

ZAL'MANOVICH, M. Z.

AUTHORS:

Matveyev, B. V., and Zal'manovich, M. Z.

475

TITLE:

Salts of Bis-quaternary Ammonium Bases. (Soli bis-chetvertichnykh ammoniyevykh osnovaniy)

PERIODICAL:

Zhurnal Obshchey Khimii, 1957, Vol. 27, No. 1, pp. 182-185
(U.S.S.R.)

ABSTRACT:

Efforts were made to obtain $(\text{CH}_3)_3\text{N}-\text{CH}_2-\text{CH}=\text{CH}-\text{CH}_2-\text{N}(\text{CH}_3)_3^{++}2(\text{OH})^-$ or its homologues having one or two methyl groups at various carbon atoms. It was expected that the pharmacological effect of bis-quaternary ammonium salts can be intensified considerably by introducing multiple bonds into the hydrocarbon chain. This assumption was later proven by pharmacological studies conducted by Yu. N. Shanin and I. I. Baryshnikov who observed that the introduction of a double bond in the hydrocarbon chain between two nitrogen atoms of bis-pyridine derivatives increases the ganglio blocking properties of the substance and that these characteristics were most vividly demonstrated by (1,4)-bis-pyridine-pentene-2 bromide. The bromide salts obtained showed both hypotensive and ganglio-blocking effects. All the substances obtained represent

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Salts of Bis-quaternary Ammonium Bases

colorless crystals, well soluble in water and less soluble in alcohol, slightly soluble in benzene and insoluble in ether. The analysis results for the bromine content (according to Carius) and the nitrogen content (according to Dumas) are shown in table.

Two tables. There are 10 references, of which 2 are Slavic.

ASSOCIATION:

PRESENTED BY:

SUBMITTED: February 7, 1956

AVAILABLE:

Card 2/2

IOFFE, I.S.; GOEMAN, I.A.; ZAI'MANOVICH, M.Z.

Rhodamine dyes and related compounds. Part 15: Rhodamine dyes
with hydroaromatic and polymethylene radicals. Zhur.org.khim.
1 no.3:581-586 Mr '65. (MIRA 1814)

IOFFE, I.S.; ~~ZAL'MANOVICH, M.Z.~~

Rhodamine dyes and related compounds. Part 7: ~~2~~-phenylethylnhodamines.
Zhur.ob.khim. 33 no.4:1089-1092 Ap '63. (MIRA 16:5)
(Rhodamine) (Dyes and dyeing)

IOFFS, I.S.; ZAL'MANOVICH, M.Z.

Rhodamine dyes and related compounds. Part 4: Aryl- and
benzylrhodamines. Zhur.ob.khim. 32 no.5:1480-1485 My '62.
(MIRA 15:5)

(Rhodamine)

IOFFE, I.S.; ZAL'MANOVICH, M.Z.

N-substituted amides of salicylic acid and its derivatives. Part 3:
Arylides of 5-aminosalicylic acid. Zhur. ob. khim. 31 no.1:199-201
Ja '61. (MIRA 14:1)

(Salicylic acid)

ZALMANOVICH, Z. I.

Dissertation: "On Some Classes of Linear Lie Algebra." Cand Phys-Math Sci, Moscow
State Pedagogical Inst imeni V. I. Lenin, 12 Apr 54. (Vechernyaya Moskva, Moscow, 1 Apr 54)

SO: SUM 243, 19 Oct 1954

GUREVICH, G.B.; ZALMANOVICH, Z.I.

Ide's orthogonally complementary algebras. Uch. zap MGPI 108:75-97
'57. (MIRA 11:12)

(Algebra, Abstract)

ZAIMANOVICI, Basia
SURNAME, Given Names

Country: Rumania

Academic Degrees: -Engineer.-

Affiliation: -not given-

Source: Bucharest, Revista de Chimie, Vol 12, No 9, Sep 1961, pp 560-561.

Data: "High Pressure Autoclaves Designed with a Screened Motor Stirring Device."

670 981643

ZALMANOWNA-GINZBURG, Galina

Successful surgical results in the treatment of open dislocation and fracture of the ankle joint. Chir.narz.ruchu ortop.polska 25 no.3:229-232 '60.

1. Z Oddzialu Traumatologicznego Szpitala S.P. Botkina w Moskwie
Lekarz naczelny: prof. A.N.Szabanow Kierownik anukowy: prof.
D.K.Jazykow
(ANKLE fract & disloc)

L. 33193-66 EWT(1)/EWT(2)/ENP(3) R/A SOURCE CODE: UR/0058/65/000/011/DO14/DO15
ACC NR: AR6016182

AUTHOR: Bukhov, F. F.; Balov, V. P.; Desyatova, N. V.; Zamanskaya, R. A. 57
TITLE: Determination of certain electrooptical parameters of P-Cl, P-Br, and P-O bonds B

SOURCE: Ref. zh. Fizika, Abs. 11D104
REF SOURCE: Tr. Komis. po spektroskopii. AN SSSR. t. 3, vyp. 1, 1964, 108-112

TOPIC TAGS: electrooptic effect, Raman scattering, Raman spectrum, spectral line, uv spectrum, conjugate bond system

ABSTRACT: A study was made of the intensities of the Raman scattering lines of fully-symmetrical oscillations of the ring in benzene, hexachlorobenzene, 1,3,5-trichlorobenzene, sym-triazine, cyanuric chloride, and phosphonitrochloride trimer. The results obtained and data on the uv spectra point to the presence of conjugation in the latter compound, although its character differs from that of "benzene." [Translation of abstract]

SUB CODE: 20, 07

Card 1/1 mc

ZALMANSON, M., kapitan-nastavnik

Dredging by sweeping. Rech. transp. 20 no. 1:50-51 Ja '61.
(MIRA 14:2)

1. Obskoye basseynovoye upravleniye puti.
(Dredging)

ZALMANSON, S. N.

"Organization of preventive sanitary control under conditions
of a large city."

Report submitted at the 13th All-Union Congress of Hygienists,
Epidemiologists, and Infectionists. 1959

BANSHCHIKOV, V.M., zasl. deyatel' nauki prof., red.; KRYLOVA, N.N.,
red; ZALMANZON, A.N., doktor med. nauk, red.; KAMENEVA, Ye.N.,
prof., red.; POVITSKAYA, R.S., doktor med. nauk, red.;
ROKHLIN, L.L., prof., red.; SNEGIREV, P.I., red.

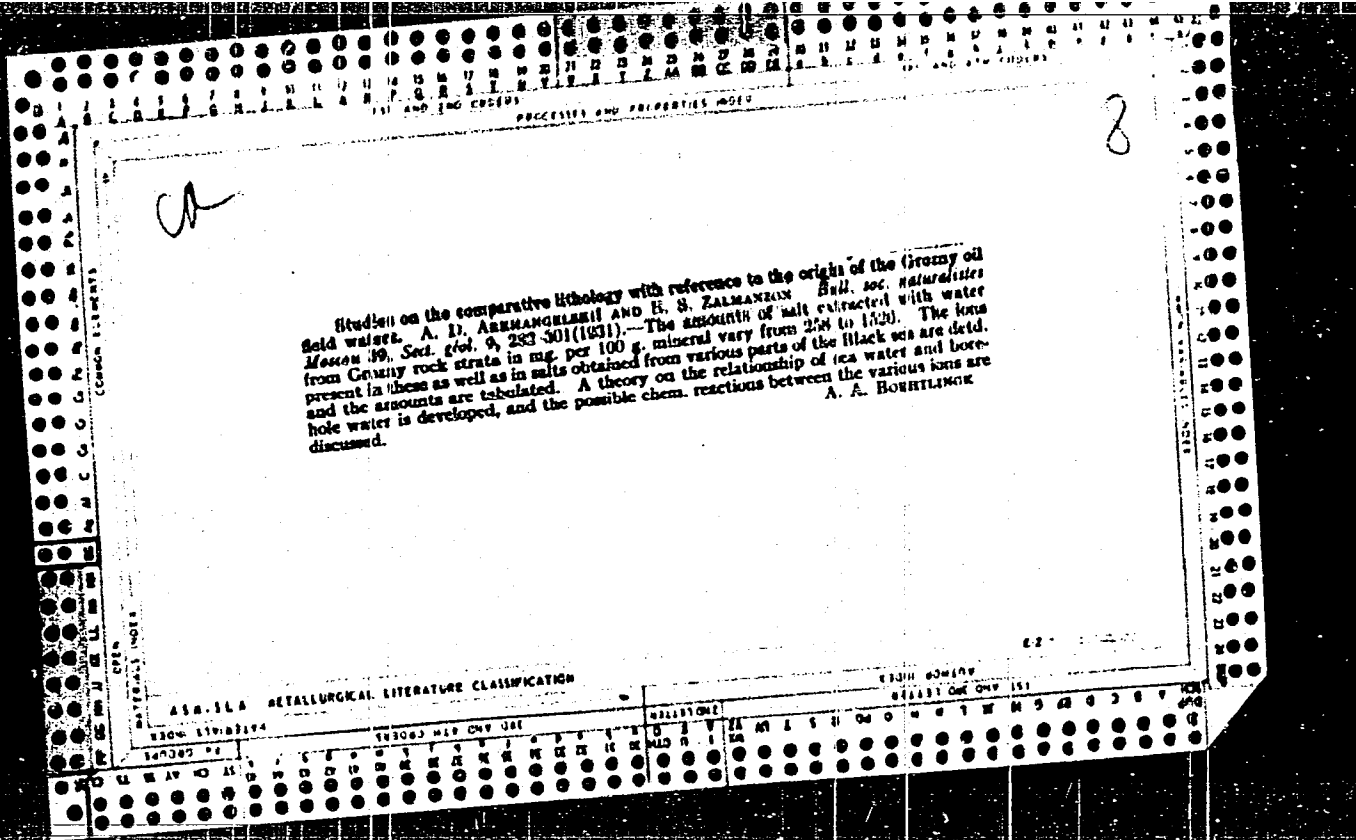
[Collection of scientific works dedicated to the 150th anniversary of the Hospital] Sbornik nauchnykh trudov, posvashchennyi 150-letiiu bol'nitsy. Pod obshchei red. V.M. Banshchikova i N.N.Krylovoi. Moskva, 1963. 487 p.
(MIRA 17:7)

1. Moscow. Psikhonevrologicheskaya gorodskaya bol'nitsa No.3.

ZAIMANZON, A.N.

Structure of symbolic thinking in schizophrenia. Trudy 1-go
MMI 34:171-180 '64. (MIRA 18:11)

1. Psikhonevrologicheskaya bol'nitsa No.3 Moskvyy.



PROCESSES AND PROPERTIES INDEX

1ST AND 2ND ORDER

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CA

On the content and forms of organic matter in the sediments of the lower Permian saline lagoon of the Near-Ural area of Bashkirtia. N. M. Strakhov and R. S. Zaimanson. *Doklady Akad. Nauk S.S.S.R.* 45, 338-41 (1944); *Compt. rend. acad. sci. U.R.S.S.* 45, 338-41 (1944) (in English).—The chemogenic facies of the saline lower Permian lagoon of the Near-Ural area of the Bashkirtia contain very little org. matter. Thus the anhydrite rocks contain only traces of org. matter (none to 0.03-0.05% C) while carbonate facies contain only up to 0.6% C as org. matter. The presence, in dark or gray sedimentation rocks, of larger amts. of org. matter (up to 1.6% C) and its much lower concn. in corresponding red rocks indicates that org. matter was brought into the lagoon by streams from the Uralian dry land. The org. matter entering the lagoon tended to be carbonized rather than converted to bitumen. Hence, although gray terrigenous facies concentrated org. matter, they probably were not responsible for formation of the Kungurian oil which sometimes occurs in Bashkirtia. I. W. Thorne

METALLURGICAL LITERATURE CLASSIFICATION

YOUNG BOWEN

BY THE ONE

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

1ST AND 2ND ORDERS PROCESSES AND PROPERTIES INDEX 1ST AND 2ND ORDERS

CA

1162

Action of protease on nuclear inclusions in silkworm jaundice infections. H. S. Zalpanov. *Mikrobiologiya* 18, 301-5(1949).—Papain and trypsin at their optimum pH (8.03 and 8.8, resp.) do not digest polyhedrons of silkworm jaundice infections. Pepsin does so at pH 2.0-2.92 (but not at pH 3.34 and 4.0). The polyhedrons are sensitized to papain and trypsin by 0.2% HCl, with glycine as buffer, at pH 2.92; exposure to 0.2% HCl for a day inactivates the polyhedrons. Pepsin lowers their infective power; trypsin does not. Enzymic proteolysis of viruses is easily misinterpreted unless proper allowance is made for inactivating and denaturing effects. J. F. Smith

Moscow Med. Inst. RSFSR Min. of Health

ASSOCIATED METALLURGICAL LITERATURE CLASSIFICATION

COMMON ELEMENTS

MATERIALS INDEX

1ST AND 2ND ORDERS

1ST AND 2ND ORDERS

C.A.

8

Method of separation of the colloid fraction from carbonaceous clay and ooze. E. S. Zalmazon and E. S. Shishova. *Izv. Akad. Nauk S.S.S.R., Geol.-Ser.* 1950, No. 2, 143-9. — A note reporting expts. made with samples of clays, the purities of which were confirmed by chem. and thermal analyses. Data are furnished for the following: (1) soly. of argillaceous minerals in 0.1 N HCl and 0.5 N AcOH, (2) soly. of clay in filtrates and wash waters, and (3) soly. of carbonates in the filtrates and wash waters. G. S. M.

CA

Sediment formation in Lake Balkhash. E. S. Zaimanov. *Byull. Moskov. Obshchestva Ispytatel. Prirady, Otdel. Geol.* 26, No. 4, 41-50 (1931).—Ten representative samples of mud were taken from Lake Balkhash. Mech. analyses according to the method of Sabankin were made on most of the mud samples. Mineralogical analyses were performed on the fractions from 0.01 to 0.001 mm. The carbonate part of the muds was detd. by treating them with a weak (1.8%) HCl ext. and heating to boiling. Such treatment converts dolomite, magnesite, and calcite. However, if siderite or gypsum is present in the muds the conditions of analysis must be changed. According to the results of the mineralogical analysis, both siderite and gypsum are absent from muds of Lake Balkhash. The analysis gives only Ca and Mg carbonates. It was established that the muds of Lake Balkhash contain only two carbonate minerals, viz., calcite and dolomite. The colloid fractions of the muds also were subjected to a chemico-mineralogical analysis. It was found that the org. part of the colloid fraction increases steadily from west to east. From this work it was learned that in Lake Balkhash at a definite alk., a definite pH, and a considerable amt. of Mg, there are formed unstable Mg silicates, together with dolomite. The minor elements are rather rare in Lake Balkhash, e.g., W, Mo, and Zn are entirely absent and Pb was found only in very small amts. in one test. The content of Cr and Co is considerably below the figure given for contemporary sediments in the literature. Ni was not observed at all by a spectral study of the natural sediments, and its presence was established only in the colloid fraction. The accumulation of Cr, Cu, Ni, Co, and Ba in the muds was connected with the petrographic compn. of the muds. The contents of P and B increased in the muds of the eastern part of the lake. Numerous tables and graphs furnish data bearing out these conclusions.
Gladys S. Macy

ZALMANZON, Ye.S.; SHISHOVA, Ye.S.

Iron, manganese, phosphorus, and minor elements in deposits at Baku. Doklady
Akad. Nauk S.S.S.R. 85, 835-7 '52. (MLRA 5:8)
(CA 47 no.22:12144 '53)

ZALMANZON, F. S.

✓ Comparability of chemical and spectral analysis data in []

Biological investigations: F. S. Zalmanzon and N. V. []
L'vov. Doklady Akad. Nauk S.S.S.R. 86, 1163-8
(1983). -- A report of the analysis of 80 samples from a series
of wells of Secondary Basin. The intensities of the spectral
lines were evaluated visually. The chem. and spectro-
scopic data led to the same conclusion. G. B. M.

(1)

ZALMANZON, Ye. S.

VSSR/Geology - Rock formations

Card 1/1 Pub. 46 - 4/21

Authors : Strakhov, N. M., and Zalmanzon, Ye. S.

Title : Distribution of authigenous mineralogical forms of iron in sedimentary rocks and its importance to lithology

Periodical : Izv. AN SSSR. Ser. geol. 1, 34-51. Jan-Feb 1955

Abstract : The article expounds the conformity to natural law noted in the distribution of ferrous minerals of the basic petrographic types of the earth's crust and analyzes the factors which bring about such a distribution. It points out the balance of mineralogical forms of iron in sedimentary rocks and presents details of the diagenetic formation of minerals in the ferrous group. Four USSR references (1947-1954). Tables; graphs.

Institution :

Submitted :

ZALMANZON, E. S.

Methods of analyses of ferruginous minerals. E. S. Zalmanzon, N. V. Zakharenko, and E. S. Shishov. *Izv. Akad. Nauk SSSR Ser. Khim. Prirod. Nauch. Otdel. Geol.* 30, No. 2, 101-107 (1974). The soly. of minerals in HCl, H₂SO₄, and AcOH under different conditions at various strengths was studied. It is shown that the usual method for decomg. FeCO₃ minerals by boiling for 1/2 hr. with 10% HCl leads to gross errors owing to the interference of silicates. Methods are developed whereby decomgn. is effected under much milder conditions. Many minerals are decompd. adequately by boiling for 5 min. with 5% HCl. To det. FeO in ankerite either the 5% HCl treatment or heating on a water bath for 5 hrs. with 4N AcOH can be used. J. A. Kravitzky

(2)

Jan

ZAIMANZON, E.S.

STRAKHOV, N.M.; RODIONOVA, K.F.; ZAIMANZON, E.S.

Geochemistry of petroleum-bearing deposits (lower Frasnian series
of Second Baku). Trudy Inst.geol.nauk no.155:3-115 '55.

(MIRA 8:10)

(Second Baku--Geology, Stratigraphic) (Second Baku--Geochemistry)

ZILMANSON, E. S.

1. Type of distribution of contents of disseminated elements
of the mantle zone. Pt. 35. *Geology*, 11, 5, 746-748,
1962, and Pt. 36. *Geology*, 11, 6, 841-843, 1962.
2. Moscow: *Geologiya*, 1958, No. 6, 25-30.
3. Elements disseminated in the coal-bearing deposits of
the Donets Basin, Karagunda, the Kuznetsk Basin,
and Ekibastuz. All deposits belonged to the humid zones of
geol. epochs. The distribution of the following
elements was studied: Fe, Mn, P, and C. V. *Geol.*, 11,
6, 841-843, 1962, Pt. 36, 1962. The first 10 years
by other methods, the others by remanent methods.
4. *Geol.*, 11, 6, 841-843, 1962.

EE

MT

KHVOROVA, I.V.; ZALMANZON, E.S.

Characteristics of the composition of phtanites and jaspers
in the Southern Ural Mountains. Lit. i pol. iskop. no.1:73-
87 '63. (MIRA 17:3)

1. Geologicheskij institut AN SSSR.

STRAKHOV, Nikolay Mikhaylovich; ZALMANZON, Emma Solomonovna; GLAGOLEVA, Mariya Andreyevna; BUSHINSKIY, G.I., otv.red.; NOSOV, W.F., red.isd-va; RYLINA, Yn.V., tekhn.red.

[Studies in the geochemistry of upper Paleozoic sediments in humid zones; facies and geochemical research] Ocherki geokhimii verkhne-paleozoiskikh otlozhenii gumidnogo tipa; opyt fatsial'no-geokhimicheskogo issledovaniia. Moskva, Izd-vo Akad.nauk SSSR, 1959. 217 (Akademiia nauk SSSR. Geologicheskii institut Trudy, no.23).

(MIRA 12:11)

(Sediments (Geology))

3785. EFFECT OF DESIGN OF DELIVERY VALVE ON FUEL INJECTION IN C.I. ENGINES. Zalmanson, L. A. (Trudy N.A.T.I., 1946, No. 4, 3-33).

The paper describes experiments on Bosch fuel pump delivery valves designed to provide a correction to the amount of fuel injected per stroke as engine speed is reduced. In the tests, delivery valves with various shapes of change-over from cylindrical plunger part (A) (see Fig. 1.) to the lower longitudinal grooves (B) have been used. A standard Bosch pump was used with a 6.5 mm. plunger diameter, an injection nozzle type DN 15 S2, the injection pressure being 110 Kg/sq. cm. It was found that a tapering angle of the grooves of 5½ degrees had the desired effect of causing an optimum increase in the volume injected per stroke as speed was reduced with a fixed position of the control rack. This effect was slightly greater when a pump with a 10 mm. plunger was used. It was also quite noticeable with a worn 6.5 mm. plunger at low speeds. The effect decreased, however, when the volume injected per pump stroke was reduced by adjusting the rack. The effect of the modified delivery valve was accentuated as the length of the injection pipe or its diameter were increased. A delivery valve modified as shown in Fig. 2 is suggested. The effect of this type of valve on the volume injected per stroke at low speeds is shown to be satisfactory with a radial bore diameter of 0.45 mm., but small variations in this dimension seem to cause noticeable variations in the volume injected, so that special matching of valves seems to be imperative. Tests on a Diesel engine have shown that the use of this type of delivery valve moved the maximum torque point towards the low speeds, and increased it by 12%, while at 1,000 r.p.m., the increase was 16.4%.

ZAIMANZON, I. A.

Governors (Machinery).....

Determination of the viscous friction coefficient in dashpots. Avtom. i telemekh. 12 No. 6, 1951.

Monthly List of Russian Acquisitions, Library of Congress, September 1952 Unclassified

ZAJMANZON, L.A.

Differential equations for pressure change processes in the valve chambers of pneumatic controllers and regulators. Avtom. i telem. 15 no.3:237-259 Ky-Je '54. (MLBA 7:11)
(Automatic control) (Differential equations) (Pneumatic tools)

ZALMANZON, L.A.

USSR/Automatics and telemechanics-nonlinear characteristics

FD-2758

Card 1/1 Pub. 10 - 3/11

Author : Zalmanzon, L. A. (Moscow)

Title : ~~USSR/Automatics and telemechanics-nonlinear characteristics~~
Taking into consideration the influence of nonlinearity of the characteristics of dead-end chambers of pneumatic regulators upon regulation processes

Periodical : Avtom. i telem., 16, Sep-Oct 1955, 454-461

Abstract : The author investigates the small deviations from position of equilibrium in a regulation system in the case of pneumatic regulators with dead-end chambers whose characteristics are essentially nonlinear. He considers the self-excited oscillations in these systems. Examples of computations are presented. Four references, USSR: L. A. Zalmanzon, "Differential equations of processes of pressure variation in flow chambers of pneumatic control and regulating devices," *ibid.* 15, No 3, 1954; L. S. Gol'dfarb, "Certain nonlinearities in regulation systems," *ibid.* 8, No 5, 1947; M. A. Ayzerman, "Physical bases of application of methods of small parameter to solution of nonlinear problems in the theory of automatic regulation," *ibid.* 14, No 5, 1953; Ya. G. Panovko, *Inzhenernyy sbornik, AN SSSR, Vol. 13, 1952.*

Institution : -

Submitted : December 1, 1953

ZALMANZON, LEV ABRAMOVICH

PHASE I BOOK EXPLOITATION

359

Zalmanzon, Lev Abramovich, and Cherkasov, Boris Aleksandrovich

Regulirovaniye gazoturbinnnykh i pryamotochnnykh vozdušno-reaktivnykh dvigateley (Control of Gas-turbine and Ramjet Engines) Moscow, Oborongiz, 1956. 374 p. 6,500 copies printed.

Reviewers: Petrov, B. N., Corresponding Member, USSR Academy of Sciences, and Bodner, V. A., Dr. of Technical Sciences, Prof.;
Ed.: Sobolev, O. K.; Ed. of Publishing House: Belitskaya, A. M.;
Tech. Ed.: Zudakin, I. M.; Managing Ed. (Oborongiz):
Sokolov, A. I., Eng.

PURPOSE: This is a textbook approved by the Ministry of Higher Education for students of aviation vtuzes. It may also be useful to workers specializing in the field of aircraft engines.

COVERAGE: The book is mainly concerned with describing the physical bases of engine control processes and with setting forth methods for experimental research and design of control devices. The close connection in the operation of the

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Control of Gas-turbine (Cont.)

elements of the control system and of the fuel supply system of the engine is revealed in a number of examples. Characteristics of the individual elements of the oil system are presented. The author thanks V. A. Bodner, B. N. Petrov, V. S. Zuyev, F. A. Korotkov, Yu. P. Portnov-Sokolov and N. V. Inozemtsev for their help in preparing the book. There are 148 references, of which 136 are Soviet (8 translations), 11 English and 1 French.

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AVAILABLE: Library of Congress
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ZALMANZON, L. A.

28(1) PHASE I BOOK EXPLOITATION 507/2702
 Akademiya nauk SSSR. Institut avtomatiki i telemekhaniki. Seminar po pnevmogidravlicheskoy avtomatike. Ist. Moscow, 1957
 Sistemy, ustroystva i elementy pnevm- i gidravtomatiki: (Sbornik) (Pneumatic and Hydraulic Circuits Devices, and Elements of Automation) [Collection of Papers] Moscow, Izd-vo AN SSSR, 1959. 233 p. Errata slip inserted. 2,703 copies printed.

Resp. Ed.: N. A. Ayzerman, Doctor of Technical Sciences, Professor, Eq. of Publishing House: A. A. Gal'. Tech. Ed.: S. P. Polyakova.

FUNCTION: This collection of papers is intended for scientific research workers and engineers in the field of design and construction of pneumatic and hydraulic equipment and accessories for automation.

COVERAGE: This collection contains papers read at the Seminar on Pneumatic and Hydraulic Devices for Automation, Moscow, Feb. 29, 1957. The collection is divided into the following three groups: 1) newly developed pneumatic and hydraulic circuits; 2) pneumatic and hydraulic devices, including guiding units, transmitters and transducers, actuating mechanisms, special-purpose devices, and relays (for automation); 3) elements of pneumatic and hydraulic devices for automation, such as controlled and permanent nozzles and diaphragms. No personalities are mentioned. References follow several of the papers.

Berezovets, G. I., Moscow. Pneumatic Ratio Controllers Without Mechanical Dividers 122
 Types RS-1 and RS-2 ratio controllers are described. The change of ratio in relation to the throttle opening and the primary pressure is discussed.

Zalmanzon, L. A. and A. I. Sotnikova, Moscow. Designing a Non-linear Transformation in Pneumatic Systems by Means of Nozzle. 128
 This paper discusses the first stage of an investigation made at the Laboratory for Pneumatic and Hydraulic Automation, IAT AN SSSR. The characteristics of a pneumatic nozzle-tube type relay consisting of a nozzle and pitot tube are described. The functioning and possible uses of this device are dealt with. Schematic diagrams of the relay and photograms of the experimental installation are shown.

Berezovets, G. I. and A. A. Gal', Moscow. Possibility of Constructing a Pneumatic Regulator with Automatic Response to Load Changes 146

Prusenko, V. S., Moscow. Extreme Pneumatic Regulator. 155
 The basic principles of an extreme regulator for maintaining certain maximum values in an automated system are described. A schematic diagram is presented, and the construction is described. Results of laboratory testing are given.

Prusenko, V. S., Moscow. Automatic Installation for Compressed Air Supply 165
 A description is given of an installation with units of simple construction (rotary liquid piston compressor, and two-stage dehydrator) for ensuring a continuous supply of clean and dry compressed air.

Auxiliary Equipment
 7

ZALMANZON, L. A.

"On works for the production of an aerodynamic oscillation generator."

report presented at the Second Conf. on the Problem of Pneumatic Hydraulic Automation, at Inst. of Automation, AS USSR, 17-19 Mar. '58.

ZALMANZON, L.A. (Moskva)

Designing a pneumatic extremum controller. Avton. i telex. 18
no.1:87-91 Ja '57. (MIRA 10:3)
(Pneumatic control)

ZAIMANZON, L.A. (Moskva)

Note on the effect of a fluid in conduits on the reduced mass of moving parts of hydraulic regulators. Avtom. i telem. 17 no. 3: 274--275 Mr '56. (MIRA 9:7)
(Hydraulic machinery) (Automatic control)

ZALMANZON, L.A.

AUTHOR: Semikova, A. I.

103-12-12/12

TITLE: Report on the Scientific Seminar on Pneumo-Hydraulic Automation
(Nauchnyy seminar po pnevmo-gidravlicheskoj avtomatike).

PERIODICAL: Avtomatika i Telemekhanika, 1957, Vol. 18, Nr 12,
pp. 1148-1150 (USSR)

ABSTRACT: At the Institute for Automation and Remote Control (IAT) of the Academy of Science of the USSR the All Union Seminar for Automation by hydraulics and compressed air began its activities, which was organized by the Laboratory for Automation by hydraulics and compressed air of the Institute under the direction of Professor Doctor of the Technical Sciences M. A. Ayzerman. The Seminar includes the specialists in the domain of automation by hydraulics and compressed air, who work in the design-offices, in scientific research and educational institutes, and in plants. The purpose of the Seminar is mutual exomange of the investigations conducted in this field in the various organizations of the USSR, and a discussion of new research and elaborations. Conferences of the seminar are held twice a year in the form of two-day sessions. The first of these was held on May 28th-29th 1957. 175 persons took part in it. 24 lectures and communications

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Report on the Scientific Seminar on Pneumo-Hydraulic
Automation.

103-12-12/12

were given. Stepanov G. P. lectured on the experimental characteristics of rubberized material membranes, V. V. Afanas'yev (KB Tsvermetavtomatika, Moscow) on the investigation of the modifications of active surfaces of texture membranes. L. A. Zalmanzon (IAT AN SSSR) gave a talk on the execution of nonlinear transformations in air-pressurized systems with the help of elements of a tube-nozzle type. I. N. Kichin (IAT SSSR) reported on the results of the experimental investigation of obliteration in systems of hydraulic automation and on the construction of controlling gear for the upkeep of a minimum stable consumption of operation liquid. V. N. Dmitriyev (IAT AN SSSR) reported on the results from the investigation of relays with an element of the nozzle-flap type. Ye. A. Andreyeva (IAT AN SSSR) reported on the results of the analytical investigation of the force- and consumption characteristics of elements of the nozzle-flap type. S. M. Zasedatelev (NII Teplopribor, Moscow) reported on the work at the investigation and construction of a new type of apparatus with a force compensation by pressurized air. N. P. Shumskiy talked on the investigations

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Report on the Scientific Seminar on Pneumo-Hydraulic
Automation

103-12-12/12

equipment of automatic assembly line. V. M. Dvoretzkiy (IAT AN SSSR) talked on a scheme based on the principle force compensation. V. P. Temnyy (IAT AN SSSR) reported on the scheme and the principle of the operation of a hydraulic observation motor. V. A. Khokhlov (IAT AN SSSR) gave a summary of hydraulic power amplifiers. A. V. Bogacheva reported the results of the theoretical and experimental investigations of the air flow in capillary tubes. A. F. Arkhangel'skiy (Kirovskiy zavod, Chelyabinsk) talked on a "hydraulic universal velocity regulator" (URS) and its application in national economy. B. F. Stupak (Leningrad) talked on a "review on constructions and elements of hydraulic motors which were constructed in the NII of the shipbuilding industry."

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ZALMANZON, L.A.

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P.2

PHASE I BOOK EXPLOITATION SOV/3114

Avtomaticheskoye regulirovaniye aviadvigateley; sbornik statey, vyp. 1 (Automatic Control of Aircraft Engines; Collection of Articles, Nr 1) Moscow, Oborongiz, 1959. 182 p. Errata slip inserted. 3,400 copies printed.

Ed. (Title page): A.A. Shevyakov; Ed. (Inside book): S.I. Bumshteyn; Ed. of Publishing House: N.A. Gortsuyeva; Tech. Ed.: N.A. Pukhlikova; Managing Ed.: A.S. Zaymovskaya, Engineer.

PURPOSE: This book is intended for workers at scientific research institutions and design bureaus.

COVERAGE: This book contains three articles in which results of the investigation of pressure-ratio regulator characteristics are described. These regulators work on the principle of small drops and proportion reduction and may be used in aircraft engines. A thorough analysis of a laminar flow of air in capillary conduits of automatic regulating systems is given. Problems connected with the calculation of centrifugal atomizers in which viscosity

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Automatic Control (Cont.)

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of the working fluid is taken into consideration are discussed in a special article.

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Automatic Control (Cont.) SQV/3114
1. Problems of investigation. Testing methods 29
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Bogacheva, A.V. Investigation of a Laminar Flow of Air in
Capillary Conduits of Pneumatic System Elements 74

The author states that experiments determined a functional dependence of the resistance coefficient and the coefficient of input μ_n in an adiabatically insulated laminar flow of a viscous compressible gas in long plane capillary conduits, on the determining dimensionless parameters: geometric parameters of the conduit, Reynolds number, reduced velocity of the flow (or pressure ratio), and the dimensionless velocity of the moving wall of the conduit.

Prakhov, A.M. Investigation and Calculation of Centrifugal Injectors 113

The author's method of investigation and calculation of centrifugal injectors is based on the analysis of a number of former methods. He takes into consideration the viscosity of the working fluid on the basis of the equation of the quantity of motion. Consideration of actual processes taking place in the

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injector should be avoided. The problem was restricted to a one stage centrifugal atomizer. However, the calculation of the problem made possible the consideration of more complicated atomizers.

AVAILABLE: Library of Congress

Card 5/5

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31285
S/124/61/000/010/018/056
D251/D301

26.2193

AUTHORS:

Zalmanzon, L.A., Mach, Yu.L. and Stepanov, G.P.

TITLE:

Investigating the characteristics of regulators of the ratio of pressures of gases intended for jet engines

PERIODICAL:

Referativnyy zhurnal. Mekhanika, no. 10, 1961, 45, abstract 10 B293 (V sb. Avtomat. regulirovaniye aviadvigatelay, no. 1, M., Oborongiz, 1959, 5-73)

TEXT:

A general investigation is carried out on the regulators of pressure to be applied to aero-jet engines. The regulators work on the principle of proportional reduction of pressure. This principle implies that with super-critical discharge in the outlet of the throttling chamber (the pressure at egress having arbitrary values), the absolute pressure in the pneumatic chamber is proportional to the absolute pressure before entry into the throttle aperture. In regulating the pressure it is necessary to guarantee

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Investigating the characteristics...

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the accuracy of measurement to 0.3%. Formulae are derived for calculating statistical error and resultant error, obtained by the linearization of the equations which describe the flow through the flow chamber. The coefficients of the linear differential equations describing the variation of pressure ratio in a non-steady regime are obtained. The need of compensation for error is observed. Ejectors of the stream and eddy types are used to guarantee supercritical flow in the outlet jet of the chamber. In this case the accuracy of the ejector's efficiency and the accuracy of the maintenance of rarefaction do not have essential values, however, the effector must guarantee supercritical discharge for sufficiently great a cross-section of the outlet (determined from the conditions of operational reliability of the apparatus). The experimental characteristics are obtained for both types of ejector. This permits the pressure of the gas being ejected and its dependence on the diameter of the outlet jet to be obtained. 13 references.

[Abstracter's note: Complete translation]

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ZAIMANZON, L.A. (Moskva); SEMIKOVA, A.I. (Moskva)

Investigating the properties of jet elements used in pneumatic automatic control systems [with summary in English]. Avtom. i telem. 20 no.4:447-467 Ap '59. (MIRA 12:5)
(Automatic control) (Pneumatics)

PLANS I BOOK EXPOSITION SOV/671

Abkhaziya nauk SSSR. Institut avtomatiki i telemekhaniki. Seminar po yuznogo dravilicheskoy avtomatiki. 2d and 3d session

Voprosy mekhaniki gidro-avtomatiki (Problems in Pneumatic and Hydraulic Automation) Moscow, 1960. 21 p. Prints slip inserted. 4,500 copies printed.

Rep. Ed.: M.A. Abramov, Doctor of Technical Sciences, Professor; Ed. of Publishing House: A.A. Tal; Fech. M.: S.G. Tikhomirova.

NOTE: This collection of articles is intended for scientific workers, industrial designers and engineers interested in automation and telemechanics.

CONTENTS: The collection of 25 articles is a continuation of an earlier work of the Academy of Sciences USSR, on pneumatic and hydraulic automation systems, published in 1959. A wide range of problems connected with the design and operation of pneumatic and hydraulic automation equipment is described. An addition to the problems based on experiments, the collection also contains theoretical problems in the field, such as the possibilities of pneumatic control, the operation of pneumatic devices, and in Czechoslovakia and reflect a somewhat different approach to automation problems. No personalities are mentioned. References accompany most of the articles.

PERMANENT AND PNEUMATIC SYSTEMS AND SYSTEMS OF AUTOMATIC REGULATION

Ferris, L.L. Pneumatic Compensating Pressure and Derivation Transmission and Transmission of Pressure	37
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Kempel, T. (Czechoslovakia). Pneumatic Regulators of the Effektiv Plant	225
TRAVELER Library of Congress (1950-542)	40/500/500

ZALMANZON, L. A.

report to be presented at the 1st Intl Congress of the Intl Federation of Automatic
 Control, 25 Jun-5 Jul 1960, Moscow, USSR.

КОЗЛОВ, А. А., ТИХОНОВ, Б. Л. и др. - "Some problems of
 the synthesis of digital analogues for automatic control"
 KHARIN, M. I. - "Computer simulation of technological processes
 of existing steel in arc furnaces"
 KRYUKOV, M. A. - "Bases of the theory and calculation of elements
 of automatic pneumatic motion"
 KREMER, A. G. - "The problem of digital program control of metallic
 existing machines"

ZALMANSON, L. A.

10.1500

26.2195

25229
S/103/61/022/009/010/014
D206/D304

AUTHOR: Zalmanzon, L.A. (Moscow)

TITLE: Theoretical possibility of practically inertialess measurement of gas and liquid temperatures using simple pneumatic and hydraulic sensing devices as thermometers

PERIODICAL: Avtomatika i telemekhanika, v. 22, no. 9, 1961,
1235 - 1243

TEXT: In the present article, the author shows that the use of different chokes could constitute the basis of designing practically inertialess measuring devices for instantaneous temperature values of gases in liquids in dynamic processes. The basic requirements as to the pneumatic and hydraulic chambers and chokes for use in temperature measurements are analyzed considering the type shown in Fig. 2 with a turbulent choke at the input and laminar choke at the output. With the gas or liquid flowing through this

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arrangement the pressure in chamber p_1 becomes a function of temperature of the medium flowing through it provided the pressure p_0 and p_2 are constant. The condition of heat exchange is no longer required in the process of temperature measurement. If in real working conditions the heat exchange influence could be made negligible such a chamber could, therefore, be used also for fast varying processes and the $p_1 = \varphi(T)$ characteristic made dependent only on the velocity of flow of given substance through the chamber and chokes. The evaluation and analysis of the $p_1 = \varphi(\dot{m})$ characteristic for gases is made from Fig. 2 and using formulae (I-10) (I-11) (I-26) (assuming a quasi-stationary process) and (I-83) from the authors previous work (Ref. 8: Protochnyye elementy pnevmaticheskikh priborov kontrolya i upravleniya (Circulating Elements of Pneumatic Instrumentation of Control) Izd-vo AN SSSR, 1961) two equations may be written for equating the gas intake in both chokes; one for normal gas temperature (288°K) and the other for temperature

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re T. Denoting the respective pressures in the chamber α by P_1^* and P_1

$$\varphi\left(\frac{P_1}{P_0}\right) = \varphi\left(\frac{P_1^*}{P_0}\right) \psi(T), \quad (1)$$

is obtained in which for the under-critical flow in choke 1

$$\varphi\left(\frac{P_1}{P_0}\right) = \frac{(P_1/P_0)^2 - (P_1^*/P_0)^2}{\sqrt{(P_1/P_0)^{2/k} - (P_1^*/P_0)^{(k+1)/k}}}, \quad (2)$$

for the over critical flow

$$\varphi\left(\frac{P_1}{P_0}\right) = \frac{(P_1^*/P_0)^2 - (P_1/P_0)^2}{\sqrt{\frac{k-1}{k+1} \left(\frac{2}{k+1}\right)^{2/(k-1)}}}, \quad (2')$$

and

$$\psi(T) = (121 + 1,027T) \sqrt{T} \cdot 10^{-4}. \quad (3)$$

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Theoretical possibility of ...

The graph of $\varphi(p_1/p_0)$ for the whole range of possible flows in choke 1, evaluated for different p_2/p_0 and for $k = 1.4$ from Eq. (2) and Eq. (2') is given. The $p_1 = \varphi(T)$ characteristic for the flow of liquid is calculated assuming again the configuration in Fig. 2 with a turbulent flow of liquid in choke 1 (local input and output losses predominate) and a laminar flow in choke 2 (friction losses predominating). To evaluate and to compensate errors resulting from heat transfer from the walls to the substance the case is considered when the latter are heated to a steady temperature T_{st} and a liquid having temperature T is flowing into the choke channel. As the result of heat transfer from the walls to the liquid, which flows with a velocity w the temperature of the latter rises by δT . In rough approximation of δT the average specific weight of the liquid is γ and its specific heat capacity is c . Assuming that the average temperature of liquid within the choke is given by $T + 1/2 \delta T$ it is shown that under the above conditions the magnitude

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$\delta T / (T_{st} - T)$ may be represented as a function of only two variables. The ratio l/d and the Reynolds number Re which determines the character of the flow. This expression is derived as

$$\frac{\delta T}{T_{st} - T} = \frac{2}{1 + \frac{1}{16} \frac{Re}{l/d}} \quad (7)$$

It follows that in order to minimize δT the effective Re values must be as near as possible to the limiting values Re_{lim} , limiting

the region of laminar flows and that the ratio l/d should be made also as small as possible [Abstractor's note: l and d are not defined but they seemingly represent the length and diameter of the choke respectively]. With too small an l/d ratio, however, the balance of losses becomes destroyed so that the measurements of fast varying temperatures may be applied in practice to a few restricted cases, in which the influence of heat exchange could be

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completely neglected. For continuous measurements when the wall temperature may differ from that of the flowing substance the errors introduced could be in practice eliminated either by proper choice of the sensing device or of one of the chokes materials. Both the variations of the wall temperature and the variations in the choke cross-section are slow-varying processes and since they introduce errors in opposite directions their proper choice and design could lead to a complete elimination of errors. It is stated in conclusion that the article deals only with essentials of materials and dimensions of the sensing devices. For large temperature ranges e.g. different materials for the device parts could be used and special compensating devices installed for compensating the measurement errors. There are 6 figures and 10 references: 7 Soviet-bloc and 3 non-Soviet-bloc. The references to the English-language publications read as follows: V.D. Sanders, Review of High-Temperature Immersion Thermal Sensing Devices for In-Flight Engine Control. The Review of Scientific Instruments, v. 29, no. 11, November 1958; D.S. Scott, Flowmeters for the measurement of gas

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D206/D304

Theoretical possibility of ...

temperatures. Chemical Engineering v. 12, no. 2, May 1960.

SUBMITTED: May 4, 1961

Fig. 2.

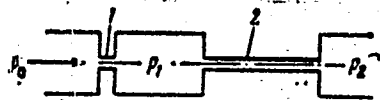


FIG. 2
Part 2

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AVEN, O.A.; DVORETSKIY, V.M.; DOMANITSKIY, S.M.; ZALMANZON, L.A.;
KRASSOV, I.M.; KRUG, Ye.K.; TAL', A.A.; KHOKHLOV, V.A.;
BULGAKOV, A.A.; DEMIDENKO, Ye.D.; BERNSHTEYN, S.I.; YEMEL'YANOV,
S.V.; LERNER, A.Ya.; MEYEROV, M.V.; PEREL'MAN, I.I.; FITSNER,
L.N.; CHELYUSTKIN, A.B.; ZHOZHIKASHVILI, V.A.; IL'IN, V.A.;
AGEYKIN, D.I.; GUSHCHIN, Yu.V.; KATYS, G.P.; MEL'TTSER, L.V.;
PARKHOMENKO, P.P.; MIKHAYLOV, N.N.; FITSNER, L.N.; PARKHOMENKO,
P.P.; ROZENBLAT, M.A.; SOTSKOV, B.S.; VASIL'YEVA, N.P.; PRANGISHVILI,
I.V.; POLONNIKOV, D.Ye.; VOROB'YEVA, T.M.; DEKABRUN, I.Ye.

Work on the development of systems and principles of automatic
control at the Institute of Automatic and Remote Control
during 1939-1964. Avtom. i telem. 25 no. 6:807-851 Je '64.
(MIRA 17:7)

ZALMANZON, Lev Abramovich

[Fluid jet control] Pnevmonika; struinaia pnevmoavtomatika.
Moskva, Nanka, 1964. 61 p. (MIRA 17:8)

ZALMANZON, L.A., kand. tekhn. nauk; TAL', A.A., kand. tekhn. nauk

New applications of pneumatic control. Vest. AN SSSR 33 no.10:
58-62 0 '63. (MIRA 16:11)

1. Institut avtomatiki i telemekhaniki Gosudarstvennogo komiteta
po priborostroyeniyu, sredstvam avtomatizatsii i sistemam
upravleniya pri Gosplane SSSR i Akademii nauk SSSR.

PHASE I BOOK EXPLOITATION

SOV/5246

Zalmanzon, Lev Abramovich

Protochnyye elementy pnevmaticheskikh priborov kontrolya i upravleniya
(Flow Passage Area Elements in Pneumatic Inspection and Control Devices)
Moscow, Izd-vo AN SSSR, 1961. 246 p. Errata slip inserted. 7,000
copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut avtomatiki i telemekhaniki.

Resp. Ed.: M.A. Ayzerman. Ed. of Publishing House: G.P. Stepanov.
Tech. Ed.: V.V. Volkova.

PURPOSE: This book is intended for engineers concerned with pneumatic devices
used in measuring instruments and automatic control installations.

COVERAGE: The book presents theory of various kinds of throttling control
elements and describes their characteristics. Assemblies consisting of
pneumatic chambers, pipelines, and throttles are also described, and their
individual and combined characteristics are given. Some attention is
given to phenomena occurring in long pipelines. No personalities are mentioned.

Card ~~1/11~~

ZALMANSON, M.B.

2*(0); 5(+); 6(2) **PHASE I BOOK EXPLOITATION** SOV/2215
 Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii imeni D.I. Mendeleeva
 Referaty nauchno-issledovatel'skikh rabot; sbornik No.2 (Scientific Research Abstracts; Collection of Articles, Nr 2) Moscow, Standartizdat, 1958. 139 p. 1,000 copies printed.
 Additional Sponsoring Agency: USSR, Komitet standartov, mer i izmeritel'nykh priborov.

Ed.: S. V. Reshetina; Tech. Ed.: M. A. Kondrat'yeva.
PURPOSE: These reports are intended for scientists, researchers, and engineers engaged in developing standards, measures, and gages for the various industries.

COVERAGE: The volume contains 128 reports on standards of measurement and control. The reports were prepared by scientists of institutes of the Komitet standartov, mer i izmeritel'nykh priborov pri Sovetskom Ministre Standartov (Commission on Standards, Measures, and Measuring Instruments) under the USSR Council of Ministers). The participating institutes are: VNIIM - Vsesoyuznyy nauchno-issledovatel'skiy metrologii imeni D.I. Mendeleeva (All-Union Scientific Research Institute of Metrology imeni D.I. Mendeleeva) in Leningrad; Sverdlovsk branch of this institute; VNIIT - Vsesoyuznyy nauchno-issledovatel'skiy institut komiteta standartov, mer i izmeritel'nykh priborov (All-Union Scientific Research Institute of the Commission on Standards, Measures, and Measuring Instruments) created from NIMIP, Mezvykovskiy gosudarstvennyy institut mer i izmeritel'nykh priborov (Moscow State Institute of Standards and Measuring Instruments) in 1952; VNIITPI - Vsesoyuznyy nauchno-issledovatel'skiy tsentr fiziko-tekhnicheskikh radioelektronicheskikh izmereniy (All-Union Scientific Research Institute of Physicochemical and Radio-engineering Measurements) in Moscow; Khar'kovskiy gosudarstvennyy institut mer i izmeritel'nykh priborov (Char'kov State Institute of Measures and Measuring Instruments); and NIMIP - Nauchno-issledovatel'skiy gosudarstvennyy institut mer i izmeritel'nykh priborov (Kovoalbirsk State Institute of Measures and Measuring Instruments). No personalities are mentioned. There are no references.

- Pokras, S.I., and M.B. Zalmanson (NIMIP). Studying a Screw Pair 14
- Staklin, G.S. (KNDIIP). Measuring the Tooth Profile of Large-Diameter Reduction Gears 15
- Sizem, G.S., and I.L. Rabinovich (KNDIIP). Investigating Instruments and Methods for Measuring Elements of Worm Gears 16
- Gomolovskaya, Ye.P., and M.S. Davydov (VNIITPI). Comparative Rating of Probe and Contactless Gages for Measuring Surface Finish 16
- Yegorov, V.A., B.S. Davydov, V.P. Parnogombo, and T.S. Labutina (VNIITPI). Developing Method for Testing Surface Finish Samples and Instruments for Surface Finish Quality Control 17
- Pogudskiy, M.G. (VNIIM). Making Improved Surface Finish Test Samples 18
- Zalmanson, M.B. (KNDIIP). Developing Methods and Means of Card 2/27

ZALMANZON, S.N., nasluzhennyy vrach RSFSR; ARONSON, V.M., sanitarnyy vrach

Work of the Moscow Municipal Sanitary and Epidemiological Station
in the field of preventive sanitary supervision of housing construction.
Fig. 1 san 24 no.10:45-52 '59. (MIRA 13:1)

1. Iz Moskovskoy gorodskoy sanitarno-epidemiologicheskoy stantsii.
(HOUSING)

L 3773-66 ENT(10) DIAAP GS

ACCESSION NR: AT5007950

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37
28
061

AUTHOR: Davydov, M. S.; Dorfman, L. G.; Yekimov, V. V.; Zaimanzon, V. B.; Zeytlénok,
G. A.; Levin, V. M.; Kalyshev, I. F.; Petelin, I. G.; Petrunin, V. I.; Popov, V.
A.; Trushin, N. Kh.; Umanskiy, I. G.; Finkel'shteyn, I. I.

TITLE: Deflecting system of 5-Gev antiproton channel

SOURCE: International Conference on High Energy Accelerators. Dubna, 1963.
Trudy. Moscow, Atomizdat, 1964, 791-794TOPIC TAGS: antiproton, high energy particle, particle beam, high energy ac-
celerator

ABSTRACT: Specific requirements flowing from the applied principle of particle resolution have determined the choice of the type of deflecting system. During development of the device the requirements were also considered from the viewpoint of the high-frequency power supply system. The creation of a high-power 150-megahertz frequency generator that operates with pulses of several milliseconds duration is a technically complex task. Therefore, special attention was given during the development of the deflecting system to its economy and efficiency. Taking these considerations into account, computations were carried out of a number of

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alternate deflecting systems--in the form of a waveguide or band line operating in the energy recuperation regime, or in the form of a system of many-cavity or single-cavity volume resonators. As shown by the computations, it is most expedient to make the deflecting system in the form of a set of independently phased resonators of the quasitoroidal type, which operate in the fundamental mode of the electric oscillations, with the use of high-frequency electrical field for deflecting the particles. The report discusses the resonators employed in the deflecting system and their arrangement in the system. The chosen resonator form permits one to obtain a specific homogeneity of the deflecting field in the cross section of a beam by selection of suitable dimensions. The report discusses the characteristics of the developed system. The linear dimensions of the apertures in the resonators for channeling the beam are commensurable with the operating wavelength, which fact leads to the radiation of electromagnetic energy and to the appearance of a strong bond among the resonators. In order to eliminate this phenomenon and preserve complete transparency of the channel for the beam of deflected particles among the resonators, the waveguide segments are provided with limiting wavelength much lower than the operating one, and feedback is introduced in the magnetic field. As shown by investigations, the bond among the resonators is almost completely eliminated. Considerable attention was paid to the electric transparency of the resona-

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tors. The field strength in the resonator gaps which corresponds to a given magnitude of the deflecting pulse was determined on the basis of the field pictures that were taken in an electrolytic tank. Corrections were made for the variation in the high-frequency field during the particles' flight time through a resonator and for the difference between the static and high-frequency pictures of the field in a gap. Measures were also taken to eliminate in the resonators the secondary electron resonance discharge. Orig. art. has: 2 figures.

ASSOCIATION: Nauchno-Issledovatel'skiy institut elektrofizicheskoy apparatury (geni D. V. Yefremova GKAE SSSR (Scientific-Research Institute of Electrophysical Equipment, GKAE SSSR)

SUBMITTED: 26May64

ENCL: 00

\$ US CODE: NE

NO REF SOV: 000

OTHER: 000

Card 3/3

L 3778-66 EWT(m)/EWA(m)-2 LJP(c) GS

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49
13
B-1

ACCESSION NR: AT5007165

AUTHOR: Vodop'yanov, P. A.; Zhukovskiy, L. S.; Zalmanzon, V. B.; Ivanov, Yu. S.;
Izergina, Ye. V.; Kuz'min, A. A.; Prokop'yev, A. I.; Tenkin, A. S.; Rubchinskiy,
S. M.

TITLE: System for the generation of the accelerating field of a 70-Gev proton
synchrotron /9

SOURCE: International Conference on High Energy Accelerators. Dubna, 1963.
Trudy: Moscow, Atomizdat, 1964, 932-936

TOPIC TAGS: high energy accelerator, synchrotron, particle beam, magnetic field

ABSTRACT: After the development of a high-precision system of frequency control of the accelerating field of the proton 50-60 Gev synchrotron with critical energy compensation (Mints, A. L., et al., Proc. International Conference on High Energy Accelerators and Instruments, CERN 1959), it was decided to achieve an alternative accelerator with transition through the critical energy, which makes it possible to increase the energy to 70 Gev. In this modification of the accelerator serious difficulties are encountered with the realization of a system for generating an accelerating field with frequency control only according to the H-program. Therefore,

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ACCESSION NR: AT50071365

it was decided to achieve a system with twin frequency control: rough, according to the H -program, and precise, according to the information on the radial and phase position of the accelerated particle beam. The present report discusses the principal characteristics governing the achievement of a programmed FM-generator, a system of frequency control according to information of the position of the accelerated particle bunches, and accelerator installation. The programmed FM-generator consists of the usual elements: transducer of the derived magnetic field strength (inductive coil in the gap of the measuring electromagnet), electronic switch, tube integrator, modulator, FM-oscillator, phase manipulator, amplitude modulator of accelerating voltage, amplifier-distributor, and a system of cable contacts. To obtain energy increase per revolution of $\Delta E = 166$ Kev for a rate of change of magnetic field strength of $\dot{H} = 550$ oersteds/second and $\phi_s = 30^\circ$, provision is made for the application of 53 accelerator stations with rated input of 7 kilovolts and 6 kilowatts power. Provisions are also made for the short-duration increase of this voltage, 1.8 times up to the time of beam bunching (around 15 microseconds), and its slow decrease to about 2 times less toward the end of the acceleration cycle with the aim of preserving constant equilibrium phase during the fall in the magnetic field growth rate. The system of frequency control of the accelerating field according to the information on the accelerated particle beam position is similar in

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ACCESSION NR: AT5007955

principle of operation to a system described by Yu. S. Ivanov and A. A. Kuz'min
(*Pribory i tekhnika eksperimenta*, No. 4, 196, (1962)), which was intended to stabilize the position of the center of gravity of the beam according to radius and phase. Orig. art. has: 1 figure.

ASSOCIATION: Radiotekhnicheskiy institut AN SSSR (Radio Engineering Institute, AN SSSR)

SUBMITTED: 26May64

ENCL: 00

SUB CODE: NP

NO REF SOV: 001

OTHER: 001

mlr
Card 3/3

ZALMANZON, V. B.

158T25

USSR/Electricity - Generator, Pulse

Apr 50

"An Impulse Choke Cascade," V. B. Zalmanzon, Engr,
Min of Communications Equipment Ind Plant, 4 pp

"Elektrichestvo" No 4

Examines cascade with inductance in plate circuit
which creates brief voltage impulses of considerable
magnitude and fixed duration. Gives design formulas
and method for selecting tube and control voltage.
Submitted 18 Jul 49.

158T25

ZALMANZON, V.B.

Letter to the editor. Radiotekhnika 19 no.6:75-76 Je '64.
(MIRA 17:10)

CA ZALMANZON, Ya-S.

23

Boiling kettle for textiles. Ya. S. Zalmanzon and I. N. Sokolov. *Izv. Vsesoyuz. Nauch.-Issledovatel. Inst. Khimichesk. Prom. Nauch.-Issledovatel. Trudy* 18, 133-34 (1951).—The economical features of the kettle, which was described earlier (Z., *ibid.* 17, (1950)), are discussed in terms of practical plant use. The high order of versatility and economy is stressed. Operating data are given.
G. M. Kosolajoff

ZAIMANZON, Ya.S., starshiy nauchmyy sotrudnik; CHIZHOV, V.N., starshiy
nauchmyy sotrudnik

Investigating the kinetics of fabric drying by air supplied
from nozzles. Tekst. prom. 24 no.5:66-73 My '64
(MIRA 18:2)

1. Ivanovskiy nauchno-issledovatel'skiy institut khlopchato-
bunazhnoy promyshlennosti.

YERSHOV, L.V.; ZALMANZON, Ya.S.

Design of a gas burner for heating boilers. Gaz. prom. 7 no.4:
18-22 '62 (MIRA 17:7)

ZALMANZON, Ya.S.; DOBROKHOTOVA, Ye.P.

Technical and economic indices of the continuous alkali-peroxide
bleaching of fabrics in the AOZh-2 apparatus. Nauch.-issl.trudy
IvNITI 23:152-161 '59. (MIRA 14:4)
(Bleaching)

BAT'KOV, A.I.; ZAIMANSON, Ya. S., nauchnyy sotrudnik; MOSKVICHEV, N.T.,
nauchnyy sotrudnik

Scouring fabric in steam under pressure. Tekst. prom. 18 no. 7:45-
47 J1 '58. (MIRA 11:7)

1. Glavnyy inzhener fabriki Bol'shaya Ivanovskaya manufaktura (for
Bat'kov). 2. Ivanovskiy nauchno-issledovatel'skiy institut khlopchato-
bumazhnoy promyshlennosti (for Zaimanson, Moskvichev).
(cotton finishing)

ZALMANZON, Ya.S.; DOBROKHOTOVA, Ye.P.

Continuous alkali-peroxide bleaching of fabric. Tekst. prom.
18 no.9:39-42 S '58. (MIRA 11:10)
(Cotton finishing) (Bleaching)

ZAIMANZON, Ya.S.; ZELENSKAYA, G.G.; NEBAROV, V.N.

Designing an automatic bleaching department. Tekst. prom. 18
no.8:43-45 Ag '58. (MIRA 11:10)

1. Rukovoditel' mekhaniko-energeticheskoy laboratorii Ivanovskogo nauchno-issledovatel'skogo tekstil'nogo instituta (for Zaimanzon).
2. Zaveduyushchiy laboratoriiy otdelochnykh mashin Vsesoyuznogo nauchno-issledovatel'skogo instituta tekstil'nogo i legkogo mashinostroyeniya (for Zelenskaya).
3. Rukovoditel' khimiko-tekhnologicheskoy laboratorii Tsentral'nogo nauchno-issledovatel'skogo instituta khlopchatobumazhnoy promyshlennosti (for Nebarov).
(Bleaching) (Textile factories)

ZALMANZON, Ya.S.; CHIZHOV, V.N.

Drying of textile fabrics with air blown by jet nozzles. Nauch.-
issl.trudy IvNITI 26:190-237 '63. (MIRA 18:4)

ZAIMANZON, YE. S.

PA 149T64

USSR/Medicine - Jaundice, Yellow Jul/Aug 49
Biology - Silkworm

"Action of Protease on Nuclear Formation in Silk-worms With Yellow Jaundice," Ye. S. Zaimanzon, Moscow Med Inst, Min of Pub Health RSFSR, 4 1/2 pp

"Mikrobiologiya" Vol XVIII, No 4

Pepsin and trypsin, at pH's for best activity, will not destroy polyhedra. Pepsin with low pH (2.0-2.92) will destroy polyhedra, while this destructive action is lacking in pepsin with pH of 3.34-4.0. A 0.2% HCl solution with a glycocci solution of pH 2.92 will render polyhedra

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USSR/Medicine - Jaundice, Yellow Jul/Aug 49
(Contd)

susceptible to the proteolytic action of pepsin and trypsin. A 24-hour exposure to a 0.2% of HCl decreases activity of polyhedra. Trypsin has no effect on susceptibility (Infectiousness) of native polyhedra. Submitted 28 Apr 49.

149T64

ZALMANZON, Ye. S.

ZALMANZON, Ye. S. -- "Data on the Question of Interaction Between Viruses and Enzymes." Sub 12 Jun 52, Acad Med Sci USSR. (Dissertation for the Degree of Candidate in Biological Sciences).

SO: Vechernaya Moskva January-December 1952

ZAIMANZON, Ye.S.; SAMVLOVA, S.A.

Incidence of psittacosis among people. Zhur.mikrobiol.epid. i immun.
27 no.7:52-55 Jy '56. (MLRA 9:9)

1. Iz gorodskoy sanitarno-epidemiologicheskoy stantsii Moskv.
(ORNITHOSIS, prev. & control
among parrot attendants in zoo)
(OCCUPATIONAL DISEASES
ornithosis, prev. among parrot attendants in zoo)

ZALMANZON, Ye.S.

ZALMANZON, Ye.S.; RAPPOPORT, R.S.; SAMVELOVA, S.A.

Etiology of influenzal infections among groups of children in Moscow
in December 1954 and January 1955. Zhur.mikrobiol.epid. i immun.,
supplement for 1956:25-26 '57 (MIRA 11:3)

1. Iz Moskovskoy gorodskoy sanitarno-epidemiologicheskoy stantsii.
(MOSCOW--INFLUENZA)

Z. Alimov, S. S.

USSR/virology. Viruses of Man and Animals.

E-3

Abs Jour: Ref. Zh.-Biol., No 9, 1957, 35438

Author : Zalmanson, I.S., Sambelova, S.A.

Inst :

Title : On the Problem of the Disease Psittacosis Among Humans

Orig Pub: Zh. mikrobiol., epidemiol., i immunobiologii, 1956, No 7, 52-55

Abstract: In May 1954, 9 cases of pneumonia and three cases of influenza were recorded among the employees of the ornithological section of the Moscow zoo. A plague of parrots preceded this outbreak and 6 birds died in 2 1/2 mos, from 2 of which the psittacosis virus was isolated. A virological examination was made of 12 employees of the parrot section (5 healthy and 7 sick) with the purpose of confirming the diagnosis of psittacosis; an intracutaneous test along with the diagnosis showed positive in two of the sick cases

Card : 1/2

USSR/Virology. Viruses of Man and Animals.

K-3

Abs Jour: Ref. Zh.-Biol., No 9, 1957, 35438

and one of the healthy; weakly positive in two of the sick cases; and negative in 2 sick cases and 4 healthy. In complement fixation test (RSK) of the blood serum of the 7 sick persons and 1 healthy employee having a positive intracutaneous test, all showed positive (among these cases there were two sick with negative skin tests). In a subsequent serological test of the healthy parrots of the zoo's cages, in 18 cases the presence of antibodies in a high titration to the psittacosis virus was established, in connection with which special measures were developed for the quarantine of parrots arriving in the zoo, and the prohibition of their sale.

Card : 2/2

-14-

ZALMANZON, Ye.S.; RAPPOPORT, R.S.; ITSELIS, F.G.; TAILINSKAYA, A.F.

Dissemination of poliomyelitis virus in the environment of the patient during the interepidemic period. Vop.virus 2 no.6:341-346 H-1) '57. (MIRA 13:5)

1. Gorodskaya sanitarno-epidemiologicheskaya stantsiya, Moskva. (POLIOMYELITIS)

USSR/Virology - Human and Animal Viruses.

E

Abs Jour : Ref Zhur Biol., No 1, 1959, 504

Author : Zalmanzon, Ye.S., Rappoport, R.S., Itselis, F.G.,
Tallinskaya, A.F.

Inst : .

Title : Poliomyelitis Virus Diffusion in an Environment of
Sickness during an Epidemic Period.

Orig Pub : Vopr. virusologii, 1957, No 6, 341-346

Abstract : Viruses of three serological types spread in the Moscow
area in April-May 1956. Examination of 721 individuals
who were in contact with patients revealed the presence
of 20 strains of type 1, 7 of type 2, and 10 type 3.
Also, 80 strains of cytopathological agents which did
not type with anti-poliomyelitis sera were isolated.
Type 1 virus was found in 7 sites, type 2 in 3, and type
3 in 5 sites. Thirty three of 37 strains isolated were
obtained from children up to three years old.

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- 1 -

EXCERPTA MEDICA Sec 17 Vol 5/5 Public Health May 59

1318. REGARDING THE DISSEMINATION OF POLIOMYELITIS VIRUS IN THE ENVIRONMENT OF THE PATIENT BETWEEN EPIDEMIC PERIODS (Russian text) - Zalmanzon E. S., Rappoport R. S., Itselis F. G. and Tattinskaya A. F. - VOPR. VIRUSOL. 1957, 6 (341-346) Tables 2 Illus. 4

In January-May 1956 sporadic cases of poliomyelitis were observed in Moscow. They were caused by types 1, 2 and 3 of poliomyelitis virus. Thirty-seven strains of poliomyelitis virus were isolated from 721 healthy contacts (5.1%); 20 strains belonged to type 1, 7 to type 2 and 10 to type 3. The low percentage of isolates from contacts might be explained by the following factors: The investigation was conducted in the interepidemic period when the agent was not disseminated as widely as during seasons of poliomyelitis. The culture of embryonic human muscle tissue was used for the isolation of viruses, which is less susceptible to poliomyelitis virus than HeLa cells or monkey kidney tissue cultures. The cultures were infected with as little as 0.1-0.2 ml. of faeces suspension. The strains of type 1 were demonstrated in 7 foci of infection, the strains of type 2 in 3 foci and the strains of type 3 in 5 foci. This is the first time that poliomyelitis virus, type 3 was discovered in the USSR. In addition, 80 unidentified cytopathogenic agents were recovered in the foci of infection. The majority of poliomyelitis strains and unidentified cytopathogenic agents were obtained from the children under the age of 3.

(L, 4, 17)

EXCERPTA MEDICA Sec 4 Vol 12/3 Med. Micro. Mar 59

1031. REGARDING THE DISSEMINATION OF POLIOMYELITIS VIRUS IN THE ENVIRONMENT OF THE PATIENT BETWEEN EPIDEMIC PERIODS

(Russian text) - Zalmanzon E. S., Rappoport R. S., Itselis F. G. and Tallinskaya A. F. - VOPR VIRUSOL. 1957, 6 (341-346) Tables 2

In January-May 1956 sporadic cases of poliomyelitis were observed in Moscow. They were caused by Types 1, 2 and 3 of poliomyelitis virus. Thirty-seven strains of poliomyelitis virus were isolated from 721 healthy contacts (5.1%); 20 strains belonged to Type 1, 7 to Type 2 and 10 to Type 3. The low percentage of isolates from contacts might be explained by the following factors: The investigation was conducted in the interepidemic period when the agent was not disseminated as widely as during seasons of poliomyelitis. The culture of embryonic human muscle tissue was used for the isolation of viruses, which is less susceptible to poliomyelitis virus than HeLa cells or monkey kidney tissue cultures. The cultures were infected with as little as 0.1-0.2 ml. of faeces suspension. The strains of Type 1 were demonstrated in 7 foci of infection, the strains of Type 2 in 3 foci and the strains of Type 3 in 5 foci. This is the first time that poliomyelitis virus Type 3 was discovered in the USSR. In addition, 80 unidentified cytopathogenic agents were recovered in the foci of infection. The majority of poliomyelitis strains and unidentified cytopathogenic agents were obtained from the children under the age of 3. (L. 4, 17)

YAMPOL'SKAYA, E.I.; ZALMANZON, Ye.S. (Moskva)

Nervous system diseases caused by intestinal viruses. Vop. okh. mat.
det. 5 no.6:56-60 N-D '60. (MIRA 13:12)

(NERVOUS SYSTEM--DISEASES)

(POLIOMYELITIS)

(INTESTINES--BACTERIOLOGY)

(VIRUSES)

YAMPOL'SKAYA, E.I.; ZAIMANZON, Ye.S.

Clinical virological characteristics of serous meningitis caused by enteroviruses (Coxsackie, ECHO). *Pediatrics* 39 no.4:19-26 April 1961.
(MIRA 14:4)

1. Iz kliniki neuroinfektsiy (zav. - prof. D.S. Futer) Nauchno-issledovatel'skogo pediatricheskogo instituta Ministerstva zdorovookhraneniya RSFSR (dir. A.P. Chernikova) na baze 1-y Detskoy klinicheskoy bol'nitsy Moskvy (glavnyy vrach Ye. V. Frokhorovich).
(MENINGITIS) (COXSACKIE VIRUSES)

YAMPOL'SKAYA, E.I.; ZALMANZON, Ye.S.

Clinical virological characteristics of isolated lesions
of the facial nerve in children. Zhur. nevr. i psikh. 61
no.7:967-972 '61. (MIRA 15:6)

1. Klinika neyroinfektsii (zav. - prof. D.S. Futer)
Nauchno-issledovatel'skogo pediatricheskogo instituta
Ministerstva zdravookhraneniya RSFSR (dir. A.P. Chernikova),
Moskva.

(POLIOMYELITIS)
(NERVES, FACIAL—DISEASES)