/193/60/000/012/006/018  
A004/A001

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TITLE: Vibration-Arc Build-Up of Parts With the Aid of the Automatic  
АНКЕФ-1 (ANKEF-1) Head

PERIODICAL: Byulleten' tekhniko-ekonomicheskoy informatsii, 1960, No. 12, pp.20-21

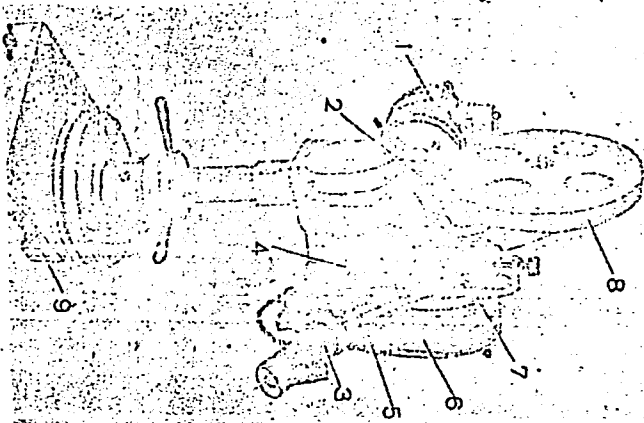
TEXT: The Tsentral'nyy nauchno-issledovatel'skiy institut putey soobshcheniya (Central Scientific Research Institute of Transport) (TsNII MPS) has developed a new method of submerged vibration arc building-up of shaft journals of the rolling stock. A thin metal layer of 0.3 - 3 mm is built up without cracks, pores and slag impurities. The building-up equipment, the special automatic ANKEF-1 head, was manufactured in cooperation with the design and planning office of the Glavstroyemkhanizatsiya Ministerstva transportnogo stroitel'stva (Glavstroyemkhanizatsiya of the Ministry of Transport Engineering). The part being built up is clamped in the centers of a lathe and rotates with a speed of 1-5 rpm while the metal is welded on with the ANKEF-1 head shown in the illustration. The head is actuated by the АОЛ-11-2 (AOL-11-2) 180 w electromotor 1 which also feeds the

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Vibration-Arc Build-Up of Parts With the Aid of the Automatic  $\text{AHK}\Phi\text{-1}$  (ANKER-1) Head

electrode wire to the part and produces the vibrations with the aid of worm reducer 2. Nozzle 3 carries out oscillations parallel to ellipsoid axis. The vibrator consists of an axle and two eccentrically located bushings 4. The axis of the outer bushing is displaced relative to the inner one by 1.5 mm, so that the total eccentricity can be varied from 0 to 3 mm. The nozzle is connected to rocker 5. At the end of the axis of the eccentric mechanism a driven skew bevel wheel is mounted which is geared to the toothed wheel of the worm shaft of the reducer. The set



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Vibration-Arc Build-up of Parts With the Aid of the Automatic АНКЭФ-1 (ANKEF-1) Head

of toothed wheels makes it possible to vary the number of nozzle oscillations in the range of 20 - 57 cps. Electrode wire feed mechanism 6 is mounted on a plate fastened to the reducer housing. The driving roll for the wire feed is made of two disks and a set of rubber rings tightened by nut 7. The electrode wire is fed to the part being built up from magazine 8. The feed speed can be varied between 57 and 236 m/hour. The ANKEF-1 head has a special prop 9 by which it is fastened to the cross slide of lathe. By the screw, connecting the head with the prop, the former can be lifted by 200 mm from its lower position. A cylindrical hinge over the screw makes it possible to tilt the head around its horizontal axis through 150°, while it can be swiveled around its vertical axis through 360°. The overall dimensions of the head (height x length x width) are 600 x 560 x 200 mm, it weighs 30 kg. For building-up operations with the ANKEF-1 heads the standard flux grades АН-348 (AN-348) or ОЦУ-45 (OSTs-45) are used. The repair costs of parts reconditioned by building-up amount to 10 - 30% of the manufacturing costs. There is 1 figure. ✓

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SHLYAPIN, V.B., kand.tekhn.nauk; LEONT'YEV, D.V., inzh.

Cold pressure welding of copper contact wires. Vest. TSMII  
MPS 20 no.6:4/-46 '61. (MIRA 14:10)  
(Electric railroads--Wires and wiring)  
(Welding)



SHLYAPIN, V.B.; VINOGRADOV, Yu.G.; SHAKHOV, V.I.; FILIPPOVA, L.S.,  
red.; DROZDOVA, N.D., tekhn. red.

[Build-up welding under flux with a vibrating arc in the  
repair of rolling stock parts] Vibrodugovaya naplavka pod  
fliusom detalei podvizhnogo sostava. Moskva, Transzhel-  
dorizdat, 1962. 26 p. (MIRA 16:4)  
(Railroads--Rolling stock--Maintenance and repair)

SHLYAPIN, V.B., kand.tekhn.nauk; VINOGRADOV, Yu.G., Inzh.

Investigating the characteristics of the build-up by weaving arc  
welding under flux. Trudy TSNII MPS no.260:61-81 '63.

(MIRA 16:11)

LEONT'YEV, D.V., inzh.; SHLYAPIN, V.B., kand.tekhn.nauk

Cold welding of alloyed copper conductors. Svar.proizv. no.4:28-29  
Ap '64. (MIRA 18:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zheleznodorozhnogo  
transporta Ministerstva putey soobshcheniya.

LEONT'YEV, M.V.; SHLYAPIN, V.B.

Welding a copper contact wire. Avtom. svar. 17 no.5:68-72  
My '64. (MIRA 17:11)

1. Tsentral'nyy nauchno-issledovatel'skiy institut Ministerstva putey  
soobshcheniya.

SHLYAPIN, V.F.

Prevention of poisoning from working with vat liquor remaining from  
the rectification of Freon-12. Gig. i san. 23 no.8:74-75 Ag '58  
(MIRA 11:9)

1. Iz Gor'kovskogo nauchno-issledovatel'skogo instituta gigiyeny  
truda i professiona'nykh zabolevaniy.  
(FREONS--PHYSIOLOGICAL EFFECT)

BONGARD, E.M.; SHLYAPIN, V.F. (GOR'KIY)

Clinical aspects of ethylene oxide poisoning. Gig. truda i  
prof. zab. 4 no.2:9-13 F '60. (MIRA 15:3)

1. Institut gigiyeny truda i professional'nykh zabolevaniy.  
(ETHYLENE OXIDE--TOXICOLOGY)

SHLYAPIN, V.F.

Industrial hygiene in the production of elegas. Trudy GIGT no.9:  
5-12 '62. (MIRA 17:9)

SHLYAPIN, Ye.G.; MOLOTOK, N.P.

Studying the possibility of using natural graphite with  
an ash content of up-to 0.2% in electric engineering.  
TSvet. met. 37 no.11:78-81 N '64. (MIRA 18:4)



POPOV, G.G.; SHLYAPINA, V.N.

Device for determining the relaxation of stresses in polymers.  
Kauch. i rez. 22 no.10:43-44 G '63. (MIRA 16:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zheleznodo-  
rozhnogo transporta.

Investigation of the ionic-organic catalysis by the method of the theory of active ensembles. I. Kucharov's reaction of catalytic hydration of acetylene. T. A. Pospelova, I. Ya. Silyapintokh, N. I. Kobozev, and L. A. Nikolayev (State Univ., Moscow). *J. Phys. Chem. (U.S.S.R.)* 21, 65-84 (1947) (in Russian). —The formation of AcH from  $C_2H_2$  and  $H_2O$  in 2.5 N  $H_2SO_4$  in the presence of  $Hg^{++}$  is accelerated about 2.5 times when, instead of  $HgSO_4$ , mercurous, i.e.,  $o-(CH_3COOH)HgCH(CH_2OCH_3)CH_2NHCO-C_6H_4OCH_2CO_2Na$ , is used, about 7 times when  $Hg^{++}$  is adsorbed on  $WO_3$ , and about 9 times when mercurous is adsorbed on  $WO_3$  or a cyclic org. compd. and then  $Hg^{++}$  is adsorbed on  $WO_3$ . The effect of cyclic compds. is greater the greater their mol. wt.; allylic acid was the smallest and 1-phenyl-2,3-dimethyl-4-dimethylamino-5-pyrazolone the heaviest compd. Stable org. Hg compds. such as  $C_6H_5HgCl$ ,  $(C_6H_5)_2Hg$ ,  $ClCH_2CH_2HgCl$ ,  $CH_3CH_2CH_2CHO$ , etc., are less active than  $HgSO_4$ . The ratio of AcH to crotonaldehyde in the reaction product is high (over 50) and independent of the adsorbent. Adsorption of  $Hg^{++}$  on active C,  $SiO_2$  gel, kaolin, etc., does not activate it. Adsorption of less than 0.005 g. of  $Hg^{++}$  by 1 g. of casein increases the activity of  $Hg^{++}$ , but casein has no effect at higher adsorbed amts. The activity of  $Hg^{++}$  adsorbed on casein and some  $WO_3$  samples decreases when the ratio  $r$  of Hg to  $WO_3$  increases; this shows that the "active ensemble" contains 1 ion of Hg (C.A. 39, 3722<sup>1</sup>). In addn., some  $WO_3$  samples give rise to a max. of activity at some small  $r$ , and one sample showed only this max.; from the  $r$  corresponding to the max. it is concluded that the "active ensemble" contains 2 Hg ions. The area of "migration cells" (C.A. 39, 3722<sup>2</sup>) is calcd. for  $WO_3$  and casein. The temp. coeff. of the reaction between 40° and 50° is smaller for  $Hg^{++}$  or  $WO_3$  than for  $HgSO_4$ , and the activity of  $Hg^{++}$  on casein is independent of temp. Some adsorption isotherms for  $Hg^{++}$  on  $WO_3$  are given. II.

Catalytic polymerization of acetylene to vinyl derivatives. E. N. Martinson and N. I. Kobozev. *Ibid.* 85-90. —When  $C_2H_2$  is brought into contact with a soln. of CuCl and  $NH_4Cl$  in HCl, a Cu compd. contg. about 4.3 C<sub>2</sub>H<sub>2</sub> per 1 atom Cu is pptd. The condensation of  $C_2H_2$  is accelerated 15-20 times by introducing active C in the above soln. The catalytic activity of an adsorbed Cu ion shows a max. when about 8 mg. Cu is adsorbed by 1 g. of C; this gives 4 for the no. of Cu ions in the "active ensemble." The "migration cells" on the C surface are  $30 \times 10^{-11}$  cm.<sup>2</sup> in size. Silica gel, bentonite, etc., cannot be substituted for C. As it was believed that HCl is required only to keep CuCl in the soln., the catalytic activity of  $CuSO_4$  + carbon in a neutral soln. was tested. This catalyst was as active as CuCl and formed "ensembles" contg. 4 Cu ions. For Cu adsorbed on C the temp. coeff. between 50 and 60° is less than without adsorbent. The lowering of the temp. coeff. by adsorption is typical for ionic catalysts.

J. J. Bikerman

SHLYAPINTOKH, I. YA. PERTILL INDEX

**CA** Ignition of explosive gaseous mixtures in shock waves. 24

Ya. B. Zel'dovich and I. Ya. Shlyapintokh. *Doklady Akad. Nauk S.S.S.R.* 63, 871-4(1959); *U.S.S.R. Acad. Sci. Trans.*, C.A. 38, 41819. --Shock waves permit rapid heating of the explosive mixt. and thus exclude alterations of the chem. decompn. during the compression period, and complications due to catalytic and surface effects. A convenient method of producing a shock wave is to fire a bullet through the gaseous mixt. A bullet flying at the velocity  $v \sim 2$  km./sec. ignites a mixt.  $2H_2 + O_2 + 5Ar$ . That the ignition is due solely to the shock wave, not to heat produced by friction on the bullet, is proved by expts. with a mixt.  $CS_2 + O_2 + 78\%$  which a flat-tipped 4.0-4.5 mm. bullet ignites at the min.  $v = 1330$  m./sec., but which a 60°-conical-tipped bullet of the same caliber fails to ignite even at  $v = 1750$  m./sec.; as the heat due to friction is the same in both cases, and the shock wave amplitude is greater in the case of the flat-tipped bullet, the ignition is evidently brought about by the wave running in front of the bullet. Examples of data of min.  $v$ , the temp. attained, and the compression  $p/p_0$  ( $p_0 =$  initial  $p$ ), are:  $2H_2 + O_2 + 7Ar$ ,  $v$  (min.) = 1320 m./sec.,  $T = 1420 \pm 70^\circ K.$ ,  $p/p_0 = 4.3$ ;  $2CO + O_2$  (satd. with  $H_2O$  at  $22^\circ$ ) 1500, 1420  $\pm$  50, 6.0;  $CS_2 + O_2$ , 78%, 1330, 1210  $\pm$  55, 6.0. Photographic recording on a revolving film of a bullet fired horizontally through the latter mixt. flowing vertically, from the bottom up, at 1.0-1.2 m./sec., permitted detn. of the time lag  $\tau$  of the ignition; at  $v = 1500 \pm 150$  m./sec.,  $\tau$  was of the order of  $10^{-6}$  to  $10^{-5}$  sec. The photographs revealed, further, two peculiarities of the ignition. At velocities distinctly greater than the min.  $v$  necessary to produce ignition, there are periodic flashes and break-downs of the combustion, with a frequency  $\nu$  attaining  $6 \times 10^6$ /sec. in the  $CS_2 + O_2$ , 78% mixt.;  $\nu$  is a function of the diam.  $d$  of the flat tip of the bullet, the dimensionless magnitude  $\nu d/v$  remaining within the limits 0.19-0.63. The other independent phenomenon is the band structure of the afterglow zone of the reaction products, which may extend to 0.001 sec. of afterglow, and indicates a periodic oscillation of the intensity of glow. N. Thon

ASS. S.A. METALLURGICAL LITERATURE CLASSIFICATION

COMMON ELEMENTS: C O N S P V W X Y Z AA AB AC AD AE AF AG AH AI AJ AK AL AM AN AO AP AQ AR AS AT AU AV AW AX AY AZ BA BB BC BD BE BF BG BH BI BJ BK BL BM BN BO BP BQ BR BS BT BU BV BW BX BY BZ CA CB CC CD CE CF CG CH CI CJ CK CL CM CN CO CP CQ CR CS CT CU CV CW CX CY CZ DA DB DC DE DF DG DH DI DJ DK DL DM DN DO DP DQ DR DS DT DU DV DW DX DY DZ EA EB EC ED EE EF EG EH EI EJ EK EL EM EN EO EP EQ ER ES ET EU EV EW EX EY EZ FA FB FC FD FE FF FG FH FI FJ FK FL FM FN FO FP FQ FR FS FT FU FV FW FX FY FZ GA GB GC GD GE GF GG GH GI GJ GK GL GM GN GO GP GQ GR GS GT GU GV GW GX GY GZ HA HB HC HD HE HF HG HH HI HJ HK HL HM HN HO HP HQ HR HS HT HU HV HW HX HY HZ IA IB IC ID IE IF IG IH II IJ IK IL IM IN IO IP IQ IR IS IT IU IV IW IX IY IZ JA JB JC JD JE JF JG JH JI JJ JK JL JM JN JO JP JQ JR JS JT JU JV JW JX JY JZ KA KB KC KD KE KF KG KH KI KJ KL KM KN KO KP KQ KR KS KT KU KV KW KX KY KZ LA LB LC LD LE LF LG LH LI LJ LK LL LM LN LO LP LQ LR LS LT LU LV LW LX LY LZ MA MB MC MD ME MF MG MH MI MJ MK ML MN MO MP MQ MR MS MT MU MV MW MX MY MZ NA NB NC ND NE NF NG NH NI NJ NK NL NM NO NP NQ NR NS NT NU NV NW NX NY NZ OA OB OC OD OE OF OG OH OI OJ OK OL OM ON OP OQ OR OS OT OU OV OW OX OY OZ PA PB PC PD PE PF PG PH PI PJ PK PL PM PN PO PP PQ PR PS PT PU PV PW PX PY PZ QA QB QC QD QE QF QG QH QI QJ QK QL QM QN QO QP QQ QR QS QT QU QV QW QX QY QZ RA RB RC RD RE RF RG RH RI RJ RK RL RM RN RO RP RQ RR RS RT RU RV RW RX RY RZ SA SB SC SD SE SF SG SH SI SJ SK SL SM SN SO SP SQ SR SS ST SU SV SW SX SY SZ TA TB TC TD TE TF TG TH TI TJ TK TL TM TN TO TP TQ TR TS TT TU TV TW TX TY TZ UA UB UC UD UE UF UG UH UI UJ UK UL UM UN UO UP UQ UR US UT UY UZ VA VB VC VD VE VF VG VH VI VJ VK VL VM VN VO VP VQ VR VS VT VY VZ WA WB WC WD WE WF WG WH WI WJ WK WL WM WN WO WP WQ WR WS WT WY WZ XA XB XC XD XE XF XG XH XI XJ XK XL XM XN XO XP XQ XR XS XT XU XV XW XX XY XZ YA YB YC YD YE YF YG YH YI YJ YK YL YM YN YO YP YQ YR YS YT YU YV YW YX YY YZ ZA ZB ZC ZD ZE ZF ZG ZH ZI ZJ ZK ZL ZM ZN ZO ZP ZQ ZR ZS ZT ZU ZV ZW ZX ZY ZZ

Shlyapin Tokh, I Ya.

USSR/Chemistry - Physical chemistry

Card 1/1 Pub. 22 - 37/47

Authors : Shlyapintokh, I. Ya.

Title : Photosynthesis inhibition by oxygen

Periodical : Dok. AN SSSR 99/1, 141-144, Nov 1, 1954

Abstract : The phenomena observed during oxygen inhibition of a photosensitized auto-oxidation reaction are described. The fact that oxygen inhibits the photosensitized reaction, which takes place with the participation of chlorophyll and appears to be one of the links of the photosynthesis process, was established. The role of chlorophyll on the hydrogen transfer during the photosynthesis is explained. Eleven references: 5-USSR; 4-German and 2-USA (1912-1953). Graphs.

Institution : Academy of Sciences USSR, Institute of Chemical Physics

Presented by: Academician A. N. Terenin, June 12, 1954